

VISTA DEL AGUA

Program Environmental Impact Report EA No. 14-04 (Draft) Volume 1

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Commonly Used Abbreviations and Acronyms

| | |
|-----------------|---|
| AAQS | Ambient Air Quality Standards |
| AB 32 | Assembly Bill No. 32 |
| AB 1493 | Assembly Bill No. 1493 |
| A.C. | Asphalt Concrete |
| ACF | annual water consumption factors |
| ACOE | Army Corps of Engineers |
| ADT | Average Daily Traffic |
| ALUC | Airport Land Use Commission |
| ANSI | American National Standards Institute |
| AQ/GHG | Air Quality/Greenhouse Gas |
| AQMP | Air Quality Management Plan |
| ARB | Air Resource Board |
| ASTM | American Society of the International Association for Testing and Materials |
| A-T | Agricultural Transition |
| BAAQMD | Bay Area Air Quality Management District |
| BACM | Best Available Control Measure |
| Basin | South Coast Air Basin |
| Bgs | Below Ground Surface |
| BMPs | Best Management Practices |
| BP | Business Park |
| BUOW | Burrowing Owl |
| C&D | Construction and demolition |
| CAAQS | California Ambient Air Quality Standards |
| CalARP | California Accidental Release Prevention Program |
| CalEEMod | California Emission Estimator Model |
| CAP | Climate Action Plan |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resource Board |
| CBC | California Building Code |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| C-G | General Commercial |
| CGPU | Coachella general Plan Update |
| CH ₄ | Methane |
| CIWMP | County Integrated Waste Management Plan |
| CLUP | French Valley Airport Comprehensive Land Use Plan |
| CMP | Congestion Management Program |
| C-N | Neighborhood Commercial |

| | |
|-------------------|--|
| CNDDDB | California Natural Diversity Database |
| CNEL | Critical Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | Carbon Monoxide |
| CO ₂ | Carbon Dioxide |
| CO ₂ E | Carbon Dioxide Equivalent |
| CR | Commercial Retail |
| CRMP | Cultural Resources Management Plan |
| CSA | Community Service Area |
| CSC | California Special Concern Species |
| CTR | California Toxics Rule |
| CUP | Conditional Use Permit |
| CVAG | Coachella Valley Association of Governments |
| CVC | California Vehicle Code |
| CVMSHCP | Coachella Valley Multi-Species Habitat Conservation Plan |
| CVWD | Coachella Valley Water District |
| Cy | Cubic Yards |
| DA | Development Agreement |
| dBA | A-weighted decibel |
| DEIR | Draft Environmental Impact Report |
| DMA | Drainage Management Area |
| DPF | Diesel Particulate Filters |
| DTSC | California Department of Toxic Substances Control |
| DIF | Development Impact Fees |
| EIR | Environmental Impact Report |
| EMWD | Eastern Municipal Water District |
| EPA | Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| FEMA | Federal Emergency Management Agency |
| FPER | Fire Protection and Emergency Response |
| °F | Fahrenheit |
| FIRM | Flood Insurance Rate Map |
| FMMP | Farmland Mapping and Monitoring Program |
| FTA | Federal Transit Administration |
| FV ALUCP | French Valley Airport Land Use Compatibility Plan |
| GHGs | Greenhouse Gas |
| GP | General Plan |
| GWP | Global Warming Potential |
| HANS | Habitat Evaluation and Acquisition Negotiation Strategy |
| HAs | Hydrologic Areas |

| | |
|---------------------|--|
| HCP | Habitat Conservation Plan |
| HRA | Health Risk Assessment |
| HSA | Hydrologic Subarea |
| HU | Hydrologic Units |
| I-10 | Interstate 10 |
| I-15 | Interstate 15 |
| I-215 | Interstate 215 |
| I-P | Industrial Park |
| IRWMP | Integrated Regional Water Management Plan |
| ITE | Institute of Transportation Engineers |
| kW | Kilowatt |
| LCA | Life-Cycle Analysis |
| LED | Light-Emitting Diode |
| Leq | Equivalent Continuous Level |
| LI | Light Industrial |
| LID | Low Impact Design |
| LOS | Level of Service |
| LST | Level of Significance Threshold |
| MBTA | Migratory Bird Treaty Act |
| MRZ | Mineral Resources Zones |
| M-S | Manufacturing Service |
| M-SC | Manufacturing-Service Commercial |
| MSHCP | Multiple Species Habitat Conservation Plan |
| MSL | Mean Sea Level |
| MS4 | Municipal Separate Storm Sewer Systems |
| MTCO ₂ e | Metric Tons Carbon Dioxide Equivalent |
| N ₂ O | Nitrous Oxide |
| NAAQS | National Ambient Air Quality Standards |
| NHTSA | National Highway Traffic and Safety Administration |
| NOA | Naturally Occurring Asbestos |
| NOP | Notice of Preparation |
| NO _x | Nitrogen Oxide |
| NO ₂ | Nitrogen Dioxide |
| NPA | No Project Alternative |
| NPDES | National Pollutant Discharge Elimination System |
| NR | Noise Reduction |
| OEHHA | Office of Environmental Health Hazard Assessment |
| OPR | Office of Planning and Research |
| O-S | Open Space |
| PAs | Planning Areas |

| | |
|-------------------|--|
| Pb | Lead |
| PDFs | Project's Design Features |
| PEIR | Program EIR |
| PM _{2.5} | Particulate Matter – 2.5 micrometers or less |
| PM ₁₀ | Particulate Matter – 10 micrometers or less |
| PPV | Peak Particle Velocity |
| R-M | Residential Multi-Family |
| R-S | Residential Single-Family |
| RCFCWCD | Riverside County Flood Control and Water Conservation District |
| RCIP | Riverside County Integrated Project |
| RCP | Reinforced Concrete Pipe |
| RCIT | Riverside County Information Technology |
| RCTC | Riverside County Transportation Commission |
| ROW | Right-of-Way |
| RRDA | Reduced Residential Density Alternative |
| RTP | Regional Transportation Plan |
| SABER | Safeguard Artifacts Being Excavated in Riverside County |
| SARWQCB | Santa Ana Regional Water Quality Control Board |
| SB 375 | Senate Bill No. 375 |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| SCS | Sustainable Communities Strategy |
| SMGB | State Mining and Geology Board |
| SoCAB | South Coast Air Basin |
| SO ₂ | Sulphur Dioxide |
| SO _x | Sulphur Oxides |
| SPEIR | Subsequent Programmatic Environmental Impact Report |
| sq. ft. | Square Feet |
| SR79 North | Winchester Road |
| SR79S | State Route 79 South |
| SR-86 | State Route 86 |
| SRA | Source Receptor Area |
| SSAB | Salton Sea Air Basin |
| STC | Sound Transmission Class |
| SWAP | Southwest Area Plan |
| SWFP | Solid Waste Facility Permit |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resource Control Board |
| TCP | Traffic Control Plan |
| TMDL | Total Maximum Daily Load |

| | |
|-------|---|
| Tpd | Tons per day |
| Tpw | Tons per week |
| TUMF | Transportation Uniform Mitigation Fee |
| TVUSD | Temecula Valley Unified School District |
| USGS | U.S. Geology Survey |
| USFW | U.S. Fish and Wildlife Service |
| UST | Underground Storage Tank |
| UWMP | Urban Water Management Plan |
| VOCs | Volatile Organic Compounds |
| WDR | Waste Discharge Requirement |
| WQMP | Water Quality Management Plan |

CHAPTER 1 – EXECUTIVE SUMMARY

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

1.1 PROJECT BACKGROUND

CVP Palm Springs, LLC, in affiliation with Strategic Land Partners, L.P., is proposing to implement a residential, commercial (suburban retail and neighborhood commercial), and open space (neighborhood park and paseos) development, with associated on-site and off-site infrastructure improvements for Vista Del Agua, an approximate 275 acre site (as well as approximately 29 acres of off-site infrastructure improvements, totaling approximately 304 acres, both on and off-site) in the City of Coachella (City), Riverside County, California.

The Project applicant has proposed a draft specific plan (Vista Del Agua Specific Plan No. 14-01), that would allow conversion of this property to the above referenced uses. To accomplish this, the Project proponent is seeking approval from the City for the following applications:

- General Plan Amendment No. 14-01
- Specific Plan No. 14-01;
- Change of Zone No. 14-01;
- Tentative Parcel Map No. 36872;
- Development Agreement; and
- Environmental Impact Report (EA No. 14-04)

These components of the Project are summarized in greater detail below, and presented in detail in Chapter 3, Project Setting and Project Description.

Based on the findings in the Initial Study (see discussions in Section III (Environmental Factors Potentially Affected) and Section V (Environmental Issue Assessment)), the City of Coachella Planning Department concluded that an Environmental Impact Report (EIR) must be prepared for the proposed Project. This EIR focuses on portions of the fifteen (15) issues listed above, with all other issues having been fully addressed in the Initial Study.

The City of Coachella Planning Department prepared and circulated a Notice of Preparation (NOP) for the Project. The NOP review period began on March 4, 2015 and ended 30 days later on April 2, 2015. Respondents were requested to submit their suggestions for and comments on environmental information and issues that should be addressed in the EIR no later than 30 days after receipt of the NOP. The NOP was distributed to interested agencies, the State Clearinghouse, and surrounding property owners. Eleven (11) letter responses to the NOP were received by the City.

A scoping hearing was held on March 12, 2015 at the City of Coachella, in the Council Chambers. Two (2) members of the public and one (1) representative from the Riverside County Fire Department were in attendance at the Scoping Hearing. A copy of the Initial Study is provided in Subchapter 8.1 of this EIR. A copy of the NOP, and the eleven comment letters are

included in Subchapter 8.2 and responses to these comment letters, are included in the following text. The Scoping Meeting PowerPoint Presentation is included in Subchapter 8.3.

1.2 INTENDED USE OF THIS ENVIRONMENTAL IMPACT REPORT

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines. The City is the local Lead Agency for the Project and has supervised the preparation of this EIR. This EIR is an information document which will inform and assist public agency decision makers and the general public of the potential environmental effects from implementing the Project, including any significant effects that will be caused by implementing the proposed Project. Possible ways to minimize significant effects of the Project and reasonable alternatives to the Project are also identified in this EIR.

This document assesses the potential impacts, including any potentially significant and unavoidable impacts and cumulative impacts, related to the construction and operation of the proposed Project. This EIR is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this Project.

Before any development can occur, the City must approve certain entitlements and grant other authorizations for development of the Project as proposed. As indicated above, other agency approvals (if required) for which this environmental document may be utilized include:

- Colorado Basin Regional Water Quality Control Board
- Coachella Water Authority
- Coachella Sanitary District
- South Coast Air Quality Management District
- Imperial Irrigation District

This EIR will be used as the information source and CEQA compliance document for the discretionary actions or approvals by the CEQA lead agency, listed in 1.1, Project Background, above.

1.3 PROJECT OBJECTIVES

The Project is being developed by CVP Palm Springs, LLC, in affiliation with Strategic Land Partners, L.P., under the jurisdiction of the City of Coachella. The Project's objectives derived from SP 14-01 are as follows:

- Create a distinctive "sense of community" unifying areas through high quality design criteria and utilizing the natural surroundings;
- High Connectivity - Implement an aesthetically pleasing and functional community concept by integrating community areas, residential areas, parks and commercial areas through connection of walkways, paseos and trails;
- Provide community focus areas within walking distance between neighborhoods;
- Provide a balanced mix of economically viable commercial and residential land uses that will promote local job creation;
- Provide a transition blend of rural and suburban lifestyles; and
- Provide a diverse mix of housing options.

1.4 IMPACTS

Based on data provided in this EIR, it is concluded the Project will result in significant impacts to aesthetic resources, agriculture and forestry resources, air quality (operations), and transportation/traffic. All other potential impacts were determined to have no impacts, be less than significant without mitigation, or can be reduced to a less than significant level with implementation of standard conditions or, the mitigation measures identified in this EIR. Cumulative significant impacts are identified in this document based on findings that the Project's contributions to such impacts are considered to be cumulatively considerable (per the threshold identified in Section 15130 of the State CEQA Guidelines). **Table 1.5-1, Summary of Impacts and Mitigation Measures Discussed in this EIR**, summarizes all of the environmental impacts and proposed mitigation measures.

1.4.1 IMPACTS DETERMINED TO BE LESS THAN SIGNIFICANT

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

Air Quality (Construction)/Greenhouse Gas

During operation, on-site emissions would be negligible and would primarily consist of the intermittent on-site travel of motor vehicles. There, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted. The mitigated construction emissions incorporate **Standard Condition SC-AQ-1**, and **Mitigation Measures AQ-2** through **AQ-10**. Daily emissions CalEEMod outputs are located in Appendix A of the Appendix A of the *AQ/GHG Analysis (Appendix D1)*. The emissions will be below the South Coast Air Quality Management District (SCAQMD) thresholds of significance for regional construction emissions. Construction LST emissions will be below the SCAQMD thresholds of significance for localized construction emissions. For all construction phases, the daily total construction emissions with standard control measures, would be below the daily thresholds established by the SCAQMD. Due to the distance of the nearest receptors from the proposed Project site and through compliance to SCAQMD's Rule 402, no significant impact related to odors would occur during operation. The potential risk for naturally occurring asbestos (NOA) during Project construction is small and less than significant.

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk." "Individual cancer risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk.

The SCAQMD has demonstrated in the carbon monoxide (CO) attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.

The City of Coachella's Climate Action Plan provides direction on how the City plans to achieve 15% reduction below 2010 (per service population) emissions by 2020. Projects that do not exceed 3,000 million metric tons of carbon dioxide equivalent (MTCO₂e) per year will be consistent with the GHG Plan with the incorporation of **Mitigation Measures MM-10** through **MM-13** and the planting of approximately 2,406 new trees, the Project's emissions would be reduced to 3.27 MTCO₂e/SP/yr., which meets the threshold. Therefore, operation of the proposed Project would not create a significant cumulative impact to global climate change. No significant unavoidable impacts are anticipated.

Biological Resources

Cumulative biological impacts are defined as those impacts resulting from the development within the Coachella Valley Multi Species Habitat Criteria Plan (MSHCP) Area as a result of build out of the City's and County's General Plans. Development of the Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site; however, development, of a larger acreage and scale that the Project is currently permitted on the site. With the incorporation of standard conditions and mitigation, the Project will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities present in Riverside County because there are no such species located within the Project area and the Project can be implemented consistent with the criteria identified in the Coachella Valley MSHCP. No significant unavoidable impacts are anticipated.

Cultural Resources

Based on the information contained in the Phase I Report, and Phase II Report, implementation of the Project will not result in cultural resource impacts that will exceed the established thresholds of significance.

MM-CUL-1 through **MM-CUL-4** would be implemented during initial mass grading of the Project to reduce potential Project impacts by ensuring avoidance, evaluation, and, as applicable, scientific recovery and study of any resources encountered. Therefore, with implementation of **MM-CUL-1** through **MM-CUL-5**, the contribution of the Specific Plan to the cumulative loss of known and unknown cultural resources throughout the City would be reduced to below a level of significance.

Because the implementation of the Project is not forecast to cause any direct, significant adverse impact to cultural resources, with implementation of identified mitigation measures, the Project has no potential to make a cumulatively considerable contribution to cultural resource impacts, in the Project area or Riverside County in general. No significant unavoidable impacts are anticipated.

Geology and Soils

The Project site is located within an Alquist-Priolo Earthquake Fault Hazard Zone. Additionally, the Project site contains areas of potentially expansive soils, subsidence, liquefaction, and is located on a geologic formation that is susceptible to lateral spreading. As such, the proposed Project would be required to implement **MM-GEO-1** through **MM-GEO-4**, and comply with applicable State and local requirements, including but not limited to the City of Coachella Building Code and the California Building Code. Seismic impacts are a regional issue, and all

projects must adhere to applicable seismic codes and design standards. The proposed Project's individual impacts related to geotechnical constraints are considered less than significant after mitigation.

Hazards and Hazardous Materials

Development of the Project may result in releases of hazards and hazardous materials. According to the analysis above, with adherence to standard conditions, and mitigation measures, Project impacts will not exceed established thresholds for hazards and hazardous materials. The thresholds have been established to address Project-specific impacts, as well as their contribution to cumulative impacts. Since the Project is below the established thresholds, cumulative impacts will remain less than significant. On the other hand, as the City grows, the demand for public service resources to respond to hazard and hazardous material grows incrementally. The Project will add to the cumulative demand for such resources. As stated in Subchapter 4.13, the Project will have an incremental impact to the City's Fire Department's ability to provide an acceptable level of service. These impacts are forecast to include an increased number of emergency and public service calls due to the increased presence of structures and population.

As stated above, each Project proponent shall participate in the Development Impact Fee Program as adopted by the City to mitigate a portion of these impacts. This will provide funding for capital improvements such as land, equipment purchases and fire station construction. The Project will contribute incrementally to cumulative impacts related to the need to reduce cumulative effects on Fire Services.

The Project's potentially significant or cumulative considerable impacts to Fire Protection and Emergency Response (FPER) Services can be reduced to less than significant and payment of fees by all cumulative projects can effectively reduce the overall cumulative impacts to such services.

Hydrology / Water Quality

The proposed Project would also be subject to NPDES and MS4 Permit requirements for both construction and operation. It will be required to develop a SWPPP and WQMPs and will be evaluated to determine appropriate BMPs to minimize impacts to surface water quality and vector. These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2, SC-HYD-3, and SC-HYD-4** (construction general permit, water quality management plans, BMPs, and hydrology reports, respectively) in Subchapter 4.9.5, as well as **MM-HYD-1**. After incorporation of standard conditions and mitigation, any Project impacts are less than significant.

Land Use / Planning

Based on the analysis contained in Subchapters 4.10.4.1 and 4.10.4.2, the Project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effects; nor will it conflict with any applicable habitat conservation plan or natural community conservation plan.

Noise

The City has an exemption for noise created during construction. Also, construction is limited to certain hours during the day. The Project will have a less than significant impact to the adjacent land uses, based on the City's noise ordinance during the construction phase of development.

The potential off-site noise impacts caused by the increase in vehicular traffic from the operation of the proposed Project on the nearby roadways (existing year), as demonstrated in **Table 4.11.4-3**, will be less than significant from the implementation of the proposed Project. Also, impacts will be less than significant from the implementation of the proposed Project at Project completion year (2022). Lastly, no significant impacts will result from the implementation of the proposed Project at General Plan Buildout Year (2035).

Portions of the Project site are located within the 65 to 70 A-weighted decibel scale of Community Equivalent Noise Level (dBA CNEL) contours of subject roadways and will therefore require noise barriers to shield any potential sensitive outdoor areas. Once a site plan or tract map is available, additional acoustical studies will need to be conducted to determine wall heights and placement to ensure compliance to the City's exterior noise standard. With mitigation incorporated, any impacts will remain less than significant.

Residences would need to be exposed to exterior noise levels exceeding 65 dBA CNEL (45 dBA + 20 dBA = 65 dBA) to potentially exceed the interior noise standard of 45 dBA CNEL with windows closed. With mitigation incorporated, any impacts will remain less than significant.

Construction activities can produce vibration that may be felt by adjacent land uses. It is anticipated that no significant vibration impact will occur to any adjacent buildings due to the distance of construction equipment from buildings. Any Impacts are considered less than significant.

Population / Housing

The proposed Project together with other commercial and residential developments within the City will serve an existing demand for employment, while also meeting the cumulative demand of employment that will result from the City's projected future population. These increases for population, housing, and employment would be within the total projected growth forecasts for 2035 by the City. These expectations align with the growth projections for the region as a whole. SCAG's 2016 RTP/SCS forecasts that the City will have a population of 143,300 in 2040. In addition, implementation of the proposed Project would be consistent with the City's vision of the Project site because of the existing General Plan Update (2015) designations for the site of Suburban Retail District, Urban, General, and Suburban Neighborhood, and Neighborhood Center. Implementation of the proposed project would not result in a cumulatively significant population or housing impact and the proposed Specific Plan land uses would not significantly induce growth in areas where growth was not previously anticipated.

Public Services and Recreation

The Project, in conjunction with other development under the General Plan Update (2015), will result in the incremental increased demands on public services. Cumulative impacts on public services were evaluated in the General Plan Update Final EIR (2015). The demand for all public services within the City's Planning Area are expected to increase, as population

increases and the need to maintain adequate quality of service, access, and response times for emergency vehicles. However, the General Plan Update (2015) proposes multiple strategies and policies to reduce potential cumulative impacts on an individual project basis through the requirement and phasing of infrastructure necessary to support the Project and payment of Development Impact Fees. The Coachella Municipal Code requires that development fees paid by individual projects be used to mitigate those incremental increased demands on fire protection and emergency response services, law enforcement services, park and recreational facilities, and libraries as a result of the project. Incremental increases to school services are mitigated through fees established by the individual school districts and paid for by the development project.

Development Impact Fees and School Fees are adjusted annually using statistical information, local planning policies, and by interacting with other agencies to delineate past service patterns, emerging trends, and future issues of concern. Once identified, service providers are able to adjust resources to meet future needs. New development projects are required to adhere to conditions placed on the project through the entitlement process. As shown in the Fiscal Impact Analysis (*FIA*, **Appendix P**), the Project will be able to cover the on-going cost of service provision. Any impacts are considered less than significant.

Utilities and Service Systems

According to Coachella Valley Water District (CVWD), there is adequate water supply and sewer capacity, to meet the demand of the Project. Water and wastewater management systems are capable of meeting the cumulative demand for these systems. Recycled water is available in the CVWD system. Thus, the Project will not cause cumulatively considerable significant adverse impacts on these systems.

Cumulative impacts to landfill capacity will be less than significant due to the Project construction debris and operational waste representing a less than substantial cumulative increment with mitigation. Therefore, due to available capacity and implementation of the above mitigation measures, which provide for recycling on site to reduce Project operational waste, cumulative impacts to the existing landfills resulting from waste generated by Project implementation are considered less than significant.

Since the project would constitute a small incremental increase of the current residential and commercial customer base and the Project is required to install Energy Star-rated models of appliances and be served by existing service and transmission lines within and around the Project area, this Project's cumulative energy impacts are determined to be a less than significant cumulative impact.

As previously stated, the analysis of cable, telephone and internet services is defined as the service territory for Time Warner Cable and Verizon. Both Time Warner Cable and Verizon would extend current facilities to meet project service demands. As these services are not operating above capacity, these service providers are anticipated to meet communication demands associated with past, present, and future development within the project area. Therefore, no cumulative impacts related to cable, telephone, and internet service will occur due to Project implementation. No significant unavoidable impacts are anticipated.

For more detail and for a list of applicable mitigation measures, please refer to **Table 1.5-1, Summary of Impacts and Mitigation Measures Discussed in this EIR**.

1.4.2 IMPACTS DETERMINED TO BE SIGNIFICANT AND UNAVOIDABLE

Based on the analysis contained in the EIR, the following impacts have been determined to have a potential for significant impact:

Aesthetic Resources

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. There will be an associated change in views, both to and from the Project site, and due to this Project's contribution to the change in the area pastoral landscape, this change in scenic views has been identified as cumulatively considerable and an unavoidable significant adverse impact if this Project is developed before any of the other proposed development in the area. The proposed Project modifications to the onsite landscape were not identified as being a significant adverse aesthetic/visual impact. Since the proposed Project makes a cumulatively considerable contribution to the cumulative change that will be experienced at this location, it is considered to cause/contribute to a cumulatively significant adverse impact. However, because the Project site and the immediate surrounding area are relatively undeveloped with little to no existing light sources, the proposed Project is anticipated to introduce a substantial amount of light and glare sources, where none previously existed, resulting in a significant adverse impact.

Agriculture and Forestry Resources

The conversion of sites from vacant land to residential, commercial and open space uses will permanently remove the potential for the land to be farmed in the future. However, this change is consistent with future land uses planned for the City in the General Plan Update (2015). Implementation of the Project (on-site and off-site components) will not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of forest land to non-forest use. There are no forest lands on or near the site. Consistent with the General Plan Update Final EIR (2015), significant unavoidable impacts are anticipated due to Project implementation.

Air Quality - Operations

When the Project is fully operational, the Project would exceed SCAQMD regional thresholds for volatile organic compounds (VOC), oxides of nitrogen (NOx), and CO. Even with the incorporation of **Mitigation Measures AQ-10** through **AQ-13** the Project would have a significant and unavoidable impact.

Transportation/Traffic

Pursuant to Section 15130(b)(2) of the California Environmental Quality Act (CEQA) Guidelines, the cumulative Project list from the *Traffic Impact Study City of Coachella, California*, prepared by RK Engineering Group, Inc., dated October 14, 2014, revised June 14, 2016, was utilized for the cumulative impacts within the City of Coachella, the Coachella Valley and Riverside County.

The Project's contribution to the Transportation Uniform Mitigation Fee (TUMF) program as a fair share contribution is considered sufficient to address the Project's fair share toward a mitigation measure or measures designed to alleviate any potential cumulative impacts.

With adherence to **Standard Condition SC-TR-1** and incorporation of **Mitigation Measures MM-TR-1** through **MM-TR-5**, established thresholds related to transportation/traffic can be mitigated under CEQA.

However, even though implementation of the improvements defined in **Mitigation Measure MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, cumulative impacts would remain significant and unavoidable at these locations (Caltrans facilities (SR-86, and I-10) with the Project and cumulative projects factored in.

In addition, the cumulative impacts to Dillon Road (I-10 to SR-86 and SR-86 to Highway 111) in 2035 Plus Project condition has been identified as a potentially significant and unavoidable impact because additional widening beyond the General Plan classification is likely infeasible.

1.5 ALTERNATIVES

The California Environmental Quality Act (CEQA) and the State CEQA Guidelines require an evaluation of alternatives to the proposed action. The purpose of the alternatives evaluation under CEQA is to determine whether one or more feasible alternatives is capable of reducing potentially significant impacts of a preferred project to a less than significant level. The applicable text in the State CEQA Guidelines occurs in Section 15126 as follows:

Section 15126.6 (a): Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

Section 15126.6 (b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

The Project Objectives are defined in Chapter 3, Project Setting and Project Description. The Project's Objectives are as follows:

- Create a distinctive “sense of community” unifying areas through high quality design criteria and utilizing the natural surroundings;
- High Connectivity - Implement an aesthetically pleasing and functional community concept by integrating community areas, residential areas, parks and commercial areas through connection of walkways, paseos and trails;
- Provide community focus areas within walking distance between neighborhoods;
- Provide a balanced mix of economically viable commercial and residential land uses that will promote local job creation;

- Provide a transition blend of rural and suburban lifestyles; and
- Provide a diverse mix of housing options.

One of the alternatives that must be evaluated is the “no project alternative,” regardless of whether it is a feasible alternative to the proposed Project, i.e. would meet the Project objectives or requirements. Under this alternative, the environmental impacts that would occur if the Project is not approved and implemented are identified.

In addition to the no project alternative, a second alternative of developing the Project site at a reduced residential density will be considered in this document. This would require standard subdivision improvements, such as paved access roads, managing drainage and undergrounding of utilities being delivered to each residential lot.

The Project could theoretically be developed at alternative locations within the vicinity of the Project site. However, the California Supreme Court determined that examination of infeasible alternatives need not be given exhaustive evaluation. Specifically, the court case Citizens of Goleta Valley v. Board of Supervisors, 1988 the court stated:

[A] Project alternative which cannot be feasibly accomplished need not be exhaustively considered. A feasible alternative is one which can be accomplished in a successful manner within a reasonable period of time, taking into account economic, legal, social and technological factors [Citations.] Surely whether a property is owned or can reasonably be acquired by the project proponent has strong bearing on the likelihood of a project’s ultimate costs and the chances for an expeditious and successful accomplishment.

The State CEQA Guidelines, Section 15126.6(f)(1) state: *Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of alternatives.*

The Project site is approximately 275 acres of on-site development, as well as approximately 29 acres of off-site infrastructure improvements, totaling approximately 304 acres, both on and off-site. The alternative locations discussed in the Draft Environmental Impact Report, La Entrada Specific Plan, LSA Associates, Inc. July 2013 (LA Entrada DEIR) which were determined to have potential as an alternative location were:

“Desert Lakes Property: The 1,500 ac Desert Lakes property on the north side of I-10 between Polk Street and Lincoln Street was considered as an alternative site. This alternative site would still need infrastructure to be brought up through La Entrada to get potable water and sewer flows to the Coachella Waste Water Treatment Plant at Avenue 54 and Polk Street.

Shadow View Area: The 750 ac Shadow View Specific Plan property and land adjacent to that property was considered. The Shadow View area is bounded on the west by the 86-S Expressway and Dillon Road, on the north by I-10, on the east by the Coachella Canal, and on the south by Avenue 50.”

These alternative locations have been dismissed from this subchapter because they were not under the control of the applicant, and they are considerably larger in size than the proposed Project. Analysis of an alternative site is not feasible.

A final (3rd) alternative has been selected for analysis. This is referred to as the Vista del Sur Access (VDSA) Alternative. This alternative is being analyzed in the event that the westerly extension of Avenue 48/Shadow View Boulevard cannot be completed due to the need for the Project applicant to acquire the necessary right-of-way to install this roadway. Vista del Sur is a currently a dedicated City roadway which connects to the northerly extension of Street "A." This alternative would allow for the development of the Project as proposed, but with alternative connection to Dillon Road, to the west of the Project site.

No other alternatives to the proposed Project are given consideration or evaluated in this chapter since no other practical or feasible alternatives have been proposed. For example, a light industrial or commercial project would have no demand in this Project area due to lack of adequate population to support commercial uses and the lack of any rationale for a light industrial uses to locate in this general Project area. Thus, the alternatives considered in this chapter include:

- 1 No Project Alternative (NPA);
- 2 Reduced Residential Density Alternative (RRDA); and
- 3 Vista del Sur Access Alternative (VDSA).

Of the three alternatives considered, all three have been determined to be environmentally superior alternatives to the Project. Section 15126.6(e)(2) indicates that where the no project alternative is environmentally superior, "the DEIR shall also identify an environmentally superior alternative among the other alternatives." Both the NPA and the RRDA have been evaluated as not being a feasible alternative because they do not meet some, or as in the case of the NPA, meet all of the Project objectives (respectively) discussed in Subchapter 3.2 of this document and summarized above.

The VDSA alternative is an environmentally superior alternative and meets all of the Project objectives.

The Executive Summary of Project impacts are presented below in **Table 1.5-1, *Summary of Impacts and Mitigation Measures Discussed in this EIR.***

**Table 1.5-1
Summary of Impacts and Mitigation Measures Discussed in this EIR**

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|---------------------|--|---|--|--|--------------------------------|
| Aesthetic Resources | a. Would the Project have a substantial adverse effect on a scenic vista? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | b. Would the Project result in substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | c. Would the Project result in the degradation of the existing visual character or quality of the site and its surroundings? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | d. Would the Project result in the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | MM-AES-1 Photometric Study. Prior to the approval of any Site Plans for any phase of development, the applicant shall submit to the City of Coachella (City) a photometric (lighting) study (to include parking areas and access way lights, external security lights, lighted signage, and ball field lighting) providing evidence that the project light sources do not spill over to adjacent off-site properties in accordance with the City's Municipal Code. All Project-related outdoor lighting, including but not limited to, street lighting, building security lighting, parking lot lighting, and landscaping lighting shall be shielded to prevent spillover of light to adjacent properties. Shielding requirements and time limits shall be identified on construction plans for each phase of development. | <i>Prior to the approval of any permits for lighting</i> | <i>Planning Division and Building Division</i> | <i>Less than significant</i> |
| | a. Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|---|--|--|---|--|---------------------------------------|
| | <p>land to non-forest use?</p> <p>b. Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| <p>Air Quality & Greenhouse Gas</p> | <p>a. Would the Project conflict with or obstruct implementation of the applicable air quality plan?</p> | <p>MM-AQ-1 Prior to the issuance of a grading plan, the Project applicant shall indicate on the grading plan areas that will be graded and shall not allow any areas more than 5 acres to be disturbed on a daily basis. Said plan shall clearly demarcate areas to be disturbed and limits 5 acres and under.</p> <p>MM-AQ-2 The Project shall require that construction contractor use construction equipment that have Tier 4 final engines, level 3 diesel particulate filters (DPF), with oxidation catalyst that impart 20% reduction and apply coatings with a VOC content no greater than 10 grams per liter (g/L).</p> <p>MM-AQ-3 EPA Tier 4-Final Emissions Standards. Prior to construction, the construction contractor shall provide the City of Coachella Public Works Director or designee a comprehensive inventory of all off-road construction equipment equal to or greater than 50 horsepower that will be used an aggregate of 40 or more hours during any portion of construction activities for the project. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified Tier specification, best available control technology (BACT) documentation, and California Air Resources Board (ARB) or SCAQMD operating permit shall be provided on site at the time of mobilization of each applicable unit of equipment. Off-road diesel-powered equipment that will</p> | <p>MM-AQ-1 Prior to the issuance of a grading plan</p> <p>MM-AQ-2 During grading</p> <p>MM-AQ-3 Prior to construction</p> <p>MM-AQ-4 Prior to the issuance of grading permits</p> <p>MM-AQ-5 Throughout the construction process</p> <p>MM-AQ-6 During construction</p> <p>MM-AQ-7 During construction</p> | <p>MM-AQ-1 through MM-AQ-9 and MM-AQ-12 Public Works Department</p> <p>MM-AQ-10 Building Division</p> <p>MM-AQ-11 and MM-AQ-13 Planning Division</p> | <p>Significant and unavoidable</p> |

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| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|--|-------------------|-------------------------|
| | | <p>be used an aggregate of 40 or more hours during any portion of the construction activities for the project shall meet the United States Environmental Protection Agency (EPA) Tier 4-Final emissions standards, and off-road equipment greater than 300 horsepower shall be equipped with diesel particulate filters.</p> <p>MM-AQ-4 <u>Application of Architectural Coatings</u>. Prior to issuance of any grading permits, the Director of the City of Coachella Public Works Department, or designee, shall verify that construction contracts include a statement specifying that the Construction Contractor shall comply with South Coast Air Quality Management District (SCAQMD) Rule 1113 and any other SCAQMD rules and regulations on the use of architectural coatings or high volume, low-pressure (HVL) spray methods. Emissions associated with architectural coatings would be reduced by complying with these rules and regulations, which include using pre-coated/natural colored building materials, using water-based or low-volatile organic compounds (VOC) coating, and using coating transfer or spray equipment with high transfer efficiency.</p> <p>MM-AQ-5 <u>Construction Equipment Maintenance</u>. Throughout the construction process, general contractors shall maintain a log of all construction equipment maintenance that shows that all construction equipment has been properly tuned and maintained in accordance with manufacturers' specifications. This condition shall be included in development plan specifications.</p> <p>MM-AQ-6 <u>Construction Equipment Operating Optimization</u>. General contractors shall ensure that during construction operations, trucks and vehicles in loading and unloading queues turn their engines off when not in use. General contractors shall phase and schedule construction operations to avoid emissions peaks and discontinue operations during second-stage smog alerts. This condition shall be included in development plan specifications.</p> | <p>MM-AQ-8 <i>During construction</i></p> <p>MM-AQ-9 <i>Prior to issuance of any construction permits</i></p> <p>MM-AQ-10 <i>Prior to issuance of a building permit</i></p> <p>MM-AQ-11 <i>During any improvement project</i></p> <p>MM-AQ-12 <i>Prior to issuance of any construction permits</i></p> <p>MM-AQ-13 <i>Prior to issuance of a building permit</i></p> | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|-----------------------|-------------------|-------------------------|
| | | <p>MM-AQ-7 <u>Construction Generator Use Minimization.</u> General contractors shall ensure that electricity from power poles is used rather than temporary diesel- or gasoline-powered generators to the extent feasible. This condition shall be included in development plan specifications.</p> <p>MM-AQ-8 <u>Construction Equipment Idling Minimization.</u> General contractors shall ensure that all construction vehicles are prohibited from idling in excess of 5 minutes, both on site and off site. This condition shall be included in development plan specifications.</p> <p>MM-AQ-9 <u>Construction Phase Overlap.</u> Prior to issuance of any construction permits, the City of Coachella Public Works Director shall restrict the timing of construction phasing in order to assure that thresholds are not exceeded.</p> <p>MM-AQ-10 <u>Construction Waste Management Plan.</u> Prior to issuance of a building permit, the applicant shall submit a Construction Waste. The plan shall include procedures to recycle and/or salvage at least 75 percent of nonhazardous construction and demolition debris and shall identify materials to be diverted from disposal and whether the materials would be stored on-site or commingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculation can be done by weight or volume but must be documented.</p> <p>MM-AQ-11 Project shall improve the pedestrian network by incorporating sidewalks within the property.</p> <p>MM-AQ-12 <u>Project Operations.</u> Prior to issuance of any construction permits, the Project applicant shall submit for review and approval by the City of Coachella Public Works Director, building plans that incorporate measures such as, but not limited to, the following: Operational Mitigation Measures (Materials Efficiency)</p> | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|--|-----------------------|-------------------|-------------------------|
| | | <ul style="list-style-type: none"> • Project plans for each Tentative Tract Map will include the following materials efficiency components. Materials used for buildings, landscape, and infrastructure will be chosen with a preference for the following characteristics: <ul style="list-style-type: none"> ○ Rapidly renewable; ○ Increased recycle content (50 percent or greater); locally sourced materials (within the South Coast Air Basin); ○ Utilization of sustainable harvesting practices; and ○ Materials with low or no volatile organic compounds (VOCs) off-gassing. <p>Operational Mitigation Measures (Transportation)</p> <ul style="list-style-type: none"> • Provide one electric car charging station for every 10 high-density residences and provisions for electric car charging stations in the garages of all medium-, low-, and ultra-low-density housing. Provide at least two designated parking spots for parking of zero emission vehicles (ZEVs) for car-sharing programs in all employee/worker parking areas. • Provide incentives for employees and the public to use public transportation such as discounted transit passes, reduced ticket prices at local events, and/or other incentives. • Implement a rideshare program for employees at retail/commercial sites. • Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems. • Require the use of the most recent model year emissions-compliant diesel trucks, or alternatively fueled, delivery trucks (e.g., food, retail, and vendor supply delivery trucks) at commercial/retail sites upon project build out (at the time of operations). If this is not feasible, consider other measures such as incentives, and phase-in schedules for clean trucks, etc. • Prior to issuance of any Site Development permits, the Director of the City of Coachella (City) Public | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|-----------------------|-------------------|-------------------------|
| | | <p>Works Department, or designee, shall include prioritized parking for electric vehicles, hybrid vehicles, and alternative fuel vehicles.</p> <p>Operational Mitigation Measures (Landscaping). <u>Project plans shall include following landscaping components:</u></p> <ul style="list-style-type: none"> • The Project shall require landscaping and irrigation that reduces outside water demand by at least 20%. • The Project shall require that at least 2,406 new trees are planted on-site (approximately 2 trees per residential unit and 25 trees per acre of parks). • The Project shall include Landscape Design Features that will be reflected on the Project plans for each Tentative Tract Map, and will include the following landscape design components: <ul style="list-style-type: none"> ○ Community-based food production within the Project by planning for community gardens; ○ Native plant species in landscaped areas; ○ A landscape plant palette that focuses on shading within developed portions of the site and in areas of pedestrian activity. ○ Tree-lined streets to reduce heat island effects; ○ Non-turf throughout the development areas where alternative ground cover can be used, such as artificial turf and/or xeriscaping; and ○ Landscaping that provides shading of structures within 5 years of building completion. <p>Operational Mitigation Measures (Water Conservation and Efficiency Features). <u>Project plans for each Tentative Tract Map will include following water efficiency components:</u></p> <ul style="list-style-type: none"> • <u>Drought-tolerant landscaping, non-potable reclaimed, well, or canal water for irrigation purposes;</u> • <u>High-efficiency plumbing fixtures and appliances that meet or exceed the most current CALGreen Code in all buildings on site;</u> • <u>Efficient (i.e., "Smart") irrigation controls to reduce water demand on landscaped areas throughout</u> | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|--|-----------------------|-------------------|-------------------------|
| | | <p><u>the Project:</u></p> <ul style="list-style-type: none"> • <u>Restriction of irrigated turf in parks to those uses dependent upon turf areas, such as playing fields and picnic areas;</u> • <u>An integrated storm water collection and conveyance system; and</u> • <u>Dual plumbing within recreation areas, landscaped medians, common landscaped areas, mixed use/commercial areas, and parks to allow the use of reclaimed water when available.</u> <p>Operational Mitigation Measures (Energy Efficiency). Project plans for each Tentative Tract Map will include the following energy efficiency components:</p> <ul style="list-style-type: none"> • Design to United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED); • GreenPoint Rated standard, or better for all new buildings constructed within the Project; • Energy-efficient light-emitting diode (LED) lighting and solar photovoltaic lighting fixtures in all common areas of the site; • Energy-efficient appliances (ENERGY STAR or equivalent), and high efficiency heating, ventilation, and air conditioning (HVAC) systems in all on-site buildings; • Green building techniques that increase building energy efficiency above the minimum requirements of Title 24; • Installation of photovoltaic panels on a minimum of 25 percent of the buildings on site; and • Utilization of high reflectance materials for paving and roofing materials on residential, commercial, and school buildings <p>Operational Mitigation Measures (Other)</p> <ul style="list-style-type: none"> • Require the use of electric or alternative fueled maintenance vehicles by all grounds maintenance contractors. • All commercial and retail development shall be | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|---|---|-----------------------|-----------------------|------------------------------------|
| | <p>required to post signs and limit idling time for commercial vehicles, including delivery trucks, to no more than 5 minutes. This condition shall be included on future site development plans for review and approval by the City of Coachella Director of Development Services.</p> <ul style="list-style-type: none"> The City shall identify energy efficient street lights which are currently available and which, when installed, would provide a 10 percent reduction beyond the 2010 baseline energy use for this infrastructure, and shall require the use of this technology in all new development. All new traffic lights installed within the project site shall use light emitting diode (LED) technology. <p>MM-AQ-13 The Project (and subsequent projects within the Specific Plan) shall score a minimum of 100 points on the "Development Review Checklist" contained in the City's CAP.</p> | <p>required to post signs and limit idling time for commercial vehicles, including delivery trucks, to no more than 5 minutes. This condition shall be included on future site development plans for review and approval by the City of Coachella Director of Development Services.</p> <ul style="list-style-type: none"> The City shall identify energy efficient street lights which are currently available and which, when installed, would provide a 10 percent reduction beyond the 2010 baseline energy use for this infrastructure, and shall require the use of this technology in all new development. All new traffic lights installed within the project site shall use light emitting diode (LED) technology. <p>MM-AQ-13 The Project (and subsequent projects within the Specific Plan) shall score a minimum of 100 points on the "Development Review Checklist" contained in the City's CAP.</p> | | | |
| | <p>b. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?</p> <p>c. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?</p> | <p>See MM-AQ-1 through MM-AQ-13, above</p> | | | <p>Significant and unavoidable</p> |
| | <p>d. Would the Project expose sensitive receptors to substantial pollutant concentrations?</p> <p>e. Would the Project create objectionable odors affecting</p> | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Significant and unavoidable</p> |
| | | <p>See MM-AQ-1 through MM-AQ-10, above</p> | | | <p>Less than significant</p> |
| | | <p>See MM-HYDRO-1, below</p> | | | <p>Less than significant</p> |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|----------------------|--|---|--|--------------------------|--------------------------------|
| | <p>a. substantial number of people?</p> <p>f. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</p> <p>g. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</p> | <p>See MM-AQ-1 through MM-AQ-13, above</p> | | | <p>Less than significant</p> |
| Biological Resources | <p>a. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p> | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Mitigation not required</p> |
| | | <p>MM-BIO-1 To avoid any potential impact to nesting birds and other protected species, including those protected by the Migratory Bird Treaty Act, construction of the Project shall occur outside of the breeding season (February 1 through September 15). As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds is removed from September 16 to January 31 (outside of the nesting season), then no further actions are required.</p> <p>Where the nesting season (February 1 to September 15) cannot be avoided during construction, a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disk, vegetation removal, demolition activities, and grading. The survey area shall include the Project site and an appropriate buffer (consistent with the Migratory Bird Treaty Act) around the site. Any active nests identified shall have an appropriate buffer area established (consistent with Migratory Bird Treaty Act protocol at the time of disturbance) of the active nest. Construction activities shall not occur within the buffer area until the biologist determines that the young have fledged.</p> <p>MM-BIO-2 In the event a burrowing owl is found to be present on site during the preconstruction survey, the</p> | <p>Prior to grading/ground disturbance</p> | <p>Planning Division</p> | <p>Less than significant</p> |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|-----------------------|-------------------|-------------------------|
| | | <p>Project applicant shall ensure the following applicable avoidance measures, are implemented:</p> <ul style="list-style-type: none"> Avoid disturbing occupied burrows during the breeding nesting period, from February 1 through August 31. If burrows are occupied by breeding pairs, an avoidance buffer should be established by a qualified biologist. The size of such buffers is generally a minimum of 300 feet, but may increase or decrease depending on surrounding topography, nature of disturbance and location and type of construction. The size of the buffer area will be determined by a qualified biologist. Continued monitoring will be required to confirm that the specified buffer is adequate to permit continued breeding activity. Avoid impacting burrows occupied during the nonbreeding season by migratory or nonmigratory resident burrowing owls. Avoid direct destruction of occupied burrows through chaining (dragging a heavy chain over an area to remove shrubs) or disking. Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection. Place visible markers near burrows to ensure that equipment and other machinery does not collapse occupied burrows. Do not fumigate, use treated bait, or other means of poisoning nuisance animals in areas where burrowing owls are known or suspected to occur. <p>If an occupied burrow is present within the approved development area, the Project applicant shall ensure that a clearance mitigation plan is prepared and approved by the CDFW prior to implementation. This plan will specify the procedures for confirmation and exclusion of nonbreeding owls from occupied burrows, followed by subsequent burrow destruction. There shall also be provisions for maintenance and monitoring to ensure that</p> | | | |

EXECUTIVE SUMMARY

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|---|---|------------------------------|------------------------------|---------------------------------------|
| | <p>owls do not return prior to construction. Breeding owls shall be avoided until the breeding cycle is complete.</p> | <p>owls do not return prior to construction. Breeding owls shall be avoided until the breeding cycle is complete.</p> | | | |
| | <p>b. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | <p>c. Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | <p>d. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p> | <p>See MM-BIO-1, above</p> | | | <p><i>Less than significant</i></p> |
| | <p>e. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | <p>f. Would the Project conflict with the provisions of an adopted Habitat</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |

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| Cultural Resources | <p>Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</p> <p>a. Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</p> <p>b. Would the Project cause a substantial adverse change in the significance of an</p> | <p>MM-CUL-1 RIV-7835 Avoidance (Planning Area 5). Prior to the issuance of a grading permit, or any activity that would involve initial ground disturbance in the vicinity of RIV-7835, the Project archaeologist will review said plans/activities to determine that none of the resources located in RIV-7835 shall be impacted by the Project development. The Project archaeologist shall make recommendations, where applicable, to protect resources contained in RIV-7835 from potential encroachment from the Project.</p> <p>MM-CUL-2 Archaeological and Native American Monitors. Prior to commencement of any grading activity on the Project site and consistent with the findings and recommendations of the cultural resources surveys and reports regarding the sensitivity of each area on the Project site for cultural resources, the City of Coachella (City) Director of Development Services, or designee, shall retain an archaeological monitor and a Native American monitor to be selected by the City after consultation with interested Tribal and Native American representatives. Both monitors shall be present at the pre-grade conference in order to explain the cultural mitigation measures associated with the Project. Both monitors shall be present on site during all ground-disturbing activities (to implement the Project Monitoring Plan) until marine terrace deposits are encountered. Once marine terrace deposits are encountered, archaeological and Native American monitoring is no longer necessary, as the marine deposits are several hundred thousand years old, significantly predating human settlement in this area.</p> <p>MM-CUL-3 Archaeological Monitoring Plan and Accidental Discovery. Prior to commencement of any grading activity on the Project site and consistent with the</p> | <p>MM-CUL-1 Prior to the issuance of a grading plan</p> <p>MM-CUL-2 Prior to commencement of any grading activity</p> | <p>MM-CUL-1 Project archaeologist</p> <p>MM-CUL-2 City of Coachella (City) Director of Development Services, or designee</p> | <p>Less than significant</p> <p>Less than significant</p> |

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| | archaeological resource pursuant to Section 15064.5? | <p>findings of the cultural resources surveys and reports regarding the sensitivity of each area on the Project site for cultural resources, the City shall prepare a Monitoring Plan. The Monitoring Plan shall be prepared by a qualified archaeologist and shall be reviewed by the City of Coachella Director of Development Services. The Monitoring Plan will include at a minimum:</p> <ol style="list-style-type: none"> (1) A list of personnel involved in the monitoring activities; (2) A description of how the monitoring shall occur; (3) A description of frequency of monitoring (e.g., full-time, part-time, spot checking); (4) A description of what resources may be encountered; (5) A description of circumstances that would result in the halting of work at the Project site (e.g., what is considered a "significant" archaeological site); (6) A description of procedures for halting work on site and notification procedures; and (7) A description of monitoring reporting procedures. <p>If any significant historical resources, archaeological resources, or human remains are found during monitoring, work should stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, Project activities shall avoid such resources.</p> <p>Where avoidance is not feasible, the resources shall be evaluated for their eligibility for listing in the California Register of Historical Resources. If a resource is not eligible, avoidance is not necessary. If a resource is eligible, adverse effects to the resource must be avoided, or such effects must be mitigated. Mitigation can include but is not necessarily limited to: excavation of the deposit</p> | commencement of any grading activity | Coachella Director of Development Services | |

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| | | <p>in accordance with a cultural resource mitigation or data recovery plan that makes provisions for adequately recovering the scientifically consequential information from and about the resource (see California Code of Regulations Title 4(3) Section 15126.4(b)(3)(C)). The data recovery plan shall be prepared and adopted prior to any excavation and should make provisions for sharing of information with Tribes that have requested Senate Bill 18 (SB 18) consultation. The data recovery plan shall employ standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. Results of the study shall be deposited with the regional California Historical Resources Information Center (CHRIS) repository.</p> <p>It shall be the responsibility of the City Department of Public Works to verify that the Monitoring Plan is implemented during Project grading and construction. Upon completion of all monitoring/mitigation activities, the consulting archaeologist shall submit a monitoring report to the City of Coachella Director of Development Services and to the San Bernardino Archaeological Information Center summarizing all monitoring/mitigation activities and confirming that all recommended mitigation measures have been met. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's Archaeological Resources Management Reports (ARMR): Recommended Contents and Format. The City of Coachella Director of Development Services or designee shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and</p> | | | |

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| | <p>c. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</p> | <p>recommendations.</p> <p>MM-CUL-5 Paleontological Resources Impact Mitigation Program. Prior to commencement of any grading activity on the Project site and consistent with the findings of the paleontological resources surveys and reports regarding the sensitivity of each area on the Project site for paleontological resources, the City's Director of Development Services, or designee, shall verify that a qualified paleontologist has been retained and will be on site during all rough grading and other significant ground-disturbing activities in paleontologically sensitive sediments.</p> <p>Prior to any ground-disturbing activities, the paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995 and 2010) and should include but not be limited to the following:</p> <ul style="list-style-type: none"> • Attendance at the pre-grade conference in order to explain the mitigation measures associated with the Project. • During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High Paleontological Sensitivity rating and on a spot-check basis in sediments that have a Low Sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that will allow for monitoring to be scaled back to part-time as the Project after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to | <p>MM-CUL-5 Prior to commencement of any grading activity</p> | <p>MM-CUL-5 City's Director of Development Services, or designee</p> | <p>Less than Significant</p> |

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| | | <p>temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens.</p> <ul style="list-style-type: none"> The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the Project disturbance limits that will be accessible throughout the Project duration but will also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, Project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water. Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer. Identification and curation of specimens into a museum repository with permanent, retrievable storage, such as the San Bernardino County Museum (SBCM). Preparation of a report of findings with an appended, itemized inventory of specimens. When submitted to the City of Coachella Director | | | |

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| | <p>d. Would the Project disturb any human remains, including those interred outside of formal cemeteries?</p> | <p>of Development Services or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources progresses.</p> <p>MM-CUL-4 Human Remains. Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the Project site, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. 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 Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). With the permission of the City of Coachella, the MLD may inspect the site of the discovery.</p> <p>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. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Coachella shall consult with the MLD as identified by the NAHC to develop an agreement for the treatment and disposition of the remains.</p> <p>Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City of Coachella Director of Development Services and the San Bernardino Archaeological Information Center. The City of Coachella</p> | <p>MM-CUL-4 During site disturbance, grading, or other construction activities</p> | <p>MM-CUL-4 City's Director of Development Services, or designee</p> | <p>Less than significant</p> |

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| Geology and Soils | <p>a. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?</p> | <p>Director of Development Services, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.</p> <p>MM-GEO-1 <u>Compliance with Geotechnical Investigations.</u> Prior to approval of any future development applications, a project-level, site-specific final geotechnical study for each specific planning area shall be completed by the Project applicant. These studies shall be submitted for review and approval by the City of Coachella (City) Engineer to ensure that each planning area with future development has been evaluated at an appropriate level of detail by a professional geologist. The location and scope of each final geotechnical report shall be tiered off of the two geotechnical reports previously prepared for the overall site, <i>Fault Investigation Report for Land Planning Purposes Alpine 280 Property Located East of Tyler Street, West of Polk Street, West of Polk Street, South of I-10 and North of Avenue 48, City of Coachella, Riverside, California</i>, Petra Geosciences, Inc., April 9, 2007, and <i>Geotechnical Investigation Report</i>, Petra Geosciences, Inc., May 7, 2015.</p> <p>The final geotechnical report for each planning area shall document any artificial fill and delineate the precise locations of any and all active faults and shall determine the appropriate building setbacks and restricted use zones within the planning area. Prior to the issuance of grading permits, the City Engineer shall confirm that all grading and construction plans incorporate and comply with the recommendations included in the final specific geotechnical report for each planning area. Design, grading, and construction would adhere to all of the seismic requirements incorporated into the 2010 California Residential Code and 2016 California Building Code (CBC) (or most current building code) and the requirements and standards contained in the applicable chapters of the City of Coachella Municipal Code, as well as appropriate local grading regulations, and the specifications of the Project geotechnical consultant, including but not limited to those related to seismic safety,</p> | <p>Prior to approval of any future development applications</p> | <p>Building Division</p> | <p>Less than significant</p> |

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| | | <p>as determined in the final area-specific geotechnical studies prepared in association with all future development application conditions, subject to review by the City of Coachella Development Services Director, or designee, prior to the issuance of any grading permits. See MM-GEO-1, above</p> <p>MM-GEO-2 California Building Code Compliance and Seismic Standards. Structures and retaining walls, if proposed, shall be designed in accordance with the seismic regulations as recommended in the CBC. Prior to issuance of any building permits, the Project engineer and the Director of the City of Coachella Development Services, or designee, shall review site plans and building plans to verify that structural design conforms to the CBC.</p> | <p>Prior to issuance of any building permits</p> | <p>Project engineer and the Director of the City of Coachella Development Services, or designee</p> | <p>Less than significant</p> |
| | <p>b. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?</p> | <p>See MM-GEO-1, above</p> | | | <p>Less than significant</p> |
| | <p>c. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?</p> | <p>See MM-GEO-1, above</p> | | | <p>Less than significant</p> |
| | <p>d. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?</p> | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Mitigation not required</p> |
| | <p>e. Would the Project result in substantial soil erosion or the loss of topsoil?</p> | <p>See MM-GEO-1, above</p> | | | <p>Less than significant</p> |
| | <p>f. Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence,</p> | <p>See MM-GEO-1, above MM-GEO-3 Subsidence. Prior to the issuance of grading permits for development applications or entire planning areas, area-specific geotechnical studies shall be prepared by the applicant's qualified geotechnical engineer and submitted to the City of Coachella for review and approval by the City Engineer. These studies shall</p> | <p>Prior to issuance of any grading permits</p> | <p>City Engineer</p> | <p>Less than significant</p> |

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| | liquefaction, or collapse? | include testing for collapsible soils. Laboratory analysis shall be conducted on selected samples to provide a more complete evaluation regarding remediation of potentially compressible and collapsible materials. Where appropriate, these studies shall contain specifications for overexcavation and removal of soil materials susceptible to subsidence, or other measures as appropriate to eliminate potential hazards associated with subsidence. | | | |
| | g. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | MM-GEO-4 Expansive Soils. As planning areas are designed and prior to issuance of grading permits, site-specific geotechnical studies, including laboratory testing for expansive soils, shall be completed by a qualified geotechnical engineer and submitted to the City of Coachella for review and approval by the City Engineer. If expansive soils are found within the area of proposed foundations, geotechnical testing shall be employed such as excavation of expansive soils and replacement with nonexpansive compacted fill, additional remedial grading, utilization of steel reinforcing in foundations, nonexpansive building pads, presoaking, and drainage control devices to maintain a constant state of moisture. In addition to these practices, homeowners shall be advised about maintaining drainage conditions to direct the flow of water away from structures so that foundation soils do not become saturated. During construction, the Project engineer shall verify that expansive soil mitigation measures recommended in the final foundation design recommendations are implemented, and the City Building Official shall conduct site inspections prior to occupancy of any structure to ensure compliance with the approved measures. | Prior to issuance of grading permits | City Engineer | Less than significant |
| Hazards and Hazardous Materials | a. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | MM-HAZ-1 During grading, and/or during construction, should an accidental release of a hazardous material occur, the following actions will be implemented: construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be notified; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or | MM-HAZ-1 During grading, and/or during construction MM-HAZ-2 During grading MM-HAZ-3 Prior | MM-HAZ-1 Building Division and Department of Environmental Health or the Department of Toxic Substances | Less than significant |

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| | | <p>disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above sampling or remediation activities related to the contamination will be conducted under the oversight of Riverside County Site Cleanup Program. All of the above actions shall be documented and made available to the appropriate oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control (DTSC) prior to closure of the contaminated area.</p> <p>MM-HAZ-2 During grading, if an unknown contaminated area is exposed, the following actions will be implemented: any contamination found during construction will be reported to the Riverside County Site Cleanup Program and all of the sampling or remediation related to the contamination will be conducted under the oversight of the Riverside County Site Program; construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be identified; a qualified professional (industrial hygienist or chemist) shall test the contamination and determine the type of material and define appropriate remediation strategies; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above actions shall be documented and made available to the appropriate oversight agency such as the Department of</p> | <p>to the issuance of a grading permit</p> <p>HAZ-4 Prior to the issuance of a grading permit</p> <p>HAZ-5 Prior to grading permit final</p> | <p>Control</p> <p>MM-HAZ-2 Building Division and Department of Environmental Health or the Department of Toxic Substances Control</p> <p>MM-HAZ-3 Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department</p> <p>MM-HAZ-4 Department of Environmental Health or the Department of Toxic Substances Control</p> <p>MM-HAZ-5 Department of Environmental Health or the Department of Toxic Substances</p> | |

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| | | <p>Environmental Health or the Department of Toxic Substances Control prior to closure of the contaminated area.</p> <p>MM-HAZ-3 Prior to the issuance of a grading permit, the applicant shall contact the Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department in Indio, California to ascertain the locations of wells. If determined by this oversight agency that the closure of the wells is required, then they shall be closed in accordance with the specific requirements for the closure of wells of the Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department.</p> <p>MM-HAZ-4 Prior to the issuance of a grading permit, the applicant shall conduct sampling of the near surface soil to assess whether residual concentrations exceed State of California action levels is recommended in areas that were in agricultural use prior to 1972. The presence of pesticides in the soil may represent a health risk to tenants or occupants on the Property and the soil may require specialized handling and disposal. A grid shall be used to take representative samples where crops were grown on the Property. Any samples shall be analyzed for pesticides using EPA Method 8081. A qualified contractor shall be contacted to remove such materials. Any work conducted shall be in compliance with guideline set by an oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control.</p> <p>MM-HAZ-5 If any materials are discovered at the site during any future activities that may contain asbestos, a qualified contractor be contacted to remove such materials. As it pertains to the shed roof, it shall be tested prior to any demolition. All work conducted shall be in compliance with guidelines set by an oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control, prior to grading</p> | | Control | |

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| | <p>b. Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</p> <p>c. Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</p> | <p>permit final.</p> <p>See MM-HAZ-1 through MM-HAZ-5, above</p> | | | <p>Less than significant</p> |
| | | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Mitigation not required</p> |
| Hydrology and Water Quality | <p>a. Would the Project violate any water quality standards or waste discharge requirements?</p> <p>b. Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p> <p>c. Would the Project</p> | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Mitigation not required</p> |
| | | <p>Mitigation not required</p> | <p>Not applicable</p> | <p>Not applicable</p> | <p>Mitigation not required</p> |

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| | <p>substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</p> | | | | <p><i>not required</i></p> |
| | <p>d. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | <p>e. Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | <p>f. Would the Project otherwise substantially degrade water quality?</p> | <p>MM-HYD-1 Vector Control Program. Prior to issuance of grading permits, the applicant shall develop a Vector Control Program in coordination with the Coachella Valley Mosquito and Vector Control District. The Vector Control Program shall address control of flies, eye gnats, imported red fire ants, and mosquitoes. The vector control program shall include measures such as landscape maintenance, removal of vegetation and landscape clippings, irrigation management, use of desert landscaping, irrigation management, and turf management.</p> | <p><i>Prior to issuance of grading permits</i></p> | <p>Coachella Valley Mosquito and Vector Control District</p> | <p><i>Less than significant</i></p> |
| | <p>g. Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding,</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |

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| | including flooding as a result of the failure of a levee or dam? h. Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? i. Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows? j. Would the Project cause inundation by seiche, tsunami, or mudflow? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| Land Use and Planning | a. Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? b. Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| Noise | a. Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in | MM-NOI-1 During any earth movement construction activities during any phase of development the developer shall: <ul style="list-style-type: none"> • Locate stationary construction noise sources | MM-NOI-1 During any earth movement construction activities | MM-NOI-1 through MM-NOI-5 Building Division | Less than significant |

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| | <p>the local general plan or noise ordinance, or applicable standards of other agencies?</p> | <p>such as generators or pumps at least 300 feet from sensitive land uses, as feasible;</p> <ul style="list-style-type: none"> • Locate construction staging areas should be located as far from noise sensitive land uses as feasible; • Ensure all construction equipment is equipped with appropriate noise attenuating devices to reduce the construction equipment noise by 8 to 10 dBA; • Turn off idling equipment when not in use; • Maintain equipment so that vehicles and their loads are secured from rattling and banging; • Limit the amount of heavy machinery equipment operating simultaneously to two (2) pieces of equipment within a 50-foot radius of each other (when located within 100 feet of existing residential units); and • Install temporary noise control barriers that provide a minimum noise level attenuation of 10.0 dBA when Project construction occurs near existing noise-sensitive structures. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be high enough and long enough to block the view of the noise source. Unnecessary openings shall not be made. • The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired. • The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity. <p>MM-NOI-2 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the necessary performance standards for adequate noise</p> | <p>MM-NOI-2 through MM-NOI-5 Prior to the approval of an implementing project</p> | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|--|-----------------------|-------------------|-------------------------|
| | | <p>reduction for residences located in PA2, PA3 and PA8, that are adjacent to Avenue 47:</p> <ul style="list-style-type: none"> • Areas Exceeding 70 dBA CNEL (within 23 feet from centerline of Avenue 47): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 65 dBA CNEL (within 73 feet from centerline of Avenue 47): 6 foot for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 60 dBA CNEL (within 231 feet from centerline of Avenue 47): 5 foot for ground level outdoor living areas such as backyards or patios. <p>MM-NOI-3 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the necessary performance standards for adequate noise reduction for residences located in PA5, PA7 and PA10, that are adjacent to Avenue 48:</p> <ul style="list-style-type: none"> • Areas Exceeding 70 dBA CNEL (within 23 feet from centerline of Avenue 47): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 65 dBA CNEL (within 73 feet from centerline of Avenue 47): 6 foot for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 60 dBA CNEL (within 231 feet from centerline of Avenue 47): 5 foot for ground level outdoor living areas such as backyards or patios. <p>MM-NOI-4 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the</p> | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--|---|-----------------------|-------------------|---|
| | | <p>necessary performance standards for adequate noise reduction for residences located in PA5, PA6 and PA7, that are adjacent to Street "A":</p> <ul style="list-style-type: none"> • Areas Exceeding 70 dBA CNEL (within 18 feet from centerline of Street "A"): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 65 dBA CNEL (within 57 feet from centerline of Street "A"): 6 foot for ground level outdoor living areas such as backyards or patios. • Areas Exceeding 60 dBA CNEL (within 181 feet from centerline of Street "A"): 5 foot for ground level outdoor living areas such as backyards or patios. <p>MM-NOI-5 The Project will require a final acoustical analysis (for each implementing project) once a site plan or tract map has been developed. The acoustical analyses must demonstrate the interior noise level will not exceed the City's 45 dBA CNEL noise limit. Potential mitigation may include a "windows closed" condition and possibly upgraded windows (increased STC window/door ratings).</p> | | | |
| | <p>b. Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</p> <p>c. Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?</p> <p>d. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project</p> | <p>See MM-NOI-2 through MM-NOI-5, above</p> <p>See MM-NOI-2, above</p> <p><i>Mitigation not required</i></p> | | | <p><i>Less than significant</i></p> <p><i>Less than significant</i></p> <p><i>Mitigation not required</i></p> |
| | | | | | |

EXECUTIVE SUMMARY

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|--|---|---------------------------------------|------------------------------|------------------------------|---------------------------------------|
| Population and Housing | <p>vicinity above levels existing without the Project?</p> <p>a. Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| Public Services and Recreation Resources | <p>a. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Fire Protection and Emergency Response Services?</p> <p>b. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |

EXECUTIVE SUMMARY

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--|---------------------------------------|------------------------------|------------------------------|---------------------------------------|
| | <p>maintain acceptable service ratios, response times or other performance objectives for Sheriff Law Enforcement Services?</p> <p>c. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other objectives for School/Education Services?</p> <p>d. 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?</p> <p>e. Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</p> <p>f. Other public facilities – Library Services</p> | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |
| | | <p><i>Mitigation not required</i></p> | <p><i>Not applicable</i></p> | <p><i>Not applicable</i></p> | <p><i>Mitigation not required</i></p> |

EXECUTIVE SUMMARY

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|------------------------|--|---|---|---|--|
| Transportation/Traffic | <p>g. Other public facilities – Health Services</p> <p>a. Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</p> | <p><i>Mitigation not required</i></p> <p>MM-TR-1 For Existing Plus Project Conditions, the Project applicant is required to make the following improvements at the following intersections (prior to the 1st occupancy):</p> <ul style="list-style-type: none"> • Intersection of Dillon Road and Shadow View Boulevard: <ul style="list-style-type: none"> ○ Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road. ○ Install traffic signal ○ Install southbound (SB) left-turn lane. ○ Install westbound (WB) left-turn lane. ○ Install WB right-turn signal. • Intersection of Tyler Street and Avenue 47: <ul style="list-style-type: none"> ○ Install all-way stop signs. • Intersection of Tyler Street and Avenue 48: <ul style="list-style-type: none"> ○ Install all-way stop signs. • Intersection of Street "A" and Vista Del Sur: <ul style="list-style-type: none"> ○ Install all-way stop signs. ○ Install NB left-turn lane. ○ Install EB right-turn signal. • Intersection of Street "A" and Avenue 47: <ul style="list-style-type: none"> ○ Install all-way stop signs. ○ Install northbound (NB) left-turn lane. ○ Install NB thru-turn lane. ○ Install SB left-turn lane. ○ Install SB thru-turn lane. ○ Install SB thru/right-turn lane. ○ Install eastbound (EB) left-turn lane. ○ Install EB thru/right-turn lane. ○ Install WB left-turn lane. ○ Install WB thru-turn lane. ○ Install WB thru/right-turn lane. • Intersection of Street "A" and Avenue 48: <ul style="list-style-type: none"> ○ Install all-way stop signs. | <p><i>Not applicable</i></p> <p>MM-TR-1 through MM-TR-3 prior to the 1st occupancy</p> | <p><i>Not applicable</i></p> <p>MM-TR-1 through MM-TR-3 Public Works Department</p> | <p><i>Mitigation not required</i></p> <p>Significant and unavoidable</p> |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|-----------------------|-------------------|-------------------------|
| | | <ul style="list-style-type: none"> ○ Install NB left-turn lane. ○ Install NB thru-turn lane. ○ Install NB thru/right-turn lane. ○ Install SB left-turn lane. ○ Install SB thru-turn lane. ○ Install SB thru/right-turn lane. ○ Install EB left-turn lane. ○ Install EB thru-turn lane. ○ Install EB thru/right-turn lane. ○ Install WB left-turn lane. ○ Install WB thru-turn lane. ○ Install WB thru/right-turn lane. <ul style="list-style-type: none"> • Intersection of Polk Street and Avenue 48: <ul style="list-style-type: none"> ○ Install all-way stop signs. <p>MM-TR-2 For Project Completion (Year 2022) With Project Conditions, the Project applicant is required to make the following improvements at the following intersections (prior to the 1st occupancy):</p> <ul style="list-style-type: none"> • Tyler Street and Avenue 47: <ul style="list-style-type: none"> ○ Install NB left-turn lane. ○ Install NB thru-turn lane. ○ Install SB left-turn lane. ○ Install SB thru-turn lane. ○ Install EB left-turn lane. ○ Install EB thru-turn lane. ○ Install WB left-turn lane. ○ Install WB thru-turn lane. • Intersection of SR-86 and Avenue 50: <ul style="list-style-type: none"> ○ Install a traffic signal. <p>MM-TR-3 For Project Completion (Year 2022) With Project and Cumulative Projects Conditions, the Project applicant shall make a fair-share contribution for the following improvements at the following intersections, as shown on Table 4.14.4-12 (prior to the 1st occupancy):</p> <ul style="list-style-type: none"> • Dillon Road and I-10 WB Ramps: <ul style="list-style-type: none"> ○ Install Traffic Signal ○ 13.5% | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|--|-----------------------|-------------------|-------------------------|
| | | <ul style="list-style-type: none"> • Dillon Road and I-10 EB Ramps: <ul style="list-style-type: none"> ○ Install Traffic Signal 17.94% • Dillon Road and Shadow View Boulevard: <ul style="list-style-type: none"> ○ Install Two (2) NB right-turn lanes 20.86% ○ Install NB right-turn overlap phase ○ Install One (1) additional SB left-turn lane ○ Install One (1) additional WB left-turn lane ○ Install WB right-turn overlap phase • Dillon Road and SR-86 NB Ramps <ul style="list-style-type: none"> ○ Install One (1) additional NB thru lane 22.83% • Dillon Road and SR-86 SB Ramps <ul style="list-style-type: none"> ○ Install One (1) additional NB thru lane 24.14% ○ Install One (1) additional NB right-turn lane • Dillon Road and Avenue 48: <ul style="list-style-type: none"> ○ Install One (1) additional EB right-turn lane 23.96% ○ Install One (1) additional WB right-turn lane • Tyler Street and Avenue 47: <ul style="list-style-type: none"> ○ Install Traffic Signal 48.34% ○ Install One (1) additional NB left-turn lane • Tyler Street and Avenue 48: | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--------|---|-----------------------|-------------------|-------------------------|
| | | <p>32.62%</p> <ul style="list-style-type: none"> ○ Install Traffic Signal ○ Install NB left-turn lane ○ Install NB thru lane ○ Install SB left-turn lane ○ Install SB thru lane ○ Install EB left-turn lane ○ Install EB thru lane ○ Install WB left-turn lane ○ Install WB thru lane <ul style="list-style-type: none"> • Tyler Street at Avenue 50: <p>13.82%</p> <ul style="list-style-type: none"> ○ Install Traffic Signal ○ Install Three (3) NB left-turn lanes ○ Install One (1) additional SB thru lane ○ Install Two (2) additional SB right-turn lanes ○ Install SB right-turn overlap phase ○ Install Two (2) EB left-turn lanes ○ Install Two (2) EB right-turn lanes ○ Install EB right-turn overlap phase <ul style="list-style-type: none"> • SR-86 and Avenue 50: <p>13.59%</p> <ul style="list-style-type: none"> ○ Install One (1) additional NB thru lane ○ Install Two (2) additional SB right-turn lanes ○ Install Two (2) additional EB left-turn lanes ○ Install One (1) additional EB thru lane ○ Install One (1) EB right-turn lane ○ Install One (1) WB right-turn lane ○ Install One (1) additional WB thru lane ○ Improve signal phasing to protected east/west <ul style="list-style-type: none"> • Polk Street at Avenue 50: | | | |

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|--|--|--|--|------------------------------------|
| | | <p>3.33%</p> <ul style="list-style-type: none"> ○ Install Traffic Signal ○ Install NB left-turn lane ○ Install NB thru turn lane ○ Install SB left-turn lane ○ Install SB thru turn lane ○ Install EB left-turn lane ○ Install EB thru turn lane ○ Install WB left-turn lane ○ Install WB thru turn lane | | | |
| | <p>b. Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county management agency for designated roads or highways?</p> | <p>See MM-TR-2 and MM-TR-3, above</p> | | | <p>Significant and unavoidable</p> |
| | <p>c. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</p> | <p>MM-TR-4 Prior to any construction on the Project site, the Project applicant shall submit a traffic control plan (TCP) to the City Engineering Department for review and approval. Said TCP shall be prepared for any subsequent implementing project and will contain, at a minimum, the following: lane closures, detouring, qualifications of work crews, duration of the plan and signing.</p> <p>MM-TR-5 Concurrent with subsequent development projects within the Specific Plan, Sunline Transit District shall be consulted to coordinate the potential for expanded transit/bus service and vanpools and to discuss and implement potential transit turnout locations within the Project area.</p> | <p>MM-TR-4 Prior to any construction on the Project site</p> <p>MM-TR-5 Concurrent with subsequent development projects within the Specific Plan</p> | <p>MM-TR-4 City Engineering Department</p> <p>MM-TR-5 City Engineering Department and Sunline Transit District</p> | <p>Less than significant</p> |
| | <p>d. Would the Project result in inadequate emergency access?</p> | <p>See MM-TR-4, above</p> | | | |
| | <p>e. Would the Project conflict</p> | <p>See MM-TR-5, above</p> | | | |

EXECUTIVE SUMMARY

| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-------------------------------|--|--------------------------------|-----------------------|-----------------------|--------------------------------|
| Utilities and Service Systems | with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | | | | |
| | a. Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | b. Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | c. Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | d. Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |
| | e. Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to | <i>Mitigation not required</i> | <i>Not applicable</i> | <i>Not applicable</i> | <i>Mitigation not required</i> |

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| Impact Category | Impact | Mitigation Measures | Implementation Timing | Responsible Party | Impact After Mitigation |
|-----------------|---|-------------------------|-----------------------|-------------------|-------------------------|
| | serve the project's projected demand in addition to the provider's existing commitments? | | | | |
| | f. Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | Mitigation not required | Not applicable | Not applicable | Mitigation not required |
| | g. Would the Project comply with federal, state, and local statutes, and regulations related to solid waste? | Mitigation not required | Not applicable | Not applicable | Mitigation not required |
| | h. Would the Project require or result in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects to Electricity? | Mitigation not required | Not applicable | Not applicable | Mitigation not required |
| | i. Would the Project require or result in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects to Natural gas? | Mitigation not required | Not applicable | Not applicable | Mitigation not required |
| | j. Would the Project require or result in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects to Communication systems? | Mitigation not required | Not applicable | Not applicable | Mitigation not required |

CHAPTER 2 – INTRODUCTION

All Chapter 2 figures are located at the end of this Chapter, not immediately following their reference in text.

2.1 BACKGROUND

CVP Palm Springs, LLC, in affiliation with Strategic Land Partners, L.P., (together, “Project proponent”) is proposing “Vista del Agua”, a master planned development on approximately 275 acres within the City of Coachella, within Riverside County, California (hereafter, “Project”). The Project includes 1,640 multi-family and single-family residential units, general commercial and neighborhood commercial uses, and open space in the form of a community park and trails and paseos. The Project also proposes onsite infrastructure, as well as approximately 29 acres of offsite infrastructure improvements. Reference **Figure 2.1-1, *Regional Location Map*** and **Figure 2.1-2, *Vicinity Map***.

The Project proponent has prepared a draft specific plan (Vista Del Agua Specific Plan No. 14-01) to allow the conversion of the Project site to the above referenced uses. To accomplish this, the Project proponent seeks approval from the City for the following applications:

- General Plan Amendment No. 14-01;
- Specific Plan No. 14-01;
- Change of Zone No. 14-01;
- Tentative Parcel Map No. 36872;
- Development Agreement; and
- Environmental Impact Report (EA No. 14-04).

These components of the Project are summarized in greater detail below, and presented in detail in the following chapter, Chapter 3, *Project Description*.

2.1.1 General Plan Amendment and Change of Zone

The Specific Plan Project site currently has the following General Plan Land Use Designation: Entertainment Commercial (C-E). Please reference **Figure 3.4.1-1, *Existing General Plan and Zoning Classifications***.

These designations are proposed to be modified on the Coachella General Plan (2015) to the designation of Specific Plan through a General Plan Amendment as illustrated on **Figure 2.1.1-1, *Specific Plan Master Development Plan***.

The Project site is zoned with the following classifications: General Commercial (C-G), Open Space (O-S), Residential Single-Family (R-S), and Manufacturing Service (M-S). Again, please reference **Figure 3.4.1-1, *Existing General Plan and Zoning Classifications***.

The proposed Change of Zone will rezone the Project site to the Specific Plan (SP), as illustrated on **Figure 2.1.1-1, *Specific Plan Master Development Plan***. Also reference **Figure 3.4.1-2, *Proposed General Plan Amendment Exhibit***, and **Figure 3.4.1-3, *Proposed Change of Zone Exhibit***.

2.1.2 Specific Plan

A total of ten (10) Planning Areas are proposed within the Vista Del Agua Specific Plan. The Specific Plan identifies a variety of residential and non-residential designations. A summary of the residential and non-residential uses is provided in **Table 2.1.2-1, Specific Plan Land Use Summary**. **Figure 2.1.1-1, Specific Plan Master Development Plan**, illustrates the draft Specific Plan proposed land uses on the approximate 275-acre Project site. A total of 1,640 residential units will be allowed in the Project, and up to 281,397 square feet of commercial uses. In the event that PA 10 does not develop as commercial uses, a maximum number of 41 single-family residential uses may be developed. In the event that PA 10 is developed with 41 single-family units, the unit count in other planning areas must be reduced to maintain the overall number of units allowed in the Project; under no circumstances will the maximum number of 1,640 units be exceeded.

**Table 2.1.2-1
 Specific Plan Land Use Summary**

| PA | LAND USE | ACRES | UNITS | DENSITY | SQUARE FOOTAGE |
|--------------|---------------------------|---------------|--------------|------------|----------------|
| 1 | General Commercial | 16.80 | N/A | N/A | 191,337 |
| | Open Space | 0.81 | N/A | N/A | N/A |
| 2 | Multi-Family Residential | 7.34 | 147 | 20.0 | N/A |
| 3 | Multi-Family Residential | 10.10 | 202 | 20.0 | N/A |
| 4 | Multi-Family Residential | 22.05 | 265 | 12.0 | N/A |
| 5 | Single Family Residential | 42.92 | 236 | 5.5 | N/A |
| 6 | Single Family Residential | 71.65 | 466 | 6.5 | N/A |
| 7 | Single Family Residential | 46.92 | 258 | 5.5 | N/A |
| 8 | Single Family Residential | 14.78 | 66 | 4.5 | N/A |
| 9 | Park | 13.82 | N/A | N/A | N/A |
| 10 | Neighborhood Commercial* | 8.27 | N/A | N/A | 90,060 |
| | Backbone Streets | 19.92 | N/A | N/A | N/A |
| TOTAL | | 275.38 | 1,640 | 7.6 | 281,397 |

* May be developed as 41 Single Family Units.
 Source: Vista del Agua Specific Plan 2018 (Appendix A)

2.1.3 Tentative Parcel Map No. 36872

Tentative Parcel Map No. 36872 is for the purpose of phasing and financing the infrastructure improvements required for the Project and proposes the subdivision of the 275-acre on-site portion of the Project into 6 parcels as illustrated on **Figure 3.4.3-1, Tentative Parcel Map No. 36872**.

2.1.4 Development Agreement

Pursuant to Government Code Sections 65864 through 65869.5, the Project proponent is proposing to enter into a Development Agreement (DA) with the City to obtain assurances for the Project that, upon approval and recordation of the Development Agreement, the applicant may proceed with the Project in accordance with existing policies, rules and regulations, subject to the conditions of approval.

2.2 PURPOSE AND TYPE OF EIR/INTENDED USES OF THIS ENVIRONMENTAL IMPACT REPORT

2.2.1 Program EIR

This Environmental Impact Report (EIR) will serve as a Program EIR (EIR) pursuant to *CEQA Guidelines* Section 15168, which states that:

“A Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- (1) Geographically,*
- (2) As logical parts in the chain of contemplated actions,*
- (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or*
- (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”*

This EIR analyzes the proposed Project under CEQA at a program level for the entire Project, which consists of approximately 275 acres of on-site development, as well as approximately 29 acres of off-site infrastructure improvements, totaling approximately 304 acres, both on and off-site. The proposed Project includes a master-planned community on approximately 275-acres that would include a mix of residential, commercial, open space, and recreational uses. As a worse-case assumption, the proposed Project would be implemented by 2022 time. This EIR has been prepared as a Program EIR for the following reasons:

- The proposed Project would be implemented over a large geographic area, approximately 275-acres on-site and 29-acres off-site, totaling 304-acres.
- Final grading and construction plans and details have not been developed for each planning area, as of yet.

A worst-case construction scenario was developed to analyze construction impacts throughout this EIR.

Subsequent activities associated with implementation of the Specific Plan would be evaluated for compliance with CEQA in light of this EIR to determine whether additional environmental documentation must be prepared. Specifically, if Tentative Tract Maps, improvement plans, or other discretionary approvals associated with implementation of the Specific Plan are submitted and proposed, the environmental impacts of implementing those maps, plans, and approvals will be compared against the analysis set forth in this EIR and CEQA’s mandates for subsequent and/or supplemental environmental review.

2.2.2 Uses of this EIR

The California Environmental Quality Act (CEQA) was adopted to assist with the goal of maintaining the quality of the environment for the people of the State. Compliance with CEQA, and its implementing guidelines, requires that an agency making a decision on a project must consider its potential environmental effects/impacts before granting any approvals or

entitlements. Further, the state adopted a policy "that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." Thus, the Lead Agency, in this case the City of Coachella Development Services Department, must examine feasible alternatives and identify feasible mitigation measures as part of the environmental review process. CEQA also states "that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof." (Section 21002, Public Resources Code).

When applied to a specific project, such as the proposed Project, i.e., construction and operation of the Project, the Lead Agency, the City of Coachella, is required to focus on and identify the potential site specific environmental impacts of implementing the project and where potential significant impacts are identified the agency must determine whether there are feasible mitigation measures or alternatives that can be implemented to avoid or substantially lessen significant environmental effects of a project.

The first step in this process, completion of an Initial Study (IS) to determine whether an EIR is required and issuance of a Notice of Preparation (NOP), has been completed for the Project and the associated Project entitlements. This constitutes the "project being considered for approval and implementation" by the City of Coachella.

Based on the information in the IS, the City concluded that the Project, as proposed, might cause significant impacts to the following fifteen (15) issues areas that would require further analysis in an EIR: aesthetics, agriculture resources, air quality/greenhouse gas emissions, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

Based on the findings in the IS (see discussions in Section III (Environmental Factors Potentially Affected) and Section V (Environmental Issue Assessment), the City of Coachella Development Services Department concluded that an Environmental Impact Report (EIR) must be prepared for the proposed Project. This EIR focuses on portions of the fifteen (15) issue areas listed above, with all other issues having been fully addressed in the IS.

The City of Coachella Development Services Department prepared and circulated an NOP for the Project. The NOP review period began on March 2, 2015 and ended 30 days later on April 1, 2015. Respondents were requested to send their suggestions for and comments on environmental information and issues that should be addressed in the EIR no later than 30 days after receipt of the NOP. The NOP was distributed to interested agencies, the State Clearinghouse, and surrounding property owners. Eleven responses to the NOP were received by the City.

A copy of the IS is provided in Subchapter 8.1 of this EIR. A copy of the NOP, and the eleven comment letters are included in Subchapter 8.2 and responses to these comment letters, are included in Subchapter 2.2.1.

No new issues for consideration in the EIR, not already identified in the IS/EA, were raised by the comment letters. This EIR has been prepared to address the issues identified above and

further discussed below to provide an informational document intended for use by the City, interested and responsible agencies and parties, and the general public in evaluating the potential environmental effects of implementing this Project.

CEQA requires that the City of Coachella, the CEQA Lead Agency, consider the environmental information in the Project record, including this EIR, along with any other issues that are raised as part of the EIR process, prior to making a decision on the Project. The decision that will be considered by the City is whether to approve the above described entitlements for the Project, or to reject the Project as proposed. The City also has the authority to modify the Project based on input provided during the public review process. This EIR evaluates the environmental effects to: aesthetics, agriculture resources, air quality/greenhouse gas emissions, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

2.2.3 Summary of Responses to the NOP

Eleven (11) written responses were submitted in response to the NOP. Comments were also received at the scoping meeting. Comments are summarized below, and a brief response to each issue organized by environmental topic is provided following the summary of comment letters. A copy of each letter is provided in Subchapter 8.2. The location where the issues raised in the comments are addressed is described in the following text.

2.2.3.1 *NOP Comment Letters*

Comment Letter #1 from the Agua Caliente Band of Cahuilla Indians (dated 3/4/15) states:

- The project is not located within the boundaries of the Agua Caliente Band of Cahuilla Indian Reservation. However, it is located within the Traditional Use Area.
- For that reason, they are requesting that upon completion, they would like a copy of the Cultural Resources Study and Mitigation Measures.

Comment Letter #2 from Desert Recreation District (DRD) (dated 3/5/15) states:

- The project is located within the District boundaries.
- Has a request that the project include as a mitigation measure and a condition of approval that the developer enter into an agreement to pay fees pursuant to the Quimby Act. The condition and agreement shall be identified and included in the agreement.

Comment Letter #3 from Desert Sands Unified School District (DRD) (dated 3/10/15) states:

- There is a school mitigation fee that is collected on all new development at the time building permits are issued.

Comment Letter #4 from South Coast Air Quality Management District (SCAQMD) (dated 3/10/15) states:

- Send Draft EIR and Air Quality/Greenhouse Gas (AQ/GHG) technical appendices directly to SCAQMD at address provided, submit for review.
- Use SCAQMD CEQA Handbook and CalEEMod for forecast.
- Identify potential adverse AQ/GHG impacts from Project construction and operations.
- Use SCAQMD regional and localized significance thresholds.

- If necessary, perform mobile source health risk assessment, including toxic air contaminant impacts.
- Assess compatibility of land uses with respect to air quality (such as placing sensitive receptors near air pollution sources, or vice versa).
- Identify mitigation measures and identify any impacts that would result from mitigation measures.

Comment Letter (email) #5 from Pauma Band of Luiseno Indians Cultural Resources (dated 3/11/15) states:

- Defers culturally related knowledge to sister Bands of Cahuilla.

Comment Letter (email) #6 from the Twenty-Nine Palms Band of Mission Indians (dated 3/11/15) states:

- Requests copies of the Environmental Assessment and the Environmental Impact Report.

Comment Letter #7 from the State of California Department of Fish & Wildlife (dated 3/26/15) states:

- The Project lies within the Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP).
- The Project site may lie within a conservation area within the CVMSHCP.
- It may be required that development plans utilize the CVMSHCP Land Use Agency Guidelines to avoid or minimize potential “edge effects.”
- The Project site is located in potential habitat for the Western Burrowing Owl.
- The Department believes that the Project could further the decline of the Burrowing Owl.
- The species must be treated with appropriate avoidance, mitigation, and compensation for any impacts identified.
- Unavoidable impacts to the Western Burrowing Owl should be mitigated through acquisition and protection, in perpetuity, of high quality biological habitat.
- Surveys and mitigation should be consistent with the 2012 Department Staff Report on Burrowing Owl Mitigation.
- The Department is emphasizing in comment letters on projects with impacts to lakes or streambeds, that alternatives and mitigation measures must be addressed in CEQA certified documents prior to submittal of an application of a Streambed Alteration Agreement.
- The Department believes that more information is needed to understand the distinction between temporary and permanent impacts of the project. This should include acreage of the areas impacted.

Comment Letter #8 from the Coachella Valley Water District (dated 3/26/15) states:

- Referred to letters dated October 12, 2010 and December 6, 2013.
- The development lies within the City of Coachella’s water service area boundary. The District and the City have signed a Memorandum of Understanding (MOU) to work together to ensure sufficient water supplies for new development.
- The District requests the City of Coachella require that the developer annex the area into the stormwater unit of the District.
- The area is protected from regional stormwater flows by a system of channels and dikes, and may be considered safe from regional stormwater flows.
- The project lies within the Study Area Boundary of the Coachella Valley Water Management Plan.

- There are existing U.S. Bureau of Reclamation facilities not shown on the development plans.
- The area is underlain with agricultural drainage lines. Surface and subsurface drainage facilities in the vicinity of this project were designed and constructed for agricultural drainage.
- The District may need replacement or additional drainage facilities to provide for the orderly expansion of the drainage system.
- The project may be required to use Nonpotable Colorado River water for specific uses.
- The project lies within the Lower Whitewater River Subbasin Area of Benefit. Groundwater production within the area of benefit is subject to a replenishment assessment in accordance with the State Water Code.
- All water wells owned or operated by an entity producing more than 25 acre-feet of water during any year must be equipped with a water-measuring device.

Comment Letter #9 from the Coachella Valley Mosquito and Vector Control District (dated 3/27/15) states:

- The Project will result in an increase in storm water retention sites which could provide additional habitat for larval mosquitos.
- The site is surrounded on three sides by agricultural areas and may result in an increased need for fly control.
- Irrigation of the property could increase the suitability of the land for red imported fire ants.
- Development of the property could result in an increase of the vector populations which could result in putting more people at risk of contracting vector-borne diseases.
- Suggests that there are a number of construction practices and landscaping designs that will reduce and potentially prevent the production of mosquitos and red imported fire ants in the area.

Comment Letter #10 from County of Riverside Transportation and Land Management Agency (dated 3/31/15) states:

- The Traffic Study should address potential impacts and Mitigation Measures on any Riverside County Roadways.
- EIR shall analyze County intersections where project will add 50 or more peak trips.
- That Riverside County Traffic Study Guidelines be followed.
- Cumulative analysis includes all approved and pending development projects with County located within 1 mile of proposed development.

Comment Letter #11 from Southern California Association of Governments (SCAG) (dated 4/2/15) states:

- SCAG is the designated Regional Transportation Planning Agency under state law, and is responsible for review for conformity with Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) pursuant to SB 375.
- Requested a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency, or non-applicability of the policy and supportive analysis in a Table format.
- RTP/SCS Strategies – if applicable, refer to these strategies as guidance for considering the proposed Project within the context of regional goals and policies.
- Regional Growth Forecasts were provided.
- Review mitigation in the SCAG 2012 RTP/SCS Final Program EIR.
- Please provide copy of Draft EIR to SCAG's Los Angeles office.

2.2.3.2 Scoping Session Comments

Two (2) members of the public and one (1) representative from the Riverside County Fire Department were in attendance at the Scoping Session held on March 12, 2015. The sign in sheet is included in Subchapter 8.4, *Scoping Session Sign in Sheet*.

A brief PowerPoint presentation was made, outlining the overall Project components and is included in Subchapter 8.3.

Questions raised by the public included:

1. What is the relationship of the Project to adjacent properties?;
2. Where are the location(s) of potable water in the Project?;
3. What is the status of existing irrigation water?; and
4. What are the location(s) of proposed sewer facilities?

These comments were addressed at the Scoping Session. No other comments relating to the scope of the EIR were raised by the public at this Scoping Session.

2.2.4 Issue Areas Remaining Significant and Unavoidable

The following issue areas would remain significant and unavoidable with implementation of the Project:

Aesthetics Resources

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. There will be an associated change in views, both to and from the Project site, and due to this Project's contribution to the change in the area pastoral landscape, this change in scenic views has been identified as cumulatively considerable and an unavoidable significant adverse impact if this Project is developed before any of the other proposed development in the area. The proposed Project modifications to the onsite landscape were not identified as being a significant adverse aesthetic/visual impact. Since the proposed Project makes a cumulatively considerable contribution to the cumulative change that will be experienced at this location, it is considered to cause/contribute to a cumulatively significant adverse impact. However, because the Project site and the immediate surrounding area are relatively undeveloped with little to no existing light sources, the proposed Project is anticipated to introduce a substantial amount of light and glare sources, where none previously existed, resulting in a significant adverse impact.

Agriculture and Forestry Resources

The conversion of sites from vacant land to residential, commercial and open space uses will permanently remove the potential for the land to be farmed in the future. However, this change is consistent with future land uses planned for the City in the General Plan Update (2015). Implementation of the Project (on-site and off-site components) will not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of forest land to non-forest use. There are no forest lands on or near the site. Consistent with the

General Plan Update Final EIR (2015), significant unavoidable impacts are anticipated due to Project implementation.

Air Quality - Operations

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The stationary source emissions would come from additional natural gas consumption for on-site buildings and electricity for the lighting in the buildings and at the parking area. Based on trip generation factors included in the traffic study, long-term operational emissions associated with the proposed Project, calculated with the CalEEMod model, are shown in **Table 4.4.4-8, Regional Significance – Operational Emissions**. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating.

Table 4.4.4-8 shows that when the Project is fully operational, the Project would exceed SCAQMD regional thresholds for *volatile organic compounds* (VOC), oxides of nitrogen (NOx), and CO. Even with the incorporation of **Mitigation Measures AQ-10** through **AQ-13** the Project would have a significant and unavoidable impact.

Transportation/Traffic

Pursuant to Section 15130(b)(2) of the California Environmental Quality Act (CEQA) Guidelines, the cumulative Project list from the *Traffic Impact Study City of Coachella, California*, prepared by RK Engineering Group, Inc., dated October 14, 2014, revised June 14, 2016, was utilized for the cumulative impacts within the City of Coachella, the Coachella Valley and Riverside County.

The Project's contribution to the Transportation Uniform Mitigation Fee (TUMF) program as a fair share contribution is considered sufficient to address the Project's fair share toward a mitigation measure or measures designed to alleviate any potential cumulative impacts.

According to the analysis above, with adherence to **Standard Condition SC-TR-1** and incorporation of **Mitigation Measures MM-TR-1** through **MM-TR-5**, established thresholds related to transportation/traffic can be mitigated under CEQA.

However, even though implementation of the improvements defined in **Mitigation Measure MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, cumulative impacts would remain significant and unavoidable at these locations (Caltrans facilities (SR-86, and I-10) with the Project and cumulative projects factored in.

In addition, the cumulative impacts to Dillon Road (I-10 to SR-86 and SR-86 to Highway 111) in 2035 Plus Project condition has been identified as a potentially significant and unavoidable impact because additional widening beyond the General Plan classification is likely infeasible.

2.3 SCOPE AND CONTENT OF THIS EIR

In accordance with Sections 15063 and 15082 of the State CEQA Guidelines, the City prepared an IS/EA to identify the environmental resources and manmade systems that could experience significant environmental impacts if the Project is implemented.

The City's Initial Study concluded that potential impacts associated with ten (10) issue areas evaluated would be less than significant adverse impacts if the Project is implemented as proposed (reference IS in Subchapter 8.1).

Fifteen (15) issue areas were identified as having the potential to cause significant adverse environmental impacts. The specific environmental issues/topics analyzed in this EIR are the potential impacts associated with aesthetics, agriculture resources, air quality/greenhouse gas, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

According to the Initial Study (p. 26), as it pertains to Mineral Resources:

“The geotechnical section of the City of Coachella General Plan EIR notes that the buildout of the General Plan would contribute to potential cumulative impacts with regard to the loss of mineral resources, but note that cumulative impacts to mineral resources would be able to be mitigated through the widespread implementation of regional preservation production quotas as identified by the California Division of Mines and Geology. The Project site (on-site and off-site components) has been utilized currently and historically for agricultural activities. They have not been utilized currently and historically for any mining activities. Therefore, implementation of the Project (on-site and off-site components) will not 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; and/or, result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.”

To expand upon this reasoning, while mining operations have not occurred on site, mineral resources, could indeed be present on the Project site. This issue was addressed in the Initial Study for the City of Coachella General Plan Update Final EIR (2015) (Appendix 11.1, Notice of Preparation + Initial Study, p. 28) as follows:

“Currently there are no locally important mineral resource recovery sites within the City limits. The loss of availability of such sites would not occur in the General Plan Planning Area, and no significant impacts would occur.”

This will serve as additional clarity as to why Mineral Resources were not discussed in this EIR.

Comments on the scope of the EIR were considered by the City and after this consideration, the overall focus of the EIR remains the same with certain additional nuances being addressed within the Chapters of this EIR, based on the specific details, particulars, and clarifications contained in the specific comment letters.

In addition to evaluating the environmental issues listed above, this EIR contains all of the sections mandated by the CEQA and State and City CEQA Guidelines. **Table 2.3-1, Required EIR Contents**, provides a listing of the contents required in a EIR along with a reference to the chapter and page number where these issues can be reviewed in the document. This EIR is contained in two volumes. Volume 1 contains the CEQA mandated sections and Volume 2 contains the technical appendices.

**Table 2.3-1
Required EIR Contents**

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

Source: http://resources.ca.gov/ceqa/docs/2016_CEQA_Statutes_and_Guidelines.pdf

2.4 FORMAT AND ORGANIZATION

This EIR contains eight (8) chapters which, when considered as a whole, provide the reviewer with an evaluation of the potential significant adverse impacts from implementing the Project (construction and operation of the Project). The following paragraphs provide a summary of the content of each chapter of this EIR.

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

Chapter 2 provides an Introduction to the document. This chapter of the document describes the background of the Project, its purpose, and its organization. The CEQA process to date is summarized and the scope of the EIR is identified. Technical evaluations prepared for the EIR are discussed and the format and availability of the EIR are provided.

Chapter 3 contains the Project description used to forecast environmental impacts. This chapter describes for the reviewer how the existing environment will be altered by the Project. In addition, this Chapter also sets the stage for conducting the environmental impact forecasts

contained in the next several chapters. This chapter also identifies the Project boundaries and the environmental setting.

Chapter 4 presents the environmental impact forecasts within fifteen (15) issue areas considered in this EIR. For each of the fifteen (15) environmental issue areas identified in Subchapter 2.3, the following impact evaluation is provided:

- The Project's existing environmental setting;
- The potential impacts forecast to occur if the Project is implemented;
- Proposed mitigation measures;
- Cumulative impacts; and
- Unavoidable adverse impacts.

Chapter 5 contains the evaluation of alternatives to the Project. Included in this chapter is an analysis of the no project alternative, a Reduced Residential Density Alternative, and a Tyler Street Access Alternative.

Chapter 6 presents the topical issues that are required in an EIR. These include:

- Any significant irreversible environmental changes;
- Unavoidable significant adverse impacts; and
- Growth inducing effects of the project.

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

Chapter 8 contains those materials referenced as appendices to the EIR, such as the IS/EA and Notice of Preparation, the Notice of Preparation comment letters, and the Director's Hearing Agenda and Staff Report from the scoping meeting. Appendix material is referenced at appropriate locations in the text of the EIR.

2.5 AVAILABILITY OF THE EIR

The EIR for this project has been distributed directly to all public agencies and interested persons identified in the NOP mailing list (see Subchapter 8.1, Chapter 8) and as requested in the NOP comments, the State Clearinghouse, as well as any other requesting agencies or individuals. All reviewers will be provided 45 days to review the EIR and submit comments to the City of Coachella, Development Services Department for consideration and response.

The EIR is also available for public review at the City's Development Services website, and at the following locations during the 45-day review period:

City of Coachella
Development Services Department
1515 6th Street
Coachella, CA 92236

Coachella Library
1538 7th Street
Coachella, CA 92236

The EIR may be downloaded from the City's website:

<http://www.coachella.org/departments/documents>

2.6 CITY REVIEW PROCESS

After receiving comments on the EIR, the City of Coachella will prepare a Final EIR for certification by the City Council (after review and recommendation by the City Planning Commission) prior to making a decision on the Project. Information concerning the EIR public review schedule and City meetings for this Project can be obtained by contacting:

Luis Lopez, Development Services Director
City of Coachella
1516 6th Street
Coachella, CA 92236
llopez@coachella.org

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Figure 2.1-1
Regional Location Map



Source: Vista del Agua Specific Plan 2018 (Appendix A)

Not to Scale

Figure 2.1-2
Vicinity Map



Source: Vista del Agua Specific Plan 2018 (Appendix A)

CHAPTER 3 – PROJECT SETTING AND PROJECT DESCRIPTION

All Chapter 3 figures are located at the end of this Chapter, not immediately following their reference in the text.

3.1 INTRODUCTION

This Chapter contains a detailed description of the Vista Del Agua Project (“Project”) with focus on those characteristics and activities that can cause physical changes in the environment. The description contained herein provides the reviewer with a written summary of the Project, as it would be developed if the City of Coachella approves the Project entitlements required to develop the property.

CVP Palm Springs, LLC, in affiliation with Strategic Land Partners, L.P., (together, “Project proponent”) is proposing “Vista del Agua”, a master planned development on approximately 275 acres (as well as approximately 29 acres of off-site infrastructure improvements, totaling approximately 304 acres, both on and off-site) within the City of Coachella, within Riverside County, California (hereafter, “Project”). The Project includes 1,640 multi-family and single-family residential units, general commercial and neighborhood commercial uses, and open space in the form of a community park and trails and paseos. The Project also proposes onsite infrastructure, as well as approximately 29 acres of offsite infrastructure improvements in the City of Coachella, Riverside County, California.

As presently proposed, the Project proponent has prepared a draft specific plan (Vista Del Agua Specific Plan No. 14-01), that would allow conversion of the Project site to residential, commercial (suburban retail and neighborhood commercial), and open space (neighborhood park and paseo) uses. To accomplish this, the Project proponent seeks approval from the City for a General Plan Amendment (GPA), a Specific Plan (SP), a Change of Zone (CZ), a Tentative Parcel Map (TPM), and a Development Agreement (DA).

The City’s case numbers are:

- General Plan Amendment No. 14-01;
- Specific Plan No. 14-01;
- Change of Zone No. 14-01;
- Tentative Parcel Map No. 36872;
- Development Agreement; and
- Environmental Impact Report (EA No. 14-04).

The GPA, SP, CZ, and TPM, area are generally located south of Interstate 10 (I-10) and Vista Del Sur, east of Tyler Street, and north of Avenue 48.

Extensions of water lines will be within the Avenue 47 and Avenue 48 roadways/rights-of-way. The Project is within the Coachella Sanitary District service area. Sewer service to the site will include construction of a 12” sewer main within Avenue 48, which will tie into the existing sewer main in Tyler Street. From this location, the sewer system gravity flows to a lift station located near Polk Street and State Route 86, where it is then lifted to another gravity system which flows to the treatment plant at Polk Street and Avenue 54. Reference **Figure 3.4.2-8, Master Water Plan**, and **Figure 3.4.2-9, Master Sewer Plan**.

Roadway extensions will also be within the Avenue 47 and Avenue 48 roadways/rights-of-way,

as well as a northeastern trending roadway from Avenue 47 to Shadow View Boulevard, within the Shadow View Specific Plan area. Additional right-of-way may be needed to accommodate the off-site roadways (including Shadow View Boulevard). This will be determined at the tentative tract map stage.

3.2 PROJECT LOCATION AND SETTING

The on-site Project components (GPA, SP, CZ, TPM) are located south of I-10 and Vista Del Sur, east of Tyler Street, and north of Avenue 48. The off-site extensions of sewer and water lines will be within the Avenue 47 and Avenue 48 roadways/rights-of-way. Off-site roadway extensions will also be within the Avenue 47 and Avenue 48 roadways/rights-of-way, as well as Shadow Hills Blvd, within the Shadow View Specific Plan area. Please reference **Figure 2.2-1, Regional Location Map** and **Figure 2.2-2, Vicinity Map**.

The Project site is within the Colorado Desert Region in the heart of the Coachella Valley at an elevation ranging between 40 feet below and 30 feet above sea level. The site topography is relatively flat to the west but does slope upwards about 25 feet in elevation to the northwest. In the south central and eastern portion of the Project site, the property slopes upward from about 60 feet below sea level to 25 feet above sea level.

The unincorporated community of Thermal is about four miles to the south, and the City of Indio is about two miles to the west. The Augustine Indian Reservation is 0.5 miles to the southeast, the Cabazon Indian Reservation about 0.25 miles to the west, and the Torres-Martinez Indian Reservation about 8-9 miles to the southwest.

The Mecca Hills, which reach a peak elevation of 1,648 feet (Mecca Hill), are 4-5 miles to the southeast. The Indio Hills begin 2-3 miles to the north at elevations of a few hundred feet but later attain elevations over 6500 feet to the northwest. Further to the east are the Little San Bernardino Mountains, which attain elevations over 3,000 feet. The town of La Quinta and the Santa Rosa Mountains are 7-8 miles to the west and southwest, respectively. These mountains, including a State Game Refuge, attain elevations of over 4,000 feet.

The Project site is surrounded by existing agricultural uses and vacant land to the west, south and east. I-10 and Vista Del Sur create the northern boundary to the Project. North of I-10 is vacant land, as well as residential, agricultural, and golf course uses. The Coachella Canal is to the east of the Project site. (**Figure 3.4.2-7, Flood Insurance Rate Map (FIRM) (Panel 2260G)** best illustrates this).

The site is currently undeveloped, with numerous unimproved dirt roads created from the use of agricultural activities in the area, trails from off-road recreational vehicles, and paint ball activities.

The following site description was obtained from the Phase I ESA conducted for the Project. See **Figure 3.2-1, Parcel Locations**, for parcel number references. The Parcel numbers correspond to the Parcel identification used in the Phase I ESA.

- Parcels 1-4, 6, and 11 all show signs of former agricultural use, especially when viewed on an aerial photograph.
 - Parcel 6 was under active agriculture as recently as 2006, and Parcel 11 until 2004.
 - Parcel 1 has been fallow for much longer, but was under active agriculture in 1975.

- Parcels 2, 3, and 4 may have been used for agriculture in the past; however, such use must have been prior to 1975.
- Parcel 5 is currently being used to grow grapes, approximately 80-acres of active vineyard (apparently since 2004).
- Parcels 7-10 do not show obvious signs of former agricultural use, although they are bordered by active agriculture on the west.
 - A significant portion of the southeast corner of Parcel 11 and the northeast corner of Parcel 1 is being used as a very large paintball arena, complete with two separate areas of various wooden “hides” and tire stacks.
 - There is also fairly extensive trash dumping in this area, including what appears to be a former irrigation pond that is now used for trash dumping and burning.
 - The majority of the southern $\frac{3}{4}$ of Parcel 1 consists of large expanses of barren ground that appears to have been cleared in the recent past.
 - Parcels 7, 8, 9, and 10 received a variety of manmade impacts in the form of ground clearing, domestic dog use, and some trash deposition, likely due to their close proximity to residential dwellings.

3.3 PROJECT OBJECTIVES

- Create a distinctive “sense of community” unifying areas through high quality design criteria and utilizing the natural surroundings;
- High Connectivity - Implement an aesthetically pleasing and functional community concept by integrating community areas, residential areas, parks and commercial areas through connection of walkways, paseos and trails;
- Provide community focus areas within walking distance between neighborhoods;
- Provide a balanced mix of economically viable commercial and residential land uses that will utilize the Enterprise Zone to promote local job creation;
- Provide a transition blend of rural and suburban lifestyles; and
- Provide a diverse mix of housing options.

3.4 PROJECT CHARACTERISTICS

The Project applicant has submitted applications for a GPA, SP, CZ, TPM, and DA that provide a conceptual level plan of site development. Data to prepare this project description was obtained from the applicant, the City of Coachella, and the Project Environmental Assessment (including incorporated references) prepared for the Project.

3.4.1 General Plan Amendment and Change of Zone

The Specific Plan Project site currently has the following General Land Use Designation: Entertainment Commercial (C-E). Please reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

These designations are proposed to be modified in the General Plan Update (2015) to the designation of Specific Plan through General Plan Amendment No. 14-01.

The Project site is zoned with the following classifications: General Commercial (C-G), Residential Single-Family (R-S), and Manufacturing Service (M-S) zoning designations. Reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

Reference **Figure 3.4.1-1, General Plan and Zoning Classifications**, **Figure 3.4.1-2, Proposed General Plan Amendment Exhibit**, and **Figure 3.4.1-3, Proposed Change of Zone Exhibit**.

The proposed Change of Zone and Specific Plan will rezone the Project site to Specific Plan. The Planning areas within the Specific Plan will correlate to the following zoning classifications: C-G (General Commercial), R-S (Residential Single-Family), R-M (Residential Multiple-Family), C-N (Neighborhood Commercial), and O-S (Open Space). Please reference **Figure 2.1.1-1, Specific Plan Master Development Plan**.

3.4.2 Specific Plan

A total of ten (10) Planning Areas are proposed within the Vista Del Agua Specific Plan (Specific Plan). The Specific Plan identifies a variety of residential and non-residential designations. A discussion of the residential and non-residential uses is provided in **Table 2.1.2-1, Specific Plan Land Use Summary**. **Figure 2.1.1-1, Specific Plan Master Development Plan**, contains a copy of the draft Specific Plan proposed land uses on the approximate 275-acre Project site.

3.4.2.1 Residential

The Project proposes up to 1,640 dwelling units within seven of the proposed Planning Areas ("PAs"). PAs 2, 3 and 4 have a multi-family residential designation. Densities in these planning areas range from 12 dwelling units per acre to 20 dwelling units per acre. PAs 5, 6, 7 and 8 have a single-family designation. Overall Project densities range from 5.0 dwelling units per acre to 20 dwelling units per acre.

3.4.2.2 Commercial

PA1 is proposed as the general commercial component to the Specific Plan and consists of approximately 16.8 acres of commercial use and .81 acres of open space. PA1 is located on both sides of Street "A" at the intersection with Vista Del Sur. This designation will provide for a wide range of community-oriented and regional-oriented commercial businesses. PA1 will allow for large retail, entertainment and commercial service business centers including large retail uses, theaters, hotels and restaurants as well as professional and medical offices. The east side of PA1 is proposed as an open-space buffer.

A second commercial Planning Area, PA10 consists of 8.3 acres of neighborhood center at the southeast corner of the Project site. This designation provides for small-scale shopping centers offering convenient retail goods and services. Examples of permitted uses include small-scale restaurants, grocery and convenience stores, service businesses that generate limited traffic, and boutique retail sales. It is anticipated that the neighborhood center will be compatible in design and scale with adjacent residential areas. Overall, 281,397 square feet of commercial uses are proposed in the SP.

3.4.2.3 Open Space

Within the Project, an approximately 13.8-acre community park is proposed in PA9, with an additional 12.7 acres of paseos and trails throughout the specific plan area. The community park will function as a buffer to the San Andreas Fault, assuring no habitable structures will be constructed within any hazard zone of the fault. The trails and open space areas will provide

connectivity throughout the Project as well as act as a bio-filter for storm runoff.

Project trails provide connections within the Project site and to destinations off-site. As shown on **Figure 3.4.2-1, Paseo/Trail System**, a 10' wide trail is proposed within the Project paseo (the paseo is a minimum of 100' wide). Reference **Figure 3.4.2-2, Paseo Detail**.

3.4.2.4 Circulation

The Circulation Plan for Vista Del Agua will balance the needs of pedestrians, bicyclists and vehicles. The SP provides vehicular, pedestrian and bicycle circulation routes along a combination of roadways, walkways, and paseos (pp. 5-1 and 5-2). Another objective of the circulation plan is to provide direct access to the parks, open space and commercial areas nearby and within the Project. Reference **Figure 3.4.2-3, Circulation Plan** and **Figure 3.4.2-4, Roadway Cross-Sections**.

The primary vehicle access to the Project is provided from Avenue 48 to the south and Vista Del Sur and Avenue 47 to the north. The north to south access will be provided by a new collector street, (Street A) that will connect Vista Del Sur, Avenue 47 and Avenue 48.

A majority of the Project traffic will use Avenue 48/Shadow View Drive as the main access roadway and Avenue 47 as a secondary roadway. This results in a total of approximately 11,600' of off-site street improvements, as shown on **Figure 3.4.2-3**. The Project will be responsible for a 30' paved section of these improvements (the ultimate street section is 118' for Avenue 48 and 90' for Avenue 47), commensurate with the needs/impacts generated by the Project. A traffic signal will be installed at Dillon Road and Vista Del Sur when warranted. It is anticipated that the Project will contribute funding to this improvement.

Local streets within each planning area would be consistent with the overall circulation goals and objectives of the project and in order to provide adequate and safe access to the proposed Specific Plan neighborhoods.

Bicycle lanes will be located within Avenue 48, Avenue 47, Polk Street and Street "A". As shown on **Figure 3.4.2-4**, these will be Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. These Class II bicycle lanes will continue off-site from the Project area along Avenue 48, Avenue 47 and Polk Street per the City's General Plan (2015) to connect to the future CV Link project, which will be a Class I bikeway/multi-use trail.

3.4.2.5 Project Conceptual Grading

The grading concept is designed to minimize natural topography impacts and to accommodate drainage, utility and road circulation systems that comply with City standards. Reference **Figure 3.4.2-5, Conceptual Grading Plan**. All grading shall be done in compliance with the City of Coachella's grading standards. Prior to any development within any Planning Area of the Specific Plan, an overall grading plan for the area shall be submitted and processed through the City of Coachella for approval. Grading procedures and Best Management Practices (BMPs) shall be employed, where feasible, to limit erosion and sedimentation as well as to limit source pollution onsite. Prior to grading or ground disturbing activities exceeding one acre, the required National Pollutant Discharge Elimination System (NPDES) permit coverage shall be obtained.

On-site earthwork will result in a balance of cut and fill material. For purposes of the analysis in this EIR, grading was assumed to occur in one (1) phase.

3.4.2.6 Drainage / Hydrology / Water Quality

The Project will provide flood control facilities to intercept and convey off-site and on-site drainage areas and revert to existing conditions as the drainage leaves the Project site. The contours indicate that the general flow direction is in the southwesterly direction. The runoff emanating from the Project ultimately discharges into the Coachella Valley Storm Channel located approximately one mile southwest of the site. The existing flow rates off-site will be maintained with no additional off-site flows as a result of the Project.

Most of the drainage for the site will be conveyed along paseo areas with excess storm water released into a proposed detention basin in the southwest portion of the site. The runoff will be conveyed to the existing watercourse that discharges in the Coachella Valley Storm Channel. Drainage for Planning Areas 1-4 will be collected within subsurface storm drain facilities. The proposed storm drain will discharge into a separate basin for water quality and detention.

Several water quality basins as well as paseos areas will act as filtration facilities for the Project runoff. Soil filtration rates throughout this area are high, lending additional groundwater recharge and water quality opportunities. Reference **Figure 3.4.2-6, Master Drainage Plan**.

The Project is located within *Federal Emergency Management Agency (FEMA) Zone X*. Zone X is defined as “areas determined to be outside 500-year floodplain determined to be outside the 0.2% annual chance floodplains.” Development within Zone X is acceptable as long as the finished floor elevations are 1 foot above the 100-year flood elevation. Reference **Figure 3.4.2-7, Flood Insurance Rate Map (FIRM) (Panel 2260G)**.

3.4.2.7 Master Water Plan

The Project is within the Coachella Water Authority service area. Service will be provided to the Project by means of existing services as well as improvements constructed as part of the Project. The Project is located within the High Zone (or 150 Zone) of the City’s water system. Connection for the site will take place at the water tank and booster station located at the southwest corner of the Project. Approximately 200’ of off-site improvements would be required for this connection. In addition, the Project will tie into the lines in Avenue 47 and Tyler Street to complete the “looped” system. Reference **Figure 3.4.2-8, Master Water Plan**. Reclaimed water facilities are not available in the Project vicinity, at this time.

3.4.2.8 Master Sewer Plan

The Project is within the Coachella Sanitary District service area. Sewer service to the site will include construction of a 12” sewer main within Avenue 48, which will tie into the existing sewer main in Tyler Street. From this location, the sewer system gravity flows to a lift station located near Polk Street and State Route 86, where it is then lifted to another gravity system which flows to the treatment plant at Polk Street and Avenue 54. Reference **Figure 3.4.2-9, Master Sewer Plan**.

3.4.2.9 Project Phasing

The primary intent of the phasing plan is to ensure that complete and adequate public facilities and services are in place and available to the future community residents and visitors.

According to Figure 8-1, Phasing Plan of the SP (reference **Figure 3.4.2-10, Phasing Plan**), the SP will be developed in 6 phases as shown on **Table 3.4.2-1, Project Phasing**, below.

**Table 3.4.2-1
Project Phasing**

| Phase | Planning Areas | On-Site Roadways | Off-Site Roadways | On-Site Parks and Open Space |
|-------|----------------|--------------------------------------|-------------------------------|---------------------------------|
| 1 | 5, 7 | Street "A", Avenue 47, and Avenue 48 | Avenue 47, Avenue 48 | Paseos and Neighborhood Parks |
| 2 | 6, 9 | Street "A", Avenue 47 | N/A | Park (PA9) |
| 3 | 8, 10 | Avenue 47/Polk Street | N/A | Paseos and Neighborhood Park |
| 4 | 4 | Street "A", Avenue 47 | N/A | Private Recreational Facilities |
| 5 | 2, 3 | Street "A" | Street "A" north of Avenue 47 | Private Recreational Facilities |
| 6 | 6, 1 | Street "A" | Street "A" north of Avenue 47 | N/A |

Source: Vista del Agua Specific plan 2018 (Appendix A)

It is anticipated that off-site utility extensions will precede the installation of on-site utilities. On-site utilities are anticipated to be installed concurrently with subsequent roadway improvements, per phase of development, primarily in Avenues 47 and 48.

Off-site intersection/roadway improvements not listed in **Table 3.4.2-1**, above, will be in accordance with **Mitigation Measures TR-1** through **TR-3** (reference Subchapter 4.14, Transportation – Traffic).

3.4.3 Tentative Parcel Map No. 36872

Tentative Parcel Map No. 36872 (TPM 36872) is for the purpose of phasing and financing the infrastructure improvements required for the Project. TPM 36872 consists of six (6) numbered lots and one lettered lot, as shown in **Table 3.4.3-1, TPM 36872 Acreages**. These parcel numbers coincide with the proposed Project phasing.

**Table 3.4.3-1
TPM 36782 Acreages**

| Parcel | Acreage |
|---------------|----------------|
| 1 | 37.93 |
| 2 | 21.35 |
| 3 | 70.10 |
| 4 | 43.62 |
| 5 | 47.63 |
| 6 | 23.91 |

Source: TPM 36872 (Appendix B)

Reference **Figure 3.4.3-1, Tentative Parcel Map No. 36872.**

3.4.4 Development Agreement

Pursuant to Government Code Section 65864-65869.5, the Project proponent is proposing to enter into a Development Agreement (DA) with the City to obtain assurances for the Project that, upon approval of the Project, the applicant may proceed with the Project in accordance with existing policies, rules and regulations, and subject to conditions of approval. The physical improvements associated with the DA have been described in Subchapters 3.4.1, 3.4.2, and 3.4.3, above.

3.5 USES OF THIS ENVIRONMENTAL IMPACT REPORT

As previously stated, before any development can occur, the City of Coachella must provide the developer of this proposed Project with the land use entitlements needed to construct the Project. It is these approvals that will allow the proposed development to proceed and allow the corresponding changes to the physical environment. This EIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the City of Coachella, including, but not limited to:

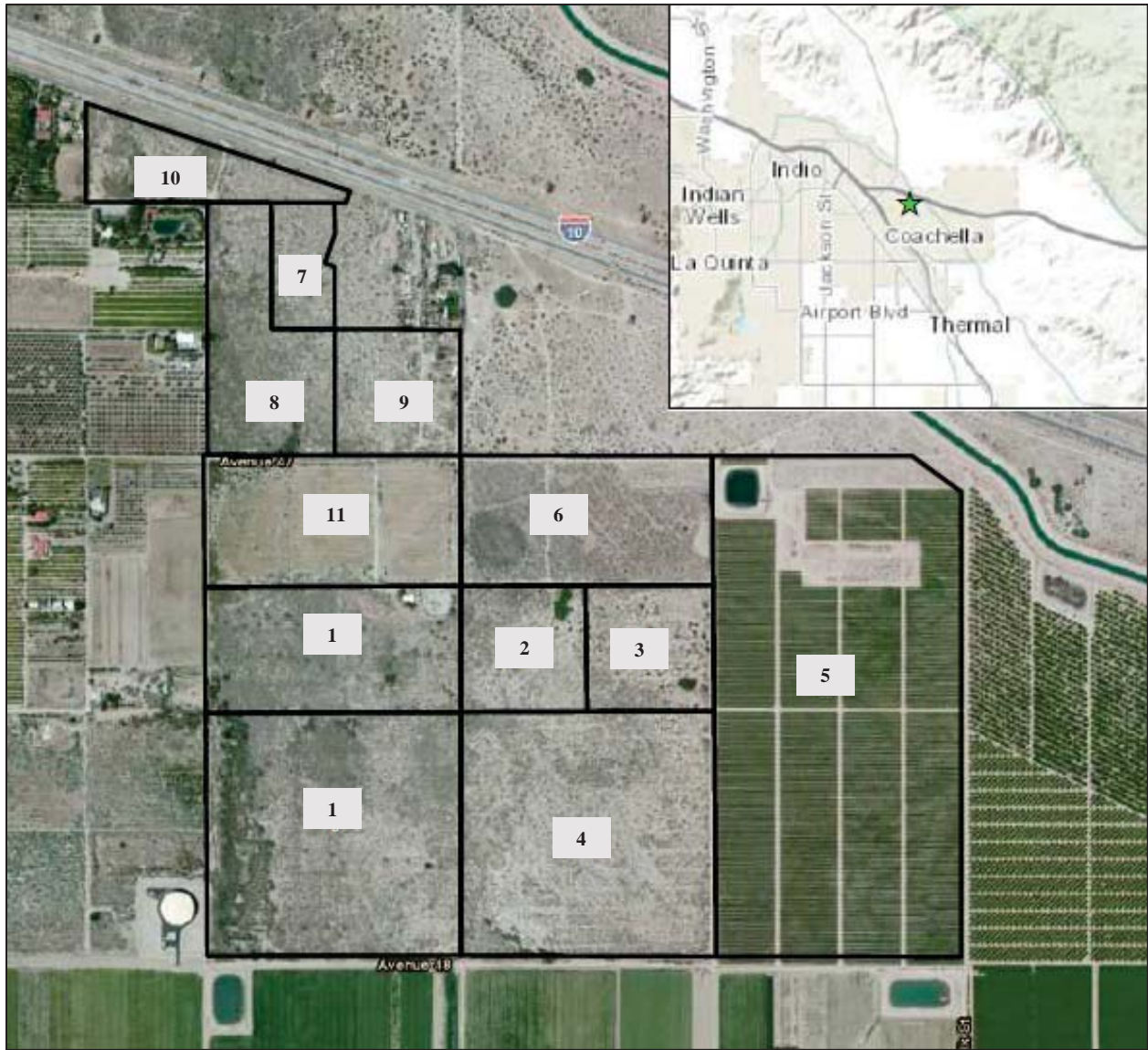
- Adoption of General Plan Amendment No. 14-01;
- Adoption of Specific Plan No. 14-01;
- Adoption of Change of Zone No. 14-01;
- Approval of Tentative Parcel Map No. 36872;
- Approval of Development Agreement;
- Tentative Map(s);
- Plot Plan(s);
- Conditional Use Permit(s);
- Various Minor Plot Plans (for landscaping [working drawings], wall and fence plans, monument signs, park plans, etc.);
- Statewide General Construction Permit(s);
- Grading Permit(s);
- Encroachment Permit(s); and
- Building Permit(s).

In addition to the above discretionary actions, this EIR may also be used by the following responsible agencies, dependent upon the review, approval, or permit requirements of each, in regard to the Project:

- Colorado Basin Regional Water Quality Control Board
- Coachella Water Authority
- Coachella Sanitary District
- South Coast Air Quality Management District
- Imperial Irrigation District

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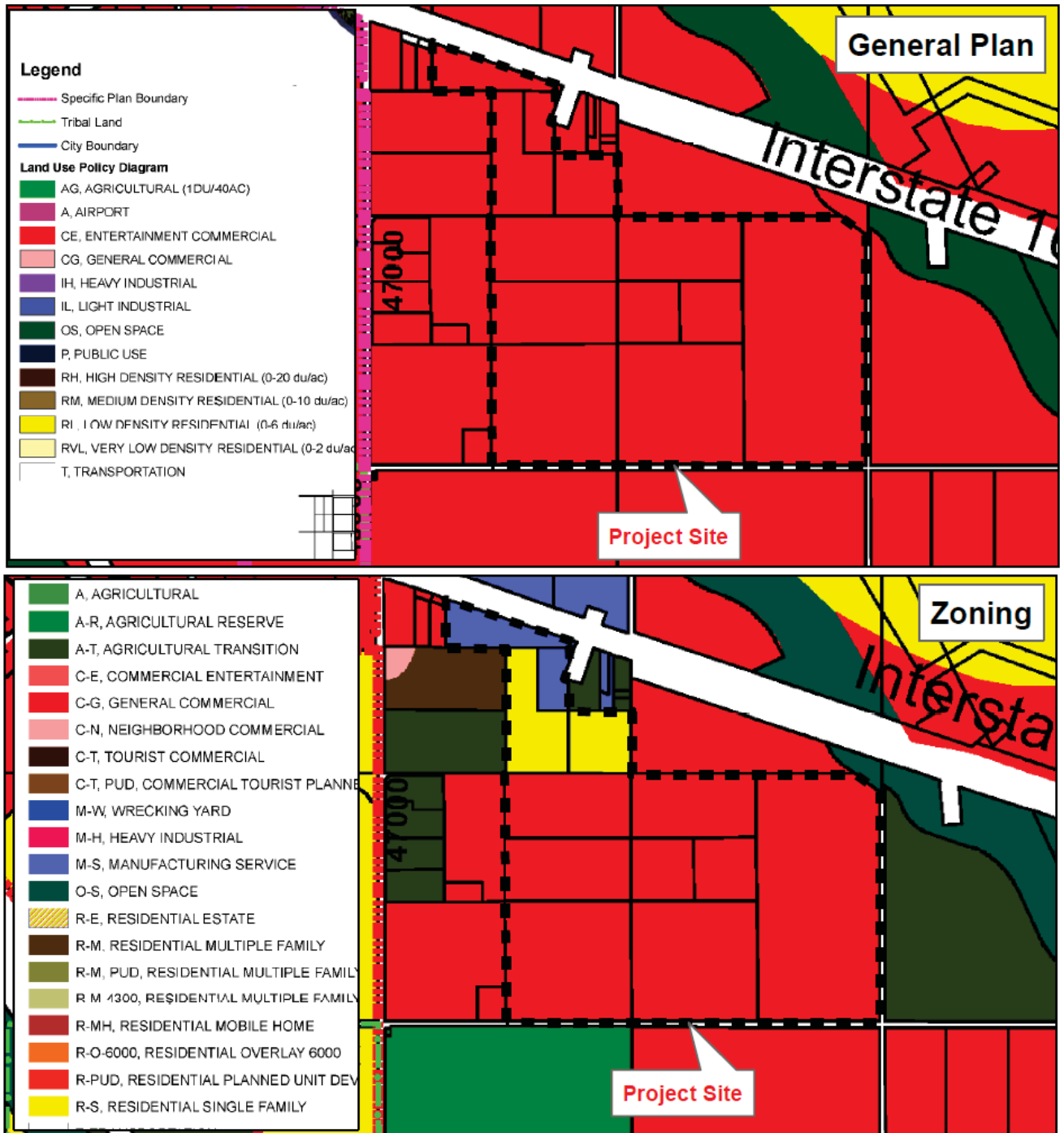
Figure 3.2-1
Parcel Locations



Source: On-Site and Off-Site Bio Report (Appendix E)

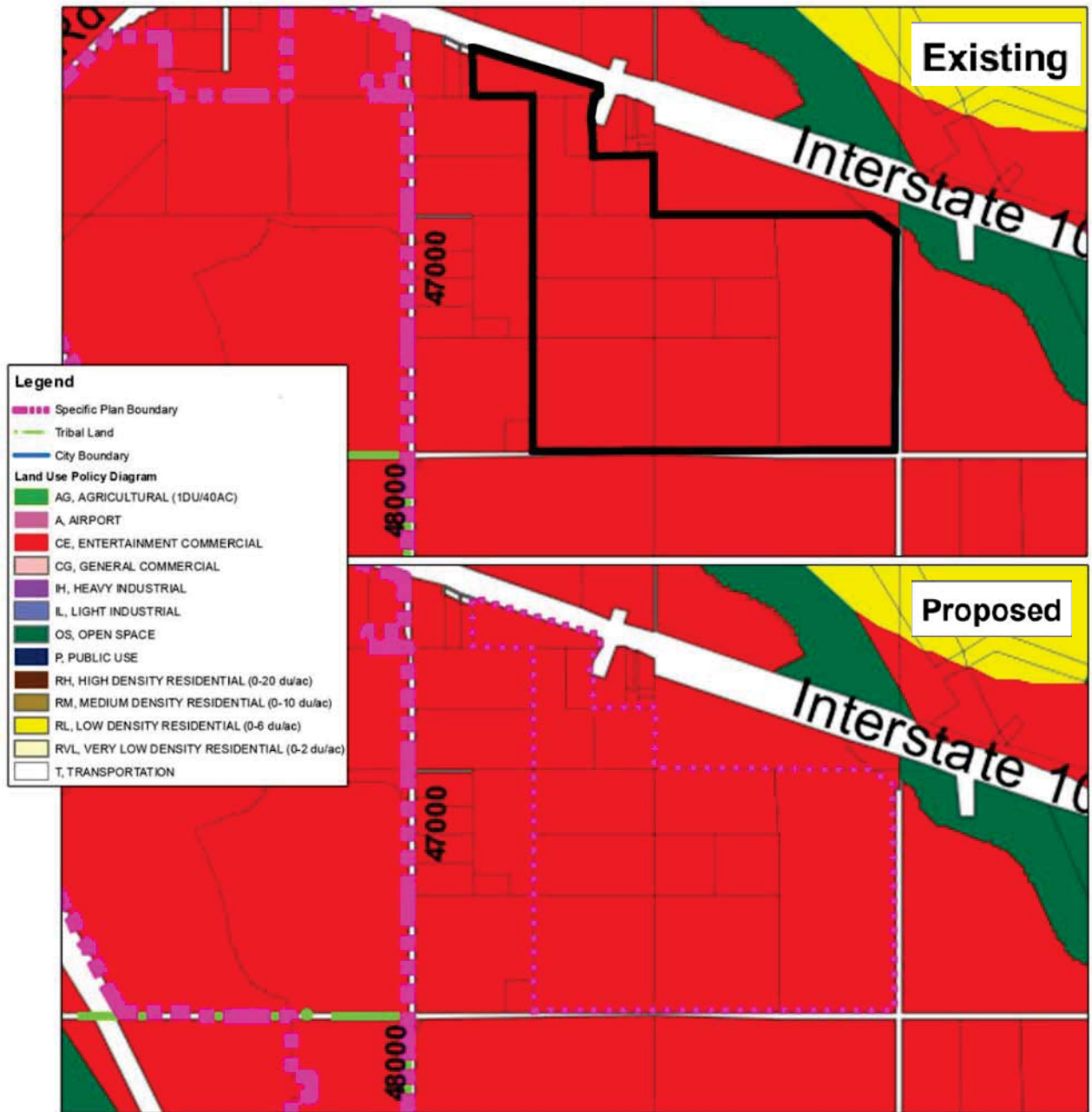
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Figure 3.4.1-1
 Existing General Plan and Zoning Classifications



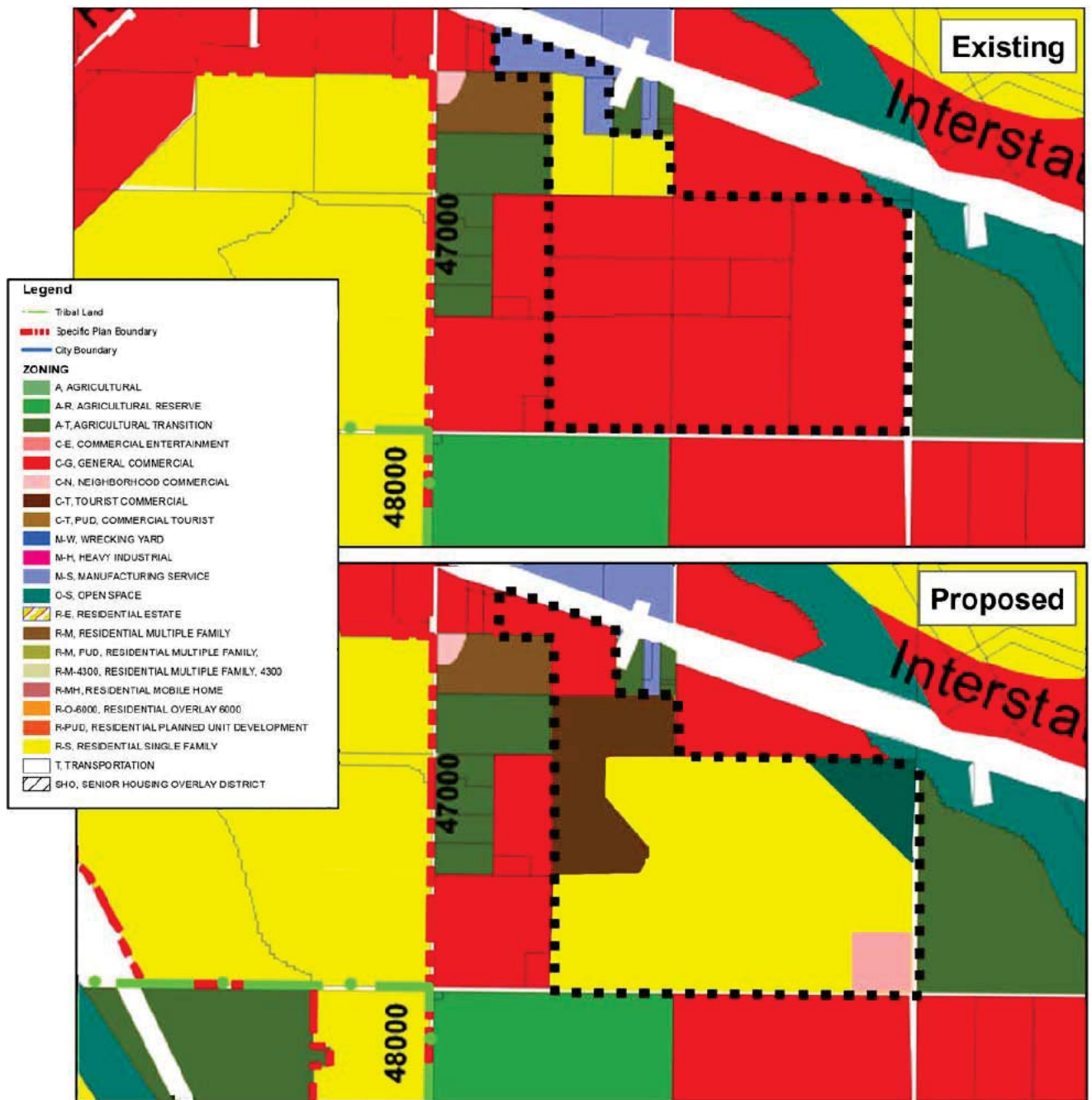
Source: Vista del Agua Specific plan 2018 (Appendix A)

Figure 3.4.1-2
 Proposed General Plan Amendment Exhibit



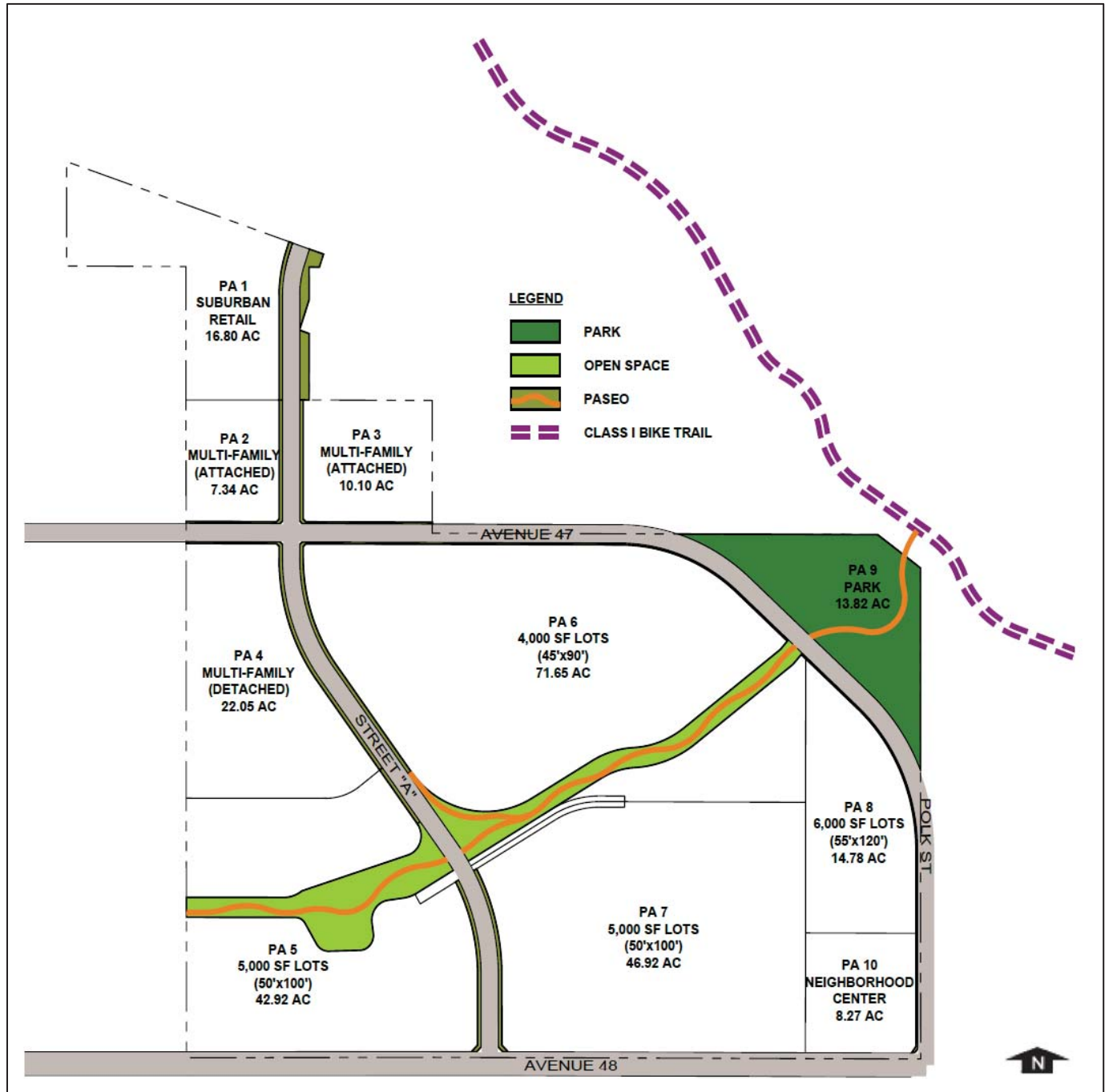
Source: Vista del Agua Specific plan 2018 (Appendix A) with revised graphics by Matthew Fagan Consulting Services, Inc.

Figure 3.4.1-3
 Proposed Change of Zone Exhibit



Source: Vista del Agua Specific plan 2018 (Appendix A) with revised graphics by Matthew Fagan Consulting Services, Inc.

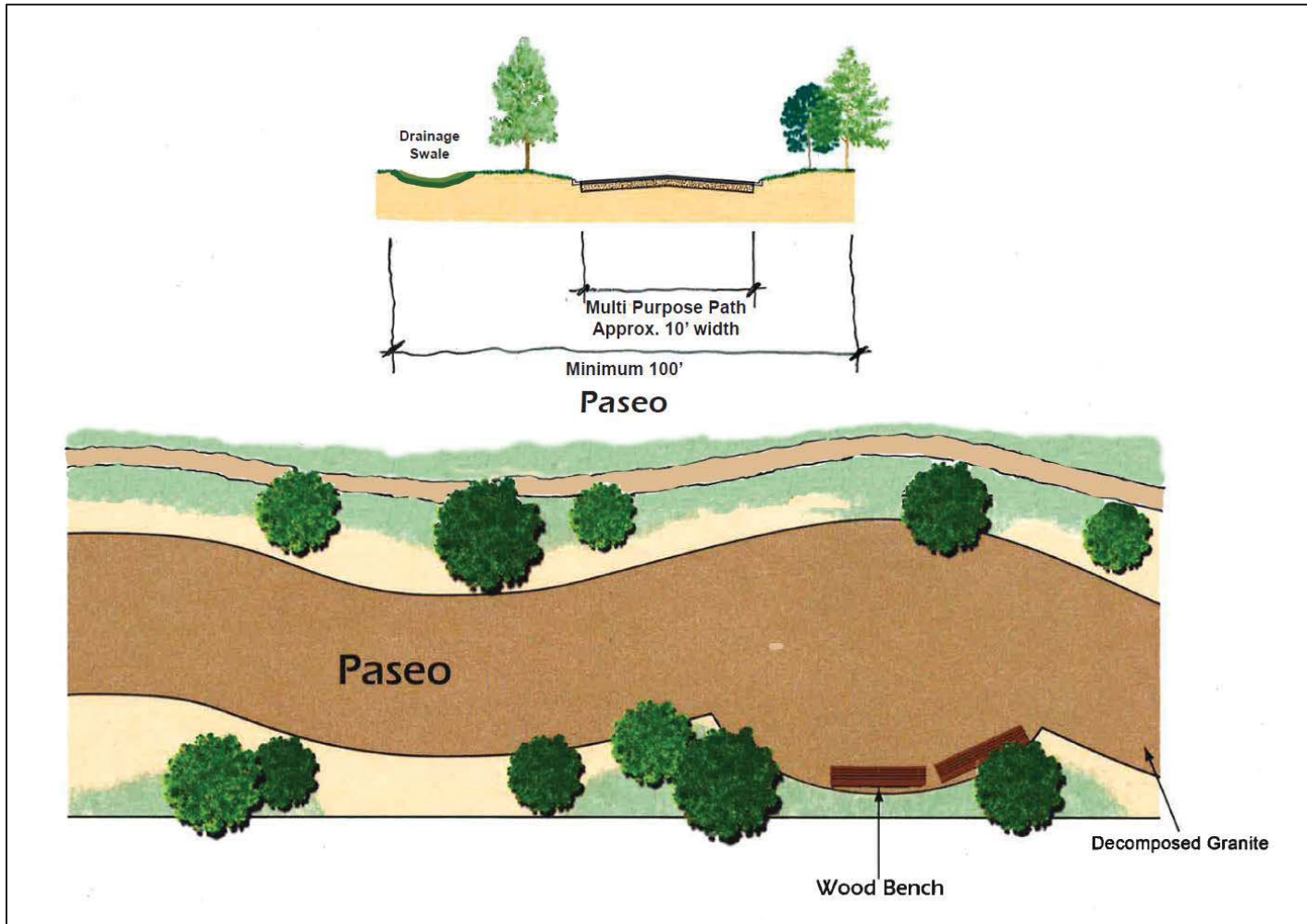
Figure 3.4.2-1
 Paseo/Trail System



Source: Vista del Agua Specific plan 2018 (Appendix A)

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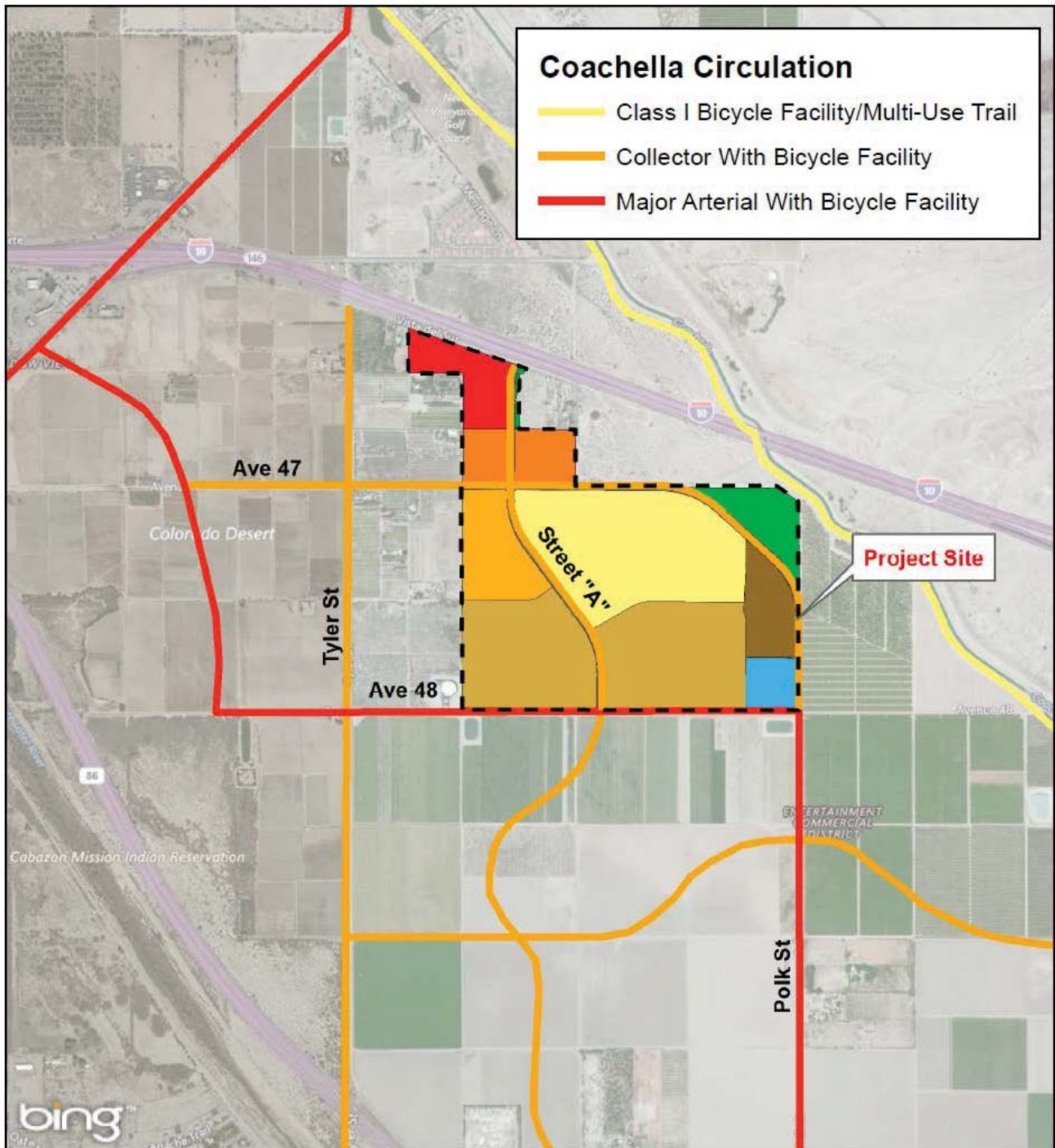
Figure 3.4.2-2
Paseo Detail



Source: Vista del Agua Specific plan 2018 (Appendix A)

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Figure 3.4.2-3
Circulation Plan
(refer to Figure 3.4.2-4, Roadway Cross Sections, below, for roadway right-of-way)

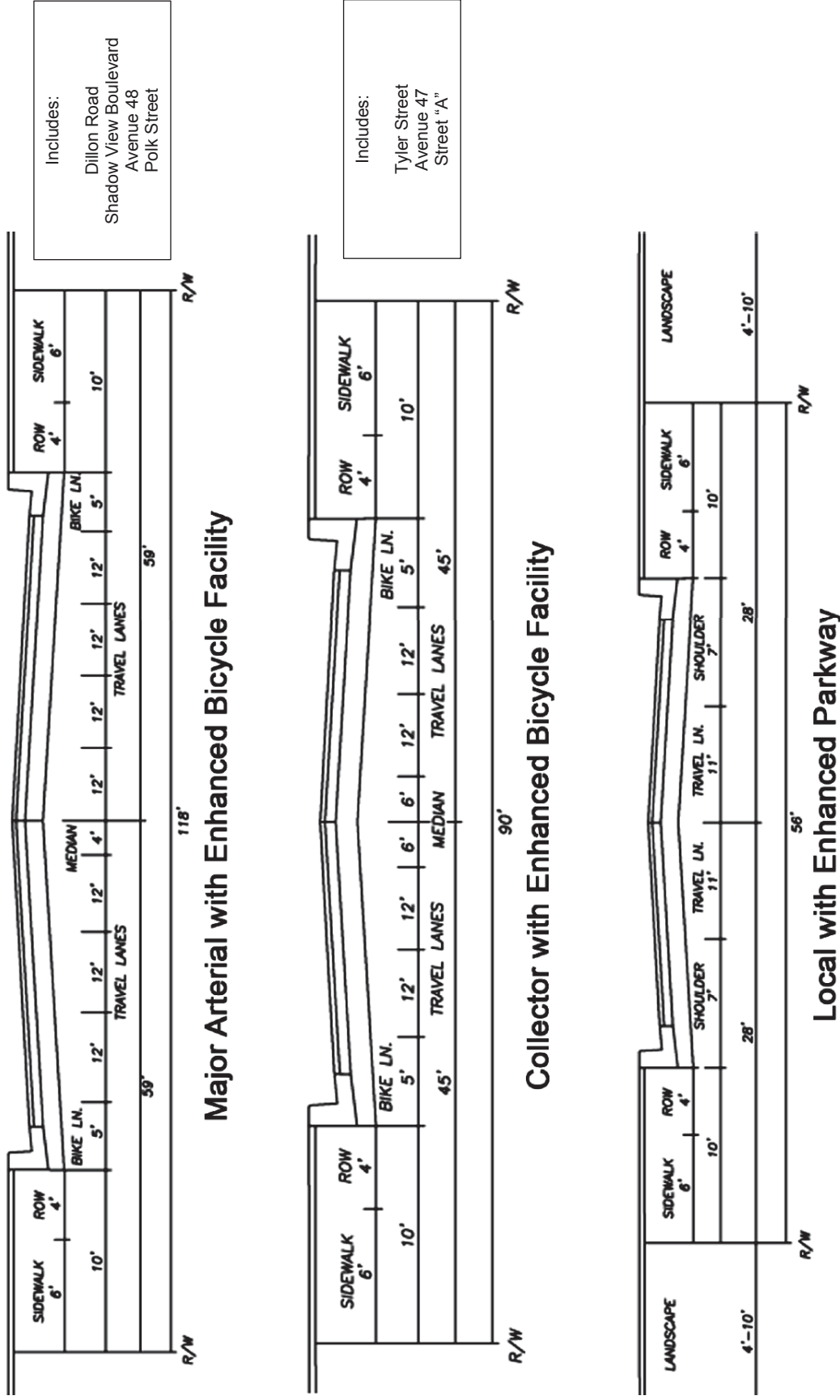


Source: Vista del Agua Specific plan 2018 (Appendix A)

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Figure 3.4.2-4
Roadway Cross-Sections



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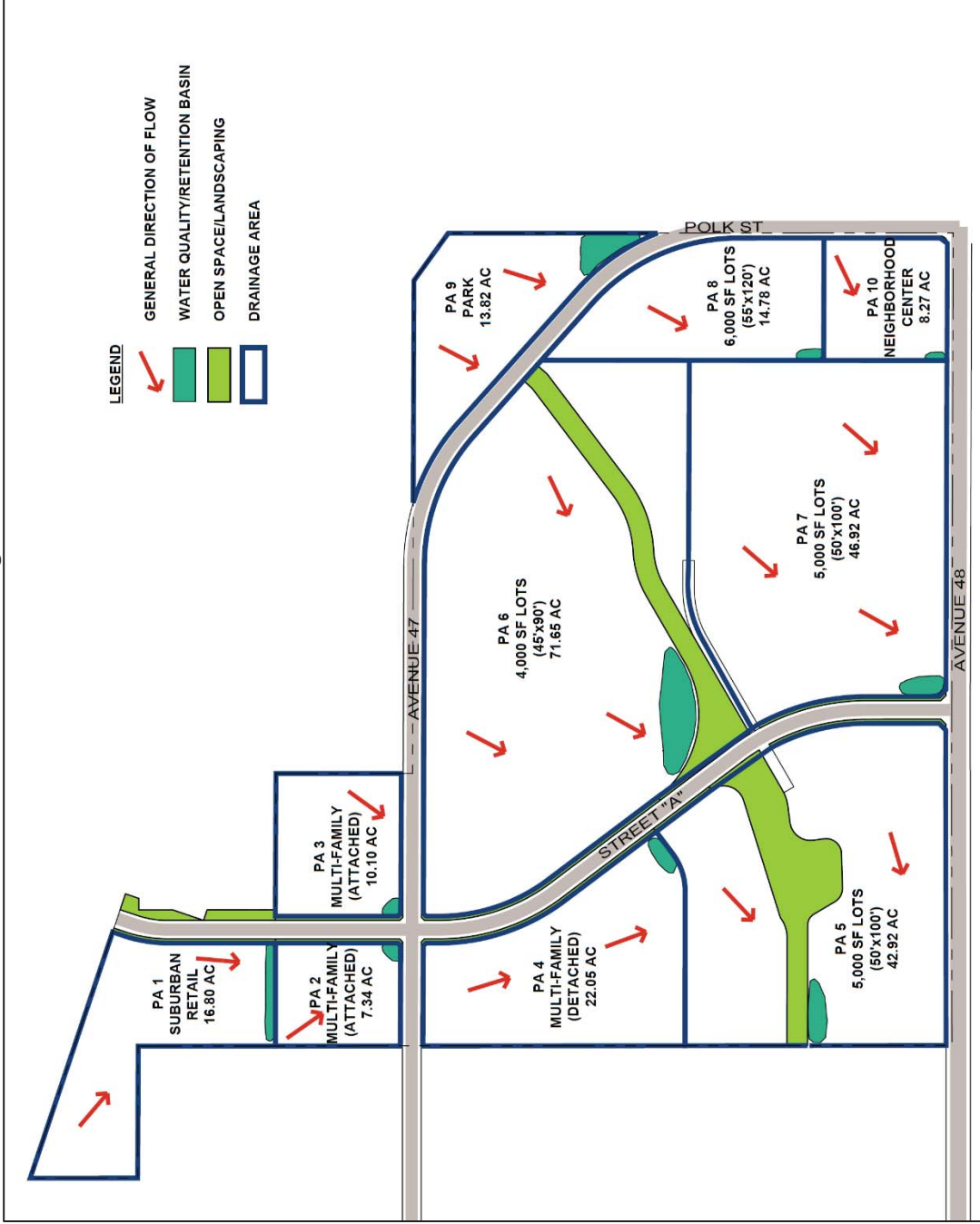
Source: Vista del Agua Specific plan 2018 (Appendix A)

Figure 3.4.2-5
Conceptual Grading Plan



Source: Vista del Agua Specific plan 2018 (Appendix A)

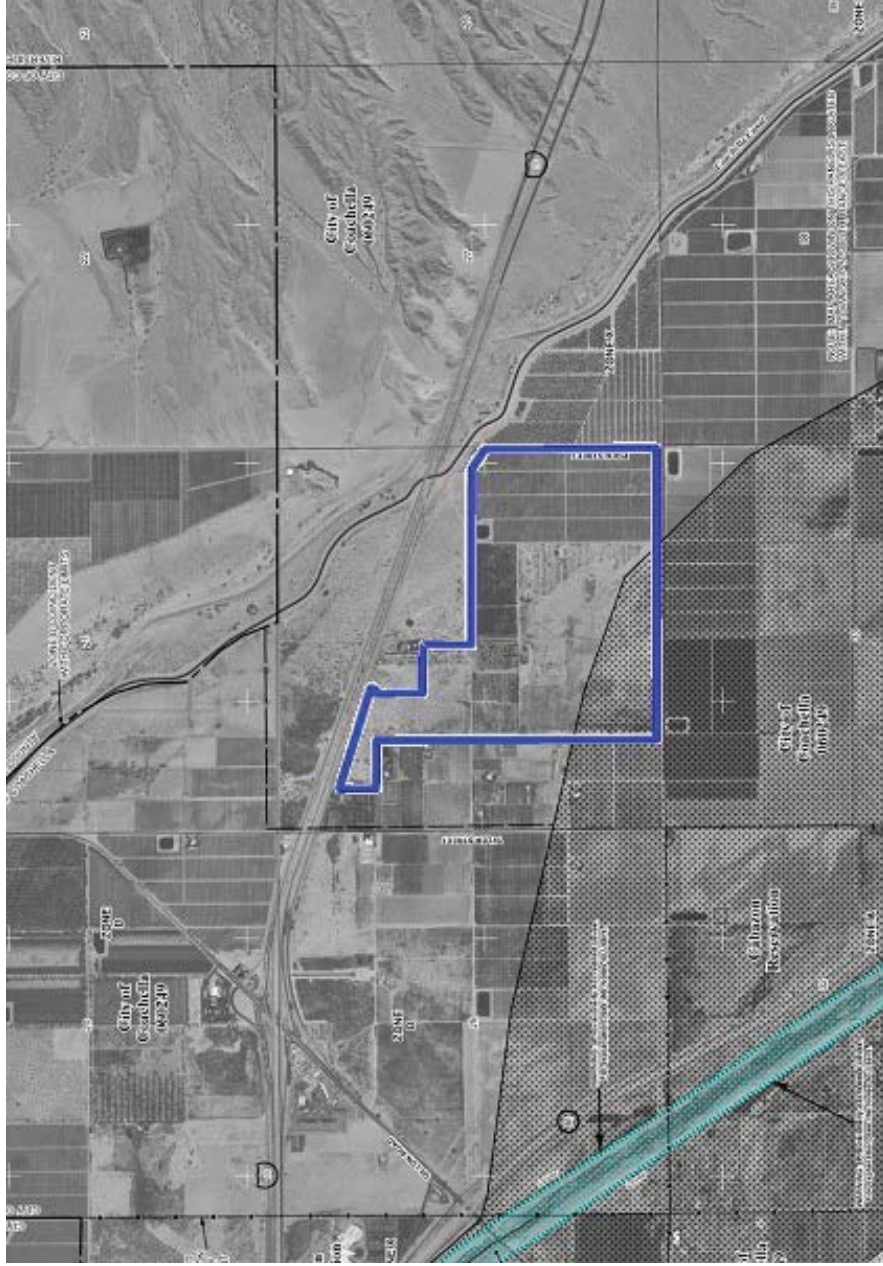
Figure 3.4.2-6
Master Drainage Plan



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Source: Vista del Agua Specific plan 2018 (Appendix A)

Figure 3.4.2-7
Flood Insurance Rate Map (FIRM) (Panel 2260G)



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood) also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, AR, AV, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A
No Base Flood Elevations determined.

ZONE AE
Base Flood Elevations determined.

ZONE AH
Flood depths of 1 to 3 feet (usually areas of ponds); Base Flood Elevations determined.

ZONE AO
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE AV
Area to be protected from 1% annual chance flood by a Federal flood control system under construction; no Base Flood Elevations determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be left free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS
Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

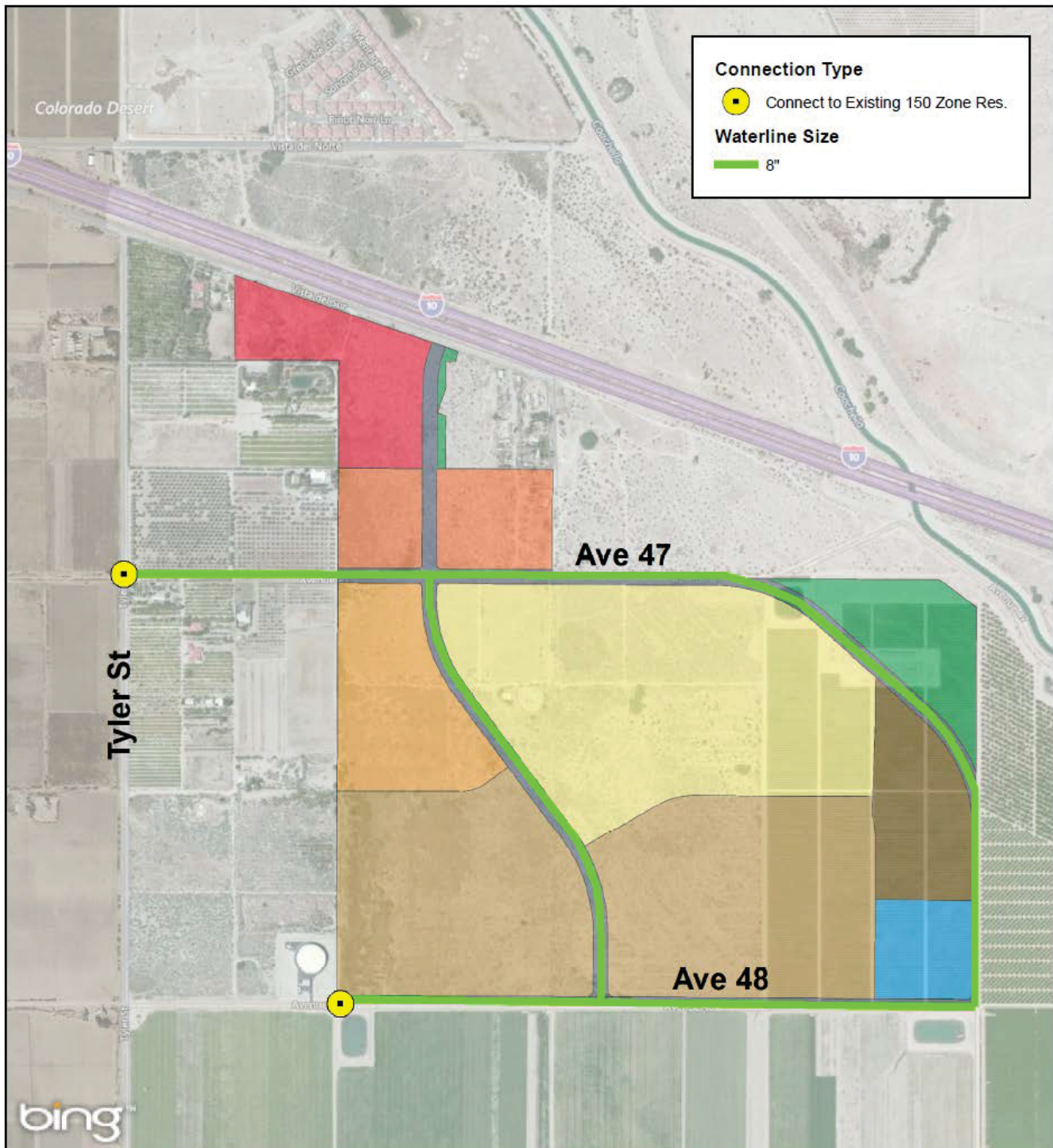
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
Zone V boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



Source: FEMA Website <http://msc.fema.gov/portal>, accessed July 2017

Figure 3.4.2-8
Master Water Plan

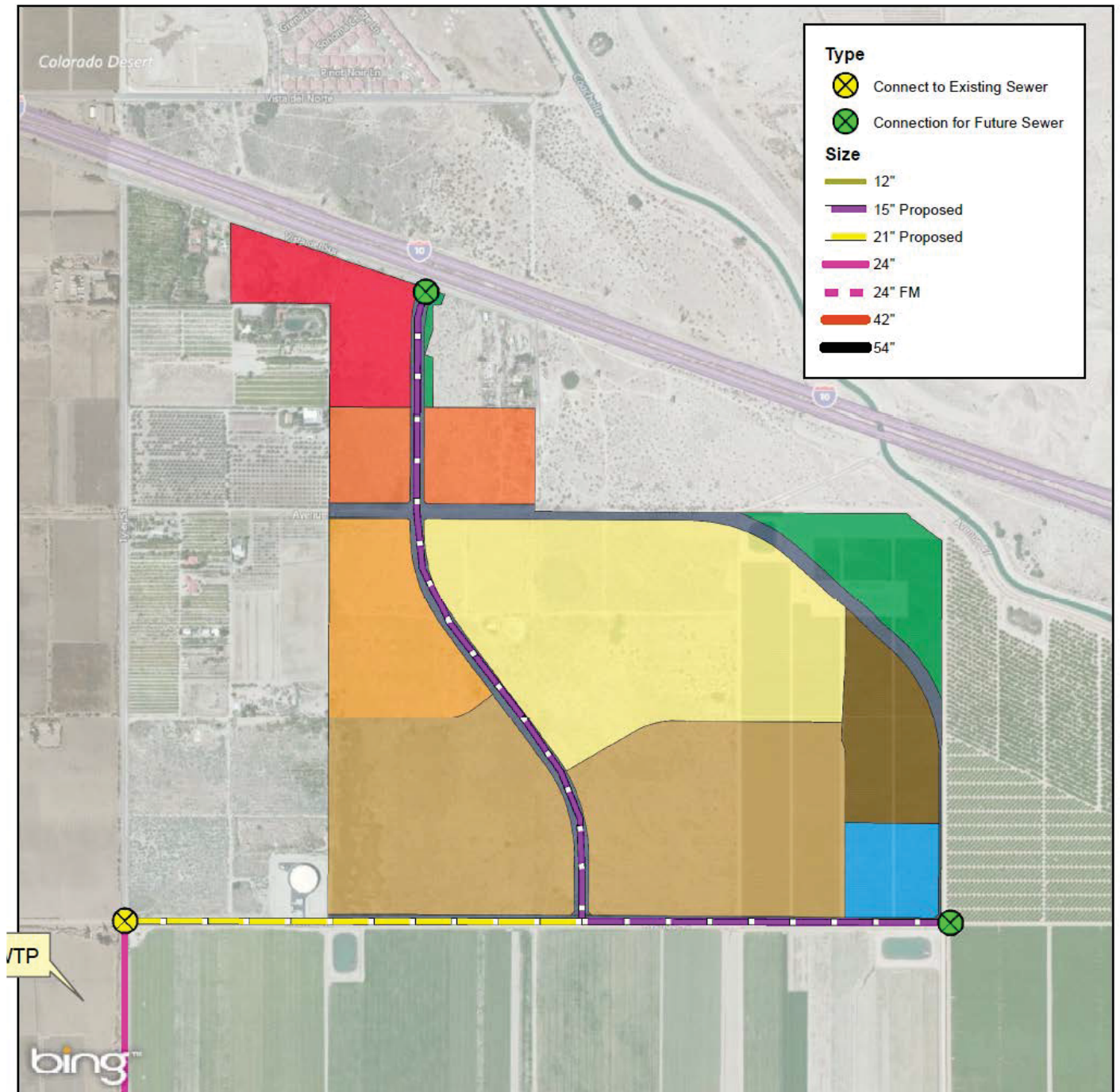


Source: Vista del Agua Specific plan 2018 (Appendix A)

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Figure 3.4.2-9
Master Sewer Plan

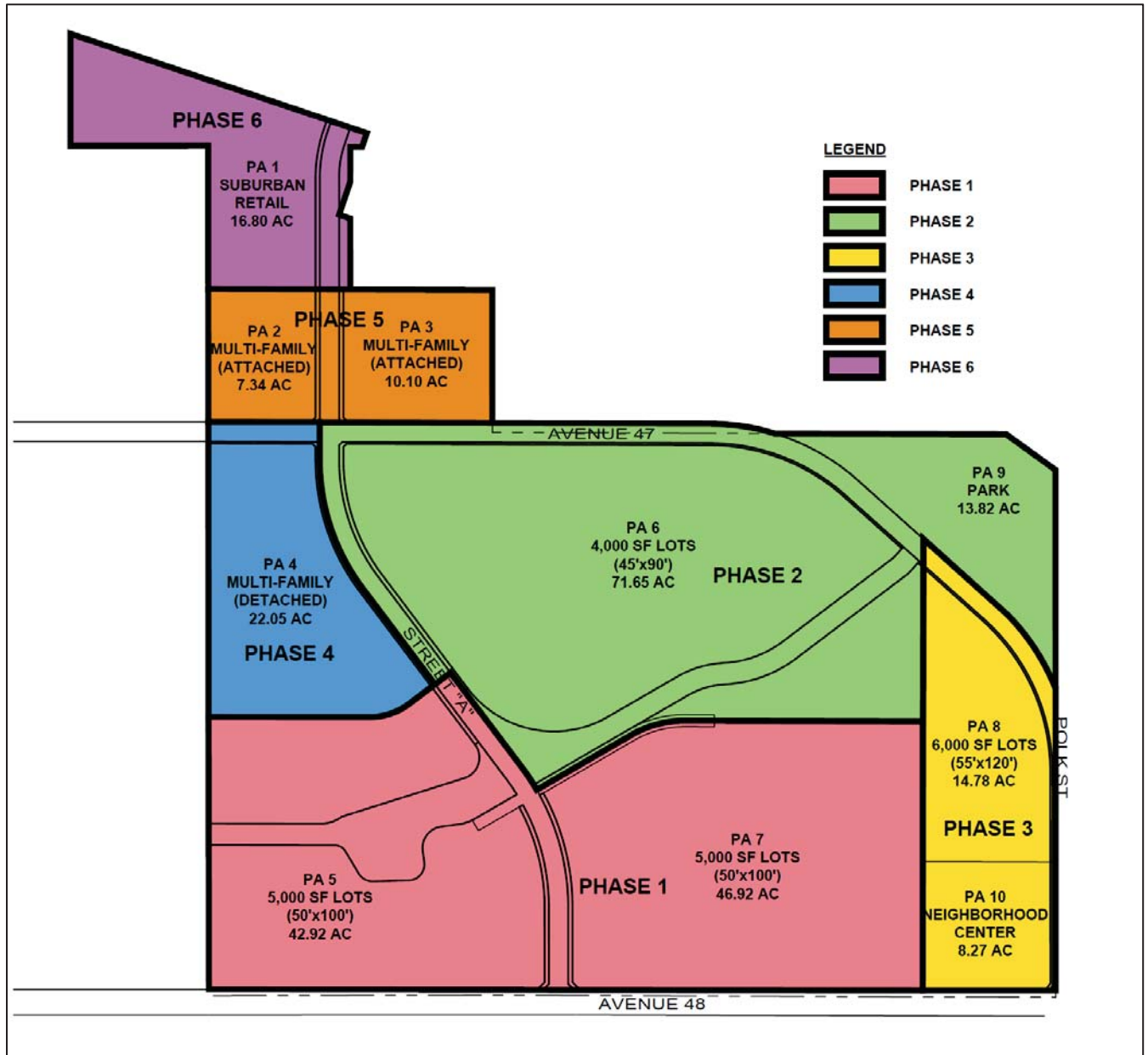


Source: Vista del Agua Specific plan 2018 (Appendix A)

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Figure 3.4.2-10
 Phasing Plan

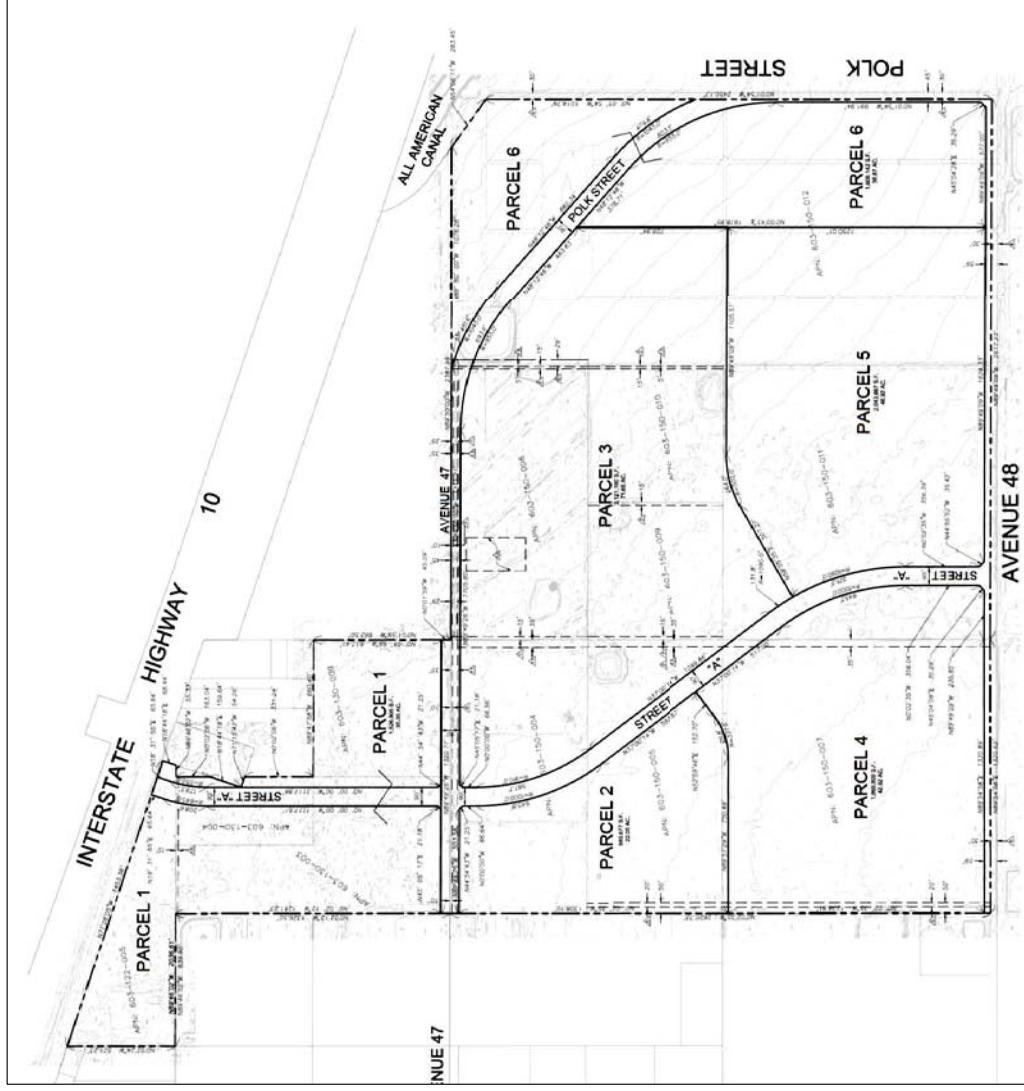


Source: Vista del Agua Specific plan 2018 (Appendix A)

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Figure 3.4.3-1
Tentative Parcel Map No. 36872



Source: TPM 36872 (Appendix B)

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Chapter 4 figures are located at the end of each Subchapter, not immediately following their reference in the text

4.1 INTRODUCTION

This chapter of the Environmental Impact Report (EIR) provides the detailed information used to forecast the type and significance of potential environmental impacts that implementation of the Project and related actions can cause if the Project is implemented as described in Chapter 3, *Project Setting and Project Description*.

In the following subchapters, each of the environmental topics identified in the Initial Study and in Chapter 2, *Introduction*, of this document as having a potential to cause a significant impact is evaluated. The environmental impact analysis section for each environmental topic is arranged in the following manner:

1. An introduction that summarizes the specific issues of concern for each subchapter, identified in the Environmental Assessment Form: Initial Study, and Notice of Preparation scoping process;
2. A summary of the current or existing environmental setting for each physical resource or human infrastructure system is presented as the baseline from which impacts will be forecast;
3. Based on stated assumptions, the potential direct and indirect impacts are forecast and the significance of impacts is assessed without applying any mitigation using identified criteria or thresholds of significance;
4. Recommended measures that can be implemented to substantially lessen potential environmental impacts are identified, and their effectiveness in reducing impacts to non-significant levels is evaluated;
5. Potential cumulative environmental impacts are assessed under each environmental topic, where applicable; and
6. Significant and unavoidable environmental impacts and any significant impacts that may be caused by implementing mitigation measures are addressed.

The baseline for the analysis in this EIR are the conditions at the time the Notice of Preparation (NOP) was issued. The NOP review period began on March 4, 2015 and ended 30 days later on April 2, 2015. Further, the environmental setting has changed little since the NOP was issued. This was validated through the revisions to the Air Quality, Greenhouse Gas, Noise, and Traffic technical studies in mid-2016. The Year 2022 was utilized for the complete buildout of the Project, however a longer timeframe for Project build-out will likely occur. If the Project is approved in 2018 this would allow approximately 4 years for the buildout of 1,640 residential units (a mixture of single-family and multi-family), a 13.8-acre park site, and 25.84 acres of commercial development, on approximately 304-acres (275-acres on-site and 29-acres off-site). Please reference Subchapter 4.1.1, Air Quality / Greenhouse Gas (Introduction) for detailed assumption on the baseline and buildout assumptions for the Project.

The text in the following subchapters summarizes all of the various mitigation measures anticipated to be incorporated into the Project to reduce potential significant environmental effects, either to the extent feasible or to a level of non-significance. After determining the degree of mitigation that can be achieved by the proposed measures and after identifying any

potential impacts that the mitigation measures can cause, a conclusion is provided regarding the remaining significant and/or unavoidable adverse impact for each environmental topic, if any.

This document utilizes conservative (worst case) assumptions in making impact forecasts based on the assumption that the impact forecasts should over-predict (if they cannot be absolutely quantified) consequences, rather than under-predict them. This includes overlapping phases of development, as well as the buildout of 1,640 dwelling units and 26.84 acres of commercial development. Many technical studies were prepared for this document, and they are incorporated by summarizing the technical information in this document to ensure technical accuracy. These technical studies themselves are compiled in a separate volume of the EIR (Volume 2).

4.1.1 Cumulative Impacts

Cumulative impacts describe potential environmental changes to the existing physical conditions that may occur as a result of project implementation together with other reasonably foreseeable, planned, and approved future projects producing related impacts. The CEQA Guidelines (Section 15355) defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. Projects that have progressed to the state that CEQA review has been initiated are treated as foreseeable probable future projects. As a result, a cumulative project list was developed based on input from the City staff for the Project Specific *Traffic Impact Study*. Please reference **Table 4.1.1-1, *Cumulative Projects Trip Generation*** and **Figure 4.1.1-1, *Cumulative Projects Location Map***.

**Table 4.1.1-1
Cumulative Projects Trip Generation**

| Zone Number | Riverside County Case Number | Land Use | Quantity | Units ¹ | Peak Hour | | | | Daily |
|---|--|--------------------------|----------|--------------------|--------------|--------------|--------------|--------------|----------------|
| | | | | | AM | | PM | | |
| | | | | | In | Out | In | Out | |
| 1 | Shadow View Specific Plan ³ | Single Family Homes | 1,600 | DU | 304 | 896 | 1,024 | 592 | 15,312 |
| | | Apartment | 1,000 | DU | 70 | 369 | 276 | 103 | 4,587 |
| | | Residential Subtotal | | | 374 | 1,265 | 1,300 | 695 | 19,899 |
| | | Commercial | 1,000 | TSF | 244 | 150 | 910 | 993 | 20,614 |
| <i>Zone 1 Subtotal</i> | | | | | <i>618</i> | <i>1,415</i> | <i>2,210</i> | <i>1,688</i> | <i>40,513</i> |
| 2 | La Entrada Specific Plan ⁴ | Med. Density Residential | 3,059 | DU | 170 | 1,075 | 873 | 319 | 12,836 |
| | | High Density Residential | 2,552 | DU | 161 | 946 | 782 | 297 | 11,441 |
| | | Low Density Residential | 2,169 | DU | 293 | 1,178 | 1,121 | 485 | 14,982 |
| | | Regional Park | 177 | AC | 10 | 10 | 15 | 18 | 735 |
| | | Retail | 1,261 | TSF | 778 | 497 | 2,279 | 2,481 | 56,497 |
| | | General Office | 250 | TSF | 305 | 43 | 61 | 268 | 2,425 |
| | | Elementary School | 3,399 | STN | 153 | 126 | 46 | 47 | 799 |
| | | Middle School | 864 | STN | 47 | 38 | 12 | 13 | 255 |
| <i>Zone 2 Subtotal</i> | | | | | <i>1,917</i> | <i>3,913</i> | <i>5,189</i> | <i>3,928</i> | <i>99,970</i> |
| 3 | TTM34293 | Single Family Homes | 129 | DU | 25 | 72 | 81 | 48 | 1,228 |
| | TTM35005 | Single Family Homes | 842 | DU | 160 | 472 | 530 | 312 | 8,016 |
| | | Apartment | 242 | DU | 24 | 99 | 106 | 56 | 1,609 |
| <i>Zone 3 Subtotal</i> | | | | | <i>209</i> | <i>643</i> | <i>717</i> | <i>416</i> | <i>10,853</i> |
| 4 | CUP254 | Retail | 3.8 | TSF | 2 | 1 | 7 | 7 | 162 |
| | | Restaurant | 5.3 | TSF | 32 | 26 | 31 | 21 | 674 |
| | | Fast Food W/ Drive Thru | 2.4 | TSF | 56 | 53 | 41 | 38 | 1,191 |
| | | Automated Carwash | 3.85 | TSF | 12 | 12 | 28 | 27 | 599 |
| <i>Zone 4 Subtotal</i> | | | | | <i>102</i> | <i>92</i> | <i>107</i> | <i>93</i> | <i>2,626</i> |
| 5 | CUP260 | Recycling Center | 6 | AC | 2 | 2 | 1 | 2 | 36 |
| | <i>Zone 5 Subtotal</i> | | | | | <i>2</i> | <i>2</i> | <i>1</i> | <i>2</i> |
| 6 | TTM33556 | Single Family Homes | 295 | DU | 56 | 165 | 186 | 109 | 2,808 |
| | <i>Zone 6 Subtotal</i> | | | | | <i>56</i> | <i>165</i> | <i>186</i> | <i>109</i> |
| 7 | TTM32263 | Single Family Homes | 322 | DU | 61 | 180 | 203 | 119 | 3,065 |
| | <i>Zone 7 Subtotal</i> | | | | | <i>61</i> | <i>180</i> | <i>203</i> | <i>119</i> |
| 8 | TTM36394 | Single Family Homes | 46 | DU | 9 | 26 | 29 | 17 | 438 |
| | <i>Zone 8 Subtotal</i> | | | | | <i>9</i> | <i>26</i> | <i>29</i> | <i>17</i> |
| <i>Total Cumulative Project Trip Generation</i> | | | | | <i>2,974</i> | <i>6,436</i> | <i>8,642</i> | <i>6,372</i> | <i>160,309</i> |

¹ DU = Dwelling Units
TSF = Thousand Square Feet
AC = Acres
STN = Students

² Rates approved by the County of Riverside.

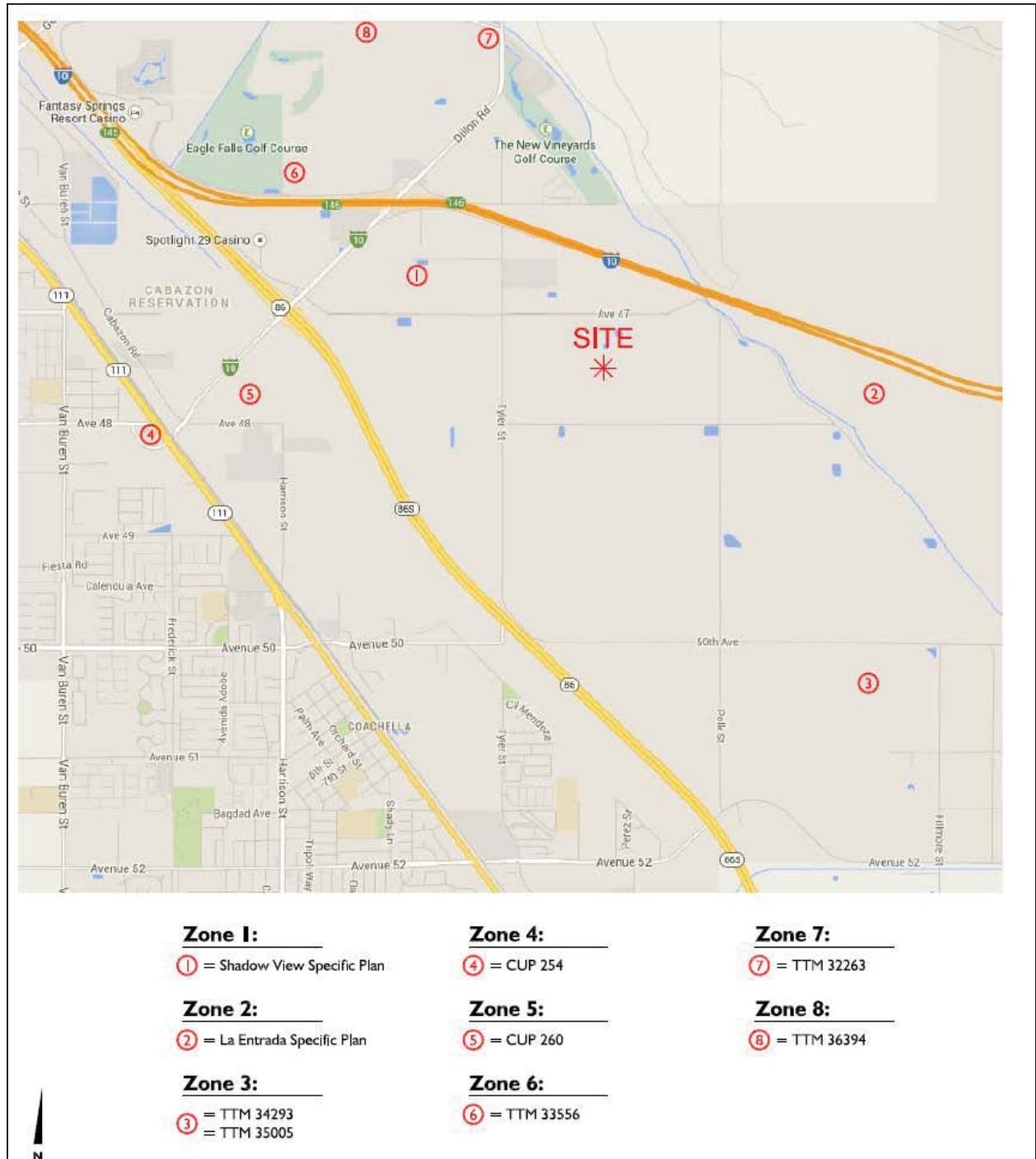
³ Source: Shadow View Specific Plan Revised Draft EIR, March 2006

⁴ Source: La Entrada Specific Plan Draft EIR, July 2013

Source: TIS (Appendix O)

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**Figure 4.1.1-1
Cumulative Projects Location Map**



Source: TIS (Appendix O)

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CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.2 figures are located at the end of this subchapter, not immediately following their reference in text

4.2 AESTHETICS RESOURCES

4.2.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of aesthetics resources from implementation of the Project. Section E.I., Aesthetic Resources, of the Initial Study posed the following questions, asking whether the Project would:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?; and/or,
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Based on the analysis in the Initial Study it was determined that all of the issue areas related to aesthetic resources in the questions asked above **would** be further analyzed in the (Environmental Impact Report) EIR.

The Initial Study indicated the following pertaining to the Project affecting aesthetic resources:

“Implementation of the Project (primarily on-site components) may have a substantial adverse effect on a scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; and/or, create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The Project represents a change to the physical environment, which will result in a long-term visual aesthetic that differs from the current agricultural setting. Grading of the site and future structures of varying heights within the Project site will have a potentially significant impact on the aesthetic quality of the site. Associated lighting from the new development, may substantially affect nighttime views in the area. A Project-specific aesthetic analysis shall be prepared in order to address questions 1.a and c, above. In order to ensure a comprehensive discussion of all of the aesthetic resources issues raised above, they will be analyzed in the EIR.”

These issues will be discussed below as set in the following framework:

- Environmental Setting: Aesthetics
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact

- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015) the City of Coachella General Plan Update Final EIR (2015) and Vista Del Agua Specific Plan (**Appendix B**) were used in the analyses presented in this subchapter. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

No comments were raised at the public scoping meeting, nor were any comments received regarding aesthetic resources in response to the Notice of Preparation (NOP). Therefore, the issues identified in the Initial Study, and described in the NOP, are the focus of the following evaluation of aesthetic resources.

The aesthetics analysis presented in this section addresses the proposed Project's visual relationship with existing and future land uses in the area surrounding the Project site. The analysis of views is based on the extent to which the proposed Specific Plan development may impact existing views and modify visual access to aesthetic features from nearby public vantage points and corridors, as well as have potential to increase light and glare in the Project area.

4.2.2 Environmental Setting

Visual Character. The Project site is currently undeveloped, with numerous unimproved dirt access roads used primarily for agricultural activities in the area. Adjacent land uses consist of cropland and sparse, rural residential development to the south, east, and west, with Interstate-10 (I-10) at the Project's northernmost Project boundary.

The Mecca Hills, which reach a peak elevation of 1,648 feet (Mecca Hill), are 4-5 miles to the southeast. The Indio Hills begin 2-3 miles to the north at elevations of a few hundred feet but later attain elevations over 6,500 feet to the northwest. Further to the east are the Little San Bernardino Mountains, which attain elevations over 3,000 feet. The Whitewater River, tamed by the Coachella Storm Water Channel, is the principal watercourse of the Coachella Valley and is about 0.75 miles southwest of the Project site. The Coachella Canal is directly adjacent to the northeast corner of the Project site.

The Project site is comprised of gently sloping desert and disturbed agricultural land with a seventy-six foot (76') elevation difference. The highest elevation at the northeast corner is approximately 37 feet above mean sea level (MSL) sloping toward the southwest corner to approximately 58 feet below MSL. The Project site was once covered by Sonoran creosote bush scrub and saltbush scrub with the latter more common in the southern portion of the property. The eastern 30% of the property is currently covered with vineyards.

The site is disturbed with evidence of ground clearing, as well as off-road vehicle use and illegal refuse dumping. Portions of the site are also being used as a paintball course.

Existing Lighting and Glare. Due to the fact that the Project site is vacant and undeveloped and is generally surrounded by undeveloped vacant land and agricultural uses, nighttime lighting present in the vicinity of the Project site consists of minimal lighting from street lights and vehicle headlights and tail lights passing by on nearby roads.

There are no sensitive uses relative to nighttime lighting and daytime glare on or in the vicinity of the Project site. The agricultural land west of the Project site is not considered a light-sensitive use because most farming operations generally occur during daylight hours. Sensitive receivers relative to daytime glare from reflected sunlight include motorists traveling on the roads adjacent to the Project site, including I-10 to the north. There are no existing buildings or facilities on the Project site that would generate significant amounts of light or glare.

4.2.2.1 Related Regulations

State

The California Scenic Highways program was established in 1963 to “preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways.” The state laws governing the Scenic Highway Program are found in the Streets and Highway Code, Section 260 et seq (<http://codes.findlaw.com/ca/streets-and-highways-code/shc-sect-260.html>). According to the California Streets and Highway Code and the California Department of Transportation (Caltrans), no State Designated or Eligible Scenic Highways exist within the immediate area. The closest State Eligible Scenic Highways is I-10.

City of Coachella Municipal Code

The City of Coachella Municipal Code contains several provisions that are expressly designed to identify and limit aesthetic impacts as projects are undergoing review by the City. Specifically, the following provisions of the Municipal Code regulate impacts related to aesthetics, light, and glare throughout all areas of the City:

Chapter 7.04.070 – Construction Activities: 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.

Chapter 16.28.150(L) - Improvements and Grading: Street lighting facilities shall be provided in accordance with the council’s policy for the area of the city where the subdivision is located. Lighting shall be adequate to permit proper policing of the subdivision and shall be so screened or otherwise designed as not to interfere with views from the hillsides of the city.

Chapter 17.56.010(J)(2)(e) - Signs: Glare from Signs. Illuminated signs shall be designed in such a manner as to avoid undue glare or reflection of light onto private property in the surrounding area or rights-of-way and shall be erected and located in a manner satisfactory to the director of community development. The intensity of lighting of sign may be reviewed in the field by the director of community development who may require the reduction of intensity.

17.54.010 (K) - Off-Street Parking and Loading: Lighting. Parking area lighting is not always required; however, if lighted parking areas are required parking areas, such lighting fixtures shall be located, with hoods provided and adjusted, so as to preclude the direct glare of the light from shining onto property or streets.

City of Coachella General Plan

The City of Coachella's recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.1, Aesthetic Resources, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on aesthetic resources and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and implementing policies address the preservation of aesthetic resources and are applicable to the Project. These goals and policies may be pertinent to other chapters and subchapters of the EIR and are, therefore, also included under those chapters and subchapters:

Land Use + Community Character Element

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.4 Natural context. Retain the City's natural infrastructure and visual character derived from topography, farmlands and waterway corridors.

2.5 High quality construction and architecture. Require high-quality and long-lasting building materials on all new development projects in the City. Encourage innovative and quality architecture in the City with all new public and private projects.

2.6 Architectural diversity. A diversity of architectural styles is encouraged, particularly those that have their roots in the heritage of Southern California and the Desert Southwest.

Sustainability + Natural Environment Element

Goal 6. Visual Resources. A city with stunning views of the hillsides and mountains surrounding the Coachella Valley.

6.1 View corridor preservation. Protect and preserve existing, signature views of the hills and mountains from the City.

6.2 Scenic roadways. Minimize the impact on views by restricting new billboards along the City's roads and highways. Electronic and animated billboards should be prohibited except in rare and special circumstances.

6.5 Dark sky: Limit light pollution from outdoor sources, especially in rural, hillside and mountain areas, and open spaces, to maintain darkness for night sky viewing.

4.2.3 Thresholds of Significance

The Initial Study contains four (4) criteria for determining impacts to aesthetics resources. Based on these thresholds, implementation of the proposed project would have a significant adverse impact related to aesthetics if it would:

- a. Have a substantial adverse effect on a scenic vista;
- b. Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- c. Result in the degradation of the existing visual character or quality of the site and its surroundings; and/or
- d. Result in the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.2.4 Potential Impacts

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

Less Than Significant Impact

According to p. 4.1-5 of the City of Coachella General Plan Update Final EIR (2015):

“An adverse effect under CEQA could occur if new development would block or substantially change views of scenic vistas.

Within the Planning Area, scenic vistas provide valuable aesthetic resources, including expansive landscape views of the Coachella Valley, to the residents and patrons of the City and Sphere of Influence. Scenic vistas within the Planning Area include the sweeping views of the Mecca Hills in the eastern portion of the Planning Area. Additional scenic vistas that are not within the Planning Area, but can be seen from within the Planning Area, include the Santa Rosa and San Jacinto Mountains, which can be viewed to the west and southwest of the Planning Area, and Little San Bernardino Mountains, which can be viewed to the north and northwest of the Planning Area. Existing views of Coachella Valley mountain ranges as shown by in Figure 4.1-1 and 4.1-2.

Under the development of the CGPU, scenic vistas within the Planning Area are to remain largely undeveloped, or only have very minimal residential development. Scenic resources are located within subarea 13, 14, 16 and 17, and are planned for minimal impact development of preserved land under the CGPU subarea designations. Development under the CGPU would occur mostly in the western portion of the City where the majority of population and development exists today.”

The Project site is located in subarea 11; therefore, there are no “scenic resources” present on-site, as defined in the City of Coachella General Plan Update Final EIR (2015).

Pp. 4.1-5 and 4.1-6 of the City of Coachella General Plan Update Final EIR (2015) continues:

In order to protect scenic resources, the CGPU includes several policies to guide future development so as to limit impacts to views of scenic resources, such as adding design restrictions for billboards along freeways, and preserving important aesthetic resources including agriculture land uses, open space, rock outcroppings, and important landmarks. These policies would protect aesthetic resources in the Planning Area by restricting large structures from obstructing views and by preserving aesthetically important landscape features. These policies would prevent unsightly billboards and development on, or blocking views of, landmarks and other aesthetics features in the region and Planning Area. Additionally, the CGPU includes policies that will limit the magnitude of change that could occur through development of the Mecca Hills. Specifically, the CGPU requires the protection and preservation of important views of the hills and mountains surrounding the City. As shown on the General Plan Designation Map in the Land Use and Community Form Element, the City is planning for lower density housing in the north and east portions of the City with ample areas set aside for open space. Lower density housing and open space will prevent impacts from occurring because this pattern would result in a less intense use of land, which would only cause minimal change to the views of the existing open space. This land use program is further supported by policies that encourage the preservation of the natural topography and features of undeveloped and working lands in the Planning Area. Finally, the CGPU limits the impact of views from roadways by restricting new billboards along the City’s roads and highways, helping to preserve transportation corridors as view corridors of the scenic vistas.”

The policies that will ensure the protection of scenic vistas in the Planning Area, which can be found in the Sustainability + Natural Environment Element, from the City of Coachella General Plan Update Final EIR (2015) are listed below. A Project consistency analysis is provided.

6.1 View corridor preservation. Protect and preserve existing, signature views of the hills and mountains from the City.

Response: The Project is consistent with the General Plan Land Use designations and will result in a development fabric, as anticipated in the City of Coachella General Plan Update Final EIR (2015). The Project site is not located within subareas 13, 14, or 16 where the City of Coachella General Plan Update Final EIR (2015) identified scenic resources.

6.2 Scenic roadways. Minimize the impact on views by restricting new billboards along the City’s roads and highways. Electronic and animated billboards should be prohibited except in

rare and special circumstances.

Response: Consistent. Billboards are not permitted in the Specific Plan.

10.8 Preservation of natural land features. Preserve significant natural features and incorporate into all developments. Such features may include ridges, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, important or landmark trees and views.

Response: Consistent. The Project does not contain any significant natural features, which may include: ridges, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, important or landmark trees and views.

10.9 Working lands. Encourage the preservation of agricultural and other working lands as important aesthetic and open space resources of Coachella.

Response: Consistent. The Project, as proposed, does not contain any agricultural/other working lands General Plan Land Use designations.

Based on this analysis, implementation of the Project will not result in a substantial adverse effect on a scenic vista. Any impacts are considered less than significant.

Threshold b: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

Significant Unavoidable Adverse Impact

Development of the Project site would substantially alter the existing visual character and quality of the site. The existing gently sloping desert and disturbed agricultural land that currently characterizes the Project site would be developed into a master-planned community consisting of residential, mixed-use, commercial, park/recreation, and open space uses, permanently changing the visual character of the Project site.

A majority of the Project traffic will use Avenue 48/Shadow View Drive as the main access roadway and Avenue 47 as a secondary roadway. This results in a total of approximately 11,600' of off-site street improvements. It is anticipated that the Project will be responsible for a 30' paved section of these improvements (the ultimate street section is 118' for Avenue 48 and 90' for Avenue 47), commensurate with the needs/impacts generated by the Project. There will also be a traffic signal installed at Dillon Road and Vista Del Sur.

Construction of the phases of development would include mass grading consistent with **Figure 3.4.2-10, Phasing Plan**, with subsequent grading for individual tracts within the Specific Plan as approved, followed by construction of residential, and commercial, and open space uses. The visual character of the Project would substantially change over what currently exists.

The Specific Plan includes Design Guidelines that are consistent with the visual character of development throughout the City. Design Guidelines within the Specific Plan include architectural guidelines, which specify the architectural style, roof form, materials, structural elements, windows, and ornamentation of the proposed residential buildings. In addition, the design guidelines establish design criteria for nonresidential uses related to form, height,

massing, materials, and colors. Further, landscape design guidelines have been included to ensure that landscaping of public spaces is complementary to the proposed development. Subsequent Tentative Tract Maps would be required to adhere to the design guidelines in the Specific Plan. **Standard Condition SC-AES-1** would require the applicant to provide detailed project plans for architectural review by the City's Planning Commission at the time each Tentative Tract Map and/or Site Plan is submitted. **Standard Condition SC-AES-2** would require the applicant to provide detailed Project landscape plans for review by the City's Planning Department at the time each Tentative Tract Map and/or Site Plan is submitted.

Implementation of this **Standard Conditions SC-AES-1** and **SC-AES-2** would ensure that all development on the project site would be consistent with the City's design requirements in the Specific Plan and would ensure consistency with visual character of existing development within the City.

The Project site is surrounded by existing agricultural uses and vacant land to the west, south and east. I-10 and Vista Del Sur create the northern boundary to the Project. North of I-10 is vacant land, as well as residential, agricultural, and golf course uses. The Coachella Canal is east of the Project site. The proposed development would change the character of the vacant Project site to an urbanized setting. The General Plan designates the project site as Suburban Retail District; Urban; General, and Suburban Neighborhood; and Neighborhood Center. The General Plan acknowledges that the site is slated for development at some point in the future (therefore not considered to be an aesthetic resource in its current undeveloped state), the development of the site as proposed would, nonetheless, result in a substantial change in visual character.

There are no other feasible mitigation measures that can be implemented to reduce potential impacts to changes in visual character from site development to a less than significant level. Project implementation would result in the conversion of the existing undeveloped site to a developed site. While the proposed project would incorporate specific Design Guidelines and Development Standards intended to avoid, reduce, offset, or otherwise minimize identified potential adverse impacts of the Project, development of the Project would not retain the existing visual character of the site. Therefore, Project-related visual character impacts would be significant and unavoidable.

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

Less Than Significant Impact

According to pp. 4.1-6 and 4.1-7 of the City of Coachella General Plan Update Final EIR (2015):

“Currently there are no designated, or eligible, State Scenic Highways within the Planning Area. Major historic highways within the Planning Area include old Highway 99 (now Dillon Road between Grapefruit Blvd. and Interstate 10), Old Highway 86 (Harrison Street south of Grapefruit Blvd), and Old Highway 111 (Grapefruit Boulevard), and Highway 86-S Expressway south of Interstate 10. Though there are no designated State Scenic Highways, the listed policies outlined below are from the Sustainability and Natural Environment Element of the CGPU are proposed to preserve and protect

corridor preservation and minimize aesthetic obstruction of billboards along these highways.”

A Project consistency analysis is provided below.

6.2 Scenic roadways. Minimize the impact on views by restricting new billboards along the City's roads and highways. Electronic and animated billboards should be prohibited except in rare and special circumstances.

Response: Consistent. Billboards are not permitted in the Specific Plan.

10.9 Working lands. Encourage the preservation of agricultural and other working lands as important aesthetic and open space resources of Coachella.

Response: Consistent. The Project, as proposed, does not contain any agricultural/other working lands General Plan Land Use designations. This is not applicable.

13.16 Unique features. Encourage parks and trails to be designed to conserve scenic and natural features and encourage public awareness of Coachella's unique geography.

Response: Consistent. Project trails will be designed as part of the Specific Plan's vehicular and non-vehicular circulation systems. Trails will be developed as paseos that utilize Project drainage features. With the exception of the San Andreas Fault, no scenic and natural features are present on the Project site.

Based on this analysis, implementation of the Project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Any impacts are considered less than significant.

Threshold d: Would the Project result in the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Currently, there are no existing sources of light or glare on site. In addition, there are no existing street lights or signalized intersections immediately adjacent to the Project site. I-10 is located to the north of the Project site; however, it is immediately adjacent to the commercial portion of the Project. I-10 is not located in proximity to the residential portion of Project site. I-10 is not a lighted highway adjacent to the project site.

Short-Term Construction Impacts

Less than Significant Impact

During construction on the Specific Plan site, travelers in the area will have views of the site which include construction fencing, equipment, grading areas, building pads, partially constructed structures, and other related facilities and activities. These views would be temporary and, therefore, would not represent a permanent change in views of construction equipment and activities from outside the Project site.

Consistent with Section 7.04.070, Construction Activities, in the City of Coachella Municipal Code, construction activities will be limited to the daytime hours. As a result, there would be no night lighting on the site for construction equipment or activities. However, there would be limited security lighting provided at the Site Manager's trailer and other locations in the construction areas. That lighting would comply with the applicable requirements in the City Municipal Code.

The construction activities and equipment would not represent substantial potential sources of glare on the Project site.

As a result, the construction activities and equipment on the Project site would result in less than significant temporary impacts related to aesthetics and light and glare.

Long-Term Impacts

Less Than Significant Impact with Mitigation Incorporated

The proposed Project would introduce new light sources that are typical of urban development projects. The proposed Project would include light sources such as street and parking lot lighting, landscape lighting, illuminated signs, exterior lighting on lamps and buildings, and automobile lighting (i.e., headlights). All building and landscape lighting would be consistent with the design guidelines established in the Specific Plan, and all City regulations and ordinances that pertain to specific plan developments (Chapter 17.36 of the City's Municipal Code). On-site landscaping would reduce glare and would screen light sources to reduce the visual impact of lighting from buildings and parking lots. Although the proposed Project would introduce new sources of light that would contribute to the light visible in the night sky and the immediate surrounding area, the proposed Project is in an undeveloped desert area, and there are no nearby sensitive receptors that would be adversely impacted by the lighting. Because agricultural uses adjacent to the Project site operate during the day, the proposed Project's impact related to light and glare on these surrounding uses would be less than significant as these uses are not typically sensitive to light and glare.

New sources of light associated with the proposed Project would be in the form of residential and park lighting on the buildings, security lighting in the carports and in parks, garages and parking areas, and vehicle lights from Project-related traffic. Future residential, commercial, mixed-use, and park uses would require the installation of outdoor lighting necessary for recreation maintenance, public safety, and security. While the proposed Project would add new lighting sources to the Project area, the number and type of lighting sources is not anticipated to substantially differ from that commonly utilized at existing developments within the City. However, because the Project site and the immediate surrounding area are relatively undeveloped with little to no existing light sources, the proposed Project is anticipated to introduce a substantial amount of light and glare sources, where none previously existed, resulting in a significant adverse impact.

All development in the City is required to adhere to lighting requirements contained in the City's Zoning Code:

Chapter 16.28.150(L) (Improvements and Grading);
Chapter 17.56.010(J)(2)(e); (Signs);
Chapter 17.54.010 (Off-Street Parking and Loading);

Chapter 17.36.030(F) and (H), 17.36.140(7) (Specific Plan District); and Chapter 17.62.010(17) (Site Plans).

These measures are uniformly applied to all development in the City. The Specific Plan documents that the Project-related lighting would be consistent with the City Zoning Code and would be shielded to avoid light spillage and glare off the Project site. As such, adherence to these measures would be mandatory and enforceable upon approval of the Project plans. Adherence to the City's Zoning Code would ensure that any building or parking lighting would not significantly impact adjacent uses. **Mitigation Measure MM-AES-1**, provided below would further reduce potential spillover light-related impacts of the Project consistent with the requirements identified in the City's Municipal Code. As stated in **Mitigation Measure MM-AES-1**, prior to the approval of any Site Plans for any phase of development, the applicant shall submit to the City of Coachella (City) a photometric (lighting) study (to include parking areas and access way lights, external security lights, lighted signage, and ball field lighting) providing evidence that the project light sources do not spill over to adjacent off-site properties in accordance with the City's Municipal Code. All Project-related outdoor lighting, including but not limited to, street lighting, building security lighting, parking lot lighting, and landscaping lighting shall be shielded to prevent spillover of light to adjacent properties.

Shielding requirements and time limits shall be identified on construction plans for each phase of development.

Impacts associated with this issue would be considered less than significant, based on compliance with the City Municipal Code, the Specific Plan, and **Mitigation Measure MM-AES-1**.

New traffic signal improvements would be added as a part of the proposed Project at the future intersections of internal roads. Traffic signals are not intended to provide on street lighting and are of an intensity that is much less than the typical street light. Traffic signals are also fitted with shielding to direct light toward a specific lane while blocking the view of the vehicles in lanes moving in other directions. By comparison, high pressure sodium lighting typically found in street lighting produces approximately 9,500 lumens or greater. Typical light-emitting diode (LED) traffic signal lights produce approximately 850 lumens. Due to the lower intensity of the lights used in the traffic signals and the use of shielding on the traffic signals to prevent the light from spreading, lighting impacts from the placement of new traffic control devices would be less than significant. No mitigation is required.

Exterior surfaces of proposed structures within the commercial, residential, and mixed-use planning areas would be finished with a combination of architectural coatings, trim, and/or other building materials such as stucco, wood, concrete, and brushed metal. The proposed Project is not expected to substantially increase the amount of daytime glare in the Project area.

4.2.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-AES-1 Architectural Review. At the submittal of each Project Tentative Tract Map and/or Site Plan, the Project applicant shall submit detailed Project plans for architectural review and approval by the City Planning Commission.

SC-AES-2 Landscape Review. At the submittal of each Project Tentative Tract Map and/or Site Plan, the Project applicant shall submit detailed Project plans for landscape review and approval by the City Planning Department, per Chapter 17.36.140 of the City's Municipal Code.

Mitigation Measure(s)

MM-AES-1 Photometric Study. Prior to the approval of any Site Plans for any phase of development, the applicant shall submit to the City of Coachella (City) a photometric (lighting) study (to include parking areas and access way lights, external security lights, lighted signage, and ball field lighting) providing evidence that the project light sources do not spill over to adjacent off-site properties in accordance with the City's Municipal Code. All Project-related outdoor lighting, including but not limited to, street lighting, building security lighting, parking lot lighting, and landscaping lighting shall be shielded to prevent spillover of light to adjacent properties.

Shielding requirements and time limits shall be identified on construction plans for each phase of development.

4.2.6 Cumulative Impacts

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. There will be an associated change in views, both to and from the Project site, and due to this Project's contribution to the change in the area pastoral landscape, this change in scenic views has been identified as cumulatively considerable and an unavoidable significant adverse impact if this Project is developed before any of the other proposed development in the area. The proposed Project modifications to the onsite landscape were not identified as being a significant adverse aesthetic/visual impact. Since the proposed Project makes a cumulatively considerable contribution to the cumulative change that will be experienced at this location, it is considered to cause/contribute to a cumulatively significant adverse impact.

4.2.7 Unavoidable Significant Adverse Impacts

As stated above, implementation of the Project represents a change to the physical environment, which will result in a long-term visual aesthetic that differs from the current vacant land and agricultural setting. This change is consistent with the future land uses planned for the City in its General Plan Update (2015). However, the proposed Project would result in significant unavoidable adverse impacts related to visual character because there are no feasible mitigation measures to reduce impacts associated with a change in visual character to a less than significant impact.

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.3 figures are located at the end of this Subchapter, not immediately following their reference in text.

4.3 AGRICULTURE AND FORESTRY RESOURCES

4.3.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of agriculture and forestry resources from implementation of the Project. Section E.II., Agricultural and Forestry Resources, of the Initial Study posed the following questions, asking whether the Project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- Conflict with existing zoning for agricultural use, or a Williamson Act Contract?
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526) or timberland zoned Timberland Production (as defined by Government Code section 51104(g))
- Result in the loss of forest land or conversion of forest land to non-forest use?
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Initial Study indicated the following pertaining to the Project affecting agriculture and forestry resources:

“According to the 2035 General Plan EIR (Figure 4.2-1: Important Farmland in Coachella), and the Riverside County Land Information System (<http://tlmabld5.agency.tlma.co.riverside.ca.us/website/rcldis>), the Project (on-site and off-site components) consists of Farmland of Local Importance, Prime Farmland, and Other Lands (not designated as farmland). The current General Plan designation for the Project (on-site and off-site components) is Suburban Retail District, Urban, General, and Suburban Neighborhood, and Neighborhood Center, therefore; it has been anticipated by the City that urbanization is planned and will ultimately occur in the Project vicinity. The Project is proposing uses that are different than the current land use designation; however, they are still urban/suburban, not agricultural in nature. Since implementation of the Project will convert Prime Farmland, and Farmland of Local Importance, in order to ensure a comprehensive discussion of this agricultural resource issue, and potential mitigation options (including mitigation fees), it will be analyzed in the EIR.”

Based on the analysis in the Initial Study (and contained in the preceding paragraph), it was determined that the only issue area related to agriculture and forestry resources in the questions asked above that **would** be further analyzed in the Environmental Impact Report (EIR) would be:

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

Based on additional review of the Initial Study, the following issue area will also be analyzed in the (EIR):

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

This issue will be discussed below as set in the following framework:

- Environmental Setting
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The following reference documents were used in preparing this subchapter of this Program EIR (EIR):

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), City of Coachella Zoning Map, and Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following were also used in the analyses presented in this subchapter:

- Assembly Bill 2881
http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080AB2881
- *Phase I Environmental Site Assessment Vista Del Agua, Coachella, California*, All Phase Environmental, Inc., September 24, 2014 (**2014 ESA Appendix C**)

No comments were raised at the public scoping meeting, nor were any comments received regarding agriculture and forestry resources in response to the Notice of Preparation (NOP). Therefore, the issues identified in the Initial Study, and described in the NOP, are the focus of the following evaluation of agriculture and forestry resources.

4.3.2 Environmental Setting

The Project site is comprised of gently sloping desert and disturbed agricultural land with a 76-foot elevation difference. The highest elevation at the northeast corner is approximately 37 feet above mean sea level (MSL) sloping toward the southwest corner to approximately 58 feet below MSL. Soils in the Coachella Valley area are primarily composed of alluvium and undifferentiated older alluvial sediments. Most of the subject property was once covered by Sonoran creosote bush scrub and saltbush scrub with the latter more common in the southern

portion of the property. The eastern 30% of the property is currently planted with vineyards while the remaining portions of the property are fallow.

The majority of the site is disturbed with evidence of ground clearing, as well as off-road vehicle use and illegal refuse dumping. Portions of the site are also being used as a paintball course. The on-site Project components [General Plan Amendment (GPA), Specific Plan (SP), Change of Zone (CZ), Development Agreement, and Tentative Parcel Map (TPM)], are located south of Interstate 10 (I-10) and Vista Del Sur, east of Tyler Street, and north of Avenue 48. The off-site extensions of sewer and water lines will be within the Avenue 47 and Avenue 48 roadways/rights-of-way. Off-site roadway extensions will also be within the Avenue 47 and Avenue 48 roadways/rights-of-way, as well as a northeastern trending roadway from Avenue 47 to Dillon Road, within the Shadow View Specific Plan area.

Historical Agricultural Use

The Property was historically developed at one time with one or more single-family residences. Sometime between 1947 and 1952, several areas of the Property were converted to agricultural use. Except for the existing vineyard, all of these areas have become fallow farmland. The existing vineyard was planted on the Property between 1996 and 2002. The existing paintball field was constructed on the Property between 2010 and 2012.

Historical Agricultural Use on Adjoining Properties

Adjoining properties are described as follows below and as illustrated on Figure 4.3.2-1, *Aerial Photo*.

- North: Between 1959 and 1972, the properties adjacent to and north of the site across Vista Del Sur was developed with Interstate 10 and North of I-10 is vacant land, as well as residential, agricultural, and golf course uses.

The property adjacent to and north of the site across Avenue 47 has never been developed.

Some of the land north of the center of the Property has never been developed. Some of the land adjacent to the north of the Property had been developed with single family residences sometime between 1959 and 1978. Between 1978 and 1989, material storage was observed at the existing scrap metal yard.

- South: Between 1947 and 1953, some of the sites adjacent to and south of the Property, across Avenue 48 were used for agricultural purposes. Except for water retention ponds, there have been no other significant uses of these sites.
- East: Between 1959 and 1972, the properties adjacent to and east of the site, across Polk Street were used for agricultural purposes. There have been no other significant uses of these properties.
- West: Between 1947 and 1953, some of these sites adjacent to and west of the Property were first used for agricultural purposes. Since 1953, these sites have been improved with nurseries, single-family residences, and a water tank.

Related Regulations

Federal

USDA Census of Agriculture

Every five years, the U.S. Department of Agriculture (USDA) performs a Census of Agriculture, which is a comprehensive survey of farming within the United States. The Census looks at land use and ownership, operator characteristics, production practices, income and expenditures and many other areas. Census data is used by federal, state, and local governments, agribusinesses, trade associations, and those who serve farmers and rural communities.

State

State of California Department of Conservation Farmland Classification System

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location and quantity of agricultural lands and conversion of these lands. The mapping program is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The mapping program provides land use conversion information for decision makers to use in planning for present and future agricultural land resources throughout the State.

Using Soil Conservation Service soil classifications, the California Department of Conservation and the California Association of Resource Conservation Districts translate modern soil survey data into Important Farmland Maps for the state's agricultural counties. The initial mapping year was 1984. The first Farmland Conversion Report was released in 1988 and detailed farmland changes from 1984 to 1986. The Important Farmland Maps and Farmland Conversion Report are updated biennially. This classification system focuses only on those lands that have been recently farmed. Land not recently farmed does not show up on the Important Farmland Maps. The Department, in its Farmland Conversion Report published in June 1994, clarified the way unfarmed agricultural lands are removed from their Important Farmland Maps. Before removing unfarmed land from the maps, the Department of Conservation now waits two mapping cycles (4 years) rather than one, to make the Department's data more meaningful.

The Important Farmland Maps and the Advisory Guidelines for the Farmland Mapping and Monitoring Program identify five agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land, and one non-agricultural-related category – "Other Land." These are defined in **Table 4.3.2-1, Farmland Classification System**, below.

**Table 4.3.2-1
Farmland Classification System**

| Designation | Description |
|----------------------------------|---|
| Prime Farmland | Prime Farmland is farmland with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date. |
| Farmland of Statewide Importance | Farmland of Statewide Importance is farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or with less ability to store soil moisture. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date. |
| Unique Farmland | Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cropped at some time during the two update cycles prior to the mapping date. |
| Farmland of Local Importance | Farmlands not covered by the categories of Prime, Statewide, or Unique. They include lands zoned for agriculture by County Ordinance and the California Land Conservation Act as well as dry farmed lands, irrigated pasture lands, and other agricultural lands of significant economic importance to the County and include lands that have a potential for irrigation from local water suppliers. |
| Grazing Land | Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres. |
| Other Land | Other Land is land not included in any other mapping category. This land generally includes rural development of low building density; brush, timber, wetland, and riparian areas not suitable for livestock grazing; vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; water bodies smaller than 40 acres; a variety of other rural land uses. |

Source: City of Coachella General Plan Update Final EIR (2015) Table 4.2-5 (p. 4.2-7)
<http://www.coachella.org/home/showdocument?id=1232>

According to Figure 4.2-1, Important Farmland in Coachella of the City of Coachella General Plan Update Final EIR (2015), there is Farmland of Local Importance, Prime Farmland and Other Land on the Project site.

The California Land Conservation Act of 1965 (The Williamson Act)

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 in order to encourage the preservation of the State's agricultural lands and to prevent its premature conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict land to agricultural and open-space uses. Under the Williamson Act, an agricultural preserve must consist of no less than 100 acres, any development on the property must be related to the primary use of the land for agricultural purposes, and development must be in compliance with local uniform rules or ordinances. Williamson Act contracts are estimated to save agricultural landowners from 20 to 75 percent in property taxes each year.

The vehicle for these agreements is a rolling-term, 10-year contract (i.e., unless either party files a "notice of nonrenewal," the contract is automatically renewed annually for an additional year). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value (California Department of Conservation, 2006). If a "notice of nonrenewal" is filed by a landowner, a nine-year nonrenewal period commences. Over this period of time, the annual tax assessment gradually increases. At the end of the nine-year nonrenewal period, the contract is terminated.

Only the landowner can petition to cancel a Williamson Act contract. To approve a tentative contract cancellation, a county or city must make specific findings that are supported by substantial evidence. The existence of an opportunity for another use of the property is not sufficient reason for cancellation. In addition, the uneconomic character of an existing agricultural use shall not, by itself, be a sufficient reason to cancel a contract (California Department of Conservation, 2004). The Williamson Act requires that a cancellation fee be applied to properties that terminate their encumbered contract status early. This cancellation fee is equal to 12.5 percent of the full market value of the property without encumbered status.

No Williamson Act contracts are active for the proposed Project site.

Assembly Bill 2881 – Right-to-Farm Disclosure

Assembly Bill (AB) 2881 was passed by the State Legislature in 2008 and became effective January 1, 2009. This bill requires that as a part of real estate transactions, land sellers and agents must disclose whether the property is located within 1 mile of farmland as designated on the most recent Important Farmland Map. Any of the five agricultural categories—Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land—on the map qualifies for disclosure purposes.

City of Coachella General Plan

The City of Coachella General Plan Update (2015), adopted April 22, 2015, includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The City's General Plan identifies areas within the City and its sphere of influence which are considered a logical progression for development and are slated for future growth. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section

4.2, Agricultural Resources, of the General Plan Update Final EIR (2015) provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on agricultural resources and is incorporated by reference.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies addressing agricultural resources are applicable to the Project. Additionally, these goals and policies may be pertinent to other areas evaluated in the EIR and, therefore, may also be included under these chapters:

Land Use + Community Character Element

Goal 1. Development Regulations. A land development and regulatory system that reinforces the City's desire to grow from a small town to a medium sized city in a sustainable and orderly manner.

1.5 Subareas. Establish and utilize a system of subareas to efficiently plan and manage the City's growth. Each area of the City and Sphere of Influence shall be included in a subarea. All development and policy decisions shall conform to the vision and policies for that planning area, in addition to the citywide goals and policies. See Figure 3-24 for a map of the City's subareas.

1.6 General plan designations. Establish and maintain a system of General Plan designations that:

- Provides flexibility for land developers to determine the best use of their land within the bounds of the vision for the subarea, particularly in undeveloped areas of the City.
- Regulates the form and character of new development to ensure the development that does occur is complete with a diversity of uses so residents don't have to drive long distances to access goods and services, connected to the Downtown and other parts of the City via multiple modes of transportation, and compact so that areas are walkable and pedestrian-friendly. The exception to the above shall be Resort developments which may be developed as isolated projects separate from the rest of the City.
- Uses the development process to enhance the character and identity of Coachella.

1.7 Specific Plans. Utilize specific plans as strategic entitlement tools when considering unique projects that bring exceptional value to the community. Periodically review existing, un-built specific plans for relevance and the potential for needed updates.

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.12 High priority development areas. Identify subareas 5, 6, 7, 8, 9, 10, and 11 as Priority Growth Areas to be targeted for growth through City policies and actions and to receive priority for funding, community facilities and services.

2.16 Range of uses. Through Specific Plans, Planned Developments, or other similar master planning processes, allow the designations shown on the General Plan Designation Map to be adjusted within the ranges set forth for each policy area in large, undeveloped areas of the City so long as the visions of the General Plan and the applicable subarea is met.

Goal 12. Diversity of uses for economic development. Non-residential uses that creates a complete city and diversifies the local economy.

Sustainability + Natural Environment Element

Goal 5. Agricultural Preservation. Viable, productive local agricultural lands and industry.

5.7 Accessory uses. Consider allowing accessory uses that are complimentary to agricultural production to improve the financial viability of agricultural land.

5.8 Buffers between agriculture and urban uses. Require new developments, whether they are new urban or new agricultural uses, in which urban and agriculture uses would be adjacent to maintain a protective buffer that ensures land use conflicts do not occur.

5.9 Right to Farm. Support the right of existing farms to continue operations.

5.12 Market transformation. If the agri-business industry declines in Coachella, support efforts that facilitate the transition of uses, businesses and employees from agriculture to other sectors of the local economy.

4.3.3 Thresholds of Significance

The Initial Study contains five (5) criteria for determining impacts to agriculture and forestry resources. As stated above, four (4) of the five (5) issue areas were analyzed in the Initial Study and determined not to need any additional analysis in the EIR. The Initial Study concluded that the Project would have “No Impact pursuant to these thresholds.”

Therefore, the analysis in this subchapter shall focus on the following:

- a. Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?
- b. Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The potential agricultural resources changes in the environment are addressed in response to the above thresholds in the following analysis.

4.3.4 Potential Impacts

THRESHOLD a: Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Significant and Unavoidable Impact

As stated above, portions of the Project site have been used for agricultural purposes from at least 1952 through the present day.

The Project site is surrounded by existing agricultural uses and vacant land to the west, south, and east. I-10 and Vista Del Sur create the northern boundary to the Project. The Coachella Canal is to the east of the Project site.

The Specific Plan Project site currently has the following General Land Use Designation: Entertainment Commercial (C-E). Please reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

These designations are proposed to be modified in the General Plan to the designation of Specific Plan through General Plan Amendment No. 14-01.

The Project site is zoned with the following classifications: General Commercial (C-G), Residential Single-Family (R-S), and Manufacturing Service (M-S) zoning designations. Reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

Reference **Figure 3.4.1-1, General Plan and Zoning Classifications, Figure 3.4.1-2, Proposed General Plan Amendment Exhibit, and Figure 3.4.1-3, Proposed Change of Zone Exhibit**.

The proposed Change of Zone and Specific Plan will rezone the Project site to Specific Plan.

The surrounding General Plan Land Use designations and zoning classifications are as shown on **Table 4.3.4-1, Surrounding General Plan Land Use Designations and Zoning Classifications**, below.

**Table 4.3.4-1
Surrounding General Plan Land Use Designations and Zoning Classifications**

| Direction | General Plan Land Use Designation(s) | Zoning Classification(s) |
|------------------|---|--|
| North | Suburban Retail District, Regional Retail District | M-S (Manufacturing Service), C-G, (General Commercial) |
| South | General Neighborhood, Neighborhood Center, Suburban Neighborhood | C-G, (General Commercial), A-R (Agricultural Reserve) |
| East | Suburban Neighborhood | A-T (Agricultural Transition) |
| West | Suburban Retail District, Urban Neighborhood, Neighborhood Center | C-G, (General Commercial), R-S (Residential Single Family), A-T (Agricultural Transition), R-M (Residential Multiple Family) |

Sources: City of Coachella General Plan Update (2015), City of Coachella Zoning Map <http://www.coachella.org/home/showdocument?id=1232>

Table 4.3.4-1, above illustrates that the General Plan Land Use Designations for the properties surrounding the Project site are planned for suburban and urban forms of development. No agriculturally General Plan Land Use designated lands are on the Project site, or to the north, south, east, or west. The zoning classifications on the current City Zoning Map do show agricultural classifications; however, it should be noted that they are not consistent with the

General Plan and will require a zoning amendment when development is proposed on these parcels.

The General Plan Update Final EIR (2015) states that one of the most effective ways to address such indirect impacts is through the provision of buffers and right-to-farm policies that protect agricultural operations from urban impacts. The General Plan Update Final EIR (2015) presents numerous goals and policies that would help to minimize direct and indirect impacts to agricultural resources. Specifically, policies 10.8 and 10.9 in the Sustainability and Natural Resources Element address the issue of indirect impacts.

- 10.8 Buffers between agriculture and urban uses. Require new developments, whether they are new urban or new agricultural uses, in which urban and agriculture uses would be adjacent to maintain a protective buffer that ensures land use conflicts do not occur.
- 10.9 Right to Farm. Support the right of existing farms to continue operations.

Policy 10.8 would be a critical policy for mitigating the indirect impacts to farmland from adjacent urban uses by requiring the establishment of a buffer between urban and agricultural uses whenever development permits are issued for land projects that would create an urban-agricultural adjacency. No such buffering is proposed with the Project, because the ultimate vision for the Project site, and immediate environs, is a suburban and urban land development pattern – not agriculture. Therefore, in the Project will result in a significant and unavoidable impact as it pertains to the adjacent parcels which currently have on-going agricultural activities.

The Project is subject to Assembly Bill 2881 – Right-to-Farm Disclosure, as discussed above. If the Project is developed before the surrounding parcels, then potential impacts can occur. **Standard Condition SC-AG-1** presented below, requires disclosures as part of all home sales transaction(s) to future residents that the property is located within 1 mile of farmland as designated on the most recent Important Farmland Map.

Standard Condition SC-AG-1 ***The Project applicant shall comply with Assembly Bill 2881. Disclosure shall be provided prior to the close of escrow on the sale of individual homes. This shall be obtained by including the following disclosures on the title report: “The property is located within 1 mile of farmland as designated on the most recent Important Farmland Map.”***

With inclusion of **Standard Condition SC-AG-1**, above, any impacts will be reduced; however, as stated above, until such time that the adjacent properties are developed with suburban and urban scale development, impacts will remain significant and unavoidable. In the long-term, impacts will be considered less than significant.

There are no forest lands on the Project site. No impacts will result in conversion of forest land to non-forest use.

THRESHOLD b: **Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

Significant and Unavoidable

Surficial soils at the Project site are included in the Carsitas-Myoma-Carrizo and Gilman-Indio-Coachella Associations and soil types mapped on the site include Coachella fine sand (CrA), Gilman fine sandy loam (GcA), Myoma fine sand (MaB) and minor amounts of Carsitas cobbly sand (ChC), reference **Figures 4.5.2-2, Soils Map** and **4.7.2-1, Soils Map**. Except for the latter, these soil types are considered prime farmland if properly irrigated and drained.

Accordingly, the General Plan Update Final EIR (2015) (Figure 3-6: Prime Farmland and Farmland of Local Importance), and the Riverside County Land Information System, both identify the Project (on-site and off-site components) as consisting of Farmland of Local Importance, Prime Farmland, and Other Lands (not designated as farmland), reference **Figure 4.3.4-1, Farmland Types**.

The Project will convert these lands to non-agricultural use. The existing General Plan Land Use designation for the Project is Entertainment Commercial (C-E).

The Coachella General Plan Update (2015) identifies agriculture as an integral part of the City's identity and economic future; however, it also recognizes the need to diversify land uses within the City's planning area to accommodate future growth, housing needs and job creation. To efficiently plan and manage the City's growth, the land use plan (Figure 4-24 of the General Plan) divides the City into 17 distinct subareas, reference **Figure 4.3.4-2, General Plan Subareas Map**. The Project is located in Subarea 11, Commercial Entertainment District, which is located at the junction of Interstate 10 and State Route 86S, an area with exceptional regional accessibility and visibility to motorists traveling the adjacent highways. The City envisions that this area will contain much of the new development that attracts visitors to Coachella, including destination retail, hotels and resorts, and entertainment uses.

The General Plan Update (2015) land use designations for the Project (on-site and off-site components) are Suburban Retail District, Urban, General, and Suburban Neighborhood, and Neighborhood Center, therefore; it has been anticipated by the City that urbanization is planned and will ultimately occur in the Project vicinity. Although the Project is proposing uses that are somewhat different than the current land use designations, they are still urban/suburban, not agricultural in nature, and consistent with the City's vision of development within the Project area.

Direct impacts to farmland include the removal of farmland from agricultural production through the development of non-agricultural uses on the land. The Project will result in the conversion of approximately 275 acres of farmland (including the active vineyard use) to urban uses. This impact is considered significant and unavoidable. No mitigation is feasible.

4.3.5 Standard Conditions and Mitigation Measures

There are no forestry resources on the Project site; therefore, no standard conditions or mitigation measures are required. The following apply to agricultural resources:

Standard Condition(s)

SC-AG-1 **The Project applicant shall comply with Assembly Bill 2881. Disclosure shall be provided prior to the close of escrow on the sale of individual homes. This shall be obtained by including the following disclosures on the title report: “The property is located within 1 mile of farmland as designated on the most recent Important Farmland Map.”**

Mitigation Measure(s)

No mitigation measures are proposed for agriculture resources since it has been determined the Project will result in a significant and unavoidable impact.

4.3.6 Cumulative Impacts

Pursuant to California Environmental Quality Act Guidelines §15130(d), previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in the cumulative impact analysis of subsequent implementing projects. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the project have already been adequately addressed in the certified EIR for that plan.

The General Plan Update Final EIR (2015) determined that regional and county-wide trends of converting land uses away from agriculture to planned urban development may result in cumulatively significant losses of agricultural resources. While the General Plan Update (2015) provides extensive policy direction that helps minimize the impacts to agricultural resources, the scope of these cumulative impacts extends beyond the jurisdiction of the City. These cumulative impacts could possibly be mitigated with region-wide or countywide agricultural preservation programs; however, the establishment of such a program is beyond the scope of control of the City of Coachella, which is limited to its jurisdiction. Thus, the General Plan Update Final EIR (2015) found such mitigation to be infeasible for the City to implement, and, therefore, the conversion of Coachella’s agricultural resources would be cumulatively considerable. Cumulative impacts to agricultural resources were determined to be significant and unavoidable and a Statement of Overriding Considerations was adopted on April 22, 2015, by the City of Coachella City Council.

The Project is consistent with the adopted General Plan Update (2015) and no new impacts on agricultural resources are anticipated as a result of the Project. Cumulative impacts to agricultural resources were determined to be adequately evaluated in the General Plan Update Final EIR (2015) and, therefore, pursuant to §15152(f)(1), cumulative impacts to agricultural resources are treated as significant for purposes of this EIR, consistent with the General Plan Update Final EIR (2015).

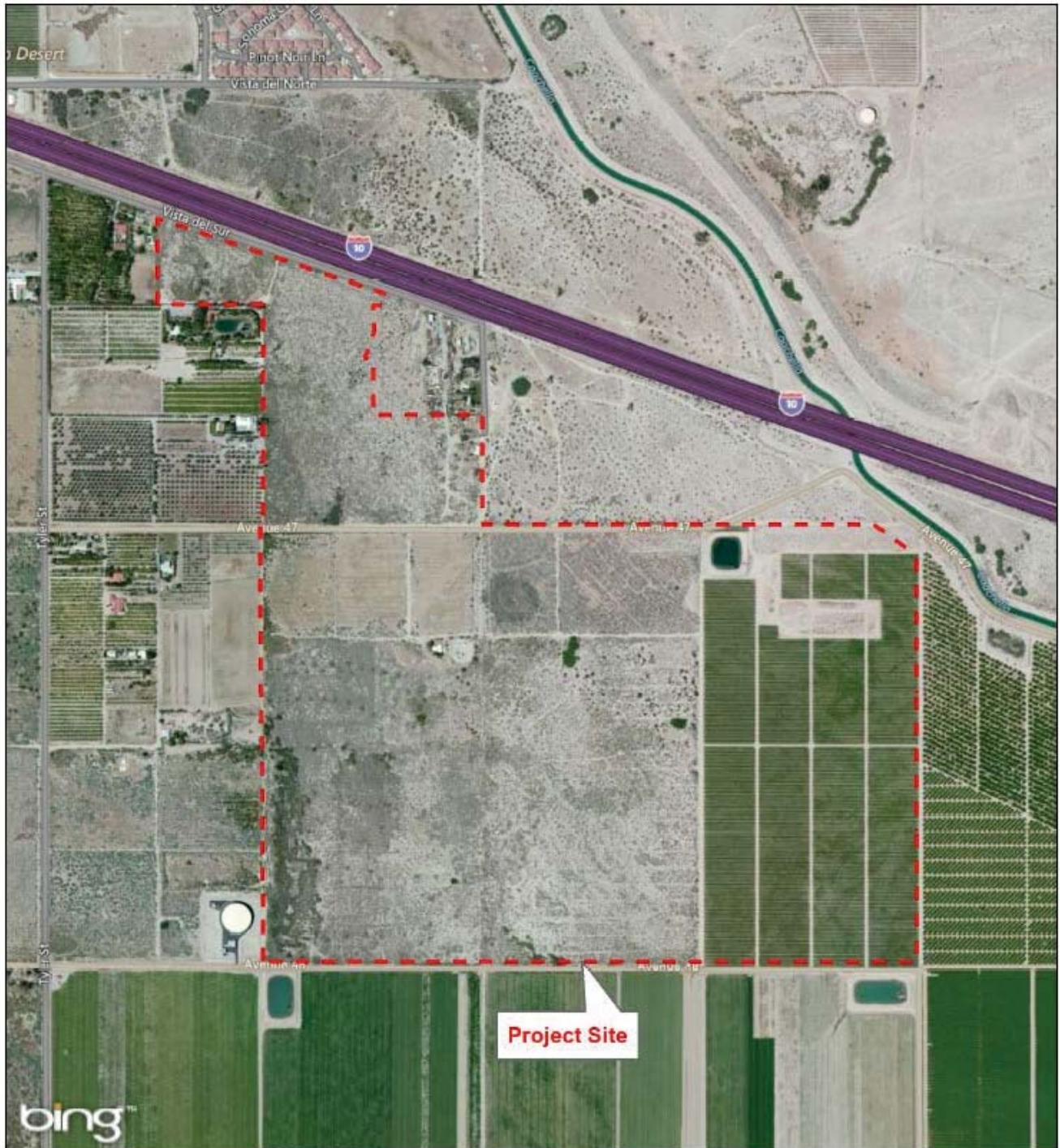
4.3.7 Unavoidable Significant Adverse Impacts

The conversion of sites from vacant land to residential, commercial and open space uses will permanently remove the potential for the land to be farmed in the future. However, this change is consistent with future land uses planned for the City in the General Plan Update (2015). Implementation of the Project (on-site and off-site components) will not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of

forest land to non-forest use. There are no forest lands on or near the site. Consistent with the General Plan Update Final EIR (2015), significant unavoidable impacts are anticipated due to Project implementation.

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Figure 4.3.2-1
Aerial Photo



Source: Vista del Agua Specific Plan 2018 (Appendix A)

Figure 4.3.4-1
Farmland Types

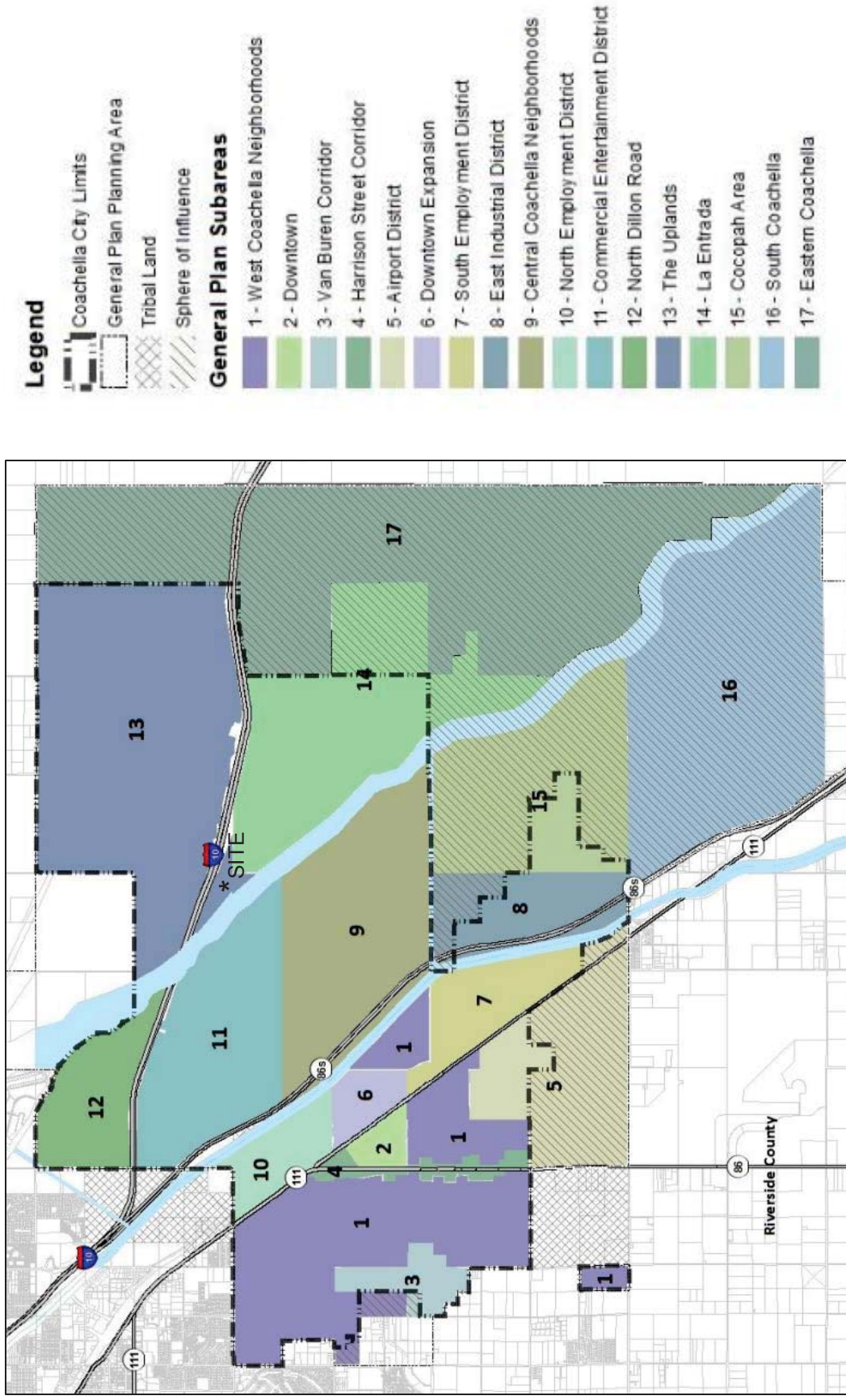


Source: General Plan Update 2015 <http://www.coachella.org/home/showdocument?id=1232>

Legend

-  Coachella City Limits
-  Farmland of Local Importance
-  Prime Farmland
-  Sphere of Influence
-  Tribal Land

Figure 4.3.4-2
General Plan Subareas Map



Source: General Plan Update 2015 <http://www.coachella.org/home/showdocument?id=1232>

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.4 figures are located at the end of this subchapter, not immediately following their reference in text.

4.4 AIR QUALITY / GREENHOUSE GAS

4.4.1 Introduction

This subchapter will evaluate the environmental impacts to the issue areas of air quality and greenhouse gas from implementation of the Project. Section E. III, Air Quality, of the Initial Study, asked whether the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- Expose sensitive receptors to substantial pollutant concentrations? and/or,
- Create objectionable odors affecting a substantial number of people?

Section E. VII, Greenhouse Gas Emissions, of the Initial Study asked whether the Project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? or;
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Based on the analysis in the Initial Study it was determined all of the issue areas related to air quality and greenhouse gas in the questions asked above **would** be further analyzed in the Environmental Impact Report (EIR).

The Initial Study indicated the following pertaining to the Project affecting air quality resources and greenhouse gas:

“Implementation of the Project (on-site and off-site components) may conflict with or obstruct implementation of the applicable air quality plan; violate any air quality standard or contribute substantially to an existing or projected air quality violation; or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Air quality emissions will occur during the construction phase for installation of both on- and off-site improvements necessary for the Project.

Short-term construction emissions will be analyzed for both on- and off-site Project improvements to determine emissions are within the pollutant thresholds (regional and

localized) established by the South Coast Air Quality Management District (SCAQMD). In addition, long-term operational activities will be analyzed to determine if Project related emissions are within the pollutant thresholds (regional and localized) established by the SCAQMD. A Project specific air quality study shall be prepared in order to address questions III.a-c, above. In order to ensure a comprehensive discussion of these air quality resources issues, they will be analyzed in the EIR.

Implementation of the Project (on-site and off-site components) may expose sensitive receptors, which are located within 1 mile of the Project site to substantial point source emissions. Single-family rural residences are located adjacent to and within a mile of the Project. Impacts from particulate matter and odors may be a concern during construction. A Project specific air quality study shall be prepared in order to address question III.d, above. In order to ensure a comprehensive discussion this air quality resource issue, it will be analyzed in the EIR.

Implementation of the Project (on-site and off-site components) may create a significant amount of objectionable odors affecting the surrounding uses during construction and operation. Odors expected to be generated by this Project will be primarily those from the construction equipment and delivery vehicles. These odors will be associated with exhaust emissions from the consumption of petroleum products (gasoline, diesel, etc.). In addition, the commercial component may result in potential uses that could result in potential objectionable odors. A Project specific air quality study shall be prepared in order to address question III.e, above. In order to ensure a comprehensive discussion of this air quality resource issue, it will be analyzed in the EIR.

Implementation of the Project (on-site and off-site components) may generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and may conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. A Project specific greenhouse gas emissions study shall be prepared in order to address questions VII.a. and b., above. In order to ensure a comprehensive discussion of greenhouse gas emissions resources issues, they will be analyzed in the EIR.”

These issues pertaining to air quality and greenhouse gas will be discussed below as set in the following framework:

- Regulatory and Environmental Setting
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), and Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Air Quality and GHG Impact Analysis, Vista Del Agua, City of Coachella, CA*, prepared by RK Engineering, dated September 1, 2016 (*AQ/GHG Analysis, Appendix D1*);
- *Climate Action Plan, Public Draft, City of Coachella*, June 2014. <http://www.coachella.org/home/showdocument?id=2880%20>;
- South Coast Air Quality Management District Final 2016 Air Quality Management Plan, March 2017 <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>; and
- *Vista del Agua Specific Plan Air Quality and Greenhouse Gas Impact Study, City of Coachella – Supplemental Letter*, prepared by RK Engineering, dated May 7, 2018 (*Supplemental Letter, Appendix D2*).

The Project has utilized the Year 2022 as the time horizon for the AQ and GHG Analysis. This time frame accelerates the impacts and mitigation for the Project.

This time horizon is a logical and sound choice for the following reasons:

1. California Environmental Quality Act (CEQA)

According to Section 15144, *Forecasting*, of the State CEQA Guidelines:

“Drafting an EIR or preparing a negative declaration necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.”

The City has exercised its discretion, based upon the information present at the current time, that this is an appropriate time horizon. As has been seen with the all economic cycles in the Coachella Valley, the rate of buildout is subject to numerous forces, many of which are not only local, but include state, national, and global forces.

2. Ambient Growth

An ambient growth rate of 2% annually was assumed for the Project-specific Traffic Impact Study, dated June 14, 2016 (*TIS*). This is a conservative rate that accounts for an “average” ambient growth rate in the area. Some years the ambient growth rate will be greater, some years it will be less, but on an average, and for sound analysis purposes, the 2% annual rate is the industry standard and accepted norm.

This ambient rate is compounded annually and will continue to do so throughout the buildout of the Project. By having a time horizon of 2022, this assumes a worst-case scenario for development, impacts, and appropriate mitigation in a shorter period of time. As discussed below, the EIR is a “program level” analysis and subsequent development within the Specific Plan will require additional analysis, including the 2% annual ambient growth rate.

3. Cumulative Projects

In addition to the 2% annual ambient growth rate, Table 3-3, *Cumulative Project Trip Generation*, of the *TIS*, shows a total of eight (8) Projects were included as the cumulative projects for the *TIS*.

This included the following projects with 160,309 anticipated daily trips, as shown on **Table 3.2-1, *Cumulative Projects Trip Generation***; and illustrated on **Figure 3.2-2, *Cumulative Projects Location Map***.

| | |
|-----------------------------|--------------------|
| • Shadow View Specific Plan | 40,513 daily trips |
| • La Entrada Specific Plan | 99,970 daily trips |
| • TTM34293/TTM35005 | 10,853 daily trips |
| • CUP254 | 2,626 daily trips |
| • CUP260 | 36 daily trips |
| • TTM33556 | 2,808 daily trips |
| • TTM32263 | 3,065 daily trips |
| • TTM36394 | 438 daily trips |

The Project is anticipated to generate 22,078 daily trips, or 13.8% of the overall cumulative trips at Project buildout and buildout of all cumulative projects used in this analysis.

It should be noted that these cumulative Projects are under the same economic forces applicable to the Project, as discussed above. By assuming that, in addition to the Project, all cumulative projects will be completed by the 2022 time horizon, a worst-case scenario for development impacts (and appropriate mitigation) has been analyzed.

4. General Plan Buildout of 2035

Should the Project time horizon year be changed to 2027, or later, then the analysis starts to encroach upon the *TIS* analysis for the General Plan buildout year of 2035. The *TIS* analyzes development impacts and suggests appropriate mitigation for the General Plan buildout year of 2035.

5. Subsequent CEQA Analysis

The current Project is being analyzed under a Program EIR, consistent with the provisions contained in Section 15168, *Program EIR*, of the State CEQA Guidelines. According to Section 15168(d):

“Use with Subsequent EIRS and Negative Declarations. A program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The program EIR can:

- (1) Provide the basis in an initial study for determining whether the later activity may have any significant effects.
- (2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.

(3) Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.”

Subsequent implementing projects (i.e., TTMs, development plans, conditional use permits) may utilize the information contained in the Program EIR, and may be required to provide additional analysis, based upon the City’s discretion.

South Coast Air Quality Management District (SCAQMD) provided guidance on the acceptable methodology for analyzing the air quality impacts of the proposed Project and detailed the required information that should be included in the EIR and provided for the Agency review. Southern California Association of Governments (SCAG) commented that the EIR should show Project consistency with the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) pursuant to Senate Bill No. 375 (SB 375) (Letter #4).

No other comments were raised at the public scoping meeting, nor were any comments received regarding air quality or greenhouse gas emissions resources in response to the Notice of Preparation (NOP). The issues identified in the Initial Study, and NOP, are the focus of the following evaluation of air quality and greenhouse gas emissions resources.

4.4.2 Regulatory and Environmental Setting

4.4.2.1 Air Quality and Greenhouse Gas Environmental Setting

Air Quality – Environmental Setting

The Project is located in the City of Coachella and is within the Salton Sea Air Basin (SSAB). The portion of Riverside County (between San Gorgonio Pass and Joshua Tree National Monument) is located in the SSAB, along with Imperial County. Air quality conditions in this portion of the County, although in the SSAB, are also administered by the SCAQMD.

Local Climate and Meteorology

The SSAB portion of Riverside County is separated from the South Coast Air Basin region by the San Jacinto Mountains and the Mojave Desert Air Basin to the east by the Little San Bernardino Mountains. During the summer, the SSAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year. The Coachella Valley is a geographically and meteorologically unique area wholly contained within the SSAB.

The region is currently impacted by significant air pollution levels caused by the transport of pollutants from coastal air basins to the west, primarily ozone, and locally generated particulate matter 10 micrometers or less in diameter (PM₁₀). The mountains surrounding the region isolate the Valley from coastal influences and create a hot and dry low lying desert. As the desert heats up, it draws cooler coastal air through the narrow San Gorgonio Pass, generating strong and sustained winds that cross the fluvial (water caused) and aeolian (wind) erosion

zones in the Valley. These strong winds suspend and transport large quantities of sand and dust, reducing visibility, damaging property, and constituting a significant health threat.

The climatological station closest to the Project site is an Indio Fire Station Weather Service Cooperative weather station located in Indio. Climatological data from the National Weather Service at this station spanning the period 1893-2013 indicate an annual average temperature of 73.6 Fahrenheit, with December the coldest month (mean minimum daily temperatures of 39.2° Fahrenheit) and July, the warmest month of the year (mean daily maximum temperatures of 106.9° Fahrenheit).

The majority of the annual rainfall in the basin occurs between November and February. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. The climatological data from the Indio Fire Station Weather Service Cooperative weather station spanning the period 1893-2013 indicate an annual average precipitation of 3.3 inches. Year to year patterns in rainfall are unpredictable due to fluctuations in the weather. General meteorological data for the Coachella Valley area, as measured at the Indio Fire Station weather station, are presented in **Table 4.4.2-1, Meteorological Summary**, below.

**Table 4.4.2-1
Meteorological Summary¹**

| Month | Temperature (°F) | | Average Precipitation (inches) |
|-----------------------|------------------|-------------|--------------------------------|
| | Average High | Average Low | |
| January | 70.6 | 39.2 | 0.64 |
| February | 74.9 | 44.3 | 0.51 |
| March | 80.0 | 50.4 | 0.31 |
| April | 86.9 | 57.4 | 0.11 |
| May | 93.7 | 64.4 | 0.05 |
| June | 102.3 | 71.9 | 0.01 |
| July | 106.9 | 77.8 | 0.12 |
| August | 105.7 | 76.9 | 0.25 |
| September | 101.5 | 70.3 | 0.31 |
| October | 91.9 | 59.4 | 0.20 |
| November | 80.2 | 46.7 | 0.26 |
| December | 71.7 | 39.4 | 0.54 |
| Annual Average | 88.9 | 58.2 | 3.3 |

¹ Averages derived from measurements recorded between 1894 and 2013.
Source: Western Regional Climate Center 2014, Indio Fire Station COOP.
Source: AQ/GHG Analysis (Appendix D1)

Local Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the Project area. For evaluation purposes, the SCAQMD has divided the basin into 36 Source

Receptor Areas (SRA) within the Basin operating monitoring stations in most of the areas. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The Project is within SRA 30, Coachella Valley. This station monitors carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), PM₁₀, particulate matter 2.5 micrometers or less in diameter (PM_{2.5}), and sulfur dioxide (SO₂). The pollutant levels from SRA 30 were used to comprise a “background” for the Project location.

Table 4.4.2-2, *Air Quality Monitoring Summary*, below, summarizes 2014 through 2016 published monitoring data, which is the most recent 3-year period available. The data shows that during the past, the Project area has exceeded the ozone, and PM₁₀ standards.

**Table 4.4.2-2
Air Quality Monitoring Summary**

| Air Pollutant Location | Averaging Time | Item | 2014 | 2015 | 2016 |
|---|----------------|---|-------------|-------------|-------------|
| Carbon Monoxide from Coachella Valley 1 Station | 1 Hour | Max 1-Hour (ppm) | 2.0 | 2.0 | 3.1 |
| | | Days > State Standard (20 ppm) | 0 | 0 | 0 |
| | | Days >National Standard (35 ppm) | 0 | 0 | 0 |
| | 8 Hour | Max 8 Hour (ppm) | 0.9 | 0.7 | 1.5 |
| | | Days > State Standard (9 ppm) | 0 | 0 | 0 |
| | | Days >National Standard (9 ppm) | 0 | 0 | 0 |
| Ozone from Coachella Valley 1 Station | 1 Hour | Max 1-Hour (ppm) | 0.108 | 0.102 | 0.103 |
| | | Days > State Standard (0.09 ppm) | 9 | 3 | 6 |
| | 8 Hour | Max 8 Hour (ppm) | 0.093 | 0.092 | 0.092 |
| | | Days > State Standard (0.07 ppm) | 61 | 51 | 48 |
| | | Days >National Standard (0.07 ppm) ¹ | 35 | 47 | 46 |
| Coarse Particles (PM10) from Coachella Valley 1 Station | 24 Hour | Max 24-Hour (µg/m³) | 57.0 | 115.0 | 113.0 |
| | | Days > State Standard (50 µg/m³) Days >National Standard (150 µg/m³) | 20 | 50 | 60 |
| | Annual | Annual Average (µg/m³) Exceeded >State Standard (20 µg/m³) | 22.2 YES | 18.8 NO | 20.8 YES |
| Fine Particulates (PM2.5) from Coachella Valley 1 Station | 24 Hour | Max 24-Hour (µg/m³) Days >National Standard (35 µg/m³) | 15.50 | 22.70 | 14.710 |
| | Annual | Annual Average (µg/m³) Exceeded >State Standard (12 µg/m³) | 6.42 NO | 5.76 NO | 5.53 NO |
| | | Exceeded >National Standard (12 µg/m³) | NO | NO | NO |
| Nitrogen Dioxide from Coachella Valley 1 Station | 1 Hour | Max 1-Hour (ppm) Days > State Standard (0.18 ppm) | 0.0460 | 0.0420 | 0.0430 |
| | | Annual Average (ppm) Exceeded >State Standard (0.030 ppm) Exceeded >National Standard (0.053 ppm) | 0.007 NO NO | 0.006 NO NO | 0.006 NO NO |
| | Annual | | | | |
| Sulfur Dioxide from Coachella Valley 1 Station | 1 Hour | Max 1 Hour (ppm) | -- | -- | -- |
| | | Days > State Standard (0.04 ppm) | -- | -- | -- |
| | | Days >National Standard (0.14 ppm) | -- | -- | -- |
| | Annual | Annual Average (ppm) Exceeded >National Standard (0.030 ppm) | -- -- | -- -- | -- -- |

¹ The 2014 O₃ national 8-hour standard is 0.07 ppm

Source: AQ/GHG Supplemental Letter (Appendix D2)

Attainment Status

The Environmental Protection Agency (EPA) and the Air Resources Board (ARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If

standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or ‘form’ of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard. **Table 4.4.2-3, Salton Sea Air Basin Attainment Status**, below, lists the attainment status for the criteria pollutants in the Basin.

**Table 4.4.2-3
Salton Sea Air Basin Attainment Status**

| Pollutant | State Status | National Status |
|---------------------------|---------------------------|-------------------------|
| Ozone (1-hour) | Nonattainment | No Standard |
| Ozone (8-hour) | Nonattainment | Nonattainment |
| Carbon monoxide | Attainment | Attainment/Unclassified |
| Nitrogen dioxide (annual) | Unclassifiable/Attainment | Attainment |
| Nitrogen dioxide (1-hour) | Unclassifiable/Attainment | Attainment |
| Sulfur dioxide | Attainment | Attainment/Unclassified |
| PM ₁₀ | Nonattainment | Nonattainment |
| PM _{2.5} | Attainment/Unclassified | Attainment/Unclassified |

Source: SCAQMD 2016 AQMP

Notes: Nonattainment: any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment: any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant.

Unclassifiable: any area that cannot be classified on the basis of available information as meeting or not meeting national primary or secondary ambient air quality standard for the pollutant.

Source: AQ/GHG Analysis (Appendix D1)

Greenhouse Gas – Environmental Setting

Climate Change Setting

Climate change is a change in the average weather of the earth that is measured by alterations in temperature, wind patterns, storms, and precipitation. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. The historical data is utilized to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years.

Consequences of Climate Change in California

In California, climate change may result in consequences such as the following:

- A reduction in the quality and supply of water from the Sierra snowpack. If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- Increased risk of large wildfires. If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant “fuel” available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today’s conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- An increase temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- A decrease in the health and productivity of California’s forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Greenhouse Gases

Gases that trap heat in the atmosphere are commonly referred to as “greenhouse gases” (GHGs) because they function like a greenhouse by letting light in while preventing heat from escaping. Naturally occurring GHGs include water vapor, carbon dioxide (CO₂) methane (CH₄) and nitrogen dioxide/oxides (N₂O and NO_x). The natural accumulation of GHGs in the atmosphere has a warming effect on the Earth’s temperature. Without these natural GHGs, the Earth’s temperature would be cooler.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. CO₂, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, the carbon dioxide equivalent (CO₂e) is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane’s warming potential of 21 indicates that methane has 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential. Greenhouse gases defined by Assembly Bill No. 32 (AB 32) include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in **Table 4.4.2-4, Description of Greenhouse Gases**, below.

Emissions in California were approximately 450 million tons of carbon dioxide equivalents

(MMTCO_{2e}) in 2009 (California Air Resources Board).

**Table 4.4.2-4
Description of Greenhouse Gases**

| Greenhouse Gas | Description and Physical Properties | Sources |
|---------------------|---|---|
| Nitrous oxide | Nitrous oxide (N ₂ O), also known as laughing gas, is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 310. | Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N ₂ O. |
| Methane | Methane (CH ₄) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25. | A natural source of CH ₄ is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming. |
| Carbon dioxide | Carbon dioxide (CO ₂) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960. | Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. |
| Chlorofluorocarbons | CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100. | Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol. |
| Hydrofluorocarbons | Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700. | Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants. |
| Perfluorocarbons | Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime of 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500. | Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing. |
| Sulfur hexafluoride | Sulfur hexafluoride (SF ₆) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900. | This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. |

Sources: Intergovernmental Panel on Climate Change 2007a and Intergovernmental Panel on Climate Change 2007b.
Source: AQ/GHG Analysis (Appendix D1)

4.4.2.2 Air Quality and Greenhouse Gas Regulatory Setting

Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States EPA regulates at the national level. The ARB regulates at the state level. SCAQMD regulates at the air basin level.

Air Quality - National and State

Both the federal government and the State of California have established health-based ambient air quality standards (AAQS) for seven air pollutants. As show in **Table 4.4.2-5, Description of Air Pollutants**, below, these pollutants include:

- Ozone (O₃);
- Carbon monoxide (CO);
- Nitrogen dioxide (NO₂);
- Sulfur dioxide (SO₂);
- Coarse particulate matter with a diameter of 10 microns or less (PM₁₀);
- Fine particulate matter with a diameter of 2.5 microns in diameter (PM_{2.5}); and
- Lead (Pb).

Table 4.4-2-5
Description of Air Pollutants

| California Standard | Federal Standard ¹ | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|--|-------------------------------|---|---|---|
| 0.09 ppm | -- | (a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) increased mortality risk; (d) altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) vegetation damage; (f) property damage. | Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NOX, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind. | Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NOX) are mobile sources (on-road and off-road vehicle exhaust). |
| 0.070 ppm | 0.075 ppm ⁴ | (a) Aggravation of angina pectoris (chest pain) and their aspects of coronary heart disease; (b) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) impairment of central nervous system functions; (d) possible increased risk to fetuses. | CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood. | CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. |
| 20 ppm | 35 ppm | (a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) contribution to atmospheric discoloration. | During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NOX (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₅ , N ₂ O ₄ , and N ₂ O ₃). NOX is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NOX can react with compounds to form nitric acid and related particles. | NOX is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. NO ₂ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations. |
| 0.18 ppm | 0.100 ppm | Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutant alone is the predominant factor. | Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SOX) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ . | Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards. |
| 0.030 ppm | 0.053 ppm | (a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) declines in pulmonary function growth in children; (c) increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM _{2.5} levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma. | Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter. | Stationary sources include fuel combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. |
| 0.25 ppm | 0.075 ppm | (a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardiopulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage. | The sulfate ion is a polyatomic anion with the empirical formula SO ₄ 2-. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water. | Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel. |
| -- | 0.5 ppm | Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment | Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in | Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the |
| 50 µg/m ³ | 150 µg/m ³ | | | |
| 20 µg/m ³ | -- | | | |
| -- | 35 µg/m ³ | | | |
| 12 µg/m ³ | 15 µg/m ³ | | | |
| Exinction coefficient of 0.23 per kilometer, visibility of ten miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. | | | | |
| 25 µg/m ³ | -- | | | |
| 1.5 µg/m ³ | -- | | | |
| -- | 1.5 µg/m ³ | | | |

ENVIRONMENTAL IMPACT EVALUATION

| | | | | |
|---|------------------------|--|--|---|
| -- | 0.15 µg/m ³ | of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers. High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants. | motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982. Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor. Hydrogen sulfide (H ₂ S) is a flammable, colorless, poisonous gas that smells like rotten eggs. Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. | atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills, sewage plants, and hazardous waste sites. Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal). Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM ₁₀ and lower visibility. |
| 0.01 ppm | -- | There are no State or federal standards for VOCs because they are not classified as criteria pollutants. | | |
| 0.03 ppm | -- | | | |
| | | Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer. Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure. | Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts and in the manufacture of detergents, explosives, and pharmaceuticals. Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment. | |
| There are no ambient air quality standards for benzene. | | | Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen. DPM is a source of PM _{2.5} —diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust. | |
| There are no ambient air quality standards for DPM. | | | | |

Notes:

ppm = parts per million (concentration) µg/m³ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

1. Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO₂, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
 2. Effective April 12, 2010, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb, or 188 µg/m³.
 3. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
 4. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.
- Source of effects: South Coast Air Quality Management District 2007b; California Environmental Protection Agency 2002; California Air Resources Board 2009; U.S. Environmental Protection Agency 2010; U.S. Environmental Protection Agency 2000; National Toxicology Program 2005a.
Source of standards: California Air Resources Board 2010a.
Source of properties and sources: U.S. Environmental Protection Agency 1999; U.S. Environmental Protection Agency 2003; U.S. Environmental Protection Agency 2011b; U.S. Environmental Protection Agency 2009a; National Toxicology Program 2005b.
Source: A Q/GHG Analysis (Appendix D1)

In addition, the State has set standards for sulfates, hydrogen sulfides, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for O₃, CO, NO₂, SO₂, and PM₁₀. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increases from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- O₃: 392 micrograms per cubic meter (µg/m³) (0.20 parts per million [ppm]), 1-hour average;
- CO: 17 milligrams per cubic meter (mg/m³) (15 ppm), 8-hour average; and
- NO₂: 1,130 µg/m³ (0.6 ppm) 1-hour average; 282 µg/m³ (0.15 ppm) 24-hour average.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts - air district prepares their federal attainment plan, which sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Several pollutants listed above are not addressed in the *AQ/GHG Analysis*. Analysis of lead is not included because the Project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed because particulate matter is addressed. The Project is not expected to generate or be exposed to vinyl chloride because proposed Project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the Project vicinity. The proposed Project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

South Coast Air Quality Management District

The agency for air pollution control for the South Coast Air Basin (basin) and the SSAB is the SCAQMD. SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On December 7, 2012, SCAQMD adopted the 2012 AQMP. The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. In addition, the 2012 AQMP includes the new and changing federal requirements, the implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

In December 2016, the AQMD released the draft Final 2016 AQMP for public review. The 2016 AQMP was approved by the SCAQMD in March 2017 and was approved by the ARB on March 23, 2017. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the draft Final 2016 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2016 RTP.

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. The rules and regulations that apply to this Project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

SCAQMD Rule 403.1 are supplemental to Rule 403 requirements and shall apply only to fugitive dust sources in the Coachella Valley.

(d) General Requirements of 403.1

(1) Any person who is responsible for any active operation, open storage pile, or disturbed surface area, and who seeks an exemption pursuant to Rule 403, paragraph (g)(2) shall be required to determine when wind speed conditions exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(2) Any person involved in active operations in the Coachella Valley Blowsand Zone shall

stabilize new man-made deposits of bulk material within 24 hours of making such bulk material deposits. Stabilization procedures shall include one or more of the following:

- (A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or
- (B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least 6 months; or
- (C) Installation of wind breaks of such design so as to reduce maximum wind gusts to less than 25 miles per hour in the area of the bulk material deposits.

(3) Any person involved in active operations in the Coachella Valley Blowsand Zone shall stabilize new deposits of bulk material originating from off-site undisturbed natural desert areas within 72 hours. Stabilization procedures shall include one or more of the following:

- (A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or
- (B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least six months.

(4) A person who conducts or authorizes the conducting of an active operation shall implement at least one of the control actions specified in Rule 403, Table 2 for the source category "Inactive Disturbed Surface Areas" to minimize wind driven fugitive dust from disturbed surface areas at such time when active operations have ceased for a period of at least 20 days.

(5) Any person involved in agricultural tilling or soil mulching activities shall cease such activities when wind speeds exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(e) Fugitive Dust Control Plan and Other Requirements for Construction Projects/Earth-Moving Activities.

(1) Any person who conducts or authorizes the conducting of an active operation with a disturbed surface area of more than 5,000 square feet shall not initiate any earth-moving activities unless a fugitive dust control plan is prepared and approved by the Executive Officer in accordance with the requirements of subdivision (f) and the Rule 403.1 Implementation Handbook. These provisions shall not apply to active operations exempted by paragraph (i)(4).

(2) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall maintain a complete copy of the approved fugitive dust control plan on site in a conspicuous place at all times and the fugitive dust control plan must be provided upon request.

(3) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall install and maintain signage with project contact information that meets the minimum standards of the Rule 403.1 Implementation Handbook prior to initiating any type of earth-moving activities.

(4) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) for a project with a disturbed surface area of 50 or more acres shall have an Dust Control Supervisor

that: (A) is employed by or contracted with the property owner or developer; and (B) is on-site or is available to be on-site within 30 minutes of initial contact; and (C) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 and 403.1 requirements; and (D) has completed the AQMD Coachella Valley Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.

(5) Failure to comply with any of the provisions of an approved fugitive dust control plan shall be a violation of this rule.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the volatile organic compound (VOC) content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of Project must comply with Rule 1113.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies addressing air quality and greenhouse gas are applicable to the Project and may also be included under other chapters of the EIR:

Land Use + Community Character Element

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.5 High quality construction and architecture: Require high-quality and long-lasting building materials on all new development projects in the City. Encourage innovative and quality architecture in the City with all new public and private projects.

2.7 Climate-appropriate design: Require architecture, building materials and landscape design to respect and relate to the local climate, topography, history, and building practices.

Goal 3. Healthy Community Design. Development patterns and urban design comprised of complete, walkable, attractive, family-friendly neighborhoods, districts and corridors that support healthy and active lifestyles.

3.2 Walkable streets: Regulate new development to ensure new blocks encourage walkability by maximizing connectivity and route choice, create reasonable block lengths to encourage more walking and physical activity and improve the walkability of existing neighborhood streets.

3.5 Health in Developments: Evaluate the health impact and benefits of new development projects in the early planning phases to maximize its contribution to the vision for a healthier Coachella.

Goal 5. Neighborhoods. Neighborhoods that provide a variety of housing types, densities, designs and mix of uses and services that reflect the diversity and identity of Coachella, provide for diverse needs of residents of all ages, ethnicities, socio-economic

groups and abilities, and support healthy and active lifestyles. (The following policies apply to all locations with a “Neighborhood” General Plan Designation.)

5.1 Complete neighborhoods: Through the development entitlement process, ensure that all new Neighborhoods (areas with a “Neighborhood” General Plan Designation) are complete and well-structured such that the physical layout and land use mix promote walking to services, biking and transit use; develop community identity and pride, are family friendly and address the needs of multiple ages and physical abilities. New neighborhoods should have the following characteristics:

- Be approximately 125 acres in size and approximately half-mile in diameter
- Contain short, walkable block lengths.
- Have a grid or modified grid street network (except where topography necessitates another street network layout).
- Contain a high level of connectivity for pedestrians, bicycles and vehicles (except where existing development or natural features prohibit connectivity).
- Have homes with entries and windows facing the street.
- Contain a diversity of housing types, where possible.
- Provide a diversity of architectural styles.
- Have goods and services within a short walking distance.
- Are organized around a central focal point such as a park, school, civic building or neighborhood retail such that most homes are no more than one quarter-mile from this focal point.

5.7 Walkable neighborhoods: Require that all new neighborhoods are designed and constructed to be pedestrian friendly and include features such as short blocks, wide sidewalks, tree-shaded streets, buildings that define and are oriented to streets or public spaces, traffic-calming features, convenient pedestrian street crossings, and safe streets that are designed for pedestrians, cyclists and vehicles.

5.10 Street layout: Design streets and lot layouts to provide a majority of lots within 20 degrees of a north-south orientation for increased energy conservation.

5.11 Connections to key destinations: Require direct pedestrian connections between residential areas and nearby commercial areas.

5.14 Shaded streets: Strive to design and build neighborhoods to provide shade over at least 30 percent of the length of sidewalks on streets within the project. Trees must provide shade within 10 years of landscape installation and should be as water efficient as possible.

5.15 Access to daily activities: Strive to create development patterns such that the majority of residents are within one-half mile walking distance to a variety of neighborhood goods and services, such as supermarkets, restaurants, churches, cafes, dry cleaners, laundromats, farmer’s markets, banks, hair care, pharmacies and similar uses.

5.16 Access to parks and open spaces: Design new neighborhoods and, where feasible, retrofit existing neighborhoods, so that 60 percent of dwelling units are within a one- third mile walk distance of a usable open space such as a tot-lot, neighborhood park, community park or plaza/green.

5.22 Green neighborhoods: Encourage new developments to build to a green neighborhood rating standard and apply for certification from a program such as LEED for Neighborhood Development or LEED for Homes.

Goal 6. Centers. A variety of mixed use, urban centers throughout the City that provides opportunities for shopping, recreation, commerce, employment and arts and culture.

6.4 Diverse centers: Encourage the development of local and city-wide centers that address different community needs and market sectors. The centers shall complement and be integrated with surrounding neighborhoods.

6.5 Access to transit: Promote the development of commercial and mixed use centers that are located on existing or planned transit stops in order to facilitate and take advantage of transit service, reduce vehicle trips and allow residents without private vehicles to access services.

6.7 New neighborhood centers: Create a series of new neighborhood centers throughout Coachella so the majority of dwelling units in each Neighborhood are no more than one-half mile from any neighborhood center.

Goal 9. Corridors and Connectivity. A network of transportation and open space corridors throughout the City that provides a high level of connectivity for vehicles, cyclists and pedestrians.

9.6 Trip Chaining: Prioritize complementary land uses to encourage trip chaining and reduce automobile use.

Goal 11. Economic Development. A broad-based and long-term economic development environment for Coachella that is supportive of existing businesses and will attract new business and tourism.

11.5 Jobs-housing balance: Strive to improve the jobs-housing balance in the City by actively pursuing employment uses to the City.

Mobility Element

Goal 1. Complete Streets. A balanced transportation system that accommodates all modes of travel safely and efficiently without prioritizing automobile travel at the expense of other modes.

1.1 Complete streets for new construction: Require that the planning, design and construction of all new transportation projects consider the needs of all modes of travel to create safe, livable and inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and abilities.

1.3 Transportation system impacts: Evaluate impacts to all modes of travel when considering transportation system performance.

1.5 Pedestrian and cyclist safety: Balance the safety concerns of pedestrians and cyclists with motor vehicles and emergency response to ensure that the safety of all users of the transportation system is considered.

Goal 2. Traffic Calming. A transportation system that limits negative impacts from vehicular travel on residents and workers.

2.5 Parking and loading: Encourage business owners to schedule deliveries during off-peak periods to limit freight impacts on other modes of travel.

2.6 Truck idling: Develop a localized anti-idling ordinance to limit truck idling by schools and residents. This ordinance should reference currently statewide and regional regulations by the Air Resources Board, the Air Pollution Control District, and other agencies as applicable.

Goal 3. Pedestrian Network. A safe pedestrian network that provides direct connections between residences, employment, shopping and civic uses.

3.1 Pedestrian network: Improve health outcomes by creating a safe and convenient circulation system for pedestrians that focuses on crosswalks, improves the connections between neighborhoods and commercial areas, provides places to sit or gather, pedestrian-scaled street lighting, buffers from moving vehicle traffic, and includes amenities that attract people of all ages and abilities.

3.4 Pedestrian connections for development: Require that all development or redevelopment projects provide pedestrian connections to the external pedestrian network.

3.5 Pedestrian access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide pedestrian connections from external areas into the community.

3.7 Neighborhood connectivity: Create bicycle and pedestrian connections through existing residential neighborhoods, providing access to adjacent neighborhoods and external bicycle/pedestrian facilities.

3.8 Park once: Design dense nodes of commercial and retail businesses with reduced off-street parking that is accessible to public parking locations so people can park once for many errands/trips.

Goal 4. Bicycle Trail Network. A bicycle and multi-use trail network that facilitates bicycling for commuting, school, shopping and recreational trips.

4.1 Bicycle networks: Require that the City provide additional bicycle facilities along all roadways in the City which are built or reconstructed in the City except in those instances in which there is insufficient right-of-way or other physical limitations.

4.3 Bicycle access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide bicycle connections from external areas into the community.

4.4 Bicycle parking: Require that the public and private development in the City provide sufficient bicycle parking.

Goal 5. Transit Supportive Development Patterns. An integrated land use and transportation network that supports transit ridership.

5.1 Transit improvements: Promote transit service in areas of the City with sufficient density and intensity of uses, mix of appropriate uses, and supportive bicycle/pedestrian networks.

5.2 Bus stops: Review existing bus stop locations to determine their accessibility to key destinations such as schools, residential areas, retail centers, civic facilities. The City will encourage bus shelters as public art and work with Sun Line to relocate bus stop locations as needed to provide greater access to these key destinations. Prioritize those bus stop locations which are connected to bicycle and pedestrian facilities.

5.3 Promote bus shelters: Encourage bus shelters in new development, if a stop is determined necessary by SunLine. Bus shelters should be designed as public art or to be compatible with the building architecture of the site.

Goal 8. Regional Connectivity. A transportation system that provides an appropriate level of regional connectivity for residents and businesses through vehicular, freight, transit and non-motorized connections.

8.1 Regional transit: Collaborate with Sun Line Transit to identify regional connections for City residents and employees.

Community Health + Wellness Element

Goal 1. Healthy Community. A physical, social and civic environment that supports residents' health, well-being and equity.

1.7 EIR Review: Submit all environmental documents (Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports) prepared with the City as the lead agency to the Riverside County Department of Public Health for review and comment.

Goal 2. Healthy Housing. Safe, affordable and healthy housing for every stage of life.

2.18 Healthy building materials: Encourage property owners pursuing new developments and home renovations to use low-or non-toxic materials such as low-VOC (volatile organic compound) paint and carpet and other strategies to improve indoor air quality and noise levels (e.g., kitchen range top exhaust fans, treated windows, etc.).

Sustainability + Natural Environment Element

Goal 1. Climate Change. A resilient community that is prepared for the health and safety impacts of and minimizes the risks of climate change.

1.2 GHG reductions: Promote land use and development patterns that reduce the community's dependence on and length of automobile trips.

1.6 Climate-appropriate building types: Seek out and promote alternative building types that are more sensitive to the arid environment found in the Coachella Valley. Courtyard housing and commercial buildings can be designed to provide micro- climates that are usable year round, reducing the need for mechanically cooled spaces and reducing energy consumption.

1.11 Urban forest: Protect the City's healthy trees and plant new ones to provide shade, increase carbon sequestration and purify the air.

1.12 Reduced water supplies: When reviewing development proposals, consider the possibility of constrained future water supplies and require enhanced water conservation measures.

1.13 Designing for warming temperatures: When reviewing development proposals, encourage applicants and designers to consider warming temperatures in the design of cooling systems.

Goal 2. Energy. An energy efficient community that relies primarily on renewable and non-polluting energy sources.

2.2 Passive solar design: Require new buildings to incorporate energy efficient building and site design strategies for the desert environment that include appropriate solar orientation, thermal mass, use of natural daylight and ventilation, and shading.

2.6 Energy performance targets – new construction: Require new construction to exceed Title 24 energy efficiency standards by 15 percent and incorporate solar photovoltaics.

2.9 Energy-efficient street lighting: Implement a program to install the latest energy- efficient technologies for street and parking lot lights to meet City and state standards.

Goal 3. Water Resources. Protected and readily available water resources for community and environmental use.

3.1 Conservation performance targets – new construction: Require new construction to exceed the state's Green Building Code for water conservation by an additional 10 percent.

3.2 Water conservation technologies: Advocate and promote indoor and outdoor water conservation and reuse practices including water recycling, grey water re-use and rainwater harvesting.

3.3 Greywater: Support the use of greywater and establish criteria and standards to permit the safe and effective use of greywater (also known as on-site water recycling).

3.4 Low impact development: Require the use of low-impact development strategies to minimize urban run-off, increase site infiltration, manage stormwater and recharge groundwater supplies.

3.5 Recycled water: Require the use of recycled water for all agricultural, irrigation and industrial uses in order to reserve the City's highest quality potable water for drinking.

3.7 Landscape design: Encourage the reduction of landscaping water consumption through plant selection and irrigation technology.

3.8 Groundwater infiltration: Encourage the use of above-ground and natural stormwater facilities in new development and redevelopment, such as grassy or vegetated swales, permeable paving and rain gardens.

Goal 4. Green Building. Community building stock (both new construction and renovations) that demonstrates high environmental performance through green design.

4.4 Reducing GHG emissions: In consulting with applicants and designing new facilities, prioritize the selection of green building design features that enhance the reduction of greenhouse gas emissions.

4.5 Heat island reductions: Require heat island reduction strategies in new developments such as light-colored cool roofs, light-colored paving, permeable paving, right-sized parking requirements, vegetative cover and planting, substantial tree canopy coverage, and south and west side tree planting.

4.6 Public realm shading: Strive to improve shading in public spaces such as bus stops, sidewalks and public parks and plazas through the use of trees, shelters, awnings, gazebos, fabric shading and other creative cooling strategies.

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.6 Grading and vegetation removal: Limit grading and vegetation removal of new development activities to the minimum extent necessary to reduce erosion and sedimentation.

Goal 11. Air Quality. Healthy indoor and outdoor air quality through reduced, locally generated pollutant emissions.

11.2 Land use patterns: Promote compact, mixed-use, energy efficient and transit- oriented development to reduce air pollutants associated energy and vehicular use.

11.8 Construction-related emissions: Require construction activities, including on-site building and the transport of materials, to limit emissions and dust.

11.9 Project mitigation: The City shall utilize the CEQA process to identify and mitigate potentially significant air quality impacts associated with new development.

11.10 Traffic congestion: Design new intersections to function in a manner that reduces air pollutant emissions from stop and start and idling traffic conditions.

11.11 Health impact assessments: Develop thresholds of significance for sensitive land uses (schools, senior centers, medical facilities and residences) in proximity to SR86S, SR111 and I10 to require preparation a health impact assessment (HIA), as part of the CEQA

environmental review process, to analyze the significance of the health impact from highway adjacency and incorporate project-specific mitigation measures to reduce potential impacts.

11.12 Indoor air quality: Require new development to meet the state's Green Building Code for indoor air quality performance.

11.13 Healthy homes: Promote green building practices that support "healthy homes," such as low VOC materials, environmental tobacco smoke control, and indoor air quality construction pollution prevention techniques.

11.17 Deliveries: Encourage business owners to schedule deliveries at off-peak traffic periods.
Safety Element

Goal 7. Severe Weather Hazards. A community that is minimally affected by high winds, dust storms, extreme temperatures and drought.

7.11 Best management practices during construction and planting: Enforce the use of water spray and other mitigation measures to control dust in grading and construction sites and in agricultural fields being prepared for planting. This may include prohibiting earthwork activities at construction sites and farms on windy days.

Infrastructure + Public Services Element

Goal 2. Water Supply Facilities. Water supply facilities that meet future growth within the city and assure a high-quality and reliable supply of water to current and future residents.

2.13 Water-efficient landscaping: Require the use of water-efficient landscaping in all new development.

2.14 Grey water: Strongly encourage new development to utilize on-site grey water systems.

2.15 Reclaimed water: Expand the use of reclaimed water for irrigation and other applications.

2.16 Reclaimed water infrastructure: As existing water distribution infrastructure is replaced, consider adding reclaimed water distribution systems to minimize construction costs. To the extent feasible, the replacement should be concurrent with major infrastructure or development projects within the City.

Goal 5. Solid Waste Management. An integrated solid waste management system that recycles resources locally and minimizes contributions to the county landfill.

5.3 Solid Waste Diversion and Recycling: Meet or exceed the state's solid waste diversion requirements under AB 939.

5.15 On-site collection and storage of recyclables: Require new public and private buildings to be designed with on-site storage facilities for recycled materials.

City of Coachella Climate Action Plan

The Coachella General Plan includes specific policies that guide the City's approach to reducing greenhouse gas emissions, preparing future inventories and climate action plans, and developing strategies to minimize the potential impacts of climate change and variability. Climate change is addressed throughout the General Plan. For the Climate Action Plan (CAP), policies were compiled from the Land Use (LU), Mobility (M), Sustainability and Natural Environment (SNE), Safety (S), and Infrastructure and Public Services (IPS) elements. Each policy references the appropriate goal and policy within an element (e.g. Sustainability and Natural Environment Goal 2 Policy 4 – SNE 2.4). A brief description of each policy is provided in the CAP along with an estimate of the anticipated reduction in greenhouse gas emissions for 2020 and 2035.

The General Plan policies have been listed in detail above. The following is a list of the policies referenced in the CAP. They are listed by Energy Efficiency Policies, Renewable Energy Policies, Land Use and Transportation Policies, Solid Waste Policies, Vegetation and Open Space Policies, and Water Use and Supply Policies.

Please refer above for additional detail as it pertains to the General Plan policies.

Energy Efficiency Policies

- Energy performance targets – new construction (SNE 2.6)
- Energy performance targets – existing buildings (SNE 2.7)
- Energy efficiency workshops (SNE Action 4)
- Passive solar design (SNE 2.1 and 2.2)
- Energy reductions from shade trees (SNE 1.11, 4.6)
- Energy reductions from cool paving (SNE 4.5)
- Energy-efficient street lighting (SNE 2.9)

Renewable Energy Policies

- Energy performance targets – new construction (SNE 2.6)
- Energy performance targets – existing buildings (SNE 2.7)
- Community choice aggregation (SNE 2.4)
- Alternative energy (SNE 2.3)
- Renewable energy–open space areas (SNE 2.8)
- New industries (SNE 2.10)
- Solar access (SNE 2.12)
- Use of passive open space (SNE 2.13)

Land Use and Transportation Policies

- Land Use and Location (LU-1 [Sub-Area 1], LU-1 [Sub-Area 6], LU-2 [Sub-Area 1], LU-3 [Sub-Area 1], LU-1 [Sub-Area 2], LU-3 [Sub-Area 6], LU-3 [Sub-Area 10], LU-4 [Sub-Area 1], LU-6 [Sub-Area 14], LU-8 [Sub Area 2], LU-7 [Sub-Area 1], LU-11 [Sub-Area 11], LU-1, LU-2.9, LU 2.10, LU-3.2, LU-3.3, LU 5.1, LU 5.2, LU 5.4, LU 5.7, LU 5.9, LU 5.10, LU 5.15, LU 6.6, LU 9.1, LU 9.3, LU 9.6, LU 11.2, S 1.2, S 11.2, M 3.4, M 3.5, M 3.7, M 4.3)
- Neighborhood and Site Enhancements (LU-2 [Sub-Area 1], LU-3 [Sub-Area 1], LU-4 [Sub-Area 1], LU-4 [Sub-Area 3], LU-5 [Sub-Area 2], LU-5 [Sub-Area 3], LU-1 [Sub-Area 6], LU-7 [Sub-Area 9], LU-5 [Sub-Area 14], LU-10 [Sub-Area 9], LU 5.8, LU 5.11, LU 5.10, M 1.1, M

1.2, M 1.5, M 2.1, M 2.2, M 3.1, M 3.2, M 3.3, M 3.9, M 4.1, M 4.2, M 4.3, M 4.4, M 4.5, M 8.3)

- Parking Management (M 3.8)
- Transit Service (LU-12 [Sub Area 2], LU-13 [Sub-Area 2], M 5.1, M 5.2, M 5.4, M 5.5, M 5.6, M 8.1)

Solid Waste Policies

- Solid waste diversion and recycling (IPS 5.3)
- Construction and demolition debris (IPS 5.13)
- Zero waste (IPS 5.4)
- Greener waste management practices (IPS 5.9)
- Electronic waste (IPS 5.10)
- On-site collection and storage of recyclables (IPS 5.15)
- Public education (IPS 5.16)

Vegetation and Open Space Policies

- Urban forest (SNE 4.6, SNE 1.11)
- Parks and open space (SNE 13.2, SNE 13.3, SNE 13.4, SNE 13.5, SNE 13.9, SNE 13.10, SNE 13.12, SNE 13.14, SNE 13.15)

Water Use and Supply Policies

- Conservation performance targets – new construction (SNE 3.1)
- Greywater (SNE 3.3)
- Recycled water (SNE 3.5)
- Landscape design (SNE 3.7, SNE 13.14)
- Public education (SNE 3.6)

Greenhouse Gas Regulatory Setting

California

Title 24. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2011 must follow the 2008 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition

ordinances and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard which buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- **Short-term bicycle parking.** If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1).
- **Long-term bicycle parking.** For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.2).
- **Designated parking.** Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles (5.106.5.2).
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- **Construction waste.** A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- **Wastewater reduction.** Each building shall reduce the generation of wastewater by one of the following methods:
 - The installation of water-conserving fixtures or
 - Utilizing nonpotable water systems (5.303.4).
 - Water use savings. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35 and 40-percent reductions.
 - Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
 - Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas.
 - Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.
 - Building commissioning. Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Pavley Regulations. California Assembly Bill No. 1493 (AB 1493), enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the EPA's denial of an implementation waiver. On January 21, 2009, the ARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009-2012) standards will result in about a 22-percent reduction compared with the 2002 fleet, and the mid-term (2013-2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels.
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure the 2020 targets in Executive Order S-3-05 are met. If a Project is consistent the service population for SCAQMD, and the City's CAP, then it is considered consistent with EO-S-3-05. EO-S-3-05 is the methodology utilized by SCAQMD to determine the service population threshold.

Low Carbon Fuel Standard - Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming

include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO₂e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a “business as usual” scenario are estimated to be 596 MMTCO₂e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

The ARB’s Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State’s emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between “capped” and “uncapped” strategies. “Capped” strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is

calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. “Uncapped” strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.

SB 375. Passing the Senate on August 30, 2008, SB 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of greenhouse gas emissions, which emits over 40 percent of the total greenhouse gas emissions in California. SB 375 states, “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing greenhouse gas emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies. Concerning CEQA, SB 375, section 21159.28 states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable community’s strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Executive Order S-13-08. Executive Order S-13-08 indicates that “climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California’s economy, to the health and welfare of its population and to its natural resources.” Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the “ . . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States.” Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the state’s load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

South Coast Air Quality Management District

The Project is within the SSAB, which is under the jurisdiction of the SCAQMD.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration (“SCAQMD draft local agency threshold”). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO₂e per year for stationary/industrial sources and 3,000 metric tons of CO₂e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD’s annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project’s construction emissions are averaged over 30 years and are added to a project’s operational emissions. If a project’s emissions are under one of the following screening thresholds, then the project is less than significant:
 - All land use types: 3,000 MTCO₂e per year.
 - Based on land use types: residential is 3,500 MTCO₂e per year; commercial is 1,400 MTCO₂e per year; and mixed use is 3,000 MTCO₂e per year.
- Tier 4 has the following options:
 - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined;
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures;
 - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e/SP/year for projects and 6.6 MTCO₂e/SP/year for plans;
 - Option 3, 2035 target: 3.0 MTCO₂e/SP/year for projects and 4.1 MTCO₂e/SP/year for plans.
- Tier 5 involves mitigation offsets to achieve target significance threshold.

4.4.3 Thresholds of Significance

The City’s Initial Study contains five (5) criteria for determining impacts to air quality resources and two (2) criteria for determining impacts to greenhouse gas. As discussed above in Subchapter 4.3.1, above, the following seven (7) criteria will be analyzed in this EIR:

- a. Would the Project conflict with or obstruct implementation of the applicable air quality plan?
- b. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- c. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d. Would the Project expose sensitive receptors to substantial pollutant concentrations?
- e. Would the Project create objectionable odors affecting a substantial number of people?
- f. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? and/or
- g. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

4.4.3.1 Regional Significance Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Coachella Valley portion of the SSAB:

- 75 pounds per day (lbs./day) of reactive organic compounds (ROC)
- 100 lbs./day of NO_x
- 550 lbs./day of CO
- 150 lbs./day of PM₁₀
- 55 lbs./day of PM_{2.5}
- 150 lbs./day of SO₂

Projects in the SSAB with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

4.4.3.2 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the Coachella Valley portion of the SSAB are the same as the construction emissions thresholds above.

4.4.3.3 Local Microscale Concentration Standard

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

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

4.4.3.4 Thresholds for Localized Significance

Local Significance Thresholds (LST) represents the maximum emissions from a Project site that is not expected to result in an exceedance of the national or state AAQS shown in **Table 4.4.2-2, Air Quality Monitoring Summary**. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA) and the distance to the nearest sensitive receptor. For this Project, the appropriate SRA for the LST is the Coachella Valley SRA 30.

In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, both of which are non-attainment pollutants. For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 micrograms per cubic meter applies to construction emissions (and may apply to operational emissions at aggregate handling facilities).

Construction LSTs are assessed with the SCAQMD screening thresholds. Construction thresholds for a 5-acre site in the Coachella Valley (SRA 30) at 100 meters were utilized:

- 425 lbs./day of NO_x
- 5,331 lbs./day of CO
- 67 lbs./day of PM₁₀
- 19 lbs./day of PM_{2.5}

4.4.3.5 SCAQMD Interim Significance Thresholds

In addition to CEQA guidelines, the SCAQMD established a working group to develop an interim significance threshold for GHG emissions under CEQA as discussed above. This analysis compares the Project's GHG emissions to the SCAQMD's Tier 3 and 4 approaches.

4.4.3.6 City of Coachella Thresholds

The City of Coachella's Climate Action Plan provides direction on how the City plans to achieve a 15% reduction below 2010 (per service population) emissions by 2020. Projects that do not exceed 3,000 MTCO_{2e} per year will be consistent with the GHG Plan and determined to have a less than significant individual and cumulative impact for GHG emissions. For projects that exceed 3,000 MTCO_{2e} per year of GHG emissions the applicant may choose to provide mitigation, which demonstrates a 15% target reduction (7.8 MTCO_{2e}/SP/year) below 2010 (per service population) emissions by 2020.

4.4.4 Potential Impacts

THRESHOLDS a & b: **Would the Project conflict with or obstruct implementation of the applicable air quality plan; violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

Modeling Parameters and Assumptions

The following modeling parameters and assumptions were used in the analysis below.

Construction

Emissions were estimated using the California Emissions Estimator Model Version 2013.2.2 (CalEEMod), which was released October 2, 2013. According to the *Supplemental Letter*, the September 2016 Air Study utilized CalEEMod version 2013.2.2, which was the latest available version at the time the study was published. The current available version of CalEEMod is version 2016.3.2 emissions factors from EMFAC2011 to EMFAC2014, and building efficiency updates reflecting the 2013 Title 24, Part 6 standards.

Changes that impact reported emissions values include updates to the California Air Resources Board (CARB) OFFROAD emissions calculation methodology, updated on-road.

The analysis reflects the construction of land use summary as indicated in **Table 4.4.4-1, Land Use Summary**, below. Construction was anticipated to begin no sooner than January 2015 with a time horizon for completion by 2022. To represent a worst-case scenario, the Project was analyzed in a single phase of construction.

**Table 4.4.4-1
Land Use Summary**

| Planning Area | Land Use | Unit Amount | Size Metric |
|---------------|------------------|-------------|----------------------|
| 1 | Shopping Center | 191.34 | Thousand Square Feet |
| 2 | Apartments | 146 | Dwelling Units |
| 3 | Apartments | 201 | Dwelling Units |
| 4 | Condos/Townhomes | 263 | Dwelling Units |
| 5 | Single Family | 250 | Dwelling Units |
| 6 | Single Family | 460 | Dwelling Units |
| 7 | Single Family | 260 | Dwelling Units |
| 8 | Single Family | 60 | Dwelling Units |
| 9 | City Park | 13.82 | Acres |
| 10 | Shopping Center | 90.06 | Thousand Square Feet |
| -- | On-site Roads | 20.0 | Acres |
| -- | Parking Lots | 6.46 | Acres |

Source: AQ/GHG Analysis (Appendix D1)

The CalEEMod default construction equipment list was multiplied by three (3) to meet the expedited schedule. The construction equipment list used is shown in **Table 4.4.4-2, Construction Equipment Assumptions**, below. The daily and annual CalEEMod emissions outputs are located in Appendix A of the *AQ/GHG Analysis*.

**Table 4.4.4-2
Construction Equipment Assumptions¹**

| Phase | Equipment | Number | Hours per day | Horsepower | Load Factor | Daily Disturbance Footprint (Acres) ² |
|--|---------------------------|--------|---------------|------------|-------------|--|
| Site Preparation | Rubber Tired Dozers | 9 | 8 | 255 | 0.4 | 10.5 |
| | Tractors/Loaders/Backhoes | 12 | 8 | 97 | 0.37 | |
| Grading of main site | Excavators | 6 | 8 | 162 | 0.38 | 15 |
| | Graders | 3 | 8 | 174 | 0.41 | |
| | Rubber Tired Dozers | 3 | 8 | 255 | 0.4 | |
| | Scrapers | 6 | 8 | 361 | 0.48 | |
| | Tractors/Loaders/Backhoes | 6 | 8 | 97 | 0.37 | |
| Building construction | Cranes | 3 | 7 | 226 | 0.29 | -- |
| | Forklifts | 9 | 8 | 89 | 0.2 | |
| | Generator Sets | 3 | 8 | 84 | 0.74 | |
| | Tractors/Loaders/Backhoes | 9 | 7 | 97 | 0.37 | |
| | Welders | 3 | 8 | 46 | 0.45 | |
| Paving of parking lots and roads, road striping | Pavers | 6 | 8 | 125 | 0.42 | -- |
| | Paving Equipment | 6 | 8 | 130 | 0.36 | |
| | Rollers | 6 | 8 | 80 | 0.38 | |
| Architectural Coating | Air Compressors | 3 | 6 | 78 | 0.48 | -- |

¹ Source: CalEEMod defaults x 3.

² Source: Calculation details for CalEEMod.

Source: AQ/GHG Analysis (Appendix D1)

Other parameters which are used to estimate construction emissions such as the worker and vendor trips and trip lengths utilize the CalEEMod defaults. The trips assumptions are provided in **Table 4.4.4-3, Construction Trip Assumptions**, below. This is based on the assumption that the Project will result in a balance of cut and fill on the site. No import or export will be required.

**Table 4.4.4-3
Construction Trip Assumptions¹**

| Phase | Trips per day | | Total # of Trips Haul | Trip Length (miles) | | |
|------------------|---------------|--------|-----------------------|---------------------|--------|------|
| | Worker | Vendor | | Worker | Vendor | Haul |
| Site Preparation | 53.0 | 0.0 | 0 | 11.0 | 5.4 | 20.0 |
| Grading | 60.0 | 0.0 | 0 | 11.0 | 5.4 | 20.0 |
| Building | 1637.0 | 509.0 | 0 | 11.0 | 5.4 | 20.0 |
| Paving | 45.0 | 0.0 | 0 | 11.0 | 5.4 | 20.0 |
| Coating | 327.0 | 0.0 | 0 | 11.0 | 5.4 | 20.0 |

¹ Worker fleet is light duty mix; vendor fleet is a heavy duty truck mix; hauling vehicle mix is heavy-heavy duty trucks (all CalEEMod defaults).

Source: AQ/GHG Analysis (Appendix D1)

Grading

The quantity of fugitive dust by CalEEMod is based on the number of equipment used during grading. Tractors, graders, and dozers would typically impact 10.5 acres (during site prep) and up to 15 acres (during grading) per 8-hour day if all were used simultaneously.

Per CalEEMod guidance “User Tips” #23, “Water truck(s) used during construction were counted in the vendor trip survey that was conducted for all phases of construction (i.e., site preparation, grading, building construction, etc.). The vehicle count factor (vehicles per unit/square foot) was based on an average of the construction projects surveyed, and vendor trips calculated for the whole construction project are listed under the Building Construction phase.” Therefore, the emissions from water trucks are accounted for in the building construction phase.

However, to reduce Project impacts to an insignificant level **Standard Condition SC-AQ-1** is required to reduce Project impacts.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rules 403 and 403.1 establish these procedures. Compliance with these rules is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent and stabilizing ground cover on finished sites.

In addition, any operator applying for a grading permit, or a building permit for an activity with a disturbed surface area of more than 5,000 square feet, shall not initiate any earth-moving operations unless a Fugitive Dust Control Plan has been prepared pursuant to the provisions of the Coachella Valley Fugitive Dust Control Handbook and approved by the City. It is anticipated that this Project will obtain and prepare the required Fugitive Dust Control Plan.

SCAQMD’s Rule 403 and 403.1 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in the sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rules 403 and 403.1 would require the use of water trucks during all phases where earthmoving operations would occur.

Operations

Operational or long-term emissions occur over the life of the Project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, gasoline service station, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project and consist of emissions from vehicles visiting the Project site. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage.

Motor Vehicle Emissions

Estimates of motor vehicle emissions require information on four parameters: trip generation, mix of vehicles accessing the Project (i.e., car versus type of truck), length of each trip made by each type of vehicle, and emission factor (quantity of emission for each mile traveled or time spent idling by each vehicle). Each of these parameters is discussed below.

Home, Work, Shop, and Other Trips

The percentages of home–work, home–shop, and home–other trips are from CalEEMod defaults. The trip generation rates are from the TIA, and the Institute of Transportation Engineers (ITE) Trip Generation Manual 9th Edition and are shown in **Table 4.4.4-4, Trip Generation Rates**, below.

**Table 4.4.4-4
Trip Generation Rates¹**

| Land Use | Quantity | Units ² | Trip Generation Rate (trips/unit/day) | | |
|----------------------------|----------|--------------------|---------------------------------------|----------|--------|
| | | | Weekday | Saturday | Sunday |
| Single Family | 1,030.00 | DU | 9.52 | 1.68 | 1.68 |
| Condo/Townhome Residential | 263.00 | DU | 5.81 | 5.81 | 5.81 |
| Apartment Residential | 347.00 | DU | 6.65 | 6.65 | 6.65 |
| Shopping Center | 281.40 | TSF | 42.70 | 42.70 | 42.70 |
| City Park | 746.000 | AC | 1.89 | 1.89 | 1.89 |

¹ Trip rates per Traffic Study (RK Engineering). Shopping Center trip rate was adjusted to reflect 30% pass-by trip.

² TSF = thousand square feet, DU = dwelling units, AC = acres.

Source: AQ/GHG Analysis (Appendix D1)

The percentages for work, shop, and other trips are from the CalEEMod defaults. A summary of the operational vehicle trip assumptions from CalEEMod are demonstrated in **Table 4.4.4-5, Operational Vehicle Trip Assumptions**, below.

**Table 4.4.4-5
Operational Vehicle Trip Assumptions¹**

| Land Use | Trip Length (miles) Residential | | | Percent of Trips (%) Residential | | |
|------------------|------------------------------------|-----|-----|-------------------------------------|------|------|
| | H-W | H-S | H-W | H-W | H-S | H-O |
| Apartments | 11.0 | 3.5 | 4.5 | 40.2 | 19.2 | 40.6 |
| Condos/Townhomes | 11.0 | 3.5 | 4.5 | 40.2 | 19.2 | 40.6 |
| Single Family | 11.0 | 3.5 | 4.5 | 40.2 | 19.2 | 40.6 |

| Land Use | Trip Length (miles) Non-Residential | | | Percent of Trips (%) Non-Residential | | |
|-----------------|--|------|------|---|------|------|
| | C-C | C-W | C-NW | C-C | C-W | C-NW |
| Shopping Center | 4.2 | 12.5 | 5.4 | 64.7 | 16.3 | 19.0 |
| City Park | 4.2 | 12.5 | 5.4 | 48.0 | 33.0 | 19.0 |

¹ CalEEMod defaults.

Source: AQ/GHG Analysis (Appendix D1)

Emission Factors

The emission factors (from EMFAC2011) required to estimate the mobile source emissions are embedded in the CalEEMod emissions model.

Other Emissions

1. Natural Gas

Natural gas emissions refer to the emissions that occur when natural gas is combusted on the Project site for heating water, space heating, stoves, or other uses. Criteria air pollutant and greenhouse gas emissions were estimated using CalEEMod defaults.

2. Indirect Electricity

Indirect electricity refers to the greenhouse gas emissions generated by offsite power plants to supply the electricity required for the Project. The CalEEMod defaults for energy intensity were used.

3. Water Transport

There would be greenhouse gas emissions generated from the electricity required to supply and treat the water to be used on the Project site. The water consumption for the Project is 213,074, 752 gallons of water per year.

4. Waste

There would be greenhouse gas emissions from the decomposing waste generated by the Project. The CalEEMod default estimates the Project scenario would generate 1,785.53 tons per year.

Localized Construction Analysis Modeling Parameters

The SCAQMD has published a “Fact Sheet for Applying CalEEMod to Localized Significance Thresholds”. CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

- 1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
- 2) The maximum number of acres disturbed on the peak day.
- 3) Any emission control devices added onto off-road equipment.
- 4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The local air quality emissions from construction were analyzed using the SCAQMD’s Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the proposed Project could result in a significant impact to the local air quality.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. Nearby existing sensitive receptors in the Project vicinity include several residential units, the closest being located within approximately 100 meters (approximately 328 feet) to the west of the Project site.

These look-up tables were utilized to determine localized significance. The construction emissions were compared to the SCAQMD’s threshold tables with a disturbance area of 5 acres. It should be noted that the analysis reviews construction over the entire site area when in reality the Project will be constructed in phases. The disturbance area for each phase will be less than the simulated peak disturbance. **Mitigation Measure MM-AQ-1** has been added to the Project. **MM-AQ-1** requires that the site preparation and grading contractors limit the daily disturbed area to 5 acres or less. This will ensure that emissions are kept within acceptable limits.

This analysis represents emissions from a worst-case standpoint. Any future development within the Specific Plan will need to incorporate the mitigation measures that have been outlined in Subchapter 4.4.5, Standard Conditions and Mitigation Measures, below.

Localized Operational Analysis Modeling Parameters

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the Project includes stationary sources, or attracts mobile sources (such as heavy-duty-trucks) that may spend long periods of time queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed Project does not include such uses. During operation, on-site emissions would be negligible and would primarily consist of the intermittent on-site travel of motor vehicles. There, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

Construction Air Quality Impacts

Regional Construction Emissions

Less Than Significant Impact with Mitigation Incorporated

CalEEMod was used to estimate onsite and offsite construction emissions as shown in **Table 4.4.4-6, Regional Significance – Construction Emissions**. The construction emissions incorporate SCAQMD Rules 403 and 403.1. The mitigated construction emissions incorporate **SC-AQ-1**, and **MM-AQ-1** through **MM-AQ-10**, which pertain to implementing SCAQMD Rules 403 and 403.1; limits to maximum site disturbance per day; particular construction equipment; EPA, Tier 4-Final Emission Standards; application of architectural coatings; construction equipment maintenance; construction equipment operating optimization; construction generator use minimization; and construction equipment idling minimizing. All of these Mitigation Measures will implement techniques to reduce the VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from the proposed Project.

Daily emissions CalEEMod outputs are located in Appendix A of the *AQ/GHG Analysis*. The emissions will be below the SCAQMD thresholds of significance for regional construction emissions.

**Table 4.4.4-6
Regional Significance – Construction Emissions**

| Unmitigated Construction Emissions^{1*} | | | | | | |
|--|------------|-----------------------|------------|-----------------------|------------------------|-------------------------|
| Activity | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} |
| Site Preparation | 16.01 | 170.90 | 130.77 | 0.12 | 31.73 | 20.36 |
| Grading | 20.59 | 237.40 | 155.77 | 0.19 | 19.43 | 14.55 |
| Building Construction | 21.66 | 128.54 | 199.08 | 0.33 | 22.95 | 10.68 |
| Architectural Coating | 84.3 | 5.43 | 16.12 | 0.04 | 3.04 | 1.02 |
| Paving | 4.23 | 38.10 | 44.53 | 0.07 | 2.37 | 1.94 |
| Maximum ¹ | 88.49 | 237.40 | 199.08 | 0.33 | 31.73 | 20.36 |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceeds Threshold (?) | Yes | Yes | Yes | No | No | No |

| Mitigated Construction Emissions² | | | | | | |
|---|------------|-----------------------|-----------|-----------------------|------------------------|-------------------------|
| Activity | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} |
| Site Preparation | 1.66 | 5.18 | 66.60 | 0.12 | 22.50 | 11.86 |
| Grading | 2.53 | 8.13 | 107.59 | 0.19 | 8.07 | 4.11 |
| Building Construction | 11.32 | 50.76 | 199.89 | 0.31 | 17.08 | 5.17 |
| Architectural Coating | 17.8 | 1.22 | 14.29 | 0.04 | 2.76 | 0.74 |
| Paving | 1.33 | 2.98 | 51.99 | 0.07 | 0.40 | 0.12 |
| Maximum ¹ | 19.16 | 50.76 | 199.89 | 0.31 | 22.50 | 11.86 |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceeds Threshold (?) | No | No | No | No | No | No |

¹ Construction activities are not expected to overlap except during paving and painting; therefore, the maximum emissions represent the largest of each activity alone except for painting and paving which are combined. It is anticipated that the emissions would exceed the thresholds therefore mitigation is required.

* For site prep and grading mitigated on-site values for fugitive dust were used per SCAQMD rules 403 and 403.1

² Construction activities are not expected to overlap except during paving and painting; therefore, the maximum emissions represent the largest of each activity alone except for painting and paving which are combined. It is anticipated that the emissions would not exceed the thresholds with the incorporation of mitigation that restricts VOC paint levels to 10g/L or less, the use of all construction equipment with Tier 4 final engines, Level 3 DPF and use oxidation catalysts that have 20% or better reduction.

Source: AQ/GHG Analysis (Appendix D1)

Localized Construction Emissions

Less Than Significant Impact

Table 4.4.4-7, Construction Localized Significance, below, illustrates the construction related LSTs for the Project area. The emissions will be below the SCAQMD thresholds of significance for localized construction emissions.

**Table 4.4.4-7
Construction Localized Significance**

| LST Pollutants¹ | CO (lbs./day) | NOx (lbs./day) | PM₁₀ (lbs./day) | PM_{2.5} (lbs./day) |
|--|-------------------------|--------------------------|--------------------------------------|---------------------------------------|
| On-site Emissions | 199.89 | 50.76 | 22.50 | 11.86 |
| SCAQMD Construction Threshold ² | 5,331 | 425 | 67 | 19 |
| Exceeds Threshold (?) | No | No | No | No |

¹ Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Tables C-1 through C-6 for a disturbance area of 5 acres and at a receptor distance of 25 meters.

² Reference: Source Receptor Area 30 Thresholds for 5 acres at 50 meters.

Note: The emission values above correspond to a disturbance area of 10.5 acres or more. **Mitigation Measure MM-AQ--1** will ensure that the Project's disturbance is limited to 5 acres and will reduce impacts.

Source: AQ/GHG Analysis (Appendix D1)

Fugitive Dust

Less Than Significant Impact

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind and cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed Project will be required to comply with SCAQMD Rules 402, 403 and 403.1 to control fugitive dust. **Table 4.4.4-6, Regional Significance – Construction Emissions**, above, illustrates total construction emissions, i.e., fugitive-dust emissions and construction equipment exhausts that have incorporated a number of feasible control measures that can be reasonably implemented to significantly reduce PM₁₀ emissions from construction. **Table 4.4.4-6**, above, illustrates that all construction phases, the daily total construction emissions with standard control measures, would be below the daily thresholds established by the SCAQMD. Therefore, the Project will not result in significant fugitive dust emissions.

Naturally Occurring Asbestos

Less Than Significant Impact

The proposed Project is located in Riverside County which is not among the counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for naturally occurring asbestos (NOA) during Project construction is small and less than significant.

Construction-Related Toxic Air Contaminant Impact

Less Than Significant Impact

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of “individual cancer risk.” “Individual cancer risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed Project.

Operational Air Quality Emissions Impact

Regional Operational Emissions

Significant and Unavoidable Impact

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The stationary source emissions would come from additional natural gas consumption for on-site buildings and electricity for the lighting in the buildings and at the parking area. Based on trip generation factors included in the traffic study, long-term operational emissions associated with the proposed Project, calculated with the CalEEMod model, are shown in **Table 4.4.4-8, Regional Significance – Operational Emissions**, below. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating.

Table 4.4.4-8 shows that when the Project is fully operational, the Project would exceed SCAQMD regional thresholds for VOC, NO_x, and CO. Even with the incorporation of **MM-AQ-10** through **MM-AQ-13** the Project would have a significant and unavoidable impact.

**Table 4.4.4-8
Regional Significance – Operational Emissions¹**

| Unmitigated (lbs/day) | | | | | | |
|--|---------------|-----------------------|---------------|-----------------------|------------------------|-------------------------|
| Activity | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} |
| Area Sources | 139.34 | 1.56 | 135.96 | 0.01 | 6.88 | 6.81 |
| Energy Sources | 1.35 | 11.53 | 4.98 | 0.07 | 0.93 | 0.93 |
| Mobile Sources | 59.93 | 122.97 | 611.92 | 1.38 | 91.33 | 26.14 |
| Total: Area Sources + Energy + Mobile | 200.62 | 136.06 | 752.86 | 1.46 | 99.14 | 33.88 |
| SCAQMD Threshold ³ | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceeds Threshold (?) | Yes | Yes | Yes | No | No | No |

| Mitigated (lbs/day)² | | | | | | |
|--|---------------|-----------------------|---------------|-----------------------|------------------------|-------------------------|
| Activity | VOC | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} |
| Area Sources | 115.73 | 1.56 | 135.96 | 0.01 | 6.88 | 6.81 |
| Energy Sources | 1.07 | 9.14 | 3.95 | 0.06 | 0.74 | 0.74 |
| Mobile Sources | 58.65 | 112.91 | 582.96 | 1.22 | 80.58 | 23.08 |
| Total: Area Sources + Energy + Mobile | 175.45 | 123.62 | 722.87 | 1.29 | 88.20 | 30.63 |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceeds Threshold (?) | Yes | Yes | Yes | No | No | No |

¹ The operational emission levels for the entire Project are detailed above.

² See Section 1.4 of the AQ/GHG Report.

³ SCAQMD thresholds in Salton Sea Air Basin are the same for construction and operation.

Source: AQ/GHG Analysis (Appendix D1)

Localized Operational Emissions

No impact

Per SCAQMD methodology, LST analysis is not warranted.

CO Hot Spot Emissions

No impact

The SCAQMD recommends that a local CO hot spot analysis be conducted if the intersection meets one of the following criteria:

- 1) The intersection is at level of service (LOS) D or worse and where the project increases the volume to capacity ratio by 2 percent; or
- 2) The project decreases at an intersection from C to D.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no “hot spots” anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the

worst-case intersections in the air basin have no “hot spot” potential, any local impacts will be below thresholds.

Air Quality Management Plan Consistency

Significant and Unavoidable Impact

An AQMP describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. CEQA requires that certain proposed projects be analyzed for consistency with the AQMP. For a project to be consistent with the AQMP adopted by the SCAQMD, the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality, or the project must already have been included in the AQMP projection. However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP. The AQMP uses the assumptions and forecast projections of local planning agencies to determine control strategies for regional compliance status. Since the AQMP is based on the local General Plan Update (2015), projects that are deemed consistent with the General Plan Update (2015) are found to be consistent with the AQMP.

The Project will be required to follow the Coachella Valley PM₁₀ State Implementation Plan which outlines additional emission reduction measures associated with Rule 403.1. **SC-AQ-1** is required to remain consistent to the Coachella Valley PM₁₀ State Implementation Plan.

As demonstrated above, the proposed Project’s emissions exceed the regional significance operational thresholds, even with mitigation measures, and would therefore be considered significant and unavoidable.

Health Risk Assessment

Less Than Significant Impact

The SCAQMD has prepared a guidance document, *"Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, (A Reference for Local Governments Within the South Coast Air Quality Management District)"* for addressing health risks for new developments (where sensitive receptors are of a concern) that occur along or near freeways. Appendix C of the *AQ/GHG Analysis* contains the quoted document; however, the full document is available on SCAQMD’s website.

The guidance document discusses that busy traffic corridors in urban areas are defined as Freeways with an average daily traffic (ADT) above 100,000 and roadways with an ADT above 50,000. In addition, the document demonstrates the drop off rate at which air pollution levels decrease as the separation distances increases from the edge of the freeway. The busiest roadway segment near the Project site is Interstate 10, which will have an estimated 40,855 ADT in Year 2035. According to the guidance document the ADT volume is below the definition of a busy corridor.

Figure 2-1 and Table 2-2 within Appendix B of the *AQ/GHG Analysis* demonstrates the drop off rate at which the pollution concentration is reduced as the separation distance increases. The data demonstrates that a minimum distance that separates sources of diesel emissions from nearby receptors is effective in reducing potential cancer risk.

The Health Risk Assessment impact would be considered less than significant.

THRESHOLD c: **Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Significant and Unavoidable Impact

Projects could contribute to an existing or projected air quality exceedance because the South Coast Air Basin (SoCAB) is currently in nonattainment for O₃, PM₁₀, and PM_{2.5}. With regard to determining the significance of the cumulative contribution from the Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional thresholds for construction (with mitigation incorporated); however, the Project will exceed the applicable SCAQMD regional thresholds for operational-source emissions. As demonstrated above, the proposed Project's emissions exceed the regional significance operational thresholds, even with mitigation measures, and would therefore be considered significant and unavoidable.

THRESHOLD d: **Would the Project expose sensitive receptors to substantial pollutant concentrations?**

Less Than Significant Impact with Mitigation Incorporated

The potential impact of toxic air pollutant emissions resulting from development on the Project site has also been considered. Sensitive receptors to toxic air pollutants can include uses such as long-term healthcare facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered sensitive receptors. The nearest sensitive receptor in the Project vicinity includes several residential units, the closest being located within approximately 100 meters (approximately 328 feet) to the west of the Project site.

As discussed above, results of the LST analysis, which were developed in response to environmental justice and health concerns, indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction, with the incorporation of

Mitigation Measures MM-AQ-1 through MM-AQ-10. Therefore, sensitive receptors would not be subject to significant air toxic impacts during construction at the Project site.

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the Project includes stationary sources, or attracts mobile sources (such as heavy-duty-trucks) that may spend long periods of time queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed Project does not include such uses. During operation, on-site emissions would be negligible and would primarily consist of the intermittent on-site travel of motor vehicles. There, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

THRESHOLD e: Would the create objectionable odors affecting a substantial number of people?

Less Than Significant Impact with Mitigation Incorporated

SCAQMD Rule 402 regarding nuisances states: “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”

Construction. Heavy-duty equipment on the Project site during construction would emit odors. While these odors could be objectionable near the equipment, all construction operations planned are a sufficient distance from existing sensitive receptors. During later phases of development, future sensitive receptors (for which the natural dissipation in the air over that distance would prevent any health risk from objectionable odors) will also be a sufficient distance from the odor-generating equipment. No other sources of objectionable odors are expected during project construction. No mitigation is required.

Operations. The proposed Project is a residential and commercial community. These proposed residential, commercial, and mixed land uses do not include any recognized sources of long-term objectionable odors. The proposed drainage system for the Specific Plan development, as shown on the Master Drainage Plan (Figure 3.4.2-3), includes a minimum of 10 water quality basins and drainage, conveyed in earthen swales a maximum of 5’ deep, throughout the Project site. These water features have the potential to cause odors from bacteria generated by still or slow-moving water and/or decaying plant materials. **Mitigation Measure MM-HYDRO-1**, provided in Section 4.9, Hydrology and Water Quality, would require preparation and implementation of a maintenance plan for these water features, which would minimize odors caused by standing or retained water. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed Project. No additional mitigation is required.

THRESHOLD f: **Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Greenhouse Gas Impact Analysis

The Project's emissions were initially compared to the screening SCAQMD draft threshold of 3,000 metric tons CO per year for all land uses. If the Project exceeds the screening thresholds, then, per the directions of SCAQMD the Project may be compared to the Tier 4 (option 3) approach. Therefore, the Project's Year 2020 mitigated emissions were compared to the SCAQMD's 4.8 MTCO₂e/SP/year and to the City's Climate Action Plan (CAP) 7.0 MTCO₂e/SP/year target.

Therefore, this Project has used the screening SCAQMD draft threshold of 3,000 metric tons CO₂e per year for all land uses (see **Table 4.4.4-9, *Unmitigated Project Greenhouse Gas Emissions During Operation***), below, followed by the Project's Year 2020 mitigated emissions to determine Project's impact (see **Table 4.4.4-10, *Year 2020 Project Greenhouse Gas Emissions with Mitigation and Regulations***), below.

**Table 4.4.4-9
Unmitigated Project Greenhouse Gas Emissions During Operation**

| Emission Source | Emissions (MTCO₂e)¹ |
|--|--|
| Area Source | 3,641.21 |
| Energy Source | 6,833.47 |
| Mobile Source | 17,105.58 |
| Waste | 812.27 |
| Water | 944.37 |
| <i>Construction (averaged over 30 years)</i> | 653.85 |
| Total Annual Emissions² | 29,990.75 |
| SCAQMD Threshold | 3,000.00 |
| Exceeds Threshold (?) | Yes |

¹ MTCO₂e = metric tons of carbon dioxide equivalents

² Reduction from sequestration from the planting of 2,406 new trees on-site. 1,703 MTCO₂e/20 (sequestration lifetime of trees).

Source: AQ/GHG Analysis (Appendix D1)

**Table 4.4.4-10
Year 2020 Project Greenhouse Gas Emissions with Mitigation and Regulations¹**

| Emission Source | Emissions (MTCO₂e)¹ |
|--|--|
| Area Source | 3,641.21 |
| Energy Source | 5,953.43 |
| Mobile Source | 15,541.76 |
| Waste | 203.07 |
| Water | 742.24 |
| <i>Construction (averaged over 30 years)</i> | 653.85 |
| Sequestration from 2,406 new on-site trees ³ | -85.17 |
| Total Annual Emissions² | 26,650.38 |
| SCAQMD 2020 target for service population (SP) (which includes residents and employees): 4.8 MTCO ₂ e/SP/year | 4.8 MTCO ₂ e/SP/year |
| Coachella City CAP GHG emission target (15% below 2010 emissions by 2020) | 7.0 MTCO ₂ e/SP/year |
| Project Service Population? ⁴ | 8,155.00 |
| Project's MTCO₂e/SP | 3.27 |
| Exceeds Threshold (?) | No |

¹ CalEEMod Version 2013.2.2. Emission for Year 2020 per Coachella City CAP methodology.

² MTCO₂e = metric tons of carbon dioxide equivalents.

³ Reduction from sequestration from the planting of 2,406 new trees on-site. 1,703 MTCO₂e/20 (sequestration lifetime of trees).

⁴ Service population on the City of Coachella occupation rate of 4.63 persons per household (source: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>), the construction of 1,640 homes with the addition of 562 employees, based on the Riverside County commercial employment rate of 500 square feet per employee.

Source: AQ/GHG Analysis (Appendix D1)

Construction Greenhouse Gas Emissions Impact

Less Than Significant Impact

CalEEMod was used to estimate the onsite and offsite construction emissions. The total construction emissions amortized over a period of 30 years are estimated to be 653.85 MTCO₂e per year.

Operational Greenhouse Gas Emissions Impact

Less Than Significant Impact with Mitigation

Table 4.4.4-10 shows that the proposed Project's emissions would be 29,991 MTCO₂e/yr. According to SCAQMD, a cumulative global impact would occur if the GHG emissions created from the on-going operation would exceed the screen thresholds of 3,000 MTCO₂e/year.

The Project's Year 2020 emissions were compared to the SCAQMD's and the City's CAP target service population of 4.8 MTCO₂e/SP/year and 7.0 MTCO₂e/SP/year, respectively.

The service population for the Project was calculated by reviewing the City of Coachella's service population rate, the construction of 1,640 homes, with the addition of 562 employees (based on the Riverside County commercial employment rate of 500 square feet per employee).

As shown in **Table 4.4.4-10**, above, the Project's emissions would be 3.27 MTCO₂e/SP/yr. which is below both the SCAQMD's and the City's CAP service population target. **Table 4.4.4-10** shows the Year 2020 emissions and includes reductions from design features and sequestration as detailed in the report. A 25% improvement was used under Energy Mitigation in CalEEMod, as the 2013 Title 24 Standards for residential construction are at least 25% more efficient than 2008 Standards. The CAP-related mitigation selected in CalEEMod are detailed as comments in the annual emission output (Appendix A of the *AQ/GHG Analysis*). **Table 4.4.4-10**, shows the applicable strategies that would be implemented into the Project. With the incorporation of **MM-AQ-10** through **MM-AQ-13** and the planting of approximately 2,406 new trees, the Project's emissions would be below both the SCAQMD's and the City's CAP service population target. Although the Project would generate greenhouse gas emissions, either directly or indirectly, these emissions are not considered to have a significant impact on the environment.

The Project will promote the goals of AB 32. The Project site location is positioned within the City's planned growth urban footprint. The Project incorporates a number of features that would minimize greenhouse gas emissions as shown in **Table 4.4.4-11, Project Consistency with CARB Scoping Measures**, below. Although the Project would generate greenhouse gas emissions, these emissions would not have a significant impact on the environment.

The core mandate of AB 32 is that statewide GHG emissions in Year 2020 be equal to Year 1990 levels. The proposed Project would be required to include all mandatory green building measures for new residential developments under CalGreen Code. The implementation of these stricter building and appliance standards would result in water, energy, and construction waste reductions for the proposed Project. Lastly, Mitigation Measure **MM-AQ-13** requires the Project (and subsequent projects within the Specific Plan) to score a minimum of 100 points on the "Development Review Checklist" contained in the City's CAP.

THRESHOLD g: **Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

Less Than Significant Impact

Emission reductions in California alone would not be able to stabilize the concentration of greenhouse gases in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify

our energy sources, save energy, create new jobs, and enhance public health”. The measures in the Scoping Plan have been in place since 2012.

In May 2014, CARB released its First Update to the Climate Change Scoping Plan. This Update identifies the next steps for California’s leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California’s success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

The 2008 Scoping Plan calls for an “ambitious but achievable” reduction in California’s greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 15 percent from today’s (2010) levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

Project consistency with applicable strategies in the Plan is assessed as well as the City’s CAP. The project’s Year 2020 emissions were compared to the SCAQMD’s and the City’s CAP target service population of 4.8 MTCO₂e/SP/year and to the City’s CAP 7.0 MTCO₂e/SP/year, respectively. As shown in **Table 4.4.4-11, *Project Consistency with CARB Scoping Measures***, below, the Project is consistent with the applicable strategies and would result in a less than significant impact. The Project will be subject to the policies and ordinances pertaining to air quality and climate change stated in the City’s/County’s General Plan Update (2015). Although the Project would generate greenhouse gas emissions, either directly or indirectly, these emissions are not considered to have a significant impact on the environment.

**Table 4.4.4-11
Project Consistency with CARB Scoping Measures¹**

| Scoping Plan Measures to Reduce Greenhouse Gas Emissions | Project Compliance with Measure |
|--|---|
| California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals. | Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy |
| Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California. | Consistent. The project will be compliant with the current Title 24 standards. 2013 Title 24 Standards are at least 30 percent more efficient than 2008 Title 24 standards (25 percent for residential standards) for energy efficiency. |
| Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard. | Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy. |
| Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures. | Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy. |
| Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures. | Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy. |
| Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings. | Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards. |
| High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases. | Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy. |
| Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste. | Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City’s recycling and waste reduction program, which initially comply, with the 50 percent reduction required in AB 939, then the 75% reduction by 2020 required in AB 341 |
| Water – Continue efficiency programs and use cleaner energy sources to move and treat water. | Consistent. The project will comply with all applicable City ordinances and CAL Green requirements. |

¹ Source: CARB Scoping Plan (2008)
Source: AQ/GHG Analysis (Appendix D1)

4.4.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-AQ-1 The Project is required to comply with regional rules that assist in reducing short-term air pollutant emissions, per Chapter 8.20 of the City's Municipal Code. SCAQMD Rule 403 and 403.1 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 and 403.1 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

Mitigation Measure(s)

Air Quality Impact Construction Mitigation Measures

The following mitigation measures are required to maintain the construction emissions below the SCAQMD daily emissions thresholds:

MM-AQ-1 Prior to the issuance of a grading plan, the Project applicant shall indicate on the grading plan areas that will be graded and shall not allow any areas more than 5 acres to be disturbed on a daily basis. Said plan shall clearly demarcate areas to be disturbed and limits 5 acres and under.

MM-AQ-2 The Project shall require that construction contractor use construction equipment that have Tier 4 final engines, level 3 diesel particulate filters (DPF), with oxidation catalyst that impart 20% reduction and apply coatings with a VOC content no greater than 10 grams per liter (g/L).

MM-AQ-3 EPA Tier 4-Final Emissions Standards. Prior to construction, the construction contractor shall provide the City of Coachella Public Works Director or designee a comprehensive inventory of all off-road construction equipment equal to or greater than 50 horsepower that will be used an aggregate of 40 or more hours during any portion of construction activities for the project. The inventory shall include the horsepower rating, engine production year, and certification of the

specified Tier standard. A copy of each such unit's certified Tier specification, best available control technology (BACT) documentation, and California Air Resources Board (ARB) or SCAQMD operating permit shall be provided on site at the time of mobilization of each applicable unit of equipment. Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities for the project shall meet the United States Environmental Protection Agency (EPA) Tier 4-Final emissions standards, and off-road equipment greater than 300 horsepower shall be equipped with diesel particulate filters.

- MM-AQ-4** **Application of Architectural Coatings.** Prior to issuance of any grading permits, the Director of the City of Coachella Public Works Department, or designee, shall verify that construction contracts include a statement specifying that the Construction Contractor shall comply with South Coast Air Quality Management District (SCAQMD) Rule 1113 and any other SCAQMD rules and regulations on the use of architectural coatings or high volume, low-pressure (HVLP) spray methods. Emissions associated with architectural coatings would be reduced by complying with these rules and regulations, which include using precoated/natural colored building materials, using water-based or low-volatile organic compounds (VOC) coating, and using coating transfer or spray equipment with high transfer efficiency.
- MM-AQ-5** **Construction Equipment Maintenance.** Throughout the construction process, general contractors shall maintain a log of all construction equipment maintenance that shows that all construction equipment has been properly tuned and maintained in accordance with manufacturers' specifications. This condition shall be included in development plan specifications.
- MM-AQ-6** **Construction Equipment Operating Optimization.** General contractors shall ensure that during construction operations, trucks and vehicles in loading and unloading queues turn their engines off when not in use. General contractors shall phase and schedule construction operations to avoid emissions peaks and discontinue operations during second-stage smog alerts. This condition shall be included in development plan specifications.
- MM-AQ-7** **Construction Generator Use Minimization.** General contractors shall ensure that electricity from power poles is used rather than temporary diesel- or gasoline-powered generators to the extent feasible. This condition shall be included in development plan specifications.
- MM-AQ-8** **Construction Equipment Idling Minimization.** General contractors shall ensure that all construction vehicles are prohibited from idling in excess of 5 minutes, both on site and off site. This condition shall be included in development plan specifications.

MM-AQ-9 **Construction Phase Overlap.** Prior to issuance of any construction permits, the City of Coachella Public Works Director shall restrict the timing of construction phasing in order to assure that thresholds are not exceeded.

MM-AQ-10 **Construction Waste Management Plan.** Prior to issuance of a building permit, the applicant shall submit a Construction Waste. The plan shall include procedures to recycle and/or salvage at least 75 percent of nonhazardous construction and demolition debris and shall identify materials to be diverted from disposal and whether the materials would be stored on-site or commingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculation can be done by weight or volume but must be documented.

Air Quality Impact (Operational)/Greenhouse Gas Emissions Mitigation Measures

When the Project is fully operational, the Project would exceed SCAQMD regional thresholds for VOC, NO_x, and CO. Even with the incorporation of the following mitigation measures the Project would have a significant and unavoidable impact as it pertains to air quality. Although the Project would generate greenhouse gas emissions, these emissions would not have a significant impact on the environment. However, the following mitigation measures shall be implemented.

MM-AQ-11 **Project shall improve the pedestrian network by incorporating sidewalks within the property.**

MM-AQ-12 **Project Operations.** Prior to issuance of any construction permits, the Project applicant shall submit for review and approval by the City of Coachella Public Works Director, building plans that incorporate measures such as, but not limited to, the following:

Operational Mitigation Measures (Materials Efficiency)

- **Project plans for each Tentative Tract Map will include the following materials efficiency components. Materials used for buildings, landscape, and infrastructure will be chosen with a preference for the following characteristics:**
 - **Rapidly renewable;**
 - **Increased recycle content (50 percent or greater); locally sourced materials (within the South Coast Air Basin);**
 - **Utilization of sustainable harvesting practices; and**
 - **Materials with low or no volatile organic compounds (VOCs) off-gassing.**

Operational Mitigation Measures (Transportation)

- **Provide one electric car charging station for every 10 high-density residences and provisions for electric car charging stations in the garages of all medium-, low-, and ultra-low-density housing. Provide at least two designated parking spots for parking of zero emission**

vehicles (ZEVs) for car-sharing programs in all employee/worker parking areas.

- Provide incentives for employees and the public to use public transportation such as discounted transit passes, reduced ticket prices at local events, and/or other incentives.
- Implement a rideshare program for employees at retail/commercial sites.
- Create local “light vehicle” networks, such as neighborhood electric vehicle (NEV) systems.
- Require the use of the most recent model year emissions-compliant diesel trucks, or alternatively fueled, delivery trucks (e.g., food, retail, and vendor supply delivery trucks) at commercial/retail sites upon project build out (at the time of operations). If this is not feasible, consider other measures such as incentives, and phase-in schedules for clean trucks, etc.
- Prior to issuance of any Site Development permits, the Director of the City of Coachella (City) Public Works Department, or designee, shall include prioritized parking for electric vehicles, hybrid vehicles, and alternative fuel vehicles.

Operational Mitigation Measures (Landscaping). Project plans shall include following landscaping components:

- The Project shall require landscaping and irrigation that reduces outside water demand by at least 20%.
- The Project shall require that at least 2,406 new trees are planted on-site (approximately 2 trees per residential unit and 25 trees per acre of parks).
- The Project shall include Landscape Design Features that will be reflected on the Project plans for each Tentative Tract Map, and will include the following landscape design components:
 - Community-based food production within the Project by planning for community gardens;
 - Native plant species in landscaped areas;
 - A landscape plant palette that focuses on shading within developed portions of the site and in areas of pedestrian activity.
 - Tree-lined streets to reduce heat island effects;
 - Non-turf throughout the development areas where alternative ground cover can be used, such as artificial turf and/or xeriscaping; and
 - Landscaping that provides shading of structures within 5 years of building completion.

Operational Mitigation Measures (Water Conservation and Efficiency Features). Project plans for each Tentative Tract Map will shall include following water efficiency components:

- Drought-tolerant landscaping, non-potable reclaimed, well, or canal water for irrigation purposes;

- High-efficiency plumbing fixtures and appliances that meet or exceed the most current CALGreen Code in all buildings on site;
- Efficient (i.e., “Smart”) irrigation controls to reduce water demand on landscaped areas throughout the Project;
- Restriction of irrigated turf in parks to those uses dependent upon turf areas, such as playing fields and picnic areas;
- An integrated storm water collection and conveyance system; and
- Dual plumbing within recreation areas, landscaped medians, common landscaped areas, mixed use/commercial areas, and parks to allow the use of reclaimed water when available.

Operational Mitigation Measures (Energy Efficiency). Project plans for each Tentative Tract Map will include the following energy efficiency components:

- Design to United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED);
- GreenPoint Rated standard, or better for all new buildings constructed within the Project;
- Energy-efficient light-emitting diode (LED) lighting and solar photovoltaic lighting fixtures in all common areas of the site;
- Energy-efficient appliances (ENERGY STAR or equivalent), and high efficiency heating, ventilation, and air conditioning (HVAC) systems in all on-site buildings;
- Green building techniques that increase building energy efficiency above the minimum requirements of Title 24;
- Installation of photovoltaic panels on a minimum of 25 percent of the buildings on site; and
- Utilization of high reflectance materials for paving and roofing materials on residential, commercial, and school buildings

Operational Mitigation Measures (Other)

- Require the use of electric or alternative fueled maintenance vehicles by all grounds maintenance contractors.
- All commercial and retail development shall be required to post signs and limit idling time for commercial vehicles, including delivery trucks, to no more than 5 minutes. This condition shall be included on future site development plans for review and approval by the City of Coachella Director of Development Services.
- The City shall identify energy efficient street lights which are currently available and which, when installed, would provide a 10 percent reduction beyond the 2010 baseline energy use for this infrastructure, and shall require the use of this technology in all new development. All new traffic lights installed within the project site shall use light emitting diode (LED) technology.

MM-AQ-13 **The Project (and subsequent projects within the Specific Plan) shall score a minimum of 100 points on the “Development Review Checklist” contained in the City’s CAP.**

4.4.6 **Cumulative Impacts**

Pursuant to Section 15130(b)(2) of the State CEQA Guidelines, the cumulative Project list from the *TIA*, was utilized for the cumulative impacts within the Coachella Valley, Riverside County, and the greater setting of the South Coast Air Basin.

During operation, on-site emissions would be negligible and would primarily consist of the intermittent on-site travel of motor vehicles. Therefore, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted. The mitigated construction emissions incorporate **SC-AQ-1**, and **MM-AQ-1** through **MM-AQ-10**. Daily emissions CalEEMod outputs are located in Appendix A of the *AQ/GHG Analysis*. The emissions will be below the SCAQMD thresholds of significance for regional construction emissions. Construction LST emissions will be below the SCAQMD thresholds of significance for localized construction emissions. For all construction phases, the daily total construction emissions with standard control measures, would be below the daily thresholds established by the SCAQMD. Due to the distance of the nearest receptors from the proposed Project site and through compliance to SCAQMD’s Rule 402, no significant impact related to odors would occur during operation. The potential risk for naturally occurring asbestos (NOA) during Project construction is small and less than significant.

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of “individual cancer risk.” “Individual cancer risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk.

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The stationary source emissions would come from additional natural gas consumption for on-site buildings and electricity for the lighting in the buildings and at the parking area. Based on trip generation factors included in the traffic study, long-term operational emissions associated with the proposed Project, calculated with the CalEEMod model, are shown in **Table 4.4.4-8, *Regional Significance – Operational Emissions***. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating.

Table 4.4.4-8 shows that when the Project is fully operational, the Project would exceed SCAQMD regional thresholds for VOC, NO_x, and CO. Even with the incorporation of Mitigation Measures **MM-AQ-10** through **MM-AQ-13** the Project would have a significant and unavoidable impact.

The SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no “hot spots” anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no “hot spot” potential, any local impacts will be below thresholds.

The City of Coachella’s Climate Action Plan provides direction on how the City plans to achieve a 15% reduction below 2010 (per service population) emissions by 2020. Projects that do not exceed 3,000 MTCO₂e per year will be consistent with the GHG Plan with the incorporation of **MM-AQ-10** through **MM-AQ-13** and the planting of approximately 2,406 new trees, the Project’s emissions would be reduced to 3.27 MTCO₂e/SP/yr., which meets the threshold. Therefore, operation of the proposed Project would not create a significant cumulative impact to global climate change.

4.4.7 Unavoidable Significant Adverse Impacts

When the Project is fully operational, the Project would exceed SCAQMD regional thresholds for VOC, NO_x, and CO. Even with the incorporation of **Mitigation Measures MM-AQ-10** through **MM-AQ-13** the Project would have a significant and unavoidable impact.

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.5 figures are located at the end of this subchapter, not immediately following their reference in text.

4.5 BIOLOGICAL RESOURCES

4.5.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of biological resources from implementation of the Project. Section E.V., Biological Resources, of the Initial Study asked whether the Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Based on the analysis in the Initial Study it was determined all of the issue areas related to biological resources in the questions asked above **would** be further analyzed in the Environmental Impact Report (EIR).

“Implementation of the Project (on-site and off-site components) may have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or

ordinance; or, conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. A Project specific biological study shall be prepared in order to address questions IV.a-f, above. In order to ensure a comprehensive discussion of all of the biological resources issues raised above, and how they relate to the Coachella Valley Multiple Species Habitat Conservation Plan, they will be analyzed in the EIR.”

These issues pertaining to biological resources will be discussed below as set in the following framework:

- Regulatory and Environmental Setting
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>. The Coachella Valley Multiple Species Habitat Conservation Plan (Final Major Amendment to the CVMSHCP – August 2016) was used in the analyses presented in this subchapter. This document is available online at http://www.cvmshcp.org/Plan_Documents_old.htm.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *General Biological Resources Assessment Vista Del Agua Project and Off-site Infrastructure Improvements*, prepared by AMEC Environment & Infrastructure, dated December 4, 2014 (*On-Site and Off-Site Bio Report*, **Appendix E**).

Unless stated otherwise, the source for the Figures and Tables in this Chapter is the *On-Site and Off-Site Bio Report*.

In response to the Notice of Preparation (NOP) the State of California Department of Fish & Wildlife commented upon the Project's location within the Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP), the potential impact on habitat for the Western Burrowing Owl, and potential impacts to an unnamed desert wash (NOP Comment Letter #7). No reference to an unnamed wash is included in the *On-Site and Off-Site Bio Report*, or within the information below. The *On-Site and Off-Site Bio Report* did not locate this wash. It was not present on the Project site.

4.5.2 Environmental Setting

On-Site

The Project site is bounded by 48th Avenue on the south, Polk Street on the east, Interstate 10 and undeveloped lands on the north, and low density residential development and agricultural lands on the west. Surrounding land uses consist of active agriculture on the east, west, and south; and the Interstate 10 corridor to the north of the site. Elevations within the study area range from approximately 33 feet above mean sea level (MSL) near the northeast corner of the study area to 60 feet below MSL at the southwest corner of the Project site. Reference **Figure 4.5.2-1, *Vicinity and Location Map***.

Soils

The USDA online Web Soil Survey (based on the Riverside County, Coachella Valley Area, California Soil Survey) was consulted to determine the soil types mapped as occurring within the Project area. Soils within the study area occur on alluvial fans or flood plains. The Project site contains four different soil types including:

- **Coachella fine sand, wet (CrA)** – A nearly level soil that occurs on alluvial fans and flood plains of the Coachella Valley with 0 to 2 percent slopes. The water table is usually at a depth between 40 and 60 inches. Grapes are commonly grown on this soil type. It is composed of light olive gray fine sand.
- **Gilman fine sandy loam, wet (GcA)** – Another nearly level soil (0 to 2 percent slopes) that is on alluvial fans and flood plains of the Coachella Valley. This is another soil type on which grapes, citrus, and “truck crops” are often grown. The water table is usually at depth between 40 and 60 inches.
- **Myoma fine sand (MaB)** – This somewhat excessively drained soil occurs on alluvial fans with 0 to 5 percent slopes. It is composed of fine sand on the surface and sand below and the parent material is composed of windblown sandy alluvium. Another soil on which grapes are grown.
- **Carsitas cobbly sand (ChC)** – This is a gently to moderately sloping soil that is on alluvial fans, valley fill, and remnants of dissected alluvial fans along the east, north, and west edges of the Coachella Valley. Cobbles and some stones cover 1 to 3 percent of the surface. Unlike the previous three soil types, this soil is not often used for crop production; and is only present on the northeast corner of the Project site.

Reference **Figure 4.5.2-2, *Soils Map***.

Vegetation Associations and Species Composition

Vegetation and Flora

Appendix 1 of the *On-Site and Off-Site Bio Report* includes the scientific and common names for plant species identified during the surveys, which were conducted on April 2 and April 3, 2014. The climate in the Project area (and southern California) has been is a drought condition

since these surveys were conducted. The surveys in 2014 represented a more “worst-case” analysis than would have been encountered during the ensuing years. No noticeable change in the biological environmental setting would have occurred since the surveys were performed. A total of 29 plant species were identified during the field survey. Of the plant species detected on the site during the survey, 24% were non-native species.

The literature review and Project biologists’ knowledge of the Project vicinity indicated that as many as 18 sensitive biological resources potentially occur in the vicinity of the Project site. These are identified on **Tables 4.5.4-2** through **4.5.4-6** in Subchapter 4.5.4, below. Of these 18 sensitive biological resources, sensitive plants were determined to be absent from the Project site; sensitive reptiles were shown to have a low probability of occurrence; sensitive birds were either absent or had a low probability of occurrence; sensitive mammals were shown to have a low probability of occurrence; and sensitive insects were absent from the Project site.

The Project site occurs in an area that appears to have been mainly used for agriculture both in the past and continuing today. Parcels 1-4, 6, and 11 all show signs of former agricultural use, especially when viewed on an aerial photograph. According to historical aerials, Parcel 6 was under active agriculture as recently as 2006, and Parcel 11 as recently as 2004. Parcel 1 has been fallow for much longer, but was under active agriculture in 1975. Although Parcels 2, 3, and 4 may have been used for agriculture in the past, no aerials could be found that show this, indicating that such use must have been prior to 1975. Parcel 5 is currently being used to grow grapes (apparently since 2004). Only Parcels 7-10 do not show obvious signs of former agricultural use, although they are bordered by active agriculture on the west. Most of Parcels 1-4, 6, and 11 support a “regrowth” of alkaline/halophytic plant species with a few scattered areas of mesquite thicket. Large areas of Parcels 1 and 11 were devoid of vegetation and sand, with bare “hard pan” substrate remaining. A significant portion of the southeast corner of Parcel 11 and the northeast corner of Parcel 1 is being used as a very large paintball arena, complete with two separate areas of various wooden “hides” and tire stacks (see Exhibits 1-3 below from the *On-Site and Off-Site Bio Report*). Reference **Figure 4.5.2-1, Vicinity and Location Map**, for Parcel locations.



Exhibit 1 – paintball arena on southeast portion of Parcel 11



Exhibit 2 - paintball arena on northeast portion of Parcel 1



Exhibit 3 – view of paintball covered ground and trash on southeast portion of Parcel 11

The Project biologists also observed fairly extensive trash dumping in this area, including what appeared to be a former irrigation pond that is now used for trash dumping and burning (see Exhibit 4 below from the *On-Site and Off-Site Bio Report*). The majority of the southern $\frac{3}{4}$ of Parcel 1 consists of large expanses of barren ground that appears to have been cleared in the recent past (see Exhibit 5 below from the *On-Site and Off-Site Bio Report*). Parcels 7, 9, and 10 had more sandy substrates than the majority of the remainder of the parcels and were vegetated with a mixture of plant species that favor sandy habitats and some species that can tolerate halophytic conditions. Parcel 8 and the northern $\frac{1}{4}$ of Parcel 1 supported a growth of very dense halophytic vegetation (see Exhibit 6 below from the *On-Site and Off-Site Bio Report*). These parcels had also received a variety of manmade impacts in the form of ground clearing, domestic dog use, and some trash deposition, likely due to their close proximity to residential dwellings. The habitat on the northern portions of the site is characterized as Stabilized and Partially-stabilized Desert Sand Field habitat by Holland, and as Creosote bush – white burr sage scrub (Sandy association) by Sawyer et al, although no white burr sage (*Ambrosia dumosa*) was observed on the site. The majority of the remaining natural habitat on the rest of the Project site is characterized as Allscale scrub (*Atriplex polycarpa* Shrubland Alliance) by Sawyer et al and as Desert saltbush scrub by Holland. The quality and composition of this habitat varies throughout the site, with some very dense areas of vegetation with little or no open ground, ranging to areas consisting of a sparse regrowth of halophytic (salt-tolerant) plants on areas that had been cleared in the not-too-distant past. Dominant plants characteristic of this vegetation community that are present on the site include: alkali goldenbush (*Isocoma acradenia*), allscale (*Atriplex polycarpa*), four-wing saltbush (*Atriplex canescens*), and cheesebush (*Ambrosia salsola*). The final two vegetation communities present on the site consist of small stands of vegetation consisting of just one species: Arrow weed thickets (*Pluchea sericea* Shrubland Alliance) and Mesquite thickets (*Prosopis glandulosa*

Woodland Alliance) as defined by Sawyer et al.



Exhibit 4 – former irrigation pond on Parcel 1 now used for trash dumping and burning



Exhibit 5 – southern portion of Parcel 1 showing barren ground; no burrows capable of supporting burrowing owls found here



Exhibit 6 – dense, almost unbroken alkali goldenbush on Parcel 8; too dense to support burrowing owls

There are only three or four areas of mesquite thickets on the Project site, located on Parcels 1, 2, and 3. Arrow weed thickets occur throughout the Project site, particularly on the edges of parcels such as Parcel 1, 4, and 11.

The best quality blow sand habitat on the Project site is present on the southeastern portion of Parcel 3 (see Exhibit 7 below from the *On-Site and Off-Site Bio Report*), although this represents a fairly small and restricted area. This area had very fine-grained aeolian sands capable of supporting Coachella Valley fringe-toed lizards (*Uma inornata*), although due to its small size and proximity to active agriculture (approximately 60 feet west of the edge of the vineyards) this species may be unlikely to occupy the site.



Exhibit 7 – sandy “dune” habitat, with mesquite thicket, on southeast portion of Parcel 3; potential habitat for Coachella Valley fringe-toed lizard (but limited in size)

Two of the off-site improvement routes are located within the road beds of Avenues 47 and 48, which will be improved with 30' of pavement. These two routes are surrounded by active agriculture, disturbed land, and a few areas of fallow fields (please see Photographs 1 through 17, below, from the *Off-Site Bio Report* for images of these areas). The third off-site improvement “route” is located almost entirely on active agricultural lands; and crosses a few areas of fallow field and a significant area of cleared ground near Dillon Road, and is within the proposed Shadow View Specific Plan. No native vegetation communities are present within, or along these three off-site improvement routes.



Photograph 1. Eastern end of Avenue 48 offsite improvement route, proposed to be located in the existing road bed.



Photograph 2. Turf/sod field on south side of Avenue 48, east of Tyler Street.



Photograph 3. Sandy fallow field on north side of Ave. 48, east of Tyler Street.



Photograph 4. Dirt extension of Ave. 48, west of Tyler Street, showing extensive cleared ground along the northern edge.



Photograph 5. View looking northwest from Ave. 48, cleared ground and agriculture.



Photograph 6. Completely disturbed condition of "habitat" along southern edge of Ave. 48.



Photograph 7. View of the west end of Ave. 48 off-site improvement route.



Photograph 8. View of the east end of the Ave. 47 off-site improvement route, surrounded by active agriculture.



Photograph 9. Ave. 47 off-site improvement route west of Tyler, surrounded by active agriculture and disturbed land.



Photograph 10. Fallow grassy field northwest of Ave. 47 off-site improvement route (west of Tyler). Generally too dense for potential Burrowing Owl use.



Photograph 11. Ave. 47 off-site improvement route (west of Tyler). Extensive agriculture and disturbance.



Photograph 12. West end of Ave. 47 off-site improvement route.



Photograph 13. Southern portion of 5,100 foot off-site improvement route that “ties in” to Dillon Road to the north, this area located entirely in an active okra field.



Photograph 14. Another portion of this route crossing active agriculture.



Photograph 15. Fallow field crossed by this route, with soils that were too sandy for preferred Burrowing Owl habitat.



Photograph 16. Northern portion of this route, again in okra field, Dillon Road truck stop in background.



Photograph 17. North end of this off-site improvement route, just before “tie in’ with Dillon Road. Extensive cleared and disturbed ground adjacent to active agriculture.

Wildlife

The list of animals detected on the Project site and off-site improvement routes during the general biological surveys totaled 64 species (1 amphibian, 5 reptiles, 54 birds and 4 mammals). The literature review and Project biologists’ knowledge of the Project vicinity indicated that as many as 18 sensitive biological resources potentially occur in the vicinity of the Project site. These are identified on **Tables 4.5.4-2** through **4.5.4-6** in Subchapter 4.5.4, below. Of these 18 sensitive biological resources sensitive reptiles were shown to have a low probability of occurrence; sensitive birds were either absent or had a low probability of occurrence; sensitive mammals were shown to have a low probability of occurrence; and sensitive insects were absent from the Project site.

The only amphibian observed in the Project area (along the Avenue 48 off-site improvement route) was a road-killed Woodhouse’s toad (*Bufo woodhousii*). This toad is not native to the Coachella Valley, but has spread into southeastern California via the aqueduct systems and is usually found in the area in irrigated agricultural regions.

Five common desert reptiles were observed on the site visits, Great Basin whiptail (*Aspidoscelis tigris tigris*), desert iguana (*Dipsosaurus dorsalis*), long-tailed brush lizard (*Urosaurus graciosus*), and western sideblotched lizard (*Uta stansburiana elegans*). A single desert banded

gecko (*Coleonyx variegatus variegatus*) was found under a board on the site. The disturbed nature of much of the Project site reduces the potential for use of the site by a greater variety of desert reptiles, as many of these species require better quality natural habitats, and some are substrate specialists (typically on dunes or wind-deposited sands – not very well represented on most of the site).

Other common reptiles that may be expected on the site include: Colorado Desert sidewinder (*Crotalus cerastes laterorepens*), red coachwhip (*Coluber flagellum piceus*), and desert glossy snake (*Arizona elegans eburnata*).

Birds observed during the survey included a mix of species common to desert scrub and developed areas of the Coachella Valley, as well as several species observed during spring and fall migration. Some of the resident birds observed included: house finch (*Haemorhous mexicanus*), verdin (*Auriparus flaviceps*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), black-tailed gnatcatcher (*Poliophtila melanura*), mourning dove (*Zenaidura macroura*), and American kestrel (*Falco sparverius*). Migrating species included: MacGillivray's warbler (*Geothlypis tolmiei*), Nashville warbler (*Oreothlypis ruficapilla*), Violet-green Swallow (*Tachycineta thalassina*), and Swainson's hawk (*Buteo swainsoni*). Common mammals (or their sign) observed during the surveys included: desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis latrans*). Additionally, evidence of domestic dog use (scat, diggings) was prevalent throughout the Project site, especially on those areas adjacent to residences.

Reference **Figure 4.5.2-3, On-Site CVMSHCP Vegetation Map.**

Off-Site Improvements

These consist of linear roadway segments located within or adjacent to the existing road bed of Avenue 48 (3,000 feet), Avenue 47 (3,500 feet), and an approximately 5,100-foot alignment that ran north/northwest from the western end of the Avenue 47 and 48 improvement alignments to a "tie in" point on Dillon Road to accommodate a 2-lane road at Project opening year. The Project biologists surveyed an approximately 3,000-foot route located in the road bed of Avenue 48. This alignment extended west from the existing water tank and booster station adjacent to the southwest corner of the Vista del Agua Project site across Tyler Street to a point in Avenue 48 approximately 1,700 feet west of Tyler Street. The Project biologists also surveyed a similar route in the Avenue 47 road bed that extended from a point approximately 1,300 feet east of Tyler Street to a point in the extension of Avenue 47 approximately 2,200 feet west of Tyler Street. The 5,100-foot north/northwest trending alignment mainly crossed active agricultural fields (okra); and some areas of fallow fields grown to dense grass, as well as a large area of cleared ground near the "tie in" with Dillon Road.

As stated above, the literature review and Project biologists' knowledge of the Project vicinity indicated that as many as 18 sensitive biological resources potentially occur in the vicinity of the Project site. These are identified on **Tables 4.5.4-2 through 4.5.4-6** in Subchapter 4.5.4, below. Of these 18 sensitive biological resources, sensitive plants were determined to be absent from the Project site; sensitive reptiles were shown to have a low probability of occurrence; sensitive birds were either absent or had a low probability of occurrence; sensitive mammals were shown to have a low probability of occurrence; and sensitive insects were absent from the Project site.

Reference **Figure 4.5.2-4, Off-Site Improvement Location and Vegetation Map.**
Related Regulations

Federal Endangered Species Act of 1973

The Federal Endangered Species Act of 1973 (16 U.S.C. 1531-1543) and subsequent amendments provide for the conservation of endangered and threatened species and the habitats on which they depend. Federally endangered species are ones facing extinction throughout all or a significant portion of its geographical range. A federally threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally threatened or endangered species on a site generally imposes severe constraints on development; particularly if development would result in a “take” of the species or its habitat. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history.

Federal Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the United States Army Corps of Engineers (ACOE) regulates discharges of dredged and/or fill material into waters of the United States. “Waters of the United States” are defined in ACOE regulations at 33 C.F.R. Part 328.3(a). Navigable waters of the United States are those waters of the United States that are navigable in the traditional sense. Waters of the United States is a broader term than navigable waters of the United States and includes adjacent wetlands and tributaries to navigable waters of the United States and other waters where the degradation or destruction of which could affect interstate or foreign commerce.

Federal Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (MTBA), 50 C.F.R. Part 10, prohibits take of migratory birds. Under the MTBA, it is unlawful to “pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product.” Implementation of the Project will be required to comply with the MTBA, which prohibits the take of migratory bird species that are considered to utilize the site and their nests or eggs. In addition, Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

California Endangered Species Act

California Endangered Species Act (Fish and Game Code 2050, et seq.) (CESA) establishes that it is the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects which would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires state lead agencies to consult with the California Department of Fish and Wildlife (CDFW) during the California Environmental Quality Act (CEQA) process to avoid jeopardy to threatened or endangered species.

California Fish and Game Code

The California Department of Fish and Wildlife (CDFW), under Section 1600 of the Fish and Game Code, regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake, which supports fish or wildlife. CDFW defines a stream, including creeks and rivers, as “a body of water that flows at least periodically or intermittently through a bed or channel having surface or subsurface flow that supports or has supported riparian vegetation.”

Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)

The CVMSHCP provides a regional vision for balanced growth to meet the requirements of federal and state endangered species laws, while promoting enhanced opportunities for recreation, tourism and job growth. The CVMSHCP aims to conserve over 240,000 acres of open space and protect 27 plant and animal species. By providing comprehensive compliance with federal and state endangered species laws, the CVMSHCP not only safeguards the desert’s natural heritage for future generations, it allows for more timely construction of roads and other infrastructure that is essential to improving the quality of life in the Coachella Valley.

Participants include Riverside County, the cities of Cathedral City, Desert Hot Springs (I-10 annexation area only), Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage as well as Coachella Valley Water District, Imperial Irrigation District, Coachella Valley Association of Governments (CVAG), Caltrans and the City of Coachella. As a member agency, the City is bound by the requirements of the CVMSHCP.

For species that are currently listed as threatened or endangered, the CVMSHCP is the basis for securing incidental take permits. For species that are not currently listed, the CVMSHCP addresses the conservation of the species and its habitat as if the species were listed, so that if the species is subsequently listed, an incidental take permit will be issued on the basis of the CVMSHCP, and no further mitigation requirements will be imposed. A further goal of the CVMSHCP is to remove the need to list species as threatened or endangered by taking proactive conservation measures.

The CVMSHCP does not address Section 404 of the Clean Water Act nor the Streambed Alteration Agreement provisions of the California Fish and Game Code, (Section 1600). Projects that currently require a Section 404 permit or Streambed Alteration Agreement will continue to do so notwithstanding the CVMSHCP. Additionally, the CVMSHCP does not provide a means of compliance with the MBTA.

The Riverside County Land Information System website was consulted to determine the parcel numbers that were surveyed on the subject Project site, and the status with regards to the various county plan areas. According to this website and a review of the approved CVMSHCP, the Project on-site and off-site components are not located within any conservation areas established by the CVMSHCP but do fall within the CVMSHCP Fee Area.

The CVMSHCP instituted a Local Development Mitigation Fee to assist in the maintenance of biological diversity and the natural ecosystem processes that support this diversity; the protection of vegetation communities and natural areas within the County, Coachella Valley and surrounding mountains located in central Riverside County which are known to support

threatened, endangered or key sensitive populations of plant and wildlife species; the maintenance of economic development within the unincorporated area of Riverside County by providing a streamlined regulatory process from which development can proceed in an orderly process; and the protection of the existing character of the County and the region through the implementation of a system of reserves which will provide for permanent open space, community edges and habitat conservation for species covered by the MSHCP.

City of Coachella General Plan

The City of Coachella 2035 General Plan Update (2015), adopted April 22, 2015, includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. This legal document identifies areas within the City and its sphere of influence which are considered a logical progression for development and are slated for future growth. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.3, Biological Resources, of the General Plan Update Final EIR (2015) provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on biological resources and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at:

<http://www.coachella.org/services/document-central/-folder-20>

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies address the preservation of biological resources and habitat and may also be included under other sections of the EIR, as well:

Sustainability + Natural Environment Element

Goal 9. Plant and Wildlife Habitat Areas. Protected plant and wildlife habitat areas that are protected, productive, viable natural resources and exist harmoniously with adjacent development.

9.1 Buffers from new development: Require new developments adjacent to identified plant and wildlife habitat areas to maintain a protective buffer.

9.5 Multiple species habitat conservation plan: Support and adhere to the Coachella Valley Multiple Species Habitat Conservation Plan.

9.7 Landscape design: Encourage new developments to incorporate native vegetation materials into landscape plans and prohibit the use of species known to be invasive according to the California Invasive Plant Inventory.

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.8 Preservation of natural land features: Preserve significant natural features and incorporate into all developments. Such features may include ridges, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, important or landmark trees and views.

4.5.3 Thresholds of Significance

The Initial Study concluded that the Project may result in impacts that may exceed thresholds of significance for the following six (6) issue areas:

- a. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c. Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

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

4.5.4 Potential Impacts

THRESHOLD a: **Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Sensitive Elements

Plant or animal taxa may be considered "sensitive" due to declining populations, vulnerability to habitat change or loss, or because of restricted distributions. Certain sensitive species have been listed as Threatened or Endangered by the United States Fish and Wildlife Service (USFWS) or by the CDFW, and are protected by the federal and state Endangered Species

Acts and the California Native Plant Protection Act. Other species have been identified as sensitive by the USFWS, the CDFW, or by private conservation organizations, including the CNPS, but have not been formally listed as Threatened or Endangered. Such species can still be considered significant under CEQA.

The literature review and the Project biologists' knowledge of the Project vicinity indicated that as many as 18 sensitive biological resources potentially occur in the vicinity of the Project site, however only one sensitive species was actually observed on the site during site surveys. For a summary of sensitive species and habitats known to occur or potentially occurring in the vicinity of the Project site, see **Tables 4.5.4-1 through 4.5.4-6, below**. As shown in these Tables, 1 of 5 sensitive plant species is covered by the CVMSHCP; both (2) sensitive reptile species are covered by the CVMSHCP; 3 of 5 sensitive bird species are covered by the CVMSHCP; 3 of 5 sensitive mammal species are covered by the CVMSHCP; and 1 (of 1) sensitive insect species is covered by the CVMSHCP.

**Table 4.5.4-1
General Biological Survey Data for the Vista Del Agua Project (Actual Observances)**

| Date/Survey Type | Observer(s) | Time | Temp. (°F) | Sensitive species observed? |
|------------------|--------------------|-------------|------------|-----------------------------|
| 2 April 2014 | Moorhatch & Wilcox | 0840-1550 | 60-74 | No |
| 3 April 2014 | Moorhatch & Wilcox | 0838-1435 | 64-80 | Yes (Loggerhead Shrike) |
| 29 October 2014 | Moorhatch & Wilcox | 0958 - 1210 | 81 - 87 | No |

Source: On-Site and Off-Site Bio Report (Appendix E)

Sensitive Plants

Less Than Significant Impact

Table 4.5.4-2, Sensitive Plants: Vista Del Agua Project Site, lists five sensitive plants known to occur in the general Project vicinity, and none of these species are expected to occur on the Project site due to lack of habitat, incorrect elevational range, or because the site is out of the currently understood range of the species. These include: chaparral sand-verbena (*Abronia villosa var. aurita*), Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*), Lancaster milk-vetch (*Astragalus preussi var. laxiflorus*), gravel milk-vetch (*Astragalus sabulonum*), and glandular ditaxis (*Ditaxis claryana*).

In the case of the Lancaster and gravel milk-vetches, the single California Natural Diversity Database (CNDDDB) records for each of these species are both very old (1928 and 1906 respectively) and are both thought to represent “best guesses” concerning the locality data. According to the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants – 7th edition interface: “Lancaster milk-vetch is known in CA only from near Lancaster and Edwards Airforce Base, where extremely rare; only reported once in recent years.”

Concerning the three remaining sensitive plants, there is very limited potential habitat for Coachella Valley milk-vetch on the site, and much of what is present is degraded by a variety of human impacts. No *Astragalus* species were observed on the Project site during the surveys, including dead remains from last year. The site is too low in elevation (apart from the northeast corner the entire site is below sea level, and much of the northeast corner is currently grapes) to support either chaparral sand-verbena or glandular ditaxis. No sand-verbena or ditaxis were observed on the site, including dead remains from a previous season. Thus, none of the aforementioned sensitive plant species are likely to occur on the Project site.

**Table 4.5.4-2
Sensitive Plants: Vista Del Agua Project Site**

| Species | Protective Status | Habitat | Flowering Period | Occurrence Probability |
|---|--|--|------------------|--|
| <i>Abronia villosa</i> var. <i>aurita</i> Chaparral Sand-Verbena | F: ND C: ND CNPS: List 1B.1 State Rank: S2.1 MSHCP: No | Sandy areas in chaparral and coastal sage scrub habitats, between 262 and 5,249 feet | January - August | Absent (this variety not likely to occur on the northern valley floor) |
| <i>Astragalus lentiginosus</i> var. <i>cochellae</i> Coachella Valley Milk-vetch | F: END C: ND CNPS List: 1B.2 State Rank: S2.1 MSHCP: Yes | Sandy flats, washes, alluvial fans, sand field, dunes and dune edges, 130 – 2,150 feet, a CA endemic | February - May | Absent (no <i>Astragalus</i> observed onsite, limited sandy habitat) |
| <i>Astragalus preussi</i> var. <i>laxiflorus</i> Lancaster Milk-vetch | F: ND C: ND CNPS List: 1B.1 State Rank: S1 MSHCP: No | Chenopod scrub on alkaline clay flats, gravelly/sandy washes, 2,300 feet | March - May | Absent (Currently only known from near Lancaster & Edwards AFB, 1928 Coachella CNDDDB record may be in error) |
| <i>Astragalus sabulorum</i> Gravel milk-vetch | F: ND C: ND CNPS List: 2B.2 State Rank: S2 MSHCP: No | Desert dunes, Mojavean & Sonoran Desert scrubs, 200 – 3,050 ft. elevation | February - June | Absent (Site too low in elevation, only 1 1908 CNDDDB record, mapped as best guess near Indio) |
| <i>Ditaxis claryana</i> Glandular Ditaxis | F: ND C: ND CNPS List: 2B.2 State Rank: S1 MSHCP: No | Sandy soils in Sonoran Desert Scrub, dry washes, and rocky hillsides, 0 – 1,500 feet elevation, | October - March | Absent (no <i>Ditaxis</i> found on site, most of site is below sea level) |

Source: On-Site and Off-Site Bio Report (Appendix E)

Sensitive Reptiles

Less Than Significant Impact

Table 4.5.4-3, Sensitive Reptiles: Vista Del Agua Project Site, lists two sensitive reptile species (Federal threatened and State endangered) that have a potential of occurring on the site: Coachella Valley fringe-toed (*Uma inornata*) and flat-tailed horned lizard (*Phrynosoma mcallii*).

According to p. 4.3-2 of the General Plan Update Final EIR (2015), the fringe-toed lizard is dependent upon Sand Fields habitat. Table 4.3-2: Special Status Wildlife Species Observed or Potentially Occurring in the City of Coachella Planning Area, of the General Plan Update Final EIR (2015) (p. 4.3-6) indicates a moderate potential for the fringe-toed lizard, and that it may be

present in “undisturbed, wind-blown sand habitats.”

The Colorado Saltbush Scrub community occurs in low-lying basins and areas of periodic flooding within the Coachella Valley. The Colorado Saltbush Scrub community is characterized by moist sandy loam and relatively high soil salinity. The flat-tailed horned lizard is a Special status species associated with the Colorado Saltbush Scrub community.

Table 4.3-2: Special Status Wildlife Species Observed or Potentially Occurring in the City of Coachella Planning Area, of the General Plan Update Final EIR (2015) (p. 4.3-6) indicates a moderate potential for the fringe-toed lizard, and that it is patchily distributed throughout the Coachella Valley, and is presently described from undisturbed natural habitats near Thousand Palms to the north, southward to Mecca.

Both of these species have been recorded within two miles of the Project site. A search of the current CNDDDB online database revealed that Coachella Valley fringe-toed lizard had been recorded from approximately 440 feet north of the northeast corner of the Project site in 1975. Flat-tailed horned lizard has been recorded within approximately 2.0 miles northwest of the site in 1997 (CNDDDB 2014).

The current surveys of the Project site did not result in observations of these species, although the timing of the surveys was during the season when these species become active. Temperatures during the surveys were favorable for lizard activity (other common lizards were observed active on the surface), although even warmer temperatures would have been preferable. Thus, these species have a low probability of occurring on the site due to the poor quality of the majority of the remaining habitat, proximity to agricultural and residential development, and ongoing negative impacts such as trash deposition and a former history of agricultural use. Both of these reptiles are “covered species” under the CVMSHCP, and potential impacts to these lizards would be mitigated through payment of the CVMSHCP mitigation fee.

Payment of the CVMSHCP fee is a standard condition (see **SC-BIO-1**, below), and is not considered unique mitigation under CEQA.

**Table 4.5.4-3
Sensitive Reptiles: Vista Del Agua Project Site**

| Species | Protective Status (F=Federal, C=California) | Habitat | Occurrence Probability |
|--|--|--|---|
| Flat-tailed Horned Lizard (<i>Phrynosoma mcallii</i>) | F: ND C: CSC State rank: S2 MSHCP: Yes | Low elevation sandy habitats in the Colorado Desert, favors dune/hardpan interface areas | Low (habitat marginal on most of site, CNDDDB record [1997] from ~ 2 miles NW of site) |
| Coachella Valley Fringe-toed Lizard (<i>Uma inornata</i>) | F: THR C: END State rank: S1 MSHCP: Yes | Sandy areas of the Coachella Valley (dunes and sand field habitats) | Low (most habitat too disturbed and/or too densely vegetated, one area of potential habitat on SE portion of parcel 3, 1975 CNDDDB record ~ 440 feet north of NE corner of site) |

Source: On-Site and Off-Site Bio Report (Appendix E)

Sensitive Birds

Less Than Significant Impact with Mitigation Incorporated

One of the five sensitive bird species listed in **Table 4.5.4-4, *Sensitive Birds: Vista Del Agua Project Site***, was observed on the site. A single loggerhead shrike (*Lanius ludovicianus*) was observed on the Project site on the second day of the survey. Loggerhead shrikes are not listed as threatened or endangered and are not a covered species under the CVMSHCP. They are considered a CDFW “California Special Concern Species” (CSC). **Mitigation Measure MM-BIO-1** has been included to address potential impacts to nesting birds and other protected species.

MM-BIO-1 states that in order to avoid any potential impact to nesting birds and other protected species, including those protected by the Migratory Bird Treaty Act, construction of the Project shall occur outside of the breeding season (February 1 through September 15). As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds is removed from September 16 to January 31 (outside of the nesting season), then no further actions are required. Where the nesting season (February 1 to September 15) cannot be avoided during construction, a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, vegetation removal, demolition activities, and grading. The survey area shall include the Project site and an appropriate buffer (consistent with the Migratory Bird Treaty Act) around the site. Any active nests identified shall have an appropriate buffer area established (consistent with Migratory Bird Treaty Act protocol at the time of disturbance) of the active nest. Construction activities shall not occur within the buffer area until the biologist determines that the young have fledged.

With the incorporation of this mitigation, any impacts will remain less than significant.

Vermilion flycatcher (*Pyrocephalus rubinus*) is not expected to occur on the Project site due to a lack of both foraging and nesting (desert riparian) habitat. This distinctive and unmistakable flycatcher was not observed on the site during the surveys.

Both Le Conte’s (*Toxostoma lecontei*) and crissal thrasher (*Toxostoma crissale*) are thought to have a low probability of occurring on the Project site, although neither species was observed during the field surveys. The few mesquite thickets present on the site provide potential habitat for both thrashers, and Le Conte’s thrasher is known to occur in alkali scrub habitats. Both thrasher species are CDFW CSC’s, and are “covered” species under the CVMSHCP, meaning that potential impacts to these two species would be mitigated through payment of the CVMSHCP fee. Payment of the CVMSHCP fee is a standard condition and is not considered unique mitigation under CEQA.

**Table 4.5.4-4
Sensitive Birds: Vista Del Agua Project Site**

| Species | Protective Status (F=Federal, C=California) | Habitat | Occurrence Probability |
|---|---|--|---|
| Burrowing Owl (<i>Athene cunicularia</i>) | F: ND C: CSC State rank: S2 MSHCP: Yes | Inhabits a variety of open habitats (including edges of agricultural fields), often occupies unused ground squirrel burrows | Absent (no burrows capable of supporting owls found on site, native habitat too dense, large area converted to vineyard) |
| Loggerhead Shrike (<i>Lanius ludovicianus</i>) | F: ND C: CSC State rank: S4 MSHCP: No | A variety of open habitats throughout southern California, fairly dense shrubs and/or brush used for nesting | Occurs (observed onsite) |
| Vermilion Flycatcher (<i>Pyrocephalus rubinus</i>) | F: ND C: CSC State rank: S2S3 MSHCP: No | Often nests in desert riparian habitats adjacent to irrigated fields, irrigation ditches, pastures | Absent (not observed onsite, no desert riparian present for nesting) |
| Crissal Thrasher (<i>Toxostoma crissale</i>) | F: ND C: CSC State rank: S2S3 MSHCP: Yes | Year-round resident in southeastern deserts in riparian and desert wash habitats | Low (not observed onsite, no desert wash or riparian but limited mesquite thickets present) |
| Le Conte's Thrasher (<i>Toxostoma lecontei</i>) | F: BCC C: CSC State rank: S3 MSHCP: Yes | Resident of open desert wash, scrub, alkali scrub, succulent scrub habitats, nests in dense spiny shrubs and cacti in washes | Low (not observed, site lacks wash habitat for nesting, CDFW designation is only for San Joaquin population) |

Source: *On-Site and Off-Site Bio Report (Appendix E)*

The Project biologists observed several inactive bird nests on the Project site. The verdin nest shown in Exhibit 8 below from the *On-Site and Off-Site Bio Report* appeared to be currently active, although this species also constructs nests that are used specifically for overnight shelters. Therefore, it is not known if this nest was being used for sleeping or breeding. Nests of native birds are protected under the MBTA. It should be noted that the Project biologists also observed a pair of black-tailed gnatcatchers feeding two or three recently fledged young on the northern edge of Parcel 6; evidence that some native bird species breed on the Project site.



Exhibit 8 – verdin nest in one of the mesquite thickets on the Project site

When development proceeds, the Project site may contain nesting birds, which could be adversely impacted. All native bird species are protected by the MBTA. Impacts to these other bird species are not permitted in any part of the CVMSHCP area. A variety of birds, which are protected by the MBTA, could nest in the proposed Project area. The Project is required by law to comply with the MBTA and perform site work to avoid impacts to birds. **Mitigation Measure MM-BIO-1** shall be implemented. **MM-BIO-1** states that in order to avoid any potential impact to nesting birds and other protected species, including those protected by the Migratory Bird Treaty Act, construction of the Project shall occur outside of the breeding season (February 1 through September 15). As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds is removed from September 16 to January 31 (outside of the nesting season), then no further actions are required. Where the nesting season (February 1 to September 15) cannot be avoided during construction, a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, vegetation removal, demolition activities, and grading. The survey area shall include the Project site and an appropriate buffer (consistent with the Migratory Bird Treaty Act) around the site. Any active nests identified shall have an appropriate buffer area established (consistent with Migratory Bird Treaty Act protocol at the time of disturbance) of the active nest. Construction activities shall not occur within the buffer area until the biologist determines that the young have fledged.

With the implementation of **MM-BIO-1**, any impacts will remain less than significant.

Burrowing Owl (*Athene cunicularia*)

Less Than Significant Impact with Mitigation Incorporated

According to p. 9-138 of the CVMSHCP, the Burrowing Owl (BUOW) is listed as a Federal Species of Concern and a State Species of Special Concern. The most significant threat to the continued persistence of the BUOW is destruction of Habitat (p. 9-140). Within the CVMSHCP, burrowing owls are scattered in low numbers on natural desert terrain throughout the lowlands. Breeding BUOW are known to occur in the Snow Creek/Windy Point Conservation Area, Whitewater Floodplain Conservation Area, the Upper Mission Creek/Big Morongo Canyon Conservation Area, the Willow Hole and Edom Hill Conservation Areas, and the Thousand Palms Conservation Area (p. 9-142).

The primary importance of the CVMSHCP to BUOW is that it provides Conservation (including Habitat protection, management and monitoring) of the species to the extent it occurs in the Coachella Valley. The CVMSHCP ensures the long-term Conservation of previously unprotected Habitat, the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection of currently unprotected burrow sites, foraging areas, and potential Habitat areas.

Some areas of the Project site provided potential habitat for BUOW. The majority of this potential habitat was located on the northwestern portion of the Project site, on Parcels 7 and 10. Potential habitat was also present within the 500-foot buffer area north of Parcels 5 and 6. The habitat on these areas was more open with suitable soils for burrowing than the majority of the rest of the site. The native habitat on most of the rest of the site consisted of very dense saltbush scrub and lacked enough open ground to provide habitat for BUOW (see Exhibit 6 provided previously from the *On-Site and Off-Site Bio Report*). The off-site improvement routes were located in existing well-used road beds (Avenues 47 and 48), and/or active agricultural lands. Some of these routes included or were adjacent to fallow fields or areas of cleared ground. However, the soils in these areas appeared far too sandy and loose for most potential BUOW occupation, as well as receiving high levels of disturbance from adjacent active agriculture. In California, BUOW often occur in association with colonies of the California ground squirrel or other ground squirrel species, where they often make use of the squirrel's burrows.

In southern California, BUOW are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, berms of flood control and creek channels, livestock farms, airports, and vacant lots. The Project biologists conducted a CDFW protocol BUOW burrow search of the Project site and where possible, within a 500-foot buffer around the site in accordance with the 1993 California Burrowing Owl Consortium and 2012 CDFG Memorandum guidelines. This included walking transects through areas of dense saltbush scrub where there were enough openings to permit access. However, burrows and/or manmade structures capable of supporting BUOW were not observed on the Project site or buffer area. Very few burrows of any size were found on the site or buffer area, those few that were found were far too small to be used by BUOW. Similarly, no potential burrows were observed along any of the proposed off-site improvement routes.

Standard Condition SC-BIO-2 requires a pre-construction survey will be implemented prior to any ground disturbance to ensure Project impacts will be reduced to a less than significant level. A pre-construction survey is a standard condition under the CVMSHCP and is not considered unique mitigation under CEQA.

In the event a burrowing owl is found to be present on site during the preconstruction survey, **Mitigation Measure MM-BIO-2** will be implemented. **MM-BIO-2** requires the Project applicant shall to ensure that applicable avoidance measures are implemented to avoid impacting the burrowing owl.

Sensitive Mammal Species

Less Than Significant Impact

No sensitive mammal species were observed on the Project site during the surveys. The five mammals listed in **Table 4.5.4-5, Sensitive Mammals: Vista Del Agua Project Site**, are thought to have a low probability of occurrence on the Project site, although none were observed during the field surveys. The Palm Springs roundtailed ground squirrel (*Xerospermophilus tereticaudus chlorus*), western yellow bat (*Lasiurus xanthinus* or *L. ega*), and Palm Springs pocket mouse (*Perognathus longimembris bangsi*) are all “covered” species under the CVMSHCP, so any potential impacts to these species would be mitigated through payment of the CVMSHCP fee. None of these three mammals are listed as threatened or endangered but are considered CDFW CSC’s. The remaining two mammals listed on **Table 4.5.4-5**, western mastiff bat (*Eumops perotis californicus*) and American badger (*Taxidea taxus*) are not covered species under the CVMSHCP. These are also not listed as threatened or endangered but considered CDFW CSC’s. Western mastiff bat could potentially periodically forage over the site, but suitable roosting sites are not present. Similarly, American badgers are known to wander widely when foraging, and would have a low potential to wander onto the site (badgers are not common anywhere in the Coachella Valley). Due to the low probability/potential for these species on the site, any impacts are considered less than significant.

**Table 4.5.4-5
Sensitive Mammals: Vista Del Agua Project Site**

| Species | Protective Status (F=Federal, C=California) | Habitat | Occurrence Probability |
|---|--|--|--|
| Western Mastiff Bat (<i>Eumops perotis californicus</i>) | F: ND C: CSC State rank: S3? WBWG: H MSHCP: No | Forages over many open, semi-arid to arid habitats, roosts in crevices in cliffs, buildings, trees and tunnels | Low (foraging only, no roosting habitat present) |
| Western Yellow Bat (<i>Lasiurus xanthinus</i> or <i>L. ega</i>) | F: ND C: CSC State rank: S3 WBWG: H MSHCP: Yes | Found in a variety of habitats: Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats | Low (foraging over site, Low: roosting – palm trees on site) |
| Palm Springs Pocket Mouse (<i>Perognathus longimembris bangsi</i>) | F: ND C: CSC State rank: S2S3 MSHCP: Yes | Most common in Creosote-dominated scrub, but also in desert riparian, scrubs, wash, and sagebrush habitats | Low (habitat lacking over majority of site, very few rodent burrows of any type found onsite) |
| American Badger (<i>Taxidea taxus</i>) | F: ND C: CSC State rank: S4 MSHCP: No | Favors open (uncultivated) habitats with friable soils for digging. | Low (very little open habitat, large area under cultivation) |
| Palm Springs Round-tailed Ground Squirrel (<i>Xerospermophilus tereticaudus chlorus</i>) | F: ND C: CSC State rank: S1S2 MSHCP: Yes | Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, & levees. | Low (no burrows observed on site capable of supporting species, no squirrels observed during surveys, 2000 CNDDDB record from < 1 mile N of site) |

Source: On-Site and Off-Site Bio Report (Appendix E)

Sensitive Insects

Less Than Significant Impact

Table 4.5.4-6, Sensitive Insects: Vista Del Agua Project Site, lists one species of sensitive insect known to occur in the greater Coachella Valley area: Coachella giant sand treader cricket (*Macrobaenetes valgum*). The Project site is located east of the currently known range of the Coachella giant sand treader cricket, and most of the habitat on the Project site is not suitable for this species (very limited areas of “dune” habitat).

The closest CNDDDB record is approximately 6 miles west of the Project site, in an area that has since been developed. **Table 4.5.4-6** indicates that the Coachella giant sand treader cricket is absent from the Project site. This insect is not listed as threatened or endangered by the state and federal agencies and is covered under the CVMSHCP. Potential impacts to this species would be mitigated through payment of the CVMSHCP fee. Payment of the CVMSHCP fee is a standard condition and is not considered unique mitigation under CEQA.

**Table 4.5.4-6
Sensitive Insects: Vista Del Agua Project Site**

| Species | Protective Status (F=Federal, C=California) | Habitat | Occurrence Probability |
|--|--|---|---|
| Coachella Giant Sand Treader Cricket (<i>Macrobaenetes valgum</i>) | F: ND C: ND State rank: S1S2 MSHCP: Yes | Wind-deposited sand dune ridges, winter rains somewhat regulate abundance | Absent (site is east of currently known range, closest CNDDDB record is from ~ 6 miles west of site [now developed]) |

Source: On-Site and Off-Site Bio Report (Appendix E)

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

Less Than Significant Impact

Implementation of the proposed Project will not have a substantial adverse effect on any riparian habitat. There is no desert wash, or desert riparian habitat present on the Project site. No reference to an unnamed wash is included in the *On-Site and Off-Site Bio Report*, or within the information below. The *On-Site and Off-Site Bio Report* did not locate this wash. It was not present on the Project site.

Species

As discussed above and demonstrated in **Table 4.5-4.4**, a single loggerhead shrike (*Lanius ludovicianus*) was observed on the Project site on the second day of the survey. Loggerhead shrikes are not listed as threatened or endangered and are not a covered species under the CVMSHCP. They are considered a CDFW “California Special Concern Species” (CSC).

Vermilion flycatcher (*Pyrocephalus rubinus*) is not expected to occur on the Project site due to a lack of both foraging and nesting (desert riparian) habitat. This distinctive and unmistakable flycatcher was not observed on the site during the surveys. Both Le Conte’s (*Toxostoma lecontei*) and crissal thrasher (*Toxostoma crissale*) are thought to have a low probability of occurring on the Project site, although neither species was observed during the field surveys. The few mesquite thickets present on the site provide potential habitat for both thrashers, and Le Conte’s thrasher is known to occur in akali scrub habitats. Both thrasher species are CDFW CSC’s, and are “covered” species under the CVMSHCP, meaning that potential impacts to these two species would be mitigated through payment of the CVMSHCP fee. Payment of the CVMSHCP fee (see **SC-BIO-1**, below), is a standard condition and is not considered unique mitigation under CEQA.

No riparian habitat, or other sensitive natural communities are located within the on-site or off-site Project components. Any impacts would be considered less than significant.

THRESHOLD c: **Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No Impact

Implementation of the proposed Project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. None of these resources are present within the on-site or off-site Project components. No impacts will occur.

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

Less Than Significant Impact with Mitigation Incorporated

According to the *On-Site and Off-Site Bio Report*, the Project biologists observed several inactive bird nests on the Project site. The verdin nest shown in Exhibit 8 provided previously from the *On-Site and Off-Site Bio Report* appeared to be currently active, although this species also constructs nests that are used specifically for overnight shelters. Therefore, it is not known if this nest was being used for sleeping or breeding. Nests of native birds are protected under the federal Migratory Bird Treaty Act. It should be noted that the Project biologists also observed a pair of black-tailed gnatcatchers feeding two or three recently fledged young on the northern edge of Parcel 6; evidence that some native bird species breed on the Vista Del Agua Project site.

When development proceeds, the Project site may contain nesting birds, which could be adversely impacted. All native bird species are protected by the MBTA. Impacts to these other bird species are not permitted in any part of the CVMSHCP area. A variety of birds, which are protected by the MBTA, could nest in the proposed Project area. The Project is required by law to comply with the MBTA and perform site work to avoid impacts to birds. **Mitigation Measure MM-BIO-1** shall be implemented. **MM-BIO-1** states that in order to avoid any potential impact to nesting birds and other protected species, including those protected by the Migratory Bird Treaty Act, construction of the Project shall occur outside of the breeding season (February 1 through September 15). As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds is removed from September 16 to January 31 (outside of the nesting season), then no further actions are required. Where the nesting season (February 1 to September 15) cannot be avoided during construction, a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, vegetation removal, demolition activities, and grading. The survey area shall include the Project site and an appropriate buffer (consistent with the Migratory Bird Treaty Act) around the site. Any active nests identified shall have an appropriate buffer area established (consistent with Migratory Bird Treaty Act protocol at the time of disturbance) of the active nest. Construction

activities shall not occur within the buffer area until the biologist determines that the young have fledged.

With the implementation of **MM-BIO-1**, any impacts will remain less than significant.

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

No Impact

The City does not currently have a tree preservation policy or ordinance preventing or restricting the removal of trees on site. Please see the discussion in 4.5.4.1, above as it pertains to sensitive vegetation. No impacts will occur.

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

Less Than Significant Impact

As discussed above, the Project may impact sensitive birds, sensitive reptiles, sensitive mammals and sensitive insects, which covered under the CVMSHCP and the Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan (HCP). Potential impacts to these species would be mitigated through payment of the CVMSHCP fee and the HCP fee. Payments of these fees are considered a standard condition and are not considered unique mitigation under CEQA. No other adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan applies to the Project. Any impacts are considered less than significant.

4.5.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-BIO-1 **CVMSHCP Mitigation Fee: The Project will be required to pay the appropriate Multiple Species Habitat Conservation Plan Mitigation Fee prior to issuance of a building permit, per Chapter 4.48 of the City's Municipal Code. The fees are assessed based on the particular type of development.**

SC-BIO-2 **Pre-Construction Burrowing Owl Survey: Prior to any ground-disturbing activities a "take avoidance survey" in accordance with CDFW for burrowing owl shall be conducted by a qualified biologist. The "take avoidance survey" shall occur within 14 days prior to any site disturbance, including grading. If burrowing owls are observed or detected on the project site during the pre-construction survey, construction activities shall halt, and the owls shall be relocated/excluded from the site outside of the breeding season**

following accepted protocols, and subject to the approval of CDFW (see MM-BIO-2, below).

Mitigation Measure(s)

MM-BIO-1 To avoid any potential impact to nesting birds and other protected species, including those protected by the Migratory Bird Treaty Act, construction of the Project shall occur outside of the breeding season (February 1 through September 15). As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds is removed from September 16 to January 31 (outside of the nesting season), then no further actions are required.

Where the nesting season (February 1 to September 15) cannot be avoided during construction, a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, vegetation removal, demolition activities, and grading. The survey area shall include the Project site and an appropriate buffer (consistent with the Migratory Bird Treaty Act) around the site. Any active nests identified shall have an appropriate buffer area established (consistent with Migratory Bird Treaty Act protocol at the time of disturbance) of the active nest. Construction activities shall not occur within the buffer area until the biologist determines that the young have fledged.

MM-BIO-2 In the event a burrowing owl is found to be present on site during the preconstruction survey, the Project applicant shall ensure the following applicable avoidance measures, are implemented:

- Avoid disturbing occupied burrows during the breeding nesting period, from February 1 through August 31. If burrows are occupied by breeding pairs, an avoidance buffer should be established by a qualified biologist. The size of such buffers is generally a minimum of 300 feet, but may increase or decrease depending on surrounding topography, nature of disturbance and location and type of construction. The size of the buffer area will be determined by a qualified biologist. Continued monitoring will be required to confirm that the specified buffer is adequate to permit continued breeding activity.
- Avoid impacting burrows occupied during the nonbreeding season by migratory or nonmigratory resident burrowing owls.
- Avoid direct destruction of occupied burrows through chaining (dragging a heavy chain over an area to remove shrubs) or disking.
- Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection.
- Place visible markers near burrows to ensure that equipment and other machinery does not collapse occupied burrows.
- Do not fumigate, use treated bait, or other means of poisoning

nuisance animals in areas where burrowing owls are known or suspected to occur.

If an occupied burrow is present within the approved development area, the Project applicant shall ensure that a clearance mitigation plan is prepared and approved by the CDFW prior to implementation. This plan will specify the procedures for confirmation and exclusion of nonbreeding owls from occupied burrows, followed by subsequent burrow destruction. There shall also be provisions for maintenance and monitoring to ensure that owls do not return prior to construction. Breeding owls shall be avoided until the breeding cycle is complete.

4.5.6 Cumulative Impacts

Cumulative biological impacts are defined as those impacts resulting from the development within the CVMSHCP Plan Area as a result of build out of the Cities and County's General Plans. Development of the Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site; however, development, of a larger acreage and scale that the Project is currently permitted on the site. With the incorporation of standard conditions and mitigation, the Project will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities present in Riverside County because there are no such species located within the Project area and the Project can be implemented consistent with the criteria identified in the CVMSHCP.

According to Section 15130 of the CEQA Guidelines, cumulative impacts refer to incremental impacts of an individual project when viewed in connection with the effects of past projects, current projects, and probable future projects. Cumulative impacts could potentially include increased edge effects and increased wildlife mortality; however, it is likely that any current and future development may threaten wildlife in the project area.

The City of Coachella and surrounding Cities and the County of Riverside are signatories of the CVMSHCP, which protects 240,000 acres of open space and 27 species. The CVMSHCP was prepared to balance environmental protection and economic development objectives in the CVMSHCP area and to simplify compliance with endangered species related laws. The CVMSHCP is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The CVMSHCP will, to the maximum extent practicable, minimize and mitigate the impacts of the taking and provide for conservation of the covered species. The objective of the CVMSHCP is to provide certain Essential Ecological Processes, particularly the fluvial sand deposition and Aeolian transport areas, which are necessary to support occupied habitat by covered species in the dunes and other blowsand habitats. Without the CVMSHCP, there would not be a coordinated system of Biological Corridors and Linkages provided to connect Conservation Areas and the ability to provide Linkages through project-by-project mitigation may be precluded over time through continued development in the Coachella Valley. The CVMSHCP includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the conservation of the covered species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, a Monitoring Program, and Adaptive Management. The Conservation Areas contained approximately

496,400 acres of Existing Conservation Lands as of 1996. By November 2006, this had increased to approximately 557,100 acres. A minimum of 129,690 acres in the Conservation Areas will be conserved as Additional Conservation Lands, to be acquired or otherwise conserved through State and federal acquisitions and Permittee contributions.

Several acquisition efforts for conservation purposes pre-date the MSHCP, and are ongoing efforts expected to conserve approximately 29,990 acres in the MSHCP Reserve System from November 2006 on. These include Bureau of Land Management (BLM) and United States Fish and Wildlife Service (USFWS) acquisition programs in the Santa Rosa and San Jacinto Mountains National Monument, BLM Wilderness inholdings acquisitions, and inholdings acquisitions in Joshua Tree National Park. These acquisition programs pre-date the MSHCP, have broader rationales than the MSHCP program, and are independent of the MSHCP effort. They complement implementation of the MSHCP but are not a Permittee obligation for purposes of the authorization of Take.

A minimum of 129,690 acres in the Conservation Areas will be conserved as Additional Conservation Lands, to be acquired or otherwise conserved through State and federal acquisitions and Permittee contributions. The Local Permittees will also protect the fluvial sand transport Essential Ecological Process on approximately 7,800 acres in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas through application of general plan land use designations and policies, and flood control guidelines.

Through the MSHCP and its Implementing Agreement (IA), the federal and state governments have agreed to partner with the Local Permittees in assembling, managing, and monitoring Reserve Lands. The federal and state governments will acquire approximately 21,390 acres of privately owned lands (this federal and state obligation is beyond any mitigation obligations for Development authorized by Local Permittees pursuant to the Plan) in the Conservation Areas after November 2006, as well as manage certain federal and state Existing Conservation Lands in the MSHCP Reserve System and participate in the Monitoring and Adaptive Management Program for Reserve Lands. The Permittees (Local and State) have an obligation to conserve approximately 115,340 acres in the Conservation Areas through:

- Conservation of 7,700 acres of currently non-conserved Local Permittee-owned lands.
- Conservation of 88,900 acres of Additional Conservation Lands by the Local Permittees and Caltrans through acquisition or other means, such as planning tools and land use regulation, and acquisition of 640 acres by State Parks (after 1996), of which 100 acres can be developed for State Park facilities.
- Management of 18,200 acres of Permittee Existing Conservation Lands consistent with the MSHCP.

In addition, the Permittees will maintain the fluvial sand transport Essential Ecological Process in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas as described in Section 4.2.2.2.4 of the CVMSHCP.

The CVMSHCP includes certain requirements for Covered Activities in the Conservation Areas to avoid, minimize, and mitigate impacts to bighorn sheep habitat, biological corridors, burrowing owl, covered riparian bird species, crissal thrasher, desert tortoise, fluvial sand transport, Le Conte's thrasher, mesquite hummocks and mesquite bosque natural communities, triple-ribbed milkvetch, Palm Springs pocket mouse, and Little San Bernardino Mountains

linanthus. These measures do not apply to single-family homes and any non-commercial accessory uses and structures including, but not limited to, second units on an existing legal lot. Because the proposed Project and the cumulative projects in the Coachella Valley would comply with the CVMSHCP, and the CVMSHCP and its associated EIR/EIS have analyzed cumulative impacts within the region of the proposed project under CEQA, NEPA, CESA, and FESA, cumulative impacts to biological resources associated with the proposed project have been previously considered and analyzed. It was determined in the EIR/EIS that cumulative impacts to biological resources would be less than significant through the implementation of the CVMSHCP. The EIR/EIS for the CVMSHCP states:

“The CVMSHCP incorporates private land acquisitions, creates large blocks capable of sustaining ecological systems, landform diversity, all trophic levels and populations large enough to be viable in the face of fluctuations caused by extremes in desert environment. The Proposed Action/Preferred Alternative is expected to result in and contribute cumulative impacts, both positive and negative. The beneficial cumulative impacts include the establishment of large, unfragmented habitat blocks, and the ecological processes that would provide for the proposed Covered Species long-term survival and recovery. The CVMSHCP proposes species-specific Avoidance, Minimization, and Mitigation Measures, and Land Use Adjacency Guidelines to avoid or minimize impacts from development in or adjacent to Conservation Areas. While the proposed CVMSHCP also allows Take, land outside of the Conservation Areas is constrained by physical conditions, isolation and a lack of cost-effective infrastructure, which could limit even very low densities of development and thereby reduce the potential Take that might occur in these areas. Nonetheless, development outside Conservation Areas facilitated by the CVMSHCP could put incremental pressure on the lands within the Reserve System.

The CVMSHCP also includes comprehensive Monitoring and Management Programs. The primary purpose of the Monitoring and Management Programs is to determine whether the proposed Plan is achieving its Conservation Goals and Objectives to ensure that the Covered Species and natural communities are protected in perpetuity; specify the primary components of MSHCP Reserve System management; and determine how effective Adaptive Management strategies are to address changes in habitat condition, natural communities, and/or species status. The Management and Monitoring Programs focus on identifying changes in identified natural communities and Covered Species condition (numbers, distribution, etc.) and what factors may be causing the identified changes.

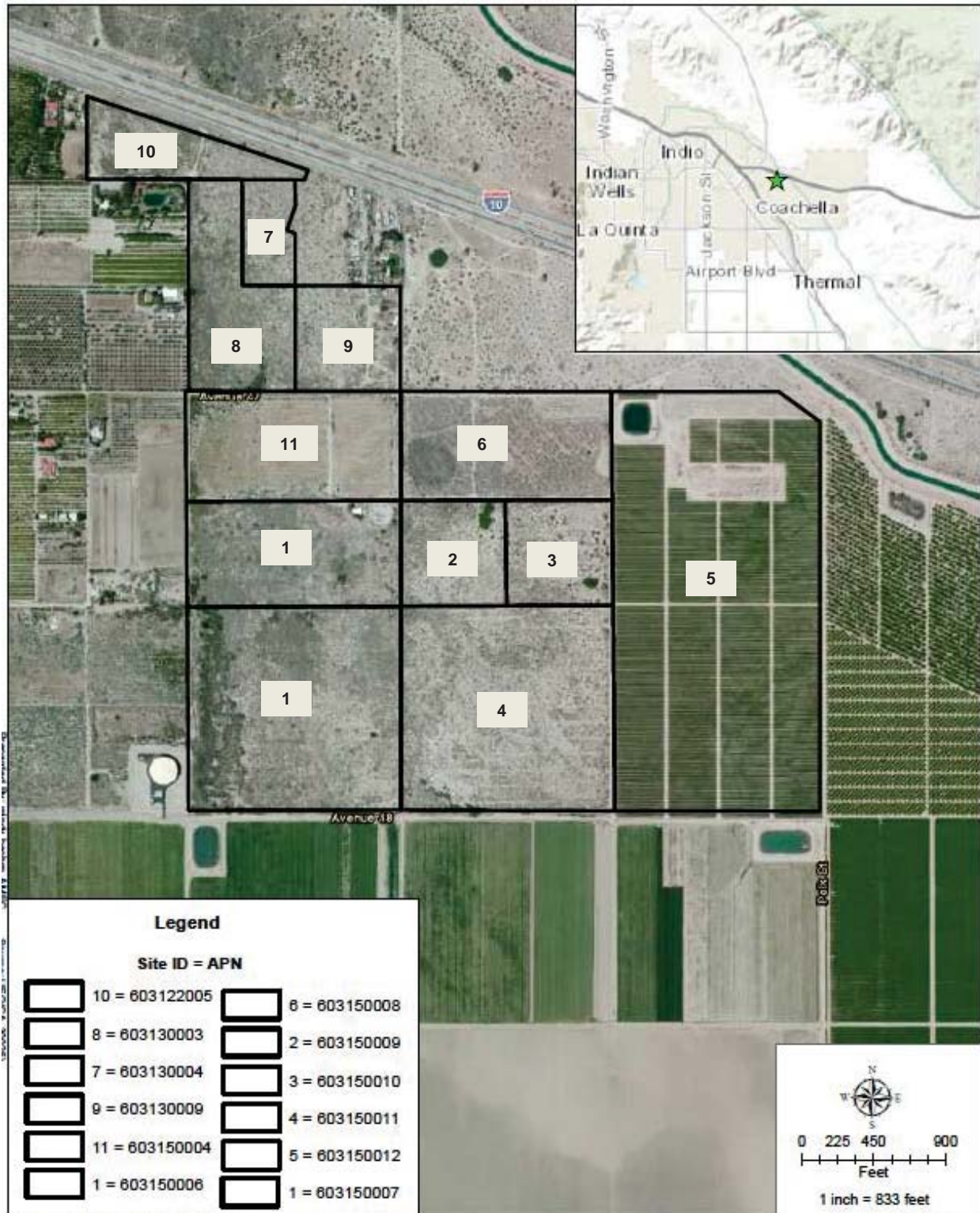
The Monitoring Program would provide scientifically reliable data on the status of Covered Species; spatial and temporal dynamics (amplitude and magnitude) of ecosystem components for the covered plant and animal species and natural communities; the threats to these species and natural communities; and the results of research and the management of covered species. The Management Program would incorporate Adaptive Management, which includes an integrated multidisciplinary approach to addressing management practices, evaluating management actions, and assessing threats using appropriate experimental approaches at species, community, and landscape levels.”

The proposed Project and any other future public or private projects are subject to CVMSHCP compliance including the payment of fees (see **SC-BIO-1**, above), which helps cover the cost of acquiring habitat and implementing the CVMSHCP and, therefore, any cumulative impacts on biological resources are less than significant.

4.5.7 Unavoidable Significant Adverse Impacts

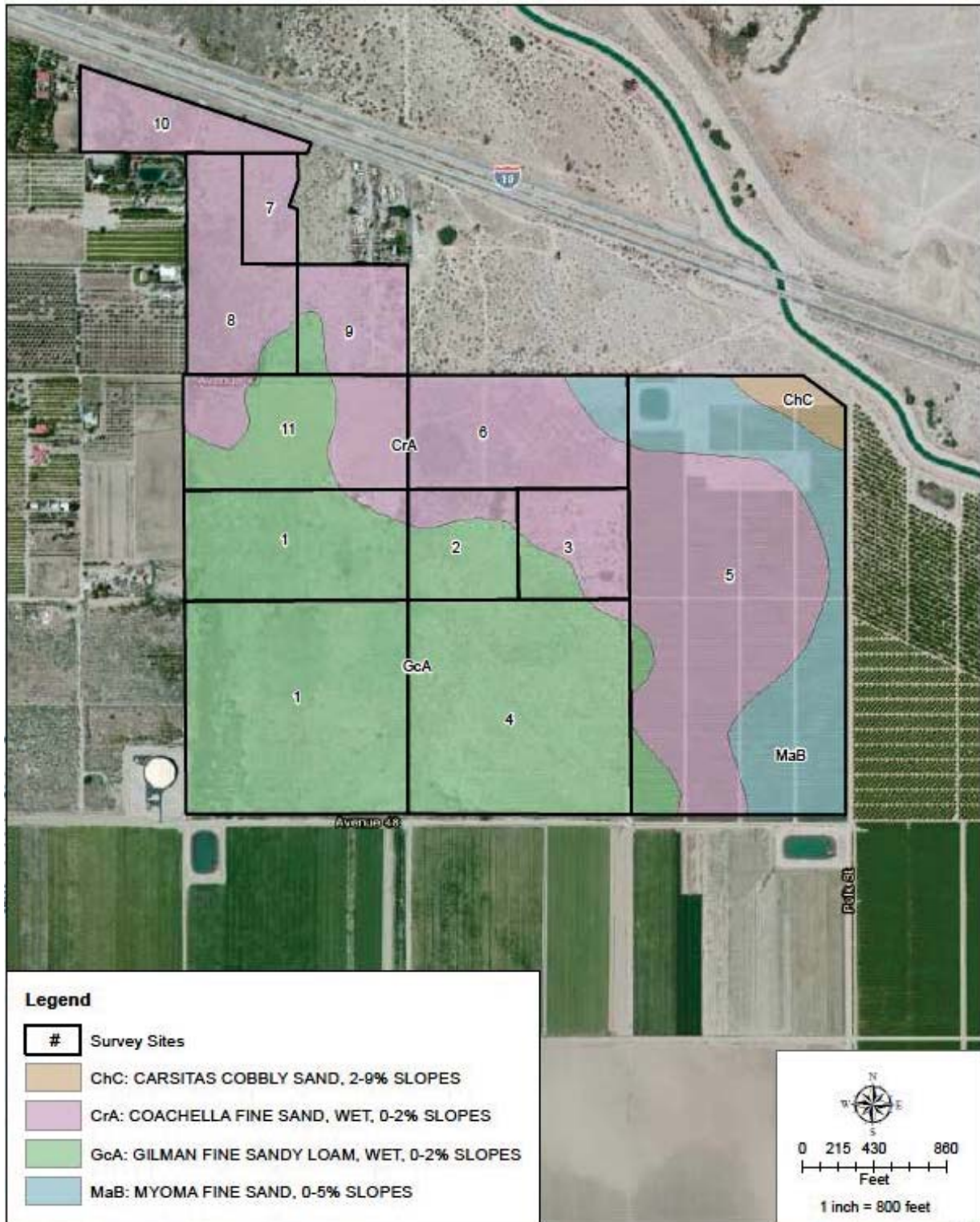
With implementation of the mitigation measures above and through CVMSHCP compliance (including the payment of fees – see **SC-BIO-1**, above), the Project will not cause any direct significant unavoidable adverse impact to sensitive biological resources, including cumulative impacts.

Figure 4.5.2-1
 Vicinity and Location Map



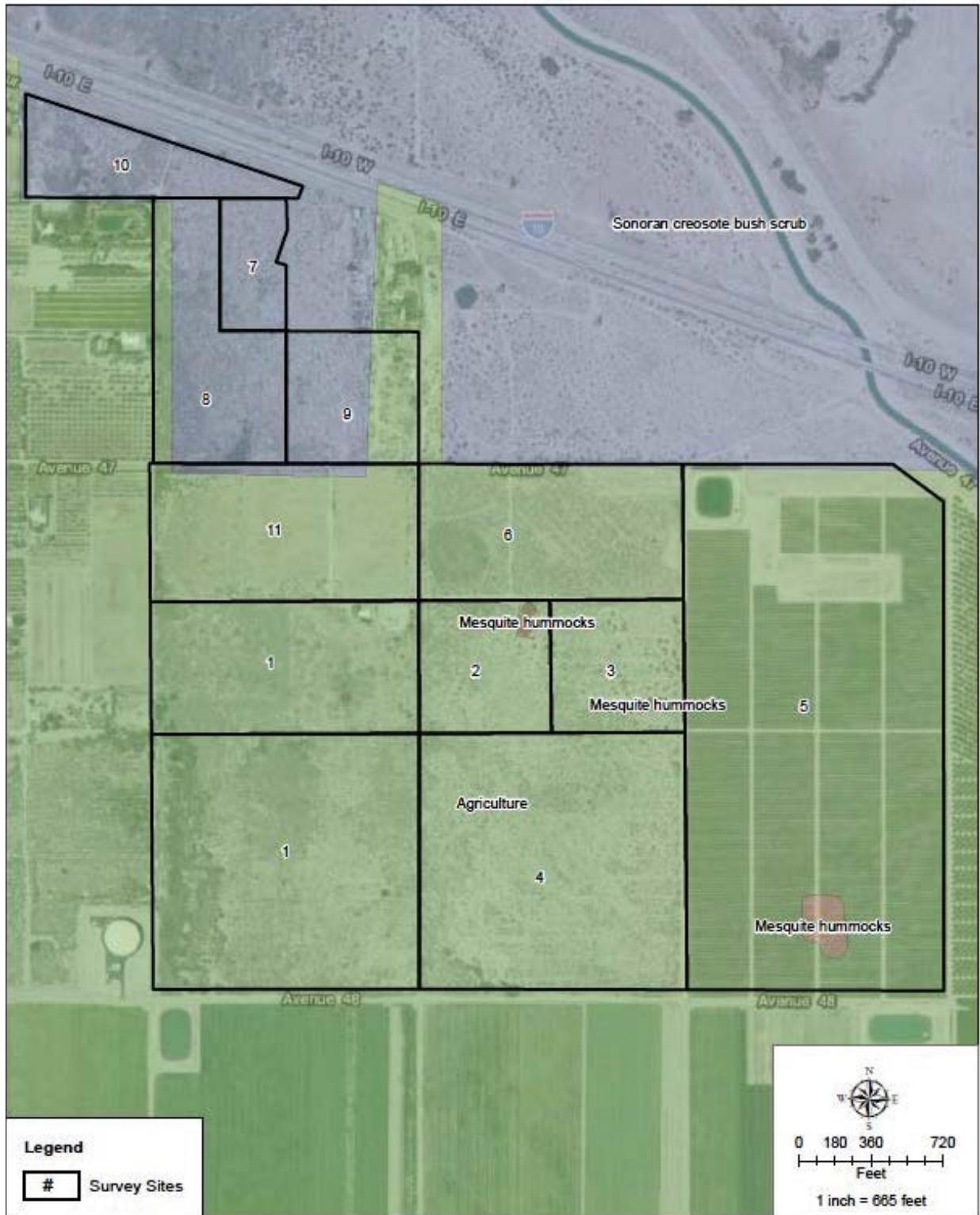
Source: On-Site and Off-Site Bio Report (Appendix E)

Figure 4.5.2-2
 Soils Map



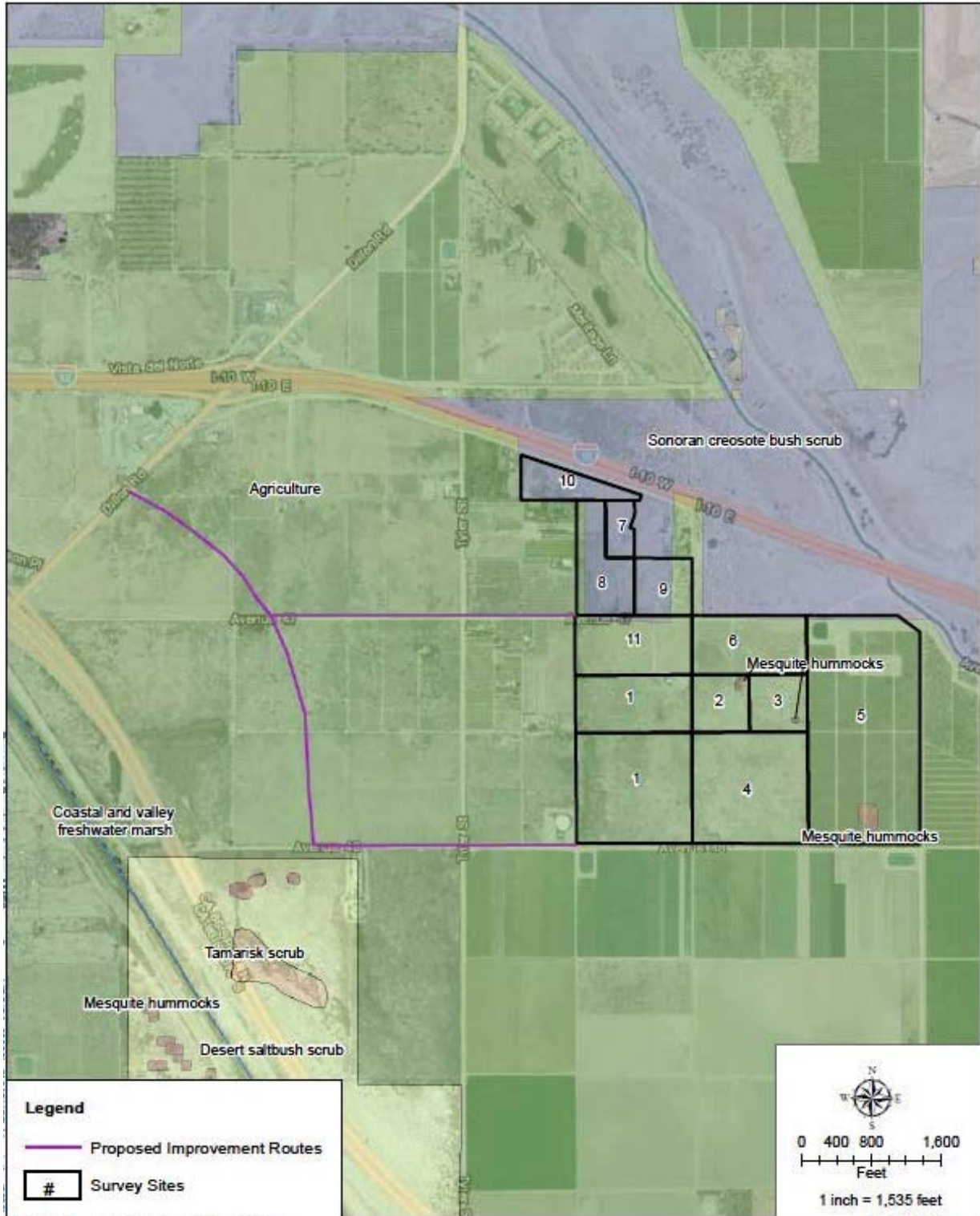
Source: On-Site and Off-Site Bio Report (Appendix E)

Figure 4.5.2-3
On-Site CVMSHCP Vegetation Map



Source: On-Site and Off-Site Bio Report (Appendix E)

Reference Figure 4.5.2-4
Off-Site Improvement Location and Vegetation Map



Source: On-Site and Off-Site Bio Report (Appendix E)

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.6 figures are located at the end of each subchapter, not immediately following their reference in text.

4.6 CULTURAL RESOURCES

4.6.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of cultural resources from implementation of the Project. Section E.V., Cultural Resources, of the Initial Study asked whether the Project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?; or
- Disturb any human remains, including those interred outside of formal cemeteries?

Based on the analysis in the Initial Study it was determined all of the issue areas related to cultural resources in the questions asked above **would** be further analyzed in the Environmental Impact Report (EIR).

The Initial Study indicated the following pertaining to the Project affecting cultural resources:

“Implementation of the Project (on-site and off-site components) may cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5; cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or, disturb any human remains, including those interred outside of formal cemeteries. A Project specific cultural resources study shall be prepared in order to address questions V.a-d, above. In order to ensure a comprehensive discussion of these cultural resources issues, they will be analyzed in the EIR.”

These issues pertaining to cultural resources will be discussed below as set in the following framework:

- Environmental Setting: Cultural Resources
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and Vista Del Agua Specific Plan were used in the analyses presented in this

subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Phase I Cultural Resources Survey and Assessment of the Vista del Agua Project, a 277-Acre Parcel Just South of Interstate 10 between Tyler and Polk Streets in the City of Coachella, Riverside County, California*, prepared by Professional Archaeological Services, dated October 10, 2014 (2014 CSRA I, **Appendix F**)
- *Phase II Evaluation of the Cultural Resources of the Vista del Agua Project, a 277-Acre Parcel with 4300 Feet of Linear Offsite Improvements Just South of I-10 between Tyler and Polk Streets in the City of Coachella, Riverside County, California, APNs: 603-122-05; 603-130-03, -04 & -09; 603-150-04, -05 & -07 thru -12*, prepared by Professional Archaeological Services, dated May 20, 2015 (2015 CSRA II, **Appendix G**)

No comments were raised at the public scoping meeting. The following comments were received regarding cultural resources in response to the Notice of Preparation (NOP):

- Agua Caliente Band of Cahuilla Indians requests that upon completion, they would like a copy of the Cultural Resources Study and Mitigation Measures (Letter #1).
 - The project is not located within the boundaries of the Agua Caliente Band of Cahuilla Indian Reservation. However, it is located within the Traditional Use Area.
 - For that reason, they are requesting that upon completion, they would like a copy of the Cultural Resources Study and Mitigation Measures.These comments are noted and the Agua Caliente Band of Cahuilla Indians will be provided with a copy of the Cultural Resources Study and Mitigation Measures.
- The Pauma Band of Luiseno Indians deferred culturally related knowledge to their sister Bands of Cahuilla (email Letter #5).
 - Defers culturally related knowledge to sister Bands of Cahuilla.This comment is noted and no additional analysis is required in the EIR.
- The Twenty-Nine Palms Band of Mission Indians requests copies of the Environmental Assessment and the Environmental Impact Report (email Letter #6).
 - Requests copies of the Environmental Assessment and the Environmental Impact Report.These comments are noted and the Twenty-Nine Palms Band of Mission Indians will be provided with a copy of the Environmental Assessment and the Environmental Impact Report.

The issues identified in the Initial Study, and described in the NOP, are the focus of the following evaluation of biological resources.

4.6.2 Environmental Setting

4.6.2.1 *Overview*

The Project area is bounded by a frontage road just south of Interstate 10 to the north, Polk Street to the east, Avenue 48 to the south, and farmland and some residential land to the west. The property is just south of Interstate 10, about 1.5 miles northeast of downtown Coachella and the Southern Pacific Railroad, and 0.25 mile east of the Cabazon Indian Reservation. In addition, 4,300 ft. of proposed offsite linear road, water and sewer improvements are also part of the Project. A survey was conducted in compliance with environmental review requirements under the California Environmental Quality Act (CEQA).

The Project site contains three previously recorded prehistoric sites and two newly recorded historic sites. They are RIV-7834, RIV-7835, RIV-7836, RIV-11775, and RIV-11776. Due to confidentiality of these resources, only general locations are provided. The exact locations are not provided.

RIV-7834 consists of four ceramic scatter loci, Loci A-D. Locus D was recorded and tested in 2005. Loci A-C were recorded during the 2014 resurvey. The site is located just south of a creosote-covered sand dune in a sandy, formerly creosote scrub, landscape that has been disturbed by agriculture between 1953 and 1984.

The site measures 240 by 68 meters (m) and is between 45 and 30 feet below sea level in elevation, placing it within the lakebed of prehistoric Lake Cahuilla.

The RIV-7835 contains surface ceramic scatter that may represent a seasonally occupied camp site along a former shoreline of prehistoric Lake Cahuilla. It measures 50 by 34 m and is situated at an elevation of 53 feet below sea level in an area of saltbush scrub. Surface artifacts include at least 47 sherds of which 32 were collected and classified almost entirely as Salton Buff with one Salton Brown and one Colorado Beige sherd. Other surface artifacts included a hammer/chopper and a brown bottle glass shard. The 2014 resurvey found 19 surface sherds including two that extend site boundaries to the south.

The RIV-7836 site is relatively small, measuring 26 by 15 m; it was found within a relatively dense cluster of saltbush. Only 14 sherds were recovered from the surface and subsurface during the 2005 test excavations. Virtually all ceramics were recovered from the upper 20 cubic meters (cm), save one. Eleven sherds were identified as Salton Buff and two as Salton Brown. In addition, four glass shards were recovered between 0-50 cm, and one freshwater shell sample was taken from the surface of Test Unit 2. No features were encountered. This site was most likely served as a seasonal plant resource procurement that was occupied after the last major infilling of prehistoric Lake Cahuilla in the 16th or 17th centuries.

RIV-11775 consists of five loci (A-E) containing between one and six currently used and/or abandoned water control features, including standpipes, water flow gauges, water pressure regulators, water flow valves, a reservoir, and other features linked by an underground water supply system constructed in the early 1950s by the Coachella Water District after the completion of Coachella Canal in 1949. Water is delivered to the highest point of every 40-acre parcel along section lines in areas of the water district eligible and registered to receive it.

These are gravity flow pipelines. Other networks provide underground tile drainage systems to carry high-salinity, used drainage water to the Salton Sea.

RIV-11776 consists of the remains of a probable farm residence that was built in the early 1950s after water was brought to the area via the Coachella Canal completed in 1949. The burned down during either 2010 or 2011. Current remains consist of the house foundation and its adjacent cement porch and a foundation for a propane tank. Just east of the foundation is a shallow dry reservoir built after 1972. The entire site measures 128 by 85.5 m. It is situated at an elevation of 40 feet below sea level. The site vicinity once consisted of former farmland but much of it is now creosote and saltbush scrub. Soils consist of fine sandy loam with pebbles in some areas. The site lies within the geologic sink known as the Salton Trough that once contained former Lake Cahuilla.

The Project area was previously surveyed and was the subject of *2015 CSRA II* test excavations at RIV-7834, -7835 and -7836. Since it had been nearly 10 years since the previous survey, an updated records search and resurvey of the property was conducted.

On March 25, 2014, a letter was faxed to the Native American Heritage Commission (NAHC) asking for a Sacred Lands Check for the approximately 275 acres of on-site development. In a letter dated May 26, 2006, Dave Singleton of the NAHC responded that no Native American sacred sites are present within or adjacent to the Project area (see Appendix B of *2014 CSRA I*). A list of tribal representatives that could be contacted was provided. Prior to the survey, Dr. de Barros contacted Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians and a representative from the tribal office of the Torres-Martinez Desert Cahuilla Indians to see if they would like to participate in the survey of the property. Both declined at this stage, but both wished to be informed when potential impacts to cultural resources were determined.

On April 29, 2014, a letter was sent or faxed to all of the tribal representatives on the list provided by the NAHC. This letter provided preliminary information about RIV-7834, -7835, and -7836 that underwent test excavations and significance evaluation in 2005 and concluded that RIV-7835 was a significant resource under CEQA. They were also informed about the preliminary results of the March 2014 resurvey, including that RIV-7834 and RIV-7835 were remapped with Global Positioning System (GPS) and that the small site, RIV-7836, could not be relocated. They were also informed of the recording of water control features along Avenue 47 and a historic house foundation dating to after World War II.

Two responses were received. The first was a letter dated April 30, 2014, from Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians in Indio. She indicated that the Project area was outside of current reservation boundaries, that they had no knowledge of any sacred/religious sites within or near the Project area, and that they would defer to the Torres-Martinez Band of Desert Cahuilla for further consultation (see Appendix C of the *2015 CSRA II*). The second was from Mary Ann Green, Tribal Chairperson of the Augustine Band of Cahuilla Indians dated May 23, 2014. She said they are unaware of specific cultural resources within or near the Project area but encouraged us to talk to other tribal representatives and to be sure an Indian monitor is present during construction. She also asked to be informed about the discovery of any cultural resources during the development of the Project.

Additional e-mail comments were received after the submission of the *2014 CSRA I*. These include an e-mail dated December 30, 2014, from Chris Devers, Cultural Clerk for the Pauma Band of Luiseño Indians and an e-mail dated March 4, 2015 from Katie Eskew, archaeologist from the Tribal Historic Preservation Officer office of the Agua Caliente Band of Cahuilla Indians. Mr. Devers deferred “any knowledge of cultural related sites or resources to our sister Bands of Cahuilla.” Ms. Eskew state the Project is not within the Agua Caliente Reservation but is within the “Tribe’s Traditional Use Area” (TUA) and requested a copy of the relevant cultural resources reports. Finally, Shawn Muir of the Twenty-Nine Palms Band of Mission Indians Tribal Environmental Protection Agency office in Coachella sent an e-mail dated February 17, 2015, requesting a copy of the Environmental Assessment (EA) or EIR associated with this Project.

Phase II testing took place in stages in November and December of 2014, and on March 7, 2015. For the work in November, requests for Tribal Monitors were made by phone to Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians, and to Mary Ann Green, Tribal Chairperson of the Augustine Band of Cahuilla Indians, but they both stated they did not have any trained monitors and they indicated that the Torres-Martinez Indian Reservation (Torres-Martinez Desert Cahuilla Indians) should be contacted.

A call was placed to the Torres-Martinez’ Planning Director, Roland Ferrer on November 21, 2014. Mr. Ferrer returned the call that same day and requested a copy of the *2014 CSRA I*. The *2014 CSRA I* was submitted to the City of Coachella before an additional 4300’ of water, sewer and road improvements were added, largely offsite. After discussing the Project with Mr. Ferrer, Dr. de Barros sent the *2014 CSRA I* and summarized its results via e-mail; he also summarized the results of initial test excavations that took place on November 21 and 23 and requested an Indian Tribal Monitor to monitor test excavations that were to take place on December 6-7, 2014. Unfortunately, Mr. Ferrer did not receive the *2014 CSRA I* or e-mail and as a result no monitor could be provided on those days.

Robin Lawson was eventually sent as a tribal monitor for the test excavations that took place on December 29-31 to investigate an intact hearth discovered on December 7, 2014. Mr. Lawson monitored on December 29-30 and discovered additional surface pottery that had been exposed due to a brief rain the week before. This led to additional surface collections and additional test units to cover the expanded Locus C. Later, it was determined that another day of additional testing would be necessary to better understand the nature of the hearth complex. Dr. de Barros requested that Mr. Lawson come on March 7, 2015 for a half-day of fieldwork, but he was unable to come on that date. This concluded the fieldwork at RIV-7834. After the ceramics and charcoal were analyzed and the site was dated, a preliminary summary of the results was sent to Roland Ferrer on May 4, 2015, prior to the completion of the *2015 CSRA II* (Appendix B of the *2015 CSRA II*). To date, no response has been received.

4.6.2.2 Prehistory

On the basis of currently available archaeological research, occupation of Southern California by human populations is believed to have begun at least 10,000 years ago. Theories proposing much earlier occupation, specifically during the Pleistocene Age, exist but at this time archaeological evidence has not been fully substantiating. Therefore, for the purposes of the *2015 CRSA II*, only human occupation within the past 10,000 years will be addressed.

A time frame of occupation may be determined on the basis of characteristic cultural resources. These comprise what are known as cultural traditions or complexes. It is through the presence or absence of time-sensitive artifacts at a particular site that the apparent time of occupation may be suggested.

In general, the earliest established cultural tradition in Southern California is accepted to be the San Dieguito Tradition, first described by Malcolm Rogers in the 1920's. The San Dieguito people were nomadic large-game hunters whose tool assemblage included large domed scrapers, leaf-shaped knives and projectile points, stemmed projectile points, chipped stone crescentics, and hammerstones. The San Dieguito Tradition was further divided into three phases: San Dieguito I is found only in the desert regions, while San Dieguito II and III occur on both sides of the Peninsular Ranges. Rogers felt that these phases formed a sequence in which increasing specialization and refinement of tool types were the key elements. Although absolute dates for the various phase changes have not been hypothesized or fully substantiated by a stratigraphic sequence, the San Dieguito Tradition as a whole is believed to have existed from approximately 7000 to 10,000 years ago (8000 to 5000 B.C.).

Throughout southwestern California the La Jolla Complex followed the San Dieguito Tradition. The La Jolla Complex, as first described by Rogers, then redefined by Harding, is recognized primarily by the presence of millingstone assemblages within shell middens. Characteristic cultural resources of the La Jolla Complex include basined millingstones, unshaped manos, flaked stone tools, shell middens, and a few Pinto-like projectile points. Flexed inhumations under stone cairns, with heads pointing north, are also present.

The La Jolla Complex existed from 5500 to 1000 B.C. Although there are several hypotheses to account for the origins of this complex, it would appear that it was a cultural adaptation to climatic warming after c. 6000 B.C. This warming may have stimulated movements to the coast of desert peoples who then shared their millingstone technology with the older coastal groups. The La Jollan economy and tool assemblage seems to indicate such an infusion of coastal and desert traits instead of a total cultural displacement.

The Pauma Tradition, as first identified by D.L. True in 1958, may be an inland variant of the La Jolla Complex, exhibiting a shift to a hunting and gathering economy, rather than one based on shellfish gathering. Implications of this shift are an increase in number and variety of stone tools and a decrease in the amount of shell. At this time, it is not known whether the Pauma Complex represents the seasonal occupation of inland sites by La Jollan groups or whether it represents a shift from a coastal to a non-coastal cultural adaptation by the same people.

The late period is represented by the San Luis Rey Complex, first identified by Meighan and later redefined by True et al. Meighan divided this complex into two periods: San Luis Rey I (A.D. 1400-1750) and the San Luis Rey II (A.D. 1750-1850). The San Luis Rey I type component includes cremations, bedrock mortars, millingstones, small triangular projectile points with concave bases, bone awls, stone pendants, Olivella shell beads, and quartz crystals. The San Luis Rey II assemblage is the same as San Luis Rey I, but with the addition of pottery vessels, cremation urns, tubular pipes, stone knives, steatite arrow straighteners, red and black pictographs, and such non-aboriginal items as metal knives and glass beads (Meighan 1954). Inferred San Luis Rey subsistence activities include hunting and gathering with an emphasis on acorn harvesting.

The Cahuilla with a Focus on the Desert Cahuilla

In the Project area, the inhabitants were the Desert Cahuilla. The Desert Cahuilla, along with their brethren the Mountain and Pass Cahuilla, were bounded by the Serrano to the north, the Luiseño and Cupeño (when they were at Warner's Ranch) to the west and southwest, and the Ipai-Tipai/Kumeyaay to the south. The Desert, Pass, and Mountain Cahuilla distinctions maintained by many ethnographers should not be seen as discrete, bounded units as intermarriage and family moves rendered them quite fluid. The Cahuilla speak a language that is part of the Cupan subgroup of the Takic family of Uto-Aztecan family of languages. A few native speakers remain and there is major effort to teach Cahuilla to the young to help preserve the language. Cahuilla is most closely related to Cupeño and Luiseño among neighboring Takic or Shoshonean languages.

The traditional territory of the Cahuilla was very diverse with a variety of climatic and floral and faunal resources associated with mountains, foothills, and desert terrains. Subsistence was organized around hunting and gathering and later some agriculture. Basic staples consumed in historic times included the two mesquites, honey mesquite and screwbean, goosefoot (*Chenopodium* spp.), pickleweed (*Allenrolfea occidentalis*), *Dicoria canescens* (Cahuilla awk-nish; Wilke, DeDecker, and Dawson), various cacti, agave (*Agave deserti*), pinyon nuts (*Pinus monophylla*), acorns (*Quercus* spp.), and other seed plants. These resources were gathered on the floor of the Coachella Valley, on adjacent mountain slopes, and in the higher mountains . . . Gathering and hunting territories crosscut the vegetation zones. Such an arrangement, which seems to have been characteristic of all villages on the desert and San Gorgonio Pass, ensured that an array of resources would be available in different settings at different elevations throughout the year. Hunting was secondary. . . . and jackrabbits (*Lepus californicus*), cottontails (*Sylvilagus* spp.), deer (*Odocoileus hemionus*), and bighorn sheep (*Ovis Canadensis*) were all taken with the bow and arrow. Smaller mammals, including a variety of rodents, were taken with traps, snares, and with fire.

Agriculture was first observed in 1823 by Europeans who were part of the Estudillo- Romero expedition through the Coachella Valley in December. Cahuilla gardens containing corn, pumpkins, squash and melons were observed at that time. Wilke and Lawton suggest that the evidence indicates crops grown in both the winter and in the summer and that irrigation by canal or ditch was employed on a small scale, probably along with pot irrigation in such an arid region. The locations of agricultural fields are also noted on La Croze's 1856 Government Land Office (GLO) plat map. Lawton has shown that agriculture was practiced for hundreds of years prior to the arrival of Europeans, basing this on the presence of cultivated plants and crop names in Cahuilla mythology. However, most agree that agriculture was primarily a complementary form of subsistence tied to a primarily hunter-gathering economy.

Acorns were stored in large granaries whereas seeds were stored in ollas sealed with pine pitch. The latter were often placed in desert rockshelters or caves to serve as food sources for those out hunting or gathering or to serve as reserve food supplies for individual families. Pottery vessels included cooking pots, small-mouthed jars, pipes, and ladles. Basketry was also important among the Cahuilla for the fashioning of globular baskets with flat bottoms for storing or carrying small items, large cone-shaped baskets used with a net for carrying heavier items, shallow baskets for parching corn and seeds or for storage, and flat winnowing trays. Cahuilla contacts with the neighboring Serrano and Gabrielino, as well as Luiseño, were important and included trade, intermarriage, ceremonies and sometimes conflict.

The Desert Cahuilla village was a permanently occupied settlement and consisted of three to five exogamous patrilineages. The 1856 GLO plat map surveyed by John La Croze, and others maps of the same time period, recorded the presence of a series of Cahuilla settlements within the Coachella Valley and elsewhere, comprising most of the settlement of the Pass and Desert Cahuilla. These data have been graphically summarized in a map in Swenson et al. Swenson et al. note that Wilke and Lawton, Wilke, Bean, Strong, and Harvey have all published maps showing village locations in the various parts of Cahuilla territory. Their maps are not always in agreement.

The reason for this seems to lie in the fact that locational data were made at a time when Cahuilla culture, like that of most other California Indians, was in a state of flux. Within a few years following regular contact with whites (immediately following 1855), Cahuilla population went into accelerated decline. Part of the reason for the decline was the skimming off of the young men and women (the effective breeding population) for laborers and servants on the ranches of the Los Angeles Basin, the San Bernardino Valley, and other places toward the coast. This was also a time of terrible epidemics of smallpox, measles, and other highly infectious diseases to which California Indians had no natural immunity. Epidemics swept the villages on the desert in 1863. When Cahuilla laborers in the ranches became ill, they probably went home, taking the disease with them. A table of population estimates for the Cahuilla, 1770-1970 shows that the epidemics of 1863 probably killed a minimum of one out of every two Cahuilla.

The links between these epidemics and shifting settlement patterns are instructive as Swenson et al. note:

It was customary among the Cahuilla that when a person died his house was burned along with most of his personal belongings (Strong 1929; Bean 1972). A new house was then erected some distance away in a different part of the village . . . in the period of population reduction through epidemics. . . the villages might . . . have changed locations by what might be called "settlement creep." A number of deaths in a village at one time might have led to the notion that the place was possessed by evil, and the entire village physically moved to another location nearby. The 1856 U.S. Land Office Survey (Wilke and Lawton 1975) noted an abandoned village in Thousand Palms Canyon already at that date. (Swenson et al. 1980:12)

As a result, several villages noted in various ethnographic and historic records may refer to the "same settlement as it gradually crept across the landscape". Swenson et al. also discuss the association of Cahuilla settlement with hand dug wells that provided water from the shallow water table associated with the former prehistoric Lake Cahuilla lakebed (see Photo 1 of the 2015 CSRA II):

The historic villages of the lower Coachella Valley [see Figure 4 of the 2015 CSRA II] were located on the bed of ancient Lake Cahuilla. Here the shallow water table permitted the excavation of conical walk-in wells for domestic water supplies. These were up to 30 ft. (9m) deep, but were often of depths ranging from 8 to 15 ft. (2.5 to 5 m). The shallow water table also gave rise to dense thickets of mesquite (*Prosopis glandulosa* var. *torreyana*). Villages were located among these mesquite thickets. For this reason, also, the early observations of village locations may be somewhat in error, especially with regard to the possible presence of villages or parts thereof where they were not observed. That the

village of La Mesa could be recorded at different times in adjacent sections meets with Bean's (1972:71, 74) description of Desert Cahuilla villages extending thinly across a radius of 2 to 3 mi (3.2 to 4.8 km), and with Blake's observation (1854:436) that the individual houses in a village were almost completely hidden in the dense mesquite thickets. (Swenson et al. 1980:12-13)

No Indian villages or rancherias were recorded in Section 28 of Township 5 South, Range 8 East on the 1856 GLO Plat Map, in part because it is more than a mile away from the Whitewater River where Indian settlement tended to be concentrated. On Henry Washington and John La Croze's southwest portion of the 1856 Plat Map, an Indian rancheria is recorded in Section 19 to the northwest of Section 28 about 0.25 miles east of the Whitewater River; and there is a well/spring mapped on the west side of the river in Section 30 to the west of Section 28 (see Figure 6 of the 2015 CSRA II). Such features are absent not only in Section 28, but also in the adjacent Sections 29, 32 and 33. By 1909, the rerecording of the same area by Lightfoot and Chubb shows the Southern Pacific Railroad west of the Whitewater River and the former Indian features are no longer present (see Figure 7 of the 2015 CSRA II). Blout and Pearson's 1911 Plat Map of the rest of Township 5 South, Range 8 East, also shows no Indian features, but does show some early settler's homes in Section 28.

Cultural Resources Investigation

A Phase II Cultural Resources Investigation was conducted on March 7, 2015. The intent of a Phase II Cultural Resources Test Investigation is three-fold. First, the field study is designed to determine if a surface lithic scatter existed and whether a subsurface cultural deposit was present. Second, the investigation is to determine whether a subsurface cultural existed in association with site findings. Third, the ultimate intent of a Phase II investigation is to determine whether archaeological sites qualify as significant cultural resources according to CEQA criteria and to determine the appropriate level of mitigation since preservation of these sites is not considered a viable alternative under the proposed Project.

Methods and Procedures

Research designs for inventory studies of properties which contain potential archaeological sites and/or historic structures consist of the following basic elements:

1. Conduct and analyze the results of the records search to:
 - a. Determine whether the property has been previously surveyed, and whether any previously recorded sites exist on or adjacent to the subject property;
 - b. Help predict what kinds of resources may exist in the area, such predictions assisting the direction of both the field survey and future archival research; and
 - c. Help determine whether existing structures may be more than 45 years old.
2. Conduct a pedestrian field survey to:
 - a. Check for the presence of archaeological sites;
 - b. Examine and assess the architectural significance of any structures; and
 - c. Examine results of, or observe, geotechnical trenching and boring if available.
3. Conduct additional archival research if historic structures are present to:
 - a. Provide an historical context for the evaluation of the historic structures;
 - b. Ascertain when the structures were built or moved onto the property; and
 - c. Ascertain whether the structures are associated with a significant person(s) or

events.

4. Record all sites on standard DPR site forms.
5. Present findings and recommendation.

A records search was conducted on March 26, 2014, at the EIC. The site was surveyed on March 28-30, 2014. A crew of five archaeologists spaced 10-15 meters apart executed north-south or east-west transects over the property, the orientation depending upon the terrain and crop alignments. There was considerably more visibility in 2014 compared to 2005, as the date palms and citrus orchards described in 2005 were gone. The remaining areas where visibility was difficult include an area of dense brush north of Avenue 47 on the western edge of the property and portions of the SW1/4 of Section 28 where stands of saltbush often made visibility difficult. Elsewhere, ground visibility ranged from very good to excellent because the land has recently been farmed. Very few rock outcrops were observed on the property and none had bedrock milling features. Nonetheless, resources could have been missed and it is recommended that construction monitoring be required for the Project area.

No new prehistoric sites were encountered but considerable time was spent relocating and remapping RIV-7834, -7835, and -7836. The first two sites were relocated, and surface sherd scatters were mapped with differentially corrected GPS to ascertain to what extent the sites were still present. Each sherd or small cluster of sherds was mapped. Despite considerable effort, the small ceramic scatter, RIV-7836, was not relocated. As discussed elsewhere, this appears to have been due to the 2005 collection of most of the surface sherds, the recent disturbance of some of the surface vegetation, and the relatively dense saltbush vegetation in the Project area.

In addition, a set of water control features along the south side of Avenue 47 were recorded as was a cement foundation and associated features linked to a former residence built prior to 1956 as shown on the 1956 *Indio* quad in the SW1/4 of Section 28. The other structure built prior to 1956 was not relocated; the same was true for a third structure built between 1956 and 1972, in the SE1/4 and SW1/4 of Section 28, respectively.

The records search conducted by Dice and Messick was done more than 10 years ago and they only considered sites within a quarter-mile radius of the Project site. The records search was updated at the EIC on March 26, 2014. It includes all sites and surveys within a mile radius of the Project site.

The updated records search produced 17 cultural resources studies and revealed that 32 cultural resources have been recorded within a mile radius of the Project site. These include the Coachella Canal, five habitation sites, two with extensive prehistoric and historic artifacts and one with two cremations; a bedrock milling site with a lithic scatter; a small cremation site with Desert Side-notched, Cottonwood and quartz points; five ceramic and lithic scatters, including one with fish bones, daub and fire-altered rock (FAR), one with FAR and flaked and groundstone tools, another with a hearth, and a small one with a historic beer bottle shard; a flaked stone and groundstone scatter with hearths; a small ceramic scatter with FAR; two pot drops; four ceramic scatters, and nine ceramic isolates and one lithic isolate. Dice and Messick (2005) was later obtained by the EIC from Michael Brandman Associates (MBA) and a copy was then studied for the 2015 CSRA II.

Most of the major cultural resources have been recorded along or near the Whitewater River to the west of the Project area, including within the Cabazon Indian Reservation. The records search did not reveal the presence of any National Register or California Register eligible or listed sites or any California Points of Historical Interest on the Project site. It also did not reveal any significant historic structures.

Related Regulations

California Register of Historical Resources

According to the Regulations for California Register of Historical Resources formally adopted by the State Historical Resources Commission on January 1, 1998, an historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory of the local area, California, or the nation.

The types of cultural resources eligible for nomination to the California Register, and thus considered historically or archaeologically significant by CEQA, are buildings, sites, structures, objects, and historic districts.

Standards such as those of the California Register were established with the recognition that not every property of a certain age is necessarily significant and what is significant can only be determined by the integrity of the resources and by the historic context in which the property exists. Despite the existence of the above eligibility criteria and similar guidelines for assessing archaeological or historical significance found in other legislation, the determination of significance remains a somewhat subjective, and often difficult, endeavor. This is primarily due to conflicting perceptions of "important" or "distinctive" or "contributing," but also because it is not always easy to remain objective when considering the past.

Senate Bill 18 Tribal Consultation

California Government Code Section 65352.3 (adopted pursuant to the requirements of SB 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a General or Specific Plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

AB52 Consultation

AB 52 pertains to Tribal Cultural Resources. CEQA defines the term “tribal cultural resource” and delineates restrictions on the meaning of the term “cultural landscape.” Pursuant to Public Resources Code section 21074(a), “tribal cultural resources” consist of either of the following:

“(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources. (B) Included in a local register of historical resources as defined in subdivision (k) of [Public Resources Code] Section 5020.1; or

(2) 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.”

Regarding the application of the term “cultural landscape,” Public Resources Code section 21074(b) limits its definition such that “[a] cultural landscape that meets the definition of [Public Resources Code section 21074] subsection (a) is a tribal cultural resource *to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.*” (Emphasis added.) Accordingly, if an area that may potentially be considered a “cultural landscape” is *not* geographically defined in terms of the size and scope of the landscape, it cannot be found to be a “tribal cultural resource” even if it otherwise meets the qualifications for such in Public Resources code section 21074(a).

AB 52 does not apply to this Project, because the NOP was issued prior to July 1, 2015, when AB 52 went into effect.

City of Coachella General Plan

The City of Coachella’s recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City’s vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.4, Cultural Resources, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on cultural resources and is incorporated by reference. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies are pertinent to the preservation of cultural resources but may also be included under other chapters of the EIR:

Sustainability + Natural Environment Element

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.3 Archaeological resource preservation: Preserve important archaeological and paleontological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

10.4 Mitigation and preservation of cultural resources: Require development to avoid archaeological and paleontological resources, whenever possible. If complete avoidance is not possible, require development to minimize and fully mitigate the impacts to the resources.

10.5 Grading: Require that proposed projects that involve a significant amount of grading shall have an archaeological and paleontological survey conducted before construction.

Goal 12. Cultural Resources and Sites. Preserved and protected cultural resources that provide the community with significant cultural, scientific, or educational value.

12.1 Tribal coordination: Require notification of California Native American tribes and organizations of proposed projects that have the potential to adversely impact cultural resources.

12.2 Protected sites: Require sites with significant cultural resources to be protected.

12.3 Preservation of historic resources: Where practical, encourage the preservation of historic resources.

12.4 Document historic resources: When it is not practical to preserve a historic resource, require the architectural details and design elements of historic structures to be preserved during renovations and remodels.

12.5 Discovery of human remains: Require that any human remains discovered during implementation of public and private projects within the City be treated with respect and dignity and fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.

12.6 Paleontological resources: Require any paleontological artifacts found within the City or Sphere of Influence be reported to the City and temporarily loaned to local museums like the Western Science Center for Archaeology and Paleontology, in Hemet, CA.

12.7 Disturbance of human remains: In areas where there is a high chance that human remains may be present (areas along the Whitewater Rivers/CVSC, on Tribal lands, on areas with previously undisturbed soil, in the washes and canyons found in the eastern areas of the Planning Area, and areas of historic settlement), require proposed projects to conduct survey to establish occurrence of human remains, if any. If human remains are discovered on proposed

project sites, the project must implement mitigation measures to prevent impacts to human remains in order to receive permit approval.

4.6.3 Thresholds of Significance

Evaluations for site significance are typically made with respect to eligibility criteria for nomination to the National Register of Historic Places. Since this measure of significance has come to be the determining factor in whether or not a particular site warrants consideration by the federal government in federally funded projects, state and local governments often use it to assess sites as well. The State of California has established its own criteria, as set forth in CEQA. CEQA applies to all discretionary projects and equates a substantial adverse change in the significance of a cultural resource with a significant effect on the environment. "Substantial adverse change" is defined as demolition, destruction, relocation, or alteration activities that would impair significance. CEQA has three separate mechanisms for determining whether a historical resource is significant and thus subject to impact mitigation considerations:

- First, resources that are listed in or eligible for listing in the California Register of Historical Resources (hereafter, California Register) are presumed to be archaeologically, historically, or culturally significant;
- Second, resources that are listed in a local register or deemed significant in a historical resource survey are presumed to be significant unless the preponderance of evidence indicates they are not; and/or,
- Finally, a resource that is not listed in or determined to be eligible for listing in the California Register, not included in a local register of historic resources, or not deemed significant in a historical resources survey may still be considered significant.

The City's Initial Study contains four (4) criteria for determining impacts to cultural resources. As discussed above in Subchapter 4.6.1, above, the following four (4) will be analyzed in this EIR:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- d. Disturb any human remains, including those interred outside of formal cemeteries.

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

4.6.4 Potential Impacts

THRESHOLD a: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less Than Significant Impact with Mitigation Incorporated

Per CEQA Guidelines Section 15064.5(b)(1), a project may result in substantial adverse change in the significance of a historical resource if the project results in a physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resources would be impaired. The following is a discussion of the five (5) sites analyzed in the *2015 CSRA II*.

Discussion

CA-RIV-7834 (P-33-14403)

Given that RIV-7834 is a prehistoric site, its potential significance lies in its potential to satisfy Criterion D under CEQA, i.e., does it have the potential to provide information important in prehistory? Given the earlier Phase II excavations by Dice and Messick at Locus D and the extensive Phase II investigations undertaken for the *2014 CSRA I* involving 30 test units that excavated 25 cubic meters of soil, the significance of RIV-7834 has been largely exhausted with site recordation and the test excavations. It is not viewed as a significant historical resource under CEQA. No additional mitigation is required.

CA-RIV-7835 (P-33-14404)

After Phase II testing, Dice and Messick determined this site was not a significant historical resource under Criteria A-D but was significant under CEQA's uniqueness criterion. However, this assessment was based on the assumption that the presence of mostly direct ceramic vessel rims equated with a Patayan I (A.D. 750-1050) occupation; however, Hildebrand has shown direct rims may also date to later periods. Nonetheless, given the presence of a subsurface deposit that also contained lithic tools and debitage as well as ceramics and a possible hearth feature, it can be argued that this site is significant under Criterion D because of its potential to provide information important in prehistory, especially because its deeper occupation levels are likely to date from an earlier infilling and subsequent recession of prehistoric Lake Cahuilla prior to the last one in the 17th century.

RIV-7835, which is in Planning Area 5, shall be avoided. This is included as **Mitigation Measure MM-CUL-1**, which requires the identification of the extent of this resource, and the methods utilized to avoid this resource during mass grading. The Project applicant shall also comply with **Mitigation Measure MM-CUL-2**, which pertains to on-site archaeological monitoring. With the incorporation of mitigation, any impacts will remain less than significant.

CA-RIV-7836 (P-33-14405)

After Phase II testing, Dice and Messick determined that this site is not a significant historical resource under Criteria A-D nor under the uniqueness criterion under CEQA. The Project archaeologist made a determination on the basis of the lack of a substantial surface or subsurface deposit and the lack of artifact diversity that RIV-7836 is not viewed as a significant historical resource under CEQA. No mitigation is required.

CA-RIV-11775 (P-33-23969)

This site consists of several sets of agricultural irrigation water control features just south of Avenue 47 that are linked to water provided by the Coachella Canal after its completion in 1948-49. The site is not linked to any significant historical event, such as one might argue for the construction of the Coachella Canal, and it is not associated with any significant individual at the local or regional level. It is the opinion of the Project Archaeologist that the construction of the Coachella Canal could qualify as a historical event. The water control features are similar to other sets of such water control features to the south and elsewhere, e.g., along Avenue 48. They also do not contain any unusual or unique architectural features. Thus, this site is not viewed as a significant historical resource under Criteria A-C or under the CEQA's uniqueness criterion. As for Criterion D, the Project archaeologist has determined that this site's research potential has been exhausted with its detailed recordation, and therefore, it is not a significant historical resource under this criterion either. RIV-11775 is not viewed as a significant historical resource under CEQA. No mitigation is required.

CA-RIV-11776 (P-33-23970)

RIV-11776 consists of a damaged cement foundation of a former farm residence that was initially thought to have been built in the early 1950s and associated propane tank cement slab, two trash scatters, and an abandoned reservoir built after 1972. The house itself burned down in 2011. The 2014 CRSA I recommended additional archival research to determine when the house was built and whether an important person significant in local history might have lived there. It is also recommended that limited Phase II test excavations be undertaken in Trash Scatter B to ascertain the depth, nature, and age of the trash scatter deposits and whether they have the potential to contribute significantly to our understanding of local history. The Project applicant shall also comply with **MM-CUL-2**, which pertains to on-site archaeological monitoring. **Mitigation Measure MM-CUL-5** would be implemented for and any subsequent grading operations.

The results of the archival research discovered that the house was not built until after 1978 and historic aerial photos do not suggest a house is present until 2002 and possibly as late as 2008. In short, the house is at most 37 years old and probably no more than 13 years old. In fact, it turns out that the structure shown on the 1956 USGS 7.5 Indio quad was in the same place as the current abandoned reservoir, such that whatever structure was first there was destroyed prior to building the reservoir built in its place. The reservoir does not show up on the 1972 photorevision of the 1956 Indio quad indicating it was built after 1972. It is, thus, a maximum of 43 years old. There is also nothing unusual about the structure or architecture of the reservoir.

The historic house foundation is no older than 37 years old and the reservoir is at most 43 years old. In short, because the site is less than 45 years old, and because there is nothing distinctive about its structure or architecture, RIV-11776 is not viewed as a significant historical resource under CEQA. No further work is required. No mitigation is required.

THRESHOLD b: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant Impact with Mitigation Incorporated

Given that portions of the property have relatively dense brush or existing vineyards and given the potential for buried prehistoric sites resulting from past infillings and recessions of prehistoric Lake Cahuilla, there is the potential for the discovery of buried cultural deposits and potentially human remains. These resources are sub-surficial and cannot be discovered until ground disturbing activities occur. **Mitigation Measures MM-CUL-2 and MM-CUL-3** shall be implemented during site ground disturbing activities. Specifically, **MM-CUL-2** requires the City to retain an archaeological monitor and a Native American monitor to be present at the Project site during all ground-disturbing activities to minimize potential impacts to unknown resources. **MM-CUL-3** requires the City to prepare a Monitoring Plan prior to commencement of any grading activities. In the event that historical, archaeological, or human remains are found during excavation or grading, **MM-CUL-2** and **MM-CUL-3** require immediate implementation of those procedures developed as part of the Monitoring Plan including, but not limited to, the cessation of all work in the immediate vicinity of the resources until such time as the resources can be evaluated by an archaeologist or other appropriate individual.

Implementation of **MM-CUL-2** and **MM-CUL-3** would reduce Project impacts to below a level of significance, and no additional mitigation is required.

THRESHOLD c: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation Incorporated

Because the Project site is located within the historic area of Lake Cahuilla, there is a potential for paleontological resources. These resources are sub-surficial and cannot be discovered until ground disturbing activities occur. **MM-CUL-5** shall be implemented during site ground disturbing activities. **MM-CUL-5** requires a qualified paleontologist to prepare a standard Paleontological Resources Impact Mitigation Program (PRIMP) prior to the beginning of ground-disturbing activities. This program would include excavation monitoring and specimen recovery, including screen washing, preparation, identification, and curation of collected specimens into a museum repository. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that would allow for monitoring to be scaled back to part-time or increased to full-time as the Project progresses. However, if significant fossils begin to be recovered after monitoring has been scaled back, conditions should also be specified that would require increased monitoring as necessary. A final report would provide details of monitoring and curation methods, fossil identification, and discussion, cataloging, and repository arrangements. Implementation of mitigation measures would reduce potential impacts to unknown paleontological resources to less than significant, and no additional mitigation is required.

THRESHOLD d: Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation Incorporated

Although no human remains are known to be on site or are anticipated to be discovered, precautionary mitigation is required. **MM-CUL-4** requires compliance with HSC 7050.5 in the unlikely event that human remains are encountered during Project grading. Upon discovery of

the remains, the County Coroner would be notified immediately, and no further disturbance would occur until the County Coroner makes a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the NAHC, which will determine and notify the most likely descendant (MLD). With permission from the City, the MLD would complete inspection within 48 hours of notification by the NAHC.

Implementation of **MM-CUL-4** reduces potential impacts related to the discovery of human remains on the proposed Project site to a less than significant level, and no additional mitigation is required.

4.6.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

No standard conditions apply to the proposed Project.

Mitigation Measure(s)

MM-CUL-1 through **MM-CUL-5** in this section would apply to all Project construction activities on the Specific Plan site, including the initial mass grading of the site, and the subsequent implementing projects to be developed on the site.

Archaeology/Native American

MM-CUL-1 **RIV-7835 Avoidance (Planning Area 5)**. Prior to the issuance of a grading plan, or any activity that would involve initial ground disturbance in the vicinity of RIV-7835, the Project archaeologist will review said plans/activities to determine that none of the resources located in RIV-7835 shall be impacted by the Project development. The Project archaeologist shall make recommendations, where applicable, to protect resources contained in RIV-7835 from potential encroachment from the Project.

MM-CUL-2 **Archaeological and Native American Monitors**. Prior to commencement of any grading activity on the Project site and consistent with the findings and recommendations of the cultural resources surveys and reports regarding the sensitivity of each area on the Project site for cultural resources, the City of Coachella (City) Director of Development Services, or designee, shall retain an archaeological monitor and a Native American monitor to be selected by the City after consultation with interested Tribal and Native American representatives. Both monitors shall be present at the pre-grade conference in order to explain the cultural mitigation measures associated with the Project. Both monitors shall be present on site during all ground-disturbing activities (to implement the Project Monitoring Plan) until marine terrace deposits are encountered. Once marine terrace deposits are encountered, archaeological and Native American monitoring is no

longer necessary, as the marine deposits are several hundred thousand years old, significantly predating human settlement in this area.

MM-CUL-3

Archaeological Monitoring Plan and Accidental Discovery. Prior to commencement of any grading activity on the Project site and consistent with the findings of the cultural resources surveys and reports regarding the sensitivity of each area on the Project site for cultural resources, the City shall prepare a Monitoring Plan. The Monitoring Plan shall be prepared by a qualified archaeologist and shall be reviewed by the City of Coachella Director of Development Services. The Monitoring Plan will include at a minimum:

- (1) A list of personnel involved in the monitoring activities;
- (2) A description of how the monitoring shall occur;
- (3) A description of frequency of monitoring (e.g., full-time, part-time, spot checking);
- (4) A description of what resources may be encountered;
- (5) A description of circumstances that would result in the halting of work at the Project site (e.g., what is considered a “significant” archaeological site);
- (6) A description of procedures for halting work on site and notification procedures; and
- (7) A description of monitoring reporting procedures.

If any significant historical resources, archaeological resources, or human remains are found during monitoring, work should stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, Project activities shall avoid such resources.

Where avoidance is not feasible, the resources shall be evaluated for their eligibility for listing in the California Register of Historical Resources. If a resource is not eligible, avoidance is not necessary. If a resource is eligible, adverse effects to the resource must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a cultural resource mitigation or data recovery plan that makes provisions for adequately recovering the scientifically consequential information from and about the resource (see California Code of Regulations Title 4(3) Section 15126.4(b)(3)(C)). The data recovery plan shall be prepared and adopted prior to any excavation and should make provisions for sharing of information with Tribes that have requested Senate Bill 18 (SB 18) consultation. The data recovery plan shall employ standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and

significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. Results of the study shall be deposited with the regional California Historical Resources Information Center (CHRIS) repository.

It shall be the responsibility of the City Department of Public Works to verify that the Monitoring Plan is implemented during Project grading and construction. Upon completion of all monitoring/ mitigation activities, the consulting archaeologist shall submit a monitoring report to the City of Coachella Director of Development Services and to the San Bernardino Archaeological Information Center summarizing all monitoring/mitigation activities and confirming that all recommended mitigation measures have been met. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's Archaeological Resources Management Reports (ARMR): Recommended Contents and Format. The City of Coachella Director of Development Services or designee shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

MM-CUL-4

Human Remains. Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the Project site, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. 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 Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). With the permission of the City of Coachella, 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. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Coachella shall consult with the MLD as identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City of Coachella Director of Development Services and the San Bernardino Archaeological Information Center. The City of Coachella Director of Development Services, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

Paleontology

MM-CUL-5

Paleontological Resources Impact Mitigation Program. Prior to commencement of any grading activity on the Project site and consistent with the findings of the paleontological resources surveys and reports regarding the sensitivity of each area on the Project site for paleontological resources, the City's Director of Development Services, or designee, shall verify that a qualified paleontologist has been retained and will be on site during all rough grading and other significant ground-disturbing activities in paleontologically sensitive sediments.

Prior to any ground-disturbing activities, the paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995 and 2010) and should include but not be limited to the following:

- Attendance at the pregrade conference in order to explain the mitigation measures associated with the Project.
- During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High Paleontological Sensitivity rating and on a spot-check basis in sediments that have a Low Sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that will allow for monitoring to be scaled back to part-time as the Project after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of

abundant or large specimens.

- The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the Project disturbance limits that will be accessible throughout the Project duration but will also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, Project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water.
- Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer.
- Identification and curation of specimens into a museum repository with permanent, retrievable storage, such as the San Bernardino County Museum (SBCM).
- Preparation of a report of findings with an appended, itemized inventory of specimens. When submitted to the City of Coachella Director of Development Services or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources progresses.

4.6.6 Cumulative Impacts

The cumulative study area for cultural and paleontological resources is the geographical area of the City of Coachella, which is the geographical area covered by the City General Plan, including all goals and policies included therein. Future development in the City could include excavation and grading that could potentially impact archaeological and paleontological resources and human remains. The cumulative effect of the proposed Project is the continued loss of these resources. The proposed Project, in conjunction with other development in the City, has the potential to cumulatively impact archaeological and paleontological resources; however, it should be noted that each development proposal received by the City undergoes

environmental review pursuant to CEQA. If there is a potential for significant impacts to archaeological or paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the City's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the City.

MM-CUL-1 through **MM-CUL-4** would be implemented during initial mass grading of the Project to reduce potential Project impacts by ensuring avoidance, evaluation, and, as applicable, scientific recovery and study of any resources encountered. Therefore, with implementation of **MM-CUL-1** through **MM-CUL-5**, the contribution of the Specific Plan to the cumulative loss of known and unknown cultural resources throughout the City would be reduced to below a level of significance.

4.6.7 Unavoidable Significant Adverse Impacts

Based on the information contained above, all potential cultural resource impacts would be limited. **MM-CUL-1** through **MM-CUL-5** would reduce potential impacts to archaeological resources, paleontological resources, and human remains to a less than significant level. incorporated will be less than significant level. As a result, there will not be any significant and unavoidable Project impacts to cultural resources from implementing the Project as proposed.

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CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.7 figures are located at the end of this subchapter, not immediately following their reference in text.

4.7 GEOLOGY AND SOILS RESOURCES

4.7.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of geology and soils resources from implementation of the Project. Section E.VI., Geology and Soils Resources, of the Initial Study posed the following questions, asking whether the Project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?
- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?
- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?
- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?
- Result in substantial soil erosion or the loss of topsoil?
- 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?
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- 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?

Based on the analysis in the Initial Study it was determined that the following issue related to geology and soils resources in the questions asked above **would not** require any further analysis in the Environmental Impact Report (EIR).

- Would the Project 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.

Based on the analysis in the Initial Study it was determined, that with the exception of the one issue mentioned above, all of the other issue areas related to geology and soils resources in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting geology and soils resources:

“Implementation of the Project (on-site and off-site components) may expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- *Rupture of a known fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.*
- *Strong seismic ground shaking;*
- *Seismic-related ground failure, including liquefaction; and/or,*
- *Landslides.*

In addition, implementation of the Project (on-site and off-site components) may:

- *Result in substantial soil erosion or the loss of topsoil;*
- *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; and/or;*
- *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.*

The San Andreas Fault traverses the northeasterly portion of the Project site. According to the ESA, the primary soil type at the north half of the Property is Coachella fine sand. The landform setting for this soil is described as alluvial fan with a slope of 0 to 2 percent. The primary soil type at the south half of the Property is Gilman fine sandy loam. The landform setting for this soil is described as alluvial fan with a slope of 0 to 2 percent.

A Project specific geotechnical study shall be prepared in order to address questions a. i-iv, b-d, above. In order to ensure a comprehensive discussion of these geotechnical resources issues, they will be analyzed in the EIR.

No portions of the proposed Project will include the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. Therefore, implementation of the Project (on-site and off-site components) will not 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 impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.”

These issues will be discussed below as set in the following framework:

- Environmental Setting: Geology and Soils Resources
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this Subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Fault Investigation Report for Land Planning Purposes Alpine 280 Property Located East of Tyler Street, West of Polk Street, West of Polk Street, South of I-10 and North of Avenue 48, City of Coachella, Riverside, California, Petra Geosciences, Inc., April 9, 2007 (2007 Fault Report, **Appendix H**);*
- *Geotechnical Investigation Report, Petra Geosciences, Inc., May 7, 2015 (2015 Geo Report, **Appendix I**); and*
- *Phase I Environmental Site Assessment Vista Del Agua, Coachella, California, All Phase Environmental, Inc., September 24, 2014 (2014 ESA, **Appendix C**).*

No comments were raised at the public scoping meeting, nor were any comments received regarding geology and soils resources in response to the Notice of Preparation (NOP). Therefore, the issues identified in the Initial Study, and described in the NOP, are the focus of the following evaluation of geology and soils resources.

4.7.2 Environmental Setting

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

4.7.2.1 Regional Geologic Setting

The Project site lies within the Salton Trough that comprises a portion of the Colorado Desert Geomorphic Province. The Salton Trough region is well known for its exposures of the San Andreas and related faults that form the margin between the Pacific and North American Plates. In southern California, these plates move past each other along a somewhat diffuse array of faults comprising the San Andreas Fault System (Powell, 1993). Geologic development of the Salton Trough began as a major half-graben¹ basin when regional crustal extension affected much of western North America in Miocene time prior to the development of the San Andreas Fault System. During the past 12 to 15 million years, the modern Salton Trough has continued to develop during formation of the northern part of the Gulf of California rift basin. This is due to “pull-apart” oblique strike-slip motion between the North American and Pacific plates within the Sea of Cortez (Gulf of Mexico), which continues into the southern Salton Trough region.

The Salton Trough, part of which is below sea level, has progressively been filling with sediments eroded from the San Jacinto Mountains along the western margins, the San Bernardino Mountains and Little San Bernardino Mountains to the north and northeast respectively, the Orocopia Mountains to the east, and sediments deposited by the Colorado

¹ A half-graben is a geological structure bounded by a fault along one side of its boundaries, unlike a full graben where a depressed block of land is bordered by parallel faults.

River to the southeast. Sediments in the Salton Trough are estimated to be over three miles thick.

4.7.2.2 Topography

The Project site comprises approximately 275 acres of on-site development, as well as approximately 29 acres of off-site infrastructure improvements, east of Tyler Street, south of Interstate-10 and Avenue 47, north of Avenue, and west of Polk Street in the City of Coachella, California.

The entire site slopes gradually down to the southwest, from a high of approximately 25 feet in the northeasterly corner to a low of approximately 60 feet below sea level in the southwesterly corner.

The northerly and southwesterly portions are vacant, undeveloped native terrain; the east-southeasterly approximately 90 acres is under active grape cultivation. The agricultural area is irrigated by water from a reservoir at the northwestern corner of the Project site.

There is an empty abandoned reservoir, vacant house and sheds in approximately the center of the subject property. Some of this central portion also has been farmed in the past, and includes an abandoned citrus orchard. There are scattered waste mounds, trash and debris over the entire property.

4.7.2.3 Groundwater

Free groundwater was encountered at depths of 12 feet below ground surface (bgs), or elevations of -97 to -102 feet below sea level, respectively. In hollow stem borings, groundwater was encountered at 10.5, 12 and 16.5 feet bgs, or at elevations of -58.5, -69, and -50.5 feet below sea level respectively. According to the *2015 Geo Report*, rainfall, irrigation and other possible factors that may not have been evident at the time of the investigation, may change local groundwater and perched water conditions.

4.7.2.4 Seismicity and Fault Surface Rupture

Because the Project site is located in tectonically active southern California, it will likely experience some effects from earthquakes. The type or severity of seismic hazards affecting the site is mainly dependent upon the distance to the causative fault, and epicenter, the intensity and duration of the seismic event, and the soil characteristics.

The State of California, California Division of Mines and Geology has published a Fault Zone Map dated July 1, 1974, which is included in this EIR. Reference **Figure 4.7.2-1, State Fault Hazard Zone Map**. **Figure 4.7.2-1** indicates that a Fault Zone traverses the northeast Property corner. The Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) publishes the locations of earthquake epicenters measuring five (5) or greater on the Richter scale. There are no such epicenters reported with one-mile of the Property.

4.7.2.5 Liquefaction and Seismically Induced Landsliding

Liquefaction is caused by sudden temporary increases in pore water pressure due to seismic densification or other displacement of submerged granular soils. Intervals of loose sand may, therefore, be subject to liquefaction if these materials are or were to become submerged and are also exposed to strong seismic ground shaking. Seismic ground shaking of relatively loose granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. This loss of support can produce local ground failure such as settlement or lateral spreading that may damage overlying improvements, i.e. structures and roads.

The Project site is considered susceptible to seismic liquefaction. This is due primarily to the documented presence of unconsolidated granular (sandy) soils in the area, the relatively shallow groundwater conditions, and the proximity of seismic sources.

According to Chapter 4.5, Geology and Soils, of the City of Coachella General Plan Update Final EIR (2015) (p. 4.5-11), slope instability is a condition that can be pre-existing and can pose a negative condition for a project. Landslides often occur along pre-existing zones of weakness within bedrock (i.e. previous failure surfaces). Additionally, landslides have the potential to occur on over-steepened slopes, especially where weak layers, such as thin clay layers, are present and dip out-of-slope. Landslides can also occur on anti-dip slopes, along other planes of weakness such as faults or joints. Local folding of bedrock or fracturing due to faulting can add to the potential for slope failure. Groundwater is very important in contributing to slope instability and landsliding. In addition, other factors that contribute to slope failure include undercutting by stream action and subsequent erosion as well as the mass movement of slopes caused by seepage or cyclical wetting and drying.

The majority of the project site is relatively level with a low potential for landslides (refer to City of Coachella General Plan Update Final EIR (2015) Figure 4.5-6: Landslide Risk). Therefore, the Project site is not subject to any landslide potential.

4.7.2.6 Seismically Induced Flooding, Seiches and Tsunamis

No special flood hazards are noted at the Property on the FEMA Q3 Flood Insurance Rate Map, Riverside (panel number 06065C) dated 2003 and 2011. The nearest significant surface water, other than the pond located along the north Property boundary, is the Coachella Channel located near the northeast Property corner. This channel flows to the northwest. The Project site is higher in elevation than the Coachella Canal. Therefore, any flooding from failure of the levee would not occur on the Project site.

Seiching is a phenomenon that occurs when seismic groundshaking induces standing waves (seiches) inside water retention facilities such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. There is a City of Coachella reservoir located adjacent to the southwest boundary of the proposed Project site. In the event of seiching from this reservoir, the prevailing drainage pattern is to the west/southwest, away from the Project site.

Tsunamis are generated wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The proposed Project is not located in a tsunami inundation zone.

4.7.2.7 Volcanic Hazards

The Project is not located in proximity to any active volcanoes; therefore, the potential for these hazards are non-existent.

4.7.2.8 Site Geology

Most of the site is underlain by lacustrine (lake), and dune, and distal fan deposits. These units are generally identified as Ql, Qs, and Qf respectively. The lacustrine deposits are associated with former high stands of ancient Lake Cahuilla. A number of geotechnical investigations within the Coachella Valley provide evidence that numerous lakes once filled the valley and subsequently dried up during the past 6000 years. Alluvial fan deposits, consisting of sands and gravels, are associated with southwest trending distal fan deposits from the Coachella fan area (see Figure 1 of the *2007 Fault Report*). Aeolian (sand dune) sediments underlie the northern, western, and extreme southern portions of the site. Reference **Figure 4.7.2-2, Soils Map**.

Based on air photo analysis, it is likely that the sand dune deposits have migrated toward the southeast. Relatively thin dune sands are shown as Qsd 1 and thicker dune sands are mapped as Qsd2 on Figures 4 and 5 of the *2007 Fault Report*. Based on data collected during the Petra Geotechnical Investigation (2006a) from test pits, CPT and hollow stem auger borings, units Ql, Qs, and Qf are interbedded, and exhibit bedding relatively parallel with existing surface contours (moderate southwest dip) across the entire property.

However, in the region of the fault trenches (Plate 1 of the *2007 Fault Report*), sand dune deposits are more prevalent within the upper 5 feet with deeper sediments generally dominated by lacustrine and distal fan deposits. Locally, small concentrations of artificial fill materials were encountered on the site. Generalized descriptions of the units encountered are presented below:

Lake Deposits (OL)

The lake (lacustrine) sediments are primarily interbedded silty fine sands and sandy silts, brown to dark yellow-brown in color, medium dense or stiff, and moist. Bedding within these silts was generally indistinct, without persistent fine laminations. Exceptions to this include lake bed deposits that exhibited fine laminated silts and clays.

Alluvial Fan Deposits (Of)

The alluvial fan deposits represent distal fan facies associated with the Coachella Fan to the northeast. The fan deposits consist generally of moderate to well sorted, fine- to coarse-grained sand with lenses of gravel and some thin scattered silt layers, and fossil shell fragments. They are medium dense, dry to moist, and primarily gray in color.

Sand Dune Deposits (Osd1 and Osd2)

Based on aerial-photograph analysis, the sand dune deposits have likely developed from wind-blown sand derived from areas toward the northwest including the upper Coachella Valley, San Jacinto Mountains, and San Bernardino Mountains. In the area of the site, two units of sand

dune deposits were mapped on the air-photographs. These include Qsd1 and Qsd2 that represent relatively thin and thick sand dune deposits respectively. These deposits encountered onsite are primarily dry, loose to very loose, fine-grained sand, poorly sorted and contain scattered fossil shell fragments. The sand dune deposits are relatively thin in the northern and northeastern portions of the site and thicken into sand dunes in the western and extreme southern portions of the site. The sand dunes are found as topographic highs, projecting up to 20 feet above the generally flat surrounding elevations.

Artificial Fill (Afu)

Limited areas of artificial fill were identified, primarily as reservoir berms, tilled soil horizons, and as loose piled mounds, and are dispersed throughout the Project site, as shown on **Figure 4.7.2-2, Soils Map**. The berms are compacted but undocumented artificial fill materials; the mounds are loose and composed of sands and silts, with varying amounts of trash and debris. The specific quantities of the limited areas of Afu will be identified during preparation of geotechnical studies as part of subsequent development projects on the site.

4.7.2.9 Related Regulations

State Policies and Regulations

Alquist-Priolo Earthquake Fault Zoning Act (1972). Regulations that are applicable to geologic, seismic, and soil hazards include the Alquist-Priolo Earthquake Fault Zoning Act of 1972 and updates (AP, Public Resources Code, Section 2621, et seq.), State-published Seismic Hazards maps, and provisions of the applicable edition of the California Building Code (CBC). The Project site is located within an Alquist-Priolo Earthquake Fault Zone; therefore, procedures and regulations recommended by the California Geological Survey (CGS) for investigations conducted in such zones are applicable to the proposed Project.

Seismic Hazard Mapping Act (1990). The Seismic Hazard Mapping Act (SHMA) was adopted by the State in 1990 for the purpose of protecting public safety from the effects of (nonsurface fault rupture) earthquake hazards. The CGS prepares and provides local governments with seismic hazard zones maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. The seismic hazards zones are referred to as “zones of required investigation” because site-specific geological investigations are required for construction projects located within these areas. Before a project can be permitted, a geologic investigation, evaluation, and written report must be prepared by a licensed geologist to demonstrate that proposed buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy must be set back from the fault (generally 50 ft.). In addition, sellers (and their agents) of real property within a mapped Seismic Hazard Zone must disclose that the property lies within such a zone at the time of sale.

California Building Code (2016). The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials,

use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code. The 2007 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. Under the Municipal Code, the most recent (2016) edition of the CBC applies.

California Health and Safety Code. Sections 17922 and 17951–17958.7 of the California Health and Safety Code require cities and counties to adopt and enforce the current edition of the CBC, including a grading section. The City enforces these provisions (refer to Title 15 of the City’s Municipal Code). Sections of Volume 2 of the CBC specifically apply to select geologic hazards. Chapter 16 of the 2007 CBC addresses requirements for seismic safety. Chapter 18 regulates excavation, foundations, and retaining walls. Chapter 33 contains specific requirements pertaining to site demolition, excavation, and construction.

Unreinforced Masonry Law. In California, unreinforced masonry (URM) buildings are generally brick buildings constructed prior to 1933 and predating modern earthquake-resistant design. In earthquakes, the brick walls (especially parapets) tend to disconnect from the building and fall outward, creating a hazard for people below and sometimes causing the building to collapse. The Unreinforced Masonry Law, enacted by the State in 1986, requires cities and counties within Seismic Zone 4 to identify hazardous URM buildings and to consider local regulations to abate potentially dangerous buildings through retrofitting or demolition, as outlined in the State Office of Planning and Research (OPR) Guidelines. No URM buildings or any other structures are located on site.

City of Coachella Municipal Code

The City of Coachella Municipal Code Chapter 15.08 Uniform Building Code Adopted, adopts the CBC (2001 Edition) with all State and City amendments thereto, as adopted by the State of California, and serves as the City’s Building Code. The City’s Building Code is the presiding building code for the purposes of regulating the erection, construction, enlargement, alteration, repair, moving, removal demolition, conversion, occupancy, equipment, use, height, area, and maintenance of all buildings or structures in the City and providing for the issuance of permits and the collection of fees therefore and providing for penalties for violations thereof. Chapter 15.66, Seismic Hazard Mitigation, includes specific language to promote public safety by identifying buildings that are most susceptible to earthquake damage and requiring certain mitigation measures to protect the lives of persons working and residing in Coachella. Under the Municipal Code, the most recent (2016) edition of the CBC applies.

City of Coachella General Plan

The City of Coachella’s recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City’s vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential

impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.5, Geology and Soils, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on geologic and seismic hazards and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies address geologic hazards and soil conditions and may also be included under other chapters of the EIR:

Sustainability + Natural Environment Element

Goal 7. Waterways. Waterways and desert washes that serve a natural, environmental function and provide aesthetically pleasing open space for the community.

7.3 Soil erosion: Require the prevention of water-born soil erosion from sites, especially those undergoing grading and mining activities.

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.6 Grading and vegetation removal: Limit grading and vegetation removal of new development activities to the minimum extent necessary to reduce erosion and sedimentation.

Safety Element

Goal 1. Earthquake Hazards. A community that is minimally affected by seismic shaking and other earthquake-induced hazards.

1.2 Earthquake-resistant new buildings: Require all new habitable buildings and structures to be designed and built to be seismically resistant and not built across the trace of an active fault.

1.6 Liquefaction assessment studies: Require liquefaction assessment studies be conducted for all projects proposed in areas identified as potentially susceptible to liquefaction (Plate 1-3, Technical Background Report). These studies need to be conducted in accordance with the provisions in the Seismic Hazards Mapping Act and the most recent version of the California Geological Survey's Special Publication 117: Guidelines for Evaluating and Mitigating Seismic Hazards in California.

1.7 Liquefaction mitigation: In areas where geotechnical testing shows the sediments are susceptible to liquefaction, require the implementation of mitigation measures as a condition of approval. Liquefaction mitigation measures shall be applied to all habitable structures, bridges, roadways, major utility lines and park improvements to be built in these areas.

Goal 2. Geologic Hazards: A community that has used engineering solutions to reduce or eliminate the potential for injury, loss of life, property damage and economic and social disruption caused by geologic hazards such as slope instability; compressible, collapsible, expansive or corrosive soils; and subsidence due to groundwater withdrawal.

2.1 Geotechnical investigations: Require all development proposals in the City to conduct, as a condition of approval, geotechnical and engineering geological investigations, prepared by state-certified professionals (geotechnical engineers and engineering geologists, as appropriate) following the most recent guidelines of the California Geological Survey and similar organizations, that address, as a minimum, the site-specific geologic hazards identified in the Technical Background Report. This includes the hazard of slope failure in, and adjacent to, hillside areas.

2.2 Mitigated geologic hazards: Require all new developments to mitigate the geologic hazards that have the potential to have an impact on habitable structures and other improvements.

2.3 Slope failure mitigation: Minimize grading and modifications to the natural topography to prevent potential for man-induced slope failures. Where deemed necessary, erect protective devices such as barriers, rock fences, retaining structures or catchment areas.

4.7.3 Thresholds of Significance

The City's Initial Study contains eight (8) criteria/thresholds for determining impacts to geology and soils resources. As discussed above in Subchapter 4.7.1, above, seven (7) of these criteria/thresholds will be analyzed in this EIR:

- a. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?
- b. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?
- c. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?
- d. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?
- e. Would the Project result in substantial soil erosion or the loss of topsoil?
- f. Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- g. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The potential geology and soils changes in the environment are addressed in response to the above thresholds in the following analysis, below.

4.7.4 Potential Impacts

THRESHOLD a: Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Less Than Significant Impact with Mitigation Incorporated

According to the *2015 Geo Report*, the Project site is located within an area of California known to contain a number of active and potentially active faults. The northeast portion of the Project site is located within an Alquist-Priolo zone of the San Andreas Southern Fault. Therefore, seismic hazards for the site include strong ground motion, surface fault rupture, soil liquefaction and other secondary earthquake-related hazards. Reference **Figure 4.7.2-1, State Fault Hazard Zone Map**.

Based on findings in the *2007 Fault Report*, it was determined that Holocene-age faulting (active faulting) is present within the Project site and is limited to the locations presented on Plate 1 of the *2007 Fault Report*. Thus, a building restriction zone (BRZ) is proposed as shown on **Figure 4.7.4-1, Building Restriction Zone**. The area within the building restriction zone is based on the existing fault data and is considered to provide the minimum area not recommended for construction of buildings intended for a "structure for human occupancy" as described in section 3601 of Special Publication 42 (Hart and Bryant, 1997).

Mitigation Measure MM-GEO-1 requires that the Preliminary Building Restriction Zones identified in the *2007 Fault Report* be supplemented with additional mapping and trenching as necessary depending on the developments proposed, area of development, and the scale of maps utilized, particularly in the mapped yellow building restriction zones. Future development application studies shall be evaluated by a qualified professional geologist to determine whether additional studies are warranted. These subsequent studies shall demonstrate that future development complies with the most current seismic requirements of the CBC and the City of Coachella Municipal Code. **MM-GEO-1** states that prior to approval of any future development applications, a project-level, site-specific final geotechnical study for each specific planning area shall be completed by the Project applicant. These studies shall be submitted for review and approval by the City of Coachella (City) Engineer to ensure that each planning area with future development has been evaluated at an appropriate level of detail by a professional geologist. The location and scope of each final geotechnical report shall be tiered off of the two geotechnical reports previously prepared for the overall site, *Fault Investigation Report for Land Planning Purposes Alpine 280 Property Located East of Tyler Street, West of Polk Street, West of Polk Street, South of I-10 and North of Avenue 48, City of Coachella, Riverside, California*, Petra Geosciences, Inc., April 9, 2007, and *Geotechnical Investigation Report*, Petra Geosciences, Inc., May 7, 2015. The final geotechnical report for each planning area shall document any artificial fill and delineate the precise locations of any and all active faults and shall determine the appropriate building setbacks and restricted use zones within the planning area. Prior to the issuance of grading permits, the City Engineer shall confirm that all grading and construction plans incorporate and comply with the recommendations included in the final specific geotechnical report for each planning area. Design, grading, and construction would

adhere to all of the seismic requirements incorporated into the 2010 California Residential Code and 2016 California Building Code (CBC) (or most current building code) and the requirements and standards contained in the applicable chapters of the City of Coachella Municipal Code, as well as appropriate local grading regulations, and the specifications of the Project geotechnical consultant, including but not limited to those related to seismic safety, as determined in the final area-specific geotechnical studies prepared in association with all future development application conditions, subject to review by the City of Coachella Development Services Director, or designee, prior to the issuance of any grading permits.

According to the *2007 Fault Report*, based on the existing fault data from the property, from similar projects in the region, and air photo analysis, the level of hazard associated with fault surface rupture throughout the property outside of the recommended building restriction zone is low.

MM-GEO-1 requires the Project to comply with the recommendations contained within the *2007 Fault Report* and the *2015 Geo Report* to address seismic-related issues.

Prior to approval of any future development entitlements, a specific final geotechnical study for each specific planning area shall be completed by the Project applicant. These studies shall be submitted for review and approval by the City of Coachella (City) Engineer. This will ensure that future development within each planning area is evaluated at an appropriate level of detail by a professional geologist. The location and scope of each final geotechnical report shall be tiered off of the two geotechnical reports prepared for the overall site, *2007 Fault Report*, and *2015 Geo Report*.

Prior to issuance of grading permits, the City Engineer shall confirm that all grading and construction plans incorporate and comply with the recommendations included in the final specific geotechnical report for each planning area. Design, grading, and construction would adhere to all of the seismic requirements incorporated into the 2010 California Residential Code and 2016 California Building Code (or most current building code) and the requirements and standards contained in the applicable chapters of the City of Coachella Municipal Code, as well as appropriate local grading regulations, and the specifications of the Project geotechnical consultant, including but not limited to those related to seismic safety, as determined in the final area-specific geotechnical studies prepared in association with all future development application conditions, subject to review by the Director of the City of Coachella Development Services Department, or designee, prior to the issuance of any grading permits.

With the incorporation of **MM-GEO-1**, any impacts that expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault would be reduced to a less than significant level.

THRESHOLD b: **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to strong seismic ground shaking?**

Less Than Significant Impact with Mitigation Incorporated

The possibility of ground shaking at the site may be considered similar to the Southern California region as a whole. The site is situated in an area of active as well as potentially active faults. A portion of the Project site is located within the Alquist-Priolo Earthquake Fault Zone; however, no structures will be permitted within the BRZ (see discussion above). According to the *2007 Fault Report*, based on the existing fault data from the property, from similar projects in the region, and air photo analysis, the Project Geologist has determined that the level of hazard associated with fault surface rupture throughout the property outside of the recommended building restriction zone is low.

MM-GEO-1 also requires compliance with the recommendations in the *2007 Fault Report*, and *2015 Geo Report*, including recommendations for appropriate development setbacks and building engineering measures to address seismic-related impacts. Further, all development associated with the proposed Project would be designed to adhere to all of the seismic requirements incorporated into the 2016 California Residential Code and 2016 CBC (or most current building code) and the requirements and standards contained in the applicable chapters of the City of Coachella Municipal Code.

MM-GEO-2 requires that structures and retaining walls, if proposed, shall be designed in accordance with the seismic regulations as recommended in the CBC. Prior to issuance of any building permits, the Project engineer and the City of Coachella Development Services Director, or designee, shall review site plans and building plans to verify that structural design conforms to the CBC. **MM-GEO-2** states that structures and retaining walls, if proposed, shall be designed in accordance with the seismic regulations as recommended in the CBC. Prior to issuance of any building permits, the Project engineer and the Director of the City of Coachella Development Services, or designee, shall review site plans and building plans to verify that structural design conforms to the CBC.

Compliance with **MM-GEO-1** and **MM-GEO-2** would ensure that appropriate geotechnical evaluation is conducted prior to development because no development application will be approved by the City prior to such an investigation, and that recommended geotechnical measures are incorporated into final design plans, thereby reducing the risks associated with strong seismic shaking to less than significant.

THRESHOLD c: **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to seismic-related ground failure, including liquefaction?**

Less Than Significant Impact with Incorporation of Mitigation

According to the *2007 Fault Report*, the level of hazard of near surface deformation associated with lateral spreading and liquefaction is low presuming near surface soils do not become saturated. Considerations for future anthropogenic water infiltration should be considered during the planning and entitlements for future development(s). Liquefaction is most likely to occur in areas where non-cohesive, saturated soils experience seismically induced ground shaking and where groundwater occurs less than 5 ft. bgs. Because groundwater at the Project site is encountered at 10.5, 12 and 16.5 ft. bgs. (-58.5, -69, and -50.5 msl respectively), liquefaction impacts are not anticipated to occur on site. Still, the Project site is considered susceptible to seismic liquefaction. This is due primarily to the documented presence of

unconsolidated granular (sandy) soils in the area, the relatively shallow groundwater conditions, and to the proximity of seismic sources.

Development of the Project could introduce large volumes of water into the subsoils, through infiltration and absorption, which could lead to localized perched water conditions within units that could become susceptible to localized liquefaction during strong ground motion. Water saturation introduced to the Project site as a result of Project operations (i.e., irrigation of parks and landscape areas) could be addressed through typical civil engineering grading design (such as appropriate surface and subsurface drainage control (detention basins) etc.), and proper grading recommendations (such as removal and recompaction of near surface soils foundation design, etc.) from the required future geotechnical studies once specific building locations have been identified. This would be accomplished by removal of the soil conditions that contribute to liquefaction (e.g., recompaction, drainage control), which would be outlined in the future geotechnical studies based on actual building footprints. Therefore, implementation of **MM-GEO-1**, which requires compliance with the recommendations in the final geotechnical studies, would reduce impacts related to liquefaction to a less than a significant level.

THRESHOLD d: **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to landslides?**

No Impact

According to Chapter 4.5, Geology and Soils, of the City of Coachella General Plan Update Final EIR (2015) (p. 4.5-11), slope instability is a condition that can be pre-existing and can present conditions that pose constraints and challenges from a development perspective for a project. Landslides often occur along pre-existing zones of weakness within bedrock (i.e. previous failure surfaces). Additionally, landslides have the potential to occur on over-steepened slopes, especially where weak layers, such as thin clay layers, are present and dip out-of-slope. Landslides can also occur on anti-dip slopes, along other planes of weakness such as faults or joints. Local folding of bedrock or fracturing due to faulting can add to the potential for slope failure. Groundwater is very important in contributing to slope instability and landsliding. In addition, other factors that contribute to slope failure include undercutting by stream action and subsequent erosion as well as the mass movement of slopes caused by seepage or cyclical wetting and drying.

The majority of the Project site is relatively level with a low potential for landslides (refer to City of Coachella General Plan Update Final EIR (2015) Figure 4.5-6: Landslide Risk). The Project site is not located in an area that contains any landslide risk. No impacts will occur.

THRESHOLD e: **Would the Project result in substantial soil erosion or the loss of topsoil?**

Less Than Significant Impact with Mitigation Incorporated

During construction activities, the Project site would be graded and excavated, soil would be exposed to wind and water, and there would be an increased potential for soil erosion compared to existing conditions. During a high wind and/or storm event, there is a potential for soil erosion to occur at an accelerated rate. Adherence to **MM-GEO-1** requires a specific final geotechnical study for each specific planning area to be prepared by a qualified professional geologist prior to each development application approval and approved by the City Engineer. The studies would

contain measures to reduce the erosion potential of engineered slopes, such as enhanced compaction of fill slope faces, immediate landscaping of slopes at the completion of grading, consideration of jute matting or chemical stabilization if landscaping cannot be established within a reasonable period of time and use of geotextile fabrics in the construction of oversteepened fill slopes or slopes subject to erosion.

Soil erosion from water runoff is discussed in Subchapter 4.9, Hydrology and Water Quality, and requires a Stormwater Pollution Prevention Plan (SWPPP) that identifies Construction Best Management Practices (BMPs) to be implemented as part of the proposed Project to minimize water quality impacts during construction, including those impacts associated with soil erosion. The Project design features, WQMP and the SWPPP will be standard requirements for subsequent Tract Maps and/or implementing projects; therefore, erosion activities associated with construction activities would be less than significant.

The entire Project site slopes gradually down to the southwest, from a high of approximately 25 feet in the northeasterly corner to a low of approximately 60 feet below sea level in the southwesterly corner. There are no significant slopes on the Project site. The proposed Project would consist of large-scale grading and excavation activities that would alter existing topography and established drainage paths, thus potentially leading to erosion.

The proposed Project includes channelization of on-site drainages into soft-bottom channels and detention basins. The soft-bottom channels and detention basins will be dedicated to the City and maintained by a Landscape and Lighting Maintenance district. On-site drainage and erosion are further discussed in Section 4.9, Hydrology and Water Quality. Project design would incorporate erosion control devices, such as street gutters, storm drains, culverts, and detention basins, to control runoff and prevent soil erosion by water to reduce or avoid soil loss due to water erosion. In the ultimate condition, the developed site would result in substantially reduced wind- and runoff-induced erosion. Implementation of **MM-GEO-1**, which requires compliance with the recommendations in the *2007 Fault Report*, and *2015 Geo Report*, including appropriate erosion control techniques, would reduce erosion impacts to a less than significant level. Such techniques reduce potential erosion by covering native soils with impermeable surfaces or landscaping that are resistant to erosion or channelizing excess surface runoff before it can cause erosion of native soils.

THRESHOLD f.: **Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

Less Than Significant Impact with Mitigation Incorporated

The *2015 Geo Report* concluded that the Project site is considered suitable for the proposed development from a soils engineering and geologic engineering point of view. The *2015 Geo Report* further concluded that the building sites would be free from landslide, liquefaction, settlement and slippage provided the recommendations in that report were incorporated in the design criteria and Project specifications, as required by **MM-GEO-1**. Recommendations include improvements such as removing unconsolidated soils and recompacting them to proper levels of compaction, stabilizing naturally weak or steep slopes through excavation and regrading at acceptable slope angles and benching, installing subdrainage systems to prevent

water buildup or erosion of compacted soils, and overexcavation and deep fill with reinforced foundation designs to prevent lateral spreading or subsidence impacts.

Based on the secondary effects of seismicity discussed in the *2007 Fault Report*, and *2015 Geo Report*, it is recommended that additional geotechnical investigations be performed as part of future development application studies to prepare site-specific grading and foundation construction specifications. These are required by **MM-GEO-1** to be completed prior to any development application approved by the City.

On- or Off-Site Landslide

No Impact

According to Chapter 4.5, Geology and Soils, of the City of Coachella General Plan Update Final EIR (2015) (p. 4.5-11), slope instability is a condition that can be pre-existing and can pose a negative condition for a project. Landslides often occur along pre-existing zones of weakness within bedrock (i.e. previous failure surfaces). Additionally, landslides have the potential to occur on over-steepened slopes, especially where weak layers, such as thin clay layers, are present and dip out-of-slope. Landslides can also occur on anti-dip slopes, along other planes of weakness such as faults or joints. Local folding of bedrock or fracturing due to faulting can add to the potential for slope failure. Groundwater is very important in contributing to slope instability and landsliding. In addition, other factors that contribute to slope failure include undercutting by stream action and subsequent erosion as well as the mass movement of slopes caused by seepage or cyclical wetting and drying.

The majority of the Project site is relatively level with a low potential for landslides (refer to City of Coachella General Plan Update Final EIR (2015) Figure 4.5-6: Landslide Risk). The Project site is not located in an area that contains any landslide risk. No impacts will occur.

Lateral Spreading

Less Than Significant Impact with Mitigation Incorporated

Lateral spreading is the movement of the ground surface down a gentle slope or toward an open free face during a seismic event that causes soil liquefaction. Therefore, given the depths and thicknesses of the liquefiable layers identified, and the gently sloping site ground geometry it has been concluded that lateral spreading may occur at the Project site. Approximately 16 to 32 inches of lateral movement may be estimated at the Project site during a strong seismic event.

The general allowable limits of lateral spreading is in the range of 12 to 18 inches. The estimated Project displacements exceed those limits. Based on lateral spreading effects of seismicity discussed in the *2007 Fault Report*, and *2015 Geo Report*, it is recommended that additional geotechnical investigations be performed as part of future development application studies to prepare site-specific grading and foundation construction specifications. These are required by **MM-GEO-1** to be completed prior to any development application approval by the City.

Subsidence

Saturation of low-density, granular soils can result in subsidence and settlement under relatively low loads. A rise in the groundwater table or an increase in infiltration can initiate settlement and cause the foundations and walls of buildings or structures to crack. Compressible and collapsible materials are expected to be found in the near-surface alluvial deposits. Removal of these upper materials would be required prior to placement of fill, as outlined in the *2015 Geo Report*.

Therefore, the potential for collapsible soils at the site would need to be evaluated during subsequent geotechnical investigations as required in **MM-GEO-3**, prior to any development application approval by the City, and incorporated into the conditions of approval for each project. **MM-GEO-3** states that prior to the issuance of grading permits for development applications or entire planning areas, area-specific geotechnical studies shall be prepared by the applicant's qualified geotechnical engineer and submitted to the City of Coachella for review and approval by the City Engineer. These studies shall include testing for collapsible soils. Laboratory analysis shall be conducted on selected samples to provide a more complete evaluation regarding remediation of potentially compressible and collapsible materials. Where appropriate, these studies shall contain specifications for overexcavation and removal of soil materials susceptible to subsidence, or other measures as appropriate to eliminate potential hazards associated with subsidence.

Implementation of **MM-GEO-3** and adherence to the recommendations of the geotechnical investigations as required in **MM-GEO-1** would reduce potential subsidence impacts to a less than significant level. These measures would remove native soils subject to subsidence and replace them and/or regrade areas of native soil to withstand expected levels of seismic shaking to the degree that habitable structures would not be destroyed by the shaking and would use reinforced foundation designs to prevent the collapse or subsidence of soils during seismic events. These measures would become conditions of approval as part of the City's development review process.

Liquefaction or Collapse

Less Than Significant Impact with Mitigation Incorporated

Refer to the impact discussion under the Threshold which asked if the Project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to seismic-related ground failure, including liquefaction. Implementation of **MM-GEO-1**, which requires compliance with the recommendations in the final geotechnical studies, would reduce impacts related to liquefaction to a less than significant level.

THRESHOLD g: Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact with Mitigation Incorporated

Based on testing of near surface soils, it is assumed that site surface soils at the completion of grading will have expansion potentials that range from Very Low to Low. Therefore, active earth

pressures equivalent to fluids having densities of 40 and 63 pounds per cubic foot should be used for design of cantilevered walls retaining a level backfill and ascending 2:1 backfill, respectively. It should be noted that the above earth pressures are based on a condition where expansive on-site soils are used for backfill. If less expansive on-site materials are available for wall backfill, these lateral earth pressures may be reduced accordingly.

Based on the locations for the off-site Project components; either within existing roadways, existing rights-of-way, or active farmland, it is anticipated that the potential of the Project to be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property would be similar to that of the on-site Project components.

Implementation of **MM-GEO-4** would reduce impacts associated with expansive soils to less than significant levels. This measure requires excavation of expansive soils and replacement with nonexpansive compacted fill, additional remedial grading, utilization of steel reinforcing in foundations, nonexpansive building pads, presoaking, and drainage control devices to maintain a constant state of moisture as ways to effectively eliminate potential impacts from expansive soils. **MM-GEO-4** states that as planning areas are designed and prior to issuance of grading permits, site-specific geotechnical studies, including laboratory testing for expansive soils, shall be completed by a qualified geotechnical engineer and submitted to the City of Coachella for review and approval by the City Engineer. If expansive soils are found within the area of proposed foundations, geotechnical testing shall be employed such as excavation of expansive soils and replacement with nonexpansive compacted fill, additional remedial grading, utilization of steel reinforcing in foundations, nonexpansive building pads, presoaking, and drainage control devices to maintain a constant state of moisture. In addition to these practices, homeowners shall be advised about maintaining drainage conditions to direct the flow of water away from structures so that foundation soils do not become saturated. During construction, the Project engineer shall verify that expansive soil mitigation measures recommended in the final foundation design recommendations are implemented, and the City Building Official shall conduct site inspections prior to occupancy of any structure to ensure compliance with the approved measures.

4.7.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

No standard conditions are required.

Mitigation Measure(s)

MM-GEO-1 **Compliance with Geotechnical Investigations.** Prior to approval of any future development applications, a project-level, site-specific final geotechnical study for each specific planning area shall be completed by the Project applicant. These studies shall be submitted for review and approval by the City of Coachella (City) Engineer to ensure that each planning area with future development has been evaluated at an appropriate level of detail by a professional geologist. The location and scope of each final geotechnical report shall be tiered off of the two geotechnical reports previously prepared for the overall site, *Fault Investigation Report for Land Planning Purposes Alpine 280 Property*

Located East of Tyler Street, West of Polk Street, West of Polk Street, South of I-10 and North of Avenue 48, City of Coachella, Riverside, California, Petra Geosciences, Inc., April 9, 2007, and Geotechnical Investigation Report, Petra Geosciences, Inc., May 7, 2015.

The final geotechnical report for each planning area shall document any artificial fill and delineate the precise locations of any and all active faults and shall determine the appropriate building setbacks and restricted use zones within the planning area. Prior to the issuance of grading permits, the City Engineer shall confirm that all grading and construction plans incorporate and comply with the recommendations included in the final specific geotechnical report for each planning area. Design, grading, and construction would adhere to all of the seismic requirements incorporated into the 2010 California Residential Code and 2016 California Building Code (CBC) (or most current building code) and the requirements and standards contained in the applicable chapters of the City of Coachella Municipal Code, as well as appropriate local grading regulations, and the specifications of the Project geotechnical consultant, including but not limited to those related to seismic safety, as determined in the final area-specific geotechnical studies prepared in association with all future development application conditions, subject to review by the City of Coachella Development Services Director, or designee, prior to the issuance of any grading permits.

- MM-GEO-2** California Building Code Compliance and Seismic Standards. Structures and retaining walls, if proposed, shall be designed in accordance with the seismic regulations as recommended in the CBC. Prior to issuance of any building permits, the Project engineer and the Director of the City of Coachella Development Services, or designee, shall review site plans and building plans to verify that structural design conforms to the CBC.
- MM-GEO-3** Subsidence. Prior to the issuance of grading permits for development applications or entire planning areas, area-specific geotechnical studies shall be prepared by the applicant's qualified geotechnical engineer and submitted to the City of Coachella for review and approval by the City Engineer. These studies shall include testing for collapsible soils. Laboratory analysis shall be conducted on selected samples to provide a more complete evaluation regarding remediation of potentially compressible and collapsible materials. Where appropriate, these studies shall contain specifications for overexcavation and removal of soil materials susceptible to subsidence, or other measures as appropriate to eliminate potential hazards associated with subsidence.
- MM-GEO-4** Expansive Soils. As planning areas are designed and prior to issuance of grading permits, site-specific geotechnical studies, including laboratory testing for expansive soils, shall be completed by a qualified geotechnical engineer and submitted to the City of Coachella for review

and approval by the City Engineer. If expansive soils are found within the area of proposed foundations, geotechnical testing shall be employed such as excavation of expansive soils and replacement with nonexpansive compacted fill, additional remedial grading, utilization of steel reinforcing in foundations, nonexpansive building pads, presoaking, and drainage control devices to maintain a constant state of moisture. In addition to these practices, homeowners shall be advised about maintaining drainage conditions to direct the flow of water away from structures so that foundation soils do not become saturated.

During construction, the Project engineer shall verify that expansive soil mitigation measures recommended in the final foundation design recommendations are implemented, and the City Building Official shall conduct site inspections prior to occupancy of any structure to ensure compliance with the approved measures.

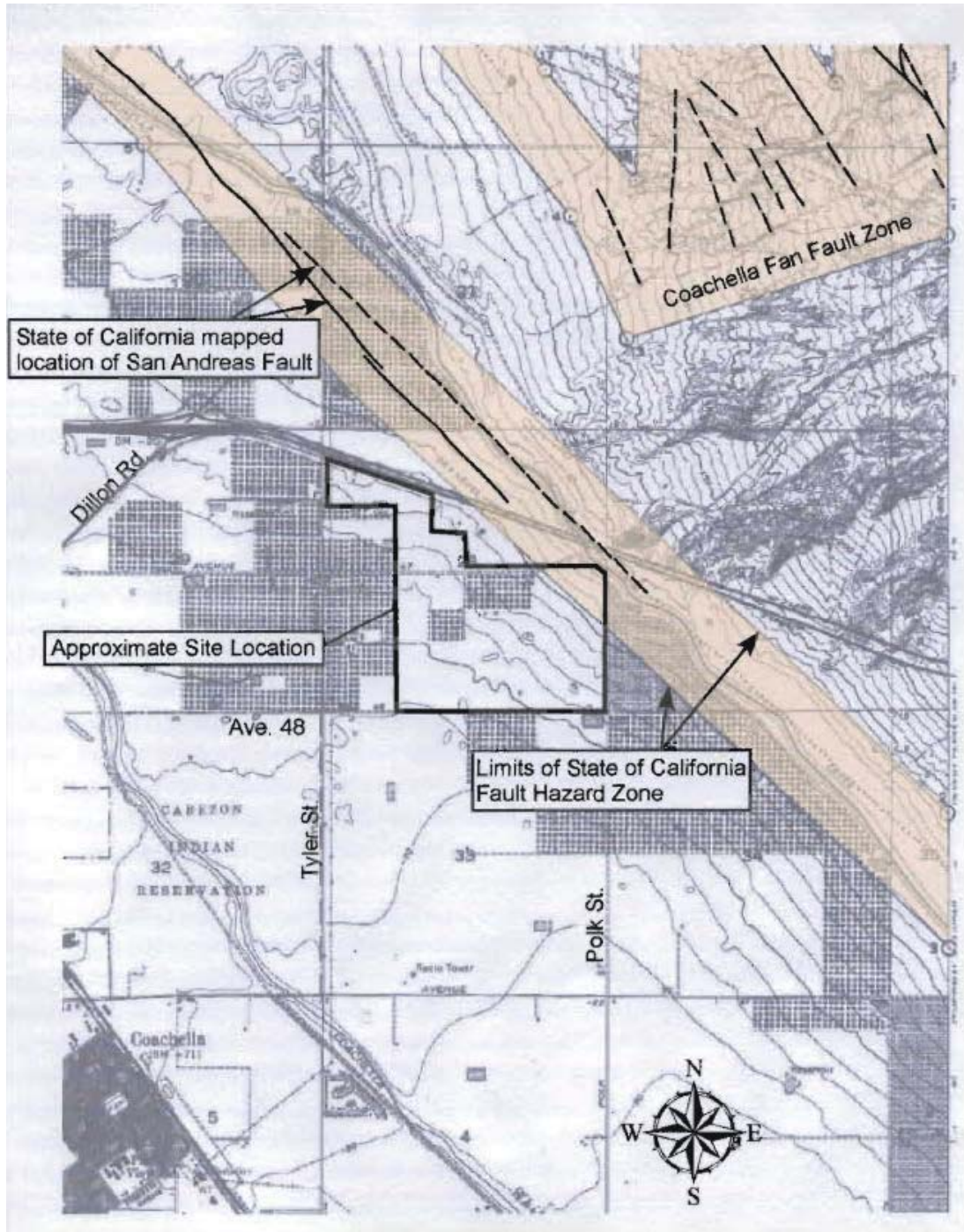
4.7.6 Cumulative Impacts

Geologic and soil impacts are, by their nature, site-specific. As described in the analysis above, the Project site is located within an Alquist-Priolo Earthquake Fault Hazard Zone. Additionally, the Project site contains areas of potentially expansive soils, subsidence, liquefaction, and is located on a geologic formation that is susceptible to lateral spreading. As such, the proposed Project would be required to implement **MM-GEO-1** through **MM-GEO-4**, and comply with applicable State and local requirements, including but not limited to the City of Coachella Building Code and the CBC. Seismic impacts are a regional issue, and all projects must adhere to applicable seismic codes and design standards. The proposed Project's individual impacts related to geotechnical constraints are considered less than significant after mitigation. Therefore, the Project's contribution to regional cumulative impacts regarding geotechnical constraints is considered potentially less than significant.

4.7.7 Unavoidable Significant Adverse Impacts

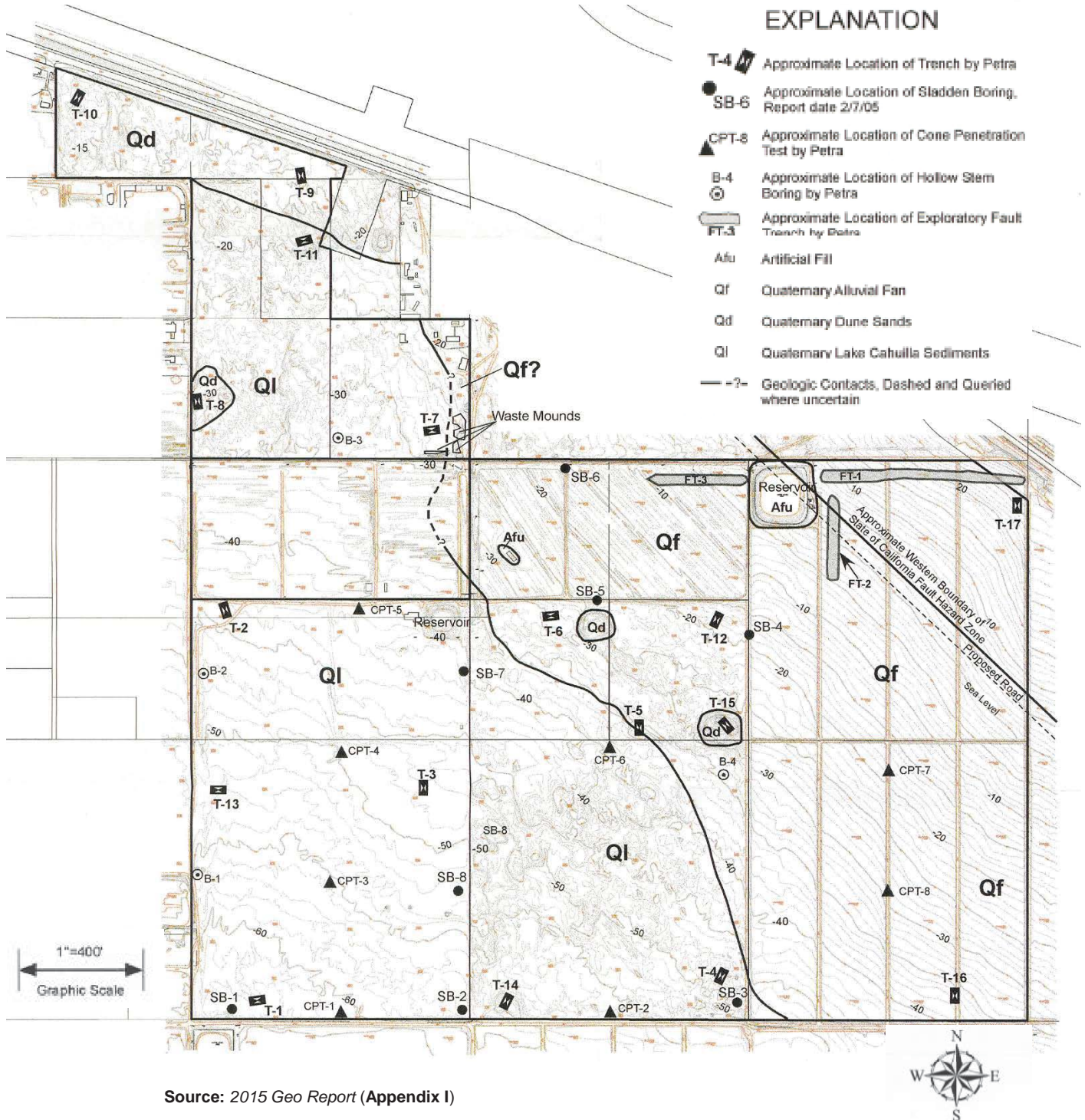
The existing geology and soil resources and constraints have been evaluated for impact to and from the implementation of the Project. No unavoidable significant adverse geology or soil impacts have been identified. **MM-GEO-1** through **MM-GEO-4**, have been identified, and must be implemented to control exposure to potentially significant geology and soils impacts. With implementation of the recommended seismic design measures, structures and inhabitants of these structures, can be adequately protected. The Project can be implemented without causing or experiencing significant unavoidable geology or soil impacts.

Figure 4.7.2-1
State Fault Hazard Zone Map



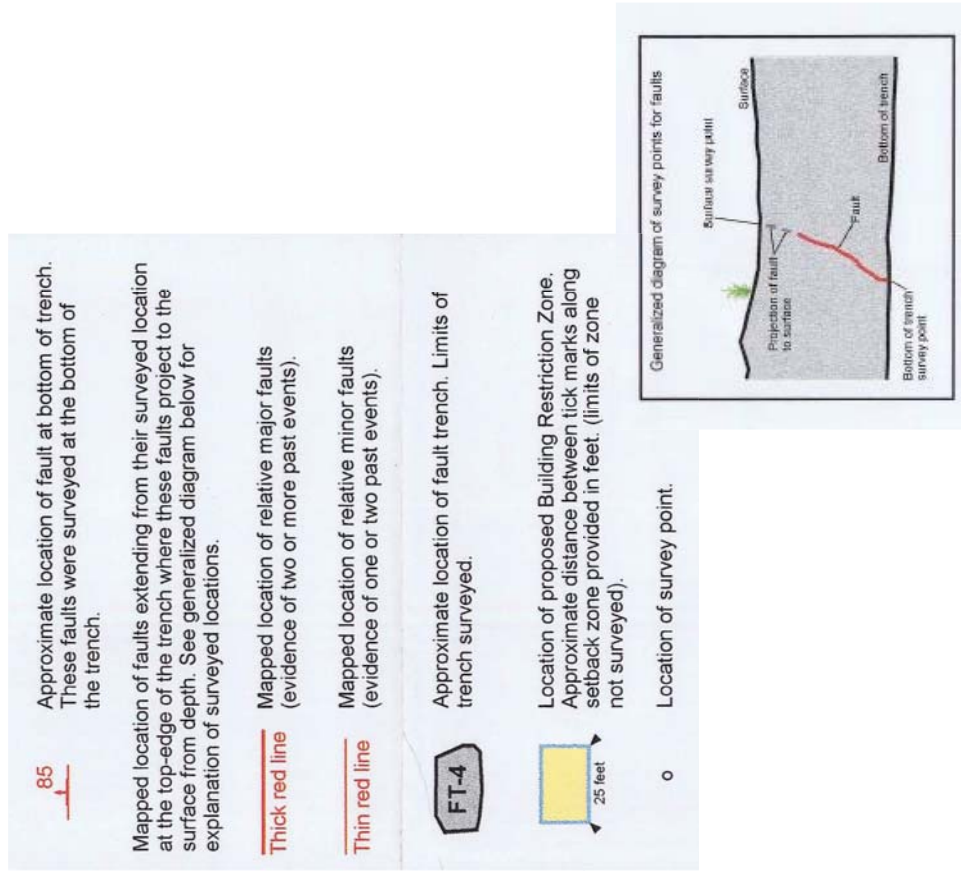
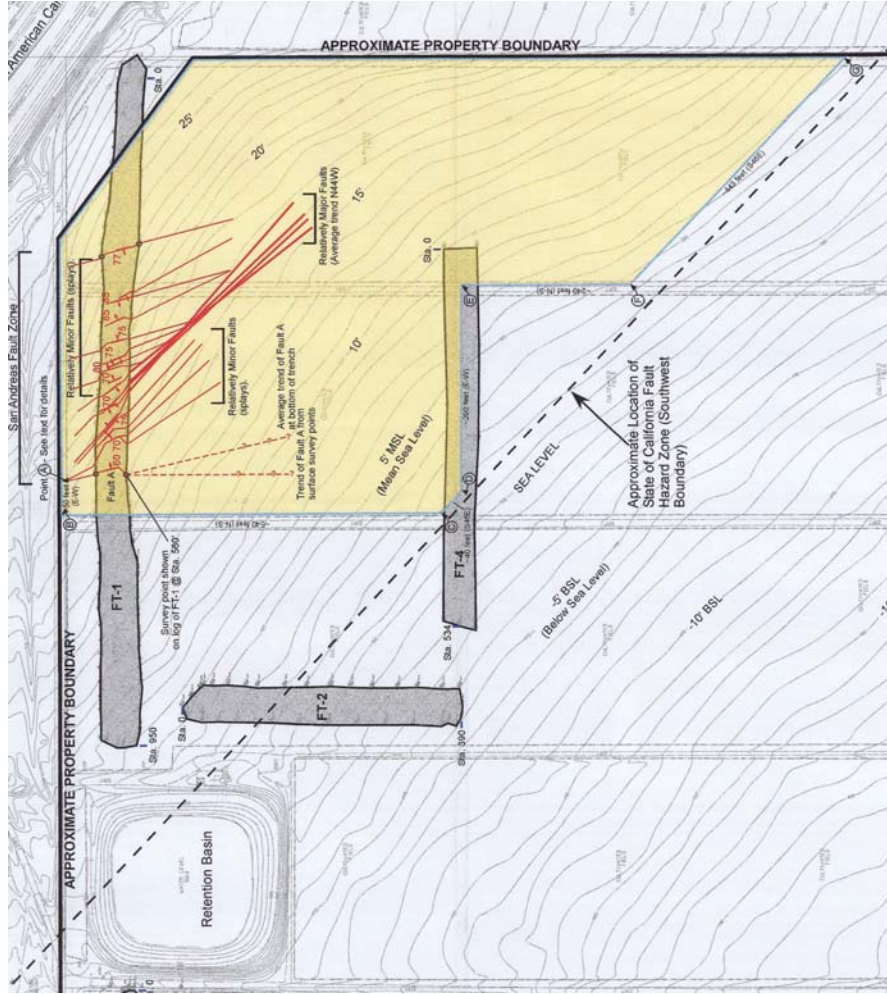
Source: 2007 Fault Report (Appendix H)

Figure 4.7.2-2
 Soils Map



Source: 2015 Geo Report (Appendix I)

Figure 4.7.4-2
Building Restriction Zone



Source: 2007 Fault Report (Appendix H)

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.8 figures are located at the end of this subchapter, not immediately following their reference in text.

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of hazards and hazardous materials from implementation of the Project. Section E.VIII., Hazards and Hazardous Materials, of the Initial Study posed the following questions, asking whether the Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 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?
- Result in an inconsistency with an Airport Master Plan?
- For a project located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?
- For a Project within the vicinity of a private airstrip, or heliport, would the Project result in a safety hazard for people residing or working in the Project area?
- Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Based on the analysis in the Initial Study it was determined that the following issue areas related to hazards and hazardous materials in the questions asked above **would not** require any further analysis in the Environmental Impact Report (EIR):

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- Result in an inconsistency with an Airport Master Plan?
- For a project located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?
- For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas of where residences are intermixed with wildlands?

Based on the analysis in the Initial Study it was determined, that with the exception of the six (6) issue areas mentioned above, the remaining three (3) issue areas related to hazards and hazardous materials in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting hazards and hazardous materials:

“Implementation of the Project (on-site and off-site components) may create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; and/or, create a significant hazard to the public or the environment through reasonable foreseeable upset and accident condition involving the release of hazardous materials into the environment. These impacts may occur during all phases of development. In order to ensure a comprehensive discussion of the hazards and hazardous materials issues related to questions VIII.a and b, above, they will be analyzed in the EIR.

According to a review of the Desert Sands Unified School District web site (<https://www.dsusd.us>) and the Coachella Valley Unified School District web site (<http://www.coachella.k12.ca.us>), the Project site is not located within one-quarter mile of an existing, or proposed school. Therefore, implementation of the Project (on-site and off-site components) will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.

According to the ESA (Phase I Environmental Assessment of Vista Del Agua, September 24, 2013, prepared by All Phase Environmental, Inc. (ESA), and is contained in Appendix B: Technical Studies, of this Environmental Assessment), the Project site, and sites within a 1 mile radius are not 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. However, the Project (on-site and off-site components) is located in an area that is currently, and has been historically devoted to agricultural activities. Therefore, in order to ensure a comprehensive discussion of potential hazards associated with these agricultural uses, they will be analyzed in the EIR.

The Project site is not located within two miles of a public airport or public use airport. The closest public airport, or public use airports are Thermal Airport (Jacqueline Cochran Regional Airport), located approximately 5 miles to the south, and the Bermuda Dunes Airport; located over 5 miles to the north-northwest. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path. Therefore, implementation of the Project (on-site and off-site components) will not result in a safety hazard for people

residing or working in the project area since the Project site is not located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.

According to the Riverside County Land Information System (<http://tlmabld5.agency.tlma.co.riverside.ca.us/website/rclis/>), the Project site is not located within the vicinity of a private airstrip. Therefore, implementation of the Project (on-site and off-site components) will not result in a safety hazard for people residing or working in the project area, since the Project site is not located within the vicinity of a private airstrip. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.

It is not anticipated that implementation of the Project (on-site and off-site components) will impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. All Project components will be required to be installed per City standard requirements, which ensure that there will be no conflicts. No impacts are anticipated. No mitigation beyond standard conditions shall be required. This issue will not require any additional analysis in the EIR.

According to Plate 4-1, High Fire Hazard Areas, of the Technical Background Report to the Safety Element, the Project site (on-site and off-site components) are not located in a High Fire Hazard Area. Therefore, implementation of the Project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas of where residences are intermixed with wildlands. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.”

These issues will be discussed below as set in the following framework:

- Environmental Setting: Hazards and Hazardous Materials
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese List), and the Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Phase I Environmental Site Assessment Vista Del Agua, Coachella, California*, prepared by All Phase Environmental, Inc., September 24, 2014 (2014 ESA, **Appendix C**).

- *Vista Del Agua Water Supply Assessment*, prepared by TKE Engineering, Inc., December 2017 (WSA, **Appendix J**)

No issues related to hazards or hazardous materials were raised in response to the Notice of Preparation (NOP) and/or at the scoping meeting. Therefore, those issues identified in the NOP are the focus of the following evaluation of hazards and hazardous materials.

4.8.2 Environmental Setting

The Project site is approximately 275 acres, has no street address, and is located south of Interstate 10 and Vista Del Sur, east of Tyler Street and north of 48th Avenue in the City of Coachella, California., in the County of Riverside, California, 92236. The Project also includes approximately 29 acres of off-site infrastructure improvements. Vista Del Sur and Avenue 47 delimit portions of the north Property border, Avenue 48 delimits the Property to the south, Polk Street delimits a portion of the Property to the east, and unpaved roads delimit the Property to the west. The general topography of the Property slopes to the south at a rate of approximately 34-feet per mile. According to the U.S. Geological Survey (USGS) topographic map, Indio, Quadrangle, the finished elevation of the Property is approximately 38-feet below Mean Sea Level (MSL). Except for several concrete pads, there were no paved areas on the Property. Currently the Project site is vacant. There are multiple unpaved roads traversing the Property, the only named one being Avenue 47. Power lines run along portions of the north Property border and into the center of the Property. There are two concrete pads along the north Property border, south of the north adjacent scrap metal yard. Near the center of the Property, at the paintball field, are a shed and a small concrete pad. Irrigation pipes are assumed to exist in former and existing agricultural areas of Property. Stormwater drains appear to exist in some areas of the Property. There is at least one groundwater well located near the retention pond along the north Property border. Approximately one-third of the west side of the Property is occupied by a vineyard. Please reference **Figure 4.8.2-1, Aerial Photo**.

4.8.2.1 *Historical Use*

The Property appears to have been developed at one time with one or more single-family residences. Sometime between 1947 and 1952, several areas of the Property had been converted to agricultural use. Except for the existing vineyard, all of these areas have become fallow farmland. The existing vineyard was planted on the Property sometime between 1996 and 2002. The existing paintball field was constructed on the Property sometime between 2010 and 2012.

The Property has been used for agricultural purposes from at least 1952 through the present day. Prior to 1972, it was a common practice to use environmentally persistent pesticides. Specifically, pesticides that included dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethane (DDD), dichlorodiphenyldichloroethylene (DDE) and toxaphene. Environmentally persistent pesticides, if previously used on the Property, may still be present. However, specific information regarding the previous use of such chemicals was not found. The possible presence of residual concentrations of environmentally persistent pesticides, is a recognized environmental condition. There are human and animal receptors in the area due to the unpaved condition of the Property. The presence of pesticides in the soil may represent a health risk to tenants or occupants on the Property and the soil may require specialized handling and disposal. It should be noted that there were no historical recognized

environmental conditions or controlled recognized environmental conditions identified in the historical documents reviewed.

4.8.2.2 Historical Use on Adjoining Properties

Adjoining properties are described as follows:

- North: Between 1959 and 1972, the properties adjacent to and north of the site across Vista Del Sur was developed with Interstate 10 and North of I-10 is vacant land, as well as residential, agricultural, and golf course uses.

The property adjacent to and north of the site across Avenue 47 has never been developed.

Some of the land north of the center of the Property has never been developed. Some of the land adjacent to the north of the Property had been developed with single family residences sometime between 1959 and 1978. Between 1978 and 1989, material storage was observed at the existing scrap metal yard.

- South: Between 1947 and 1953, some of the sites adjacent to and south of the Property, across Avenue 48 were used for agricultural purposes. Except for water retention ponds, there have been no other significant uses of these sites.
- East: Between 1959 and 1972, the properties adjacent to and east of the site, across Polk Street were used for agricultural purposes. There have been no other significant uses of these properties.
- West: Between 1947 and 1953, some of these sites adjacent to and west of the Property were first used for agricultural purposes. Since 1953, these sites have been improved with nurseries, single-family residences, and a water tank.

4.8.2.3 Related Regulations

A number of federal, state, and local laws have been enacted to regulate the management of hazardous materials. Implementation of these laws and management of hazardous materials are regulated independently of the CEQA process through programs administered by various agencies at the federal, state, and local levels. An overview of the key hazardous materials laws and regulations that apply to the any activity that may handle hazardous materials or generate hazardous waste are provided below.

Federal and state regulations govern the renovation and demolition of structures where materials containing lead and asbestos are present. These requirements include: Part 61, Subpart M of the Code of Federal Regulations (pertaining to asbestos) and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development (HUD).

Federal

Several federal agencies regulate hazardous materials. These include the EPA, the Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Applicable federal regulations are contained primarily in Titles 10, 29, 40, and 49 of the

Code of Federal Regulations (CFR). In particular, CFR Title 49 governs the manufacture of packaging and transport containers; packing and repacking, labeling, and the marking of hazardous material transport. Other federal regulations such as the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA), regulate the cleanup of known hazardous waste sites. These agencies keep lists of known sites; these and other lists of known sites with hazardous materials contamination potential are checked to determine if any portion of the Project site will be affected.

The EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to state and local environmental regulatory agencies.

In addition, with respect to emergency planning, the Federal Emergency Management Agency (FEMA) is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, state, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to and recover from a full range of emergencies.

State

Primary state agencies with jurisdiction over hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB). Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), Office of Emergency Services (OES-California Accidental Release Prevention implementation), Department of Fish and Game (DFG), Air Resources Board (ARB), Caltrans, State Office of Environmental Health Hazard Assessment (OEHHA-Proposition 65 implementation) and the California Integrated Waste Management Board (CIWMB). The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and California Department of Transportation (Caltrans). Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulation. In addition, South Coast Air Quality Management District Rules and Regulations pertaining to asbestos abatement (including rule 1403), Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from Title 8 of the California Code of Regulations may be required for any materials discovered during any future soil moving activities that may contain hazardous materials.

California Environmental Protection Agency

The California EPA (Cal/EPA) has broad jurisdiction over hazardous materials management in the state. Within Cal/EPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

Along with the DTSC, the RWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. RWQCB regulations are

contained in Title 27 of the California Code of Regulations (CCR). Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.

Department of Toxic Substances Control

The DTSC regulates hazardous waste in California primarily under the authority of the Federal Resource Conservation and Recovery Act (RCRA), and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reductions, cleanup, and emergency planning. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. As such, the management of hazardous waste of the nature and quantities which, are regulated that is disposed of, treated, stored, or handled on the Project site would be under regulation by the DTSC to ensure compliance with state and federal requirements pertaining to hazardous waste. California law provides the general framework for regulations of hazardous wastes by the Hazardous Waste Control Law (HWCL) passed in 1972. DTSC is the state's lead agency in implementing the HWCL. The HWCL provides for state regulation of existing hazardous waste facilities, which include "any structure, other appurtenances, and improvements on the land, used for treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous waste," and requires permits for, and inspections of facilities involved in generation and/or treatment, storage and disposal of hazardous wastes.

Hazardous Materials Management Plans

In January 1996, Cal/EPA adopted regulations implementing a "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, above-ground storage tanks, hazardous materials release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency-the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. For the County of Riverside, CUPA jurisdiction is under the Department of Environmental Health Services. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely. Thus, although it is not anticipated that many businesses within the Project will handle the quantities of hazardous materials that require regulations, all businesses within the Project will be required to comply with this law if they store or use sufficient quantities of hazardous substances on-site. A gas station, for example would be required to comply.

California Accidental Release Prevention Program (CalARP)

The CalARP program (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than 500 pounds, 55 gallons, or 200 cubic feet of gas of specific regulated substances at their facilities. The CalARP program regulations became effective on January 1, 1997 and include the provisions of the Federal Accidental Release Prevention program (Title

40, CRF Part 68) with certain additions specific to the state pursuant to Article 2, Chapter 6.95, of the Health and Safety Code.

The list of regulated substances is found in Article 8, Section 2770.5 of the CalARP program regulations and include common cleaning products. However, as the minimum quantity that is regulated is 500 pounds or 55 gallons, it is unlikely that the types of businesses expected to locate within the Project area will use such quantities.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employees are to properly train workers.

Hazardous Materials Transportation

The CHP and Caltrans are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations. The Office of Emergency Services (OES) also provides emergency response services involving hazardous materials incidents.

The oversight of hazardous materials release site often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and RWQCB are the two primary state agencies responsible for issues pertaining to hazardous materials release sites. Air quality issues related to remediation and construction at contaminated sites are also Project to federal and state laws and regulations that are administered at the local level.

Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses.

City of Coachella General Plan

The City of Coachella's recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.6, Hazardous Materials, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on hazards and hazardous materials and is incorporated by reference. The PEIR may be reviewed at the City of

Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

The following General Plan Update (2015) goals and policies are pertinent to the Project and may also be included under other chapters of the EIR:

Community Health + Wellness Element

Goal 1. Healthy Community. A physical, social and civic environment that supports residents' health, well-being and equity.

1.7 EIR Review: Submit all environmental documents (Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports) prepared with the City as the lead agency to the Riverside County Department of Public Health for review and comment.

Safety Element

Goal 6. Clean Environment. A community protected from the harmful effects of pollution and hazardous materials, hazardous waste and environmental contamination.

6.9 Agricultural land project coordination: Work with the Riverside County Department of Environmental Health and the Agricultural Commissioner's Office on regulating pesticide/hazardous materials upon conversion of an existing agricultural operation. Encourage property owners to coordinate with regulatory agencies concurrently with project design and development. A materials analysis (degree of contamination, scope of treatment, remediation and/or disposal measures) should be considered, initiated and documented in conjunction with the preliminary design, project review and construction. Develop a process to keep adjacent residents informed and protected throughout the stages of development, including the identification and remediation phases.

6.10 Agriculture soil quality: Require testing of land previously used for agricultural purposes before new development. If contaminants are present, the soil must be treated and re-tested until levels are adequate, or if necessary, removed and replaced with clean soil, before any development on site.

6.11 Soil Quality: Require soil testing for contaminants on sites that have historically, or currently, been exposed to chemical releases. If contamination does exist, require a remediation strategy to reduce or eliminate contamination on site.

4.8.3 Thresholds of Significance

The Initial Study contains nine (9) criteria for determining impacts to hazards and hazardous materials. As stated above, six (6) of the nine (9) issue areas were analyzed in the Initial Study and determined not to need any additional analysis in the EIR. The Initial Study concluded that any impacts to these six (6) issue areas would have "No Impact."

Therefore, the analysis in this subchapter shall focus on the following three (3) issue areas:

- a. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

- b. Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c. Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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

4.8.4 Potential Impacts

THRESHOLDS a & b: **Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or, create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Less Than Significant Impact with Mitigation Incorporated

During construction, there are activities that can expose the public to significant hazards from accidental circumstances both directly and indirectly. The first pathway occurs when petroleum products are accidentally released from construction equipment or storage facilities. For example, vandalism can cause a release from stored fuels, or a hydraulic hose may break on a large piece of construction equipment. This type of impact is readily mitigated by immediately stopping the construction activity; controlling the accidental release; and carrying out remediation of the area contaminated by the spill. It is anticipated that the stormwater pollution prevention plan (SWPPP) prepared for the proposed Project.

According to the City of Coachella General Plan Update Final EIR (2015) (p. 4.7-12):

A SWPPP prepared in compliance with the General Permit describes the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-storm water management controls. Dischargers are also required to inspect construction sites before and after storms to identify storm water discharge from construction activity, and to identify and implement controls where necessary.

A SWPPP is required under City Ordinance No. 13.16, Water Quality Control, and is required prior to the issuance of a grading permit for each and every phase of development that would require a grading permit. This is a standard per Ordinance No. 13.16 and is not considered unique mitigation under CEQA. With the inclusion of this standard condition, any impacts from implementation of the proposed Project related to significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, are considered less than significant. No additional mitigation is required.

The second circumstance occurs when unknown contaminants are exposed during construction. An example would be a barrel of hazardous material buried below the ground surface that could be exposed during grading. As in the previous instance, the exposure of such contamination typically occurs over a very limited area and with proper mitigation, the potential hazard to humans and the environment can be managed so it will not significantly impact either humans or the environment. With the incorporation of **Mitigation Measures MM-HAZ-1** and **MM-HAZ-2**, any impacts from spills during construction, or discovery of subsurficial hazardous materials, will be reduced to a less than significant level.

Both during construction and once the Project is occupied, the transport of hazardous materials to the Project site can result in additional potential for accidental spills, leaks, or other hazards such as fire or explosion. For such transporters, the existing regulatory environment will ensure that the hazardous materials and any hazardous wastes transported to and from the Project site will be properly managed. These regulations are codified in Titles 8, 22, and 26 of the California Code of Regulations and Title 40 of the Code of Federal Regulations. Haulers must comply with all existing applicable federal, state and local laws and regulations regarding transport, use, disposal, handling and storage of hazardous wastes and material. Compliance with these laws and regulations related to transportation will minimize potential exposure of humans or the environment to significant hazards from transport of such materials and wastes. Due to the inability to ascertain what these hazardous materials may be at this time, these regulations are considered sufficient to control potential hazards from accidents to a less than significant impact level. Should specific uses generate hazardous materials during the life of the Project, subsequent analysis may be required to ascertain impacts and mitigation, if required (i.e., medical wastes, chemical wastes, etc.).

With the exception of the discussion below, the *2014 ESA* has revealed no evidence of recognized environmental conditions, historical recognized environmental conditions, controlled recognized environmental conditions, or de minimis conditions in connection with the Property. A Radius Profile Report from Environmental Data Resources, Inc. dated September 5, 2014 was reviewed as part of the *2014 ESA* preparer. The radius report, found in Appendix G of the *2014 ESA*, contains records of registered sites in the vicinity of the Property for the classifications and distances listed in **Table 4.8.4-1, Federal Environmental Record Source Summary**, and **Table 4.8.4-2, State and Local Environmental Record Source Summary**, and as required by American Society of the International Association for Testing and Materials (ASTM) Practice E-1527-13. Report dates for each database searched are listed in the appendix of the *2014 ESA*.

**Table 4.8.4-1
Federal Environmental Record Source Summary**

| FEDERAL DATABASES | SEARCH RADIUS | NUMBER OF REPORTED SITES |
|--|----------------------|---------------------------------|
| National Priorities List (NPL) | 1.00 mile | 0 |
| De-listed National Priorities List (NPL) | 1.00 mile | 0 |
| Resource Conservation and Recovery Act (RCRA) Corrective Action Facilities (CORRACTS) | 1.00 mile | 0 |
| Records of Decision (ROD) | 1.00 mile | 0 |
| Superfund Consent Decrees (CONSENT) | 1.00 mile | 0 |
| Sites currently or formerly under review by US EPA (CERCLIS and CERCLIS/NFRAP) | 0.50 mile | 0 |
| RCRA permitted Treatment, Storage and Disposal Facilities (TSD) | 0.50 mile | 0 |
| Mines Master Index File (MINES) | 0.25 mile | 0 |
| RCRA Administrative Action Tracking System (RAATS) | 0.25 mile | 0 |
| RCRA Registered Small or Large Generators of Hazardous Waste (GNRTR) | 0.25 mile | 0 |
| Emergency Response Notification System (ERNS) | 0.25 mile | 0 |
| Facility Index System/Facility Identification Initiative Program Summary Report (FINDS) | Property Only | 0 |
| Hazardous Materials Information Reporting System (HMIRS) | Property Only | 0 |
| Material Licensing Tracking System (MLTS) | Property Only | 0 |
| Federal Superfund Liens (NPL LIENS) | Property Only | 0 |
| PCB Activity Database System (PADS) | Property Only | 0 |
| Toxic Chemical Release Inventory System (TRIS) | Property Only | 0 |
| FIFRA/TSCA Tracking System (FTTS) | Property Only | 0 |
| Toxic Substances Control Act (TSCA) | Property Only | 0 |

Source: 2014 ESA (Appendix C)

**Table 4.8.4-2
State and Local Environmental Record Source Summary**

| STATE AND LOCAL DATABASE | SEARCH RADIUS | NUMBER OF REPORTED SITES |
|---|----------------------|---------------------------------|
| Cal-Sites and Cal-Sites Annual Work Plan (AWP) | 1.00 mile | 0 |
| Notify 65 | 1.00 mile | 0 |
| Areas Of Concern (AOCONCERN) | 1.00 mile | 0 |
| California Bond Expenditure Plan (CA BEP) | 1.00 mile | 0 |
| California EPA Office of Emergency Information (CORTESE) and Historical CORTESE | 1.00 mile | 0 |
| Toxic Pits Cleanup facilities (TOXIC PITS) | 1.00 mile | 0 |
| ENVIROSTOR | 1.00 mile | 0 |
| RESPONSE | 1.00 mile | 0 |
| Tribal Records (Indian Reservations, LUST, UST) | Up to 1.50 miles | 0 |
| California Spills, Leaks, Investigations & Clean-up Cost Recovery Listing (CA SLIC) | 0.50 mile | 0 |
| State Landfills | 0.50 mile | 0 |
| Leaking Underground Storage Tanks (LUST) | 0.50 mile | 0 |
| Waste Management Unit Database/State Water Resources Control Board (WMUDS/SWAT) | 0.50 mile | 0 |
| California City Land Fills (CA LA LF) | 0.50 mile | 0 |
| Voluntary Cleanup Program Properties (VCP) | 0.50 mile | 0 |
| Indian Reservation | 0.50 mile | 1 |
| Registered Underground Storage Tanks (UST) | 0.25 mile | 0 |
| California Facility Inventory Database Underground Storage Tanks (CA FID UST) | 0.25 mile | 0 |
| Hazardous Substances Storage Container Database (HIST UST) | 0.25 mile | 0 |
| Statewide Environmental Evaluation and Planning System UST (SWEEPS UST) | 0.25 mile | 0 |
| Drycleaners | 0.25 mile | 0 |
| Historical Auto Stations/Dry Cleaners | 0.25 mile | 0 |
| Registered Above Ground Storage Tanks (AST) | 0.25 mile | 0 |
| Emissions Inventory Data (EMI) | Property Only | 0 |
| Hazardous Waste Information System (HAZNET) | Property Only | 0 |
| California Hazardous Material Incident Report System (CHMIRS) | Property Only | 0 |
| California Waste Discharge System (CA WDS) | Property Only | 0 |

Source: 2014 ESA (Appendix C)

Previous Agriculture Use on Property

Less Than Significant Impact with Mitigation Incorporated

The Property has been used for agricultural purposes from at least 1952 through the present day. Prior to 1972, it was a common practice to use environmentally persistent pesticides. Specifically, pesticides that included DDT, DDD, DDE and toxaphene. Environmentally persistent pesticides, if previously used on the Property, may still be present. However, specific information regarding the previous use of such chemicals was not found during the research conducted for the 2014 ESA. The possible presence of residual concentrations of environmentally persistent pesticides, is a recognized environmental condition. It is recommended that the samples be analyzed for pesticides using United States Environmental Protection Agency (EPA) Method 8081 during grading, and/or during construction. This is reflected in **Mitigation Measures MM-HAZ-1, MM-HAZ-2, and MM-HAZ-4**, which requires grading activities to be halted, soil sampling and coordination with the appropriate oversight agency. Necessary actions will be identified (if required) in order to address this issue. With the incorporation of **Mitigation Measure MM-HAZ-1, MM-HAZ-2, and MM-HAZ-4**, any impacts will be reduced to a less than significant level.

Groundwater Wells on The Property

Less Than Significant Impact with Mitigation Incorporated

At least one groundwater well is located on the Property, near the water retention pond along the north Property border. The 2014 ESA was not conclusive as to whether there was a second well along the north Property border, south of the north adjacent scrap metal yard. Since wells may have been modified and are located below the surface, other wells may exist on the Property that were not identified during the Property reconnaissance. The presence of groundwater wells on the Property is not a recognized environmental condition; however, they must be properly decommissioned or protected if the Property is to be developed. The Project will be served by potable and reclaimed water, when it becomes available. It is not anticipated that the wells will be utilized as a water source for the Project. The analysis contained in the Project-specific Water Supply Assessment does not include the use of these wells as a water source (see Subchapter 4.15, Utilities and Service Systems).

With the incorporation of **Mitigation Measure MM-HAZ-3**, the applicant, will be required, prior to the issuance of a grading permit, to contact the Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department in Indio, California to ascertain the locations of wells. If closure of the wells is required, they shall be closed in accordance with the specific requirements for the closure of wells of the Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department. With the implementation of **Mitigation Measure MM-HAZ-3**, any impacts will be reduced to a less than significant level as they relate to closure of the wells (if necessary).

Possible Septic System or Cesspool on The Property

No Impacts

Several structures appear to have once been developed along the north Property border, south

of the adjacent scrap metal yard. These appear to have been single family residences. A septic system or cesspool may have been associated with this former development and may still exist on the Property. A septic system or cesspool on the Property is not considered a recognized environmental condition when used in association with a residential property (in this case, a historic use). No further investigation in regard to this condition is deemed necessary at this time. No impacts will occur.

Solid Waste Disposal on The Property

Less Than Significant Impact with Mitigation Incorporated

There was evidence observed of debris, trash, empty cans, clothing, furniture, concrete, roofing, wood, cuttings, rubber tires, railroad ties, and other materials typical of illegal dumping noted throughout the Project site. These materials were typically located in areas along the access roads. There were two other areas where more solid waste was identified including the former water retention pond near the center of the Property and the area south of the north adjacent scrap metal yard. The solid waste appeared to be innocuous household trash dumped illegally and there were no signs of disposed hazardous materials or petroleum products. Other than the recommendation that these materials be removed to help avert further dumping, no further investigation in regard to this condition is deemed necessary at this time. **Mitigation Measures MM-HAZ-1, MM-HAZ-2, and MM-HAZ-4**, have been added, which require grading activities to be halted, soil sampling and coordination with the appropriate oversight agency should any of these items prove to be hazardous (during grading). Necessary actions will be identified (if required) in order to address this issue. With the incorporation of **Mitigation Measure MM-HAZ-1, MM-HAZ-2, and MM-HAZ-4**, any impacts will be reduced to a less than significant level.

Suspect Asbestos Containing Materials on The Property

Less Than Significant Impact with Mitigation Incorporated

The presence of asbestos or suspect asbestos does not represent a recognized environmental condition for the Property. The 2014 ESA preparer noted a pile of roofing materials that had been dumped on the Property in the vicinity of the former water retention pond near the center of the Property. The suspect asbestos containing materials included asphalt roofing, roof tar, and roofing felt. It is recommended that these materials be tested for asbestos. If found to contain asbestos, an asbestos abatement contractor will be required to have this material removed from the Property.

The shed located near the paintball field has suspect asbestos containing roofing. It is recommended that if this shed will be demolished, the roofing materials be tested for asbestos prior to the disturbance of this material. If found to contain asbestos, an asbestos abatement contractor will be required to have this material removed from the shed prior to its demolition. **Mitigation Measure MM-HAZ-5** requires that if any materials are discovered at the site during any future activities that may contain asbestos, a qualified contractor be contacted to remove such materials. Any work conducted shall be in compliance with guideline set by an oversight agency such as the DEH or the Department of Toxic Substances Control (DTSC), prior to grading permit final.

No above grade indications were observed that cement asbestos pipes (Transite pipe) were used on the Property. However, cement asbestos pipes are known to have been used for water distribution systems for crop irrigation. **Mitigation Measure MM-HAZ-5** also requires that, if suspect cement asbestos pipes are identified (during excavation activities on the Property), they be removed and disposed of by a licensed asbestos abatement contractor.

With the incorporation of **Mitigation Measure MM-HAZ-5**, any impacts will be reduced to a less than significant level as it relates to asbestos.

Paintball Use on The Property

No Impacts

The paint used for paintballs is soluble in water, so that it washes easily out of players' clothes. It is nontoxic, as well, in case a player is hit in the mouth and accidentally swallows the paint. The basic materials for the paint are mineral oils, food coloring, calcium, ethylene glycol, and iodine. The paint is encapsulated in a bubble made from gelatin. This is the same material used in encapsulated medicines, such as many pain killers and cold treatments, and in liquid vitamins, such as vitamin E.¹ Therefore, no impacts will occur.

THRESHOLD c: **Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

No Impact

The CORTESE and HIST CORTESE lists are composed of sites that have had releases designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS) and the Department of Toxic Substances Control (Cal-Sites). The source is the California Environmental Protection Agency/Office of Emergency Information. This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration.

The Project site was not listed in the search of this database. One (1) site was found in the State database search (1.0-mile radius) under this listing. No impacts will occur.

4.8.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

No standard conditions are required for hazards and hazardous materials.

Mitigation Measure(s)

¹ <http://www.madehow.com/Volume-6/Paintball.html>

The following mitigation measures are provided to reduce potential adverse hazards and hazardous material handling impacts identified in the previous analysis of potential impacts due to Project use or exposure to these impacts.

MM-HAZ-1 **During grading, and/or during construction, should an accidental release of a hazardous material occur, the following actions will be implemented: construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be notified; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above sampling or remediation activities related to the contamination will be conducted under the oversight of Riverside County Site Cleanup Program. All of the above actions shall be documented and made available to the appropriate oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control (DTSC) prior to closure of the contaminated area.**

MM-HAZ-2 **During grading, if an unknown contaminated area is exposed, the following actions will be implemented: any contamination found during construction will be reported to the Riverside County Site Cleanup Program and all of the sampling or remediation related to the contamination will be conducted under the oversight of the Riverside County Site Program; construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be identified; a qualified professional (industrial hygienist or chemist) shall test the contamination and determine the type of material and define appropriate remediation strategies; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above actions shall be documented and made available to the appropriate oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control prior to closure of the contaminated area.**

MM-HAZ-3 **Prior to the issuance of a grading permit, the applicant shall contact the Riverside County Community Health Agency, Department of**

Environmental Health, Water Engineering Department in Indio, California to ascertain the locations of wells. If determined by this oversight agency that the closure of the wells is required, then they shall be closed in accordance with the specific requirements for the closure of wells of the Riverside County Community Health Agency, Department of Environmental Health, Water Engineering Department.

MM-HAZ-4

Prior to the issuance of a grading permit, the applicant shall conduct sampling of the near surface soil to assess whether residual concentrations exceed State of California action levels is recommended in areas that were in agricultural use prior to 1972. The presence of pesticides in the soil may represent a health risk to tenants or occupants on the Property and the soil may require specialized handling and disposal. A grid shall be used to take representative samples where crops were grown on the Property. Any samples shall be analyzed for pesticides using EPA Method 8081. A qualified contractor shall be contacted to remove such materials. Any work conducted shall be in compliance with guideline set by an oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control.

MM-HAZ-5

If any materials are discovered at the site during any future activities that may contain asbestos, a qualified contractor be contacted to remove such materials. As it pertains to the shed roof, it shall be tested prior to any demolition. All work conducted shall be in compliance with guidelines set by an oversight agency such as the Department of Environmental Health or the Department of Toxic Substances Control, prior to grading permit final.

4.8.6 Cumulative Impacts

Pursuant to Section 15130(b) of the State CEQA Guidelines, the geographic scope of the cumulative setting for hazards and hazardous materials analysis is the City of Coachella, the Coachella Valley, and Riverside County.

Development of the Project may result in releases of hazards and hazardous materials. According to the analysis above, with adherence to standard conditions, and mitigation measures, Project impacts will not exceed established thresholds for hazards and hazardous materials. The thresholds have been established to address Project-specific impacts, as well as their contribution to cumulative impacts. Since the Project is below the established thresholds, cumulative impacts will remain less than significant.

On the other hand, as the City grows, the demand for public service resources to respond to hazards and hazardous materials grows incrementally. The Project will add to the cumulative demand for such resources. As stated in Subchapter 4.13.2.5, the Project will have an incremental impact to the City's Fire Department's ability to provide an acceptable level of service for responding to calls related to hazards and hazardous materials releases. These impacts are forecast to include an increased number of emergency and public service calls due to the increased presence of structures and population, and vehicles.

Each future Project within the Vista Del Agua Specific Plan shall participate in the Development Impact Fee Program as adopted by the City to mitigate a portion of these impacts. This will provide funding for capital improvements such as land, equipment purchases and fire station construction. The Project will contribute incrementally to cumulative impacts related to the need to reduce cumulative effects on Fire Services.

The Project's potentially significant or cumulative considerable impacts to Fire Protection and Emergency Response Services can be reduced to less than significant and payment of fees by all cumulative projects can effectively reduce the overall cumulative impacts to such services. Therefore, cumulative impacts are considered less than significant.

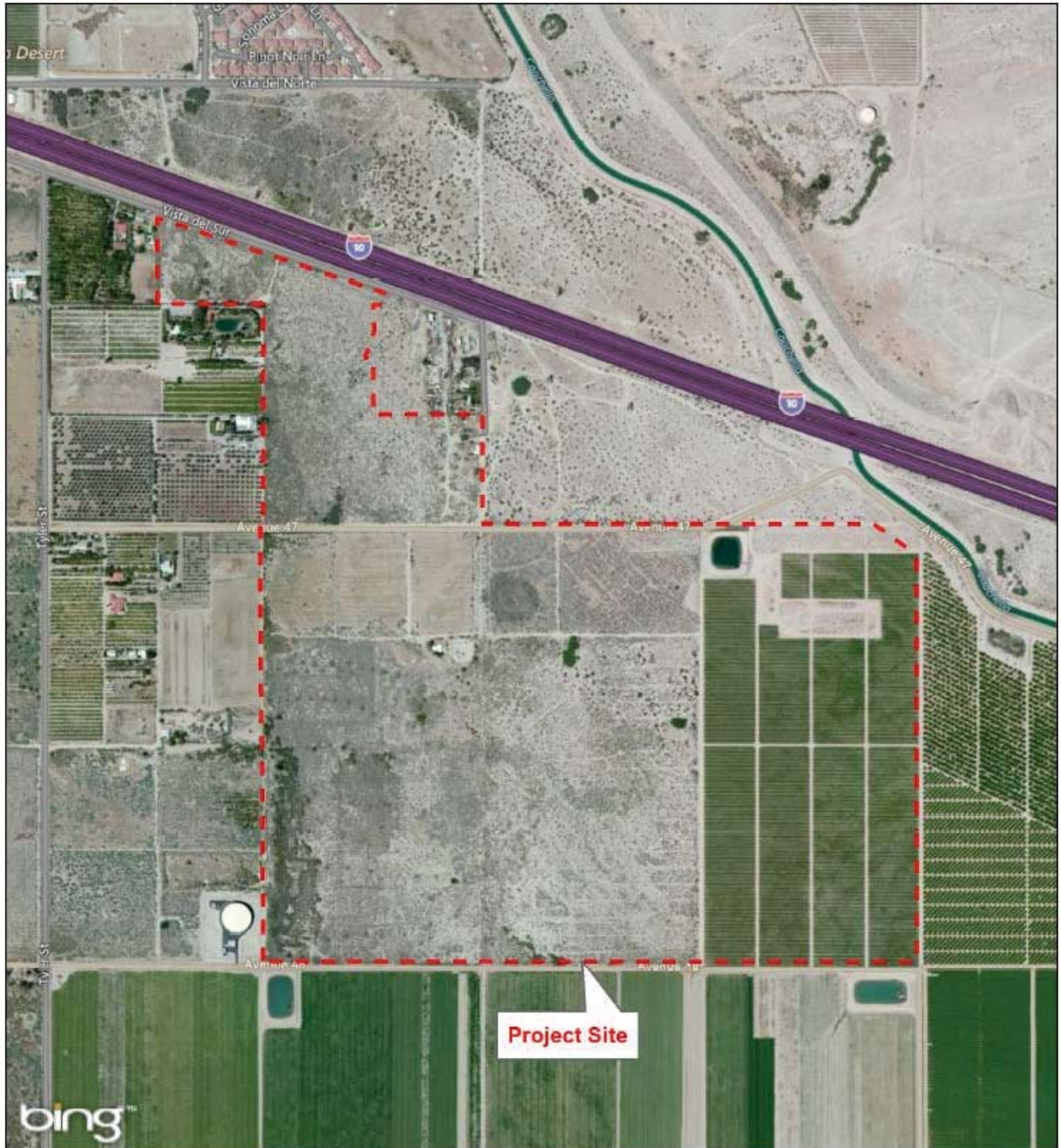
4.8.7 Unavoidable Significant Adverse Impacts

Implementation of the Project will not emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; result in an inconsistency with an Airport Master Plan; for a project located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area; for a Project within the vicinity of a private airstrip, or heliport, would the Project result in a safety hazard for people residing or working in the Project area; impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan; or expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

With the incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-5**, any impacts from implementation of the proposed Project are fully mitigated. Any impacts will be considered less than significant. No unavoidable significant impacts are anticipated.

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Figure 4.8.2-1
Aerial Photo



Source: Vista del Agua Specific Plan 2018 (Appendix A)

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.9 figures are located at the end of this subchapter, not immediately following their reference in text.

4.9 HYDROLOGY AND WATER QUALITY RESOURCES

4.9.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of hydrology and water quality resources from implementation of the Project. Section E.IX., Hydrology and Water Quality, of the Initial Study posed the following questions, asking whether the Project would:

- Violate any water quality standards or waste discharge requirements?
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff?
- Otherwise substantially degrade water quality?
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- Inundation by seiche, tsunami, or mudflow?

Based on the analysis in the Initial Study it was determined that the following issue area related to hydrology and water quality in the questions asked above **would not** require any further analysis in the Environmental Impact Report (EIR).

- None.

Based on the analysis in the Initial Study it was determined, that all of the issue areas related to hydrology and water quality in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting hydrology and water quality:

“Implementation of the Project (on-site and off-site components) may violate any water quality standards or waste discharge requirements; substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted); substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site; substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff; and/or, otherwise substantially degrade water quality.

A Project specific hydrology study and water quality management plan shall be prepared in order to address questions IX.a-f, above, including impacts to the existing tile drain. In order to ensure a comprehensive discussion of these hydrology and water quality resources issues, they will be analyzed in the EIR.

Implementation of the Project (on-site and off-site components) may place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; place within a 100-year flood hazard area structures which would impede or redirect flood flows, and/or, expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. According to the FIRM Map (Panel 2260G), the majority of the site is within Zone X. Zone X is defined as “areas determined to be outside the 0.2% annual chance floodway.” Development within Zone X is acceptable with finished floor elevations 1 foot above the 100-year flood elevation. There is the potential for failure of Coachella canal as part of an earthquake. In order to ensure a comprehensive discussion of this issue, it will be analyzed in the EIR.

A tsunami is a sea wave caused by submarine earth movement. A seiche is an oscillation of the surface of a lake or landlocked sea. The City of Coachella is not in close proximity to the ocean, a landlocked sea, or a lake; therefore the City is not at risk of inundation from these phenomena. In addition, the City’s land is relatively flat and has a low risk of being impacted by mudslides. Therefore, implementation of the Project would not result in any impact due to inundation from seiche or tsunami. No impacts are anticipated. No mitigation is required. These issues will not require any additional analysis in the EIR. There is the potential for mudflows, especially in the event of a breach of the Coachella canal as part of an earthquake. In order to ensure a comprehensive discussion of this issue, it will be analyzed in the EIR.”

These issues pertaining to hydrology and water quality resources will be discussed below under the following framework:

- Environmental Setting: Hydrology and Water Quality
- Thresholds of Significance
- Potential Impact
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), Draft Environmental Impact Report, La Entrada Specific Plan, LSA Associates, Inc. July 2013 (*La Entrada DEIR*), and the Vista Del Agua Specific Plan were used in the analyses presented in this Subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this Subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Vista Del Agua - Project Impacts associated with Offsite Runoff*, prepared by JLC Engineering & Consulting, Inc., dated November 10, 2014 (*2014 Off-Site Runoff Report*, **Appendix K**);
- *Preliminary Drainage Report for Vista Del Agua Specific Plan, Coachella, CA*, prepared by United Engineering Group – California, dated February 2016, Revised September 20, 2017 (*PDR*, **Appendix L**);
- *Project Specific Water Quality Management Plan for Vista Del Agua*, prepared by United Engineering Group – California, dated January 18, 2016, revised August 29, 2016 (*WQMP*, **Appendix M**); and
- *La Entrada Specific Plan Final Environmental Impact Report (SCH No. 2012071061)*, October 9, 2013 <https://laentradacommunity.com/>.

Issues were raised in *Comment Letter #9 from the Coachella Valley Mosquito and Vector Control District (dated 3/27/15)* in response to the Notice of Preparation (NOP), and shall be addressed in this Subchapter of the EIR. In response to the NOP the State of California Department of Fish & Wildlife commented upon the Project's potential impacts to an unnamed desert wash (*Comment Letter #7*). The unnamed wash mentioned in the California Department of Fish & Wildlife letter was not located by the Project biologist during the biological survey performed for the Project. Therefore, it was not referenced in the *On-Site and Off-Site Bio Report* (reference Subchapter 4.5, Biological Resources).

No comments pertaining to hydrology and water quality resources were raised at the scoping meeting.

Therefore, the above referenced issues, in addition to the issues identified in the NOP, are the focus of the following evaluation of hydrology and water quality resources.

4.9.2 Environmental Setting

4.9.2.1 Regional Off-site Drainage

Based on the existing terrain, the upstream watershed is comprised of large alluvial fans that sheet flow across the watershed area. These large off-site watershed areas are located east of the All-American Canal. As part of the All-American Canal, the Bureau of Reclamation constructed a series of dikes that collect and discharge the runoff, emanating from the off-site watershed, to the Whitewater River. **Figure 4.9.2-1a, Existing Regional Drainage Facilities**, shows the boundary of the Project site and the existing facilities that help protect the Project from off-site flooding. **Figure 4.9.2-1b, All American Canal Wasteways and Areas**, illustrates the All American Canal Wasteways and Areas which have a relationship to the Project site, yet are beyond the immediate vicinity of the Project. A brief description of the facilities are as follows:

1. Detention Dike No. 1 is an existing facility that collects 268.1 square miles of off-site watershed area. Detention Dike No. 1 extends from Interstate 10 to the Salton Sea. The Detention Dike No. 1 system has two facilities that regulate the outflow collected by the dike. These two facilities are defined as Wasteway No. 1 and Wasteway No. 2. It should be noted, that the off-site area upstream of the Project is 51.8 square miles of the total area of 268.1 square miles. The off-site watershed upstream of the Project is defined as Area D. All drainage from Area D is collected and discharged directly into Wasteway No. 2.
2. Wasteway No. 2 is an existing channel and inlet system that regulates the runoff collected by Detention Dike No. 1, which emanates from Area D. The Wasteway No. 2 channel conveys the regional off-site watershed areas directly into Whitewater River.
3. Detention Dike No. 2 is an existing facility that collects 145.7 square miles of off-site watershed area. The Detention Dike No. 2 system implements the use of Wasteway No. 3 to regulate the outflow collected by the dike. The purpose of Detention Dike No. 2 is to divert runoff upstream of the Project site to the west and towards Wasteway No. 3.
4. Wasteway No. 3 is an existing channel and inlet system that regulates the runoff collected by Detention Dike No. 2, which emanates from Area E, F, and G. The Wasteway No. 3 channel conveys the regional offsite watershed areas directly into Whitewater River.

Based on the hydrological analysis, the Project site is not impacted by any large regional watershed areas. The existing facilities discussed provide flood protection to the Project site by diverting upstream watershed areas to the Whitewater River.

4.9.2.2 Local Off-site Watershed Areas

Based on the Project site location and the existing topography, the following offsite watersheds contribute runoff to the Project site:

1. Area A, located north of the Project, is a 60-acre drainage area. The area runoff flows in a southerly direction.
2. Area B, located east of the Project, is a 20-acre drainage area.

Reference **Figure 4.9.2-2, Local Off-site Watershed Areas**.

4.9.2.3 On-site Watershed Areas

Based on the existing topography, the entire Project site flows towards the southerly boundary. The Project will be required to construct storm drains, open space/earthen channel systems and retention basins to mitigate and flood protect the Project site. All Planning Areas (PA's) will have at least one basin. The Paseo, which traverses PA's 5 and 6 will also serve to facilitate Project drainage. Reference **Figure 4.9.2-3, Master Drainage Plan**.

4.9.2.4 Groundwater Resources

The Project site is located above the Coachella Valley Groundwater Basin, Desert Hot Springs Subbasin. However, domestic water supply would come from the Coachella Valley Groundwater Basin, Indio Subbasin (also referred to as the Whitewater River Subbasin). For management purposes, groundwater basins are designated in the Colorado River Basin Regional Water Quality Control Board's Basin Plan using the same Hydrologic Units (HU) and Hydrologic Areas (HAs) as surface waters. The project site is located in Coachella Planning Area, the Whitewater HU, and the Coachella Hydrologic Subarea (HSA).

The Desert Hot Springs Subbasin is bound on the northeast by the Little San Bernardino Mountains, on the southwest by the Indio Hills and the Banning and Mission Creek Faults, and on the southeast by the Mecca Hills. The Indio Subbasin is bound on the north by the Banning Fault, on the northeast by the Indio Hills, on the south by the San Jacinto and Santa Rosa Mountains, on the northwest by a bedrock constriction, on the east by the Salton Sea, and by a low drainage divide on the southeast. The Banning-Mission Creek Fault separates the Desert Hot Springs Subbasin from the Indio Subbasin beneath the alluvial debris cone between the Indio Hills and Mecca Hills.

Seasonal runoff from the Little San Bernardino Mountains recharges the Desert Hot Springs Subbasin by percolation through alluvial fan deposits. Surface runoff from high precipitation or snow melt is conveyed by intermittent creeks that discharge into this subbasin. Surface runoff and subsurface inflow are substantial sources of recharge to the Indio Subbasin. In addition, recharge occurs at the Whitewater River spreading grounds northwest of Palm Springs. Colorado River Aqueduct water is conveyed into the subbasin via the Coachella Canal.

According to the 2014 ESA, groundwater is anticipated between 10 to 30-feet below ground surface (bgs).

4.9.2.5 Related Regulations

Federal Clean Water Act

In 1972 the Federal Water Pollution Control Act (later referred to as the Clean Water Act (CWA)) was amended to require that the discharge of pollutants into waters of the United States from any point source be effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was again amended to require that the United States Environmental Protection Agency (EPA) establish regulations for the permitting of storm water discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The

regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by an NPDES permit.

The CWA requires states to adopt water quality standards for water bodies and have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are set concentrations or levels of constituents—such as lead, suspended sediment, and fecal coliform bacteria—or narrative statements that represent the quality of water that support a particular use. Because the State had not established a complete list of acceptable water quality criteria for toxic pollutants, the EPA Region IX established numeric water quality criteria for toxic constituents in the form of the California Toxics Rule (CTR).

When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a “factor of safety” included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

California Department of Water Resources

NPDES Permit Program

The State Water Resources Control Board administers the NPDES permit program regulating stormwater from construction activities for projects greater than one acre in size. This is known as the General Permit for Storm Water Discharges Associated with Construction Activities, Order No. 99-08-DWQ, NPDES No. CAS000002. The main compliance requirement of the NPDES permits is the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The purpose of a SWPPP is to identify potential on-site pollutants and identify and implement appropriate stormwater pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. Stormwater Best Management Practices (BMPs) to be implemented during construction and grading, as well as post-construction BMPs, will be outlined in the SWPPP prepared for the Project when future construction is actually initiated in the future. The SWPPP shall be prepared and implemented for each phase of the project in compliance with the requirements of the Construction General Permit.

Examples of BMPs include:

- Detention basins for capture and containment of sediments;
- Use of silt fencing, sandbags, or straw bales to control runoff; and
- Identification of emergency procedures in case of hazardous materials spills.

The Project proponent will be required to obtain a construction NPDES permit prior to site disturbance. These requirements are reflected in **Standards Conditions SC-HYD-1, SC-**

HYD-2 and **SC-HYD-3** (construction general permit, water quality management plans and BMPs, respectively) in Subchapter 4.9.5, below.

Urban Water Management Plan

Water resources in the Coachella Valley are subject to comprehensive planning and management efforts. At the regional level, such efforts are carried out in cooperation with the Coachella Valley Water District (CVWD) and the Desert Water Agency. At the subregional and local level, and more specifically in and around the City of Coachella, water resources are cooperatively managed by regional and retail water agencies such as CVWD, the Coachella Water Authority, the Indio Water Authority, and others.

The Integrated Water Resources Management Planning Act (Water Code Sections 10530 – 10550), CEQA and other laws and policies, several water supply planning documents have been prepared and adopted to ensure a sufficient and reliable long-term water supply within CVWD, including the City and its Sphere of Influence (SOI). Those planning documents include, but are not limited to:

- City of Coachella 2015 Urban Water Management Plan (City 2015 UWMP);
- Coachella Valley Water District 2015 Urban Water Management Plan (CVWD 2015 UWMP);
- Coachella Valley Water District 2010 Coachella Valley Water Management Plan Update (2010 CVWMP Update);
- Coachella Valley Water District Coachella Valley Water Management Plan Update Final Subsequent Programmatic Environmental Impact Report (2011 SPEIR);
- 2014 Water Management Plan Status Report for the 2010 CVWMP (2014 Status Report); and
- Coachella Valley Integrated Regional Water Management Plan (2014 IRWMP).

City of Coachella General Plan

The City of Coachella's recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.16, Water Supply and Wastewater, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on groundwater and water quality impacts and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies address groundwater and water quality impacts, are applicable to the Project, and may also be included under other chapters of the EIR:

Land Use + Community Character Element

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.7 Climate-appropriate design: Require architecture, building materials and landscape design to respect and relate to the local climate, topography, history, and building practices.

Goal 5. Neighborhoods. Neighborhoods that provide a variety of housing types, densities, designs and mix of uses and services that reflect the diversity and identity of Coachella, provide for diverse needs of residents of all ages, ethnicities, socio-economic groups and abilities, and support healthy and active lifestyles. (The following policies apply to all locations with a “Neighborhood” General Plan Designation.)

5.14 Shaded streets: Strive to design and build neighborhoods to provide shade over at least 30 percent of the length of sidewalks on streets within the project. Trees must provide shade within 10 years of landscape installation and should be as water efficient as possible.

5.22 Green neighborhoods: Encourage new developments to build to a green neighborhood rating standard and apply for certification from a program such as LEED for Neighborhood Development or LEED for Homes.

Goal 10. Development requirements. A fair, understandable and predictable approach that ensures new development does not impose a fiscal burden on the City, conforms to regional airport and railroad safety practices, and requires new project provide adequate public facilities and services as part of the overall process.

10.1 Required contents of Specific Plans and Planned Developments that implement the subarea Master Plans: Require that all Specific Plans, Planned Developments, Master Plans and other master-planned community implementation tools include:

- A plan for the phasing of all off-site infrastructure.
- A performance schedule for the issuance of building permits based on the concurrent availability of public services and amenities, including parks, schools and other public facilities identified in the entitlement documents.
- A clear statement of the minimum public improvements that will be required as part of the first phase of development.
- A statement of the financing mechanisms that will provide for the ongoing funding and financing of the public facilities of the project. These financing tools should be presented and discussed in the entitlement document implementation plan.

10.2 Concurrency: Prohibit the issuance of precise grading plans and building permits unless the City has made a determination that adequate stormwater facilities, parks, solid waste, water, sewer and transportation facilities are operating to serve each phase of development.

10.3 Phasing of project site improvements: Require that new subdivisions complete the public improvements before occupancy inspections unless a development agreement is implemented.

Mobility Element

Goal 6. Sustainable Transportation. A sustainable transportation system that can be built, operated and maintained within the City's existing and future resource limitations

6.5 Sustainable Landscaping: Promote the use of sustainable landscape and streetscape elements along roadways and other transportation facilities as they are constructed or reconstructed.

Sustainability + Natural Environment Element

Goal 1. Climate Change. A resilient community that is prepared for the health and safety impacts of and minimizes the risks of climate change.

1.6 Climate-appropriate building types: Seek out and promote alternative building types that are more sensitive to the arid environment found in the Coachella Valley. Courtyard housing and commercial buildings can be designed to provide micro- climates that are usable year round, reducing the need for mechanically cooled spaces and reducing energy consumption.

1.12 Reduced water supplies: When reviewing development proposals, consider the possibility of constrained future water supplies and require enhanced water conservation measures.

1.13 Designing for warming temperatures: When reviewing development proposals, encourage applicants and designers to consider warming temperatures in the design of cooling systems.

Goal 2. Energy. An energy efficient community that relies primarily on renewable and non-polluting energy sources.

2.1 Community development–subdivisions: When reviewing applications for new subdivisions, require all residences be oriented along an east-west access, minimizing western sun exposure, to maximize energy efficiency.

2.2 Passive solar design: Require new buildings to incorporate energy efficient building and site design strategies for the desert environment that include appropriate solar orientation, thermal mass, use of natural daylight and ventilation, and shading.

2.6 Energy performance targets – new construction: Require new construction to exceed Title 24 energy efficiency standards by 15 percent and incorporate solar photovoltaics.

Goal 3. Water Resources. Protected and readily available water resources for community and environmental use.

3.1 Conservation performance targets – new construction: Require new construction to exceed the state’s Green Building Code for water conservation by an additional 10 percent.

3.4 Low impact development: Require the use of low-impact development strategies to minimize urban run-off, increase site infiltration, manage stormwater and recharge groundwater supplies.

3.5 Recycled water: Require the use of recycled water for all agricultural, irrigation and industrial uses in order to reserve the City’s highest quality potable water for drinking.

3.7 Landscape design: Encourage the reduction of landscaping water consumption through plant selection and irrigation technology.

3.8 Groundwater infiltration: Encourage the use of above-ground and natural stormwater facilities in new development and redevelopment, such as grassy or vegetated swales, permeable paving and rain gardens.

Goal 4. Green Building. Community building stock (both new construction and renovations) that demonstrates high environmental performance through green design

4.4 Reducing GHG emissions: In consulting with applicants and designing new facilities, prioritize the selection of green building design features that enhance the reduction of greenhouse gas emissions.

4.5 Heat island reductions: Require heat island reduction strategies in new developments such as light-colored cool roofs, light-colored paving, permeable paving, right-sized parking requirements, vegetative cover and planting, substantial tree canopy coverage, and south and west side tree planting.

Goal 7. Waterways. Waterways and desert washes that serve a natural, environmental function and provide aesthetically pleasing open space for the community.

7.1 Pollution prevention: Limit the amount and concentration of pollutants released into the City’s waterways.

7.2 Development impacts: When considering development applications, require consideration of onsite detainment of stormwater runoff and require the incorporation of appropriate stormwater treatment and control measures.

7.3 Soil erosion: Require the prevention of water-born soil erosion from sites, especially those undergoing grading and mining activities.

7.4 Water quality: Ensure water quality in the City’s waterways meets applicable state and federal standards.

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.6 Grading and vegetation removal: Limit grading and vegetation removal of new development activities to the minimum extent necessary to reduce erosion and sedimentation.

Goal 13. Parks and Open Space. Increased access to parks, recreation, and natural open spaces to support and increase physical activity.

13.15 Sustainable landscaping: Promote sustainability for residences through desert- friendly water-efficient landscaping for parks. Establish public demonstration gardens using native desert planting.

Safety Element

Goal 3. Flood hazards. A community that is minimally disrupted by flooding and inundation hazards.

3.1 Hydrological studies: Require new development proposals to include as a condition of approval, hydrological studies prepared by a state-certified engineer with expertise in these kinds of studies, that assess the impact the new development will have on the flooding potential of existing development down-gradient. The studies shall provide mitigation measures to reduce this impact to an acceptable level.

3.3 Flood mitigation for both existing and new construction: Require all new developments and redevelopments in areas susceptible to flooding (such as the 100-year floodplain and areas known to flood during intense or prolonged rainfall events) to incorporate mitigation measures designed to minimize or eliminate flood hazards.

3.5 Storm drainage facilities: Maintain, develop and improve where needed, the storm drain facilities (including bridges and other stormwater channel crossings) with an emphasis on those areas in the City that flood repeatedly.

Goal 8. Disaster Preparedness. A community that has planned for emergency response and recovery from natural disasters, especially from earthquakes, flooding, and fire, and from civil unrest that may occur following a natural disaster.

8.12 Flood-preparedness educational programs: Prepare and distribute informational materials to owners of properties within the flood zones (Zones A and X), as well as potential seismically induced inundation areas, regarding the potential for flooding in their area. It would include the potential for flooding of access routes to and from their neighborhoods. Continue to educate and remind the public of the risks of flooding and the uncertainties inherent in the flood hazard mapping.

Infrastructure + Public Services Element

Goal 1. Citywide Utilities. A healthy community with well maintained, efficient, high-quality public infrastructure facilities and services throughout the city.

1.4 Development phasing: Ensure that new public facilities and services are phased in, in conjunction with the approved urban development it's intended to serve.

1.5 New development infrastructure costs: Require new developments to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

Goal 2. Water Supply Facilities. Water supply facilities that meet future growth within the city and assure a high-quality and reliable supply of water to current and future residents.

2.5 Water supply for new development: Ensure water supply capacity and infrastructure capacity is in place before granting building permits for new development.

2.6 Expanding water supply: If water supply is not adequate to supply new development, require new water supplies be secured before granting building permits for new development.

2.8 Fair-share costs: Establish connection fees to ensure all development has adequate infrastructure for the provision of water and require real property be dedicated when new water facilities are required to serve a development.

2.9 Water supply source protection: Protect local groundwater resources from localized and regional contamination sources such as septic tanks, underground storage tanks, industrial businesses and urban runoff.

2.13 Water-efficient landscaping: Require the use of water-efficient landscaping in all new development.

2.14 Grey water: Strongly encourage new development to utilize on-site grey water systems.

2.15 Reclaimed water: Expand the use of reclaimed water for irrigation and other applications.

Goal 4. Stormwater Capacity. Sufficient stormwater drainage facilities and services that are environmentally sensitive, accommodate growth and protect residents and property.

4.2 New stormwater facilities: Ensure all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

4.4 Fair-share costs: Require new development fund fair-share costs associated with the provision of stormwater drainage to ensure all development has adequate stormwater drainage protection.

4.5 New development: Require the preparation of drainage studies that evaluate adherence to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding with all new development applications.

4.6 Stormwater Pollution Prevention: Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.

4.9 Property dedication: Require the dedication of real property and improvements of that property when new stormwater drainage facilities are required to serve a development.

4.9.3 Thresholds of Significance

As discussed above in Subchapter 4.9.1, above all ten (10) criteria will be analyzed in this EIR. The City's Initial Study contains the following ten (10) criteria for determining impacts to hydrology and water quality resources:

- a. Violate any water quality standards or waste discharge requirements?
- b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff?
- f. Otherwise substantially degrade water quality?
- g. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- h. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- i. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- j. Inundation by seiche, tsunami, or mudflow?

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

4.9.4 Potential Impacts

THRESHOLD a: Would the Project violate any water quality standards or waste discharge requirements?

Less Than Significant Impact

This Project has the potential for discharge of surface runoff into the regional drainage system, which eventually flows into the Whitewater River, the Coachella Valley Stormwater Channel, and the Salton Sea. **Table 4.9.4-1, *Receiving Waters for Urban Runoff from Site***, below, lists the Project's receiving water, EPA approved 303(d) list impairments, and proximity to Threatened, or Endangered Species (RARE) beneficial use designated receiving waters (includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered).

**Table 4.9.4-1
Receiving Waters for Urban Runoff from Site**

| Receiving Waters | EPA Approved 303(d) List Impairments | Designated Beneficial Use | Proximity to RARA Beneficial Use Designated Receiving Waters |
|-------------------------------------|---|--|---|
| Coachella Valley Stormwater Channel | Pathogens, Source unknown; TDML completion 2010; Dillon Road to Salton Sea | FRSH; RECI; RECII; WARM; WILD; RARE | 4,400 feet |
| Salton Sea | Arsenic TDML Comp 2021; Chlorpyrifos TDML Comp 2021; DDT TDML Comp 2021; Enterococcus TDML Comp 2021; Nutrients (Agri runoff, Industrial, out of state) TDML Comp 2019; Salinity (Agri, out of state, Point Source) TDML Comp 2021. | AQUA; IND; RECI; RECII; WARM; WILD; RARE | 14 miles |

Source: WQMP 2016, (Appendix M)

As listed in **Table 4.9.4-1**, above, beneficial uses include the following:

Beneficial uses of water are defined in the Basin Plan as the uses necessary for the survival or well-being of humans, plants, and wildlife. The existing beneficial uses for both the Coachella Valley Storm Water Channel and the Salton Sea, as designated by the RWQCB in the Basin Plan, include the following:

- Freshwater Replenishment (FRSH) – Uses of water for natural or artificial maintenance of surface water quality or quantity.
- Water Contact Recreation (REC-1) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, or use of natural hot springs.
- Non-Contact Water Recreation (REC-2) – Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat (WARM) – Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
- Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

- Rare, Threatened, or Endangered Species (RARE) – Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.
- Aquaculture (AQUA) – Aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
- Industrial Service Supply (IND) – Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

Project Design Features related to hydrology and water quality are:

- The Specific Plan development areas shall conform to all of the requirements imposed by the Coachella Valley Water District Development Design Manual, the requirements of the City of Coachella’s adopted Stormwater Management Ordinance (Title 13.16 of the Municipal Code), the requirements of the Whitewater River Watershed Stormwater Management Plan, and the National Pollutant Discharge Elimination System (NPDES) Construction General Permit.
- The Project has incorporated a comprehensive drainage and water quality program into the site, consisting of the surface drainage system and water quality features. This will reduce storm water runoff volume and velocity, improve storm water runoff water quality during storm events and low-flow irrigation volumes, and create biological resource habitat. Key system features are summarized in the *WQMP*, on file at the City.
- The proposed Specific Plan includes multiple basins and a paseo which will provide soft-bottomed drainages.

Without Project design features and/or standard conditions (discussed below), varying amounts of urban pollutants, such as motor oil, antifreeze, gasoline, pesticides, detergents, trash, domestic animal waste and fertilizers, can degrade storm water flows. **Table 4.9.4-2, *Pollutant of Concern Summary***, below, lists the pollutant category, potential for pollutant for Project (and/or existing site), and causing receiving water impairment.

**Table 4.9.4-2
 Pollutant of Concern Summary**

| Pollutant Category | Potential for Project and/or Existing Site | Causing Receiving Water Impairment |
|---------------------------|---|---|
| Bacteria/Virus | Potential | Potential Pathogens (CVSD) |
| Heavy Metals | Potential (Commercial) | Potential Arsenic (Salton) |
| Nutrients | Potential | Potential (Salton) |
| Toxic Organic Compounds | Potential (Commercial) | Potential DDT (Salton) |
| Sediment/Turbidity | Potential | |
| Trash & Debris | Potential | |
| Oil & Grease | Potential | |
| Other | | Potential Chlorpyrifos (Salton) |
| Other | | Potential Enterococcus (Salton) |

Source: *WQMP* 2016, (Appendix M)

The Project requires the preparation of a SWPPP for control of pollutants during construction and a Water Quality Management Plan (WQMP) for control of pollutants during occupancy of the Project site. The SWPPP shall be prepared and implemented for each phase of the project in compliance with the requirements of the Construction General Permit. The City has adopted BMPs designed to control discharges of pollution during construction and occupancy that could cause a significant adverse impact to surface water quality. The SWPPP and WQMP must address the hydrologic conditions of concern by maintaining pre-development flows once the Project is developed and treatment of the surface runoff from the site before discharge to the Whitewater River. The protection of water quality and future runoff volumes will be accomplished by reducing, to the extent feasible, the amount of impervious surface and through on-site retention.

The BMPs for this Project, which will be included in either the SWPPP, or *WQMP* (as applicable), may include a combination of the following, as depicted on **Table 4.9.4-3, *BMP Selection Matrix Based upon Pollutant of Concern Removal Efficiency***, below:

- Landscape swale;
- Landscape strip;
- Biofiltration (with underdrain);
- Extended Detention Basin;
- Sand Filter Basin;
- Infiltration Basin;
- Permeable Pavement;
- Bioretention (w/o underdrain); and/or
- Other BMPs, including Proprietary BMPs.

**Table 4.9.4-3
BMP Selection Matrix Based upon Pollutant of Concern Removal Efficiency**

| Pollutant of Concern | Landscape Swale ^{2, 3} | Landscape Strip ^{2, 3} | Bioretention (with underdrain) ^{2, 3} | Extended Detention Basin ² | Sand Filter Basin ² | Infiltration Basin ² | Infiltration Trench ² | Permeable Pavement ² | Bioretention (w/o underdrain) ^{2, 3} | Other BMPs Including Proprietary BMPs ^{4, 6} |
|---|---------------------------------|---------------------------------|--|---------------------------------------|--------------------------------|---------------------------------|----------------------------------|---------------------------------|---|---|
| Sediment & Turbidity | M | M | H | M | H | H | H | H | H | Varies by Product ⁵ |
| Nutrients | L/M | L/M | M | L/M | L/M | H | H | H | H | |
| Toxic Organic Compounds | M/H | M/H | M/H | L | L/M | H | H | H | H | |
| Trash & Debris | L | L | H | H | H | H | H | L | H | |
| Bacteria & Viruses (also: Pathogens) | L | M | H | L | M | H | H | H | H | |
| Oil & Grease | M | M | H | M | H | H | H | H | H | |
| Heavy Metals | M | M/H | M/H | L/M | M | H | H | H | H | |
| <p>Abbreviations: L: Low removal efficiency M: Medium removal efficiency H: High removal efficiency</p> <p>Notes:</p> <p>(1) Periodic performance assessment and updating of the guidance provided by this table may be necessary.</p> <p>(2) Expected performance when designed in accordance with the most current edition of the document, "Riverside County, Whitewater River Region Stormwater Quality Best Management Practice Design Handbook".</p> <p>(3) Performance dependent upon design which includes implementation of thick vegetative cover. Local water conservation and/or landscaping requirements should be considered; approval is based on the discretion of the local land use authority.</p> <p>(4) Includes proprietary stormwater treatment devices as listed in the CASQA Stormwater Best Management Practices Handbooks, other stormwater treatment BMPs not specifically listed in this WQMP (including proprietary filters, hydrodynamic separators, inserts, etc.), or newly developed/emerging stormwater treatment technologies.</p> <p>(5) Expected performance should be based on evaluation of unit processes provided by BMP and available testing data. Approval is based on the discretion of the local land use authority.</p> <p>(6) When used for primary treatment as opposed to pre-treatment, requires site-specific approval by the local land use authority.</p> | | | | | | | | | | |

Source: WQMP 2016, (Appendix M)

These treatment BMPs reduce potential Project pollutants (e.g. sediment/turbidity, nutrients, trash and debris, oxygen demanding substances, bacteria and viruses, oil and grease, pesticides, organic compounds, and metals) to meet water quality requirements. Finally, prior to site development, the City will require the submittal and approval of the Final Water Quality Management Plan. The WQMP and SWPPP are standard conditions and are not considered unique mitigation under CEQA.

The Project design features, WQMP and the SWPPP will be standard requirements for subsequent Tract Maps and/or implementing projects. These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2 and SC-HYD-3** (construction general permit, water quality

management plans and BMPs, respectively) in Subchapter 4.9.5, below.

With the implementation of the Project design features, SWPPP and WQMP, impacts to water quality are expected to be less than significant, and no mitigation is required.

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

Less Than Significant Impact

Groundwater supplies and recharge are addressed in detail in Subchapter 4.15, Utilities and Service Systems, of this EIR. Construction and operation of the proposed Project would not substantially deplete groundwater or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Please refer to Subchapter 4.15 for a complete discussion of impacts related to groundwater supplies.

Any impacts are considered less than significant.

THRESHOLD c: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact

Construction. During construction activities, the Project site would be graded, and excavated soil would be exposed, and there would be an increased potential for soil erosion compared to existing conditions. During a storm event, soil erosion and sedimentation could occur at an accelerated rate. For example, grading activities generate sediment, which has the potential to be washed into storm drains or tracked off site by construction trucks and heavy equipment. In addition, grading and construction activities would compact soil, and construction of structures would increase the impervious area, which can increase runoff during construction.

As a standard requirement, the City requires preparation of a SWPPP to identify Construction BMPs to be implemented as part of each phase of development to reduce impacts to water quality during construction, including those impacts associated with soil erosion and increased runoff. Erosion Control BMPs would be implemented to prevent erosion. Sediment Control BMPs would be implemented to prevent soil particles from leaving the site should any erosion occur. During construction, short-term alteration of drainage patterns would occur; however, the SWPPP would include measures to divert and convey flows to reduce flooding during construction. These measures would ensure that temporarily diverted flows associated with construction activity would not result in on-site or off-site downstream flooding.

These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2 and SC-HYD-3** (construction general permit, water quality management plans and BMPs, respectively)

in Subchapter 4.9.5, below.

With the implementation of the SWPPP, which requires compliance with the requirements of the General Construction Permit and implementation of BMPs during construction, would reduce potential construction impacts related to erosion and siltation and flooding to less than significant levels.

Operation. The proposed Project would change on-site drainage patterns and increase storm water runoff by adding impervious surface areas, including buildings and streets. However, the Project would include a comprehensive drainage system to convey on-site storm flows. A detailed hydrology study would be prepared for each phase of the proposed development to ensure that the on-site storm drain facilities are appropriately sized to prevent on-site or off-site flooding. In the proposed condition, the impervious surface areas would not be prone to erosion or siltation. Treatment BMPs, as part of subsequent WQMPs would be incorporated into the Project. These BMPs would be designed to convey storm water and minimize on-site erosion and siltation.

These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2, SC-HYD-3, and SC-HYD-4** (construction general permit, water quality management plans, BMPs, and hydrology reports, respectively) in Subchapter 4.9.5, below.

With the implementation Project design features, and Project-specific WQMPs, potential operation impacts related to erosion and siltation and flooding would be reduced to less than significant levels.

THRESHOLD d: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact

The proposed Project site's existing drainage pattern will be altered, but the proposed Project engineering plans have taken considerable care to ensure that future runoff patterns (local watersheds) are maintained and that the volume of water discharged will not exceed the current volumes as required by the County and Regional Boards.

In terms of proposed drainage patterns, both off-site and on-site hydrologic and hydraulic drainage conditions were analyzed in the *PDR*.

Offsite flows will be collected at the exiting points of interception with the Project's development limits. Area A will be accepted and routed through Planning Area 3 [Drainage Management Area (DMA) Area A4]. Area B is proposed to be analyzed and controlled with Polk Street and continue southerly. Reference **Figure 4.9.4-1, Proposed Condition DMA Map for the Vista Del Agua Specific Plan.**

As required by the City of Coachella, the Project will retain its full 100-year, 24-hours post development runoff. The Project has been designed with multiple drainage management areas, all with infiltration basins. The Projects infiltration rates were confirmed to be between 1.6 and

2.7 inches per hour. However, for design, an infiltration rate of 0.67 inch/hour was used, as is required by local ordinance. Refer to Appendix D of the *PDR* for Percolation Testing, **Figure 4.9.4-1**, and Appendix B of the *PDR* for detail.

Hydrologic Conditions

1. Methodology

The Synthetic Unit Hydrograph was employed to determine peak runoff volumes. The RCFCWCD Hydrology Manual was used to develop the hydrological parameters for the 100-year 24-hr storm event. Due to the large number of similar DMAs, a representative flow rate yield was identified by studying three DMAs and determining the yield per acre to be applied to the remaining DMAs. Refer to Appendix B of the *PDR* for details. The Rationale Method was employed to determine peak runoff amounts. The RCFCWCD Hydrology Manual was used to develop the hydrological parameters for the 10- and 100-year peak runoff for routing through the proposed project area by the proposed streets. Refer to Appendices B and C of the *PDR* for detail.

2. Off-Site

passed through the Project or routed by edge condition roads. They are identified in **Figure 4.9.2-2**. The areas that will be accepted into the proposed Project's system of drainage is Area A (60 acres). The remaining off-site area, Area B (20 acres), will be routed southerly by the proposed construction of Polk Street. Area A will be accepted into the Project's drainage system and will be routed through the Project. Street capacity will be the primary method, and storm drains will be used at final design when capacity is exceeded, or intersections are desired to be kept dry. Similarly, Polk Street will carry the Area B runoff, and if street capacity is exceeded, storm drains may be used. Additional analysis and design will accompany the Tract Maps.

3. On-Site

The Synthetic Unit Hydrograph method was used to develop and analyze the proposed on-site conditions. Areas A3-A6, A8, and A24 were analyzed independently due to the specific land use (multi-family, park, and commercial). Refer to **Figure 4.9.4-1**.

Hydraulic Conditions

1. Proposed Conditions

As designed, the Project will use infiltration basins for the 100-year 24-hour runoff volume. The primary hydraulic concerns will be the routing of runoff along the proposed streets, and the inlets conveying street runoff into the basins. Primarily the basins will spill over the edges, if any exceedance storm impacts the area. Since the basins hold the full 100 year volume, no outlet design is required. Any overtopping (exceedance storm, i.e., a 500 year event), would spill out of the basins and continue southwesterly in the streets.

2. Roads

Interior roads will consist of pavement thickness in conformance with the Geotechnical Report, when available, and per City Standards. Local roads will have 36' widths measured back of curb to back of curb per City Standards. Streets will be designed to pass the 10-year storm water within the curb, with the 100-year flows contained within the right-of-way. All interior roads will have cross slopes of two (2) percent. Street capacity for the minimum slope roads (0.4%) are calculated in the *PDR* at 33 cfs for curb capacity and 66 cfs for right-of-way capacity. Most of the streets are designed in excess of the 0.4% minimum, with many over 1%. The worst-case scenario, or largest runoff area is DMA 9 at nearly 27 acres. This areas street capacity was checked to confirm the road can convey runoff as designed. Area A9 yields 28 cfs for the 10-year runoff, and 61 cfs for the 100-year runoff. The road that will convey this flow is set at 1.4% slope and can carry 62 cfs within the curbs, and 124 cfs within the right of way. As the Project is designed, none of the areas of runoff exceed the back of curb capacity for 100-year runoff. Therefore, the Project will not require storm drain due to street capacity. However, in locations where intersections are desired to be kept dry, storm drain may be used at final design. Refer to **Figure 4.9.4-1**, and Appendix C of the *PDR* for additional detail.

Based on the information provided above, implementation of the Project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Impacts are considered less than significant with the inclusion of Project Design Features.

THRESHOLD e: Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff?

Less Than Significant Impact

The Project will provide flood control facilities to intercept and convey off-site and on-site drainage areas and revert to existing conditions as the drainage leaves the Project site. The contours indicate that the general flow direction is in the southwesterly direction. The runoff emanating from the Project ultimately discharges into the Coachella Valley Storm Channel located approximately one mile southwest of the site. The existing flow rates off-site will be maintained with no additional off-site flows as a result of the Project.

Construction. Construction of the proposed Project has the potential to introduce pollutants into the storm water drainage system from erosion, siltation, and accidental spills. In addition, grading and construction activities would compact soil, and construction of structures would increase the impervious area, which can increase runoff during construction. The Construction General Permit requires preparation of a SWPPP to identify construction BMPs to be implemented during Project construction to reduce impacts to water quality, including those impacts associated with soil erosion, siltation, spills, and increased runoff. This is a standard condition and is not considered unique mitigation under CEQA. With compliance with the Construction General Permit and implementation of BMPs during construction, construction impacts related to exceedance of the capacity of and providing additional sources of polluted runoff to storm water drainage systems would be reduced to less than significant levels. No mitigation is required.

Operation. The Project includes a comprehensive drainage system to convey on-site storm flows. During the design of each phase of the Project, a detailed hydrology study would be prepared to ensure that the on-site storm drain facilities are appropriately sized to prevent on-site flooding. This is a standard condition and is not considered unique mitigation under CEQA. On-site retention basins would retain storm water runoff on-site and would therefore not contribute runoff water that would exceed the capacity of the downstream storm drain facilities. The Project includes Site Design, Source Control, and Treatment BMPs to target pollutants of concern in runoff from the Project site. This also is a standard condition and is not considered unique mitigation under CEQA.

Most of the drainage for the site will be conveyed along paseo areas with excess storm water released into a proposed detention basin in the southwest portion of the site. Several water quality basins as well as paseos areas will act as filtration facilities for the Project runoff. Soil filtration rates throughout this area are high, lending additional groundwater recharge and water quality opportunities. Reference **Figure 4.9.2-3**.

These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2, SC-HYD-3, and SC-HYD-4** (construction general permit, water quality management plans, BMPs, and hydrology reports, respectively) in Subchapter 4.9.5, below.

Thus, Project drainage design will insure that increases in surface runoff from the site as a result of increased impervious surface will be reduced to a non-significant level of flow before leaving the Project site. Storm flows will be controlled to a level that does not cause any significant increases in runoff and flood hazards downstream. No potential for significant adverse impacts due to the increased volume of flows is forecast to occur.

THRESHOLD f: Would the Project otherwise substantially degrade water quality?

Less Than Significant Impact with Mitigation Incorporated

NOP Comment Letter #9 from the Coachella Valley Mosquito and Vector Control District (dated 3/27/15) states:

- The Project will result in an increase in storm water retention sites which could provide additional habitat for larval mosquitos.
- The site is surrounded on three sides by agricultural areas and may result in an increased need for fly control.
- Irrigation of the property could increase the suitability of the land for red imported fire ants.
- Development of the property could result in an increase of the vector populations which could result in putting more people at risk of contracting vector-borne diseases.
- Suggests that there are a number of construction practices and landscaping designs that will reduce and potentially prevent the production of mosquitos and red imported fire ants in the area.

The Project's retention basins could provide habitat for larval mosquitoes. In addition, the location of the project site, downwind from agricultural areas, may result in the increased need for fly and eye gnat control. Also, irrigation of the Project could increase the suitability for red imported fire ants. Because there is not a specific CEQA threshold to address vector control, it

is being evaluated here, as these vectors are associated with surface water.

Flies and eye gnats are a potential concern due to the proximity of the Project site to agricultural land. Imported red fire ants are a potential concern in the landscape and open space areas of the Project because imported red fire ants tend to build nests in open, sunlit, irrigated, grassy areas. Mosquitos are a potential concern associated with on-site water, particularly standing water or moist soils associated with treatment BMPs, which can serve as breeding habitat for mosquitos.

As specified in **Mitigation Measure MM-HYD-1**, a Vector Control Program would be implemented to address control of flies, eye gnats, imported red fire ants, and mosquitos. Flies and eye gnats would be controlled through measures such as landscape maintenance, removal of vegetation and landscape clippings, and irrigation management to prevent overwatering. Red ants would be controlled by limiting access to water through use of desert landscaping, irrigation management, and turf management to reduce potential nesting habitat. **MM-HYD-1** requires that prior to issuance of grading permits, the applicant shall develop a Vector Control Program in coordination with the Coachella Valley Mosquito and Vector Control District. The Vector Control Program shall address control of flies, eye gnats, imported red fire ants, and mosquitos. The vector control program shall include measures such as landscape maintenance, removal of vegetation and landscape clippings, irrigation management, use of desert landscaping, irrigation management, and turf management.

As specified within the *WQMP*, a Maintenance and Management Program for all storm water facilities would be developed and implemented to control mosquitos and reduce potential breeding habitat. The Maintenance and Management Program would include a detailed plan for the control of vectors indigenous to wetlands. Because the minimum length of time for mosquito development is 96 hours, the water quality features, such as vegetated strips, vegetated swales, detention devices, infiltration BMPs, bioretention BMPs, and media filters would be designed to drain within 72 hours or be sealed against mosquitos. In addition, mosquito control would be achieved through use of desert landscaping and irrigation management. These requirements are reflected in **Standards Conditions SC-HYD-2**, and **SC-HYD-3**, (water quality management plans, and BMPs, respectively) in Subchapter 4.9.5, below.

With implementation of **MM-HYD-1**, which require development and implementation of a Vector Control Program, and with an on-going BMP Maintenance and Management Program (consistent with the *WQMP*), and **Standards Conditions SC-HYD-2**, and **SC-HYD-3**, potential impacts related to vectors would be reduced to less than significant levels.

THRESHOLD g: Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact

The Project is not located within a 100-year flood hazard area. There are no dams or reservoirs upslope of the Project site; therefore, the Project site is not in the flood zone of a dam. During a seismic event, there is a possibility that the Coachella Canal levee could fail. The Project site is adjacent to the levee of the canal. The Project site is lower in elevation than the Coachella Canal. Flooding from failure of the levee, while extremely rare, could occur on the Project site.

It is anticipated that any flows would be accepted by the Project drainage and basin system. The City has emergency procedures in place to address such failures, and other catastrophic events that, while rare, must have contingency plans in the event of failure. While the Project site is located in this potential hazard area, these emergency procedures are in place to address any such occurrence. Therefore, any impacts are considered less than significant.

THRESHOLD h & i: Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or, place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less Than Significant Impact

According to **Figure 3.4.2-7, Flood Insurance Rate Map (FIRM) (Panel 2260G)**, the majority of the Project site is within Zone X. Zone X is defined as “areas determined to be outside the 0.2% annual chance floodway.” Development within Zone X is acceptable with finished floor elevations 1 foot above the 100-year flood elevation. The Project includes implementation of an integrated storm water collection, implementation of a conveyance system designed to provide 100-year flood protection to flood-prone areas, prohibition of development within on-site floodplains, and integration of setbacks/buffers and passive recreational amenities within these areas into the Specific Plan Land Use Plan.

Therefore, structures and housing would be protected from the 100-year flood, and construction or operational impacts related to placement or housing within a 100-year flood hazard area would be less than significant.

THRESHOLD j: Would the Project be subject to inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact

Seiching is a phenomenon that occurs when seismic groundshaking induces standing waves (seiches) inside water retention facilities such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. There are no water retention facilities located in proximity to the proposed Project site. There is an enclosed water tank located off-site at the southwest corner of the Project site. Since this is an enclosed tank, there is not potential for a seiche.

While the Project site is adjacent to the levee of the Coachella Canal, the Project site will be higher in elevation than the Coachella Canal. Therefore, potential seiches from the levee could occur from the Canal. According to the General Plan EIR, minor seiches may occur within the Planning Area in smaller ponds or lakes, however the water level rise is unlikely to exceed 0.5 m (1.6 ft.) high. Since this is a canal and not a pond or lake, no impacts will occur.

The proposed retention basins are designed to temporarily detain runoff and due to their temporary nature would not constitute a body of water. Therefore, the risk associated with possible seiche waves is not considered a potential constraint or a potentially significant impact of the Project, and no mitigation is necessary.

Tsunamis are generated wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The proposed project is not located in a tsunami inundation zone. Therefore, the Project would not result in impacts related to exposure of people or structures to risk of loss, injury, or death involving flooding as a result of inundation by tsunami. No mitigation is required.

Mudslides and slumps are described as a shallower type of slope failure, usually affecting the upper soil mantle or weathered bedrock underlying natural slopes and triggered by surface or shallow subsurface saturation. No debris/mudflows were noted during the geologic mapping for the Project.

Therefore, the risk associated with possible mudflows and mudslides is not considered a potential constraint or a potentially significant impact of the Project, and no mitigation is necessary. Therefore, the Project would result in less than significant impacts related to exposure of people or structures to risk of loss, injury, or death involving flooding as a result of inundation by mudflow.

4.9.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-HYD-1 Construction General Permit. Prior to issuance of a grading permit, the applicant shall obtain coverage for each phase of the project under the State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, Permit No. CAS000002) (Construction General Permit), or subsequent issuance. The applicant shall provide the Waste Discharge Identification Numbers to the City of Coachella Director of Public Works to demonstrate proof of coverage under the Construction General Permit, per Chapter 13.16 of the City's Municipal Code. A SWPPP shall be prepared and implemented for each phase of the project in compliance with the requirements of the Construction General Permit. The SWPPPs shall identify construction BMPs to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities.

SC-HYD-2 Water Quality Management Plans. Prior to issuance of grading permits, the applicant shall submit a Final Water Quality Management Plan for each phase of the project to the City of Coachella Director of Public Works for review and approval, per Chapter 13.16 of the City's Municipal Code. The Final WQMPs shall be consistent with the requirements of the Whitewater River Region Water Quality Management Plan for Urban Runoff (January 2011 or subsequent issuance). Project-specific Site Design, Source Control, and Treatment Control BMPs contained in the Final WQMPs shall be incorporated into final design. The BMPs shall be properly designed

and maintained to target pollutants of concern and reduce runoff from the project site. The WQMPs shall include an operations and maintenance plan for the prescribed Treatment Control BMPs to ensure their long-term performance.

Site Design BMPs to be considered and incorporated into the Project where feasible include conserving natural areas and minimizing urban runoff, impervious footprint, and directly connected impervious areas. Nonstructural Source Control BMPs to be considered and incorporated into the project where feasible include education/training for property owners, operators, tenants, occupants, or employees; activity restrictions; irrigation system and landscape maintenance; common area litter control; street sweeping of private streets and parking lots; and drainage facility inspection and maintenance.

Structural Source Control BMPs to be considered and incorporated into the Project where feasible include storm drain inlet stenciling and signage; landscape and irrigation system design; protection of slopes and channels; provision of community car wash racks; provision of wash water controls for food preparation areas; and proper design and maintenance of fueling areas, air/water supply area drainage, trash storage areas, loading docks, maintenance bays, vehicle and equipment wash areas, outdoor material storage areas, and outdoor work areas or processing areas.

Treatment Control BMPs to be considered and incorporated into the project where feasible include biofilters (grass swales, grass strips, wetland vegetation swales, and bioretention), detention basins (extended/dry detention basins with grass lining and extended/dry detention basins with impervious lining), infiltration BMPs (infiltration basins, infiltration trenches, and porous pavement), wet ponds or wetlands (permanent pool wet ponds and construction wetlands), filtration systems (sand filters and media filters), water quality inlets, hydrodynamic separator systems (hydrodynamic devices, baffle boxes, swirl concentrators, or cyclone separators), and manufactured or proprietary devices.

SC-HYD-3

Best Management Practices (BMP) Maintenance and Management Program. Prior to the issuance of a grading permit, a detailed maintenance and management program for construction and post-construction storm water facilities shall be prepared that includes, but is not be limited to: detailed landscaped design criteria, a detailed plan for the control of vectors indigenous to wetlands, a detailed plan for the control of mosquitos (in addition to a separate Vector Control Program for nonstorm water facilities – see below), and a plan to evaluate the overall health of the facility on a regular schedule and implement any corrective actions necessary to

maintain the facility's ability to improve water quality, per Chapter 13.16 of the City's Municipal Code.

- SC-HYD-4** **Hydrology Reports.** Prior to issuance of grading permits, the applicant shall submit a final hydrology report for each phase of the Project to the City of Coachella City Engineer-1 for review and approval, per Chapter 13.16 of the City's Municipal Code. The hydrology reports shall demonstrate, based on hydrologic calculations, that the Project's on-site storm conveyance and retention facilities are designed in accordance with the requirement of the Riverside County Flood Control and Water Conservation District Hydrology Manual.

Mitigation Measure(s)

- MM-HYD-1** **Vector Control Program.** Prior to issuance of grading permits, the applicant shall develop a Vector Control Program in coordination with the Coachella Valley Mosquito and Vector Control District. The Vector Control Program shall address control of flies, eye gnats, imported red fire ants, and mosquitos. The vector control program shall include measures such as landscape maintenance, removal of vegetation and landscape clippings, irrigation management, use of desert landscaping, irrigation management, and turf management.

4.9.6 Cumulative Impacts

The cumulative study area for hydrology and water quality is the Whitewater Watershed. Each of the cumulative projects, individually and cumulatively, could potentially increase the volume of storm water runoff and contribute to pollutant loading in storm water runoff reaching both the City's storm drain system and the Whitewater River, resulting in cumulative impacts to hydrology and surface water quality. However, as with the proposed Project, each of the cumulative projects would also be subject to NPDES and MS4 Permit requirements for both construction and operation. Each project would be required to develop a SWPPP and WQMPs and would be evaluated individually to determine appropriate BMPs to minimize impacts to surface water quality and vector. These requirements are reflected in **Standards Conditions SC-HYD-1, SC-HYD-2, SC-HYD-3, and SC-HYD-4** (construction general permit, water quality management plans, BMPs, and hydrology reports, respectively) in Subchapter 4.9.5, above, as well as **MM-HYD-1**, above.

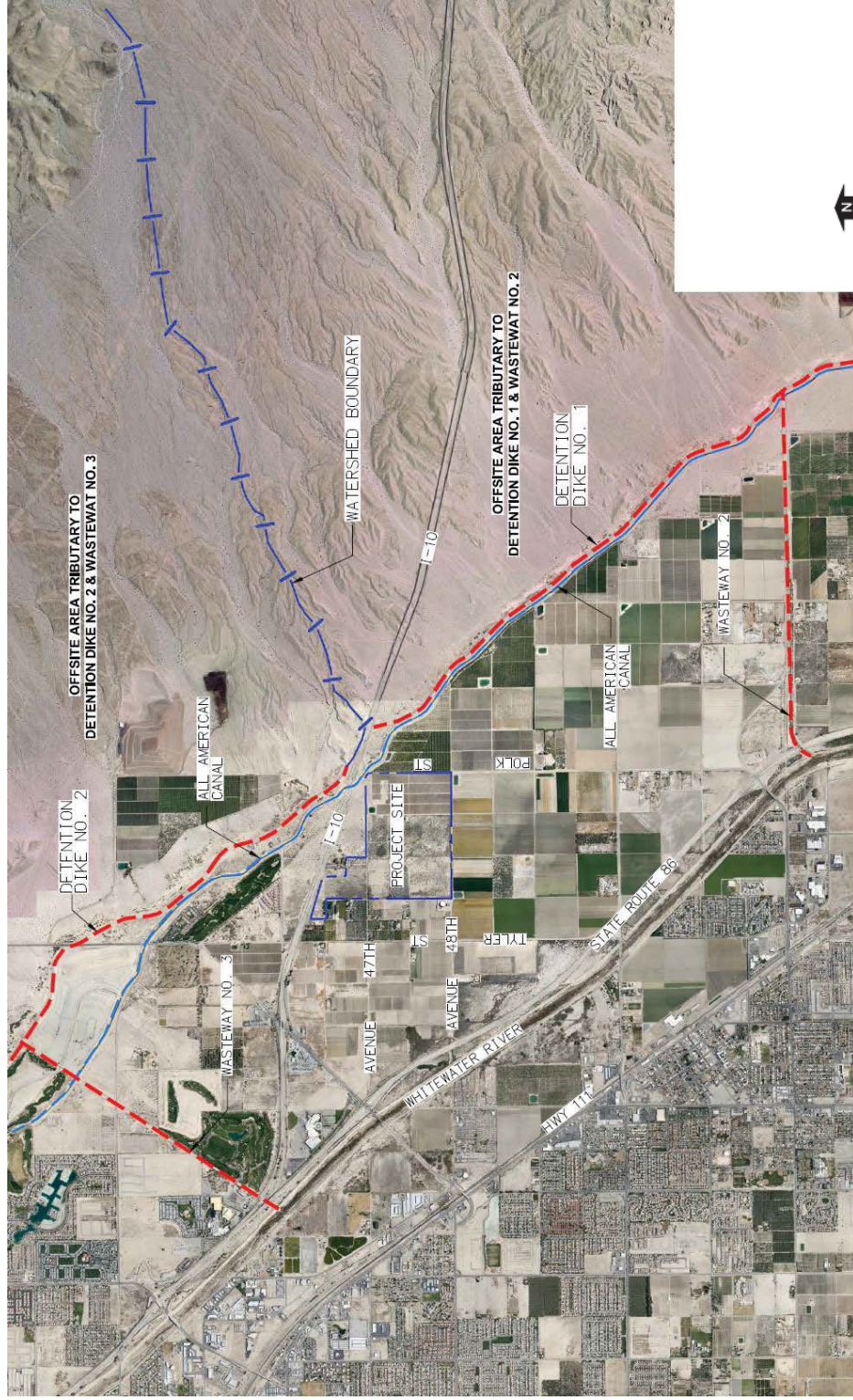
In addition, the City Department of Public Works reviews all development projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available. Thus, the Project's contribution to cumulative impacts to hydrology and water quality would be less than significant.

4.9.7 Unavoidable Significant Adverse Impacts

The proposed Project would not result in significant unavoidable adverse impacts related to hydrology and water quality.

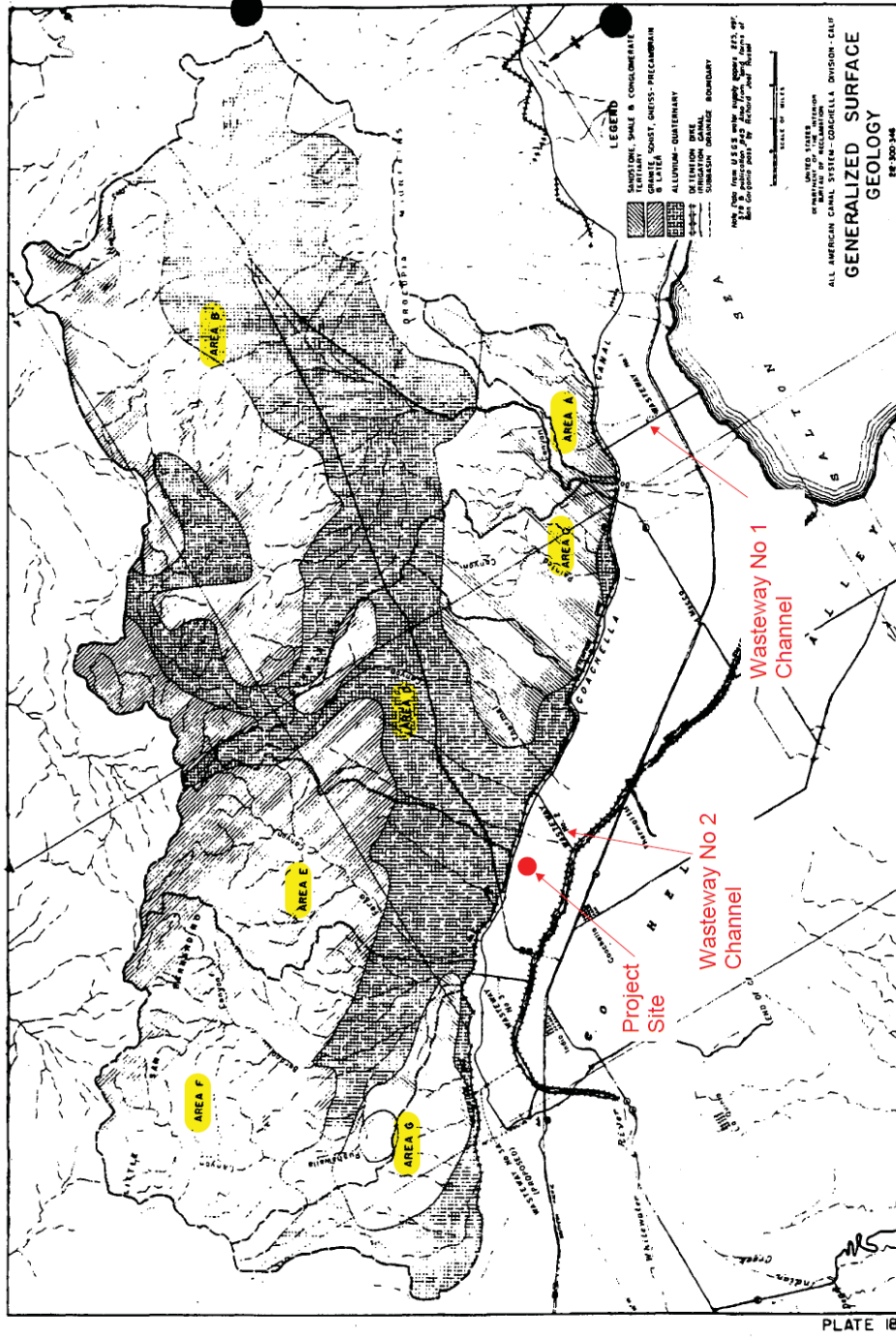
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Figure 4.9.2-1a
Existing Regional Drainage Facilities



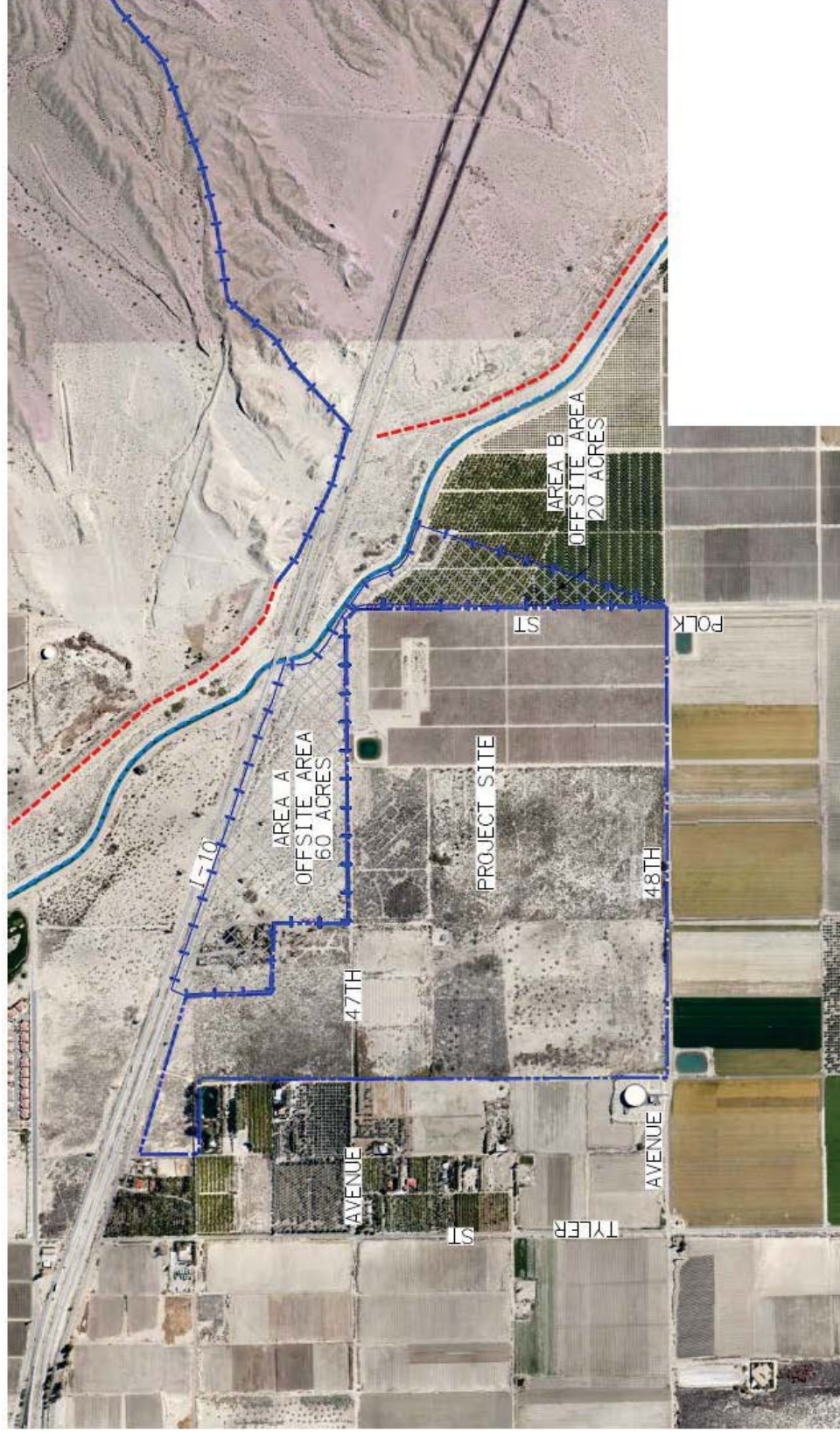
Source: Project Drainage Report 2017 (Appendix L)

Figure 4.9.2-1b
All American Canal Wasteways and Areas



Source: Project Drainage Report 2017 (Appendix L)

Figure 4.9.2-2
Local Off-site Watershed Areas



Source: Project Drainage Report 2017 (Appendix L)

Figure 4.9.2-3
Master Drainage Plan

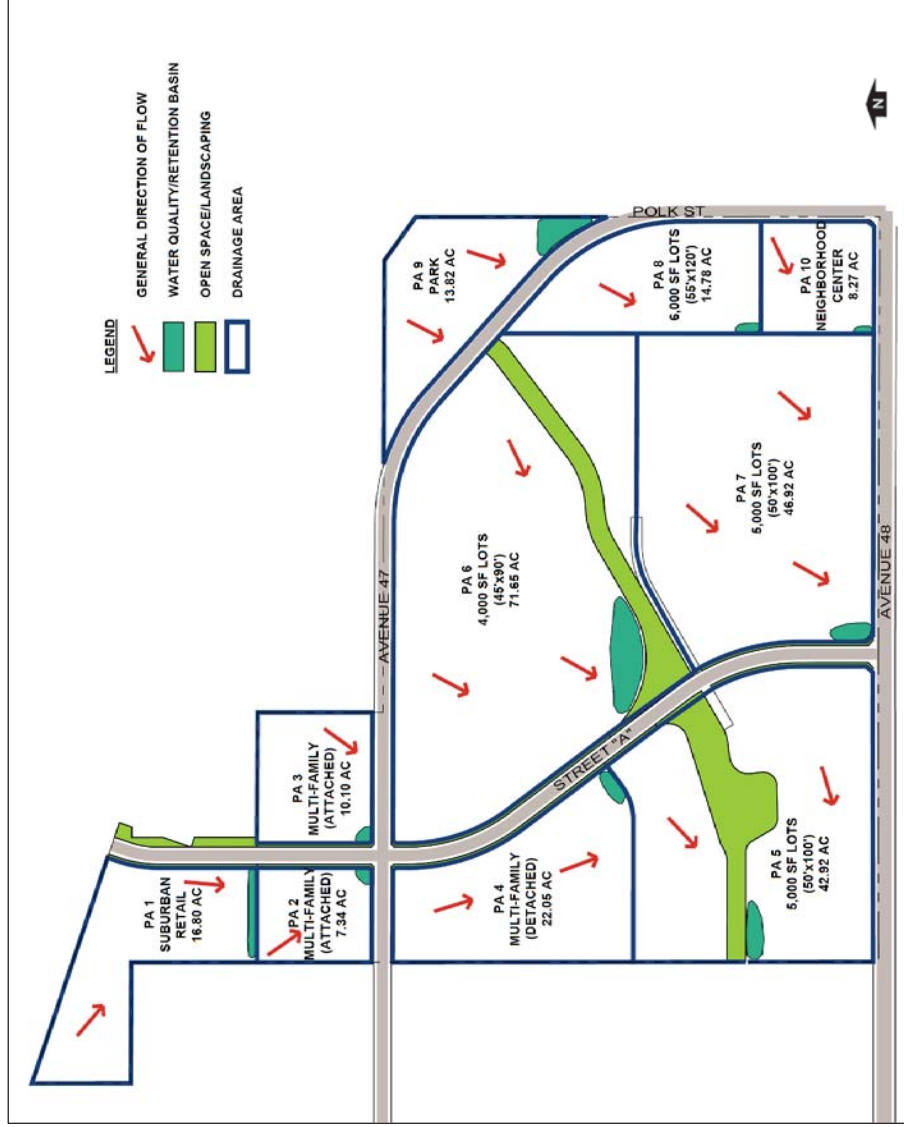
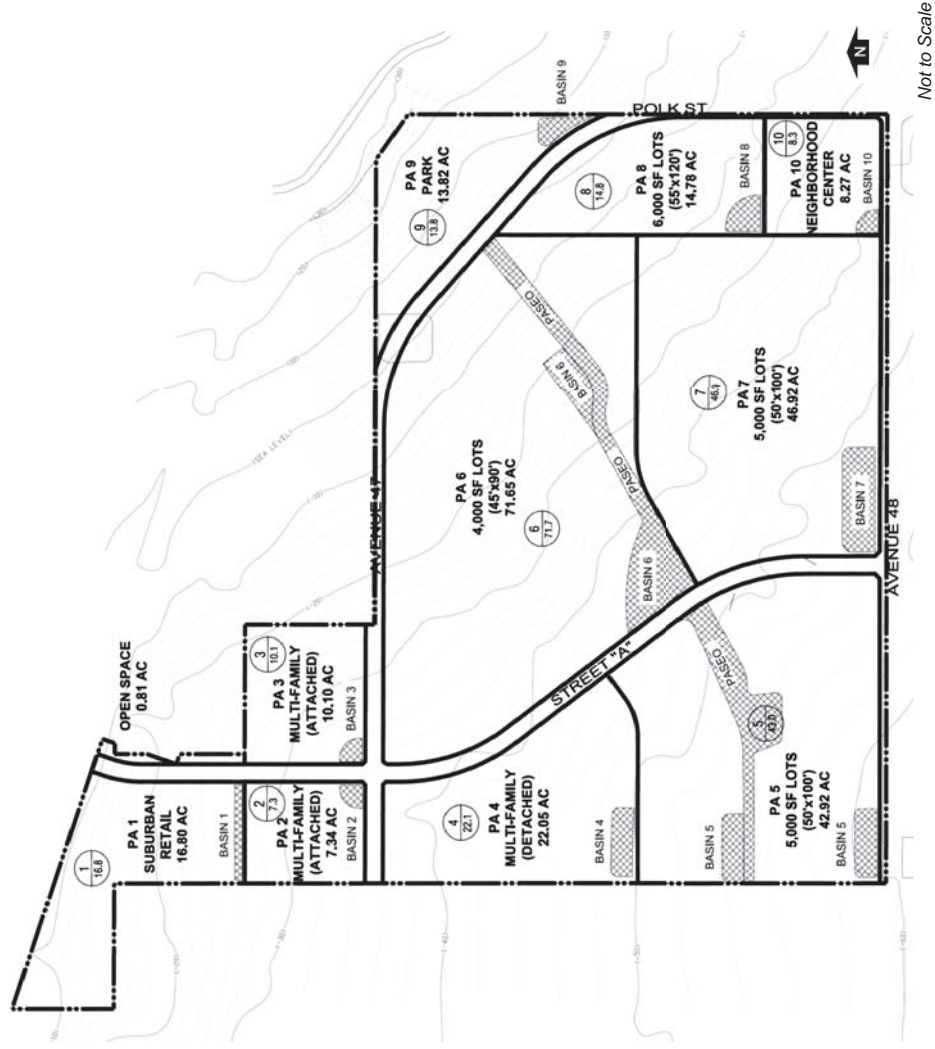


Figure 4.9.4-1
Proposed Condition DMA Map for the Vista Del Agua Specific Plan



Source: Project Drainage Report 2017 (Appendix L)

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.10 figures are located at the end of this subchapter, not immediately following their reference in text.

4.10 LAND USE AND PLANNING

4.10.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of land use and planning from implementation of the Project. Section E.X., Land Use and Planning, of the Initial Study posed the following questions, asking whether the Project would:

- Physically divide an established community?
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? and/or,
- Conflict with any applicable habitat conservation plan or natural community conservation plan?

Based on the analysis in the Initial Study it was determined that the following issue areas related to land use and planning in the questions asked above **would not** require any further analysis in the Environmental Impact Report (EIR).

- Physically divide an established community.

Based on the analysis in the Initial Study it was determined, that with the exception of the one (1) issue area mentioned above, the remaining two (2) issue areas related to land use and planning in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting land use and planning:

“The Project (on-site and off-site components) is located in an area that is predominately utilized in an agricultural capacity. The current General Plan designation for the Project (on-site and off-site components) is Suburban Retail District, Urban, General, and Suburban Neighborhood, and Neighborhood Center, therefore; it has been anticipated by the City, that urbanization is planned and will ultimately occur in the Project vicinity. The Project is proposing uses that are different than the current land use designation; however, they are still urban/suburban, not agricultural in nature. Should the Project be developed before any of the surrounding areas are developed, it may physically divide the established community. Since the General Plan anticipates urban/suburban uses, these impacts are considered less than significant. No additional mitigation is required. This issue will not require any further analysis in the EIR.

The Project (on-site and off-site components), as implemented will include a General Plan amendment, change of zone, specific plan, tentative parcel map, and a development agreement. The City will process all of these applications concurrently.

Through this City review, as well as review by the applicable local agencies, special districts, state and federal agencies, etc., the Project will be required to comply with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Impacts will need to be completely identified and mitigation measures may be required to reduce impacts completely, or to the greatest extent feasible. In order to ensure a comprehensive discussion of this land use and planning resource issue, it will be analyzed in the EIR.

Please reference Response IV.a-f, above. Implementation of the Project (on-site and off-site components) may conflict with any applicable habitat conservation plan or natural community conservation plan, including the Coachella Valley Multiple Species Habitat Conservation Plan. In order to ensure a comprehensive discussion of this land use and planning resource issue, it will be analyzed in the EIR.”

These issues pertaining to land use and planning will be discussed below as set in the following framework:

- Environmental Setting: Land Use and Planning
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and the Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following resources were utilized in this subchapter:

- CV Link Proposed Route:
http://www.coachellavalleylink.com/images/documents/CV_Link_Outreach_Map_8.5_x_14.pdf

No issues were raised in response to the Notice of Preparation (NOP) and/or at the scoping meeting. Reference Subchapter 2.2.1, Summary of Responses to the NOP, and Subchapter 2.2.2, Summary of Responses to Scoping Meeting Speaker Comments.

4.10.2 Environmental Setting

Overview

The Specific Plan Project site currently has the following General Plan Land Use Designation: Entertainment Commercial (C-E). Please reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

The Project site has the following zoning classifications: General Commercial (C-G), Residential Single-Family (R-S), and Manufacturing Service (M-S) zoning designations. Again, please reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**.

The proposed Project would include Residential, Commercial, Parks/Recreation, and Open Space uses. **Table 4.10-1, Proposed Specific Plan Land Use, General Plan Land Use Designations, and Zoning Classifications**, below, shows the current relationships between the 3. Please reference **Figure 3.4.1-1, Existing General Plan and Zoning Classifications**, and **Figure 2.1.1-1, Specific Plan Master Development Plan**.

**Table 4.10-1
Proposed Specific Plan Land Use, General Plan Land Use Designations, and Zoning Classification(s)**

| Planning Area | Land Use | Acreeage | General Plan Land Use Designation | Zoning Classification(s) |
|----------------------|-------------------------------|-----------------|--|--|
| 1 | General Commercial/Open Space | 16.80/0.81 | Entertainment Commercial (C-E) | General Commercial (C-G), Residential Single-Family (R-S), and Manufacturing Service (M-S) |
| 2 | Multi-Family Residential | 7.34 | Entertainment Commercial (C-E) | Residential Single-Family (R-S) |
| 3 | Multi-Family Residential | 10.10 | Entertainment Commercial (C-E) | Residential Single-Family (R-S) |
| 4 | Multi-Family Residential | 22.05 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 5 | Single-Family Residential | 42.92 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 6 | Single-Family Residential | 71.65 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 7 | Single-Family Residential | 46.92 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 8 | Single-Family Residential | 14.78 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 9 | Park | 13.82 | Entertainment Commercial (C-E) | General Commercial (C-G) |
| 10 | Neighborhood Commercial | 8.27 | Entertainment Commercial (C-E) | General Commercial (C-G) |

Source: Vista del Agua Specific Plan 2018 (Appendix A)

Related Regulations

City of Coachella General Plan

The City of Coachella's General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.8, Land Use + Planning, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on land use and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies address land use impacts and may also be included under other chapters of the EIR:

Land Use + Community Character Element

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.7 Climate-appropriate design: Require architecture, building materials and landscape design to respect and relate to the local climate, topography, history, and building practices.

2.12 High priority development areas. Identify subareas 5, 6, 7, 8, 9, 10, and 11 as Priority Growth Areas to be targeted for growth through City policies and actions and to receive priority for funding, community facilities and services.

2.16 Range of uses: Through Specific Plans, Planned Developments, or other similar master planning processes, allow the designations shown on the General Plan Designation Map to be adjusted within the ranges set forth for each policy area in large, undeveloped areas of the City so long as the visions of the General Plan and the applicable subarea is met.

Goal 3. Healthy Community Design. Development patterns and urban design comprised of complete, walkable, attractive, family-friendly neighborhoods, districts and corridors that support healthy and active lifestyles.

3.1 Physical plan: Facilitate the construction of a built environment that supports a healthy physical and social environment for new and existing neighborhoods.

3.2 Walkable streets: Regulate new development to ensure new blocks encourage walkability by maximizing connectivity and route choice, create reasonable block lengths to encourage more walking and physical activity and improve the walkability of existing neighborhood streets.

3.3 Pedestrian barriers: Discourage physical barriers to walking and bicycling between and within neighborhoods and neighborhood centers. If physical barriers are unavoidable, provide safe and comfortable crossings for pedestrians and cyclists. Physical barriers may include arterial streets with speed limits above 35 mph, transit or utility rights-of-way, very long blocks without through-streets, and sound walls, among others.

Goal 5. Neighborhoods. Neighborhoods that provide a variety of housing types, densities, designs and mix of uses and services that reflect the diversity and identity of Coachella, provide for diverse needs of residents of all ages, ethnicities, socio-economic groups and abilities, and support healthy and active lifestyles. (The following policies apply to all locations with a “Neighborhood” General Plan Designation.)

5.1 Complete neighborhoods: Through the development entitlement process, ensure that all new Neighborhoods (areas with a “Neighborhood” General Plan Designation) are complete and well-structured such that the physical layout and land use mix promote walking to services, biking and transit use; develop community identity and pride, are family friendly and address the needs of multiple ages and physical abilities. New neighborhoods should have the following characteristics:

- Be approximately 125 acres in size and approximately half-mile in diameter
- Contain short, walkable block lengths.
- Have a grid or modified grid street network (except where topography necessitates another street network layout).
- Contain a high level of connectivity for pedestrians, bicycles and vehicles (except where existing development or natural features prohibit connectivity).
- Have homes with entries and windows facing the street.
- Contain a diversity of housing types, where possible.
- Provide a diversity of architectural styles.
- Have goods and services within a short walking distance.
- Are organized around a central focal point such as a park, school, civic building or neighborhood retail such that most homes are no more than one quarter-mile from this focal point.

5.4 Balanced neighborhoods: Within the allowed densities and housing types, promote a range of housing and price levels within each neighborhood in order to accommodate diverse ages and incomes. For development projects larger than five acres, require that a diversity of housing types be provided and that these housing types be mixed rather than segregated by unit type.

5.7 Walkable neighborhoods: Require that all new neighborhoods are designed and constructed to be pedestrian friendly and include features such as short blocks, wide sidewalks, tree-shaded streets, buildings that define and are oriented to streets or public spaces, traffic-calming features, convenient pedestrian street crossings, and safe streets that are designed for pedestrians, cyclists and vehicles.

5.8 Provision of sidewalks: Except within designated rural areas, require sidewalks of at least six feet in width on both sides of streets in neighborhoods.

5.9 Street network: Except where infeasible because of topographic conditions, require new Neighborhoods to be designed with a traditional grid pattern and block sizes ranging from 300 to 600 feet, depending on the General Plan Designations.

5.11 Connections to key destinations: Require direct pedestrian connections between residential areas and nearby commercial areas.

5.13 Tree-lined streets: Design and build Neighborhoods to provide trees on both sides of at least 60 percent of new and existing streets within the project and on the project's side of bordering streets, between the vehicle travel way and walkway at intervals averaging no more than 50 feet (excluding driveways and utility vaults). This standard shall apply whenever new streets are constructed or when existing streets and sidewalks are significantly rehabilitated with existing neighborhoods.

5.14 Shaded streets: Strive to design and build neighborhoods to provide shade over at least 30 percent of the length of sidewalks on streets within the project. Trees must provide shade within 10 years of landscape installation and should be as water efficient as possible.

5.15 Access to daily activities: Strive to create development patterns such that the majority of residents are within one-half mile walking distance to a variety of neighborhood goods and services, such as supermarkets, restaurants, churches, cafes, dry cleaners, laundromats, farmers markets, banks, hair care, pharmacies and similar uses.

5.16 Access to parks and open spaces: Design new neighborhoods and, where feasible, retrofit existing neighborhoods, so that 60 percent of dwelling units are within a one-third mile walk distance of a usable open space such as a tot-lot, neighborhood park, community park or plaza/green.

5.17 Neighborhood transitions: Require that new neighborhoods provide appropriate transitions in scale, building type and density between different General Plan designations.

5.20 Soundwalls: Allow the use of soundwalls to buffer new Neighborhoods from existing sources of noise pollution such as railroads and limited access roadways. Prohibit the use of soundwalls to buffer residential areas from arterial or collector streets. Instead design approaches such as building setbacks, landscaping and other techniques shall be used.

5.21 Subdivision gateways: Discourage the use of signs to distinguish one residential project from another. Strive for neighborhoods to blend seamlessly into one another.

5.22 Green neighborhoods: Encourage new developments to build to a green neighborhood rating standard and apply for certification from a program such as LEED for Neighborhood Development or LEED for Homes.

Goal 6. Centers. A variety of mixed use, urban centers throughout the City that provides opportunities for shopping, recreation, commerce, employment and arts and culture.

6.5 Access to transit: Promote the development of commercial and mixed use centers that are located on existing or planned transit stops in order to facilitate and take advantage of transit service, reduce vehicle trips and allow residents without private vehicles to access services.

6.7 New neighborhood centers: Create a series of new neighborhood centers throughout Coachella so the majority of dwelling units in each Neighborhood are no more than one-half mile from any neighborhood center.

6.8 Neighborhood center location: Locate new Neighborhood Centers at the intersections of major roadways such as collectors and arterials.

6.9 Neighborhood center design: Design new neighborhood centers to be walkable and pedestrian-friendly with buildings that front internal streets and public sidewalks and with buildings facing major roadways. No more than 50 percent of the frontage on streets may be parking lots.

Goal 7. Districts. A series of unique, destination-oriented districts throughout Coachella that provide space for large-format retail, industrial and resort uses in order to increase access to jobs, provide amenities for residents and improve the fiscal stability of the City.

7.6 New suburban retail districts: Allow Suburban Retail Districts to locate along major roadways throughout the City.

7.7 Suburban retail district design: Allow Suburban Retail Districts to have an automobile-oriented design with surface parking lots with landscaping, buildings set back from the street and relatively low floor area ratios. Freestanding retail pads are encouraged. Ensure that the design also allows for pedestrian and bicycle access to and through the site.

Goal 8. Public Facilities and Buildings. A variety of public facilities and buildings throughout the City that improves the quality of life for residents and maintains a high-level of public services.

8.2 Phasing of public facilities. Require new parks, open spaces and public facilities be constructed concurrent with, or prior to, the development of each Neighborhood. All required parks, open spaces and public facilities should be constructed before 75 percent of the dwelling units are constructed.

Goal 9. Corridors and Connectivity. A network of transportation and open space corridors throughout the City that provides a high level of connectivity for vehicles, cyclists and pedestrians.

9.1 City-wide connectivity: Establish and preserve a Citywide street network throughout the City where through roads occur approximately every one-quarter mile, except where connections cannot be made because of previous large development projects or physical constraints. Physical constraints shall be canals, railroads, water, steep slopes, limited access roadways and similar natural and man-made barriers.

9.2 Subarea connectivity: Ensure a high-level of connectivity in all Neighborhoods, Centers and Districts throughout the City. The connectivity shall be measured as block perimeter and in external connectivity on the perimeter of a new development project.

9.3 Connections between development projects: Require the continuation of the street network between adjacent development projects and discourage the use of cul-de-sacs except where necessary because connections cannot be made due to existing development, topographic conditions or limited access to transportation systems.

Goal 10. Development requirements. A fair, understandable and predictable approach that ensures new development does not impose a fiscal burden on the City, conforms to regional airport and railroad safety practices, and requires new projects to provide adequate public facilities and services as part of the overall process.

10.1 Required contents of Specific Plans and Planned Developments that implement the subarea Master Plans. Require that all Specific Plans, Planned Developments, Master Plans and other master-planned community implementation tools include:

- A plan for the phasing of all off-site infrastructure.
- A performance schedule for the issuance of building permits based on the concurrent availability of public services and amenities, including parks, schools and other public facilities identified in the entitlement documents.
- A clear statement of the minimum public improvements that will be required as part of the first phase of development.
- A statement of the financing mechanisms that will provide for the ongoing funding and financing of the public facilities of the project. These financing tools should be presented and discussed in the entitlement document implementation plan.

10.2 Concurrency: Prohibit the issuance of precise grading plans and building permits unless the City has made a determination that adequate stormwater facilities, parks, solid waste, water, sewer and transportation facilities are operating to serve each phase of development.

10.3 Phasing of project site improvements. Require that new subdivisions complete the public improvements before occupancy inspections unless a development agreement is implemented.

Mobility Element

Goal 3. Pedestrian Network. A safe pedestrian network that provides direct connections between residences, employment, shopping and civic uses.

3.1 Pedestrian network: Improve health outcomes by creating a safe and convenient circulation system for pedestrians that focuses on crosswalks, improves the connections between neighborhoods and commercial areas, provides places to sit or gather, pedestrian-scaled street lighting, buffers from moving vehicle traffic, and includes amenities that attract people of all ages and abilities.

3.4 Pedestrian connections for development: Require that all development or redevelopment projects provide pedestrian connections to the external pedestrian network.

3.5 Pedestrian access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide pedestrian connections from external areas into the community.

3.7 Neighborhood connectivity: Create bicycle and pedestrian connections through existing residential neighborhoods, providing access to adjacent neighborhoods and external bicycle/pedestrian facilities.

3.8 Park once: Design dense nodes of commercial and retail businesses with reduced off-street parking that is accessible to public parking locations so people can park once for many errands/trips.

Goal 4. Bicycle Trail Network. A bicycle and multi-use trail network that facilitates bicycling for commuting, school, shopping and recreational trips

4.3 Bicycle access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide bicycle connections from external areas into the community.

4.4 Bicycle parking: Require that the public and private development in the City provide sufficient bicycle parking.

Goal 5. Transit Supportive Development Patterns. An integrated land use and transportation network that supports transit ridership

5.3 Promote bus shelters: Encourage bus shelters in new development, if a stop is determined necessary by SunLine. Bus shelters should be designed as public art or to be compatible with the building architecture of the site.

5.4 Transit accessible development: Encourage new large residential or commercial developments to locate on existing and planned transit routes.

Goal 6. Sustainable Transportation. A sustainable transportation system that can be built, operated and maintained within the City's existing and future resource limitations

6.1 Fair share costs: Require that new development pay for its fair share of construction costs for new and/or upgraded transportation infrastructure needed to accommodate this development.

6.3 Development contributions to O&M costs: Require the new development and redevelopment contribute to the operations and maintenance of new transportation infrastructure.

Sustainability + Natural Environment Element

Goal 2. Energy. An energy efficient community that relies primarily on renewable and non-polluting energy sources.

2.1 Community development–subdivisions: When reviewing applications for new subdivisions, require all residences be oriented along an east-west access, minimizing western sun exposure, to maximize energy efficiency.

2.2 Passive solar design: Require new buildings to incorporate energy efficient building and site design strategies for the desert environment that include appropriate solar orientation, thermal mass, use of natural daylight and ventilation, and shading.

2.6 Energy performance targets – new construction: Require new construction to exceed Title 24 energy efficiency standards by 15 percent and incorporate solar photovoltaics.

2.9 Energy-efficient street lighting: Implement a program to install the latest energy- efficient technologies for street and parking lot lights to meet City and state standards.

Goal 3. Water Resources. Protected and readily available water resources for community and environmental use.

3.1 Conservation performance targets – new construction: Require new construction to exceed the state’s Green Building Code for water conservation by an additional 10 percent.

3.4 Low impact development: Require the use of low-impact development strategies to minimize urban run-off, increase site infiltration, manage stormwater and recharge groundwater supplies.

3.5 Recycled water: Require the use of recycled water for all agricultural, irrigation and industrial uses in order to reserve the City’s highest quality potable water for drinking.

3.7 Landscape design: Encourage the reduction of landscaping water consumption through plant selection and irrigation technology.

Goal 4. Green Building. Community building stock (both new construction and renovations) that demonstrates high environmental performance through green design

4.5 Heat island reductions: Require heat island reduction strategies in new developments such as light-colored cool roofs, light-colored paving, permeable paving, right-sized parking requirements, vegetative cover and planting, substantial tree canopy coverage, and south and west side tree planting.

Goal 7. Waterways. Waterways and desert washes that serve a natural, environmental function and provide aesthetically pleasing open space for the community.

7.2 Development impacts: When considering development applications, require consideration of onsite detainment of stormwater runoff and require the incorporation of appropriate stormwater treatment and control measures, in accordance with the most recent NPDES permit requirements.

7.3 Soil erosion: Require the prevention of water-born soil erosion from sites, especially those undergoing grading and mining activities.

Goal 9. Plant and Wildlife Habitat Areas. Protected plant and wildlife habitat areas that are protected, productive, viable natural resources and exist harmoniously with adjacent development.

9.5 Multiple species habitat conservation plan: Support and adhere to the Coachella Valley Multiple Species Habitat Conservation Plan.

9.7 Landscape design: Encourage new developments to incorporate native vegetation materials into landscape plans and prohibit the use of species known to be invasive according to the California Invasive Plant Inventory.

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.1 Open space network. Require new development to contribute land and/or funding to expand the community's open space network in support of the Coachella Valley MSHCP.

10.6 Grading and vegetation removal: Limit grading and vegetation removal of new development activities to the minimum extent necessary to reduce erosion and sedimentation.

Goal 11. Air Quality. Healthy indoor and outdoor air quality through reduced, locally generated pollutant emissions.

11.8 Construction-related emissions: Require construction activities, including on-site building and the transport of materials, to limit emissions and dust.

11.12 Indoor air quality: Require new development to meet the state's Green Building Code for indoor air quality performance.

Goal 13. Parks and Open Space. Increased access to parks, recreation, and natural open spaces to support and increase physical activity.

13.4 Accessibility to parks. Seek new park locations that will serve residential areas that are more than a quarter mile from an existing or planned park or separated from an existing or planned park by a street that consists of four or more travel lanes. Where possible, parks shall be associated with and connected to the trail network.

Safety Element

Goal 2. Geologic Hazards: A community that has used engineering solutions to reduce or eliminate the potential for injury, loss of life, property damage and economic and social disruption caused by geologic hazards such as slope instability; compressible, collapsible, expansive or corrosive soils; and subsidence due to groundwater withdrawal.

2.1 Geotechnical investigations: Require all development proposals in the City to conduct, as a condition of approval, geotechnical and engineering geological investigations, prepared by state-certified professionals (geotechnical engineers and engineering geologists, as appropriate)

following the most recent guidelines of the California Geological Survey and similar organizations, that address, as a minimum, the site-specific geologic hazards identified in the Technical Background Report. This includes the hazard of slope failure in, and adjacent to, hillside areas.

2.2 Mitigated geologic hazards: Require all new developments to mitigate the geologic hazards that have the potential to have an impact on habitable structures and other improvements.

Goal 3. Flood hazards. A community that is minimally disrupted by flooding and inundation hazards.

3.1 Hydrological studies: Require new development proposals to include as a condition of approval, hydrological studies prepared by a state-certified engineer with expertise in these kinds of studies, that assess the impact the new development will have on the flooding potential of existing development down-gradient. The studies shall provide mitigation measures to reduce this impact to an acceptable level.

3.3 Flood mitigation for both existing and new construction: Require all new developments and redevelopments in areas susceptible to flooding (such as the 100-year floodplain and areas known to flood during intense or prolonged rainfall events) to incorporate mitigation measures designed to minimize or eliminate flood hazards.

Goal 7. Severe Weather Hazards. A community that is minimally affected by high winds, dust storms, extreme temperatures and drought.

7.11 Best management practices during construction and planting: Enforce the use of water spray and other mitigation measures to control dust in grading and construction sites and in agricultural fields being prepared for planting. This may include prohibiting earthwork activities at construction sites and farms on windy days.

Infrastructure + Public Services Element

Goals 1. Citywide Utilities. A healthy community with well maintained, efficient, high-quality public infrastructure facilities and services throughout the city.

1.5 New development infrastructure costs. Require new developments to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

Goal 2. Water Supply Facilities. Water supply facilities that meet future growth within the city and assure a high-quality and reliable supply of water to current and future residents.

2.5 Water supply for new development: Ensure water supply capacity and infrastructure capacity is in place before granting building permits for new development.

2.6 Expanding water supply: If water supply is not adequate to supply new development, require new water supplies be secured before granting building permits for new development.

2.8 Fair-share costs: Establish connection fees to ensure all development has adequate infrastructure for the provision of water and require real property be dedicated when new water facilities are required to serve a development.

2.13 Water-efficient landscaping: Require the use of water-efficient landscaping in all new development.

Goal 3. Wastewater Systems. Adequate and reliable sewer and wastewater facilities that collect, treat and safely dispose of wastewater.

3.4 Wastewater treatment capacity for new development: Ensure that wastewater treatment and conveyance capacity is in place before to granting building permits for new development.

3.5 Fair-share costs: Require new development fund fair-share costs associated with the provision of wastewater service through the collection of development impact fees and connection fees to ensure all development has adequate infrastructure for a wastewater collection and treatment system.

3.6 Expanding water supply: If water supply is not adequate to supply new development, require new water supplies be secured before granting building permits for new development.

3.9 Sewer system connections: Require connection to the sewer system of all new development at densities of one unit per acre or greater. New development at rural densities or in areas with extremely difficult and/or expensive sewer construction, for example the Mecca Hills, may be accommodated by private septic systems provided there are no negative health and safety impacts and subject to review and approval by the City Council, the Coachella Sanitary District, the Riverside County Environmental Health Department, the Coachella Valley Water District, and the Regional Water Quality Control Board.

Goal 4. Stormwater Capacity. Sufficient stormwater drainage facilities and services that are environmentally sensitive, accommodate growth and protect residents and property.

4.2 New stormwater facilities: Ensure all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

4.4 Fair-share costs: Require new development fund fair-share costs associated with the provision of stormwater drainage to ensure all development has adequate stormwater drainage protection.

4.5 New development: Require the preparation of drainage studies that evaluate adherence to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding with all new development applications.

4.6 Stormwater Pollution Prevention: Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.

4.9 Property dedication: Require the dedication of real property and improvements of that property when new stormwater drainage facilities are required to serve a development.

Goal 5. Solid Waste Management. An integrated solid waste management system that recycles resources locally and minimizes contributions to the county landfill.

5.13 Construction and demolition debris: Require recycling and reuse of construction wastes, including recycling materials generated by the demolition and remodeling of buildings, with a minimum diversion of 75% by weight.

5.15 On-site collection and storage of recyclables: Require new public and private buildings to be designed with on-site storage facilities for recycled materials.

Goals 7. Police and Fire Services. Improved public safety, increased fire safety and quality emergency medical services.

7.5 Review of new development. Encourage the police department will continue to work with the Community Development Department to review and modify development proposals to incorporate “defensible space” concepts and other public safety design concepts into new development.

7.8 Development impacts. Require new development in the City to mitigate project- related impacts to police and fire services.

7.16 Fair-share contributions. Establish a development impact fee program that requires individual development projects to pay fair-share contributions to public safety infrastructure needs.

Noise Element

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.

1.1 Noise Compatibility: Use the City’s Land Use/Noise Compatibility Matrix shown in Figure 10-1 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 the City’s Land Use/Noise Compatibility Matrix in Figure 10-1. 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 dBA CNEL level or lower for all interior living spaces.

4.10.3 Thresholds of Significance

The City's Initial Study contains three (3) criteria for determining impacts to land use and planning. As discussed above in Subchapter 4.10.1, above, the following two (2) will be analyzed in this EIR:

- a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or,
- b. Conflict with any applicable habitat conservation plan or natural community conservation plan.

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

4.10.4 Potential Impacts

THRESHOLD a: **Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

Less than Significant Impact

As presently proposed, the Project proponent has prepared a draft specific plan (Vista Del Agua Specific Plan No. 14-01), that would allow conversion of this property to residential, commercial (suburban retail and neighborhood commercial) and open space (neighborhood park and paseo) uses. To accomplish this, the Project proponent has submitted applications seeking approval from the City for a General Plan Amendment (GPA), a Specific Plan (SP), a Change of Zone (CZ), a Tentative Parcel Map (TPM), and a Development Agreement (DA).

The City's formal case numbers are:

- General Plan Amendment No. 14-01;
- Specific Plan No. 14-01;
- Change of Zone No. 14-01;
- Tentative Parcel Map No. 36872;
- Development Agreement; and
- Environmental Impact Report (EA No. 14-04)

Any improvements described in the DA must be consistent with the description of the Project in this EIR.

The City's General Plan contains goals and policies that are applicable to the proposed Project.

These goals and policies, which were extrapolated from the General Plan Update Final EIR (2015) (pp. 4.8-14 through 4.8-19) are listed in **Table 4.10-2, General Plan Land Use Policy Consistency Analysis**, along with a consistency analysis for each relevant goal and policy. The purpose of this discussion is to provide a guide to the decision-makers' policy interpretation and should be considered preliminary; a final determination of consistency with plans and policies would be made by City decision-makers. As identified through this consistency analysis, the proposed Project would be consistent with all applicable policies in the General Plan Update (2015). In addition, the approval of a GPA and Zone Change would enable the Specific Plan to serve as the guiding land use and zoning document for the Project site. Therefore, the proposed Project would be consistent with the General Plan Update (2015). Impacts related to inconsistencies between the proposed Project and the General Plan Update (2015) would be less than significant, and no mitigation would be required. The same conclusions would apply to the proposed Project.

**Table 4.10-2
 General Plan Land Use Policy Consistency Analysis**

| Policies | Consistency Analysis |
|--|---|
| Land Use Element | |
| <p>1.7 Specific Plans. Utilize specific plans as strategic entitlement tools when considering unique projects that bring exceptional value to the community. Periodically review existing, un-built specific plans for relevance and the potential for needed updates.</p> | <p>Consistent. The Project is a specific plan which contains strategic entitlement tools that bring exceptional value to the community. These tools are contained in the Development Standards and Design Guidelines of the Specific Plan.</p> |
| <p>2.14 Reserve development areas. Subareas 15 and 16 shall be maintained as reserve development areas. These areas shall maintain their current land or agricultural use until the identified High Priority Development Areas and Growth Expansion Areas are at least 60 percent developed with urban uses or preserved open spaces.</p> | <p>N/A. The Project is located in Subarea 11, and is not located in either Subarea 15 or 16.</p> |
| <p>6.2 Downtown implementation. Follow the Pueblo Viejo Revitalization Plan for the Downtown adopted by the City Council in 2009.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>10.1 Required contents of Specific Plans and Planned Developments that implement the subarea Master Plans. Require that all Specific Plans, Planned Developments, Master Plans and other master-planned community implementation tools include:</p> <ul style="list-style-type: none"> • A plan for the phasing of all off-site infrastructure. • A performance schedule for the issuance of building permits based on the concurrent availability of public services and amenities, including parks, schools and other public facilities identified in the entitlement documents. • A clear statement of the minimum public improvements that will be required as part of the first phase of development. • A statement of the financing mechanisms that will provide for the ongoing funding and financing of the public facilities of the project. These financing tools should be presented and discussed in the entitlement document implementation plan. | <p>Consistent. The Specific Plan contains these required components.</p> |

**Table 4.10-2
 General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|---|--|
| <p>10.4 Airport compatibility: Require new development in the vicinity of Cochran Airport to conform to the county’s airport land use and safety plans.</p> | <p>N/A. Thermal Airport (Jacqueline Cochran Regional Airport) is located approximately 5 miles to the south, of the Project site. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path.</p> |
| <p>10.5 Regional coordination. Promote coordinated long-range planning between the City, airport authorities, businesses and the public to meet the region's aviation needs.</p> | <p>N/A. Thermal Airport (Jacqueline Cochran Regional Airport) is located approximately 5 miles to the south, of the Project site. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path.</p> |
| <p>10.6 Airport Land Use Commission Review. Before the adoption or amendment of this General Plan, any specific plan, the adoption or amendment of a zoning ordinance or building regulation within the planning boundary of the airport land use compatibility plan, refer proposed actions for review, determination and processing by the Riverside County Airport Land Use Commission as provided by the Airport Land Use Law.</p> | <p>N/A. Thermal Airport (Jacqueline Cochran Regional Airport) is located approximately 5 miles to the south, of the Project site. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path.</p> |
| <p>10.7 Navigable airspace. Ensure that no structures or activities encroach or adversely affect the use of navigable airspace of Cochran Airport.</p> | <p>N/A. Thermal Airport (Jacqueline Cochran Regional Airport) is located approximately 5 miles to the south, of the Project site. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path.</p> |
| <p>14.3 Regional transportation and infrastructure decisions. Actively support regional transportation decisions that benefit the City and the region.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. As shown on the Proposed Route Map for the CV Link, A future extension of a community connector is proposed south of the Project site, along Avenue 50. It is not adjacent to the Project site.</p> |
| <p>14.4 Regional governance. Plan an active role in the Coachella Valley Association of Governments, the Southern California Association of Governments and other regional agencies to protect and promote the interests of the City.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>Mobility Element</p> | |
| <p>8.1 Regional transit. Collaborate with Sun Line Transit to identify regional connections for City residents and employees.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |

**Table 4.10-2
General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|---|---|
| 8.2 Regional park and ride. Collaborate with CVAG to identify potential park and ride locations in Coachella. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 8.3 Regional non-motorized connections. Prioritize connections between the City's bicycle and pedestrian network to regional facilities such as the CV Link and other regional trail facilities. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. As shown on the Proposed Route Map for the CV Link, A future extension of a community connector is proposed south of the Project site, along Avenue 50. It is not adjacent to the Project site. |
| 8.4 Regional Planning for Alternative Transportation. Collaborate with CVAG on the development of any regional planning documents related to bicycles, pedestrians, transit, and low speed electric vehicles. | N/A. This policy applies to the development of regional planning documents, and does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| Community Health + Wellness | |
| 2.12 Rental assistance programs. Allow the use of incentives to encourage more residential property owners to participate in rental assistance programs, such as Section 8. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 2.13 Housing Displacement. Require a Health Impact Assessment for any development that causes residential displacement for both established and informal housing within the City and Sphere of Influence. | Consistent. No existing housing is located on the Project site. Therefore, there will be no residential displacement. |
| 8.6 Public school capacity. Coordinate with Desert Sands Unified School District to provide an adequate number of elementary, middle and high schools for Coachella's growing population and achieve an equitable distribution of school sites among all socioeconomic categories. | Consistent. As discussed in Subchapter, 4.13, Public Services and Recreation Resources, the Project complies with this requirement. No school site is required by the DSUSD on the Project site. |
| Sustainability + Natural Environment | |
| 1.5 Climate action plan. Maintain, implement and periodically update a climate action plan and greenhouse gas inventory. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 1.8 Regional participation. Act as the participant in of climate change activities in the Coachella Valley. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 11.20 Regional coordination. The City shall coordinate its air quality planning efforts with other local, regional and state agencies, and encourage community participation in air quality planning. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |

**Table 4.10-2
 General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|---|--|
| <p>11.21 Air district coordination. The City shall work with the South Coast Air Quality Management District (SCAQMD) to ensure the earliest practicable attainment of federal and State ambient air quality standards.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>12.1 Tribal coordination. Require notification of California Native American tribes and organizations of proposed projects that have the potential to adversely impact cultural resources.</p> | <p>Consistent. California Native American tribes were notified as part of the SB18 consultation required for a General Plan Amendment and Specific Plan</p> |
| <p>13.22 Park fees. Collect land dedications or in lieu fees from new development for the provision of parks and recreation facilities, in pursuit of a minimum parkland standard of three acres per 1,000 residents, as allowed by the California Quimby Act. Establish policies for identifying neighborhoods that have a preference for the physical provision of park and recreation infrastructure over in lieu fees and administer a fee through which new development can provide parkland in lieu of certain development fees.</p> | <p>Consistent. As discussed in Subchapter, 4.13, Public Services and Recreation Resources, the Project complies with this requirement.</p> |
| <p>Safety</p> | |
| <p>1.6 Liquefaction assessment studies. Require liquefaction assessment studies be conducted for all projects proposed in areas identified as potentially susceptible to liquefaction (Plate 1-3, Technical Background Report). These studies need to be conducted in accordance with the provisions in the Seismic Hazards Mapping Act and the most recent version of the California Geological Survey's Special Publication 117: Guidelines for Evaluating and Mitigating Seismic Hazards in California.</p> | <p>Consistent. As discussed in Subchapter, 4.7, Geology and Soils, the Project complies with this requirement.</p> |
| <p>3.3 Flood mitigation for both existing and new construction. Require all new developments and redevelopments in areas susceptible to flooding (such as the 100-year floodplain and areas known to flood during intense or prolonged rainfall events) to incorporate mitigation measures designed to minimize or eliminate flood hazards.</p> | <p>Consistent. As discussed in Subchapter, 4.9, Hydrology and Water Quality, the Project complies with this requirement.</p> |

**Table 4.10-2
 General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|--|--|
| <p>3.4 Flood hazard enforcement. Continue to enforce City ordinances for flood hazard reduction, tract drainage and stormwater management for all new developments and existing projects undergoing substantial improvements within the FEMA-designated Special Flood Hazard Areas, other areas identified by the state as susceptible to flooding, hillside areas, and other areas known to flood. Mitigation measures may include (but are not limited to) the design of onsite drainage systems connected to the Coachella Valley Stormwater Channel, keeping surface waters within the project area, grading of the sites so that runoff does not affect adjacent properties, and building structures so they are elevated above the anticipated flood levels.</p> | <p>Consistent. As discussed in Subchapter, 4.9, Hydrology and Water Quality, the Project complies with this requirement.</p> |
| <p>3.7 Disaster response plan. Require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, childcare centers and nursing homes) in or within 200 feet of Flood Zones A and X, to develop disaster response and evacuation plans that address the actions to be taken in the event of storm flooding or inundation due to catastrophic failure of a water reservoir or other water retention facilities such as the Coachella Canal, the Eastside Dike and levees of the Coachella Valley Stormwater Channel.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>6.9 Agricultural land project coordination. Work with the Riverside County Department of Environmental Health and the Agricultural Commissioner's Office on regulating pesticide/hazardous materials upon conversion of an existing agricultural operation. Encourage property owners to coordinate with regulatory agencies concurrently with project design and development. A materials analysis (degree of contamination, scope of treatment, remediation and/or disposal measures) should be considered, initiated and documented in conjunction with the preliminary design, project review and construction. Develop a process to keep adjacent residents informed and protected throughout the stages of development, including the identification and remediation phases.</p> | <p>Consistent. As discussed in Subchapter, 4.8, Hazards and Hazardous Materials, the Project complies with this requirement.</p> |

**Table 4.10-2
General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|---|---|
| <p>6.14 Proximity to pollution sources. Avoid locating new sensitive uses such as schools, child-care centers, multifamily housing and senior housing in proximity to sources of pollution (e.g., I-10, truck routes, busy roadways and agricultural land where pesticides and chemical fertilizers are used regularly) and vice versa. Where such uses are located in proximity to sources of air pollution, use building design, construction and technology techniques to mitigate the negative effects of air pollution on indoor air quality. For guidance consult with the South Coast Air Quality Management District, CARB's Air Quality and Land Use Handbook or other more recent scientific studies or tools.</p> | <p>Consistent. As discussed in Subchapter, 4.4, Air Quality and Greenhouse Gases, the Project complies with this requirement.</p> |
| <p>6.15 Regional air and water quality. Track and publicly support regional, state and federal efforts that improve air and water quality to protect human and environmental health and minimize disproportionate impacts on sensitive population groups.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>8.1 Local Hazard Mitigation Plan. Maintain and update on a regular basis, as mandated by FEMA, a Local Hazard Mitigation Plan. Incorporate an assessment of climate change related hazards in all future Local Hazard Mitigation Plan updates.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>8.2 Emergency response organization. Maintain and update the emergency response organization consisting of representatives from all City departments, the Riverside County Fire and Sheriff Departments, local quasi-governmental agencies, private businesses, citizens, and other community partners involved in emergency relief and/or community-wide emergency-response services.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>Infrastructure + Public Services</p> | |
| <p>2.5 Water supply planning. Prepare, implement and maintain long-term, comprehensive water supply plans, like the Urban Water Management Plan.</p> | <p>N/A/Consistent. A Water Supply Assessment was prepared and approved. As discussed in Subchapter, 4.15, Utilities and Service Systems, the Project complies with this requirement.</p> |

**Table 4.10-2
General Plan Land Use Policy Consistency Analysis, continued**

| Policies | Consistency Analysis |
|--|--|
| <p>3.9 Sewer system connections. Require connection to the sewer system of all new development at densities of one unit per acre or greater. New development at rural densities or in areas with extremely difficult and/or expensive sewer construction, for example the Mecca Hills, may be accommodated by private septic systems provided there are no negative health and safety impacts and subject to review and approval by the City Council, the Coachella Sanitary District, the Riverside County Environmental Health Department, the Coachella Valley Water District, and the Regional Water Quality Control Board.</p> | <p>Consistent. As discussed in Subchapter, 4.15, Utilities and Service Systems, the Project complies with this requirement.</p> |
| <p>7.10 Fire service equipment. Work with the Riverside County Fire Department to ensure adequate fire-fighting and EMS infrastructure, equipment and personnel to provide a high level of fire and emergency medical service in Coachella to meet growing demands.</p> | <p>N/A. This policy applies to the City and does not directly apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>7.11 Fire service facility improvements. In coordination with the Riverside County Fire Department and surrounding cities, support the replacement of old and outdated fire facilities with new facilities containing the necessary infrastructure and design features to adequately support fire and emergency functions for the area.</p> | <p>N/A. This policy applies to the City and does not directly apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| Noise Element | |
| <p>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.</p> | <p>N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy.</p> |
| <p>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.</p> | <p>N/A. Thermal Airport (Jacqueline Cochran Regional Airport) is located approximately 5 miles to the south, of the Project site. The southwest corner of the Project is about 2 miles northeast of Compatibility Zone E of the Thermal Airport. The Project is not located in a flight path.</p> |

Source: General Plan Update Final EIR (2015) <http://www.coachella.org/home/showdocument?id=1232>

City Zoning Code. The Project site is zoned General Commercial (C-G), Residential Single-Family (R-S), and Residential Multiple Family (R-M).

The proposed Project would include Residential, Commercial, Parks/Recreation, and Open Space uses. The overall zoning of the Project site would become “Specific Plan,” and a Zone

Change would be required prior to approval of the proposed Project to change the current zoning designations to reflect the proposed uses included as part of the Specific Plan. Therefore, approval of a Zone Change would ensure that the proposed project would be consistent with the City's Zoning Ordinance.

The General Plan Update (2015) proposes multiple policies that require development to comply with applicable regulations, and prevents conflicts with federal, state, or local plans. From airport land use compatibility compliance, to requiring development to work with utilities services before project approval, the General Plan Update (2015) ensures development of any new plans are consistent in the existing regulatory framework. Specific plan compliance can also be sited in Section 4.3 of the General Plan Update Final EIR (2015), for an assessment of the Coachella Valley Multiple Species Habitat Conservation Plan compliance.

The combined policies that address plan, policy, or regulation compliance occur throughout the General Plan Update (2015), and ensure development compliance with related local, state, or federal regulations. The policies guide growth to meet the goals, visions, and plans that affect the Planning Area, and help reduce plan conflicts or non-compliance with any regulations. Additionally, the General Plan Update (2015) proposes a development program that complies with the growth forecasts of all of the regional planning documents. The General Plan Update (2015) concluded that based on the Shadow View revision requirements, and all policies regarding plan, policy, or regulation compliance, no conflicts with existing plans have been identified and impacts would be less than significant. No mitigation is required.

THRESHOLD b: Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact

The Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP) calls for the protection of open space, as well as plant and animal species, throughout the Coachella Valley region. As described further in Subchapter 4.5, Biological Resources, the proposed Project is within the planning area of the CVMSHCP, which encompasses over 1 million acres in the Coachella Valley Region. Although the Project site is located within the planning area of the CVMSHCP, the Project site is not located in one of the 27 designated conservation areas intended to preserve natural communities in the Coachella Valley Region.

The City's General Plan contains goals and policies that are applicable to the proposed Project. These goals and policies, which were extrapolated from the General Plan Update Final EIR (2015) (pp. 4.8-20 and 4.8-21) are listed in **Table 4.10-3, General Plan Land Use Policy Consistency Analysis – Habitat Conservation Plans**, along with a consistency analysis for each relevant goal and/or policy.

**Table 4.10-3
General Plan Land Use Policy Consistency Analysis – Habitat Conservation Plans**

| Policies | Consistency Analysis |
|---|---|
| Sustainability + Natural Environment | |
| 5.6 Habitat restoration. Allow unviable and abandoned farmland to revert to desert, habitat area and open space, especially in areas contiguous to existing habitat and desert. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 9.1 Buffers from new development. Require new developments adjacent to identified plant and wildlife habitat areas to maintain a protective buffer. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 9.2 Agriculture and natural habitat. Promote the creation and maintenance of natural habitat and wildlife corridors on agricultural lands through wildlife-compatible farm management practices. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 9.3 Wildlife corridors. Support the creation of local and regional conservation and preservation easements that protect habitat areas, serve as wildlife corridors and help protect sensitive biological resources. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 9.4 Conservation and preservation easements. Develop a program to facilitate the creation of conservation and preservation easements that identifies key habitat areas, habitat corridors and sensitive biological resources and: <ul style="list-style-type: none"> • Establishes a simple process for land owners to grant easements, including identifying organizations or agencies capable of holding the easements; and • Provides information to the landowners of identified properties about the benefits of conservation and preservation easements. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |
| 9.5 Multiple species habitat conservation plan. Support and adhere to the Coachella Valley Multiple Species Habitat Conservation Plan. | Consistent. As discussed in Subchapter 4.5, Biology, the Project both supports and adheres to the Coachella Valley Multiple Species Habitat Conservation Plan. |
| 9.6 Native habitat management. Develop a program to restore native habitat on undeveloped portions of City-owned properties, where feasible, and remove invasive species where they occur. | N/A. This policy does not apply to the proposed Project. The proposed Project does not impede the implementation of this policy. |

**Table 4.10-3
General Plan Land Use Policy Consistency Analysis – Habitat Conservation Plans, continued**

| Policies | Consistency Analysis |
|--|--|
| 9.7 Landscape design. Encourage new developments to incorporate native vegetation materials into landscape plans and prohibit the use of species known to be invasive according to the California Invasive Plant Inventory. | Consistent. Chapter 7 of the Specific Plan contains a plant palette which incorporates native vegetation materials into landscape plans and prohibits the use of species known to be invasive according to the California Invasive Plant Inventory. |
| Infrastructure + Public Services | |
| 1.10 Minimized environmental impacts. Locate and design utilities to avoid or minimize any impact to environmentally sensitive areas and habitats. | N/A. This policy does not apply to the proposed Project at the current time. This policy will be applicable with subsequent implementing projects. The proposed Project does not impede the implementation of this policy. |

Source: General Plan Update Final EIR (2015) <http://www.coachella.org/home/showdocument?id=1232>

As stated in Subchapter 4.5, Biological Resources, the Project may impact sensitive birds, sensitive reptiles, sensitive mammals and sensitive insects, which are covered under the CVMSHCP. Potential impacts to these species would be mitigated through payment of the CVMSHCP fee (see **SC-BIO-1**, below). Payments of these fees are considered a standard condition and are not considered unique mitigation under CEQA. No other adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan applies to the Project. Any impacts are considered less than significant.

4.10.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-BIO-1 **CVMSHCP Mitigation Fee: The Project will be required to pay the appropriate Multiple Species Habitat Conservation Plan Mitigation Fee prior to issuance of a building permit, per Chapter 4.48 of the City’s Municipal Code. The fees are assessed based on the particular type of development.**

Mitigation Measure(s)

There are no mitigation measures required for Land Use and Planning.

4.10.6 Cumulative Impacts

Implementation of the proposed Project, when considered in conjunction with other existing and planned developments in the Project area, would result in the development of a mostly vacant and undeveloped site. The cumulative study area analyzed for potential land use impacts is the City of Coachella and the City’s Sphere of Influence (SOI). **Table 4.1.1-1, *Cumulative Projects Trip Generation*** (refer to Chapter 4.0, Environmental Impact Evaluation – Introduction) lists adopted and planned projects within the City, and **Figure 4.1.1-1, *Cumulative Projects Location Map***, maps the locations of these projects.

The Specific Plan Project site currently has the following General Land Use Designation: Entertainment Commercial (C-E).

Approval of the proposed Project would ensure that the Specific Plan, in conjunction with the Coachella General Plan, would be the guiding land use policy documents for the Project area. As such, implementation of the proposed Project would not result in significant land use compatibility issues within the City's jurisdiction.

With the incorporation of the CVMSHCP Mitigation Fee (see **SC-BIO-1**, above), the Project will not conflict with any applicable habitat conservation plan or natural community conservation plan. Cumulative impacts are considered less than significant with incorporation of this standard condition.

4.10.7 Unavoidable Significant Adverse Impacts

The proposed Project would not result in unavoidable significant adverse land use impacts.

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CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.11 figures are located at the end of this subchapter, not immediately following their reference in text.

4.11 NOISE

4.11.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of hazards and hazardous materials resources from implementation of the Project. Section E.XIII., Noise Resources, of the Initial Study posed the following questions, asking whether the Project would:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?
- For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

Based on the analysis in the Initial Study it was determined that the following issue areas related to hazards and hazardous materials resources in the questions asked above **would not** require any further analysis in the Program Environmental Impact Report (EIR).

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

Based on the analysis in the Initial Study it was determined, that with the exception of the two (2) issue areas mentioned above, the remaining four (4) issue areas related to noise resources in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting noise resources:

“Implementation of the Project (on-site and off-site components) may result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; a substantial permanent increase in ambient

noise levels in the project vicinity above levels existing without the project; and/or, a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. These potential noise impacts may occur during all phases of the Project. A Project specific noise study shall be prepared in order to address questions XII. a-d, above. In order to ensure a comprehensive discussion these noise resource issues, they will be analyzed in the EIR.

The Project site is not located within two miles of a public airport or public use airport. The closest public airport, or public use airports are Thermal Airport (Jacqueline Cochran Regional Airport), located approximately 5 miles to the south, and the Bermuda Dunes Airport (located over 5 miles to the north-northwest). Therefore, implementation of the Project (on-site and off-site components) will not expose people residing or working in the project area to excessive noise levels, since the Project site is not 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. Any impacts are considered less than significant. No additional mitigation is required. This issue will not require any additional analysis in the EIR.

According to the Riverside County Land Information System (<http://tlmabld5.agency.tlma.co.riverside.ca.us/website/rclis/>), the Project site is not located within the vicinity of a private airstrip. Therefore, implementation of the Project (on-site and off-site components) will not expose people residing or working in the project area to excessive noise levels, since the Project site is not located within the vicinity of a private airstrip. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.”

The City of Coachella General Plan Update 2015, the City of Coachella General Plan Update Final EIR (2015), and the Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- *Vista Del Agua Noise Impact Study City of Coachella, California*, prepared by RK Engineering Group, Inc., dated November 6, 2016 (*Noise Analysis, Appendix N*).

No issues related to noise resources were raised in response to the Notice of Preparation (NOP) and/or at the scoping meeting. Therefore, those issues identified in the NOP are the focus of the following evaluation of noise resources.

4.11.2 Environmental Setting

4.11.2.1 Fundamentals of Noise

This information, taken from the Noise Analysis, provides basic information about noise and presents some of the terms used within this subchapter.

Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or unwanted.

Frequency and Hertz

A continuous sound is described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter (N/m²), also called micro-Pascal (μ Pa). One μ Pa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or Lp) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB.

Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. The A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a

doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns other are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels. The following indicates the most commonly used noise descriptors and gives a brief definition:

A-Weighted Sound Level

The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level

The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL)

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB)

A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A)

A-weighted system decibel (see definition above).

Equivalent Sound Level (LEQ)

The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room

Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes,

excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n)

The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90 and L99, etc.

Noise

Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound..."

Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors:

- (1) Volume of traffic;
- (2) Speed of traffic, and/or
- (3) Auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation.

The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed above.

Outdoor Living Area

Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels

See L(n).

Sound Level (Noise Level)

The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter

An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL)

The dBA level which, if it lasted for one (1) second, would produce the same A-weighted sound energy as the actual event.

Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity and turbulence can further impact how far sound can travel.

The Project's *Noise Analysis* was prepared to evaluate whether the potential noise impacts associated with the Project would cause a significant impact to the nearest sensitive receptor.

4.11.2.2 Ground-Borne Vibration Fundamentals

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise

radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Vibration Descriptors

Several different methods are used to quantify vibration amplitude:

PPV

Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS

Known as root mean squared (RMS) can be used to denote vibration amplitude.

VdB

A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

Construction Related Vibration Level Prediction

Construction activities are separated into two different categories. The vibration can be transient or continuous in nature. Each category can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the Project area site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. The thresholds from Caltrans Transportation and Construction Induced Vibration Guidance Manual in **Table 4.11.2-1, Guideline Vibration Annoyance Potential Criteria**, below provide general guidelines as to the maximum vibration limits for when vibration becomes potentially annoying.

**Table 4.11.2-1
Guideline Vibration Annoyance Potential Criteria**

| Human Response | Maximum PPV (in/sec) | |
|------------------------|----------------------|--|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Barely perceptible | 0.04 | 0.01 |
| Distinctly perceptible | 0.25 | 0.04 |
| Strongly perceptible | 0.90 | 0.10 |
| Severe | 2.00 | 0.40 |

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: *Noise Analysis*, (Appendix N)

The Caltrans Transportation and Construction Induced Vibration Guidance Manual provide general thresholds and guidelines as to the vibration damage potential from vibratory impacts. **Table 4.11.2-2, Guideline Vibration Damage Potential Threshold Criteria**, below provides general vibration damage potential thresholds:

**Table 4.11.2-2
Guideline Vibration Damage Potential Threshold Criteria**

| Structure and Condition | Maximum PPV (in/sec) | |
|---|----------------------|--|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Extremely fragile historic buildings, ruins ancient monuments | 0.12 | 0.08 |
| Fragile buildings | 0.20 | 0.10 |
| Historic and some old buildings | 0.50 | 0.25 |
| Older residential structures | 0.50 | 0.30 |
| New residential structures | 1.00 | 0.50 |
| Modern industrial/commercial buildings | 2.00 | 0.50 |

Source: *Noise Analysis*, (Appendix N)

Soil conditions have an impact on how vibration propagates through the ground. The Caltrans Transportation and Construction Induced Vibration Guidance Manual provides suggested “n” values based on soil class. **Table 4.11.2-3, Suggested “n” Value Based on Soil Classes**, below outlines the manual’s suggested values and description.

**Table 4.11.2-3
Suggested “n” Value Based on Soil Classes**

| Soil Class | Description of Soil Material | Suggested Value of "n" |
|------------|--|------------------------|
| I | Weak or soft soils: loose soils, dry or partially saturated peat and muck, mud, loose beach sand, and dune sand. | 1.4 |
| II | Most sands, sandy clays, silty clays, gravel, silts, weathered rock. | 1.3 |
| III | Hard soils: dense compacted sand, dry consolidated clay, consolidated glacial till, some exposed rock. | 1.1 |
| IV | Hard, component rock: bedrock, freshly exposed hard rock. | 1.0 |

Source: *Noise Analysis*, (Appendix N)

4.11.2.3 Existing Noise

Regulatory Setting

The proposed Project is located in the City of Coachella, which follows the noise regulations of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce;
- Assist state and local abatement efforts; and
- Promote noise education and research.

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible to regulate noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible to regulate noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers.

The federal government advocates that local jurisdiction use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

City of Coachella Municipal Code

The City of Coachella outlines their acoustical guidelines in the Compatibility Matrix of the Noise Element from the General Plan Update 2015 and the Acoustical Standards (reference Appendix A of the *Noise Analysis*).

Noise levels for residential single family and multi-family units are clearly compatible below 60 dBA CNEL, normally compatible below 70 dBA CNEL, normally incompatible above 70 dBA CNEL and clearly incompatible above 75 dBA CNEL.

Noise levels for commercial retail and restaurants are clearly compatible below 70 dBA CNEL, normally compatible below 80 dBA CNEL, normally incompatible above 80 dBA CNEL.

Section 7.04.030 of the City’s Municipal Code outlines the stationary residential noise standard as follows:

Daytime (6AM-10PM) exterior noise standard of 55 dBA (10-minute Leq) and a nighttime (10PM – 6AM) exterior standard of 45 dBA (10-minute Leq) for stationary sources near residential uses.

Section 7.04.030 of the City’s Municipal Code outlines the stationary commercial noise standard as follows:

Daytime (6AM-10PM) exterior noise standard of 65 dBA (10-minute Leq) and a nighttime (10PM – 6AM) exterior standard of 55 dBA (10-minute Leq) for stationary sources near residential uses.

Vibration Regulation

The City does not have a specific limit for vibration.

Construction Noise Regulation

The City's Municipal Noise Code (Section 7.04.070) indicates that the project construction noise levels should be kept to a minimum by using acceptable practices where sensitive land uses are adjacent to construction zones. As stated in the municipal code, 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 Coachella General Plan

The City of Coachella's General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.10, Noise, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on noise and noise impacts and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-/folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update 2015 goals and policies address noise and noise impacts and may also be included under other chapters of the EIR:

Land Use + Community Character Element

Goal 5. Neighborhoods. Neighborhoods that provide a variety of housing types, densities, designs and mix of uses and services that reflect the diversity and identity of Coachella, provide for diverse needs of residents of all ages, ethnicities, socio-economic groups and abilities, and support healthy and active lifestyles. (The following policies apply to all locations with a “Neighborhood” General Plan Designation.)

5.20 Soundwalls: Allow the use of soundwalls to buffer new Neighborhoods from existing sources of noise pollution such as railroads and limited access roadways. Prohibit the use of soundwalls to buffer residential areas from arterial or collector streets. Instead design approaches such as building setbacks, landscaping and other techniques shall be used.

Mobility Element

Goal 2. Traffic Calming. A transportation system that limits negative impacts from vehicular travel on residents and workers.

2.6 Truck idling: Develop a localized anti-idling ordinance to limit truck idling by schools and residents. This ordinance should reference currently statewide and regional regulations by the Air Resources Board, the Air Pollution Control District, and other agencies as applicable.

Community Health + Wellness Element

1.7 EIR Review: Submit all environmental documents (Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports) prepared with the City as the lead agency to the Riverside County Department of Public Health for review and comment.

Noise Element

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.

1.1 Noise Compatibility: Use the City’s Land Use/Noise Compatibility Matrix shown in Figure 10-1 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 the City’s Land Use/Noise Compatibility Matrix in Figure 10-1. 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 dBA CNEL level or lower for all interior living spaces.

1.6 Land Use and Community Design: Except in cases where noise levels are in the clearly incompatible range as shown in the City's Land Use/Noise Compatibility Matrix shown in Figure 10-1, 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.

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.

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

3.1 Roadway Noise: Where roadway noise exceeds the normally compatible range shown in the City's Land Use/Noise Compatibility Matrix shown in Figure 10-1, 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 the City's Land Use/Noise Compatibility Matrix shown in Figure 10-1, 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.

Study Method and Procedure

To determine the existing noise level environment, three (3) short-term noise measurements were taken at the Project study area. Please reference **Figure 4.11.2-1, Noise Monitoring Locations**. The following describes the measurement procedures, measurements locations, results, noise modeling methods and assumptions to determine the existing and future noise level impact:

Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as first row of houses;
- Locations that are acoustically representative and equivalent of the area of concern;
- Human land usage; and
- Sites clear of major obstruction and contamination.

Sound level measurements were conducted in accordance to the City of Coachella, County of Riverside and Caltrans technical noise specifications. All measurements equipment meets American National Standards Institute (ANSI) specifications for sound level meters. The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements.
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement.
- Following the calibration of equipment, a wind screen was placed over the microphone.
- Frequency weighting was set on "A" and slow response.
- Results of the long-term noise measurements were recorded on field data sheets.
- During any short-term noise measurements any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted.
- Temperature and sky conditions were observed and documented.

Noise Measurements

Noise measurements were conducted June 17, 2014 using a Larson Davis 700 type II sound level meter. The Leq, Lmin, Lmax, L2, L8, L25 and L50 were recorded over a 10-minute interval. The information was utilized to define the noise characteristics for the Project. (Lmin and Lmax are the lowest and highest values measured by the sound level meter over a given period of time).

Noise Measurement Locations

The noise monitoring locations for the Project were selected based on the proximity to the location to Interstate 10 (I-10) Freeway and adjacent sensitive receptors. Short-term noise monitoring location (ST-1) is located along the Project site's southerly property line, along Avenue 48, and represents ambient noise levels in the vicinity of the measurement location. ST-2 is located along the Project site's southeasterly property line, near the intersection of Polk Street and Avenue 48, and represents noise levels within the vicinity of the measurement location. ST-3 is located along the Project site's northerly property line, along Vista Del Sur, and represents ambient noise levels within the vicinity.

Noise Measurement Timing and Climate

The short-term noise measurements were recorded during daytime hours between 10AM – 12PM on June 17, 2014. Noise measurements were conducted in 10-minute intervals during the indicated time schedule.

The climate data was noted during the measurements and is indicated in the field sheets within Appendix B of the *Noise Analysis*.

Traffic Noise Modeling

Traffic noise from vehicular traffic was projected using a version of the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the key input parameters. Traffic data, traffic volumes, and percentages were obtained using the Traffic Impact Study (prepared by RK Engineering Group, Inc.) and vehicle mix data from the City of Coachella and County of Riverside Traffic Noise Parameters (Appendix A of the *Noise Analysis*). The referenced traffic data utilized for the study is indicated in Appendix C of the *Noise Analysis*.

The following outlines the key adjustments made to the computer model for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc.);
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway);
- Average Daily Traffic (ADT) Volumes, Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks;
- Roadway grade and angle of view;
- Site Conditions (e.g. soft vs. hard); and
- Percentage of total ADT, which flows each hour throughout a 24-hour period.

Table 4.11.2-4, *Arterial Highway Hourly Traffic Flow Distribution*, and Table 4.11.2-5, *Project Average Daily Traffic Volumes and Traffic Speeds*, show the roadway parameters, vehicle distribution, and scenarios utilized for the *Noise Analysis*.

**Table 4.11.2-4
Arterial Highway Hourly Traffic Flow Distribution**

Major, Arterial, Expressway Vehicle Distribution (Truck Mix) ¹

| Motor-Vehicle Type | Daytime % (7 AM - 7 PM) | Evening % (7 PM - 10 PM) | Night % (10 PM - 7 AM) | Total % of Traffic Flow |
|---------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| Automobiles | 77.5 | 14.0 | 10.5 | 92.00 |
| Medium Trucks | 48.0 | 2.0 | 50.0 | 3.00 |
| Heavy Trucks | 48.0 | 50.0 | 50.0 | 5.00 |

Secondary and Collectors Vehicle Distribution (Truck Mix) ²

| Motor-Vehicle Type | Daytime % (7 AM - 7 PM) | Evening % (7 PM - 10 PM) | Night % (10 PM - 7 AM) | Total % of Traffic Flow |
|---------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| Automobiles | 77.5 | 12.9 | 9.6 | 97.42 |
| Medium Trucks | 84.8 | 4.9 | 10.3 | 1.84 |

¹ Vehicle percentages utilized from Riverside County Traffic Data, Traffic Modeling Requirements.

² Vehicle percentages are typical for southern California roadway.

Source: Noise Analysis, (Appendix N)

**Table 4.11.2-5
Project Average Daily Traffic Volumes and Traffic Speeds**

| Roadway | Segment | Average Daily Traffic ¹ | | | | | | | Travel Speeds ² |
|---------------|-----------------------------|------------------------------------|---------|-----------------------|-------------------------------|----------------------------|------------------------------------|---------------------------------|----------------------------|
| | | Existing | Project | Existing Plus Project | Buildout 2022 without Project | Buildout 2022 With Project | Forecast Year 2035 without Project | Forecast Year 2035 with Project | |
| Vista Del Sur | Dillon Road to Tyler Street | 589 | 2,814 | 3,403 | 683 | 3,497 | 6,637 | 9,451 | 25/40 |
| | Tyler Street to Street A | 145 | 2,814 | 2,959 | 168 | 2,982 | 6,171 | 8,985 | 25/40 |
| Avenue 47 | Dillon Road to Tyler Street | 53 | 7,800 | 7,853 | 28,349 | 36,149 | 28,363 | 36,163 | 25/40 |
| | Tyler Street to Street A | 53 | 10,040 | 10,093 | 61 | 10,101 | 75 | 10,115 | 25/40 |
| | Street A to Polk Street | 53 | 3,808 | 3,808 | 61 | 3,869 | 75 | 3,883 | 25/40 |
| Avenue 48 | Tyler Street to Street A | 53 | 3,472 | 3,525 | 61 | 3,533 | 12,507 | 15,979 | 25/40 |
| | Street A to Polk Street | 79 | 2,641 | 2,720 | 92 | 2,733 | 13,338 | 15,979 | 25/40 |
| Tyler Street | Vista Del Sur to Avenue 47 | 476 | 0 | 476 | 552 | 552 | 676 | 676 | 25/40 |
| | Avenue 47 to Avenue 48 | 475 | 2,578 | 3,053 | 11,745 | 14,323 | 11,869 | 14,447 | 25/40 |
| | Avenue 48 to Avenue 50 | 541 | 5,710 | 6,251 | 12,854 | 18,564 | 12,994 | 18,704 | 25/40 |
| Street A | Vista Del Sur to Avenue 47 | n/a | 7,921 | 7,921 | N/A | 7,921 | N/A | 7,921 | 25/40 |
| | Avenue 47 to Avenue 48 | n/a | 3,577 | 3,577 | N/A | 3,577 | N/A | 3,577 | 25/40 |
| Polk Street | Avenue 47 to Avenue 48 | 145 | 998 | 1,143 | 168 | 1,166 | 21,951 | 22,949 | 25/40 |
| | Avenue 48 to Avenue 50 | 647 | 2,434 | 3,081 | 751 | 3,185 | 11,985 | 14,419 | 25/40 |
| Interstate 10 | East of Dillon Road | 24,600 | N/A | N/A | 31,250 | N/A | 40,855 | N/A | 65 |

¹ ADTs were obtained from the Vista Del Agua *Traffic Impact Study*.

² 25/40 = Existing/Buildout classification speed limits. A prima facie speed limit of 25 mph has been assumed for all existing unimproved roadway segments.

Source: *Noise Analysis*, (Appendix N)

The following outlines key adjustments to the computer model for the Project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source);
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor);
- Traffic noise source spectra; and
- Topography.

Traffic noise levels were estimated at 100 feet from the centerline of the analyzed roadway and the roadway noise contours. The noise model assumes a flat topography condition (which is a worst-case scenario). The Project noise calculation worksheet outputs are provided in Appendix D of the *Noise Analysis*.

Existing Noise Environment

Ambient noise measurements were conducted at various locations at the Project site. Three (3) short-term ambient measurements were conducted at or near the site to evaluate the existing noise conditions. **Figure 4.11.2-1, Noise Monitoring Locations**, shows the measurement locations. Noise measurement data indicates that traffic noise propagating from the I-10 Freeway is the primary source of noise impacting the Project site along the northerly

boundary. The existing roadways in the vicinity of the site are generally unimproved dirt roads, or low volume rural 2 lane undivided roads, and traffic noise is not predominant throughout most of the site away from the I-10 Freeway.

There are no existing residences on the Project site; however, there are two (2) existing residences to the west of the Project site (approximately 75 feet to the west), and approximately 1,000 feet setback from the centerline of Tyler Street. There are no noise-sensitive outdoor living areas between the centerline of the road and these structures. The Project site, however, backs up these two receptors.

Short-Term Noise Measurement Results

The results of the short-term noise data are presented in **Table 4.11.2-6, Noise Level Measurements, below**. The noise data indicates the daytime (7AM – 10PM) ambient noise level. The noise measurement data indicates that the average noise level near the site area ranges from 50.4 to 68.2 dBA Leq. The maximum measured noise level was 91.9 dBA Lmax.

The sites are exposed to typical traffic noise from the local roadway network. Noise levels vary depending on distance from centerline of roadway, time of day, and traffic speeds and activities.

**Table 4.11.2-6
Noise Level Measurements^{1, 2}**

| Site No. | Time Started | Leq | L _{min} | L _{max} | L ₂ | L ₈ | L ₂₅ | L ₅₀ | Comments |
|----------|--------------|------|------------------|------------------|----------------|----------------|-----------------|-----------------|---|
| 1 | 10:55 AM | 66.7 | 37.9 | 91.9 | 66.1 | 45.4 | 41.7 | 39.4 | Noise meter was placed at the southern property line along Avenue 48. It should be noted a tractor drove adjacent to the noise meter at 10:57 AM. |
| 2 | 11:07 AM | 50.4 | 46.2 | 72.2 | 53.2 | 46.4 | 47.2 | 47.0 | Noise meter was placed along the southeastern property line, at the intersection of Avenue 48 and Polk Street. |
| 3 | 11:20 AM | 68.2 | 46.2 | 79.9 | 77.0 | 73.5 | 67.4 | 62.9 | Noise meter was placed at the northern property line along Vista Del Sur. Meter was approximately 150 feet south of the I-10 Freeway. Ambient noise was captured from the adjacent freeway traffic. |

¹ Short term noise measurements were taken for ten minute periods.

² Noise measurements were taken on June 17, 2014. Field measurement data and photographs are provided in Appendix B of the *Noise Analysis*.

Source: *Noise Analysis*, (Appendix N)

Modeled Existing Traffic Noise Levels

The noise contours of the nearby existing roadways were calculated using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) in order to provide a baseline of the existing traffic noise levels. The distances to the 55, 60, 65, 70 dBA CNEL noise contours were calculated. In addition, the noise level at 100 feet from the centerline was calculated and representative of

the nearest homes along the study area roadways. The existing traffic (without Project) noise levels along the roadways are presented in **Table 4.11.2-7, Existing (Without Project) Exterior Noise Levels Along Highways (dBA CNEL), below.**

The calculated existing noise contours in **Table 4.11.2-7** demonstrate that the noise level at 100 feet from the centerline for the analyzed roadways, range from 35.9 to 46.8 dBA CNEL. As shown in **Table 4.11.2-7**, below, existing traffic noise levels along roadway segments in the Project vicinity are low, with 70 dBA confined within the roadway right-of-way (ROW), with the exception of traffic noise level adjacent to the I-10 Freeway, where the 70 dBA CNEL extends up to 174 feet from the I-10 roadway centerline. The existing traffic noise level conditions are conservative and do not take into account any topography and or existing walls along the roadway segments which may serve to attenuate noise. The noise levels were generated for comparative purposes.

**Table 4.11.2-7
Existing (Without Project) Exterior Noise Levels Along Highways (dBA CNEL)**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-----------------------|-----------------------------|----------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 46.4 | 0 | 1 | 4 | 14 |
| | Tyler Street to Street A | 40.3 | 0 | 0 | 1 | 3 |
| Avenue 47 | Dillon Road to Tyler Street | 35.9 | 0 | 0 | 0 | 1 |
| | Tyler Street to Street A | 35.9 | 0 | 0 | 0 | 1 |
| | Street A to Polk Street | 35.9 | 0 | 0 | 0 | 1 |
| Avenue 48 | Tyler Street to Street A | 35.9 | 0 | 0 | 0 | 1 |
| | Street A to Polk Street | 37.7 | 0 | 0 | 1 | 2 |
| Tyler Street | Vista Del Sur to Avenue 47 | 45.5 | 0 | 1 | 4 | 11 |
| | Avenue 47 to Avenue 48 | 45.5 | 0 | 1 | 4 | 11 |
| | Avenue 48 to Avenue 50 | 46.0 | 0 | 1 | 4 | 13 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | N/A | N/A | N/A | N/A | N/A |
| | Avenue 47 to Avenue 48 | N/A | N/A | N/A | N/A | N/A |
| Polk Street | Avenue 47 to Avenue 48 | 40.3 | 0 | 0 | 1 | 3 |
| | Avenue 48 to Avenue 50 | 46.8 | 0 | 2 | 5 | 15 |
| FREEWAY ANALYSIS | | | | | | |
| Roadway ² | Segment | CNEL at 500 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Interstate 10 | East of Dillon Road | 61.2 | 174 | 375 | 807 | 1,739 |

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D of the Noise Analysis for projected noise level calculations.

⁴ Future planned roadway as part of Project, does not currently exist.

Source: Noise Analysis, (Appendix N)

4.11.3 Thresholds of Significance

The City's Initial Study contains six (6) criteria for determining impacts to transportation/traffic resources. As discussed above in Subchapter 4.11.1, above, the following four (4) will be analyzed in this EIR:

- a. Would the Project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

- b. Would the Project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c. Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?
- d. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

4.11.4 Potential Impacts

THRESHOLD a: **Would the Project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Construction Noise

Less Than Significant Impact with Mitigation Incorporated

The proposed Project would result in short-term noise impacts associated with construction activities. Two types of short-term noise impacts could occur during construction of the proposed Project. First, construction crew commute and the transport of construction equipment and materials to the site for the proposed Project would incrementally increase noise levels on access roads leading to the site.

Construction Traffic

Truck traffic associated with Project construction would be limited to within the permitted construction hours, as listed in the City's Municipal Code, Sub-Chapter 7.04.070, Construction Activities. Although there would be a relatively high single-event noise exposure potential at a maximum of 87 dBA Lmax at 50 feet from passing trucks, causing possible short-term intermittent annoyances, the effect on ambient noise levels would be less than 1 dBA when averaged over one hour or 24 hours. In other words, the changes in noise levels over 1 hour or 24 hours attributable to passing trucks would not be perceptible to the normal human ear.

Therefore, short-term construction-related impacts associated with worker commute and equipment transport on local streets leading to the Project site would result in a less than significant impact on noise-sensitive receptors along the access routes.

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in **Table 4.11.4-1, Typical Construction Noise Levels, below**. These noise levels would diminish rapidly with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured 50 feet from the noise source would reduce to 80 dBA at 100 feet. At 200 feet from the noise source the noise level would reduce to 74 dBA. At 400 feet the noise source would reduce by another 6 dBA to 68 dBA.

**Table 4.11.4-1
Typical Construction Noise Levels¹**

**EQUIPMENT POWERED BY INTERNAL COMBUSTION
ENGINES**

| | |
|---------------------------|---------|
| Compactors (Rollers) | 73 - 76 |
| Front Loaders | 73 - 84 |
| Backhoes | 73 - 92 |
| Tractors | 75 - 95 |
| Scrapers, Graders | 78 - 92 |
| Pavers | 85 - 87 |
| Trucks | 81 - 94 |
| Materials Handling | |
| Concrete Mixers | 72 - 87 |
| Concrete Pumps | 81 - 83 |
| Cranes (Movable) | 72 - 86 |
| Cranes (Derrick) | 85 - 87 |
| Stationary | |
| Pumps | 68 - 71 |
| Generators | 71 - 83 |
| Compressors | 75 - 86 |

IMPACT EQUIPMENT

| Type | Noise Levels (dBA) at 50 Feet |
|---------------------------|-------------------------------|
| Pneumatic Wrenches | 82 - 87 |
| Jack Hammers, Rock Drills | 80 - 99 |
| Pile Drivers (Peak) | 95-105 |

OTHER

| Type | Noise Levels (dBA) at 50 Feet |
|-----------|-------------------------------|
| Vibrators | 68 - 82 |
| Saws | 71 - 82 |

¹ Referenced Noise Levels from the Environmental Protection Agency (EPA).
Source: *Noise Analysis*, (Appendix N)

Construction Activities

The site preparation phase, which includes grading and paving, tends to generate the highest noise levels, since the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, and front loaders.

Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Construction of the proposed Project is expected to require the use of scrapers, bulldozers, motor grader, and water and pickup trucks. Noise associated with the use of construction equipment is estimated to reach between 79 and 89 dBA L_{max} at a distance of 50 ft. from the active construction area for the grading phase. The maximum noise level generated by each scraper is assumed to be approximately 87 dBA L_{max} at 50 ft. from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by the sound sources with equal strength increases the noise level by 3 dBA. The worst-case combined noise level during this phase of construction would be 91 dBA L_{max} at a distance of 50 ft. from an active construction area.

The closest sensitive receptors to the Project's construction area are two (2) residences located along Tyler Street near the western boundary of the project site at a distance of 75 ft. At this distance, these receptor locations would be exposed to construction noise levels of up to 88 dBA L_{max} during site preparation. In addition, residences constructed in earlier Project phases within 100 ft. of an active construction area would be exposed to construction noise levels of up to 85 dBA L_{max} during site preparation of later phases. After site preparation is completed for each individual phase of development, other construction activities are anticipated generate lower noise levels.

The following **Standard Condition, SC-NOI-1** shall be implemented:

The City has established certain hours during the day when construction can occur to minimize potential disturbance to sensitive receptors which are shown below:

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.

The Project applicant will comply with these allowable hours. In addition, construction noise sources are not stationary, and therefore, high noise levels would not persist in one particular location.

Mitigation Measure MM-NOI-1 requires that during any earth movement construction activities during any phase of development the developer shall:

- Locate stationary construction noise sources such as generators or pumps at least 300

- feet from sensitive land uses, as feasible;
- Locate construction staging areas should be located as far from noise sensitive land uses as feasible;
 - Ensure all construction equipment is equipped with appropriate noise attenuating devices to reduce the construction equipment noise by 8 to 10 dBA;
 - Turn off idling equipment when not in use;
 - Maintain equipment so that vehicles and their loads are secured from rattling and banging;
 - Limit the amount of heavy machinery equipment operating simultaneously to two (2) pieces of equipment within a 50-foot radius of each other (when located with 100 feet of existing residential units); and
 - Install temporary noise control barriers that provide a minimum noise level attenuation of 10.0 dBA when Project construction occurs near existing noise-sensitive structures. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be high enough and long enough to block the view of the noise source. Unnecessary openings shall not be made.
 - The noise barriers must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
 - The noise control barriers and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.

Mitigation Measure MM-NOI-1 will ensure that Project construction noise impacts to sensitive receptors will not exceed thresholds and are reduced to a less than significant level.

Exterior Noise

Each future noise source related to the Project was analyzed and compared to the California Environmental Quality Act (CEQA) guidelines. The discussion below analyzes the exterior noise levels and provide mitigation measures that would reduce noise levels. This assessment evaluates the potential noise impacts from the proposed Project to the surrounding land uses and compares the results to the City's/County's Noise Standards.

Traffic Source Noise

Less Than Significant Impact

The potential off-site noise impacts caused by the increase in vehicular traffic from the operation of the proposed Project on the nearby roadways were calculated for the following scenarios and conditions:

1. Existing Year with Project Condition

This scenario refers to existing year traffic noise conditions with (plus) Project generated traffic noise and is demonstrated in **Table 4.11.4-2, Existing (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, below. **Table 4.11.4-3, Change in Existing Noise Levels as a Result of Project (dBA CNEL)**, below, compares the existing without Project to the existing with Project condition and shows the change in noise level as a result of the proposed

Project. As demonstrated in **Table 4.11.4-3**, impacts will be less than significant from the implementation of the proposed Project.

**4.11.4-2
Existing (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)¹**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-----------------------|-----------------------------|----------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 54.0 | 3 | 8 | 25 | 80 |
| | Tyler Street to Street A | 58.3 | 7 | 21 | 68 | 214 |
| Avenue 47 | Dillon Road to Tyler Street | 62.5 | 18 | 57 | 179 | 567 |
| | Tyler Street to Street A | 63.6 | 23 | 73 | 230 | 729 |
| | Street A to Polk Street | 59.5 | 9 | 28 | 88 | 279 |
| Avenue 48 | Tyler Street to Street A | 59.1 | 8 | 25 | 80 | 255 |
| | Street A to Polk Street | 57.9 | 6 | 20 | 62 | 196 |
| Tyler Street | Vista Del Sur to Avenue 47 | 45.5 | 0 | 1 | 4 | 11 |
| | Avenue 47 to Avenue 48 | 53.6 | 2 | 7 | 23 | 72 |
| | Avenue 48 to Avenue 50 | 56.7 | 5 | 15 | 56 | 147 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | 62.6 | 18 | 57 | 181 | 572 |
| | Avenue 47 to Avenue 48 | 59.1 | 8 | 26 | 82 | 258 |
| Polk Street | Avenue 47 to Avenue 48 | 54.2 | 3 | 8 | 26 | 83 |
| | Avenue 48 to Avenue 50 | 53.6 | 2 | 7 | 23 | 72 |

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D of the *Noise Analysis* for projected noise level calculations.

⁴ Future planned roadway as part of Project, does not currently exist.

Source: *Noise Analysis*, (Appendix N)

**Table 4.11.4-3
 Change in Existing Noise Levels as a Result of Project (dBA CNEL)**

| Roadway | Segment | CNEL at 100 Feet dBA | | | |
|---------------|-----------------------------|--------------------------|-----------------------|-----------------------|---|
| | | Existing Without Project | Existing With Project | Change in Noise Level | Potential Significant Impact ¹ |
| Vista Del Sur | Dillon Road to Tyler Street | 46.4 | 54.0 | 7.6 | NO |
| | Tyler Street to Street A | 40.3 | 58.3 | 18.0 | NO |
| Avenue 47 | Dillon Road to Tyler Street | 35.9 | 62.5 | 26.6 | NO |
| | Tyler Street to Street A | 35.9 | 63.6 | 27.7 | NO |
| | Street A to Polk Street | 35.9 | 59.5 | 23.6 | NO |
| Avenue 48 | Tyler Street to Street A | 35.9 | 59.1 | 23.2 | NO |
| | Street A to Polk Street | 37.7 | 57.9 | 20.2 | NO |
| Tyler Street | Vista Del Sur to Avenue 47 | 45.5 | 45.5 | 0.0 | NO |
| | Avenue 47 to Avenue 48 | 45.5 | 53.6 | 8.1 | NO |
| | Avenue 48 to Avenue 50 | 46.0 | 56.7 | 10.7 | NO |
| Street A | Vista Del Sur to Avenue 47 | N/A | 62.6 | N/A | NO |
| | Avenue 47 to Avenue 48 | N/A | 59.1 | N/A | NO |
| Polk Street | Avenue 47 to Avenue 48 | 40.3 | 54.2 | 13.9 | NO |
| | Avenue 48 to Avenue 50 | 46.8 | 53.6 | 6.8 | NO |

¹ It takes a change of 3 dBA or more to hear a noticeable change in noise level. The projected noise levels at 100' are theoretical and do not take into consideration the effect of topography, noise barriers, structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5-10+ dBA from what is shown in the projected noise levels at 100'. Therefore, the levels that are shown are for comparative purposes only to show the difference in projected noise levels without and with the Project.
Source: *Noise Analysis*, (Appendix N)

2. Project Completion Year 2022 Without Project Condition

This scenario refers to the Project Completion Year 2022 traffic noise conditions consisting of future traffic generated by ambient growth and known development Projects in the Project study areas, without the proposed Project generated traffic noise and is demonstrated in **Table 4.11.4-4, Project Completion Year 2022 (Without Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, below.

**Table 4.11.4-4
Project Completion Year 2022 (Without Project) Exterior Noise Levels Along Roadways
(dBA CNEL)**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-------------------------|-----------------------------|-----------------------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 44.8 | 1 | 2 | 5 | 16 |
| | Tyler Street to Street A | 41.0 | 0 | 0 | 1 | 4 |
| Avenue 47 | Dillon Road to Tyler Street | 68.1 | 65 | 205 | 647 | 2,047 |
| | Tyler Street to Street A | 36.6 | 0 | 0 | 0 | 1 |
| | Street A to Polk Street | 36.6 | 0 | 0 | 0 | 1 |
| Avenue 48 | Tyler Street to Street A | 36.6 | 0 | 0 | 0 | 1 |
| | Street A to Polk Street | 38.3 | 0 | 0 | 1 | 2 |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.0 | 1 | 4 | 13 | 40 |
| | Avenue 47 to Avenue 48 | 64.3 | 27 | 85 | 268 | 848 |
| | Avenue 48 to Avenue 50 | 64.7 | 29 | 93 | 294 | 928 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | N/A | N/A | N/A | N/A | N/A |
| | Avenue 47 to Avenue 48 | N/A | N/A | N/A | N/A | N/A |
| Polk Street | Avenue 47 to Avenue 48 | 41.0 | 0 | 0 | 1 | 4 |
| | Avenue 48 to Avenue 50 | 47.5 | 1 | 2 | 6 | 18 |
| FREEWAY ANALYSIS | | | | | | |
| Roadway ² | Segment | CNEL at 670 Ft (dBA) ⁵ | Distance to Contour (Ft) ³ | | | |
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Interstate 10 | East of Dillon Road | 62.3 | 204 | 439 | 947 | 2,039 |

¹ Exterior noise levels calculated at 5 feet above ground level.
² Noise levels calculated from centerline of subject roadway.
³ Refer to Appendix D of the *Noise Analysis* for projected noise level calculations.
⁴ Future planned roadway as part of the Project, do not currently exist.
⁵ The freeway analysis show projected noise levels to the nearest residential area of the site.
Source: *Noise Analysis*, (Appendix N)

3. Project Completion Year 2022 With Project Condition

Less Than Significant Impact

This scenario refers to Project Completion Year 2022 traffic noise conditions with (plus) Project generated traffic noise and is demonstrated in **Table 4.11.4-5, Project Completion Year 2022 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, below. **Table 4.11.4-6, Change in Project Completion Year 2022 Noise Levels as a Result of the Project (dBA CNEL)**, below, compares the Project Completion Year 2022 without Project to the Project Completion Year 2022 with Project condition and shows the change in noise level as a result of the proposed Project. As demonstrated in **Table 4.11.4-6**, impacts will be less than significant from the implementation of the proposed Project.

**Table 4.11.4-5
Project Completion Year 2022 (With Project) Exterior Noise Levels Along Roadways
(dBA CNEL)¹**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-----------------------|-----------------------------|----------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 54.1 | 3 | 8 | 26 | 82 |
| | Tyler Street to Street A | 58.3 | 7 | 22 | 68 | 215 |
| Avenue 47 | Dillon Road to Tyler Street | 69.2 | 83 | 261 | 826 | 2,611 |
| | Tyler Street to Street A | 63.6 | 23 | 73 | 231 | 729 |
| | Street A to Polk Street | 59.5 | 9 | 28 | 88 | 279 |
| Avenue 48 | Tyler Street to Street A | 59.1 | 8 | 26 | 81 | 255 |
| | Street A to Polk Street | 58.0 | 6 | 20 | 62 | 197 |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.0 | 1 | 4 | 13 | 40 |
| | Avenue 47 to Avenue 48 | 65.1 | 33 | 103 | 327 | 1,034 |
| | Avenue 48 to Avenue 50 | 66.3 | 42 | 134 | 424 | 1,341 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | 62.6 | 18 | 57 | 181 | 572 |
| | Avenue 47 to Avenue 48 | 59.1 | 8 | 26 | 82 | 258 |
| Polk Street | Avenue 47 to Avenue 48 | 54.3 | 3 | 8 | 27 | 84 |
| | Avenue 48 to Avenue 50 | 53.7 | 2 | 7 | 24 | 75 |

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D of the *Noise Analysis* for projected noise level calculations.

⁴ Future planned roadway as part of the Project, do not currently exist.

Source: *Noise Analysis*, (Appendix N)

**Table 4.11.4-6
 Change in Project Completion Year 2022 Noise Levels as a Result of the Project (dBA
 CNEL)**

| Roadway | Segment | CNEL at 100 Feet dBA | | | |
|---------------|-----------------------------|---------------------------|------------------------|-----------------------|---|
| | | Year 2022 Without Project | Year 2022 With Project | Change in Noise Level | Potential Significant Impact ¹ |
| Vista Del Sur | Dillon Road to Tyler Street | 44.8 | 54.1 | 9.3 | NO |
| | Tyler Street to Street A | 41.0 | 58.3 | 17.3 | NO |
| Avenue 47 | Dillon Road to Tyler Street | 68.1 | 69.2 | 1.1 | NO |
| | Tyler Street to Street A | 36.6 | 63.6 | 27.0 | NO |
| | Street A to Polk Street | 36.6 | 59.5 | 22.9 | NO |
| Avenue 48 | Tyler Street to Street A | 36.6 | 59.1 | 22.5 | NO |
| | Street A to Polk Street | 38.3 | 58.0 | 19.7 | NO |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.0 | 51.0 | 0.0 | NO |
| | Avenue 47 to Avenue 48 | 64.3 | 65.1 | 0.8 | NO |
| | Avenue 48 to Avenue 50 | 64.7 | 66.3 | 1.6 | NO |
| Street A | Vista Del Sur to Avenue 47 | N/A | 62.6 | N/A | NO |
| | Avenue 47 to Avenue 48 | N/A | 59.1 | N/A | NO |
| Polk Street | Avenue 47 to Avenue 48 | 41.0 | 54.3 | 13.3 | NO |
| | Avenue 48 to Avenue 50 | 47.5 | 53.7 | 6.2 | NO |

¹ It takes a change of 3 dBA or more to hear a noticeable change in noise level. The projected noise levels at 100' are theoretical and do not take into consideration the effect of topography, noise barriers, structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5-10+ dBA from what is shown in the projected noise levels at 100'. Therefore, the levels that are shown are for comparative purposes only to show the difference in projected noise levels without and with the Project.

Source: Noise Analysis, (Appendix N)

4. General Plan Buildout Year 2035 Without Project Condition

This scenario refers to the 2035 traffic noise conditions consisting of future traffic generated by ambient growth and known development Projects in the Project study areas, without the proposed Project generated traffic noise and is demonstrated in **Table 4.11.4-7, General Plan Buildout Year 2035 Exterior Noise Levels Along Roadways (dBA CNEL)**, below.

**Table 4.11.4-7
General Plan Buildout Year 2035 Exterior Noise Levels Along Roadways (dBA CNEL)¹**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-------------------------|-----------------------------|-----------------------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 61.8 | 15 | 48 | 152 | 479 |
| | Tyler Street to Street A | 61.5 | 14 | 45 | 141 | 446 |
| Avenue 47 | Dillon Road to Tyler Street | 68.1 | 65 | 205 | 648 | 2,048 |
| | Tyler Street to Street A | 42.4 | 0 | 1 | 2 | 5 |
| | Street A to Polk Street | 42.3 | 0 | 1 | 2 | 5 |
| Avenue 48 | Tyler Street to Street A | 64.8 | 31 | 97 | 305 | 965 |
| | Street A to Polk Street | 65.1 | 33 | 103 | 326 | 1,030 |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.9 | 2 | 5 | 15 | 49 |
| | Avenue 47 to Avenue 48 | 64.3 | 27 | 86 | 271 | 857 |
| | Avenue 48 to Avenue 50 | 64.7 | 30 | 94 | 297 | 938 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | N/A | N/A | N/A | N/A | N/A |
| | Avenue 47 to Avenue 48 | N/A | N/A | N/A | N/A | N/A |
| Polk Street | Avenue 47 to Avenue 48 | 67.3 | 54 | 169 | 536 | 1,695 |
| | Avenue 48 to Avenue 50 | 59.9 | 10 | 31 | 97 | 306 |
| FREEWAY ANALYSIS | | | | | | |
| Roadway ² | Segment | CNEL at 670 Ft (dBA) ⁵ | Distance to Contour (Ft) ³ | | | |
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Interstate 10 | East of Dillon Road | 63.4 | 244 | 526 | 1,134 | 2,443 |

¹ Exterior noise levels calculated at 5 feet above ground level.
² Noise levels calculated from centerline of subject roadway.
³ Refer to Appendix D of the *Noise Analysis* for projected noise level calculations.
⁴ Future planned roadway as part of the Project, do not currently exist.
⁵ The freeway analysis show projected noise levels to the nearest residential area of the site.
Source: *Noise Analysis*, (Appendix N)

5. General Plan Buildout Year 2035 With Project Condition

Less Than Significant Impact

This scenario refers to the 2035 traffic noise conditions consisting of future traffic generated by ambient growth and known development projects in the Project study areas, with (plus) the proposed Project generated traffic noise and is demonstrated in **Table 4.11.4-8, General Plan Buildout Year 2035 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**,

below. **Table 4.11.4-9, Change in General Plan Buildout Year 2035 Noise Levels as a Result of the Project (dBA CNEL), below**, compares the noise level contours for the without and with Project 2035 Project condition and shows the change in noise level as a result of the proposed Project. As demonstrated in **Table 4.11.4-9**, a less than significant impact will result from the implementation of the proposed Project.

**Table 4.11.4-8
General Plan Buildout Year 2035 (With Project) Exterior Noise Levels Along Roadways
(dBA CNEL)**

| Roadway ² | Segment | CNEL at 100 Ft (dBA) | Distance to Contour (Ft) ³ | | | |
|-----------------------|-----------------------------|----------------------|---------------------------------------|-------------|-------------|-------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Vista Del Sur | Dillon Road to Tyler Street | 63.3 | 22 | 68 | 216 | 682 |
| | Tyler Street to Street A | 63.1 | 21 | 65 | 205 | 649 |
| Avenue 47 | Dillon Road to Tyler Street | 69.2 | 83 | 261 | 826 | 2,612 |
| | Tyler Street to Street A | 63.6 | 23 | 73 | 231 | 730 |
| | Street A to Polk Street | 59.4 | 9 | 27 | 87 | 275 |
| Avenue 48 | Tyler Street to Street A | 65.9 | 39 | 123 | 390 | 1,234 |
| | Street A to Polk Street | 65.9 | 39 | 123 | 390 | 1,234 |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.9 | 2 | 5 | 15 | 49 |
| | Avenue 47 to Avenue 48 | 65.2 | 33 | 104 | 330 | 1,043 |
| | Avenue 48 to Avenue 50 | 66.3 | 43 | 135 | 427 | 1,351 |
| Street A ⁴ | Vista Del Sur to Avenue 47 | 62.6 | 18 | 57 | 181 | 572 |
| | Avenue 47 to Avenue 48 | 59.1 | 8 | 26 | 82 | 258 |
| Polk Street | Avenue 47 to Avenue 48 | 67.5 | 56 | 177 | 560 | 1,772 |
| | Avenue 48 to Avenue 50 | 60.7 | 12 | 37 | 117 | 369 |

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D of the *Noise Analysis* for projected noise level calculations.

⁴ Future planned roadway as part of the Project, do not currently exist.

Source: *Noise Analysis*, (Appendix N)

**Table 4.11.4-9
Change in General Plan Buildout Year 2035 Noise Levels as a Result of the Project (dBA CNEL)**

| Roadway | Segment | CNEL at 100 Feet dBA | | | |
|---------------|-----------------------------|---------------------------|------------------------|-----------------------|---|
| | | Year 2035 Without Project | Year 2035 With Project | Change in Noise Level | Potential Significant Impact ¹ |
| Vista Del Sur | Dillon Road to Tyler Street | 61.8 | 63.3 | 1.5 | NO |
| | Tyler Street to Street A | 61.5 | 63.1 | 1.6 | NO |
| Avenue 47 | Dillon Road to Tyler Street | 68.1 | 69.2 | 1.1 | NO |
| | Tyler Street to Street A | 42.4 | 63.6 | 21.2 | NO |
| | Street A to Polk Street | 42.3 | 59.4 | 17.1 | NO |
| Avenue 48 | Tyler Street to Street A | 64.8 | 65.9 | 1.1 | NO |
| | Street A to Polk Street | 65.1 | 65.9 | 0.8 | NO |
| Tyler Street | Vista Del Sur to Avenue 47 | 51.9 | 51.9 | 0.0 | NO |
| | Avenue 47 to Avenue 48 | 64.3 | 65.2 | 0.9 | NO |
| | Avenue 48 to Avenue 50 | 64.7 | 66.3 | 1.6 | NO |
| Street A | Vista Del Sur to Avenue 47 | N/A | 62.6 | N/A | NO |
| | Avenue 47 to Avenue 48 | N/A | 59.1 | N/A | NO |
| Polk Street | Avenue 47 to Avenue 48 | 67.3 | 67.5 | 0.2 | NO |
| | Avenue 48 to Avenue 50 | 59.9 | 60.7 | 0.8 | NO |

¹ It takes a change of 3 dBA or more to hear a noticeable change in noise level. The projected noise levels at 100' are theoretical and do not take into consideration the effect of topography, noise barriers, structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5-10+ dBA from what is shown in the projected noise levels at 100'. Therefore, the levels that are shown are for comparative purposes only to show the difference in projected noise levels without and with the Project.

Source: Noise Analysis, (Appendix N)

Off-Site Traffic Noise Impact

No Impact

The Project-related vehicle trips would be distributed to area roadways. **Table 4.11.4-3, Change in Existing Noise Levels as a Result of Project (dBA CNEL), Table 4.11.4-6, Change in Project Completion Year 2022 Noise Levels as a Result of the Project (dBA CNEL), and Table 4.11.4-9, Change in General Plan Buildout Year 2035 Noise Levels as a Result of the Project (dBA CNEL),** above, show that the largest increase in noise levels are along Avenue 47 and Avenue 48, between Tyler Street and Polk Street, where there will be an increase of up to 27.7 dBA CNEL. It should be noted these roads are currently unimproved dirt roads with little existing traffic volume and no sensitive receptors.

Due to the existing vacant land condition on the Project site and in the immediate Project vicinity, the vehicular traffic volumes are small and less than 1,000 vehicles a day along roadway segments in the Project vicinity. If all Project-related vehicular traffic is imposed to these roadway segments, the scenarios of Existing Plus Project and 2022 Plus Project traffic conditions would result in substantial increases in traffic noise levels along the majority of the roadway segments leading to the Project site.

For the future (2035) with Project scenarios, the following off-site roadway segments would experience traffic noise level increases exceeding 3 dBA:

- Avenue 47 between Tyler Street and Street A: 2035 (+21.2 dBA)
- Avenue 47 between Street A and Polk Street: 2035 (+17.1 dBA)

However, any existing sensitive receptors along Avenue 47 between Tyler Street and Polk Street are located below the 65 dBA CNEL contour. Therefore, no potential noise impacts would occur along these roadway segments.

There are two (2) sensitive receptors along Tyler Street between Vista Del Sur and Avenue 47 but the structures are located at least 600 feet from the centerline. These existing sensitive receptors are located within 65 to 70 dBA CNEL contour of the I-10 Freeway. These receptors would not be exposed to traffic noise from Tyler Street exceeding 65 dBA CNEL and, therefore, no potential impacts would occur as a result of the proposed Project. No mitigation measures would be required for off-site sensitive land uses.

The projected noise levels at 100' are theoretical and do not take into consideration the effect of topography, any noise barriers (berms, maximum 6' high walls), structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5 to 10 dBA or more from what is shown in the projected noise levels at 100'. Therefore, the levels that are shown are for comparative purposes only to show the difference in projected noise levels without and with the Project.

As shown in **Table 4.11.4-3, Change in Existing Noise Levels as a Result of Project (dBA CNEL)**, **Table 4.11.4-6, Change in Project Completion Year 2022 Noise Levels as a Result of the Project (dBA CNEL)**, and **Table 4.11.4-9, Change in General Plan Buildout Year 2035 Noise Levels as a Result of the Project (dBA CNEL)**, above, the increase in noise levels, as a result of the Project, would result in more than a 3 dBA change; however, noise levels are not expected to increase beyond the normally compatible 70 dBA level for residential uses. Furthermore, the only sensitive receptor within the Project area would not experience an exterior level above the City's acceptable threshold and therefore the impacts are considered less than significant.

On-Site Traffic Noise Impact

Table 4.11.4-4, Project Completion Year 2022 (Without Project) Exterior Noise Levels Along Roadways (dBA CNEL), **Table 4.11.4-5, Project Completion Year 2022 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, **Table 4.11.4-6, Change in Project Completion Year 2022 Noise Levels as a Result of the Project (dBA CNEL)**, **Table 4.11.4-7, General Plan Buildout Year 2035 Exterior Noise Levels Along Roadways (dBA CNEL)**, **Table 4.11.4-8, General Plan Buildout Year 2035 (With Project) Exterior Noise**

Levels Along Roadways (dBA CNEL), and **Table 4.11.4-9, Change in General Plan Buildout Year 2035 Noise Levels as a Result of the Project (dBA CNEL)**, above, show the Existing Plus Project, Project Completion Year 2022 and General Plan Buildout Year 2035 scenarios traffic noise levels. For the future (2022 and 2035) with Project scenarios, the following on-site roadway segments would experience traffic noise level increases exceeding 3 dBA:

- Avenue 47 between Tyler Street and Street A: 2022 (+27.0 dBA), 2035 (+21.2 dBA)
- Avenue 47 between Street A and Polk Street: 2022 (+22.9 dBA), 2035 (+17.1 dBA)
- Avenue 48 between Tyler Street and Street A: 2022 (+22.5 dBA)
- Avenue 48 between Street A and Polk Street: 2022 (+19.7), 2035 (+17.1 dBA)

There are no existing noise-sensitive land uses on the Project site; therefore, no land uses would be exposed to substantial traffic noise increases, and no potential substantial traffic noise level increase impacts would occur along these roadway segments.

For the proposed Project, the following roadway segments would have potential traffic noise impacts on the proposed on-site uses:

- I-10;
- Avenue 47 between Tyler Street and Street "A;"
- Avenue 47 between Street "A" and Polk Street;
- Avenue 48 between Tyler Street and Street "A;" and
- Avenue 48 between Street "A" and Polk Street.

It should be noted that the extension of Avenue 48 (westerly of Tyler Street) is identified as Shadow View Boulevard in the Shadow View Specific Plan. As shown on Figure 4.11.4-1, Circulation Plan, this is the Project connection to Dillon Road. Similar to Avenue 48, this roadway is classified as a Major Arterial.

Impacts from these roadways are discussed below.

I-10

Less Than Significant Impact

Based on information contained in **Table 4.11.4-7, General Plan Buildout Year 2035 Exterior Noise Levels Along Roadways (dBA CNEL)**, above, retail spaces (PA 1) would be located within the 70 to 75 dBA CNEL contour of the I-10 Freeway and would be exposed to traffic noise within the normally compatible standard of 75 dBA CNEL for commercial uses. Commercial spaces and open space are not considered noise-sensitive and would not be required to have any mitigation measures along I-10. Any impacts are considered less than significant.

Avenue 47

Less Than Significant Impact with Mitigation Incorporated

Based upon information contained in **Table 4.11.4-8, General Plan Buildout Year 2035 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, above, dwelling units

proposed within PA2, PA3 and PA8 that are within 231, 73, and 23 feet of Avenue 47 centerline would be exposed to traffic noise exceeding the 60, 65, and 70 dBA CNEL, respectively, exterior noise standards for residential uses. In order to reduce exterior noise levels to 60 dBA CNEL or lower, sound wall heights (or equivalent noise reduction measures) need to be implemented for residential units with outdoor living areas (backyards and patios) along this segment of Avenue 47 within the potential impact zone.

Mitigation Measure MM-NOI-2 will be required, which will attain noise reduction methods in order to reduce noise impacts to acceptable thresholds. The City General Plan discourages the sole use of walls as the only source of noise reduction. The following requirements are listed in order to provide the necessary performance standards for adequate noise reduction for residences located in the 70 dBA CNEL, 65 dBA CNEL, and 60 dBA CNEL, respectively.

- Areas Exceeding 70 dBA CNEL (within 23 feet from centerline of Avenue 47): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 73 feet from centerline of Avenue 47): 6 foot for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 60 dBA CNEL (within 231 feet from centerline of Avenue 47): 5 foot for ground level outdoor living areas such as backyards or patios.

With the incorporation of **Mitigation Measure MM-NOI-2**, any noise impacts to dwelling units proposed within PA2, PA3 and PA8, that are adjacent to Avenue 47 will be reduced to a less than significant level.

Avenue 48

Less Than Significant Impact with Mitigation Incorporated

Based upon information contained in **Table 4.11.4-8, General Plan Buildout Year 2035 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, above, dwelling units proposed within PA5, PA7 and PA10 that are within 390, 123, and 39 feet of Avenue 48 centerline would be exposed to traffic noise exceeding the 60, 65, and 70 dBA CNEL, respectively, exterior noise standards for residential uses. In order to reduce exterior noise levels to 60 dBA CNEL or lower, sound wall heights (or equivalent noise reduction measures) need to be implemented for residential units with outdoor living areas (backyards and patio) along this segment of Avenue 48 are within the potential impact zone:

Mitigation Measure MM-NOI-3 will be required, which will attain noise reduction methods in order to reduce noise impacts to acceptable thresholds. The City General Plan discourages the sole use of walls as the only source of noise reduction. The following requirements are listed in order to provide the necessary performance standards for adequate noise reduction for residences located in the 70 dBA CNEL, 65 dBA CNEL, and 60 dBA CNEL, respectively.

- Areas Exceeding 70 dBA CNEL (within 39 feet from centerline of Avenue 48): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 123 feet from centerline of Avenue 48): 6 foot for ground level outdoor living areas such as backyards or patios.

- Areas Exceeding 60 dBA CNEL (within 390 feet from centerline of Avenue 48): 5 foot for ground level outdoor living areas such as backyards or patios.

With the incorporation of **Mitigation Measure MM-NOI-3**, any noise impacts to dwelling units proposed within PA5, PA7 and PA10, that are adjacent to Avenue 48 will be reduced to a less than significant level.

As it pertains to the westerly extension of Avenue 48 (Shadow View Boulevard), the same noise impacts would be anticipated. However, since the land is currently vacant, there are no sensitive receptors.

Street “A”

Less Than Significant Impact with Mitigation Incorporated

Based upon information contained in **Table 4.11.4-8, General Plan Buildout Year 2035 (With Project) Exterior Noise Levels Along Roadways (dBA CNEL)**, above, dwelling units proposed within PA5, PA6 and PA7 that are within 181, 57, and 18 feet of Street “A” centerline would be exposed to traffic noise exceeding the 60, 65, and 70 dBA CNEL, respectively, exterior noise standards for residential uses. In order to reduce exterior noise levels to 60 dBA CNEL or lower, sound wall heights (or equivalent noise reduction measures) need to be implemented for residential units with outdoor living areas (backyards and patio) along this segment of Street “A” within the potential impact zone.

Mitigation Measure MM-NOI-4 will be required, which will attain noise reduction methods in order to reduce noise impacts to acceptable thresholds. The City General Plan discourages the sole use of walls as the only source of noise reduction. The following requirements are listed in order to provide the necessary performance standards for adequate noise reduction for residences located in the 70 dBA CNEL, 65 dBA CNEL, and 60 dBA CNEL, respectively.

- Areas Exceeding 70 dBA CNEL (within 18 feet from centerline of Street “A”): 8 foot (combination of earthen berm and maximum 6’ high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 57 feet from centerline of Street “A”): 6 foot for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 60 dBA CNEL (within 181 feet from centerline of Street “A”): 5 foot for ground level outdoor living areas such as backyards or patios.

With the incorporation of **Mitigation Measure MM-NOI-4**, any noise impacts to dwelling units proposed within PA5, PA6 and PA7, that are adjacent to Street “A” will be reduced to a less than significant level.

Future Interior Noise

Less Than Significant Impact with Mitigation Incorporated

Based on the data provided in the Environmental Protection Agency’s (EPA) Protective Noise Levels (EPA 550/9-79-100, Nov 1979), standard homes in Southern California provide at least 12 dBA of noise exterior to interior noise attenuation with windows open and 20 dBA with

windows closed.

Therefore, residences would need to be exposed to exterior noise levels exceeding 65 dBA CNEL (45 dBA + 20 dBA = 65 dBA) to potentially exceed the interior noise standard of 45 dBA CNEL with windows closed. A windows-closed condition is defined as: the interior noise level with the windows closed. Upgrades are required for residential structures that would experience interior noise levels exceeding the 45 dBA CNEL noise standard when windows are closed (e.g. higher grade of insulation in outdoor walls, and/or double-paned windows and air condition units). **Mitigation Measure MM-NOI-5** will be implemented and reads as follows:

“The Project will require a final acoustical analysis (for each tract map) once a site plan or tract map has been developed. The acoustical analyses must demonstrate the interior noise level will not exceed the City’s 45 dBA CNEL noise limit. Potential mitigation may include a “windows closed” condition and possibly upgraded windows (increased STC window/door ratings).”

With **Mitigation Measure MM-NOI-5** incorporated, any **interior noise** impacts will remain less than significant.

THRESHOLD b: Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less than Significant Impact with Mitigation Incorporated

There would be an increase in traffic noise levels on several roadway segments in the Project vicinity as a result of the proposed Project. However, any existing sensitive receptors along Avenue 47 between Tyler Street and Polk Street are located below the 65 dBA CNEL contour. Therefore, no significant off-site traffic noise impacts would occur as a result of the proposed Project, and no mitigation measures would be required for off-site sensitive land uses.

Mitigation Measures MM-NOI-2 through **MM-NOI-5** have been identified for future proposed on-site uses that could be impacted by traffic noise to reduce this impact to less than significant levels. Sound walls (or equivalent mitigation) are recommended to reduce the traffic noise levels in the outdoor active use areas to 60 dBA CNEL or lower to meet the City’s exterior noise standard of 60 dBA CNEL. To achieve the interior noise level standard, a final acoustical analysis (for each tract map) once a site plan or tract map will be required. The acoustical analyses must demonstrate the interior noise level will not exceed the City’s 45 dBA CNEL noise limit. Potential mitigation may include a “windows closed” condition and possibly upgraded windows (increased STC window/door ratings). All measures specified are typically the minimum that would be required to meet these noise standards and therefore reduce noise to a level that is less than significant. With more building upgrades, the interior noise would be reduced even more; however, the associated cost would also be greater.

THRESHOLD c: Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less than Significant Impact with Mitigation Incorporated

As discussed above under Threshold a., construction at the Project site would temporarily increase ambient noise levels above existing levels without the Project. The high noise levels that would occur during site preparation caused by earthmoving equipment for each of the Specific Plan phases would be short term.

Other construction activities such as building erection would generate lower noise levels, and the majority of the construction activity would occur more than 100 ft. from the nearest receptors. The proposed project would comply with the time periods for construction specified in the City's Municipal Code as listed in **Standard Condition SC-NOI-1**, which does not allow construction at nighttime.

Mitigation Measure MM-NOI-2 was designed to reduce the construction noise impacts. Compliance with the City's construction hours restrictions (**SC-NOI-1**) would reduce the construction noise impact to a less than significant level. Implementation of **MM-NOI-2** would further reduce the construction noise exposure for receivers adjacent to the Project site by requiring all construction equipment to be equipped with properly operating and maintained mufflers, placing all stationary equipment so that noise is directed away from noise-sensitive receptors; locating equipment staging areas to create the greatest distance between construction-related noise sources and noise-sensitive receptors; limiting the amount of heavy machinery equipment operating simultaneously and installation of temporary noise control barriers.. Therefore, the temporary increase in ambient noise levels as a result of construction is not considered substantial and would be reduced to a less than significant level with mitigation incorporated.

THRESHOLD d: Would the Project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact

The effects of vibration on structures have been the subject of extensive research. The Federal Transit Administration has compiled data regarding the vibration levels for various construction equipment and activities and is detailed in **Table 4.11.4-10, *Vibration Source Levels for Construction Equipment***, below. Much of the work orientated in the mining industry, where vibration from blasting is critical. The Transportation and Construction Induced Vibration Guidance Manuel for the California Department of Transportation has various recommended vibration thresholds for various types of projects and land uses. According to the Konan Vibration Criteria for Historic and Sensitive Buildings the criteria for transient vibration sources should not exceed 0.3 peak particle velocity (PPV). 0.035 inches per second is barely perceptive.

**Table 4.11.4-10
Vibration Source Levels for Construction Equipment¹**

| Equipment | Peak Particle Velocity (inches/second) at 25 feet | Approximate Vibration Level (LV) at 25 feet |
|--------------------------------|--|--|
| Pile driver (impact) | 1.518 (upper range) | 112 |
| | 0.644 (typical) | 104 |
| Pile driver (sonic) | 0.734 upper range | 105 |
| | 0.170 typical | 93 |
| Clam shovel drop (slurry wall) | 0.202 | 94 |
| Hydromill | 0.008 in soil | 66 |
| (slurry wall) | 0.017 in rock | 75 |
| Vibratory Roller | 0.210 | 94 |
| Hoe Ram | 0.089 | 87 |
| Large bulldozer | 0.089 | 87 |
| Caisson drill | 0.089 | 87 |
| Loaded trucks | 0.076 | 86 |
| Jackhammer | 0.035 | 79 |
| Small bulldozer | 0.003 | 58 |

¹ Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

Source: *Noise Analysis*, (Appendix N)

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary source vibration during construction may be from a bull dozer. A large dozer has a vibration impact of 0.089 inches per second PPV at 25 feet. The distance of the construction equipment will be further than 75 feet from any existing building. At a distance of 75 feet the vibration level would be 0.027 VdB, which is within the range of perception but below any risk of architectural damage. It is anticipated that any significant vibration impact will occur to any adjacent buildings due to the distance of construction equipment from buildings.

Any Impacts are considered less than significant. No mitigation is required.

4.11.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-NOI-1 The City has established certain hours during the day when construction can occur to minimize potential disturbance to sensitive receptors. The Project applicant shall comply with these requirements, which are shown below:

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.**

Mitigation Measure(s)

MM-NOI-1 During any earth movement construction activities during any phase of development the developer shall:

- **Locate stationary construction noise sources such as generators or pumps at least 300 feet from sensitive land uses, as feasible;**
- **Locate construction staging areas should be located as far from noise sensitive land uses as feasible;**
- **Ensure all construction equipment is equipped with appropriate noise attenuating devices to reduce the construction equipment noise by 8 to 10 dBA;**
- **Turn off idling equipment when not in use;**
- **Maintain equipment so that vehicles and their loads are secured from rattling and banging;**
- **Limit the amount of heavy machinery equipment operating simultaneously to two (2) pieces of equipment within a 50-foot radius of each other (when located with 100 feet of existing residential units); and**
- **Install temporary noise control barriers that provide a minimum noise level attenuation of 10.0 dBA when Project construction occurs near existing noise-sensitive structures. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be high enough and long enough to block the view of the noise source. Unnecessary openings shall not be made.**
 - **The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.**
 - **The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.**

MM-NOI-2 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the necessary performance standards for adequate noise

reduction for residences located in PA2, PA3 and PA8, that are adjacent to Avenue 47:

- Areas Exceeding 70 dBA CNEL (within 23 feet from centerline of Avenue 47): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 73 feet from centerline of Avenue 47): 6 foot for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 60 dBA CNEL (within 231 feet from centerline of Avenue 47): 5 foot for ground level outdoor living areas such as backyards or patios.

MM-NOI-3 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the necessary performance standards for adequate noise reduction for residences located in PA5, PA7 and PA10, that are adjacent to Avenue 48:

- Areas Exceeding 70 dBA CNEL (within 23 feet from centerline of Avenue 47): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 73 feet from centerline of Avenue 47): 6 foot for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 60 dBA CNEL (within 231 feet from centerline of Avenue 47): 5 foot for ground level outdoor living areas such as backyards or patios.

MM-NOI-4 Prior to the approval of an implementing project, the Project applicant shall submit plans to the Building and Safety Department that will demonstrate the necessary performance standards for adequate noise reduction for residences located in PA5, PA6 and PA7, that are adjacent to Street "A":

- Areas Exceeding 70 dBA CNEL (within 18 feet from centerline of Street "A"): 8 foot (combination of earthen berm and maximum 6' high wall) for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 65 dBA CNEL (within 57 feet from centerline of Street "A"): 6 foot for ground level outdoor living areas such as backyards or patios.
- Areas Exceeding 60 dBA CNEL (within 181 feet from centerline of Street "A"): 5 foot for ground level outdoor living areas such as backyards or patios.

MM-NOI-5 The Project will require a final acoustical analysis (for each implementing project) once a site plan or tract map has been developed. The acoustical analyses must demonstrate the interior noise level will not exceed the City's 45 dBA CNEL noise limit. Potential mitigation may include a "windows closed" condition and possibly upgraded windows (increased STC window/door ratings)."

4.11.6 Cumulative Impacts

For the proposed Project, cumulative impacts are the incremental effects of the proposed Project when viewed in connection with the effects of past, current, and potential future projects within the cumulative impact area of the City of Coachella

The cumulative study area for traffic noise is the proposed Project's traffic study area. The Traffic Study conducted a cumulative analysis for the existing plus project, Project Completion Year 2022, and General Plan Buildout 2035, with and without Project conditions. Therefore, the traffic noise analysis presented in this section is a cumulative impact analysis.

The City has an exemption for noise created during construction. Also, construction is limited to certain hours during the day. The Project will have a less than significant impact to the adjacent land uses, based on the City's noise ordinance during the construction phase of development.

The potential off-site noise impacts caused by the increase in vehicular traffic from the operation of the proposed Project on the nearby roadways (existing year), as demonstrated in Table 4.11.4-3, will be less than significant from the implementation of the proposed Project. This includes the extension of Avenue 48 westerly (as it becomes Shadow View Boulevard). Also, impacts will be less than significant from the implementation of the proposed Project at Project completion year (2022). Lastly, no significant impacts will result from the implementation of the proposed Project at General Plan Buildout Year (2035).

Portions of the Project site are located within the 65 to 70 dBA CNEL contours of subject roadways and will therefore require noise barriers (or equivalent mitigation) to shield any potential sensitive outdoor areas. Once a site plan or tract map is available, additional acoustical studies will need to be conducted to determine wall heights and placement to ensure compliance to the City's exterior noise standard. With mitigation incorporated, any impacts will remain less than significant.

Residences would need to be exposed to exterior noise levels exceeding 65 dBA CNEL (45 dBA + 20 dBA = 65 dBA) to potentially exceed the interior noise standard of 45 dBA CNEL with windows closed. With mitigation incorporated, any impacts will remain less than significant.

Construction activities can produce vibration that may be felt by adjacent land uses. It is anticipated that no significant vibration impact will occur to any adjacent buildings due to the distance of construction equipment from buildings. Any Impacts are considered less than significant.

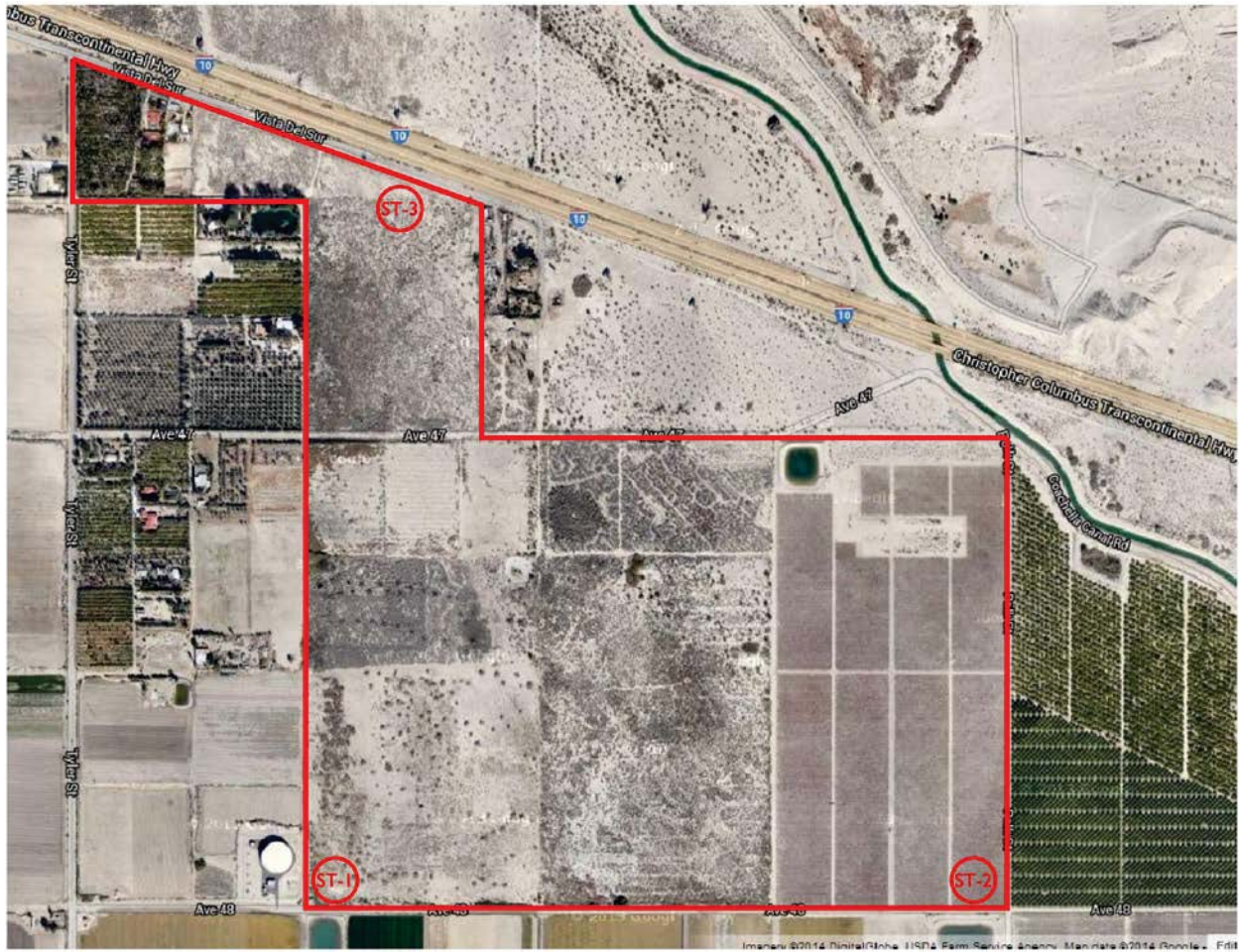
Because Project impacts are below established thresholds for these issue areas, when combined with other Projects in the area, it will not result in any cumulative impacts.

4.11.7 Unavoidable Significant Adverse Impacts

The existing noise setting of the Project site will be permanently altered. Even though intensification of development will be greater than that which presently occurs on the site, it will not result in an unavoidable adverse noise impact. Based on the data and analysis presented in this subchapter, implementation of the Project will cause an adverse noise impact to these specific resources. The Project itself does not contribute significantly to local, site specific impacts that cannot be mitigated.

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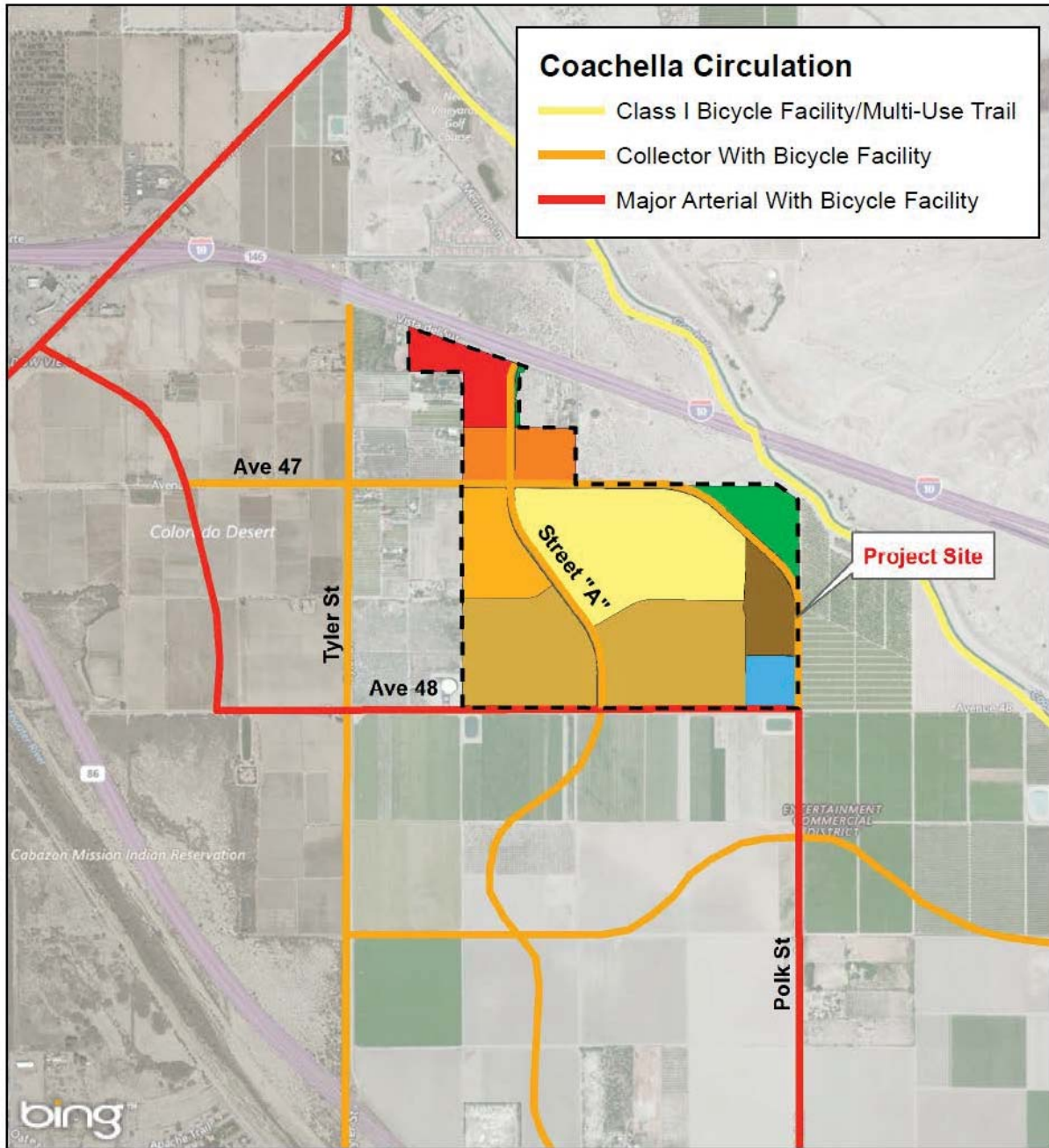
Figure 4.11.2-1
Noise Monitoring Locations



Source: Noise Analysis, (Appendix N)

Not to Scale

Figure 4.11.2-1
Circulation Plan



Source: Vista del Agua Specific Plan 2018 (Appendix A)

Not to Scale

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.12 figures are located at the end of this subchapter, not immediately following their reference in text.

4.12 POPULATION AND HOUSING

4.12.1 Introduction

This subchapter will evaluate the environmental impacts to population and housing from implementation of the Project. Section E.XIII., Population and Housing Resources, of the Initial Study (IS) posed the following questions, pertaining to thresholds, asking whether the Project would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The IS indicated the following pertaining to the Project affecting population and housing resources:

“Due to the nature of the Project, implementation of the Project (on-site or off-site components); may induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). As a result of the proposed general plan amendment, change of zone, specific plan and tentative parcel map, the Project is proposing uses that are different than the current land use designation. In order to ensure a comprehensive discussion of the population and housing issues related to question XIII.a, above, they will be analyzed in the EIR.

There is no existing housing, or people located on the Project (on-site or off-site components); therefore the implementation of the Project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or, displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. No impacts are anticipated. No mitigation is required. These issues will not require any further analysis in the EIR.”

The IS determined that Thresholds/bullet points #2 and #3 related to displacing persons and housing units **would not** require any further analysis in the Environmental Impact Report (EIR). Therefore, Threshold/bullet point #1, above, will be the focus of this analysis.

Comments related to population and housing resources were provided in *Comment Letter #11 from the Southern California Association of Governments (SCAG) (dated 4/2/15)* in response to the Notice of Preparation (NOP). In their letter, SCAG indicated that SCAG is the designated Regional Transportation Planning Agency under state law, and is responsible for review for

conformity with Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) pursuant to SB 375. SCAG requested the following:

- A side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency, or non-applicability of the policy and supportive analysis in a Table format. RTP/SCS Strategies – if applicable, refer to these strategies as guidance for considering the proposed Project within the context of regional goals and policies; and
- Review mitigation in the SCAG RTP/SCS Final Program EIR.

Since receipt of this NOP comment letter, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS). Therefore, the EIR will utilize the 2016 RTP/SCS for the analysis.

The General Plan Update Final EIR (2015) conducted this analysis, which has been incorporated by reference. In addition, the General Plan Update Final EIR (2015) concluded that SCAG's 2012 RTP/SCS forecasts that the City will have a population of 128,700 in 2035, is approximately 4.9 percent less than the General Plan Update (2015) population projections. The SCAG forecasts and the General Plan Update (2015) projections are considered reasonably similar estimates for 2035, therefore, the City has provided the analysis that was raised by SCAG.

These issues pertaining to population and housing will be discussed below as set in the following framework:

- Environmental Setting: Population and Housing
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and the Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In the following sources were used in the evaluation presented in this Subchapter:

- Southern California Association of Governments Website: <http://www.scag.ca.gov/about/Pages/Home.aspx>
- 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>
- SCAG Sustainability Planning Grant Website: <http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx>
- Western Riverside Council of Governments Website: <http://www.wrcog.cog.ca.us>
- 2016 RTP/SCS Final PEIR – Section 3.11 Land Use and Planning http://scagrtpscs.net/Documents/2016/peir/draft/2016dPEIR_3_11_LandUseandPlanning.pdf

4.12.2 Environmental Setting: Population and Housing

The Project consists of approximately 275 acres of on-site development, as well as approximately 29 acres of off-site infrastructure improvements, as described in Chapter 3, *Project Description* of this EIR. The Project site is surrounded by:

- North: I-10 and Vista Del Sur
- South: existing agricultural uses and vacant land
- East: existing agricultural uses, vacant land, and Coachella Canal
- West: existing agricultural uses and vacant land

According to p. 4.13-1 of the General Plan Update Final EIR (2015), between 2005 and 2010, the City's population increased by nearly one-third, jumping from 30,879 to 40,704. The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan estimates that Coachella could grow to 146,300 by 2040. Furthermore, the population in the southeastern Coachella Valley is expected to increase to between 300,000 and 500,000 people within a generation or two.

According to p. 4.13-2 of the General Plan Update Final EIR (2015), 40,704 people lived in the City of Coachella's 8,998 occupied housing units. On average, 4.51 persons were living within each occupied housing unit. As compared to the statewide (2.96) and countywide averages (3.2), Coachella had more persons living within each occupied unit. Compared with the County, and Statewide averages, Coachella exhibits significantly higher numbers of unit occupancy which indicates overcrowding. Between 2000 and 2010, the total population of the City of Coachella increased by 17,980 reaching 40,704 in 2010. During this 10-year period, the City's population growth rate of 79.1 percent was higher than the Riverside County rate of 41.7 percent. This population growth increased the demand for housing. Between 2000 and 2010, permits were issued for 4,389 new residential units. Additionally, vast amounts of undeveloped and underdeveloped land in the City present opportunities for continued development.

Approximately 18,530 acres of the City's Planning Area of 45,300 acres is partially developed, with nearly 27,000 acres undeveloped. Of that undeveloped land, approximately 10 percent has been entitled for future development.

Page 4.13-4 of the General Plan Update Final EIR (2015) states that in 2010, the Agriculture sector was the largest job sector, accounting for 29.7% of total jobs in the City. Other large sectors included:

- Retail (14.7 %);
- Transportation-Warehousing-Utilities (12.6 %); and
- Education-Health (11.3 %).

In February 2017, the unemployment rate in Coachella was higher than neighboring communities and county and statewide averages. The California Employment Development Department reported the unemployment rate in Coachella was 8.5%; this is higher than the California unemployment rate (5%) and the Riverside County rate (5.5%). Figure 4.13.5 of the General Plan Update Final EIR (2015) shows the unemployment for cities in the Coachella Valley.

City of Coachella General Plan Goals and Policies

Goal 1. Adequate Housing. Adequate housing in the city by location, price, type, and tenure, especially for those of lower income and households with special needs.

1.1 Land Use Controls: Use the Land Use Element of the General Plan and the Zoning Code to ensure the availability of adequate sites for a variety of housing types.

1.2 Varying Densities: Employ a range of housing densities to provide housing for all economic segments of the community consistent with good planning practice.

1.4 Compatible Uses: Ensure the compatibility of residential areas with surrounding uses through the separation of potentially hazardous or damaging uses, construction of adequate buffers, and other planning and land use techniques.

1.6 Services and Facilities: Require that adequate public and private services and facilities are or will be provided to all new residential developments as a prerequisite for their approval.

1.8 Innovative Construction: Promote and encourage the use of innovative construction techniques.

Goal 2. Conservation and Improvement. A preserved and well-maintained existing affordable housing stock.

2.5 Code Enforcement: Ensure that all new housing units constructed in the city are safe and livable through vigorous enforcement of the Uniform Building Code.

Goal 3. Reduced Energy Usage. Reduced residential energy usage within the city, resulting in reduced housing costs.

3.1 Conservation Techniques: Encourage the use of energy-conserving techniques in the siting and design of new housing.

3.2 State Requirements: Actively enforce state energy conservation requirements for new residential construction.

Goal 4. Equal Housing Opportunity. Equal housing opportunities for all residents of the city regardless of race, religion, marital status, age, sex, nationality, physical or developmental disability, family size, and level and source of income.

4.4 Handicapped Access: Promote handicapped access in new housing developments and in existing housing.

4.6 Special Needs Housing: Encourage the development of housing to meet the needs of elderly, large family, and female-headed households.

4.7 Unit Sizes: Promote the provision of sale and rental housing to meet the needs of families of all sizes.

Specific Plan Project Objectives

- Create a distinctive “sense of community” unifying areas through a range of housing types that provide affordable homes with high quality design criteria.
- High Connectivity - Create aesthetic and functional streetscapes and trails which provide a range of transportation options.
- Provide a balanced mix of economically viable commercial and residential land uses that will utilize the Enterprise Zone to promote local job creation.

4.12.3 Thresholds of Significance

The City’s IS contains three (3) criteria for determining impacts population and housing resources. As discussed above, the following Threshold will be analyzed in this EIR:

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

4.12.4 Potential Impacts

THRESHOLD a: **Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Less Than Significant Impact

As stated on p. 4.13-8 of the General Plan Update Final EIR (2015):

“An impact relative to induced population growth in an area might occur if the project would induce population growth in an area not otherwise identified for or expecting growth. This growth could be induced directly by proposing new homes and businesses or indirectly through the provision of new infrastructure. Growth projected under the CGPU timeline would more than double the current Planning Area population. However, the CGPU has been prepared to respond to the growth demand projected for Coachella as described by SCCAG and the Riverside County Center for Demographics Research. It is also the goal of the CGPU to ensure that this new growth will occur in a manner that has less environmental impact than that of recent development occurring under the existing General Plan.”

As stated above, the City is expected to grow to a total population of 143,300, by 2040. The City currently has 9,903 housing units, a population of 40,704, and approximately 5,831 jobs.

According to p. 4.13-9 of the General Plan Update Final EIR (2015), the City has enough undeveloped land to accommodate generations of growth and has long anticipated growing into a mid-sized City. These expectations align with the growth projections for the region as a whole. SCAG’s 2016 RTP/SCS forecasts that the City will have a population of 143,300 in 2040.

The City's approach to development as proposed by the General Plan Update (2015) would focus new development in High Priority Development Areas and Growth Expansion Areas and prohibit development of land in Subareas 15 and 16 until the growth areas are at least 60% developed. The Project site is located in Subarea 11 – Commercial-Entertainment District (reference Figure 3.0-4: Proposed Subareas) of the General Plan Update Final EIR (2015). The Commercial Entertainment District will include, but not be wholly limited to: destination retail, hotels and resorts, and entertainment uses. The General Plan Update (2015) states that Subarea 11 must also exhibit strong, fine-grained connections to the surrounding neighborhoods, allowing community members easy access to the shopping and entertainment uses. The Project, as designed, and shown on Figure 2.1.1-1, Specific Plan Land Use Plan, meets these criteria: strong, fine-grained connections to the surrounding neighborhoods, allowing community members easy access to the shopping and entertainment uses.

New growth will be incremental, as development projects continue to be built in the City. The General Plan Update (2015) has been developed in consideration of these growth trends and the resulting goals and policies intend to harness this growth and mitigate any negative externalities associated it. While the entirety of the General Plan Update (2015) is intended to layout the framework for orderly development into a midsize City and mitigate the impacts of growth, the first two goals of the Land Use and Community Character Element present a series of policies specifically focused on establishing the orderly growth of the City (reference pp. 4.13-9 through 4.13-112 of the General Plan Update Final EIR (2015)).

According to current trends and growth projections by SCAG, population growth in the City is imminent and will result in a substantial change of size of the City. As such, development will need to occur in order to accommodate the increase in population. The Project will induce growth relative to economic expansion, population growth, precedent setting action, and encroachment into open space; however, it will be consistent with the General Plan Update (2015). Therefore, impacts will also be consistent with those anticipated in the General Plan Update (2015) and the General Plan Update Final EIR (2015). Impacts related to population and housing would be incremental and considered less than significant.

The following is a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency, or non-applicability of the policy and supportive analysis. The RTP/SCS Strategies – if applicable, refer to these strategies as guidance for considering the proposed Project within the context of regional goals and policies.

Table 4.12-1, *RTP/SCS Goals*, below lists the 9 Goals contained in the 2016 RTP/SCS and the Project's relationship to these Goals.

**Table 4.12-1
RTP/SCS Goals**

| Goal | Project |
|---|--|
| 1. Align the plan investments and policies with improving regional economic development and competitiveness. | Consistent. The Project contains residential and commercial uses that will contribute to economic development and competitiveness. |
| 2. Maximize mobility and accessibility for all people and goods in the region. | Consistent. The Project offers opportunities for vehicular and non-vehicular modes of transportation; thereby, providing mobility and accessibility for people and goods. |
| 3. Ensure travel safety and reliability for all people and goods in the region. | Consistent. The Project offers opportunities for vehicular and non-vehicular modes of transportation; thereby, providing travel safety and reliability for all people and goods. |
| 4. Preserve and ensure a sustainable regional transportation system. | Consistent. The Project will not provide a hindrance to the preservation and ensurance of a sustainable regional transportation system. |
| 5. Actively encourage and create incentives for energy efficiency, where possible. | Consistent. The Project will comply with Title 24 requirements; which includes energy efficiency, where possible. |
| 6. Maximize the productivity of our transportation system. | Consistent. The Project provides additional local and subregional roadways, and will not provide a hindrance to the productivity of the transportation system. |
| 7. Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking) | Consistent. The Project offers opportunities for vehicular and non-vehicular modes of transportation; thereby, protecting the environment and health of residents by improving air quality. |
| 8. Encourage land use and growth patterns that facilitate transit and non-motorized transportation | Consistent. The Project offers opportunities for vehicular and non-vehicular modes of transportation. |
| 9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies | N/A. This is not a function of the Project. |

Source: 2016 RTP/SCS <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>

As demonstrated in **Table 4.12-1**, the Project is consistent with these Goals. Any impacts from the Project are considered less than significant.

Table 4.12-2, RTP/SCS Policies, below lists the 8 Policies contained in the 2016 RTP/SCS and the Project's relationship to these Goals.

**Table 4.12-2
RTP/SCS Policies**

| Goal | Project |
|---|--|
| 1. Transportation investments shall be based on SCAG's adopted regional Performance Indicators. | N/A. This is not a function of the Project. |
| 2. Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region. | N/A. This is not a function of the Project. |
| 3. RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives. | N/A. This is not a function of the Project. |
| 4. Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1. | N/A. This is not a function of the Project. |
| 5. HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1. | N/A. This is not a function of the Project. |
| 6. The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single occupancy vehicle use, by leveraging advanced technologies. | N/A. This is not a function of the Project. |
| 7. The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run. | N/A. This is not a function of the Project. |
| 8. Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan. | N/A. This is not a function of the Project. |

Source: 2016 RTP/SCS <http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS.pdf>

As demonstrated in **Table 4.12-2**, the Policies are not applicable to the Project. These Policies are geared more to the regional and sub-regional level. No impacts are anticipated from the Project.

According to Section 3.11, Land Use and Planning of the Final PEIR for the 2016 RTP/SCS, one project-level performance standards-based mitigation measure was identified (below) in response to the question raised in this Threshold. It should be noted that SCAG indicates that mitigation measures “may be considered by the City, as applicable and feasible.”

“MM-LU-1(b): Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or reducing the significant effects regarding the potential to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project that are within the jurisdiction and responsibility of local jurisdictions and Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies established within the applicable adopted county and city general plans within the SCAG region to avoid conflicts with zoning and ordinance codes, general plans, land use plan, policy, or regulation of an agency with jurisdiction over the project, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:

- Where an inconsistency with the adopted general plan is identified at the proposed project location, determine if the environmental, social, economic, and engineering benefits of the project warrant a variance from adopted zoning or an amendment to the general plan.”

The General Plan anticipates that the Project site and surrounding environs will ultimately be developed as suburban/urban densities. Impacts are considered less than significant.

4.12.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

No standard conditions are required for population and housing

Mitigation Measure(s)

No mitigation measures are required for population and housing

4.12.6 Cumulative Impacts

As defined in the California Environmental Quality Act (CEQA) Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for population and housing. The cumulative study area used to assess potential cumulative population and housing impacts includes the City of Coachella and the County of Riverside because employees at the proposed Project site may live outside the City’s jurisdictional boundaries.

The proposed Project together with other commercial and residential developments within the City will serve an existing demand for employment, while also meeting the cumulative demand of employment that will result from the City’s projected future population. These increases for population, housing, and employment would be within the total projected growth forecasts for 2035 by the City. These expectations align with the growth projections for the region as a whole. SCAG’s 2016 RTP/SCS forecasts that the City will have a population of 143,300 in 2040. In addition, implementation of the proposed Project would be consistent with the City’s vision of the Project site because of the existing General Plan Update (2015) designations for the site of Suburban Retail District, Urban, General, and Suburban Neighborhood, and Neighborhood Center. Implementation of the proposed project would not result in a

cumulatively significant population or housing impact and the proposed Specific Plan land uses would not significantly induce growth in areas where growth was not previously anticipated.

4.12.7 Unavoidable Significant Adverse Impacts

The Project is being developed consistent with the City's General Plan Update (2015) and SCAG's 2026 RTP/SCS forecasts; therefore, it will not exceed official regional or local population projections. It will induce population and housing growth in an area directly, by proposing new homes and indirectly by proposing jobs. Because of consistency with the General Plan General Plan Update (2015), this would not be considered an unavoidable adverse impact. Indirect effects from implementation of the Project (through the extension of roads or other infrastructure) would not create any unavoidable adverse impacts, as the roadways and other infrastructure (with the exception of water, sewer and natural gas) are already available in the Project vicinity. Therefore, consistent with the statement on p. 4.13-13 of the General Plan Update Final EIR (2015), population and housing growth from the Project is not considered an unavoidable adverse impact.

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.13 figures are located at the end of this subchapter, not immediately following their reference in text.

4.13 PUBLIC SERVICES AND RECREATION RESOURCES

4.13.1 Introduction

4.13.1.1 *Public Services*

The specific topics considered in this subchapter include: Fire Protection and Emergency Response Services; Sheriff Law Enforcement Services; School/Education Services; Library Services; and Health Services. Of these services, all but Health Services are typically provided solely by local government. In contrast, some Health Services are provided by local government, but most Health Services are available through private businesses (doctors, hospitals, etc.). Section E. XIV, Public Services, of the Initial Study, asked whether the Project would:

- Would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - a. Fire Protection?
 - b. Sheriff Protection?
 - c. Schools?
 - d. Parks?
 - e. Other public facilities?

Based on the analysis in the Initial Study it was determined all of the issue areas related to public services resources in the questions asked above **would** be further analyzed in the Environmental Impact Report (EIR).

The Initial Study indicated the following pertaining to the Project affecting public services resources:

“Implementation of the Project (on-site or off-site components) may result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new of 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 and other public facilities. In order to ensure a comprehensive discussion, the questions raised in XIV.a, above, will be analyzed in the EIR. It is anticipated that the adverse physical effect on the environment resulting to recreational facilities will also be analyzed in the recreation resources section of the EIR.”

4.13.1.2 Recreation

Section E. XV, Recreation, of the Initial Study, asked whether the Project would:

- 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?; and/or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Based on the analysis in the Initial Study it was determined all of the issue areas related to recreation resources in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting recreation resources:

“Implementation of the Project (on-site components) may 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; and/or, include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. However, it is not anticipated that the off-site Project components will have any effect on these recreational resources. Do to the nature of the Project, additional recreation resources will be needed and existing recreation resources may be impacted. In order to ensure a comprehensive discussion, the questions raised in XV.a and b, above, will be analyzed in the EIR. It is anticipated that the adverse physical effect on the environment resulting from the construction or expansion of recreational facilities will be analyzed in the respective sections of the EIR (i.e., air quality, cultural resources, etc.)”

Each of the referenced Public Service issues is addressed in a separate discussion/evaluation below set in the following framework:

- Environmental Setting
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The following reference documents were used in preparing this subchapter of this Program EIR (EIR):

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and Vista Del Agua Specific Plan (**Appendix A**) were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following were also used in the analyses presented in this subchapter:

- City of Coachella, *Fire and Emergency Medical Services Master Plan*, dated July 2007 https://webcache.googleusercontent.com/search?q=cache:9ZZ-VDteEdgJ:https://cityofcoachellageneralplanupdate.weebly.com/uploads/1/2/1/2/12129446/fire_protection_rev_07-20-11.doc+&cd=3&hl=en&ct=clnk&gl=us
- City of Coachella, *Desert Recreation District Master Plan*, dated 2013 <https://myrecreationdistrict.com/assets/attachments/2013-Master-Plan.pdf>
- City of Coachella, *Ordinance No. 1061* https://library.municode.com/ca/coachella/codes/code_of_ordinances
- City of Coachella, *Municipal Code, Chapter 4.45 – Development Impact Fees* https://library.municode.com/ca/coachella/codes/code_of_ordinances
- City of Coachella, *Adopted Operating Budget, Fiscal Year 2014-2015* <http://www.coachella.org/departments/finance/budgets>
- Riverside County Fire Department, *Strategic Plan 2009-2029*, dated November 2009 <http://www.rvcfire.org/stationsAndFunctions/AdminSppt/StrategicPlanning/Documents/StrategicPlan2009.pdf>
- Desert Sands Unified School District, *Long Range Facilities Master Plan Update*, dated July 22, 2014 <https://www.dsusd.us/sites/default/files/07-22-2014%20Board%20Study%20Session%20-%20Facilities%20Master%20Plan%20%281%29.pdf>
- County of Riverside, *Riverside County Land Information Service (RCLIS) website* (http://www.rctlma.org/gis/content/apps_reports.aspx)
- The Natelson Dale Group, Inc., *Vista Del Agua City of Coachella, CA Fiscal Impact Analysis (FIA, Appendix P)*, 11-14-2014
- Verbal communication with Marisa Duran at Fire Station #79 on July 27, 2015
- Verbal communication with Captain Bill Lawe, Strategic Planning Division of the Riverside County Fire Department, on July 29, 2015
- Verbal communication with Lt. Misty Reynolds, Asst. Chief of the Riverside County Sheriff's Department Thermal Station, on July 31, 2015
- E-mail communication with Director Patrick Cisneros, School Facilities Department of the DSUSD, on June 26, 2017
- E-mail communication with Director Patrick Cisneros, School Facilities Department of the DSUSD, on October 25, 2017, provided by Ron Goldman and Luis Lopez

No comments were received on the Notice of Preparation (NOP) pertaining to public services. The Desert Recreation District commented that the Project is located within the District Recreation Boundary and that the developer will be required to enter into an agreement to pay fees pursuant to the Quimby Act.

No other comments were raised at the public scoping meeting. The issues identified in the Initial Study, and NOP, are the focus of the following evaluation of public services and recreation resources.

4.13.2 Environmental Setting

Both Fire Protection and Emergency Response Services and Sheriff Law Enforcement Services are contracted by the City of Coachella from the County of Riverside. The Riverside County

Library System provides library services to the City of Coachella. If the Project is implemented as proposed, it will result in development of a site, that is currently vacant, with 1,640 residential dwelling units and approximately 25 acres of commercial uses. Additional structures and increase in population will increase the demand for the following services and/or expansion or construction of associated facilities: fire protection and emergency response services, sheriff law enforcement services, school/education services, recreational facilities, library services, and health services. The potential significance of this increase in demand for these services is evaluated in the following text.

Fire Protection and Emergency Response Services

The City of Coachella contracts with the Riverside County Fire Department (RCFD) for fire protection services and emergency medical services. This contract includes fire suppression, fire prevention, paramedic services, hazardous materials response, urban search and rescue response and other related services. The RCFD is administrated and operated by the California Department of Forestry (CALFIRE) under an agreement with the County of Riverside.

The RCFD is a "Full Service" agency, providing fire protection, emergency medical, emergency management, and public assistance services to citizens within its jurisdiction. The City of Coachella has one (1) Fire Station, Battalion 6 Coachella Fire Station #79, located at 1377 Sixth Street in the City of Coachella, which serves the incorporated portions of the City. To ensure adequate fire protection services in the event of an emergency, the City maintains a mutual aid agreement with surrounding city and county jurisdictions where additional resources are available to the City when the need arises.

Other existing stations proximate to the City of Coachella and the Project site include:

- Fire Station #86, located approximately 5.5 miles west of the Project site at 46990 Jackson Street in the City of Indio;
- Fire Station #87, located approximately 4.5 miles northwest of the Project site at 42900 Golf Center Parkway in the City of Indio; and,
- Fire Station #39, located approximately 7.5 miles south of the Project site at 86911 Avenue 58 in the unincorporated community of Thermal.

Through the Regional Fire Service System, the City of Coachella receives an immediate response from the outlying stations, including personnel and equipment for any major event or multiple events that may occur within the City. The City of Coachella is also in a cost sharing agreement with the Cities of Indio, La Quinta and Riverside County for the use of the 100' ladder truck located at Fire Station #86.

Response time to emergency calls within the City average approximately four (4) minutes or less more than 80 percent of the time. The RCFD responds to all medical emergency calls with the nearest available unit. Based on the City of Coachella Fire and Emergency Medical Services Master Plan, this response time falls within the following time frames:

- Outlying: 15 minutes.
- Rural: 10 minutes.
- Urban: 5 minutes.

- Heavy Urban: 5 minutes.

The Project site will be subject to Rural and Outlying Land-Use standards. According to the *Riverside County Fire Department FY 17-18 Service Alternatives*, prepared March 7, 2017 (<file:///C:/Users/Angie/Downloads/Attachment-5359.pdf>), rural areas have a population density of 100 to 500 persons per square mile and outlying areas have a population density of < 100 per square mile. Rural and Outlying Land-Use specifies that a full alarm assignment be operating on the ground within ten (10) minutes and fifteen (15) minutes of notification that a fire is in progress, respectively.

The station serving this area is the Coachella Fire Station #79, located approximately 3.5 miles southwest of the Project site. This station staffs 11 full-time firefighters including one (1) paramedic and is equipped with one (1) Type-1 fire engine that provides 24-hour, year around service. Fire engine staffing includes three (3) to four (4) persons per engine per day and includes paramedic staff. (Staffing, unit types, and hours verified through verbal communication).

Based on this information, Fire Station #79 would arrive within approximately 9 minutes; Fire Station #86 within approximately 13 minutes; Fire Station #87 within approximately 9 minutes; and Fire Station #39 within approximately 13 minutes. These times are approximate and actual response times currently meet or exceed the Urban Land Use protection goals found in the Fire Protection Master Plan. According to the Riverside County *Map My County*, the Project site is not located within a hazardous fire area.

It should be noted that the General Plan Update Final EIR (2015) recommended that the City of Coachella consider the addition of new fire service facilities to meet the increased demand for future fire protection and emergency medical services under the General Plan Update Final EIR (2015). The La Entrada Project Development Agreement (https://laentradacommunity.com/download/ordinance_1067/FINAL%20APPROVED%20La%20Entrada%20Development%20Agreement.pdf) requires that upon issuance of a certificate of occupancy for the 1,500th Unit, the Master Developer shall provide the necessary land and facilities for a three-person engine company.

Chapter 4.45 of the Coachella Municipal Code establishes a Development Impact Fee be placed on all new development within the City which is directly related to the funding and construction of fire protection and emergency response facilities necessary to address direct and cumulative impacts generated by new development. According to Section 4.45.030 of Chapter 4.45 of the Coachella Municipal Code the following public facilities must be constructed, installed and paid for or financed: General Government facilities; library facilities, park and recreation facilities, street facilities, fire facilities and police facilities. Development Impact Fees are reviewed and adjusted administratively on an annual basis each fiscal year.

Sheriff Law Enforcement Services

The City of Coachella contracts law enforcement services from the Riverside County Sheriff's Department (RCSD). The City of Coachella also maintains a formal mutual aid agreement with the California Governor's Office of Emergency Services for law enforcement and emergency services. The State is divided into seven (7) Law Enforcement Mutual Aid Regions, in which the

City of Coachella is located within Region #6. Mutual Aid Region #6 consists of Riverside, San Bernardino, San Diego, Imperial, Inyo, and Mono Counties.

An informal mutual aid agreement¹ exists between the City of Coachella and the cities of Indio, Palm Springs, and Desert Hot Springs Police Departments for law enforcement and emergency services. These Departments work closely together on a day-to-day basis in order to assist each other with law enforcement activities, including response to calls, follow-up investigations, limited patrol, and limited traffic control, when a need arises.

The Project site is within the jurisdiction of the Riverside County Sheriff's' Department Thermal Station, located approximately 6 miles to the south at 86625 Airport Boulevard. The Thermal Station contracts law enforcement services to the City, as well as to several other cities and unincorporated communities in the eastern half of the Coachella Valley. The Riverside County jail (detention facility) is located at 46057 Oasis Street, approximately 6 miles northwest of the Coachella Project site, in the City of Indio.

The Thermal Station currently has 35 sworn officers, not including non-sworn personnel. The majority of these officers are dedicated to the Patrol Division with the remaining deputies dedicated to special assignments such as the Community Action Team (C.A.T.), School Resources, and Gang and Narcotics Enforcement. The RCSD provides support law enforcement services including Emergency Services, K-9, Forensic Services, Aviation Unit, Hostage Negotiation, Hazardous Device Team, Underwater Recovery Team and other specialized teams.

Under the contractual agreement with the City of Coachella, the RCSD provides 90 hours per day of law enforcement and emergency services. Nine (9) deputies are dedicated to the City per day, correlating to three (3) deputies per shift, three (3) shifts per day, for continual 24-hour service. For the year 2014, the Thermal Station responded to 24,362 calls for service within the City of Coachella, averaging 70-79 calls per day. (Staffing, hours and response times verified through verbal communication).

According to the RCSD, the Coachella Police Department averaged 5.02 minutes total response time to emergency or Priority 1 calls (involving immediate threat to life or property); 4.72 minutes total response time to Priority 2 calls (involving urgent but not immediate threat to life or property); 28.46 minutes total response time to Priority 3 calls (non-life-threatening); and, 42.80 minutes total response time to Priority 4 calls (non-emergency) during the 2016 Calendar Year. Based on these averages, and even given the location of the site and its limited access at the current time, it is anticipated that the Project would experience response times, with most calls being of the Priority 3 or 4 category (since the Project site is currently vacant).

The RCSD recommends a ratio of one (1) law enforcement officers per 1,000 residents. The Thermal Station indicates that the existing ratio for the City of Coachella is 0.67 officers per 1,000 residents and would like to see an increase of up to one (1) officer per 1,000 residents. This would indicate a need for increased law enforcement staff to maintain adequate response times within the City as development occurs under the General Plan Update (2015).

¹ The Federal Emergency Management Agency (FEMA), defines mutual aid agreements as "...agreements between agencies, organizations, and jurisdictions that provide a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials, and other associated services."

Chapter 4.45 of the Coachella Municipal Code establishes a Development Impact Fee be placed on all new development within the City which is directly related to the funding and construction of law enforcement and emergency services facilities necessary to address direct and cumulative impacts generated by new development. According to Section 4.45.030 of Chapter 4.45 of the Coachella Municipal Code the following public facilities must be constructed, installed and paid for or financed: General Government facilities; library facilities, park and recreation facilities, street facilities, fire facilities and police facilities. Development Impact Fees are reviewed and adjusted administratively on an annual basis each fiscal year.

School/Education Services

Two unified school districts are within the City of Coachella, the Coachella Valley Unified School District (CVUSD) and the Desert Sands Unified School District (DSUSD). The Project site is located within the DSUSD jurisdictional boundaries, which encompass the area north of 48th Avenue and west of Fillmore Street; the areas north of 20th Avenue between Jackson Street and Van Buren Street; and, the area south of 48th Avenue and west of Jefferson Street (<http://www.myschoollocation.com/desertsandsusd/>), reference **Figure 4.13.2-1, DSUSD Boundary Map.**

The DSUSD website (<http://apps.schoolslocator.com/?districtcode=83763#>) indicates that the Project site falls within the service boundaries of the following schools in the City of Indio: Dwight Eisenhower Elementary (K-5), located approximately 5 miles northwest of the Project site at 83391 Dillon Avenue; Desert Ridge Academy (6-8), located approximately 10 miles northwest of the Project site at 79767 Avenue 39; and Shadow Hills High (9-12), located approximately 12 miles northwest of the Project site at 39225 Jefferson Street. Patrick Cisneros, Director of Facilities Services for DSUSD, provided the 2016-17 student enrollment of each of the schools listed above via e-mail correspondence on June 26, 2017, reference **Table 4.13.2-1, DSUSD 2016-17 Enrollment for Project Area Schools**, below. He also indicated that DSUSD is currently building a new elementary school in the City of Indio; the school is scheduled to open for 2018-19 school year. There are no other new facilities planned, at this time. Per their e-mail dated October 25, 2017, the District has indicated that they are not interested in a school site in the Project.

**Table 4.13.2-1
DSUSD 2016-17 Enrollment for Project Area Schools**

| School | Enrollment (2016-17) | Capacity |
|------------------------------|----------------------|----------|
| Eisenhower Elementary School | 471 | 775 |
| Desert Ridge Academy | 1361 | 1296 |
| Shadow Hills High School | 2027 | 1890 |

Source: DSUSD <http://apps.schoolslocator.com/?districtcode=83763#>

Table 4.13.2-1 shows that **2016-17** enrollment at Eisenhower Elementary School was below capacity. Both the Middle and High schools were operating above existing capacity. However, future growth of the surrounding communities has been recognized and planned for as indicated in the School District Master Plan.

In addition to DSUSD, there are several local colleges located in the lower desert available to meet the educational needs of the current residents and the projected population growth of the City.

California law authorizes the governing board of any school district to levy a fee, charge, dedication or other requirement against any construction within its district for the purpose of funding school facilities. These fees are established annually by preparing a School Facilities Needs Analysis (SFNA) and subsequent adoption of the fees by resolution. The DSUSD has adopted "Resolutions Adopting School Facilities Fees" and will require payment of fees or dedication of land to mitigation Project impacts on school facilities.

Recreational Facilities

Parks and recreational facilities provide residents, visitors and the community with both passive and active recreational benefits. Within the City of Coachella, there are traditional parks, school parks, recreational facilities, additional recreational services and trails. The Desert Recreation District (DRD) provides park and recreational services for the City. DRD administers recreational programs within City-owned parks.

According to the City of Coachella website (<http://www.coachella.org/residents/parks-and-recreation>), there are currently eight (8) parks located within the City which offer a variety of amenities from safe playgrounds to shaded areas with picnic tables to soccer and football fields, volleyball and tennis courts, and swimming. Also available, for indoor events, is the City's Community Center located in Bagdouma Park. These parks are listed and described below:

- **Bagdouma Park:** This 46-acre community park includes the Coachella Valley Boxing Club; a swimming pool; a baseball/softball field; a soccer/football field; basketball and tennis courts; a pavilion; playground; restroom/drinking facilities; and tables, benches, bleachers, parking and open grass areas. It is located on the corner of Avenue 52 and Douma Street, near several Coachella schools.
- **Dateland Park:** Home to the City's skateboard park, the 4-acre neighborhood park (per aerial map) is on Shady Lane, next to Bobby Duke Middle School. Hours of operation are 6:00 a.m. to 10 p.m.
- **Veterans' Memorial Park:** The 2.4-acre park site (per aerial map) of the annual Veterans Day 5k and pancake breakfast, includes a playground; stage; restroom/drinking facilities; and tables, benches, bleachers, parking, and open grass areas. It is located on 4th Street, directly behind City Hall.
- **Sierra Vista Park:** This 2-acre mini-park in north Coachella includes basketball courts; baseball/softball field; playground and open grass areas. It is located on the corner of Tyler Street and Calle Mendoza.
- **Rancho De Oro Park:** The 4-acre neighborhood park site of the popular Movies in the Park series, **and** is located on Avenue 50, next to Cesar Chavez Elementary School. Recreational facilities include a baseball/softball field; a soccer/football field; splash pad; playground; restroom/drinking facilities; and tables, benches and open grass areas.

- **Tot Lot:** This 0.2-acre tot lot is a great spot for families with young children and includes a playground with open grass areas. It is located on the corner of Avenue 53 and Calle Empalme.
- **Shady Lane Park:** A small 1-acre mini-park, it is located on the corner of Shady Lane and Avenue 52 and includes tables, benches, restroom/drinking facilities and open grass areas.
- **Rancho Las Flores:** One of Coachella's newest and most popular community parks, it is located on 29 acres on Van Buren Street just blocks away from Martin Van Buren Elementary School. This park includes a soccer/football field; basketball court; playground; restroom/drinking facilities; and tables, benches and open grass areas.
- **Community Center:** The community center is available for a range of community activities and is located at Bagdouma Park.

In addition to City parks, there are also a number of school parks located within the CVUSD and DSUSD. These parks offer a variety of park and recreational resources available to students during school hours and to the general public after school, evenings, weekends and summers. However, the availability of these resources is on a site-specific basis and accessibility can be limited.

The City's General Plan Update Final EIR (2015) also lists the Ye'we'vichem special use park, located on 0.6 acres between 48th and 50th Avenues, west of Calhoun Street for a total park acreage of approximately 89.2 acres. Presently, there are no regional parks located within the City of Coachella; however, the County of Riverside maintains 35 regional parks, encompassing roughly 23,317 acres, which are available to all County residents. The City's General Plan Update Final EIR (2015) recognizes the need for additional local parks as future development projects are implemented throughout the City.

There are no regional recreational trails or bicycle trails located within the City. However, the Coachella Valley Association of Governments (CVAG), with funding from the California Strategic Growth Council, Riverside County Park and Open Space District, Desert Healthcare District, South Coast Air Quality Management District, California Active Transportation Program, and Caltrans, is presently implementing measures to develop the CV Link. This is a transformative, multi-modal facility that will create a new spine for alternative transportation through the entire Coachella Valley. Groundbreaking on first segments is scheduled to begin in 2017. The route plans to largely follow the Whitewater River Channel. Future paths are planned to extend the CV Link to Desert Hot Springs, the Salton Sea, and other destinations throughout the desert. Ultimately CV Link will span more than 50 miles across nine cities and three tribal governments, and is the largest, most ambitious project of its kind in the region, the state, and the nation.

Chapter 4.45 of the Coachella Municipal Code establishes a Development Impact Fee to be placed on all new residential development within the City to subsidize the need for expansion and/or new park and recreation facilities as a result of the development project. Park and recreation facility fees will be used to ensure that city park land, dedicated pursuant to the 2013 Desert Recreation District Master Plan, which incorporated the standard for parkland dedication in-lieu fee as allowed under the Quimby Act of three acres per thousand population, or otherwise, will be improved with the financial resources provided by this development impact fee

in addition to those of the Desert Recreation District. Typical improvements will include turf, fields, fencing, play apparatus, lighting, restrooms and parking.

Chapter 4.45 of the Coachella Municipal Code establishes a Development Impact Fee be placed on all new development within the City which is directly related to the funding and construction of recreational facilities necessary to address direct and cumulative impacts generated by new development. According to Section 4.45.030 of Chapter 4.45 of the Coachella Municipal Code the following public facilities must be constructed, installed and paid for or financed: General Government facilities; library facilities, park and recreation facilities, street facilities, fire facilities and police facilities. Development Impact Fees are reviewed and adjusted administratively on an annual basis each fiscal year.

Library Services

The Coachella Library, located within the City at 1538 Seventh Street, is a branch of the Riverside County Library System serving residents within the City and surrounding unincorporated areas. The City of Coachella is also currently building an approximately 15,000 square foot library that is located across from City Hall. Participation in the Riverside County Library System enables library users to access all libraries within the system, which includes 33 libraries, two bookmobiles, and online access to library resources. Residents of California can obtain a free Riverside County Library System card and have full access to library resources. Currently, non-California residents pay a nominal annual fee to obtain a library card.

Chapter 4.45 of the Coachella Municipal Code establishes a Development Impact Fee be placed on all new development within the City which is directly related to the funding and construction of new library facilities necessary to address direct and cumulative impacts generated by new development. According to Section 4.45.030 of Chapter 4.45 of the Coachella Municipal Code the following public facilities must be constructed, installed and paid for or financed: General Government facilities; library facilities, park and recreation facilities, street facilities, fire facilities and police facilities. Development Impact Fees are reviewed and adjusted administratively on an annual basis each fiscal year.

Health Services

The City of Coachella receives Health Service from the County of Riverside and private sources. Medical services take the form of hospitals, both with and without emergency room/trauma centers, medical clinics, doctor offices, and ambulance services. Hospitals and urgent care facilities that would likely serve the Project site include:

- **Indio Family Care Center** located at 47-923 Oasis Street, in Indio, CA 92201. Office hours are 7:30 am – 5:00 pm, Monday – Friday. This facility is approximately 6 miles from the Project site.
- **Desert Oasis Healthcare** provides both Full Service and Immediate Care facilities in the Coachella Valley. An immediate care facility is located at 81-880 Dr. Carreon Boulevard, Ste. C-108, in Indio, CA 92201. Office hours are M-F: 8 a.m. – 8:00 p.m. and Weekends/Holidays: 9:00 a.m. – 7:00 p.m. This facility is approximately 7 miles from the Project site.

- **Desert Regional Medical Center** is a 387-bed tertiary acute care hospital located at 1150 North Indian Canyon Drive, in Palm Springs, CA 92270. The emergency department is the Coachella Valley's only designated trauma center, serving more than 8,000 square miles of Southeastern California. This facility is approximately 26 miles from the Project site.
- **Eisenhower Medical Center** is located at 39000 Bob Hope Drive in Rancho Mirage, CA 92590. However, the Eisenhower Medical Center has locations across the Coachella Valley for convenient, quality health care. The main campus and hospital is located on 130 acres in Rancho Mirage. Eisenhower Medical Center complex is comprised of a 476-bed hospital, the Annenberg Center for Health Sciences at Eisenhower, and the Barbara Sinatra Children's Center at Eisenhower in addition to its outpatient facilities in Palm Springs, Cathedral City, Rancho Mirage and La Quinta. The Betty Ford Center is also located on the Eisenhower campus. The main facility is approximately 17 miles from the Project site.
- **JFK Memorial Hospital** is located at 47111 Monroe Street in Indio, CA 92201. JFK Memorial Hospital is a 156-bed facility, open 24 hours a day, 7 days a week, with emergency care service. This facility is approximately 5 miles from the Project site.

In addition, there are several clinics and family care centers such as Clinicas de Salud del Pueblo, Santa Rosa Del Valley Clinic and Clinica Medica Del Valle that are located within the City.

These are just a few of the options available in the Project area; however, it should be noted that medical services are often driven by an individual's personal preference or insurance provider. Therefore, it is hard to determine exactly where the residents of the Project would go for medical services.

Related Regulations

The following are the federal, state, local and City regulations that pertain to public services and recreation.

National Fire Protection Association

The National Fire Protection Association, an organization that develops national standards for the fire service, established a new standard, which contains minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by substantially all career fire departments. This proposal is known as "1710" and it established a nationwide standard of four-person Fire Engine staffing.

It should be noted that, according to the *Riverside County Fire Department FY 17-18 Service Alternatives*, prepared March 7, 2017, the current Riverside County Fire Department staffing standard is a 3-person, municipally staffed, paramedic Type 1 engine company. This standard was enacted by the Board of Supervisors on January 24, 2012. The City of Coachella, *Fire and Emergency Medical Services Master Plan*, dated July 2007, acknowledges that it is the recommendation of the Coachella Master Plan that Engine Company Staffing be increased to four firefighters, which is more operationally efficient, would meet the current municipal standard. The City of Coachella, *Fire and Emergency Medical Services Master Plan* also states that the construction and occupancy of these facilities will be based on actual development

timetables and funded as part of the “development agreements” or as part of a “Cost Share” agreement with adjoining agencies or jurisdictions.

California Fire Code (California Building Standards Code)

The International Fire Code has been published and adopted, as amended, by the California Building Standards Commission into the California Code of Regulations (CCR) as Title 24, Part 9, titled the California Fire Code. The California Fire Code contains fire safety related building standards. CCR Title 24 is also referred to as the California Building Standards Code. Both the County of Riverside and the City of Coachella have adopted the 2013 California Fire Code, California Code of Regulations, Title 24, Part 9, as amended, to govern the safeguarding of life and property from fire, explosion hazards and hazardous conditions and to regulate the issuance of permits and collection of fees.

California Proposition 12

The Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000 provides funds to preserve open space and repair and improve safety of neighborhood parks in the State of California; the City of Coachella utilizes funds from Proposition 12 for preserving open space and repairing/improving the safety of neighborhood parks.

California Proposition 40

The California Clean Water, Clean Air, and Safe Neighborhood Parks and Coastal Protection Act of 2002 allows California to continue to acquire, develop, restore and protect parkland, following Proposition 12; the City of Coachella utilizes funding from Proposition 40 for acquiring, developing, restoring, and protecting parkland.

California Government Code Section 66477

The Quimby Act, as more commonly known, allows cities and counties to require, as a condition of approval of a subdivision, the dedication of land or the payment of an in-lieu fee dedication, or a combination of both, for park or recreational purposes at a minimum of three acres per 1,000 population. In-lieu fee credit can be given for parkland, but not open space. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements. The Quimby Act gives lead agencies the authority only to cities and counties to create land dedication ordinances. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services community-wide.

City of Coachella Fire and Emergency Medical Services Master Plan

The City of Coachella Fire and Emergency Medical Services Master Plan July 2007 is the long-range comprehensive Fire and Emergency Medical Services Master Plan document for the City of Coachella. This plan includes the following components:

- Defines the current and future fire-emergency medical protection environment.

- Defines acceptable life and property risk levels.
- Defines the optimal fire protection-emergency medical system which provides the level of service commensurate with the level of accepted risk.
- Establishes policy in advance of change, permitting control of, rather than reaction to, the fire emergency-medical environment.
- Identifies and justifies the resources necessary to develop and operate the fire protection- emergency medical system.

The Riverside County Fire Department implements the City of Coachella Fire and Emergency Medical Services Master Plan 2007. This Master Plan identifies present and future operational needs so that cost effective programs, budgeting and program solutions may be defined, rather than reacting to an undefined fire-emergency medical problem. The RCFD uses response time to determine the need for additional FPER services and facilities.

The availability of sufficient on-site water pressure is also a basic requirement of the RCFD. The RCFD requires sufficient capacity for fire flow for public hydrants at a minimum fire flow 2,500 gallons per minute (gpm) for multi-family residential development, 4,000 gpm for commercial uses, and 2,500 gpm for heavy industrial.

City of Coachella Municipal Code

Title 4 – Revenue and Finance, establishes provisions for assessing and collecting fees as a condition of development approval for the costs of constructing public facilities related to the development project. Chapter 4.45 – Development Impact Fees requires developer fees for public safety capital improvement facilities. Specifically, the following subsections state:

Section 4.45.030 – Need for public facilities. In order to implement the goals and objectives of the city's general plan and applicable specific plans by accommodating the need for public facilities and mitigating the financial and physical impacts for all development projects within the city, the following public facilities must be constructed, installed, and paid for or financed:

1. General government facilities.
2. Library facilities.
3. Park and recreation facilities.
4. Street facilities.
5. Fire facilities.
6. Police facilities.

Section 4.45.060 – Use of development impact fees.

- (B) *Library facilities fees will be used for the land acquisition and construction costs of a public library facility as part of the Riverside County Library System, to serve the new residential development in the city.*
- (C) *Park and recreation facility fees will be used to ensure that city park land dedicated pursuant to the 2006 Parks and Recreation Master Plan which incorporated the standard for parkland dedication in-lieu fee as allowed under the Quimby Act of three acres per thousand population, or otherwise, will be improved with the financial resources provided by this development impact fee in addition to those of the Coachella Valley Parks and Recreation District.*

- (E) *Fire facility fees ensure residents of the city have adequate fire protection facilities including buildings, land, equipment and vehicles based on the facility standard of one fire station for every three thousand (3,000) dwelling units.*
- (F) *Police facility fees ensure residents and workers of the city have adequate police protection facilities including buildings, land, equipment and vehicles.*

Title 8 – Health and Safety, establishes county enforcement of state regulations and statutes relating to public health. Chapter 8.16 – Ambulance Services outlines the parameters for the provision of ambulance and emergency medical personnel services; Chapter 8.32 – Fireworks, regulates the sale, discharge and storage of fireworks, in the prevention of fires which may result from the improper sale, use or storage of fireworks; and, Chapter 8.52 – Hazardous Materials, authorizes the fire department to clean-up or abate the effects of any hazardous material deposited upon or into property or facilities of the city.

Title 16, Section 16.36.060 – Dedication of land and/or payment of fees for park and recreation purposes pursuant to the Quimby Art, adopts Section 66477 of the Government Code which provides for the dedication of land or the payment of fees in lieu thereof for park and recreational facilities as a condition of approval of a tentative map or parcel map.

City of Coachella General Plan

The City of Coachella’s recently adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City’s vision of long-term growth, development and conservation between now and 2035. The General Plan Update Final EIR (2015) prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.15, Public Services, of the General Plan Update Final EIR (2015) provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on public services and is incorporated by reference. The General Plan Update Final EIR (2015) may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

The following General Plan Update (2015) goals and policies address impacts on public services and associated facilities related to fire protection, emergency response, law enforcement, library services, park and recreation, and education. Many of these goals and policies may also be applicable to other resources and are included under other subchapters of the EIR:

Land Use + Community Character Element

Goal 2. Growth and Development. The successful transformation of Coachella from a small town into a medium-sized, full-service City that is a major economic center for the Coachella Valley.

2.12 High priority development areas. Identify subareas 5, 6, 7, 8, 9, 10, and 11 as Priority Growth Areas to be targeted for growth through City policies and actions and to receive priority for funding, community facilities and services.

Goal 8. Public Facilities and Buildings. A variety of public facilities and buildings throughout the City that improves the quality of life for residents and maintains a high-level of public services.

8.2 Phasing of public facilities. Require new parks, open spaces and public facilities be constructed concurrent with, or prior to, the development of each Neighborhood. All required parks, open spaces and public facilities should be constructed before 75 percent of the dwelling units are constructed.

8.4 Parks and open space. Establish a range of parks and open spaces, including tot lots, neighborhood parks, community parks, plazas/greens and/or greenways/parkways within all new Neighborhoods, Centers and Districts.

Goal 10. Development requirements. A fair, understandable and predictable approach that ensures new development does not impose a fiscal burden on the City, conforms to regional airport and railroad safety practices, and requires new projects to provide adequate public facilities and services as part of the overall process.

10.1 Required contents of Specific Plans and Planned Developments that implement the subarea Master Plans. Require that all Specific Plans, Planned Developments, Master Plans and other master-planned community implementation tools include:

- A plan for the phasing of all off-site infrastructure.
- A performance schedule for the issuance of building permits based on the concurrent availability of public services and amenities, including parks, schools and other public facilities identified in the entitlement documents.
- A clear statement of the minimum public improvements that will be required as part of the first phase of development.
- A statement of the financing mechanisms that will provide for the ongoing funding and financing of the public facilities of the project. These financing tools should be presented and discussed in the entitlement document implementation plan.

10.3 Phasing of project site improvements. Require that new subdivisions complete the public improvements before occupancy inspections unless a development agreement is implemented.

Goal 13. Fiscal Stability. A City with thorough economic development strategies and reasoned decisions based on sound fiscal policies.

13.1 Fiscal impact assessment. For all major development projects, including but not limited to specific plans, annexations and changes in General Plan designations for areas over 20 acres in size, require a fiscal impact assessment to determine possible fiscal impact of the development project and use the information to formulate conditions of approval for the project.

Community Health + Wellness Element

8.7 Education impact fees. Coordinate with the school districts in the assessment of the impact of new development on existing public educational facilities.

Sustainability + Natural Environment Element

Goal 10. Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.

10.1 Open space network. Require new development to contribute land and/or funding to expand the community's open space network.

Goal 13. Parks and Open Space. Increased access to parks, recreation, and natural open spaces to support and increase physical activity.

13.3 New parks. Ensure existing and new neighborhoods have sufficient access to park facilities that meet the needs of all residents, and increases in new residents do not overburden existing parks.

13.4 Accessibility to parks. Seek new park locations that will serve residential areas that are more than a quarter mile from an existing or planned park or separated from an existing or planned park by a street that consists of four or more travel lanes. Where possible, parks shall be associated with and connected to the trail network.

13.5 New development needs. Work with new development to provide at least **three** acres of parkland for every 1,000 residents and ensure new development complies with this requirement. School playgrounds and fields shall be counted where access is ensured by a joint use agreement.

13.22 Park fees. Collect land dedications or in lieu fees from new development for the provision of parks and recreation facilities, in pursuit of a minimum parkland standard of three acres per 1,000 residents, as allowed by the California Quimby Act. Establish policies for identifying neighborhoods that have a preference for the physical provision of park and recreation infrastructure over in lieu fees and administer a fee through which new development can provide parkland in lieu of certain development fees.

Safety Element

Goal 4. Fire hazards. A community that is minimally affected by wildland and structure fires.

4.1 Vegetation control: Require the use of vegetation control methods to reduce the hazard of wildland fire.

4.2 Construction materials: Require the use of fire-resistant building construction materials to reduce the hazard of structure fires, within the developed areas of the City and at the urban-wildland interface.

Infrastructure + Public Services Element

Goals 1. Citywide Utilities. A healthy community with well maintained, efficient, high-quality public infrastructure facilities and services throughout the city.

1.5 New development infrastructure costs. Require new developments to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

Goals 7. Police and Fire Services. Improved public safety, increased fire safety and quality emergency medical services.

7.5 Review of new development. Encourage the police department to continue to work with the Community Development Department to review and modify development proposals to incorporate “defensible space” concepts and other public safety design concepts into new development.

7.8 Development impacts. Require new development in the City to mitigate project-related impacts to police and fire services.

7.14 Service funding. Explore funding sources, such as impact fees from development or parcel taxes, to ensure a high level of fire services for the City.

7.16 Fair-share contributions. Establish a development impact fee program that requires individual development projects to pay fair-share contributions to public safety infrastructure needs.

4.13.3 Thresholds of Significance

The City’s Initial Study contains five (5) criteria for determining impacts to public services resources and two (2) criteria for determining impacts to recreation resources. As discussed above in Subchapter 4.13.1, above, the following seven (7) criteria will be analyzed in this EIR:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - a. Fire Protection and Emergency Response Services
 - b. Sheriff Law Enforcement Services
 - c. School/Education Services
 - d. 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?
 - e. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
 - f. Other public facilities – Library Services
 - g. Other public facilities – Health Services

The RCFD utilizes response time to determine the need for additional staffing and/or facilities. The Sheriff Department recommends a ratio of 1.2 law enforcement personnel for every 1,000 residents served. Therefore, RCFD and RCSD funding impacts were evaluated by estimating

compliance with local goals and policies identified in the City's General Plan Update (2015) and Master Plan documents.

School service impacts will be evaluated based on the number of students generated by the Project and the subsequent increased demand placed on local schools.

The potential impacts of the Project on recreation and park resources are evaluated based on whether implementation of the Project could result in increased use of existing recreation and park resources, or whether implementation of the Project could necessitate the construction or expansion of recreation and park facilities.

Evaluation of library service impacts associated with the proposed project will be based on the number of new residents generated by the Project and subsequent increased demand on local libraries.

Impacts on health services will be evaluated on the number of new residents generated by the Project and subsequent increased demand on local medical facilities.

4.13.4 Potential Impacts

THRESHOLD a: **Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for Fire Protection and Emergency Response Services?**

Less Than Significant Impact

As discussed under Subchapter 4.13.2, Environmental Setting, above, the City of Coachella contracts with the RCFD for fire protection and emergency medical services. This contract includes fire suppression, fire prevention, paramedic services, hazardous materials response, urban search and rescue response and other related services.

Currently, the City of Coachella has one (1) Fire Station, Battalion 6 Coachella Fire Station #79, located at 1377 Sixth Street in the City of Coachella, which serves the incorporated portions of the City. The City also maintains a mutual aid agreement with surrounding cities and communities where additional resources are available in the event of a life-threatening emergency. Through this mutual aid agreement, the City of Coachella receives an immediate response from the outlying stations, including Fire Station #86, Fire Station #87, and Fire Station #39.

Information obtained from Fire Station #79 indicates that actual response times currently meet or exceed the Urban Land Use protection goals established in the City's Fire and Emergency Medical Services Master Plan. Moreover, the Project site is not located within a designated hazardous fire area.

The General Plan Update (2015) includes a number of goals and policies under the Land Use + Community Character Element, the Safety Element and the Infrastructure + Public Services Element which are applicable to the Project and address construction standards which further

aid in the reduction of potential structure fires, and the phasing and provision of key infrastructure required to assist fire protection and emergency personnel in protecting life and property. These goals and policies are included under Subchapter 4.13.2, above.

The Project will be reviewed by Fire Department personnel and subject to standard conditions of approval through the entitlement process. Additionally, the Project will be conditioned to pay Development Impact Fees, a portion of which must be used for the provision of adequate fire protection facilities, including buildings, land, equipment and vehicles based on the facility standard of service times is less than five minutes, and a ratio of 1.0 firefighter people per 1,000 residents and one fire station for every three thousand (3,000) dwelling units. This fee directly corresponds to the incremental increased demand on fire protection and emergency services as a result of the Project.

Chapter 4.45 (Development Impact Fees) of the City's Municipal Code spells out the purpose and findings, basis for calculation of development impact fees, the need for public facilities, the need for development impact fees and the use if development impact fees (DIF). According to Section 4.45.030 (Need for public facilities), in order to implement the goals and objectives of the City's General Plan and applicable specific plans by accommodating the need for public facilities and mitigating the financial and physical impacts for all development projects within the city, fire facilities must be constructed, installed, and paid for or financed. Section 4.45.060 (Use of development impact fees), fire facility fees ensure residents of the city have adequate fire protection facilities including buildings, land, equipment and vehicles based on the facility standard of one fire station for every three thousand (3,000) dwelling units.

These fees are reviewed and adjusted annually to accommodate the incremental demands to fire services as a result of development within the City. The payment of DIF is a one-time fee, and is paid prior to the issuance of a building permit. The payment of DIF is a standard condition and is not considered unique mitigation under CEQA.

Therefore, upon payment of the development fees, the Project will not result in substantial adverse impacts associated with the provision of new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection and emergency services. These standard conditions of approval are not considered mitigation measures.

The *FIA* demonstrates the annual recurring revenues to the City's General Fund at Project build-out will equal \$2,434,685 compared to recurring fiscal costs of \$2,376,070; a net benefit to the City of approximately \$58,615. The largest sources of revenue will result from property tax, property tax in lieu of vehicle license fees, and sales tax. This finding demonstrates that the Project's future demands on the provision of fire protection and emergency response services will be more than fulfilled in the future after it is developed.

Impacts related to fire protection and emergency response services are considered to be below a level of significance.

THRESHOLD b: **Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable**

service ratios, response times, or other performance objectives for Sheriff Law Enforcement Services?

Less Than Significant Impact

The City of Coachella contracts law enforcement services from the RCSD. The City also maintains a formal and informal mutual aid agreement with the State of California Governor's Office of Emergency Services and the cities of Indio, Palm Springs, and Desert Hot Springs Police Departments for law enforcement and emergency services. These Departments work closely together on a day-to-day, as-needed basis in order to assist each other with law enforcement activities, including but not limited to, response to calls, investigations and patrol.

The Project site is within the jurisdiction of the Riverside County Sheriffs' Department Thermal Station, located at 86625 Airport Boulevard. The Thermal Station currently has 35 sworn officers, not including non-sworn personnel. The majority of these officers are dedicated to the Patrol Division with the remaining deputies dedicated to special assignments such as the C.A.T., School Resources, and Gang and Narcotics Enforcement. Support law enforcement services including Emergency Services, K-9, Forensic Services and other specialized teams previously listed is provided by the RCSD.

Under the contractual agreement with the City of Coachella, the RCSD provides 90 hours per day of law enforcement and emergency services to the City. This equates to nine (9) deputies per day or three (3) deputies per shift, three (3) shifts per day, for continual 24-hour service.

RCSD records indicate that the Thermal Station responded to 24,362 calls for service within the City of Coachella, averaging 70-79 calls per day, in 2014. The Thermal Station averaged a total response time of: 4.75 minutes to emergency or Priority 1 calls; 13.23 minutes to Priority 2 calls; 24.67 minutes to Priority 3 calls; and, 34.5 minutes to Priority 4 calls, during 2014. It is anticipated that the Project would experience similar response times.

The General Plan Update (2015) includes a number of goals and policies under the Infrastructure + Public Services Element which are applicable to the Project, including Sheriff Department review of the Project for incorporation of public safety design concepts and payment of fair-share contributions to public safety infrastructure needs. These goals and policies are included under Subchapter 5.13.2, above.

The Project will be reviewed by Sheriff Department personnel and subject to standard conditions of approval through the entitlement process (i.e., prior to an implementing project). Furthermore, prior to the issuance of a building permit, the Project will be conditioned to pay Development Impact Fees, a portion of which must be used for the provision of adequate police protection facilities, including buildings, land, equipment and vehicles.

Chapter 4.45 (Development Impact Fees) of the City's Municipal Code spells out the purpose and findings, basis for calculation of development impact fees, the need for public facilities, the need for development impact fees and the use of development impact fees (DIF). According to Section 4.45.030 (Need for public facilities), in order to implement the goals and objectives of the City's General Plan and applicable specific plans by accommodating the need for public facilities and mitigating the financial and physical impacts for all development projects within the city, police facilities must be constructed, installed, and paid for or financed. Section 4.45.060

(Use of development impact fees), Police facility fees ensure residents and workers of the city have adequate police protection facilities including buildings, land, equipment and vehicles.

These fees are reviewed and adjusted annually to accommodate the incremental demands to law enforcement services as a result of development within the City. The payment of DIF is a one-time fee, and is paid prior to the issuance of a building permit. The payment of DIF is a standard condition and is not considered unique mitigation under CEQA.

Therefore, upon payment of the development fees, the Project will not result in substantial adverse impacts associated with the provision of new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives for sheriff services.

The *FIA* demonstrates the annual recurring revenues to the City's General Fund at Project build-out will equal \$2,434,685 compared to recurring fiscal costs of \$2,376,070; a net benefit to the City of approximately \$58,615. The largest sources of revenue will result from property tax, property tax in lieu of vehicle license fees, and sales tax. This finding demonstrates that the Project's future demands on the provision of sheriff law enforcement services will be more than fulfilled in the future after it is developed.

Impacts related to law enforcement services are considered to be below a level of significance.

THRESHOLD c: **Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for School/Education Services?**

Less Than Significant Impact

As discussed under Subchapter 4.13.2, Environmental Setting, above and shown on **Figure 4.13.2-1**, two (2) unified school districts are within the City of Coachella: the CVUSD and the DSUSD. The Project site is located within the DSUSD jurisdictional boundaries which encompass the area north of 48th Avenue and west of Fillmore Street; the areas north of 20th Avenue between Jackson Street and Van Buren Street; and, the area south of 48th Avenue and west of Jefferson Street.

The 2016-2017 student enrollment records and Long Range Facilities Master Plan Update for each of the affected schools serving the Project site, indicates that there is existing, or planned capacity to accommodate new students generated by the Project.

The following student generation factors are utilized by DSUSD for both single-family and multi-family units:

- Elementary school: 0.1704/dwelling unit.
- Middle school: 0.0909/dwelling unit.
- High school: 0.1261/dwelling unit.

Based on 1,640 residential units, the Project will generate the following approximate number of students, below.

- Elementary school: 280
- Middle school: 149
- High school: 207

The District's Master Plan recognizes and plans for increased demands on school services as a result of future development under the City's General Plan Update (2015). These incremental demands are met through payment of School Impact Fees, identified in an annual School Facilities Needs Analysis (SFNA), which determines the need for additional facilities as a result of population growth. This SFNA establishes the amount of school fees that will be placed on a development project and made a condition of development approval. This is a standard condition and is not considered unique mitigation under CEQA.

Therefore, upon payment of the school impact fees, the Project will not result in substantial adverse impacts associated with the provision of new or physically altered school facilities in order to maintain classroom levels, teacher/student ratios or other school performance objectives. Impacts related to school services are considered to be below a level of significance.

Parks and Recreational Facilities

THRESHOLD d: **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?**

Less Than Significant Impact

There are currently eight (8) parks and one (1) community center located within the City of Coachella, which include two (2) community parks, two (2) neighborhood parks, three (3) mini-parks, and one (1) tot lot. These parks offer a variety of recreational activities and range from passive to more physical interests, such as shaded picnic and grass areas, playgrounds, baseball and football fields, basketball and tennis courts, and swimming. In addition to City parks, the Desert Recreation District maintains a number of parks and recreational facilities through the lower desert in proximity to the Project site. Although there are no regional parks located within the City, there are numerous regional parks located within Riverside County which are open to all County residents.

As stated under Subchapter 4.13.2, Environmental Setting, above, the City's General Plan Update Final EIR (2015) recognizes the need for additional local parks as future development projects are implemented throughout the City. All new residential development is required to pay parks and recreation fees or parkland dedication in-lieu fee as allowed under the Quimby Act for provision of expanded and/or new parks and recreation facilities. These fees must be used to ensure adequate facilities are available to Project residents through new or improved facilities. Typical improvements will include turf, fields, fencing, play apparatus, lighting, restrooms and parking.

The Project includes dedication of an approximately 14-acre parcel in proximity of the Coachella Canal for an approximate 13.8-acre neighborhood park site (PA 9), as well as an approximate 12.6-acre Paseo, which traverses Planning Areas 5 and 6. PA 9 is solely designated for a park site. According to the Specific Plan, the following are permitted uses in PA9:

- Nature study area
- Public and private parks, greenbelts, common areas
- Pedestrian & bicycle trails
- Rest Stop
- Restroom facilities
- Public utilities facilities
- Flood control facilities
- Trails (hiking, walking)

According to the Specific Plan, the following are conditionally permitted uses in PA9:

- Public facilities (i.e. fire/police stations)

Ultimately this dedication requires acceptance by City and local parks and recreation district. The Project will be reviewed by the City and Coachella Valley Recreation and Parks District for determination of parkland dedication and/or development impact fees through the entitlement process, in order to completely meet the parkland requirement generated by the Project. Should the Project not meet the dedication requirement, the payment of in-lieu fees will be required, pursuant to Ordinance No. 868. This is reflected in **Standard Condition SC-REC-1**, below.

Chapter 4.45 (Development Impact Fees) of the City's Municipal Code spells out the purpose and findings, basis for calculation of development impact fees, the need for public facilities, the need for development impact fees and the use if development impact fees (DIF). According to Section 4.45.030 (Need for public facilities), in order to implement the goals and objectives of the City's General Plan and applicable specific plans by accommodating the need for public facilities and mitigating the financial and physical impacts for all development projects within the city, the park and recreation public facilities must be constructed, installed, and paid for or financed. Section 4.45.060 (Use of development impact fees), park and recreation facility fees will be used to ensure that city park land dedicated pursuant to the 2006 Parks and Recreation Master Plan which incorporated the standard for parkland dedication in-lieu fee as allowed under the Quimby Act of three acres per thousand population, or otherwise, will be improved with the financial resources provided by this development impact fee in addition to those of the Coachella Valley Parks and Recreation District. Typical improvements will include turf, fields, fencing, play apparatus, lighting, restrooms and parking.

At the current time, the DIF for parks improvements is \$3,541.00 per residential unit. No other land uses in the Specific Plan generate the need for DIF to park improvements.

These fees are reviewed and adjusted annually to accommodate the incremental demands to parks and recreational facilities as a result of development within the City. This is reflected in **Standard Condition SC-REC-2**, below. The payment of DIF is a one-time fee, and is paid prior

to the issuance of a building permit. The payment of DIF is a standard condition and is not considered unique mitigation under CEQA.

Therefore, upon payment of the development fees and/or dedication of parkland, the Project will not result in substantial adverse impacts associated with the provision of new or physically altered government facilities in order to maintain an acceptable service ratio of parks and recreational facilities to population generated by the Project. Impacts related to parks and recreational facilities are considered to be below a level of significance.

THRESHOLD e: Would the Project Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact

If implementation of the Project occurs on site at the specified density and intensity, the Project would result in the provision of new recreational opportunities through the dedication of 13.82 acres of parkland, 12.7 acres of open space/recreational uses, and 19.0 acres of drainage/water quality basins. Development of the Project site could potentially result in a population increase of approximately 7,921 people at Project buildout. With the addition of 7,921 people, the potential residential development that could occur on the Project site would require 23.8 acres of parkland to meet the City requirement of 3.0 acres per 1,000 residents.

The construction of amenities associated with parks and open space within the Specific Plan area are included as part of Project site's development. Therefore, as the environmental effects for the Specific Plan site are included as part of the entire analysis of environmental effects in the EIR, the construction or expansion of such areas would not result in an adverse physical effect on the environment beyond those analyzed for the overall development of the Project.

Please reference the discussion on Threshold "d" above as it pertains to Quimby requirement, parkland dedication, payment of in-lieu fee and payment of DIF. These is a standard condition, as reflected in **Standard Condition SC-REC-1**, below, and is not considered unique mitigation under CEQA.

For these reasons, impacts associated with this issue are considered to be less than significant.

THRESHOLD f: Other Services – Library Services

Less Than Significant Impact

The City of Coachella Library is a branch of the Riverside County Library System serving residents within the City and surrounding unincorporated areas. As part of the County Library System, residents have access to all libraries within the system, which includes 33 libraries, two bookmobiles, and online access to library resources. A Riverside County Library System card is free to all California residents and, currently, non-California residents pay a nominal annual fee.

The Coachella Municipal Code establishes a Development Impact Fee to be placed on all new residential development within the City to offset incremental demands on library services. The library facilities fees must be used for the land acquisition and construction costs of a public

library facility as part of the Riverside County Library System, to serve new residential development in the City. Development Impact Fees are reviewed and adjusted administratively on an annual basis.

Chapter 4.45 (Development Impact Fees) of the City's Municipal Code spells out the purpose and findings, basis for calculation of development impact fees, the need for public facilities, the need for development impact fees and the use if development impact fees (DIF). According to Section 4.45.030 (Need for public facilities), in order to implement the goals and objectives of the City's General Plan and applicable specific plans by accommodating the need for public facilities and mitigating the financial and physical impacts for all development projects within the city, the library facilities must be constructed, installed, and paid for or financed. Section 4.45.060 (Use of development impact fees), library facilities fees will be used for the land acquisition and construction costs of a public library facility as part of the Riverside County Library System, to serve the new residential development in the city.

At the current time, the DIF for parks improvements is \$3,541.00 per residential unit. No other land uses in the Specific Plan generate the need for DIF to park improvements. This is reflected in **Standard Condition SC-REC-2**, below.

The Project will be reviewed by City staff and subject to standard conditions of approval through the entitlement process, which include the payment of development fees. Therefore, no impacts to Library Services are anticipated.

THRESHOLD g: Other Services – Health Services

Less Than Significant Impact

The California Environmental Quality Act (CEQA) does not establish thresholds for the provision of health care services. The accessibility and provision of health care is being addressed on a local level through general plan policies, school-based health initiatives and federal funding. Local communities are placing an emphasis on preventive health care measures and the incorporation of healthy practices into daily living. The City of Coachella General Plan Update Final EIR (2015) recognizes that hospitals and medical facilities serve to benefit the quality of life and health of community residents, are an asset to the City, and provide a valued service to residents and patrons.

The need for new medical facilities are accommodated through general plan land use designations which allow for hospitals, medical centers, health clinics and other associated uses. Medical facilities would be built concurrently with other development within the City's Planning Area both as demanded by the market and through City-facilitated regional efforts, and would make up a small proportion of the overall built environment. General plan policies ensure all public facilities, including medical facilities, incorporate sustainable design features.

The increase in population resulting from Project implementation represents a very small percentage of the overall increased demand for Health Services, as listed above, in the Coachella area based on the Project's buildout population of 7,396 persons in relation to the Region's buildout population (2040) of approximately 500,000 persons, which represents 1.48% of the total population (reference Subchapter 4.12, Population and Housing, of this EIR). Furthermore, since the majority of health services are provided through private sources, it is

anticipated that the availability of health services will respond to increased demands. According to the General Plan Update Final EIR (2015):

“Medical core facilities serve to benefit the quality of life and health of community residents. Additional hospitals and medical facilities in the Planning Area would provide an asset to the Planning Area and provide a valued service to residents and patrons. The CGPU recognizes the important of including these facilities as potential development scenario and has outlined several policies to ensure the facilities are being developed in a minimal impactful way on the environment, as they are needed. The CGPU anticipates a need for new medical facilities and accommodates that need through the following designations: Urban Neighborhoods, Neighborhood Center, Downtown Center, Urban Employment Center, Suburban Retail District, and Regional Retail District. Additionally, the CGPU proposes policies also ensure all public facilities, including medical facilities incorporate sustainable design including; sustainable landscaping, energy conservation practices, passive heating and cooling design, and land use patterns to reduce GHG emissions. All policies address potential impacts from public buildings, including medical facilities, and aim to reduce negative impacts from development. Additionally, medical facilities would be built concurrently with all other development of the CGPU both as demanded by the market and through City-facilitated regional efforts, and would make up a small proportion of the overall built environment. Though there are potential negative impacts associated with medical facilities, the significance of medical facilities among the overall CGPU is less than significant. Based on the scaled development of medical facilities and policies outlined in the CGPU, impacts from construction and maintenance of additional medical facilities would be less than significant.”

Therefore, substantial adverse impacts associated with the Project as they pertain to the provision of new or physically altered medical facilities would be within the projected population growth estimates, incremental and are considered less than significant.

4.13.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

- SC-REC -1** **Quimby Requirement.** Prior to the recordation of a final map, the Project applicant shall offer dedication of land and/or make in-lieu payment of Quimby Fees for park or recreational purposes shall be at the rate of three acres per 1,000 residents.
- SC-REC-2** **Development Impact Fee.** The Project applicant shall pay Development impact fees at the time an application is made for a building permit.

Mitigation Measure(s)

No mitigation measures are required to mitigate impacts to public services and recreation resources resulting from the Project. Standard Conditions of Approval (Quimby Requirement and payment of Development Impact Fees) are applied to the Project as part of the entitlement process.

4.13.6 Cumulative Impacts

The Project, in conjunction with other developments will result in the incremental increased demands on public services. Cumulative impacts on public services were evaluated in the City of Coachella General Plan Update Final EIR (2015), adopted April 22, 2015. The demand for all public services within the City are expected to increase, as population increases and the need to maintain adequate quality of service, access, and response times for emergency vehicles. However, the General Plan Update (2015) proposes multiple strategies and policies to reduce potential cumulative impacts on an individual project basis through the requirement and phasing of infrastructure necessary to support the Project and payment of Development Impact Fees. The Coachella Municipal Code requires that development fees paid by individual projects be used to mitigate those incremental increased demands on fire protection and emergency response services, law enforcement services, park and recreational facilities, and libraries as a result of the project. Incremental increases to school services are mitigated through fees established by the individual school districts and paid for by the development project.

Development Impact Fees and School Fees are adjusted annually using statistical information, local planning policies, and by interacting with other agencies to delineate past service patterns, emerging trends, and future issues of concern. Once identified, service providers (private sources) are able to adjust resources, based on market demand, in order to meet future needs. New development projects are required to adhere to conditions placed on the project through the entitlement process.

These General Plan Update (2015) policies, conditions of approval, and payment of development fees will reduce potential incremental impacts on public facilities and ensure the provision of adequate levels of service. Therefore, cumulative impacts would be less than significant. This finding is consistent with the General Plan Update Final EIR (2015).

The cumulative study area for recreation resources is the City of Coachella, which is the area used by the City when determining its park-to-population ratio goals. Implementation of the proposed Project would result in the construction and operation of approximately 13.82 acres of parkland, 12.7 acres of open space/recreational uses, and 19.0 acres of drainage/water quality basins.

The proposed Project would also contribute to a cumulative growth in population (refer to subchapter 4.12 of this EIR for a detailed analysis). However, because the proposed Project includes an amount of parkland and recreational areas that exceeds the minimum requirements of the City either through dedication or payment of in-lieu fees, implementation of the proposed Project would not have a significant cumulative contribution to increased uses and physical deterioration of existing parks and recreational facilities. Additionally, the proposed Project would not only meet the parkland needs for the anticipated growth in population associated with Project implementation, but it would help to reduce the existing Citywide deficit of parkland in the City.

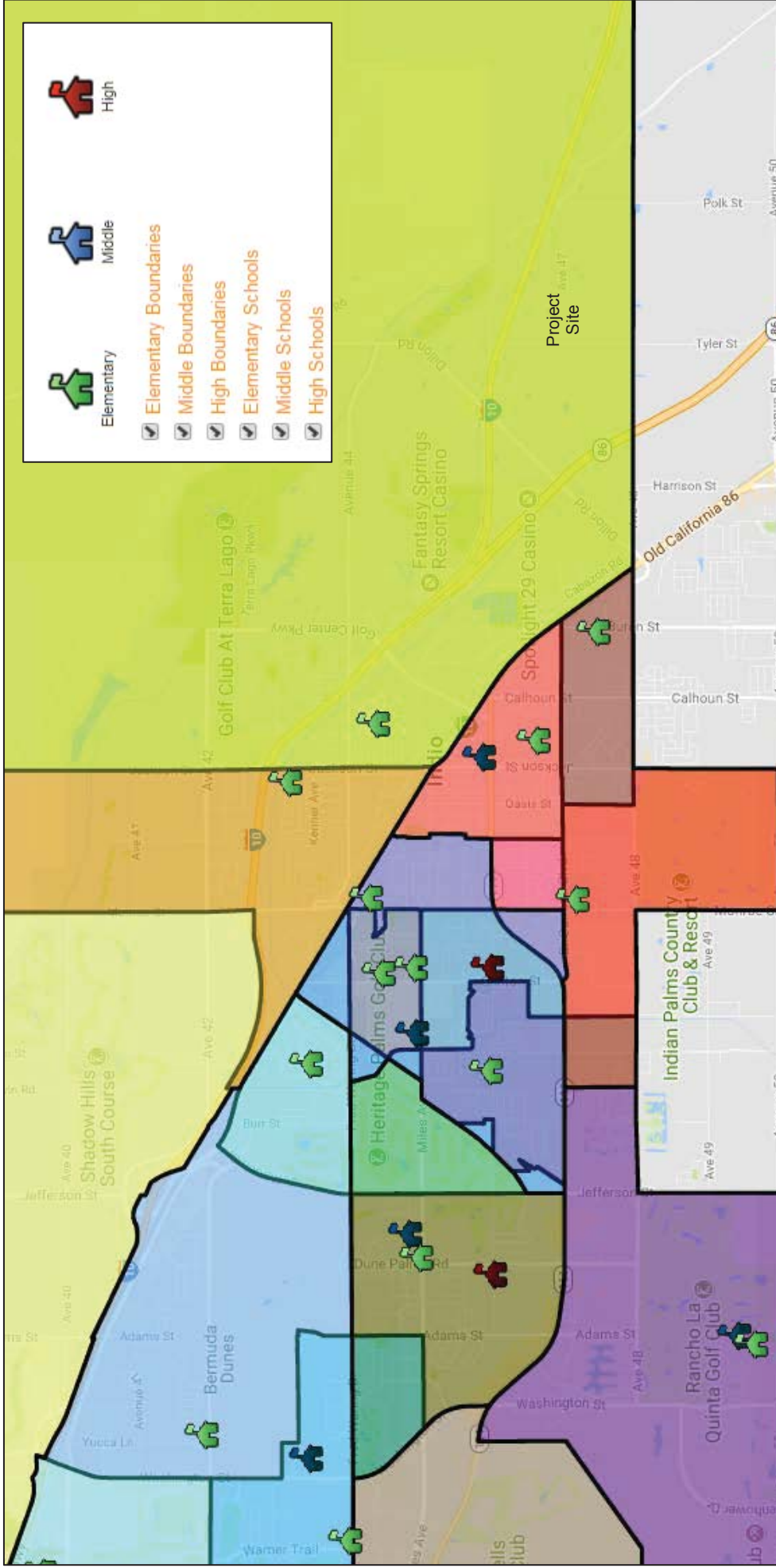
Implementation of the proposed Project in combination with cumulative projects in the area would increase use of existing parks and recreation facilities. However, as future residential development is proposed, the City would require developers to provide the appropriate amount of parkland or pay the in-lieu fees, which would contribute to future recreational facilities.

Payment of these fees and/or implementation of new parks on a project-by-project basis would offset cumulative parkland impacts by providing funding for new and/or renovated parks equipment and facilities, or new parks. Therefore, the Project's cumulative contribution impacts to parks and recreation resources would be less than significant.

4.13.7 Unavoidable Significant Adverse Impacts

Based on the above environmental analysis, there would be no significant and unavoidable impacts to public services and recreation resources as a result of the Project.

Figure 4.13.2-1
DSUSD Boundary Map



Source: <http://www.myschoollocation.com/desertsandsusd/> accessed June 2017

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Subchapter 4.14 figures are located at the end of this subchapter, not immediately following their reference in text

4.14 TRANSPORTATION/TRAFFIC

4.14.1 Introduction

This subchapter will evaluate the environmental impacts to the issue area of transportation/traffic resources from implementation of the Project. Section E.XVI., Transportation/Traffic Resources, of the Initial Study posed the following questions, asking whether the Project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access? and/or,
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Based on the analysis in the Initial Study it was determined that the following issue areas related to transportation/traffic resources in the questions asked above **would not** require any further analysis in the Environmental Impact Report (EIR):

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Based on the analysis in the Initial Study it was determined, that with the exception of the one (1) issue area mentioned above, the remaining five (5) issue areas related to transportation/traffic resources in the questions asked above **would** be further analyzed in the EIR.

The Initial Study indicated the following pertaining to the Project affecting transportation/traffic resources:

“Implementation of the Project (on-site components) may result in a conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the

circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; and/or, conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

A Project specific traffic study shall be prepared in order to address questions XVI.a and b, above. In order to ensure a comprehensive discussion of these transportation/traffic resources issues, they will be analyzed in the EIR

The Project site is not located within two miles of a public airport or public use airport. The closest public airport, or public use airports are Thermal Airport (Jacqueline Cochran Regional Airport), located approximately 5 miles to the south, and the Bermuda Dunes Airport (located over 5 miles to the north-northwest). According to the Riverside County Land Information System (<http://tlmabld5.agency.tlma.co.riverside.ca.us/website/rclis/>), the Project site is not located within the vicinity of a private airstrip. Therefore, implementation of the Project (on-site and off-site components) will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. No impacts are anticipated. No mitigation is required. This issue will not require any additional analysis in the EIR.

It is not anticipated that implementation of the Project (on-site and off-site components) will substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). However, in order to ensure a comprehensive discussion of these transportation/traffic resources issues, they will be analyzed in the EIR.

Please reference Response VIII.d, above. It is not anticipated that implementation of the Project (on-site and off-site components) will impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. All Project components will be required to be installed per City standard requirements, which ensure that there will be no conflicts. However, the distance to emergency responders, the lack of a direct connection to I-10 and community isolation, in the event of a large earthquake with multiple bridge failures (i.e. along SR 86) may occur. In order to ensure a comprehensive discussion of these transportation/traffic resources issues, they will be analyzed in the EIR.

It is not anticipated that implementation of the Project (on-site and off-site components) will conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. However, in order to ensure a comprehensive discussion of these transportation/traffic resources issues, they will be analyzed in the EIR.”

These issues pertaining to transportation/traffic resources will be discussed below as set in the following framework:

- Environmental Setting
- Thresholds of Significance
- Potential Impacts
- Standard Conditions and Mitigation Measures
- Cumulative Impact
- Unavoidable Significant Adverse Impacts

The City of Coachella General Plan Update (2015), the City of Coachella General Plan Update Final EIR (2015), and the Vista Del Agua Specific Plan were used in the analyses presented in this subchapter. These documents may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and are available online at <http://www.coachella.org/services/document-central/-folder-20>.

In addition, the following Project-specific studies were also used in the analyses presented in this subchapter (reference the Technical Appendices to this EIR in the enclosed CD):

- The City of Coachella General Plan, *Traffic Impact Study City of Coachella, California*, prepared by RK Engineering Group, Inc., dated October 14, 2014, revised June 14, 2016 (*TIS, Appendix O*).

The following comments were raised in response to the Notice of Preparation (NOP):

- The Riverside Transportation and Land Management Agency comments asked that the Traffic Study address potential impacts and Mitigation Measures on any Riverside County Roadways, the EIR analyze County intersections where project will add 50 or more peak trips, and that Riverside County Traffic Study Guidelines be followed (Letter #10). This comment is noted, and this methodology was utilized for the preparation of the Traffic Study.
- The Southern California Association of Governments noted that new development be guided toward existing infrastructure and services and reviewed for conformity with the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) pursuant to SB 375 (Letter #11). SB 375 is also addressed under subchapter 4.4 Air Quality and Greenhouse Gas. Please refer to Subchapter 4.12, Population and Housing, for the Project consistency analysis with the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS).

No additional comments were raised at the scoping meeting. Therefore, those issues identified in the NOP are the focus of the following evaluation of transportation/traffic resources.

The baseline for the analysis in this EIR are the conditions at the time the Notice of Preparation (NOP) was issued. The NOP review period began on March 2, 2015 and ended 30 days later on April 1, 2015. The environmental setting has changed little since the NOP was issued. This was validated through the revisions to the Air Quality, Greenhouse Gas, Noise, and Traffic technical studies in mid-2016. The Year 2022 was utilized for the complete buildout of the

Project. Please reference Subchapter 4.4.1, Air Quality / Greenhouse Gas (Introduction) for detailed assumption on the baseline and buildout assumptions for the Project.

4.14.2 Environmental Setting

Site Location and Study Area

The Project is located south of the Interstate 10 (I-10) Freeway and east of Tyler Street in the City of Coachella. Vehicular access to the site will be served via Vista Del Sur, Avenue 47, Avenue 48, Tyler Street, Polk Street, and the future Street "A" and Shadow View Boulevard.

Figure 4.14.2-1, *Existing Number of Through Lanes and Intersection Controls*, identifies the existing roadway conditions for the study area roadways. The number of through traffic lanes for existing roadways and the existing intersection controls are identified. Several of the roadways within the study area are currently unimproved dirt roads or future planned roads on the City's General Plan. **Figure 4.14.2-1** identifies the dirt roads and future roads in the study area.

Study Area and Intersections

The current technical guide to the evaluation of traffic operations is the Highway Capacity Manual (HCM). The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches.

The HCM uses different procedures depending on the type of intersection control. The levels of service determined in the *TIS* are determined using the HCM methodology.

For signalized intersections, average control delay per vehicle is used to determine level of service. Levels of service at signalized study intersections have been evaluated using the HCM intersection analysis program.

Study area intersections, which are stop sign controlled (with stop control on the minor street only), have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at these locations; the level of service has been calculated. The level of service is determined based on worst individual movement or movements sharing a single lane. The relationship between level of service and delay is different than for signalized intersections.

The level of services are defined for the various analysis methodologies as follows in **Table 4.14.2-1, LOS Defined**, below.

**Table 4.14.2-1
 LOS Defined**

| LOS | Average Control Delay Per Vehicle (Seconds) | |
|-----|---|---------------|
| | Signalized | Unsignalized |
| A | 0.00 - 10.00 | 0.00 - 10.00 |
| B | 10.01 - 20.00 | 10.01 - 15.00 |
| C | 20.01 - 35.00 | 15.01 - 25.00 |
| D | 35.01 - 55.00 | 25.01 - 35.00 |
| E | 55.01 - 80.00 | 35.01 - 50.00 |
| F | >80.01 | >50.01 |

Source: TIS, (Appendix O)

The LOS analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of four seconds per phase in accordance with Riverside County Guidelines for the preparation of Traffic Impact Analyses. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings have also been considered in the signalized intersection analysis. Saturation flow rates of 1,900 vehicles per hour of green (vphg) have been assumed for all capacity analysis.

Per the City of Coachella General Plan Update (2015), all study intersections will be required to perform at LOS D or better. Mitigation measures to improve level of service are provided for all Project study intersections operating below the acceptable standard. Recommended improvements are generally based on the ultimate buildout classifications of the roadway.

The study area was based on the Riverside County TIA guidelines criteria. The minimum study area includes any intersection of “Collector” or higher classification street, with “Collector” or higher classification streets, at which the proposed project will add 50 or more peak hour trips, not exceeding a 5-mile radius from the project site. This addresses the comment raised in Letter #10 by the Riverside Transportation and Land Management Agency comments asking that the EIR analyze County intersections where the Project will add 50 or more peak trips.

The study area was also confirmed with the City of Coachella Public Works Department and Planning Department prior to initiating the analysis.

The study area includes the following intersections, as identified in **Table 4.14.2-2, Study Area Intersections**, below.

**Table 4.14.2-2
 Study Area Intersections**

| | North-South Street | East-West Street |
|-----|--------------------------------|-------------------------|
| 1. | Dillon Road | I-10 WB Ramps |
| 2. | Dillon Road | I-10 EB Ramps |
| 3. | Dillon Road | Vista Del Sur |
| 4. | Dillon Road | Shadow View Boulevard |
| 5. | Dillon Road | SR-86 NB Ramps |
| 6. | Dillon Road | SR-86 SB Ramps |
| 7. | Dillon Road | Avenue 48 |
| 8. | Grapefruit Boulevard (Hwy 111) | Avenue 48 |
| 9. | Tyler Street | Vista Del Sur |
| 10. | Tyler Street | Avenue 47 |
| 11. | Tyler Street | Avenue 48 |
| 12. | Tyler Street | Avenue 50 |
| 13. | SR-86 | Avenue 50 |
| 14. | Street "A" | Vista Del Sur |
| 15. | Street "A" | Avenue 47 |
| 16. | Street "A" | Avenue 48 |
| 17. | Polk Street | Avenue 48 |
| 18. | Polk Street | Avenue 50 |

Source: TIS, (Appendix O)

The study area includes the following roadway segments, as identified in **Table 4.14.2-3, Study Area Roadway Segments**, below.

**Table 4.14.2-3
Study Area Roadway Segments**

| | Roadway | Segment |
|----|---------------|----------------------------|
| 1. | Dillon Road | I-10 to SR-86 |
| 2. | Dillon Road | SR-86 to Hwy 111 |
| 3. | Vista Del Sur | Dillon Road to Tyler St |
| 4. | Tyler Street | Vista Del Sur to Avenue 47 |

Source: TIS, (Appendix O)

Existing Traffic Controls and Intersection Geometrics

Figure 4.14.2-1, Existing Number of Through Lanes and Intersection Controls, identifies the existing roadway conditions for the study area roadways. The number of through traffic lanes for existing roadways and the existing intersection controls are identified.

Several of the roadways within the study area are currently unimproved dirt roads or future planned roads on the City’s General Plan Update (2015). **Figure 4.14.2-1** identifies the dirt roads and future roads in the study area.

Existing (2013) Traffic Volumes

Existing AM and PM peak hour traffic volumes for study area intersections are shown on **Figure 4.14.2-2, Existing Peak Hour Intersection Volumes and Average Daily Traffic**. These volumes are based upon manual AM and PM peak hour turning movement counts compiled for RK in May 2014.

RK conducted 24-Hour Two-Way average daily traffic (ADT) volume counts along the four (4) study area Roadway Segments. The ADT traffic counts were conducted in May 2014 and the count worksheets are provided in Appendix A of the TIS, and the counts are provided in **Figure 4.14.2-2**.

Traffic counts were conducted in May 2014. The standard acceptable time period for establishing baseline conditions is usually within of year of the Notice of Preparation (NOP) for the EIR (2015). The traffic counts were conducted within a one (1) year period of the NOP filing and should be considered an adequate representation of baseline conditions. Based on discussion with City of Coachella staff, there has not been significant development in the area since traffic counts were obtained and cumulative development traffic has not significantly changed. Traffic counts from May 2014 are still considered adequate for analysis of baseline conditions.

For the roadway segments not included in the Roadway Segment analysis, estimated average daily traffic (ADT) volumes in the study area are shown on **Figure 4.14.2-2** as well. ADT volumes were factored up from the PM peak hour counts, using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) * 12 = Leg Volume

Due to the seasonal variation in traffic experienced in the Coachella Valley area, an additional 10% increase has been applied to the existing traffic volumes. The seasonal adjustment is consistent with other jurisdictions in the Coachella Valley for this time of year.

Operations Analysis

Existing intersection level of service calculations are shown in **Table 4.14.2-4, *Intersection Analysis for Existing Conditions, below***, and are based upon manual AM and PM peak hour turning movement counts. The City of Coachella requires Level of Service D or better. HCM level of service definitions are provided in Appendix B of the *TIS*.

For existing traffic conditions, all study area intersections are currently operating at Level of Service D or better during the peak hours.

Existing roadway segment level of service calculations are shown in **Table 4.14.2-5, *Roadway Segment Analysis for Existing Conditions, below***. For existing roadway segment conditions, all study area roadway segments are currently operating at Level of Service C.

It should be noted that the Coachella Valley experiences a seasonal fluctuation in traffic patterns due to the large number of temporary residents who live in the valley during the winter months (snowbirds). The peak season typically occurs from October to April. In order to account for the worst-case traffic conditions during peak season, traffic volume was increased by a 10% to account for potential seasonal growth. The seasonal growth adjustment was reviewed and approved by the City Traffic Engineer prior to initiating the *TIS*.

**Table 4.14.2-4
Intersection Analysis for Existing Conditions**

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | | |
|-------------------------------|------------------------------|--|-----|------|------------|-----|-----|-----------|-----|------|-----------|-----|-----|---------------------------------|------|------------------|----|--|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM | |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | CSS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 11.7 | 12.2 | B | B | |
| 2. I-10 Fwy EB Ramps (EW) | CSS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 12.0 | 12.2 | B | B | |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 9.1 | 9.1 | A | A | |
| 4. Shadow View Boulevard (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 5. SR-86 NB Ramps (EW) | TS | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 16.9 | 16.0 | B | B | |
| 6. SR-86 SB Ramps (EW) | TS | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 13.3 | 11.1 | B | B | |
| 7. Avenue 48 (EW) | TS | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 14.0 | 14.2 | B | B | |
| Highway 111 (NS) at: | | | | | | | | | | | | | | | | | | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 9.4 | 11.5 | A | B | |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 8.6 | 8.7 | A | A | |
| 10. Avenue 47 (EW) | UC | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.9 | 8.2 | A | A | |
| 11. Avenue 48 (EW) | UC | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.4 | 7.9 | A | A | |
| 12. Avenue 50 (EW) | CSS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | 8.8 | 8.9 | A | A | |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) | TS | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 28.7 | 26.6 | C | C | |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15. Avenue 47 (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16. Avenue 48 (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) | UC | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 4.8 | 7.3 | A | A | |
| 18. Avenue 50 (EW) | CSS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 9.0 | 9.1 | A | A | |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.
L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Improvements.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal.
CSS = Cross Street Stop.
AWS = All Way Stop.
UC = Uncontrolled/Yield.

Source: TIS, (Appendix O)

**Table 4.14.2-5
Roadway Segment Analysis for Existing Conditions**

| Existing Roadway Classification | | | | | |
|--|--|--|---------------------------------|------------------|-------------|
| Segment | Existing Roadway Geometry¹ | Maximum Two-Way ADT³ | Existing ADT⁴ | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Secondary Arterial | 28,900 | 8,168 | 0.283 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Secondary Arterial | 28,900 | 9,345 | 0.323 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 589 | 0.057 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Local | 10,000 | 476 | 0.048 | C or Better |

| General Plan Buildout Roadway Classification | | | | | |
|---|--|--|---------------------------------|------------------|-------------|
| Segment | General Plan Classification² | Maximum Two-Way ADT³ | Existing ADT⁴ | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Major Arterial | 56,000 | 8,168 | 0.146 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial | 56,000 | 9,345 | 0.167 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 589 | 0.057 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 476 | 0.024 | C or Better |

¹ Existing classification based on current roadway geometry and number of through lanes.

² Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

³ Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study. March 2014, and referenced from the County of Riverside Congestion Management Plan.

⁴ Existing ADT measures in May 2014 and a 10% seasonal increase has been applied.

Source: TIS, (Appendix O)

Transit Service

As shown on Figure 4.9-2, *Existing Transit Facilities in the City*, of the General Plan Update Final EIR (2015) (p. 4.9-5), there is no bus service provided to the Project area.

According to the General Plan Update Final EIR (2015) (p. 4.9-4):

“Public transportation in Coachella consists of the following services and facilities:

- *Public bus, and*
- *Paratransit.*

Public transportation in Coachella is operated by SunLine Transit Agency, which enables commuters to travel within the City and adjacent cities with minimal transfers. Currently, SunLine operates two buses routes within the City, Route 90 and Route 91.

- *Route 90 operates all seven days of the week and connects Coachella to the City of Indio. Service frequency is at 35-minute headways on weekdays and weekends.*
- *Route 91 operates all seven days of the week and connects Coachella to the Cities of Indio, Thermal, Oasis and Mecca. Weekday service frequency is at 60-minute headways and weekend service frequency is at 80-minute headways.*

In Coachella, an intermediate type of service is provided by SunLine via their SunDial bus service. SunDial provides next day, curb-to-curb transit service by reservation for any person with a SunDial ADA Certification Card. This certification is obtained via the application process from SunLine. Pick up and drop off can only occur within 3/4 miles of a SunLine bus route, and the transit service is shared among multiple riders.”

Related Regulations

Coachella Valley Association of Governments Transportation Uniform Mitigation Fee

The Coachella Valley Association of Governments (CVAG) implements the Transportation Uniform Mitigation Fee (TUMF) program. The TUMF is a component of the countywide Measure A sales tax. Mitigation fees are imposed on development projects by local agencies and collected by the applicable jurisdiction and then transmitted to CVAG where the funds are placed in the Coachella Valley Transportation Mitigation Trust Fund. The fund is used to construct regional arterial improvement projects. TUMF is included as **Standard Condition SC-TR-1**, below.

City of Coachella Development Impact Fee Program

The City has an established street facilities mitigation fee program to fund the construction of traffic improvements to the local and regional roadway system. These street facilities fees are collected as part of the City’s overall Development Impact Fee (DIF) Program, which includes fees imposed on development projects to offset impacts from new development on City public facility infrastructure, including general government facilities, libraries, park and recreation facilities, streets, police facilities, and fire facilities. The DIF is assessed on new development to fund necessary public infrastructure improvements, including roadway improvements, needed to maintain adequate LOS and to prevent further degradation of roadway facilities that currently operate below the prescribed LOS standard. The street facilities fees are imposed on new development and collected at the building permit stage. After the impact fees are collected,

they are placed in separate interest-bearing accounts in compliance with the requirements of *Government Code*, Section 66000 *et seq.* These fees are then made available to the City to implement identified roadway improvements. The timing of the improvements is established through the City's Capital Improvement Program (CIP).

The City conducts traffic counts and reviews traffic trends throughout the City and uses these data to determine the timing of necessary roadway improvements and makes necessary adjustments to the CIP to ensure that construction and needed improvements occur prior to or concurrent with the time at which the identified roadway segment or intersection LOS is forecast to fail to achieve performance levels established by the City. As a result of its continual monitoring of the local circulation system, the CIP is adjusted and fine-tuned so that roadway improvements are constructed prior to the time the LOS deteriorates below the City's established performance criteria. A vast majority of the streets included within the study area for this report are scheduled for future improvements based on the City's CIP that is funded by the collection of impact fees.

2016 SCAG RTP/SCS

SCAG's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy SCAG adopted the 2016-2040 RTP/SCS in April 2016 pursuant to the requirements of SB 375. SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in the 2016 RTP/SCS is to provide for a plan that allows the southern California region to grow in more compact communities in existing urban areas; provide neighborhoods with efficient and plentiful public transit, abundant and safe opportunities to walk, bicycle, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands. The 2016 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as a forecast development that is generally consistent with regional-level general plan data. The projected regional development pattern, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel-related GHG emissions and achieve the GHG reduction per capita targets for the SCAG region.

The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS, but provides incentives for consistency for governments and developers. The 2016 RTP/SCS SCAG anticipates lowering GHG emissions below 2005 levels by 8 percent by 2020, 18 percent by 2035, and 22 percent by 2040. Key strategies in the SCAG's RTP/SCS are identified in Table 5.10-3, Consistency with SCAG's 2016-2040 RTP/SCS Goals, in Section 5.10, Land Use and Planning. Table 5.5-8, SCAG 2016 RTP/SCS Transportation-Land Use Consistency, evaluates the project in comparison to the three primary transportation-land use strategies in the RTP/SCS.

City of Coachella General Plan

The City of Coachella's adopted General Plan Update (2015) includes a number of goals and policies intended to facilitate the City's vision of long-term growth, development and conservation between now and 2035. The Program Environmental Impact Report (PEIR)

prepared in conjunction with the General Plan Update (2015) document evaluates potential impacts to the environment as a result of development in accordance with the updated General Plan. Section 4.9, Circulation, of the PEIR provides a complete discussion of the existing environment and regulatory framework for the analysis of impacts on traffic and circulation and is incorporated by reference. The PEIR may be reviewed at the City of Coachella, 1515 Sixth Street, Coachella, CA, 92236 and is available online at <http://www.coachella.org/services/document-central/-folder-20>.

City of Coachella General Plan Goals and Policies

General Plan Update (2015) goals and policies address transportation and traffic impacts and may also be included under other chapters of the EIR:

Land Use + Community Character Element

Goal 3. Healthy Community Design. Development patterns and urban design comprised of complete, walkable, attractive, family-friendly neighborhoods, districts and corridors that support healthy and active lifestyles.

3.2 Walkable streets: Regulate new development to ensure new blocks encourage walkability by maximizing connectivity and route choice, create reasonable block lengths to encourage more walking and physical activity and improve the walkability of existing neighborhood streets.

3.3 Pedestrian barriers: Discourage physical barriers to walking and bicycling between and within neighborhoods and neighborhood centers. If physical barriers are unavoidable, provide safe and comfortable crossings for pedestrians and cyclists. Physical barriers may include arterial streets with speed limits above 35 mph, transit or utility rights-of-way, very long blocks without through-streets, and sound walls, among others.

Goal 5. Neighborhoods. Neighborhoods that provide a variety of housing types, densities, designs and mix of uses and services that reflect the diversity and identity of Coachella, provide for diverse needs of residents of all ages, ethnicities, socio-economic groups and abilities, and support healthy and active lifestyles. (The following policies apply to all locations with a “Neighborhood” General Plan Designation.)

5.1 Complete neighborhoods: Through the development entitlement process, ensure that all new Neighborhoods (areas with a “Neighborhood” General Plan Designation) are complete and well-structured such that the physical layout and land use mix promote walking to services, biking and transit use; develop community identity and pride, are family friendly and address the needs of multiple ages and physical abilities. New neighborhoods should have the following characteristics:

- Be approximately 125 acres in size and approximately half-mile in diameter.
- Contain short, walkable block lengths.
- Have a grid or modified grid street network (except where topography necessitates another street network layout).
- Contain a high level of connectivity for pedestrians, bicycles and vehicles (except where existing development or natural features prohibit connectivity).
- Have homes with entries and windows facing the street.
- Contain a diversity of housing types, where possible.

- Provide a diversity of architectural styles.
- Have goods and services within a short walking distance.
- Are organized around a central focal point such as a park, school, civic building or neighborhood retail such that most homes are no more than one quarter-mile from this focal point.

5.7 Walkable neighborhoods: Require that all new neighborhoods are designed and constructed to be pedestrian friendly and include features such as short blocks, wide sidewalks, tree-shaded streets, buildings that define and are oriented to streets or public spaces, traffic-calming features, convenient pedestrian street crossings, and safe streets that are designed for pedestrians, cyclists and vehicles.

5.8 Provision of sidewalks: Except within designated rural areas, require sidewalks of at least six feet in width on both sides of streets in neighborhoods.

5.9 Street network: Except where infeasible because of topographic conditions, require new Neighborhoods to be designed with a traditional grid pattern and block sizes ranging from 300 to 600 feet, depending on the General Plan Designations.

5.11 Connections to key destinations: Require direct pedestrian connections between residential areas and nearby commercial areas.

5.15 Access to daily activities: Strive to create development patterns such that the majority of residents are within one-half mile walking distance to a variety of neighborhood goods and services, such as supermarkets, restaurants, churches, cafes, dry cleaners, laundromats, farmers markets, banks, hair care, pharmacies and similar uses.

Goal 9. Corridors and Connectivity. A network of transportation and open space corridors throughout the City that provides a high level of connectivity for vehicles, cyclists and pedestrians.

9.1 City-wide connectivity: Establish and preserve a Citywide street network throughout the City where through roads occur approximately every one-quarter mile, except where connections cannot be made because of previous large development projects or physical constraints. Physical constraints shall be canals, railroads, water, steep slopes, limited access roadways and similar natural and man-made barriers.

9.2 Subarea connectivity: Ensure a high-level of connectivity in all Neighborhoods, Centers and Districts throughout the City. The connectivity shall be measured as block perimeter and in external connectivity on the perimeter of a new development project.

9.3 Connections between development projects: Require the continuation of the street network between adjacent development projects and discourage the use of cul-de-sacs except where necessary because connections cannot be made due to existing development, topographic conditions or limited access to transportation systems.

Goal 10. Development requirements. A fair, understandable and predictable approach that ensures new development does not impose a fiscal burden on the City and requires new project provide adequate public facilities and services as part of the overall process.

10.1 Required contents of Specific Plans and Planned Developments that implement the subarea Master Plans. Require that all Specific Plans, Planned Developments, Master Plans and other master-planned community implementation tools include:

- A plan for the phasing of all off-site infrastructure.
- A performance schedule for the issuance of building permits based on the concurrent availability of public services and amenities, including parks, schools and other public facilities identified in the entitlement documents.
- A clear statement of the minimum public improvements that will be required as part of the first phase of development.
- A statement of the financing mechanisms that will provide for the ongoing funding and financing of the public facilities of the project. These financing tools should be presented and discussed in the entitlement document implementation plan.

10.2 Concurrence: Prohibit the issuance of precise grading plans and building permits unless the City has made a determination that adequate stormwater facilities, parks, solid waste, water, sewer and transportation facilities are operating to serve each phase of development.

10.3 Phasing of project site improvements. Require that new subdivisions complete the public improvements before occupancy inspections unless a development agreement is implemented.

Mobility Element

Goal 2. Traffic Calming. A transportation system that limits negative impacts from vehicular travel on residents and workers.

2.2 Traffic calming for future streets: Apply traffic calming techniques to future residential streets to limit cut-through traffic and speeding on these roadway streets. Potential traffic calming applications can include clearly marked bicycle and pedestrian zones, bicycle boulevards, bulb outs, median islands, speed humps, traffic circles, speed tables, center island narrowings, raised crosswalks, blinking crosswalks, chicanes, chokers, raised intersections, realigned intersections, and textured pavements, among other effective enhancements.

Goal 3. Pedestrian Network. A safe pedestrian network that provides direct connections between residences, employment, shopping and civic uses.

3.1 Pedestrian network: Improve health outcomes by creating a safe and convenient circulation system for pedestrians that focuses on crosswalks, improves the connections between neighborhoods and commercial areas, provides places to sit or gather, pedestrian-scaled street lighting, buffers from moving vehicle traffic, and includes amenities that attract people of all ages and abilities.

3.4 Pedestrian connections for development: Require that all development or redevelopment projects provide pedestrian connections to the external pedestrian network.

3.5 Pedestrian access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide pedestrian connections from external areas into the community.

3.8 Park once: Design dense nodes of commercial and retail businesses with reduced off-street parking that is accessible to public parking locations so people can park once for many errands/trips.

Goal 4. Bicycle Trail Network. A bicycle and multi-use trail network that facilitates bicycling for commuting, school, shopping and recreational trips.

4.3 Bicycle access to gated communities: Require that all new communities, regardless of the presence of gates and sound walls, provide bicycle connections from external areas into the community.

4.4 Bicycle parking: Require that the public and private development in the City provide sufficient bicycle parking.

Goal 5. Transit Supportive Development Patterns. An integrated land use and transportation network that supports transit ridership.

5.3 Promote bus shelters: Encourage bus shelters in new development, if a stop is determined necessary by SunLine. Bus shelters should be designed as public art or to be compatible with the building architecture of the site.

5.4 Transit accessible development: Encourage new large residential or commercial developments to locate on existing and planned transit routes.

Goal 6. Sustainable Transportation. A sustainable transportation system that can be built, operated and maintained within the City's existing and future resource limitations.

6.1 Fair share costs: Require that new development pay for its fair share of construction costs for new and/or upgraded transportation infrastructure needed to accommodate this development.

6.3 Development contributions to O&M costs: Require the new development and redevelopment contribute to the operations and maintenance of new transportation infrastructure.

Sustainability + Natural Environment Element

Goal 11. Air Quality. Healthy indoor and outdoor air quality through reduced, locally generated pollutant emissions.

11.10 Traffic congestion: Design new intersections to function in a manner that reduces air pollutant emissions from stop and start and idling traffic conditions.

Infrastructure + Public Services Element

Goals 1. Citywide Utilities. A healthy community with well maintained, efficient, high-quality public infrastructure facilities and services throughout the City.

1.5 New development infrastructure costs. Require new developments to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

4.14.3 Thresholds of Significance

The City's Initial Study contains six (6) criteria for determining impacts to transportation/traffic resources. As discussed above in Subchapter 4.14.1, above, the following five (5) criteria will be analyzed in this EIR:

- a. Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b. Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- d. Would the Project result in inadequate emergency access? or,
- e. Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Per the City of Coachella General Plan Update (2015), all study intersections will be required to perform at LOS D or better. Recommended improvements to improve level of service are provided for all intersections operating below the acceptable standard. Recommended improvements are generally based on the ultimate buildout classifications of the roadway.

4.14.4 Potential Impacts

THRESHOLD a: Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

A Project specific Traffic Impact Study (*TIS*) was developed to evaluate the development of the Vista Del Agua Specific Plan from a traffic circulation standpoint. The proposed development is located within the City of Coachella.

TIS Objectives

The TIS objectives include:

1. Documentation of existing traffic conditions in the vicinity of the site;
2. Evaluation of traffic conditions in the Project Completion (Year 2022) Without and With Cumulative Projects;
3. Evaluation of traffic conditions in the General Plan Buildout (Year 2035) Without and With the Project; and
4. Determination of on-site and off-site improvements and system management actions needed to achieve City of Coachella and County of Riverside level of service requirements.

Project Traffic Conditions

Trip generation represents the amount of traffic that is attracted and produced by a development. The trip generation for the Project is based upon the specific land uses that have been planned for this development.

Trip generation rates for the proposed development are shown in **Table 4.14.4-1, Trip Generation Rates**, below, and are from the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012 (most recent Edition). This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

**Table 4.14.4-1
Trip Generation Rates¹**

| Land Use | ITE Trip Code | Units ² | Peak Hour | | | | | | Daily |
|-------------------|---------------|--------------------|-----------|------|-------|------|------|-------|-------|
| | | | AM | | | PM | | | |
| | | | In | Out | Total | In | Out | Total | |
| Shopping Center | 820 | TSF | 0.60 | 0.36 | 0.96 | 1.78 | 1.93 | 3.71 | 42.70 |
| Apartments | 220 | DU | 0.10 | 0.41 | 0.51 | 0.40 | 0.22 | 0.62 | 6.65 |
| Condos/Townhouses | 230 | DU | 0.07 | 0.37 | 0.44 | 0.35 | 0.17 | 0.52 | 5.81 |
| Single Family | 210 | DU | 0.19 | 0.56 | 0.75 | 0.63 | 0.37 | 1.00 | 9.52 |
| City Park | 411 | AC | 2.52 | 1.98 | 4.50 | 2.00 | 1.51 | 3.50 | 1.89 |

¹ Source: Institute of Transportation Engineers (ITE), *Trip Generation*, 9th Edition, 2012.

² DU = Dwelling Unit
TSF = Thousand Square Feet
AC = Acres

Source: TIS, (Appendix O)

Both daily and peak hour trip generation for the proposed development are shown in **Table 4.14.4-2, Project Trip Generation**, below. The proposed development is projected to generate

approximately 22,078 trip-ends per day with 1,319 total vehicles per hour during the AM peak hour and 2,164 total vehicles per hour during the PM peak hour.

It should be noted that the trip rate for Institute of Transportation Engineers (ITE) Land Use 820 is based on sample data from a wide range of commercial shopping centers of various uses and sizes. The shopping center rate includes neighborhood centers, community centers, regional centers, and super regional centers. Uses within a shopping center can include retail stores, small offices, office buildings, movie theaters restaurants, banks, and health clubs. They can range in size from 1,700 SF to 2.2 million SF. Based on the data provided by ITE, the proposed uses for PA1 are adequately represented by the ITE Trip Code 820.

**Table 4.14.4-2
Project Trip Generation**

| Planning Area | Land Use | Quantity | Units ¹ | Peak Hour | | | | | | Daily |
|--------------------------------------|---|----------|--------------------|------------|------------|--------------|--------------|------------|--------------|---------------|
| | | | | AM | | | PM | | | |
| | | | | In | Out | Total | In | Out | Total | |
| 1 | Shopping Center | 191.337 | TSF | 114 | 70 | 184 | 341 | 369 | 710 | 8,170 |
| | Less 30% Pass-By Reduction ² | | | -34 | -21 | -55 | -102 | -111 | -213 | -2,451 |
| | Sub-Total PA 1 | | | 80 | 49 | 129 | 239 | 258 | 497 | 5,719 |
| 2 | Apartments | 146 | DU | 15 | 60 | 75 | 59 | 32 | 91 | 971 |
| 3 | Apartments | 201 | DU | 21 | 82 | 103 | 81 | 44 | 125 | 1,337 |
| 4 | Condo/Townhomes | 263 | DU | 20 | 96 | 116 | 92 | 45 | 137 | 1,528 |
| 5 | Single Family | 250 | DU | 47 | 141 | 188 | 158 | 93 | 251 | 2,380 |
| 6 | Single Family | 460 | DU | 86 | 259 | 345 | 290 | 170 | 460 | 4,379 |
| 7 | Single Family | 260 | DU | 49 | 146 | 195 | 164 | 96 | 260 | 2,475 |
| 8 | Single Family | 60 | DU | 11 | 34 | 45 | 38 | 22 | 60 | 571 |
| 9 | City Park | 13.82 | Acres | 35 | 27 | 62 | 28 | 21 | 49 | 26 |
| 10 | Shopping Center | 90.060 | TSF | 54 | 33 | 87 | 160 | 174 | 334 | 3,846 |
| | Less 30% Pass-By Reduction ² | | | -16 | -10 | -26 | -48 | -52 | -100 | -1,154 |
| | Sub-Total PA 10 | | | 38 | 23 | 61 | 112 | 122 | 234 | 2,692 |
| Total Project Trip Generation | | | | 402 | 917 | 1,319 | 1,261 | 903 | 2,164 | 22,078 |

¹ DU = Dwelling Unit
TSF = Thousand Square Feet
AC = Acres

² Pass-by reduction based on ITE Trip Generation Manual 9th Edition, Users Guide and Handbook. Per Land Use 820 – Shopping Center, the average pass-by trip percentage for the weekday PM peak hour is 34%. To be conservative the TIS assumed a lower pass-by reduction of 30% for the AM, PM and Daily periods.

Source: TIS, (Appendix O)

Pass-by reduction is based on ITE Trip Generation Manual 9th Edition, Users Guide and Handbook. Per Land Use 820 - Shopping Center, the average pass-by trip percentage for the weekday PM peak period is 34%. To be conservative, the TIS assumed a slightly lower pass-by reduction of 30% for the AM, PM and Daily periods.

Pass-By Trips

Studies have shown that for some developments such as the one proposed, a portion of the site-generated vehicle trips are already present in the adjacent passing stream of traffic. These types of trips are known as pass-by trips. Pass-by trips are made by traffic already using the adjacent roadway and enter the site as an intermediate stop on the way from another destination. The trip may not necessarily be “generated” by the land use under study, and thus, no new trips are added to the roadway system. For this Project, a 30% pass-by credit was applied to the commercial/retail trip generation only and was based on the ITE Trip Generation Manual 9th Edition, Users Guide and Handbook. ITE found that approximately 34% of all PM peak hour trips for shopping center land uses are pass-by trips.

Internal Capture

Internal trip capture is the portion of trips generated by a mixed-use Project that both begin and end within the development. The importance of internal trip capture is that a portion of the total development’s trip generation is satisfied without using the external road system. As a result, a mixed-use development that generates a given number of total trips creates less demand on the external road system than single-use developments generating the same number of trips.

For this Project, it would be reasonable to assume that a significant portion of the commercial development trip generation would be internal to the specific plan area, and not impact area wide roadways. However, to show the full impact of this development’s trip generation to both on-site and off-site roadways, no internal trip credit has been taken.

Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, employment and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses, and highways within the community and existing traffic volumes.

Trip distribution patterns are based on the existing roadway network with the construction of Shadow View Boulevard and Avenue 47 prior to the opening of the Project. Shadow View Boulevard and Avenue 47 will connect the Project site to Dillon Road.

Trip distribution for the *TIS* was based upon near-term conditions, based upon those highway facilities, which are either in place or will be implemented over the next few years, which represents the buildout occupancy for the proposed development. The trip distribution patterns for the Project are graphically depicted on:

- **Figure 4.14.4-1, *Planning Area 1 Outbound Trip Distribution;***
- **Figure 4.14.4-2, *Planning Area 1 Inbound Trip Distribution;***
- **Figure 4.14.4-3, *Planning Area 2 Inbound Trip Distribution;***
- **Figure 4.14.4-4, *Planning Area 3 Outbound Trip Distribution;***
- **Figure 4.14.4-5, *Planning Area 2 Outbound Trip Distribution;***
- **Figure 4.14.4-6, *Planning Area 3 Inbound Trip Distribution;***

- **Figure 4.14.4-7, Planning Area 4 Outbound Trip Distribution;**
- **Figure 4.14.4-8, Planning Area 4 Inbound Trip Distribution;**
- **Figure 4.14.4-9, Planning Area 5 Outbound Trip Distribution;**
- **Figure 4.14.4-10, Planning Area 5 Inbound Trip Distribution;**
- **Figure 4.14.4-11, Planning Area 6 Outbound Trip Distribution;**
- **Figure 4.14.4-12, Planning Area 6 Inbound Trip Distribution;**
- **Figure 4.14.4-13, Planning Area 7 Outbound Trip Distribution;**
- **Figure 4.14.4-14, Planning Area 7 Inbound Trip Distribution;**
- **Figure 4.14.4-15, Planning Area 8 Outbound Trip Distribution;**
- **Figure 4.14.4-16, Planning Area 8 Inbound Trip Distribution;**
- **Figure 4.14.4-17, Planning Area 9 Outbound Trip Distribution;**
- **Figure 4.14.4-18, Planning Area 9 Inbound Trip Distribution;**
- **Figure 4.14.4-19, Planning Area 10 Outbound Trip Distribution; and**
- **Figure 4.14.4-20, Planning Area 10 Inbound Trip Distribution.**

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, existing and proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site.

Modal Split

Modal split denotes the proportion of traffic generated by a Project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic reducing potential of public transit and other modes is significant. However, the traffic projections are "conservative" in that public transit and alternative transportation may be able to reduce the traffic volumes. Thus, no modal split reduction is applied to the projections in order to identify and disclose the worst-case scenario. With the implementation of transit service and provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced.

Project Peak Hour Traffic Volumes

Project peak hour traffic volumes have been calculated throughout the study area. The Project's AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-21, Project Traffic Volumes**.

Cumulative Projects Traffic

Table 4.14.4-3, Cumulative Project Trip Generation, below, lists the proposed land uses for the nearby developments for Project Completion (Year 2022) With Cumulative Project traffic conditions known by the City of Coachella, County of Riverside and RK Engineering at the time the *TIS* was prepared. Development that has been approved or is being processed concurrently in the study area includes the projects illustrated on the map in **Figure 4.14.4-22, Cumulative Project Location Map**. Those projects which filed permits more than ten (10) years ago or have since expired were not included in the cumulative developments.

**Table 4.14.4-3
Cumulative Project Trip Generation²**

| Zone Number | Riverside County Case Number | Land Use | Quantity | Units ¹ | Peak Hour | | | | Daily | |
|---|--|--------------------------|----------|--------------------|--------------|--------------|--------------|--------------|----------------|--------------|
| | | | | | AM | | PM | | | |
| | | | | | In | Out | In | Out | | |
| 1 | Shadow View Specific Plan ³ | Single Family Homes | 1,600 | DU | 304 | 896 | 1,024 | 592 | 15,312 | |
| | | Apartment | 1,000 | DU | 70 | 369 | 276 | 103 | 4,587 | |
| | | Residential Subtotal | | | | 374 | 1,265 | 1,300 | 695 | 19,899 |
| | | Commercial | 1,000 | TSF | 244 | 150 | 910 | 993 | 20,614 | |
| <i>Zone 1 Subtotal</i> | | | | | <i>618</i> | <i>1,415</i> | <i>2,210</i> | <i>1,688</i> | <i>40,513</i> | |
| 2 | La Entrada Specific Plan ⁴ | Med. Density Residential | 3,059 | DU | 170 | 1,075 | 873 | 319 | 12,836 | |
| | | High Density Residential | 2,552 | DU | 161 | 946 | 782 | 297 | 11,441 | |
| | | Low Density Residential | 2,169 | DU | 293 | 1,178 | 1,121 | 485 | 14,982 | |
| | | Regional Park | 177 | AC | 10 | 10 | 15 | 18 | 735 | |
| | | Retail | 1,261 | TSF | 778 | 497 | 2,279 | 2,481 | 56,497 | |
| | | General Office | 250 | TSF | 305 | 43 | 61 | 268 | 2,425 | |
| | | Elementary School | 3,399 | STN | 153 | 126 | 46 | 47 | 799 | |
| | | Middle School | 864 | STN | 47 | 38 | 12 | 13 | 255 | |
| <i>Zone 2 Subtotal</i> | | | | | <i>1,917</i> | <i>3,913</i> | <i>5,189</i> | <i>3,928</i> | <i>99,970</i> | |
| 3 | TTM34293 | Single Family Homes | 129 | DU | 25 | 72 | 81 | 48 | 1,228 | |
| | TTM35005 | Single Family Homes | 842 | DU | 160 | 472 | 530 | 312 | 8,016 | |
| | | Apartment | 242 | DU | 24 | 99 | 106 | 56 | 1,609 | |
| <i>Zone 3 Subtotal</i> | | | | | <i>209</i> | <i>643</i> | <i>717</i> | <i>416</i> | <i>10,853</i> | |
| 4 | CUP254 | Retail | 3.8 | TSF | 2 | 1 | 7 | 7 | 162 | |
| | | Restaurant | 5.3 | TSF | 32 | 26 | 31 | 21 | 674 | |
| | | Fast Food W/ Drive Thru | 2.4 | TSF | 56 | 53 | 41 | 38 | 1,191 | |
| | | Automated Carwash | 3.85 | TSF | 12 | 12 | 28 | 27 | 599 | |
| <i>Zone 4 Subtotal</i> | | | | | <i>102</i> | <i>92</i> | <i>107</i> | <i>93</i> | <i>2,626</i> | |
| 5 | CUP260 | Recycling Center | 6 | AC | 2 | 2 | 1 | 2 | 36 | |
| | <i>Zone 5 Subtotal</i> | | | | | <i>2</i> | <i>2</i> | <i>1</i> | <i>2</i> | <i>36</i> |
| 6 | TTM33556 | Single Family Homes | 295 | DU | 56 | 165 | 186 | 109 | 2,808 | |
| | <i>Zone 6 Subtotal</i> | | | | | <i>56</i> | <i>165</i> | <i>186</i> | <i>109</i> | <i>2,808</i> |
| 7 | TTM32263 | Single Family Homes | 322 | DU | 61 | 180 | 203 | 119 | 3,065 | |
| | <i>Zone 7 Subtotal</i> | | | | | <i>61</i> | <i>180</i> | <i>203</i> | <i>119</i> | <i>3,065</i> |
| 8 | TTM36394 | Single Family Homes | 46 | DU | 9 | 26 | 29 | 17 | 438 | |
| | <i>Zone 8 Subtotal</i> | | | | | <i>9</i> | <i>26</i> | <i>29</i> | <i>17</i> | <i>438</i> |
| <i>Total Cumulative Project Trip Generation</i> | | | | | <i>2,974</i> | <i>6,436</i> | <i>8,642</i> | <i>6,372</i> | <i>160,309</i> | |

¹ DU = Dwelling Unit
TSF = Thousand Square Feet
AC = Acres
STN = Students

² Rates approved by the County of Riverside.

³ Source: Shadow View Specific Plan Revised Draft EIR, March 2006.

⁴ Source: La Entrada Specific Plan Draft EIR, July 2013.

Source: TIS, (Appendix O)

The Cumulative Project's AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-23, Cumulative Project Traffic Volumes**. Appendix D of the *TIS* contains the directional distribution and assignment of the Cumulative Project traffic.

The Avenue 50 interchange is highly likely to be built prior to the completion of the La Entrada project; therefore the "with" interchange alternative was included in the cumulative analysis. The Ave 50 interchange is not accounted for in existing/baseline conditions, it is only analyzed in cumulative as part of the La Entrada traffic assignment patterns. The interchange is located outside of the Project study area and would not significantly impact the findings of the analysis in the *TIS*.

Existing Plus Project Traffic Conditions

Less Than Significant Impact with Mitigation Incorporated

Existing Plus Project peak hour intersection turning movement volumes were obtained by combining existing traffic volumes with Project traffic volumes. Existing Plus Project AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-24, Existing Plus Project Traffic Volumes**, below.

Intersection Level of Service for Existing Plus Project Conditions Intersection levels of service for the existing network with the proposed Project are shown in **Table 4.14.4-4, Intersection Analysis for Existing Plus Project Conditions**, below.

It should be noted that improvements for existing plus Project conditions include roadway construction and traffic control which will be part of the Project design. The analysis software used for the *TIS* cannot calculate LOS for uncontrolled intersections or nonexistent roads, and thus a "without mitigation" scenario is not applicable in this case.

**Table 4.14.4-4
Intersection Analysis for Existing Plus Project Conditions**

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | | |
|--|------------------------------|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------------------------|------|------------------|----|--|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM | |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | CSS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 15.2 | 18.3 | C | C | |
| 2. I-10 Fwy EB Ramps (EW) | CSS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 13.3 | 14.7 | B | B | |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 10.0 | 10.2 | B | B | |
| 4. Shadow View Boulevard (EW) ⁴ | TS | 0.0 | 1.5 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 15.9 | 18.0 | B | B | |
| 5. SR-86 NB Ramps (EW) | TS | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 16.1 | 18.5 | B | B | |
| 6. SR-86 SB Ramps (EW) | TS | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 11.8 | 13.2 | B | B | |
| 7. Avenue 48 (EW) | TS | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 15.5 | 17.4 | B | B | |
| Highway 111 (NS) at: | | | | | | | | | | | | | | | | | | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 10.3 | 12.7 | B | B | |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 9.6 | 10.2 | A | B | |
| 10. Avenue 47 (EW) ⁴ | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 11.0 | 34.8 | B | D | |
| 11. Avenue 48 (EW) ⁴ | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 8.5 | 12.1 | A | B | |
| 12. Avenue 50 (EW) | CSS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | 11.7 | 17.7 | B | C | |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) | TS | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 40.1 | 46.0 | D | D | |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) ⁴ | AWS | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 8.7 | 8.1 | A | A | |
| 15. Avenue 47 (EW) ⁴ | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 9.2 | 12.8 | A | A | |
| 16. Avenue 48 (EW) ⁴ | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 7.9 | 8.7 | A | A | |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) ⁴ | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.3 | 8.3 | A | A | |
| 18. Avenue 50 (EW) | CSS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 10.1 | 10.6 | B | B | |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.

L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Improvements.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal.
CSS = Cross Street Stop.
AWS = All Way Stop.
UC = Uncontrolled/Yield.

⁴ Intersection is currently unimproved or not existing and requires these improvements to accommodate the Project.

Source: TIS, (Appendix O)

As shown in **Table 4.14.4-4**, HCM calculations are based on the existing intersection geometrics and the intersection geometrics necessary to mitigate the Project impact. For Existing Plus Project traffic conditions, all study area intersections are expected to operate at Level of Service D or better during the peak hours.

With implementation of intersection improvements as mitigation measures, shown in **Table 4.14.4-5, *Intersection Mitigation for Existing Plus Project Conditions***, below, all study area intersections are projected to operate at LOS D or better in the Existing Plus Project Conditions peak hour conditions.

**Table 4.14.4-5
Intersection Mitigation for Existing Plus Project Conditions**

| Intersection | Existing Plus Project Conditions Recommended Intersection Mitigation ¹ |
|--|--|
| Dillon Road (NS) at: 4. Shadow View Boulevard (EW) | <ul style="list-style-type: none"> - Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road - Install Traffic Signal - Install Southbound Left Turn Lane - Install Westbound Left Turn Lane - Install Westbound Right Turn Lane |
| Tyler Street (NS) at: 10. Avenue 47 (EW) | <ul style="list-style-type: none"> - Install All-Way Stop Signs |
| 11. Avenue 48 (EW) | <ul style="list-style-type: none"> - Install All-Way Stop Signs |
| Street "A" (NS) at: 14. Vista Del Sur (EW) ² | <ul style="list-style-type: none"> - Install All-way Stop Signs; - Install Northbound Left Turn Lane - Install Eastbound Right Turn Lane |
| 15. Avenue 47 (EW) ² | <ul style="list-style-type: none"> - Install All-way Stop Signs - Install Northbound Left Turn Lane - Install Northbound Thru Turn Lane - Install Northbound Thru/Right Turn Lane - Install Southbound Left Turn Lane - Install Southbound Thru Turn Lane - Install Southbound Thru/Right Turn Lane - Install Eastbound Left Turn Lane - Install Eastbound Thru Turn Lane - Install Eastbound Thru/Right Turn Lane - Install Westbound Left Turn Lane - Install Westbound Thru Turn Lane - Install Westbound Thru/Right Turn Lane |
| 16. Avenue 48 (EW) ² | <ul style="list-style-type: none"> - Install All-way Stop Signs - Install Northbound Left Turn Lane - Install Northbound Thru Turn Lane - Install Northbound Thru/Right Turn Lane - Install Southbound Left Turn Lane - Install Southbound Thru Turn Lane - Install Southbound Thru/Right Turn Lane - Install Eastbound Left Turn Lane - Install Eastbound Thru Turn Lane - Install Eastbound Thru/Right Turn Lane - Install Westbound Left Turn Lane - Install Westbound Thru Turn Lane - Install Westbound Thru/Right Turn Lane |
| Polk Street (NS) at: 17. Avenue 48 (EW) | <ul style="list-style-type: none"> - Install All-Way Stop Signs |

¹ Mitigation generally consist of the minimum necessary improvements at an intersection to improve operations to Level of Service D or better.

² Street "A" improvements are consistent with the General Plan Transportation Network Collector Classification for this future roadway.

Source: TIS, (Appendix O)

This is reflected in **Mitigation Measure MM-TR-1**, which requires the Project applicant (prior to the 1st occupancy) to make the following improvements:

- Intersection of Dillon Road and Shadow View Boulevard:
 - Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road.

- Install traffic signal
 - Install southbound (SB) left-turn lane.
 - Install westbound (WB) left-turn lane.
 - Install WB right-turn signal.
- Intersection of Tyler Street and Avenue 47:
 - Install all-way stop signs.
- Intersection of Tyler Street and Avenue 48:
 - Install all-way stop signs.
- Intersection of Street "A" and Vista Del Sur:
 - Install all-way stop signs.
 - Install NB left-turn lane.
 - Install EB right-turn signal.
- Intersection of Street "A" and Avenue 47:
 - Install all-way stop signs.
 - Install northbound (NB) left-turn lane.
 - Install NB thru-turn lane.
 - Install NB thru/right-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install SB thru/right-turn lane.
 - Install eastbound (EB) left-turn lane.
 - Install EB thru-turn lane.
 - Install EB thru/right-turn lane.
 - Install WB left-turn lane.
 - Install WB thru-turn lane.
 - Install WB thru/right-turn lane.
- Intersection of Street "A" and Avenue 48:
 - Install all-way stop signs.
 - Install NB left-turn lane.
 - Install NB thru-turn lane.
 - Install NB thru/right-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install SB thru/right-turn lane.
 - Install EB left-turn lane.
 - Install EB thru-turn lane.
 - Install EB thru/right-turn lane.
 - Install WB left-turn lane.
 - Install WB thru-turn lane.
 - Install WB thru/right-turn lane.
- Intersection of Polk Street and Avenue 48:
 - Install all-way stop signs.

Please also reference **Figure 4.14.4-25, *Recommended Intersection Improvements***, below.

Impacts are considered less than significant with mitigation incorporated.

Roadway Segment Level of Service for Existing Plus Project Conditions

Less Than Significant Impact

The Roadway Segment level of service calculations for Existing Plus Project Conditions are shown in **Table 4.14.4-6, Roadway Segment Analysis for Existing Plus Project Conditions**, below. The City requires Level of Service D or better for all study area Roadway Segments.

For Existing Plus Project traffic conditions, the study area Roadway Segments are expected to operate at acceptable level of service based on the General Plan Update (2015) Classification of the Roadway.

Impacts are considered incremental and less than significant.

**Table 4.14.4-6
Roadway Segment Analysis for Existing Plus Project Conditions**

| Existing Roadway Classification | | | | | |
|--|--|--|----------------------------------|------------------|-------------|
| Segment | Existing Roadway Geometry¹ | Maximum Two-Way ADT³ | Existing Plus Project ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Secondary Arterial | 28,900 | 14,408 | 0.499 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Secondary Arterial | 28,900 | 14,635 | 0.506 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,403 | 0.327 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Local | 10,000 | 476 | 0.048 | C or Better |

| General Plan Buildout Roadway Classification | | | | | |
|---|--|--|----------------------------------|------------------|-------------|
| Segment | General Plan Classification² | Maximum Two-Way ADT³ | Existing Plus Project ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Major Arterial | 56,000 | 14,408 | 0.257 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial | 56,000 | 14,635 | 0.261 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,403 | 0.327 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 476 | 0.024 | C or Better |

¹ Existing classification based on current roadway geometry and number of through lanes.

² Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

³ Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study, March 2014, and referenced from the County of Riverside Congestion Management Plan.

Source: TIS, (Appendix O)

Project Completion (Year 2022) Conditions

The Project development is proposed for completion by approximately year 2022. Although the Project will likely be built-out over in a series of phases, the TIS analyzed the Project in one (1) complete phase, to show the ultimate worst-case impacts of the Project upon completion. To

assess Project Completion (Year 2022) traffic conditions, Project traffic is combined with existing traffic, and area wide growth.

Background Traffic Growth Rate Project Completion (Year 2022) volumes were derived by applying a two percent (2%) annual growth rate over an eight-year period to existing volumes with the 10% seasonal adjustment. The background traffic growth rate of 2% is consistent with typical ambient growth rates used for traffic impact studies in the City of Coachella and County of Riverside.

The Coachella Valley experiences a seasonal fluctuation in traffic patterns due to the large number of temporary residents who live in the valley during the winter months (snowbirds). The peak season typically occurs from October to April. In order to account for the worst-case traffic conditions during peak season, traffic volume was increased by a 10% to account for potential seasonal growth. The seasonal growth adjustment was reviewed and approved by the City Traffic Engineer prior to initiating the *TIS*.

Project Completion (Year 2022) With Project Traffic Volumes Project Completion (Year 2022) With Project traffic conditions include existing traffic volumes on surrounding roadways, project traffic, and area wide growth. The AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-26, Project Completion (Year 2022) With Project Traffic Volumes**.

Intersection Level of Service for Project Completion (Year 2022) With Project Conditions

Significant and Unavoidable Impact

Intersection levels of service for the existing network with background growth, and the proposed Project are shown in in **Table 4.14.4-7, Intersection Analysis for Project Completion (Year 2022) With Project Conditions**, below. As shown in **Table 4.14.4-7**, HCM calculations are based on the existing intersection geometrics and the intersection geometrics necessary to mitigate the Project impact.

For the Project Completion (Year 2022) With Project traffic conditions, all study area intersections are expected to operate at Level of Service D or better during the peak hours, with the exception of the following intersections that are expected to operate at an unacceptable Level of Service during peak hours without mitigation:

- Tyler Street at Avenue 47; and
- SR-86 at Avenue 50.

It should be noted that improvements for existing plus Project conditions include roadway construction and traffic control which will be part of the Project design. The analysis software used for the *TIS* cannot calculate LOS for uncontrolled intersections or nonexistent roads, and thus a "without mitigation" scenario is not applicable in this case.

**Table 4.14.4-7
Intersection Analysis for Project Completion (Year 2022) With Project Conditions**

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | |
|-------------------------------|------------------------------|--|------------|------|------------|------------|-----|------------|------------|------|------------|------------|-----|---------------------------------|------|------------------|----|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | CSS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 16.6 | 21.0 | C | C |
| 2. I-10 Fwy EB Ramps (EW) | CSS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 14.5 | 16.3 | B | C |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 10.3 | 10.4 | B | B |
| 4. Shadow View Boulevard (EW) | TS | 0.0 | 1.5 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 15.7 | 17.9 | B | B |
| 5. SR-86 NB Ramps (EW) | TS | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 16.9 | 20.5 | B | C |
| 6. SR-86 SB Ramps (EW) | TS | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 12.8 | 14.6 | B | B |
| 7. Avenue 48 (EW) | TS | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 16.2 | 18.8 | B | B |
| Highway 111 (NS) at: | | | | | | | | | | | | | | | | | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 10.6 | 13.3 | B | B |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 9.7 | 10.2 | A | B |
| 10. Avenue 47 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 11.1 | 36.0 | B | E |
| -Recommended Mitigation | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 9.8 | 15.4 | A | C |
| 11. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 8.5 | 12.2 | A | B |
| 12. Avenue 50 (EW) | CSS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | 12.0 | 19.2 | B | C |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) | T | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 51.5 | 58.5 | D | E |
| -Recommended Mitigation | S | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 39.0 | 39.2 | | D |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) | AWS | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.5 | 0.5 | 0.0 | 8.7 | 8.1 | A | A |
| 15. Avenue 47 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 9.2 | 12.8 | A | A |
| 16. Avenue 48 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 7.9 | 8.7 | A | A |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.3 | 8.4 | A | A |
| 18. Avenue 50 (EW) | CSS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 10.2 | 10.7 | B | B |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.

L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Improvements.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal.
CSS = Cross Street Stop.
AWS = All Way Stop.
UC = Uncontrolled/Yield.

Source: T/S, (Appendix O)

With implementation of intersection improvements as mitigation measures, shown in **Table 4.14.4-8, *Intersection Mitigation for Project Completion (Year 2022) With Project Conditions*** below, all study area intersections are projected to operate at LOS D or better in the Project Completion (Year 2022) With Project peak hour conditions.

**Table 4.14.4-8
Intersection Mitigation for Project Completion (Year 2022) With Project Conditions**

| Intersection | Project Completion (Year 2022) With Project Conditions Recommended Intersection Mitigation ¹ |
|--|--|
| Dillon Road (NS) at: 4. Shadow View Boulevard (EW) | <ul style="list-style-type: none"> - [Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road] - [Install Traffic Singal] - [Install Southbound Left Turn Lane] - [Install Westbound Left Turn Lane] - [Install Westbound Right Turn Lane] |
| Tyler Street (NS) at: 10. Avenue 47 (EW) | <ul style="list-style-type: none"> - [Install All-Way Stop Signs] - Install Northbound Left Turn Lane - Install Eastbound Left Turn Lane - Install Northbound Thru Turn Lane - Install Eastbound Thru Turn Lane - Install Southbound Left Turn Lane - Install Westbound Left Turn Lane - Install Southbound Thru Turn Lane - Install Westbound Thru Turn Lane |
| 11. Avenue 48 (EW) | <ul style="list-style-type: none"> - [Install All-Way Stop Signs] |
| Street "A" (NS) at: 14. Vista Del Sur (EW) ² | <ul style="list-style-type: none"> - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Right Turn Lane] |
| 15. Avenue 47 (EW) ² | <ul style="list-style-type: none"> - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Left Turn Lane] - [Install Northbound Thru Turn Lane] - [Install Eastbound Thru Turn Lane] - [Install Northbound Thru/Right Turn Lane] - [Install Eastbound Thru/Right Turn Lane] - [Install Southbound Left Turn Lane] - [Install Westbound Left Turn Lane] - [Install Southbound Thru Turn Lane] - [Install Westbound Thru Turn Lane] - [Install Southbound Thru/Right Turn Lane] - [Install Westbound Thru/Right Turn Lane] |
| 16. Avenue 48 (EW) ² | <ul style="list-style-type: none"> - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Left Turn Lane] - [Install Northbound Thru Turn Lane] - [Install Eastbound Thru Turn Lane] - [Install Northbound Thru/Right Turn Lane] - [Install Eastbound Thru/Right Turn Lane] - [Install Southbound Left Turn Lane] - [Install Westbound Left Turn Lane] - [Install Southbound Thru Turn Lane] - [Install Westbound Thru Turn Lane] - [Install Southbound Thru/Right Turn Lane] - [Install Westbound Thru/Right Turn Lane] |
| Polk Street (NS) at: 17. Avenue 48 (EW) | <ul style="list-style-type: none"> - [Install All-Way Stop Signs] |

¹ Mitigation generally consists of the minimum necessary improvements at an intersection to improve operations to Level of Service D or better.

² Street "A" improvements are consistent with the General Plan Transportation Network Collector Classification for this future roadway.

³ [] = Previous phase improvement (Existing Plus Project Conditions).

Source: TIS, (Appendix O)

This is reflected in **Mitigation Measure MM-TR-2**, which requires the Project applicant (prior to the 1st occupancy) to complete the following intersection improvements:

- Tyler Street and Avenue 47:
 - Install NB left-turn lane.
 - Install NB thru-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install EB left-turn lane.
 - Install EB thru-turn lane.
 - Install WB left-turn lane.
 - Install WB thru-turn lane.
- Intersection of SR-86 and Avenue 50:
 - Install a traffic signal.

Although implementation of the improvements defined in **MM-TR-2** would reduce the significant impacts, the City cannot control the timing of when the intersection improvement for the location on Caltrans facilities (SR-86 and Avenue 50) is implemented. For this reason, even with implementation of **MM-TR-2**, impacts would remain significant and unavoidable at this location.

Roadway Segment Level of Service for Project Completion (Year 2022) With Project Conditions

Less Than Significant Impact

The Roadway Segment level of service calculations for Project Completion (Year 2022) With Project Conditions are shown in **Table 4.14.4-9, Roadway Segment Analysis for Project Completion (Year 2022) With Project Conditions**, below. The City requires Level of Service D or better for all study area Roadway Segments.

For Project Completion (Year 2022) With Project traffic conditions, the study area Roadway Segments are expected to operate at acceptable level of service based on the General Plan Update 2015 Classification of the Roadway. Impacts are considered incremental, and less than significant.

**Table 4.14.4-9
Roadway Segment Analysis for Project Completion (Year 2022) With Project Conditions**

| Existing Roadway | | | | | |
|--|--|----------------------------------|--|-----------|-------------|
| Segment | Existing Roadway Geometry ¹ | Maximum Two-Way ADT ³ | Project Completion (Year2022) With Project ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Secondary Arterial | 28,900 | 15,715 | 0.544 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Secondary Arterial | 28,900 | 16,130 | 0.558 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,497 | 0.336 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Local | 10,000 | 552 | 0.055 | C or Better |

| General Plan Buildout Roadway Classification | | | | | |
|--|--|----------------------------------|--|-----------|-------------|
| Segment | General Plan Classification ² | Maximum Two-Way ADT ³ | Project Completion (Year2022) With Project ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Major Arterial ⁴ | 56,000 | 15,715 | 0.281 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial ⁴ | 56,000 | 16,130 | 0.288 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,497 | 0.336 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 552 | 0.028 | C or Better |

¹ Existing classification based on current roadway geometry and number of through lanes.

² Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

³ Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study. March 2014, and referenced from the County of Riverside Congestion Management Plan.

Source: TIS, (Appendix O)

Project Completion (Year 2022) With Project and Cumulative Projects Traffic Volumes

Significant and Unavoidable Impact

Project Completion (Year 2022) With Project and Cumulative Projects traffic conditions include existing traffic volumes on surrounding roadways, Project traffic, cumulative projects traffic, and area wide growth. The AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-27, Project Completion (Year 2022) With Project and Cumulative Project Traffic Volumes.**

Intersection Level of Service for Project Completion (Year 2022) With Project and Cumulative Projects Conditions Intersection levels of service for the existing network with background growth, and the proposed Project are shown in **Table 4.14.4-10, Intersection Analysis for Project Completion (Year 2022) With Project and Cumulative Conditions**, below. As shown in **Table 4.14.4-10**, HCM calculations are based on the existing intersection geometrics and the intersection geometrics necessary to mitigate the Project impact. For the Project Completion (Year 2022) With Project and Cumulative Projects traffic conditions, all study area intersections are expected to operate at Level of Service D or better during the peak hours, with the exception of the following intersections that are expected to operate at an unacceptable Level of Service during peak hours without mitigation:

- Dillon Road at I-10 WB Ramps;
- Dillon Road at I-10 EB Ramps;
- Dillon Road at Shadow View Boulevard;
- Dillon Road at SR-86 NB Ramps;
- Dillon Road at SR-86 SB) Ramps;
- Dillon Road at Avenue 48;
- Tyler Street at Avenue 47;
- Tyler at Avenue 48;
- Tyler Street at Avenue 50;
- SR-86 at Avenue 50; and
- Polk Street at Avenue 50.

It should be noted that improvements for existing plus Project conditions include roadway construction and traffic control, which will be part of the Project design. The analysis software used for the *T/S* cannot calculate LOS for uncontrolled intersections or nonexistent roads, and thus a "without mitigation" scenario is not applicable in this case.

**Table 4.14.4-10
Intersection Analysis for Project Completion (Year 2022) With Project and Cumulative
Conditions**

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | | |
|--|------------------------------|--|-----|------|------------|-----|-----|-----------|-----|------|-----------|-----|-----|---------------------------------|--------|------------------|----|--|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM | |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) -Recommended Mitigation | CSS TS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 494.5 | 2186.0 | F | F | |
| 2. I-10 Fwy EB Ramps (EW) -Recommended Mitigation | CSS TS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 73.9 | 751.1 | F | F | |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 14.0 | 15.6 | B | C | |
| 4. Shadow View Boulevard (EW) -Recommended Mitigation | TS TS | 0.0 | 1.5 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 74.3 | 444.5 | E | F | |
| 5. SR-86 NB Ramps (EW) -Recommended Mitigation | T S | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 17.7 | 208.6 | B | F | |
| 6. SR-86 SB Ramps (EW) -Recommended Mitigation | T S | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 29.3 | 126.6 | C | F | |
| 7. Avenue 48 (EW) -Recommended Mitigation | T S | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 34.2 | 134.4 | C | F | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 13.3 | 16.8 | B | B | |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 9.7 | 10.2 | A | A | |
| 10. Avenue 47 (EW) -Recommended Mitigation | AWS TS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 42.0 | 442.0 | E | F | |
| 11. Avenue 48 (EW) -Recommended Mitigation | AWS TS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 13.2 | 390.7 | B | F | |
| 12. Avenue 50 (EW) -Recommended Mitigation | CSS TS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | OV | OV | F | F | |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) -Recommended Mitigation | T S | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 330.7 | 608.4 | F | F | |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) | AWS | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 8.7 | 8.1 | A | A | |
| 15. Avenue 47 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 9.2 | 12.8 | A | B | |
| 16. Avenue 48 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 7.9 | 8.7 | A | A | |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.3 | 8.4 | A | A | |
| 18. Avenue 50 (EW) -Recommended Mitigation | CSS TS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | OV | OV | F | F | |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.

L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Improvements.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal.
CSS = Cross Street Stop.
AWS = All Way Stop.
UC = Uncontrolled/Yield.

Source: T/S, (Appendix O)

As shown in **Table 4,14.4-11, *Mitigation for Project Completion (Year 2022) With Project and Cumulative Conditions***, below, improvements in the form of mitigation are required to the study area intersections.

**Table 4.14.4-11
Mitigation for Project Completion (Year 2022) With Project and Cumulative Conditions**

| Intersection | Recommended Intersection Mitigation¹ |
|---|---|
| Dillon Road (NS) at: 1. I-10 Fwy WB Ramps (EW) | - Install Traffic Signal |
| 2. I-10 Fwy EB Ramps (EW) | - Install Traffic Signal |
| Dillon Road (NS) at: 4. Shadow View Boulevard (EW) | [Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road] [Install Traffic Signal] - Install Two (2) Northbound Right Turn Lanes - [Install Westbound Left Turn Lane] - Install Northbound Right Turn Overlap Phase - - Install One (1) Additional Westbound Left Turn Lane - [Install Southbound Left Turn Lane] - [Install Westbound Right Turn Lane] - Install One (1) Additional Southbound Left Turn Lane - - Install Westbound Right Turn Overlap Phase |
| 5. SR-86 NB Ramps (EW) | - Install One (1) Additional Northbound Thru Lane |
| 6. SR-86 SB Ramps (EW) | - Install One (1) Additional Northbound Thru Lane - - Install One (1) Additional Southbound Thru Lane - Install One (1) Northbound Right Turn Lane |
| 7. Avenue 48 (EW) | - Install One (1) Additional Eastbound Right Turn Lane - - Install One (1) Additional Westbound Left Turn Lane |
| Tyler Street (NS) at: 10. Avenue 47 (EW) | - Install Traffic Signal - [Install Northbound Left Turn Lane] - [Install Eastbound Left Turn Lane] - Install One (1) Additional Northbound Left Turn Lane - [Install Eastbound Thru Turn Lane] - [Install Northbound Thru Turn Lane] - [Install Westbound Left Turn Lane] - [Install Southbound Left Turn Lane] - [Install Westbound Thru Turn Lane] |
| 11. Avenue 48 (EW) | - Install Traffic Signal - Install Northbound Left Turn Lane - - Install Eastbound Left Turn Lane - Install Northbound Thru Turn Lane - - Install Eastbound Thru Turn Lane - Install Southbound Left Turn Lane - - Install Westbound Left Turn Lane - Install Southbound Thru Turn Lane - - Install Westbound Thru Turn Lane |
| 12. Avenue 50 (EW) | - Install Traffic Signal - Install Three (3) Northbound Left Turn Lanes - - Install Two (2) Eastbound Left Turn Lanes - Install One (1) Additional Southbound Thru Lane - - Install Two (2) Eastbound Right Turn Lanes - Install Two (2) Southbound Right Turn Lanes - - Install Eastbound Right Turn Overlap Phase |

| | |
|--|--|
| SR-86 (NS) at: 13. Avenue 50 (EW) | - Install One (1) Additional Northbound Thru Lane - Install One (1) Eastbound Right Turn Lane - Install Two (2) Additional Southbound Left Turn Lanes - Install One (1) Westbound Left Turn Lane - Install Two (2) Eastbound Left Turn Lanes - Install One (1) Additional Westbound Thru Lane - Install One (1) Additional Eastbound Thru Lane - Improve Signal Phasing To Protected East/West |
| Street "A" (NS) at: 14. Vista Del Sur (EW) ² | - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Right Turn Lane] |
| 15. Avenue 47 (EW) ² | - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Left Turn Lane] - [Install Northbound Thru Turn Lane] - [Install Eastbound Thru Turn Lane] - [Install Northbound Thru/Right Turn Lane] - [Install Eastbound Thru/Right Turn Lane] - [Install Southbound Left Turn Lane] - [Install Westbound Left Turn Lane] - [Install Southbound Thru Turn Lane] - [Install Westbound Thru Turn Lane] - [Install Southbound Thru/Right Turn Lane] - [Install Westbound Thru/Right Turn Lane] |
| 16. Avenue 48 (EW) ² | - [Install All-way Stop Signs] - [Install Northbound Left Turn Lane] - [Install Eastbound Left Turn Lane] - [Install Northbound Thru Turn Lane] - [Install Eastbound Thru Turn Lane] - [Install Northbound Thru/Right Turn Lane] - [Install Eastbound Thru/Right Turn Lane] - [Install Southbound Left Turn Lane] - [Install Westbound Left Turn Lane] - [Install Southbound Thru Turn Lane] - [Install Westbound Thru Turn Lane] - [Install Southbound Thru/Right Turn Lane] - [Install Westbound Thru/Right Turn Lane] |
| Polk Street (NS) at: 17. Avenue 48 (EW) | - [Install All-Way Stop Signs] |
| 18. Avenue 50 (EW) | - Install Traffic Signal - Install Northbound Left Turn Lane - Install Eastbound Left Turn Lane - Install Northbound Thru Turn Lane - Install Eastbound Thru Turn Lane - Install Southbound Left Turn Lane - Install Westbound Left Turn Lane - Install Southbound Thru Turn Lane - Install Westbound Thru Turn Lane |
| Roadway Segment | Recommended Roadway |
| Dillon Road: 1. I-10 to SR-86 | - Contribute fair-share funding towards the buildout of roadway to ultimate classification of 6-lane Major Arterial |
| Dillon Road: 2. SR-86 to Highway 111 | - Contribute fair-share funding towards the buildout of roadway to ultimate classification of 6-lane Major Arterial |

¹ Mitigation generally consistent of the minimum necessary improvements to improve operations to Level of Service D or better.

² Street "A" improvements are consistent with the General Plan Transportation Network Collector Classification for this future roadway.

³ [] = Previous phase intersection improvement recommendation.

Bold = Current phase intersection improvement.

Source: TIS, (Appendix O)

With payment of fair-share contribution to intersection improvements as mitigation measures, all study area intersections are projected to operate at LOS D or better in the Project Completion (Year 2022) With Project and Cumulative Projects peak hour conditions.

This is reflected in **Mitigation Measure MM-TR-3**, which requires the Project applicant (prior to the 1st occupancy) to make a fair-share contribution for the following improvements at the following intersections, as shown on **Table 4.14.4-12, Project Fair-Share Intersection Contribution for Project Completion (Year 2022) With Project and Cumulative Conditions**:

- Dillon Road and I-10 WB Ramps: 13.5%
 - Install Traffic Signal
- Dillon Road and I-10 EB Ramps: 17.94%
 - Install Traffic Signal
- Dillon Road and Shadow View Boulevard: 20.86%
 - Install Two (2) NB right-turn lanes
 - Install NB right-turn overlap phase
 - Install One (1) additional SB left-turn lane
 - Install One (1) additional WB left-turn lane
 - Install WB right-turn overlap phase
- Dillon Road and SR-86 NB Ramps 22.83%
 - Install One (1) additional NB thru lane
- Dillon Road and SR-86 SB Ramps 24.14%
 - Install One (1) additional NB thru lane
 - Install One (1) additional NB right-turn lane
- Dillon Road and Avenue 48: 23.96%
 - Install One (1) additional EB right-turn lane
 - Install One (1) additional WB right-turn lane
- Tyler Street and Avenue 47: 48.34%
 - Install Traffic Signal
 - Install One (1) additional NB left-turn lane
- Tyler Street and Avenue 48: 32.62%
 - Install Traffic Signal
 - Install NB left-turn lane
 - Install NB thru lane
 - Install SB left-turn lane
 - Install SB thru lane
 - Install EB left-turn lane
 - Install EB thru lane
 - Install WB left-turn lane
 - Install WB thru lane
- Tyler Street at Avenue 50: 13.82%
 - Install Traffic Signal
 - Install Three (3) NB left-turn lanes
 - Install One (1) additional SB thru lane
 - Install Two (2) additional SB right-turn lanes
 - Install SB right-turn overlap phase
 - Install Two (2) EB left-turn lanes
 - Install Two (2) EB right-turn lanes

- Install EB right-turn overlap phase
- SR-86 and Avenue 50: 13.59%
 - Install One (1) additional NB thru lane
 - Install Two (2) additional SB right-turn lanes
 - Install Two (2) additional EB left-turn lanes
 - Install One (1) additional EB thru lane
 - Install One (1) EB right-turn lane
 - Install One (1) WB right-turn lane
 - Install One (1) additional WB thru lane
 - Improve signal phasing to protected east/west
- Polk Street at Avenue 50: 3.33%
 - Install Traffic Signal
 - Install NB left-turn lane
 - Install NB thru turn lane
 - Install SB left-turn lane
 - Install SB thru turn lane
 - Install EB left-turn lane
 - Install EB thru turn lane
 - Install WB left-turn lane
 - Install WB thru turn lane

It should be noted that improvements required under **Mitigation Measures MM-TR-1** and **MM-TR-2** will not require a fair-share contribution in addition to the physical improvements for the following intersections listed in **Table 4.14.4-12**:

- Dillon Road and Shadow View Boulevard;
- Tyler Street and Avenue 47;
- Street "A" and Vista Del Sur;
- Street "A" and Avenue 47;
- Street "A" and Avenue 48; and
- Polk Street and Avenue 48.

**Table 4.14.4-12
Project Fair-Share Intersection Contribution for Project Completion (Year 2022) With
Project and Cumulative Conditions**

| Intersection | Existing Conditions | | Project Completion (Year 2022) | | Growth in Traffic | | Project Traffic | | % of Project Completion (Year 2022) | |
|-------------------------------|---------------------|-------|--------------------------------|-------|-------------------|-------|-----------------|-------|-------------------------------------|---------|
| | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| Dillon Road (NS) at: | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | 620 | 615 | 1,844 | 2,274 | 1,224 | 1,659 | 145 | 224 | 11.85% | 13.50% |
| 2. I-10 Fwy EB Ramps (EW) | 580 | 647 | 1,827 | 2,704 | 1,247 | 2,057 | 216 | 369 | 17.32% | 17.94% |
| 3. Vista Del Sur (EW) | 497 | 542 | 1,654 | 2,370 | 1,157 | 1,828 | 226 | 397 | 19.53% | 21.72% |
| 4. Shadow View Boulevard (EW) | 509 | 659 | 2,772 | 4,586 | 2,263 | 3,927 | 435 | 819 | 19.22% | 20.86% |
| 5. SR-86 NB Ramps (EW) | 738 | 821 | 2,323 | 3,489 | 1,585 | 2,668 | 368 | 609 | 23.22% | 22.83% |
| 6. SR-86 SB Ramps (EW) | 739 | 835 | 1,961 | 3,198 | 1,222 | 2,363 | 331 | 570 | 27.09% | 24.12% |
| 7. Avenue 48 (EW) | 1,004 | 1,331 | 2,312 | 3,489 | 1,308 | 2,158 | 313 | 517 | 23.93% | 23.96% |
| Highway 111 (NS) at: | | | | | | | | | | |
| 8. Avenue 48 (EW) | 1,741 | 2,268 | 2,831 | 3,864 | 1,090 | 1,596 | 216 | 370 | 19.82% | 23.18% |
| Tyler Street (NS) at: | | | | | | | | | | |
| 9. Vista Del Sur (EW) | 35 | 47 | 199 | 242 | 164 | 195 | 158 | 187 | 96.34% | 95.90% |
| 10. Avenue 47 (EW) | 37 | 45 | 1,026 | 2,122 | 989 | 2,077 | 517 | 1,004 | 52.28% | 48.34% |
| 11. Avenue 48 (EW) | 43 | 53 | 880 | 1,788 | 837 | 1,735 | 344 | 566 | 41.10% | 32.62% |
| 12. Avenue 50 (EW) | 92 | 129 | 2,473 | 4,137 | 2,381 | 4,008 | 324 | 554 | 13.61% | 13.82% |
| SR-86 (NS) at: | | | | | | | | | | |
| 13. Avenue 50 (EW) | 2158 | 2354 | 4810 | 6432 | 2652 | 4078 | 324 | 554 | 12.22% | 13.59% |
| Street "A" (NS) at: | | | | | | | | | | |
| 14. Vista Del Sur (EW) | 0 | 0 | 161 | 223 | 161 | 223 | 161 | 223 | 100.00% | 100.00% |
| 15. Avenue 47 (EW) | 0 | 0 | 658 | 1,209 | 658 | 1,209 | 658 | 1,209 | 100.00% | 100.00% |
| 16. Avenue 48 (EW) | 0 | 0 | 291 | 453 | 291 | 453 | 291 | 453 | 100.00% | 100.00% |
| Polk Street (NS) at: | | | | | | | | | | |
| 17. Avenue 48 (EW) | 22 | 33 | 198 | 292 | 176 | 259 | 172 | 33 | 97.73% | 12.74% |
| 18. Avenue 50 (EW) | 61 | 111 | 2,172 | 3,440 | 2,111 | 3,329 | 152 | 111 | 7.20% | 3.33% |

¹ Project Fair-Share Traffic Contribution represents the project's traffic contribution at each study area intersection as a percentage of the overall growth in traffic for Project Completion (Year 2020) conditions.
Source: TIS, (Appendix O)

Although payment of fair-share contribution to the improvements defined in **MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, impacts would remain significant and unavoidable at these locations.

Roadway Segment Level of Service for Project Completion (Year 2022) With Project and Cumulative Projects Conditions

Less Than Significant Impact

The Roadway Segment level of service calculations for Project Completion (Year 2022) With Project and Cumulative Projects Conditions are shown in **Table 4.14.4-13, Roadway Segment Analysis for Project Completion (Year 2022) With Project and Cumulative Projects Conditions**. The City requires Level of Service D or better for all study area Roadway Segments.

Roadway improvements would be required to widen Dillon Road from a Secondary Arterial to a Major Arterial Dillon Road. This roadway is listed in the CVAG TUMF 2006 Fee Schedule Update, Nexus Study Report, 2006, and therefore the fair-share payment of TUMF would be required to mitigate this impact. TUMF is included as **Standard Condition SC-TR-1**, below.

For Project Completion (Year 2022) With Project and Cumulative Projects traffic conditions, the study area Roadway Segments are expected to operate at acceptable level of service based on the General Plan Update 2015 Classification of the Roadway. No mitigation is required.

**Table 4.14.4-13
Roadway Segment Analysis for Project Completion (Year 2022) With Project and Cumulative Projects Conditions**

| Existing Roadway Classification | | | | | |
|--|--|----------------------------------|---|-----------|-------------|
| Segment | Existing Roadway Geometry ¹ | Maximum Two-Way ADT ³ | Project Completion (Year 2022) With Project and Cumulatives ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Secondary Arterial | 28,900 | 35,439 | 1.226 | F |
| Dillon Road: 2. SR-86 to Highway 111 | Secondary Arterial | 28,900 | 28,953 | 1.002 | F |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,497 | 0.336 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Local | 10,000 | 552 | 0.055 | C or Better |

| General Plan Buildout Roadway Classification | | | | | |
|--|--|----------------------------------|---|-----------|-------------|
| Segment | General Plan Classification ² | Maximum Two-Way ADT ³ | Project Completion (Year 2022) With Project and Cumulatives ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Major Arterial⁴ | 56,000 | 35,439 | 0.633 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial⁴ | 56,000 | 28,953 | 0.517 | C or Better |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 3,497 | 0.336 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 552 | 0.028 | C or Better |

¹ Existing classification based on current roadway geometry and number of through lanes.

² Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

³ Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study. March 2014, and referenced from the County of Riverside Congestion Management Plan.

⁴ Major Arterial capacity assumes 6 lanes.

Bold = recommended mitigation.

Source: TIS, (Appendix O)

General Plan Buildout (Year 2035) Conditions

To assess General Plan Buildout (Year 2035) traffic conditions, future traffic volumes were obtained by utilizing the Riverside Traffic Analysis Model (RivTAM) daily traffic volume plots and 2035 turning movement counts at several study intersections from the City of Coachella General Plan Traffic Impact Study, provided by Fehr and Peers. The RivTAM model details the projected daily traffic volumes at the study area roadway segments for the General Plan Buildout (Year 2035) Conditions. For Year 2035 daily traffic volume projections, volumes from the RivTAM model were utilized. For Year 2035 peak hour turning movements, were utilized from the General Plan projections. However, due to the lack of turning movement volumes for all study area intersections, a uniform traffic growth rate of 2% per year was applied to all study area intersections, plus the addition of cumulative Project volume and Project traffic volumes. These were compared with the projected volumes with the Year 2035 turning movement data, and the results were generally consistent with the projections and findings shown in the General Plan.

General Plan Buildout (Year 2035) Without Project Traffic Volumes

General Plan Buildout (Year 2035) Without Project AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-28, General Plan Buildout (Year 2035) Without Project Traffic Volumes.**

Intersection Level of Service for General Plan Buildout (Year 2035) Without Project Conditions

Intersection levels of service for the existing network with background growth, and the proposed Project are shown in **Table 4.14.4-14, Intersection Analysis for General Plan Buildout (Year 2035) Without Project Conditions.** As shown in **Table 4.14.4-14**, HCM calculations are based on the existing intersection geometrics and the intersection geometrics necessary to mitigate the Project impact.

For the General Plan Buildout (Year 2035) Without Project traffic conditions, all study area intersections are expected to operate at Level of Service D or better during the peak hours, with the exception of the following intersections that are expected to operate at an unacceptable Level of Service during peak hours, without mitigation:

- Dillon Road at I-10 WB Ramps
- Dillon Road at I-10 EB Ramps
- Dillon Road at Shadow View Boulevard
- Dillon Road at SR-86 NB Ramps
- Dillon Road at SR-86 SB Ramps
- Dillon Road at Avenue 48
- Tyler Street at Avenue 47
- Tyler at Avenue 48
- Tyler Street at Avenue 50
- SR-86 at Avenue 50
- Polk Street at Avenue 50

It should be noted that these intersections will operate at a similar level of service as the General Plan Buildout (Year 2035) Without Project Conditions, discussed below.

Table 4.14.4-14
Intersection Analysis for General Plan Buildout (Year 2035) Without Project Conditions

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | |
|-------------------------------|------------------------------|--|------------|----------------|------------|------------|----------------|------------|------------|----------------|------------|------------|----------------|------------------------------|--------|------------------|----|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | CSS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 301.6 | 1332.0 | F | F |
| -Recommended Mitigation | TS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 15.6 | 13.8 | B | B |
| 2. I-10 Fwy EB Ramps (EW) | CSS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 72.5 | 751.5 | F | F |
| -Recommended Mitigation | TS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 12.6 | 21.7 | B | C |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 12.2 | 12.6 | B | B |
| 4. Shadow View Boulevard (EW) | TS | 0.0 | 1.5 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 38.6 | 235.4 | D | F |
| -Recommended Mitigation | TS | 0.0 | 2.0 | 2.0> | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 1.0> | 14.0 | 17.2 | | B |
| 5. SR-86 NB Ramps (EW) | T | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 39.4 | 143.5 | D | F |
| -Recommended Mitigation | S | 1.0 | 2.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 11.2 | 36.0 | | D |
| 6. SR-86 SB Ramps (EW) | T | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 19.0 | 91.5 | B | F |
| -Recommended Mitigation | S | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 15.0 | 24.3 | B | C |
| 7. Avenue 48 (EW) | T | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 25.4 | 98.6 | C | F |
| -Recommended Mitigation | S | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 16.1 | 22.9 | B | C |
| Highway 111 (NS) at: | | | | | | | | | | | | | | | | | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 12.2 | 17.0 | B | B |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 8.7 | 8.8 | A | A |
| 10. Avenue 47 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 9.1 | 46.6 | A | E |
| -Recommended Mitigation | TS | 2.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 19.5 | 26.3 | B | |
| 11. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 13.2 | 390.7 | B | F |
| -Recommended Mitigation | TS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 15.1 | 16.0 | B | B |
| 12. Avenue 50 (EW) | CSS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | OV | OV | F | F |
| -Recommended Mitigation | TS | 3.0 | 1.0 | 0.0 | 0.0 | 2.0 | 2.0> | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | R | R | B | C |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) | T | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 324.3 | 601.5 | F | F |
| -Recommended Mitigation | S | 1.0 | 3.0 | 1.0 | 3.0 | 2.0 | 1.0 | 2.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 54.9 | 54.8 | D | D |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15. Avenue 47 (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16. Avenue 48 (EW) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 6.8 | 6.9 | A | A |
| 18. Avenue 50 (EW) | CS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 666.4 | OV | F | F |
| -Recommended Mitigation | S | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 16.8 | R | B | D |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.
L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Improvements.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal.
CSS = Cross Street Stop.
AWS = All Way Stop.
UC = Uncontrolled/Yield.

Source: T/S, (Appendix O)

With implementation of intersection improvements, shown in **MM-TR-2**, all study area intersections are projected to operate at LOS D or better in the General Plan Buildout (Year 2035) Without Project peak hour conditions.

Roadway Segment Level of Service for General Plan Buildout (Year 2035) Without Project Conditions

The Roadway Segment level of service calculations for General Plan Buildout (Year 2035) Without Project Conditions are shown in **Table 4.14.4-15, Roadway Segment Analysis for General Plan Buildout (Year 2035) Without Project Conditions**. The City requires Level of Service D or better for all study area Roadway Segments. Level of Service D or better for all study area Roadway Segments. For General Plan Buildout (Year 2035) Without Project traffic conditions, the study area Roadway Segments are expected to operate at acceptable level of service based on the General Plan Classification of the Roadway.

**Table 4.14.4-15
Roadway Segment Analysis for General Plan Buildout (Year 2035) Without Project Conditions**

| Segment | General Plan Classification ¹ | Maximum Two-Way ADT ² | General Plan (Year 2035) Without Project ADT | V/C Ratio | LOS |
|--|--|----------------------------------|--|-----------|-------------|
| Dillon Road: 1. I-10 to SR-86 | Major Arterial ³ | 56,000 | 41,786 | 0.746 | C or Better |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial ³ | 56,000 | 47,147 | 0.842 | D |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 6,637 | 0.638 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 465 | 0.023 | C or Better |

¹ Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

² Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study. March 2014, and referenced from the County of Riverside Congestion Management Plan.

³ Major Arterial capacity assumes 6 lanes.

⁴ **Bold** = Recommended mitigation.

⁵ Potentially significant and unmitigable impact.

Source: TIS, (Appendix O)

General Plan Buildout (Year 2035) With Project Traffic Volumes

The AM and PM peak hour intersection turning movement volumes and average daily traffic are shown on **Figure 4.14.4-29, General Plan Buildout Year (2035) With Project Traffic Volumes**.

Intersection Level of Service for General Plan Buildout (Year 2035) With Project Conditions

Significant and Unavoidable Impact

Intersection levels of service for the General Plan Buildout (Year 2035) With Project conditions are shown in **Table 4.14.4-16, Intersection Analysis for General Plan Buildout (Year 2035) With Project Conditions**. As shown in **Table 4.14.4-16**, HCM calculations are based on the existing intersection geometrics and the intersection geometrics necessary to mitigate the Project impact.

For the General Plan Buildout (Year 2035) With Project traffic conditions, all study area intersections are expected to operate at Level of Service D or better during the peak hours, with the exception of the following intersections that are expected to operate at an unacceptable Level of Service during peak hours without mitigation:

1. Dillon Road at I-10 WB Ramps;
2. Dillon Road at I-10 EB Ramps;
4. Dillon Road at Shadow View Boulevard;
5. Dillon Road at SR-86 NB Ramps;
6. Dillon Road at SR-86 SB Ramps;
7. Dillon Road at Avenue 48;
10. Tyler Street at Avenue 47;
11. Tyler at Avenue 48;
12. Tyler Street at Avenue 50;
13. SR-86 at Avenue 50; and
18. Polk Street at Avenue 50.

**Table 4.14.4-16
Intersection Analysis for General Plan Buildout (Year 2035) With Project Conditions**

| Intersection | Traffic Control ³ | Intersection Approach Lane(s) ¹ | | | | | | | | | | | | Delay ² (Seconds) | | Level of Service | | |
|-------------------------------|------------------------------|--|------------|----------------|------------|------------|----------------|------------|------------|----------------|------------|------------|----------------|------------------------------|--------|------------------|----|--|
| | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | AM | PM | AM | PM | |
| | | L | T | R | L | T | R | L | T | R | L | T | R | | | | | |
| Dillon Road (NS) at: | | | | | | | | | | | | | | | | | | |
| 1. I-10 Fwy WB Ramps (EW) | CSS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 940.2 | 3685.0 | F | F | |
| -Recommended Mitigation | TS | 1.0 | 2.0 | 0.0 | 0.0 | 1.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 17.6 | 17.4 | | | |
| 2. I-10 Fwy EB Ramps (EW) | CSS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 113.8 | 1151.0 | F | F | |
| -Recommended Mitigation | TS | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 13.2 | 29.3 | | C | |
| 3. Vista Del Sur (EW) | CSS | 0.0 | 1.5 | 0.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 15.6 | 17.4 | C | C | |
| 4. Shadow View Boulevard (EW) | TS | 0.0 | 1.5 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 105.3 | 432.8 | F | F | |
| -Recommended Mitigation | TS | 0.0 | 2.0 | 2.0> | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 1.0> | 14.4 | 25.7 | | C | |
| 5. SR-86 NB Ramps (EW) | T | 1.0 | 1.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1! | 0.0 | 20.1 | 253.3 | C | F | |
| -Recommended Mitigation | S | 1.0 | 2.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.5 | 0.5 | 13.8 | 47.9 | B | D | |
| 6. SR-86 SB Ramps (EW) | T | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 24.5 | 156.4 | B | F | |
| -Recommended Mitigation | S | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 15.3 | 36.4 | B | D | |
| 7. Avenue 48 (EW) | T | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 1.0 | 2.0 | 0.0 | 36.3 | 155.3 | D | F | |
| -Recommended Mitigation | S | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 17.1 | 37.2 | | D | |
| Highway 111 (NS) at: | | | | | | | | | | | | | | | | | | |
| 8. Avenue 48 (EW) | TS | 2.0 | 2.0 | 0.0 | 1.0 | 2.0 | 1.0 | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | 13.2 | 20.5 | B | C | |
| Tyler Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 9. Vista Del Sur (EW) | CSS | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 9.5 | 10.0 | A | A | |
| 10. Avenue 47 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 15.7 | 315.7 | C | F | |
| -Recommended Mitigation | TS | 2.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 18.5 | 29.4 | B | C | |
| 11. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 12.8 | 194.2 | B | F | |
| -Recommended Mitigation | TS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 20.3 | 19.1 | C | | |
| 12. Avenue 50 (EW) | CSS | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 1! | 0.0 | 0.0 | 0.0 | 0.0 | OV | OV | F | F | |
| -Recommended Mitigation | TS | 3.0 | 1.0 | 0.0 | 0.0 | 2.0 | 2.0> | 2.0 | 0.0 | 2.0> | 0.0 | 0.0 | 0.0 | R | R | | | |
| SR-86 (NS) at: | | | | | | | | | | | | | | | | | | |
| 13. Avenue 50 (EW) | T | 1.0 | 2.0 | 1.0 | 1.0 | 2.0 | 1.0 | 0.0 | 1! | 0.0 | 0.5 | 0.5 | 1.0 | 392.6 | 691.5 | F | F | |
| -Recommended Mitigation | S | 1.0 | 3.0 | 1.0 | 3.0 | 2.0 | 1.0 | 2.0 | 3.0 | 1.0 | 1.0 | 2.0 | 1.0 | 54.9 | 53.4 | D | D | |
| Street "A" (NS) at: | | | | | | | | | | | | | | | | | | |
| 14. Vista Del Sur (EW) | AWS | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 8.7 | 8.1 | A | A | |
| 15. Avenue 47 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 9.2 | 12.8 | A | B | |
| 16. Avenue 48 (EW) | AWS | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 7.9 | 8.7 | A | A | |
| Polk Street (NS) at: | | | | | | | | | | | | | | | | | | |
| 17. Avenue 48 (EW) | AWS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 7.3 | 7.9 | A | A | |
| 18. Avenue 50 (EW) | CS | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | 0.0 | 1! | 0.0 | OV | OV | F | F | |
| -Recommended Mitigation | S | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 0.5 | R | R | | D | |

¹ When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. Where "0" is indicated for the right or left turn, the movement is either non-existent or may be shared with the through movement.
L = Left; T = Through; R = Right; 1! = Left/Thru/Right; > = Right Turn Overlap; >> = Free Right Turn; **Bold** = Additional improvements beyond Existing Plus Project Conditions.

² Analysis Software: Traffix, Version 8.0. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal for all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. OVR = OVERFLOW.

³ TS = Traffic Signal. CSS = Cross Street Stop. AWS = All Way Stop. UC = Uncontrolled/Yield.

Source: T/S, (Appendix O)

With implementation of intersection improvements as mitigation measures, all study area intersections are projected to operate at LOS D or better in the General Plan Buildout (Year 2035) With Project peak hour conditions. These improvements are reflected in **MM-TR-3**, above, which requires the Project applicant (prior to the 1st occupancy) to make a fair-share contribution for the following improvements at the following intersections, as shown on **Table 4.14.4-12**:

| | |
|--|--------|
| • Dillon Road and I-10 WB Ramps: | 13.5% |
| ○ Install Traffic Signal | |
| • Dillon Road and I-10 EB Ramps: | 17.94% |
| ○ Install Traffic Signal | |
| • Dillon Road and Shadow View Boulevard: | 20.86% |
| ○ Install Two (2) NB right-turn lanes | |
| ○ Install NB right-turn overlap phase | |
| ○ Install One (1) additional SB left-turn lane | |
| ○ Install One (1) additional WB left-turn lane | |
| ○ Install WB right-turn overlap phase | |
| • Dillon Road and SR-86 NB Ramps | 22.83% |
| ○ Install One (1) additional NB thru lane | |
| • Dillon Road and SR-86 SB Ramps | 24.14% |
| ○ Install One (1) additional NB thru lane | |
| ○ Install One (1) additional NB right-turn lane | |
| • Dillon Road and Avenue 48: | 23.96% |
| ○ Install One (1) additional EB right-turn lane | |
| ○ Install One (1) additional WB right-turn lane | |
| • Tyler Street and Avenue 47: | 48.34% |
| ○ Install Traffic Signal | |
| ○ Install One (1) additional NB left-turn lane | |
| • Tyler Street and Avenue 48: | 32.62% |
| ○ Install Traffic Signal | |
| ○ Install NB left-turn lane | |
| ○ Install NB thru lane | |
| ○ Install SB left-turn lane | |
| ○ Install SB thru lane | |
| ○ Install EB left-turn lane | |
| ○ Install EB thru lane | |
| ○ Install WB left-turn lane | |
| ○ Install WB thru lane | |
| • Tyler Street at Avenue 50: | 13.82% |
| ○ Install Traffic Signal | |
| ○ Install Three (3) NB left-turn lanes | |
| ○ Install One (1) additional SB thru lane | |
| ○ Install Two (2) additional SB right-turn lanes | |
| ○ Install SB right-turn overlap phase | |
| ○ Install Two (2) EB left-turn lanes | |
| ○ Install Two (2) EB right-turn lanes | |
| ○ Install EB right-turn overlap phase | |

- SR-86 and Avenue 50: 13.59%
 - Install One (1) additional NB thru lane
 - Install Two (2) additional SB right-turn lanes
 - Install Two (2) additional EB left-turn lanes
 - Install One (1) additional EB thru lane
 - Install One (1) EB right-turn lane
 - Install One (1) WB right-turn lane
 - Install One (1) additional WB thru lane
 - Improve signal phasing to protected east/west
- Polk Street at Avenue 50: 3.33%
 - Install Traffic Signal
 - Install NB left-turn lane
 - Install NB thru turn lane
 - Install SB left-turn lane
 - Install SB thru turn lane
 - Install EB left-turn lane
 - Install EB thru turn lane
 - Install WB left-turn lane
 - Install WB thru turn lane

Although implementation of the improvements defined in **MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, impacts would remain significant and unavoidable at these locations. Lastly, it should be noted that the Project fair-share contribution is lower for the General Plan Buildout (Year 2035) With Project Conditions than the Project Completion (Year 2022) With Project and Cumulative Conditions. However, the payment of fair-share contribution was made prior to the 1st occupancy.

Roadway Segment Level of Service for General Plan Buildout (Year 2035) With Project Conditions

Less Than Significant Impact

The Roadway Segment level of service calculations for General Plan Buildout (Year 2035) With Project Conditions are shown in **Table 4.14.4-17, Roadway Segment Analysis for General Plan Buildout (Year 2035) With Project Conditions**. The City requires Level of Service D or better for all study area Roadway Segments.

For General Plan Buildout (Year 2035) With Project traffic conditions, all study area Roadway Segments are expected to operate at acceptable level of service based on the General Plan Classification of the Roadway, with the exception of the following segments without mitigation:

- Dillon Road, from SR-86 to Highway 111
- Vista Del Sur, from Dillon Road to Tyler Street

**Table 4.14.4-17
Roadway Segment Analysis for General Plan Buildout (Year 2035) With Project Conditions**

| Existing Roadway Classification | | | | | |
|--|--|----------------------------------|--|-----------|-------------|
| Segment | Existing Roadway Geometry ¹ | Maximum Two-Way ADT ³ | Completion (Year 2022) With Project and Cumulative ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Secondary Arterial | 28,900 | 48,026 | 1.662 | F |
| Dillon Road: 2. SR-86 to Highway 111 | Secondary Arterial | 28,900 | 52,437 | 1.814 | F |
| Vista Del Sur: 3. Dillon Road to Tyler Street | Local | 10,400 | 9,451 | 0.909 | C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Local | 10,000 | 465 | 0.047 | C or Better |

| General Plan Buildout Roadway Classification | | | | | |
|---|--|----------------------------------|---|----------------|------------------|
| Segment | General Plan Classification ¹ | Maximum Two-Way ADT ² | General Plan (Year 2035) With Project ADT | V/C Ratio | LOS |
| Dillon Road: 1. I-10 to SR-86 | Major Arterial ³ | 56,000 | 48,026 | 0.858 | D |
| Dillon Road: 2. SR-86 to Highway 111 | Major Arterial ³ | 56,000 | 52,437 | 0.936 | E ⁵ |
| Vista Del Sur: 3. Dillon Road to Tyler Street - Recommended Mitigation ⁴ | Local Collector | 10,400 20,000 | 9,451 9,451 | 0.909 0.473 | E C or Better |
| Tyler Street: 4. Vista Del Sur to Avenue 47 | Collector | 20,000 | 465 | 0.023 | C or Better |

¹ Reference from the City of Coachella General Plan Mobility Element Transportation Network, Figure 4-1: Future Roadway Network.

² Maximum two-way ADT values are based on the City of Coachella General Plan Traffic Impact Study. March 2014, and referenced from the County of Riverside Congestion Management Plan.

³ Major Arterial capacity assumes 6 lanes.

⁴ **Bold** = Recommended mitigation.

⁵ Potentially significant and unmitigable impact.

Source: TIS, (Appendix O)

The impact to Dillon Road in 2035 Plus Project condition has been identified as a potentially significant and unmitigable impact because additional widening beyond the General Plan classification is likely infeasible.

THRESHOLD b: **Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Significant and Unavoidable Impact

The CMP utilizes a LOS standard of LOS E, except for non-exempt locations where the standard is LOS F. The Project intersection impact analyses discussed above as part of the discussion contained under Threshold a, above, is based on the more restrictive LOS D standards from the local jurisdiction in which the intersection is located (City of Coachella). The CMP system in the City of Coachella Valley includes SR-111, SR-86, and I-10.

According to **Table 4.14.4-4, *Intersection Analysis for Existing Plus Project Conditions***, above, shows that no impacts will occur to study area intersections on SR-111, SR-86, or I-10 that would cause these intersections to operate at less than CMP LOS E standard. No impacts are anticipated.

Table 4.14.4-7, *Intersection Analysis for Project Completion (Year 2022) With Project Conditions*, above, shows three study area intersections on SR-111, SR-86, or I-10 are not forecast to operate at less than the CMP LOS E standard in the Project Completion (Year 2022) With Project Conditions with the incorporation of **Mitigation Measure TR-2**.

Table 4.14.4-10, *Intersection Analysis for Project Completion (Year 2022) With Project and Cumulative Conditions*, above, shows two study area intersections (SR-86 and I-10) are forecast to operate at less than the CMP LOS E standard in the Project Completion (Year 2022). Because the proposed Project causes the LOS to fall below the standard or causes further degradation at these intersections, this is considered to be a Project direct significant impact and mitigation is required. Mitigation for this significant impact is provided in **MM-TR-3**. Although implementation of the improvements defined in **MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities are implemented. For this reason, even with implementation of **MM-TR-3**, impacts would remain significant and unavoidable at these locations. SR-111 operates at an acceptable LOS. No mitigation is required.

Table 4.14.4-16, *Intersection Analysis for General Plan Buildout (Year 2035) With Project Conditions*, above, shows two study area intersections (SR-86 and I-10) are forecast to operate at less than the CMP LOS E standard in the General Plan Buildout (Year 2035) With Project Conditions. Because the proposed Project causes the LOS to fall below the standard or causes further degradation at these intersections, this is considered to be a Project direct significant impact and mitigation is required. Mitigation for this significant impact is provided in **MM-TR-3**. Although implementation of the improvements defined in **MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for

the locations on Caltrans facilities are implemented. For this reason, even with implementation of **MM-TR-3**, impacts would remain significant and unavoidable at these locations. SR-111 operates at an acceptable LOS. No mitigation is required.

Mitigation for this significant impact is provided in **Mitigation Measures MM-TR-2** and **MM-TR-3**. Although implementation of **Mitigation Measures MM-TR-2** and **MM-TR-3** would reduce the significant impacts by requiring the Project's fair share contribution in the form of DIF and TUMF fee payments towards the future intersection improvements, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. TUMF is included as **Standard Condition SC-TR-1**, below. For this reason, even with implementation of **Standard Condition SC-TR-1**, and **Mitigation Measures MM-TR-2** and **MM-TR-3**, cumulative impacts would remain significant and unavoidable at these locations.

THRESHOLD c: Would the Project substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Less Than Significant Impact with Mitigation Incorporated

The design of roadways must provide adequate sight distance and traffic control measures. This provision is normally realized through roadway design to facilitate roadway traffic flows. Roadway improvements in and around the Project site would be designed and constructed to satisfy all City requirements for street widths, corner radii, intersection control as well as incorporate design standards tailored specifically to Project access requirements that would result in the safe and efficient flow of traffic. In addition, the proposed Project is a Specific Plan that includes a circulation plan to guide future construction of internal roadways. The circulation plan addresses vehicular circulation, non-motorized circulation, traffic calming, drainage crossings, and public transportation. The Specific Plan contains the general alignment and street cross sections for all key roadways as well as an infrastructure implementation component. Adherence to the Specific Plan general street alignments and street cross-sections and other applicable City requirements for the construction of streets would ensure the proposed Project would not include any sharp curves, dangerous intersections, or other design hazards. Therefore, the Project would not increase hazards to a design feature and would result in a less than significant impact. No mitigation is required.

Temporary impacts associated with the construction of the proposed Project may temporarily restrict vehicular traffic or cause temporary hazards.

Construction operations would be required to implement adequate measures to facilitate the passage of people and vehicles through/around any required road or lane closures. Site-specific activities, such as temporary construction activities, are finalized on a project-by-project basis by the City and are required to ensure adequate traffic flow. **Mitigation Measure MM-TR-4** shall be implemented which requires the applicant to submit a traffic control plan (TCP) prior to construction for any phase of development for approval by the City Engineering Department. Said TCP shall contain, at a minimum, standards for: lane closures, detouring, qualifications of work crews, duration of the plan and signing. With the incorporation of **MM-TR-4**, any potential impacts will be reduced to a less than significant level.

At the time of approval of any site-specific development plans required for the construction of infrastructure as a part of the Specific Plan's infrastructure implementation element or other typical conditions of approval, the Project would be required to implement **Mitigation Measure MM-TR-5**, that would maintain traffic flow and access on each Project development phase. Such measures include may include, but not be limited to: design of streets in accordance with all applicable City requirements for street widths, corner radii, and intersection control. No operation-related roadway design hazards are anticipated.

Therefore, a less than significant impact would occur during Project construction with mitigation incorporated.

THRESHOLD d: Would the Project result in inadequate emergency access?

Less Than Significant Impact with Mitigation Incorporated

Development in accordance with the Specific Plan general street alignments, street cross-sections and other applicable City requirements for the construction of streets shall ensure the proposed Project would not include any sharp curves, dangerous intersections, or other design hazards that might otherwise impede emergency response vehicles.

Construction activities that may temporarily restrict vehicular traffic would be required to implement adequate measures to facilitate the passage of people and vehicles through/around any required road closures. Site-specific activities such as temporary construction activities would be required as part of the Specific Plan's infrastructure implementation element and are finalized on a project-by-project basis by the City and are required to ensure adequate emergency access. Such measures are implemented through a construction traffic management plan placed on each Project development phase. **MM-TR-4** shall be implemented which requires the applicant to submit a TCP prior to construction for any phase of development for approval by the City Engineering Department. Said TCP shall contain, at a minimum, standards for: lane closures, detouring, qualifications of work crews, duration of the plan and signing. With the incorporation of **MM-TR-4**, any potential impacts will be reduced to a less than significant level.

Based on the design and construction of roadways to City standards, it is not anticipated that an operational aspect of the Project will create any significant impacts that would result in inadequate emergency access.

THRESHOLD e: Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact with Mitigation Incorporated

As shown on Figure 4.9-2, *Existing Transit Facilities in the City*, of the General Plan Update Final EIR (2015) (p. 4.9-5), there is no bus service provided adjacent to the Project. Mitigation Measure TR-5 has been included which requires that concurrent with subsequent development projects within the Specific Plan, Sunline Transit District shall be consulted to coordinate the potential for expanded transit/bus service and vanpools and to discuss and implement potential

transit turnout locations within the Project area.

The proposed Project incorporates a network of on- and off-street trail system within the Project site to promote walkability and reduce vehicle miles traveled within the Project. The system provides for bicycles and pedestrians. Project trails provide connections within the Project site and to destinations off-site. As shown on **Figure 3.4.2-1, Paseo/Trail System** (Figure 5-9 of the Specific Plan), a 10' wide trail is proposed within the Project paseo, which is a minimum of 100' wide. Reference **Figure 3.4.2-1, Paseo Detail** (Figure 5-10 of the Specific Plan).

The Paseo runs from the Park in PA9, crosses Avenue 47/Polk Street, runs between PAs 6 and 7, crosses Street "A" and dissects PA5. The intent of this Paseo Trail is to:

- Provide an east/west pathway in the Specific Plan;
- Connect to the off-site Class I Bicycle Trail (northeasterly of the Project Site);
- Connect to the park within the Shadow View Project; and
- Provide connectivity to the local streets within the Project.

Bicycle routes are located along Avenue 48, Avenue 47, Polk Street and Street "A". Regional bicycle paths will continue off-site from the project along Avenue 48, Avenue 47 and Polk Street per the City's General Plan

With the incorporation of **MM-TR-5**, the Project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.14.5 Standard Conditions and Mitigation Measures

Standard Condition(s)

SC-TR-1 Regional Funding Mechanisms. The applicant shall participate in any approved transportation or development impact fees, such as TUMF fees, required by the City of Coachella per Chapter 4.40 of the City's Municipal Code.

Mitigation Measure(s)

MM-TR-1 For Existing Plus Project Conditions, the Project applicant is required to make the following improvements at the following intersections (prior to the 1st occupancy):

- **Intersection of Dillon Road and Shadow View Boulevard:**
 - Construct new extension of Avenue 47/Shadow View Boulevard to Dillon Road.
 - Install traffic signal
 - Install southbound (SB) left-turn lane.
 - Install westbound (WB) left-turn lane.
 - Install WB right-turn signal.
- **Intersection of Tyler Street and Avenue 47:**

- Install all-way stop signs.
- Intersection of Tyler Street and Avenue 48:
 - Install all-way stop signs.
- Intersection of Street “A” and Vista Del Sur:
 - Install all-way stop signs.
 - Install NB left-turn lane.
 - Install EB right-turn signal.
- Intersection of Street “A” and Avenue 47:
 - Install all-way stop signs.
 - Install northbound (NB) left-turn lane.
 - Install NB thru-turn lane.
 - Install NB thru/right-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install SB thru/right-turn lane.
 - Install eastbound (EB) left-turn lane.
 - Install EB thru-turn lane.
 - Install EB thru/right-turn lane.
 - Install WB left-turn lane.
 - Install WB thru-turn lane.
 - Install WB thru/right-turn lane.
- Intersection of Street “A” and Avenue 48:
 - Install all-way stop signs.
 - Install NB left-turn lane.
 - Install NB thru-turn lane.
 - Install NB thru/right-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install SB thru/right-turn lane.
 - Install EB left-turn lane.
 - Install EB thru-turn lane.
 - Install EB thru/right-turn lane.
 - Install WB left-turn lane.
 - Install WB thru-turn lane.
 - Install WB thru/right-turn lane.
- Intersection of Polk Street and Avenue 48:
 - Install all-way stop signs.

MM-TR-2 For Project Completion (Year 2022) With Project Conditions, the Project applicant is required to make the following improvements at the following intersections (prior to the 1st occupancy):

- Tyler Street and Avenue 47:
 - Install NB left-turn lane.
 - Install NB thru-turn lane.
 - Install SB left-turn lane.
 - Install SB thru-turn lane.
 - Install EB left-turn lane.

- Install EB thru-turn lane.
- Install WB left-turn lane.
- Install WB thru-turn lane.
- Intersection of SR-86 and Avenue 50:
 - Install a traffic signal.

MM-TR-3 For Project Completion (Year 2022) With Project and Cumulative Projects Conditions, the Project applicant shall make a fair-share contribution for the following improvements at the following intersections, as shown on Table 4.14.4-12 (prior to the 1st occupancy):

- **Dillon Road and I-10 WB Ramps: 13.5%**
 - Install Traffic Signal
- **Dillon Road and I-10 EB Ramps: 17.94%**
 - Install Traffic Signal
- **Dillon Road and Shadow View Boulevard: 20.86%**
 - Install Two (2) NB right-turn lanes
 - Install NB right-turn overlap phase
 - Install One (1) additional SB left-turn lane
 - Install One (1) additional WB left-turn lane
 - Install WB right-turn overlap phase
- **Dillon Road and SR-86 NB Ramps 22.83%**
 - Install One (1) additional NB thru lane
- **Dillon Road and SR-86 SB Ramps 24.14%**
 - Install One (1) additional NB thru lane
 - Install One (1) additional NB right-turn lane
- **Dillon Road and Avenue 48: 23.96%**
 - Install One (1) additional EB right-turn lane
 - Install One (1) additional WB right-turn lane
- **Tyler Street and Avenue 47: 48.34%**
 - Install Traffic Signal
 - Install One (1) additional NB left-turn lane
- **Tyler Street and Avenue 48: 32.62%**
 - Install Traffic Signal
 - Install NB left-turn lane
 - Install NB thru lane
 - Install SB left-turn lane
 - Install SB thru lane
 - Install EB left-turn lane
 - Install EB thru lane
 - Install WB left-turn lane
 - Install WB thru lane
- **Tyler Street at Avenue 50: 13.82%**
 - Install Traffic Signal
 - Install Three (3) NB left-turn lanes
 - Install One (1) additional SB thru lane
 - Install Two (2) additional SB right-turn lanes
 - Install SB right-turn overlap phase

- Install Two (2) EB left-turn lanes
- Install Two (2) EB right-turn lanes
- Install EB right-turn overlap phase
- **SR-86 and Avenue 50:** 13.59%
 - Install One (1) additional NB thru lane
 - Install Two (2) additional SB right-turn lanes
 - Install Two (2) additional EB left-turn lanes
 - Install One (1) additional EB thru lane
 - Install One (1) EB right-turn lane
 - Install One (1) WB right-turn lane
 - Install One (1) additional WB thru lane
 - Improve signal phasing to protected east/west
- **Polk Street at Avenue 50:** 3.33%
 - Install Traffic Signal
 - Install NB left-turn lane
 - Install NB thru turn lane
 - Install SB left-turn lane
 - Install SB thru turn lane
 - Install EB left-turn lane
 - Install EB thru turn lane
 - Install WB left-turn lane
 - Install WB thru turn lane

MM-TR-4 Prior to any construction on the Project site, the Project applicant shall submit a traffic control plan (TCP) to the City Engineering Department for review and approval. Said TCP shall be prepared for any subsequent implementing project and will contain, at a minimum, the following: lane closures, detouring, qualifications of work crews, duration of the plan and signing.

MM-TR-5 Concurrent with subsequent development projects within the Specific Plan, Sunline Transit District shall be consulted to coordinate the potential for expanded transit/bus service and vanpools and to discuss and implement potential transit turnout locations within the Project area.

4.14.6 Cumulative Impacts

Pursuant to Section 15130(b)(2) of the California Environmental Quality Act (CEQA) Guidelines, the cumulative Project list from the *Traffic Impact Study City of Coachella, California*, prepared by RK Engineering Group, Inc., dated October 14, 2014, revised June 14, 2016, was utilized for the cumulative impacts within the City of Coachella, the Coachella Valley and Riverside County.

The Project's contribution to the Transportation Uniform Mitigation Fee (TUMF) program as a fair share contribution is considered sufficient to address the Project's fair share toward a mitigation measure or measures designed to alleviate any potential cumulative impacts.

According to the analysis above, with adherence to **Standard Condition SC-TR-1** and incorporation of **Mitigation Measures MM-TR-1** through **MM-TR-5**, established thresholds related to transportation/traffic can be mitigated under CEQA.

However, even though implementation of the improvements defined in **Mitigation Measure MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, cumulative impacts would remain significant and unavoidable at these locations (Caltrans facilities (SR-86, and I-10) with the Project and cumulative projects factored in.

In addition, the cumulative impacts to Dillon Road (I-10 to SR-86 and SR-86 to Highway 111) in 2035 Plus Project condition has been identified as a potentially significant and unavoidable impact because additional widening beyond the General Plan classification is likely infeasible.

4.14.7 Unavoidable Significant Adverse Impacts

Based on the discussion in this subchapter of the EIR, implementation of the Project will conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Even though implementation of the improvements defined in **MM-TR-3** would reduce the significant impacts, the City cannot control the timing of when the intersection improvements for the locations on Caltrans facilities (SR-86, and I-10) are implemented. For this reason, even with implementation of **MM-TR-3**, cumulative impacts would remain significant and unavoidable at these locations Caltrans facilities (SR-86, and I-10) with the Project and cumulative projects factored in. Impacts to Dillon Road (I-10 to SR-86 and SR-86 to Highway 111) in 2035 Plus Project condition has been identified as a potentially significant and unavoidable impact because additional widening beyond the General Plan classification is likely infeasible.

The Project would not result in an unavoidable significant adverse impact that could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment); cause an effect upon, or a need for new or altered maintenance of roads; cause an effect upon circulation during the Project's construction; result in inadequate emergency access or access to nearby uses; and/or, conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. City application materials, site-specific analysis, mitigation measures, standard conditions, and conditions of approval will ensure that these impacts to transportation/traffic resources are fully addressed and will be considered less than significant.