# Indian Street Commerce Center

# Draft Environmental Impact Report

Prepared for
City of Moreno Valley

August 2016

applied planning inc

# DRAFT ENVIRONMENTAL IMPACT REPORT

for the

## Indian Street Commerce Center Project

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# 1.0 EXECUTIVE SUMMARY

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## 1.1 INTRODUCTION

Pursuant to the requirements of the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (DEIR or EIR) evaluates and discloses the potential environmental effects resulting from construction and operation of the proposed Indian Street Commerce Center Project (the Project). In summary, the Project proposes approximately 446,350 square feet of light industrial uses within an approximately 19.64-acre site. As currently proposed, 347,080 square feet of the Project building area would be allocated for distribution warehouse uses; 89,270 square feet would be assigned to manufacturing uses; and 10,000 square feet would be assigned to office uses. The Project does not include a refrigerated/cold storage component.

The Project site is located in the southern portion of the City of Moreno Valley, in western Riverside County. The Project site is located approximately one-half mile westerly of Perris Boulevard and is bounded by Indian Street to the east. Grove View Road (alignment) comprises the Project site northerly boundary. March Air Force Base is located approximately one-third mile westerly of the Project site.

This EIR Section identifies Project background issues, provides an overview of the Project and its Objectives, and summarizes the potential environmental impacts of the proposal. Table 1.11-1, *Impacts and Mitigation Summary*, presented at the conclusion of this Section, lists these impacts and presents the mitigation measures recommended to eliminate or reduce the effects of those impacts which have been determined to be potentially significant. For a full description of the Project, its impacts, recommended mitigation measures, and considered Alternatives, please refer to EIR Sections 3.0, 4.0, and 5.0, respectively.

## 1.2 PROJECT ELEMENTS

Primary elements comprising the Project are summarized below. Please refer also to the expanded characterization of Project facilities and operations presented at EIR Section 3.0, *Project Description*.

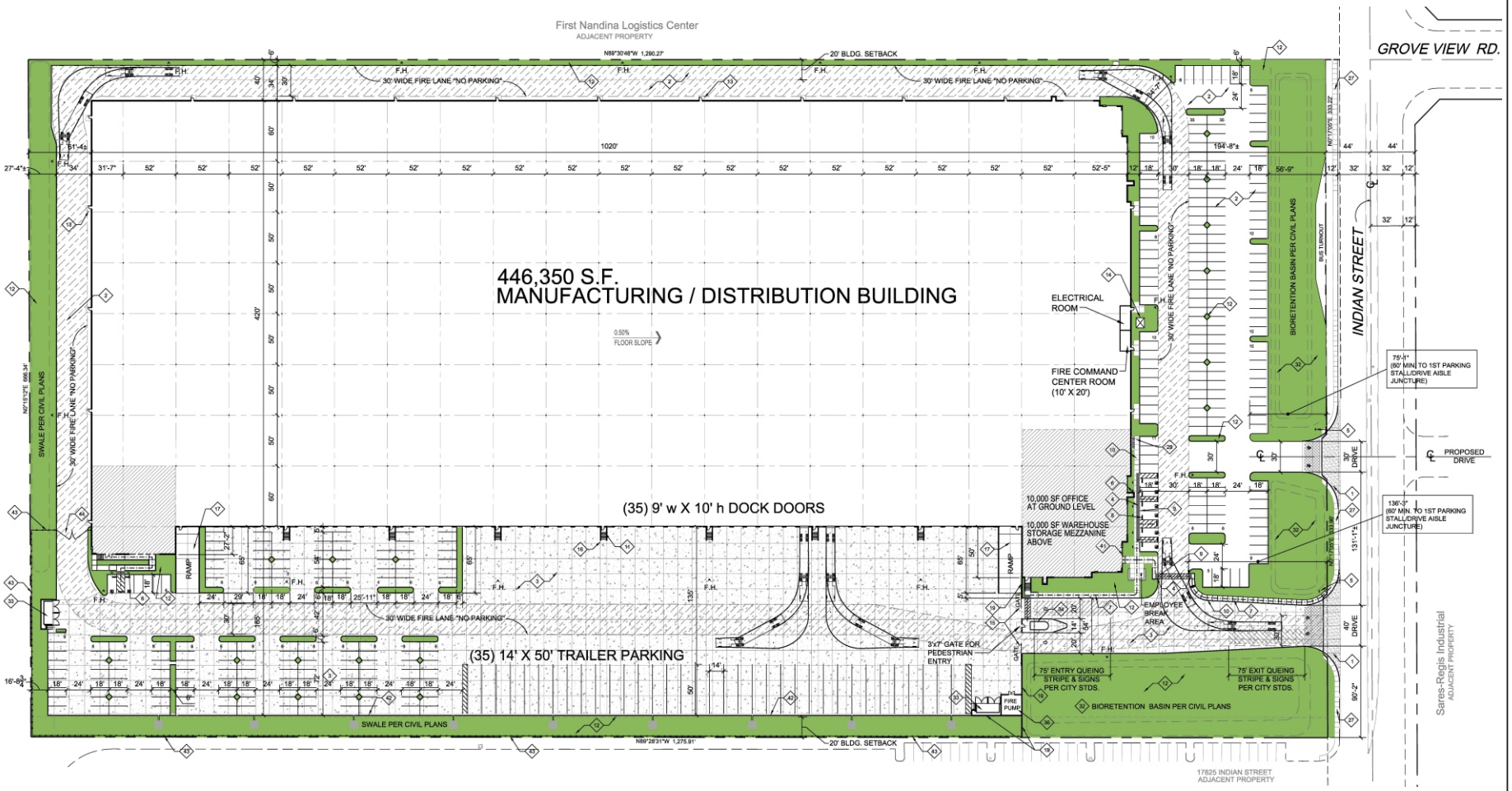
### 1.2.1 Site Preparation

The Project area would be grubbed, rough-graded, and fine-graded in preparation of building construction. Debris generated during site preparation activities would be disposed of and/or recycled consistent with the City's Source Reduction and Recycling Element (SRRE). Site preparation activities in total would be staged in a manner that minimizes exposure of soils and reduces the potential for wind and water erosion. Existing grades within the Project site would be modified to establish suitable building pads and to facilitate site drainage. Allowing for varying soils characteristics approximately 3,000 cubic yards of soil import/export may be required over the course of Project site preparation and construction.

### 1.2.2 Development Concept

The Project proposes approximately 446,350 square feet of light industrial uses within an approximately 19.64-acre site. As currently proposed, 347,080 square feet of the Project building area would be allocated for distribution warehouse uses; 89,270 square feet would be assigned to manufacturing uses; and 10,000 square feet would be assigned to office uses. Approximately 35 loading dock doors would be provided along the warehouse's southerly face.

The Project Site Plan Concept is presented at Figure 1.2-1. Final designs of the Project building will be realized consistent with industrial design requirements and standards of the encompassing Moreno Valley Industrial Area Plan and Municipal Code Section 9.05.040, "Industrial Site Development Standards."

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NOT TO SCALE

Source: Herdman Rierson Architecture + Design (August 2016); Applied Planning, Inc.

Figure 1.2-1
Site Plan

### 1.2.3 Access and Circulation

Under the Project Site Plan Concept, primary access to the Project would be provided by two driveways onto existing Indian Street along the site's easterly boundary. Driveway 1 would provide access to passenger cars only. This driveway is proposed to align with the proposed future driveway on the east side of Indian Street. Driveway 2 would provide access to trucks only. Both driveways would be STOP-controlled, and would allow left- and right- turn movements. The Project would also construct all site-adjacent roadway improvements as presented in the Project TIA and summarized at EIR Section 4.2, *Transportation/Traffic.*

### 1.2.4 Landscape/Hardscape

The Project would incorporate perimeter and interior landscaping and streetscape elements, acting to generally enhance the Project's visual qualities. Proposed landscaping includes varied trees, shrubs, and ground cover. Design accents, including all landscape/hardscape designs and features are subject to City review and approval. Landscaping will also be provided within and adjacent to the Project retention/detention areas acting to screen and enhance these areas as well as provide treatment for stormwater runoff from the Project site. Final design of the Project's landscaping and hardscape are subject to the City's Design Review processes.

### 1.2.5 Walls/Screening

An approximately 50-foot wide, bermed landscape setback along Indian Street would be provided, acting to screen Project parking areas and generally enhance public views of the Project site. Additionally, a minimum 20-foot landscape setback/edge treatment along the Project's southerly boundary, and an approximately 25-foot wide landscape setback/edge treatment along the Project site westerly boundary would be provided, acting to further screen and enhance views of the Project site. Landscape setbacks and edge treatments would conform to applicable provisions of the Moreno Valley Industrial Area Plan (MVIAP), and requirements stipulated at Municipal Code Section 9.05.040, "Industrial Site Development Standards."

Internal site features and appurtenances including but not limited to loading dock areas, trash collection areas, and utility pedestals/surface utility boxes, would also be screened.

All walls/screening elements would be designed and implemented consistent with applicable provisions of the encompassing Moreno Valley Industrial Area Plan, Municipal Code Section 9.08.150, "Screening Requirements," and Section 9.10.160, "Outdoor Storage, Trash Areas, and Service Areas."

Project screening elements, including all screening walls, would be architecturally compatible with other Project facilities. Final design of all proposed screening elements are subject to City Design Review and Approval processes.

### 1.2.6 Lighting

All Project lighting would be designed and implemented in a manner that precludes potential adverse effects of light overspill consistent with requirements of the MVIAP and as identified at City Municipal Code Section 9.10.110, "Light and Glare." Municipal Code Section 9.16.280, "Applications for Lighting, General Requirements," subsection A. states:

Lighting serves both safety and aesthetic purposes, illuminating dark areas and providing for highlights and accents. Effective lighting would highlight building features, add emphasis to important spaces and create an ambience of vitality and security. The intent of these guidelines is to encourage effective and innovative lighting to be incorporated as an integral component of a project.

Final design of the Project lighting plan including locations, heights, and performance standards for all Project lighting features and fixtures is subject to the City's Design Review processes. Detailed lighting plans would be prepared in conjunction with building plan submittals, and would be subject to City Design Review and Approval processes prior to issuance of building permits.

### 1.2.7 Signs

Signs for the Project would be designed and implemented consistent with applicable provisions of the MVIAP and Municipal Code Section 9.12, "Sign Regulations." The Project Sign Program would provide detailed guidelines and requirements for facility and informational signs and other graphic displays within the Project area. The Sign Program would afford prospective tenants with the maximum possible exposure in a manner that is consistent with the encompassing Project design concept, and responsive to community visual and aesthetic sensibilities.

### 1.2.8 Parking

The City of Moreno Valley Municipal Code at Section 9.11.040 "Off-street parking requirements," Table 9.11.040C-12 [Industrial] *Off-Street Parking Requirements* specifies a parking ratio of one parking space for each 1,000 square feet of gross floor area in a warehouse/distribution building for the first 20,000 square feet; one additional space for each 2,000 square feet of floor area within the second 20,000 square feet; and one additional space for each 4,000 square feet of floor area for areas in excess of the initial 40,000 square feet. Additionally, one parking space is required for every 500 square feet of manufacturing uses; and one parking space is required for every 250 square feet of office uses. Pursuant to City parking requirements, the Project would be required to provide an estimated 323 parking spaces. The Preliminary Site Plan Concept provides 326 parking spaces (318 standard spaces, 8 ADA spaces); and 35 additional trailer spaces. No off-site parking is proposed, nor would it be required. Final design of parking areas would be as reviewed and approved by the City through the City's Design Review processes.

### Other

The Project would also be provided water and sewer services, solid waste management, natural gas, electrical, telecommunications services. Service providers available to the Project are listed below:

- Water and sewer services (Eastern Municipal Water District);
- Solid waste collection (Waste Management of the Inland Empire);

- Natural gas (The Gas Company);
- Electricity (SCE, Moreno Valley Electric Utility); and
- Telecommunications (various private services, including AT&T, Time Warner Communications, and Verizon Communications).

### 1.2.9 Energy Efficiency/Sustainability

Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project in total would provide sustainable design features necessary to achieve a "Certified" rating under the United States Green Building Council's Leadership in Energy & Environmental Design (LEED) programs. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City.

- All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

    - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

- Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy).[1] Development proposals within the Project site would also be required to implement the following:

  - Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

[1] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

## 1.3 PROJECT OBJECTIVES

The primary goal of the Project is to develop high quality light industrial/business park uses accommodating a variety of prospective tenants. Complementary Project Objectives include the following:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs;
- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision;
- Provide adequate roadway and wet and dry utility infrastructure to serve the Project;
- Accommodate warehouse and manufacturing uses that are compatible with adjacent land uses;
- Provide an attractive, efficient and safe environment for warehouse uses that is cognizant of natural and man-made conditions;
- Accommodate a mix of warehouse and manufacturing uses responsive to current and anticipated market demands;
- Establish new development that would increase locally available employment opportunities and would further the City's near-term and long-range fiscal goals and objectives; and
- Establish new development that would increase locally available employment opportunities thereby improving jobs/housing balance within the City.

## 1.4 PROJECT DISCRETIONARY ACTIONS, PERMITS, CONSULTATIONS

Discretionary actions, permits and related consultation(s) necessary to approve and implement the Project include, but are not limited to the following.

### 1.4.1 Discretionary Actions

*CEQA Guidelines* Section 15124 states in pertinent part that if "a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed…"

Requested decisions, or discretionary actions, necessary to realize the Indian Street Commerce Center Project would include the following:

- **Certification of the EIR (City Case #P16-003).** The proposed development is a Project under CEQA, and may result in significant environmental impacts. Lead Agency certification of the Project EIR is required;

- **Plot Plan Review and Approval** to include Project design and architectural reviews;

- **Construction, grading, and encroachment permits** allowing implementation of the Project facilities within City of Moreno Valley jurisdictional areas; and

- **Vacation and/or dedication of public rights-of-way and easements** as elements of the proposed parcel map, or independent of the map. Rights-of-way and easements would provide public access, and ensure appropriate alignment of and access to infrastructure and utilities.

### 1.4.2 Other Consultation and Permits

*CEQA Guidelines* Section 15124 also states that the EIR should, to the extent known, include a list of all the agencies expected to use the EIR in their decision-making (Responsible Agencies, Trustee Agencies), and a list of other permits or approvals required to implement the Project. Based on the current Project design concept, anticipated permits necessary to realize the proposal would likely include, but are not limited to, the following:

- Tribal Resources consultation with requesting Tribes as provided for under *AB 52, Gatto. Native Americans: California Environmental Quality Act*;

- Permitting may be required by/through the Regional Water Quality Control Board (RWQCB) pursuant to requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit;

- Permitting may be required by/through the South Coast Air Quality Management District (SCAQMD) for certain equipment or land uses that may be implemented within the Project area; and

- Various construction, grading, and encroachment permits allowing implementation of the Project facilities.

### 1.4.3 City Development Applications

In support of requested discretionary approvals and permits noted above, development applications submitted by the Project Applicant include:

- **Plot Plan** approval for the Project facilities; and

- **Tentative Parcel Map** approval to combine and reconfigure existing parcels comprising the Project site.

## 1.5 INITIAL STUDY

The City of Moreno Valley, through the Initial Study process, has determined that the Project has the potential to cause or result in significant environmental impacts, and warranted further analysis, public review, and disclosure through the preparation of an EIR. The Initial Study (IS) and associated EIR Notice of Preparation (NOP), dated March 2016, were forwarded to the California Office of Planning and Research, State Clearinghouse (SCH), and circulated for public review and comment. The State Clearinghouse established the public comment period for the NOP/IS as March 14, 2016 through April 12, 2016. The assigned State Clearinghouse reference for the Project is SCH No. 2016031036. The Initial Study, NOP, and NOP Responses are presented at Appendix A of this Draft EIR.

## 1.6 IMPACTS NOT FOUND TO BE POTENTIALLY SIGNIFICANT

The following discussions identify and list those environmental issues that have been determined pursuant to the IS/NOP and associated public review processes to pose no potentially significant impacts, or where compliance with standard mitigation or conditions of approval would reduce certain potentially significant impacts to levels that are less-than-significant. The specific issues listed are not substantively discussed within the body of this EIR. Please refer also to related discussions and analyses presented within the Initial Study, EIR Appendix A.

***Aesthetics***

The Project site is located in an urbanized area. Implementation of the Project would not affect scenic vistas or scenic resources within the vicinity of a designated scenic highway. The closest designated scenic highways are State Route 60 and Moreno Beach Drive; each located approximately 5 miles from the Project site. The Project site is vacant, and therefore no historic buildings would be directly affected by Project implementation. Nor does the Project propose or require uses or facilities that would affect any off-site historic buildings.

Project development is expected to improve the visual character and quality of the site by improving undeveloped and underutilized areas with contemporary commercial structures and landscaping, consistent with the City General Plan. As supported by the preceding discussions, the Project would have less-than-significant impacts for the following aesthetic considerations:

- Substantial adverse effects on a scenic vista;

- Substantial damage to scenic resources, including, but not limited to, trees, rocks, outcroppings, and historic buildings within a state scenic highway;

- Substantial degradation of the existing visual character or quality of the site and its surroundings; and

- Creation of a new source of substantial light or glare, which would adversely affect the day or nighttime views in the area.

***Agriculture and Forest Resources***

The Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; nor are any portions of the Project site subject to, or otherwise affected by, Williamson Act contracts. Further, there are no lands within the City of Moreno Valley that qualify, or are designated, as forest land or timberland. As such, the Project will have no impact for the following considerations:

- Conversion of 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; and

- Conflict with existing zoning for agricultural use, or a Williamson Act contract;

- Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production;

- Result in the loss of forest land or conversion of forest land to non-forest use; or

- 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.

***Air Quality***

The Project does not propose facilities or on-going operations that would create objectionable odors affecting a substantial number of people. On this basis, the Project would have a less-than-significant impact in regard to the following consideration:

- Create objectionable odors affecting a substantial number of people.

***Biological Resources***

The Project would adhere to all applicable General Plan Policies, specifically compliance with the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) area. There are no other known local ordinances protecting biological resources within the City. On this basis, the Project would have a less-than-significant impact in regard to the following considerations:

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

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

***Cultural Resources***

There are no known historic, archaeological, or paleontological resources located within the Project site, nor would the Project affect any known offsite resources of historical, archaeological, or paleontological significance. Moreover, historic and current disturbance of the subject site indicates that whatever resources may have been previously present, have likely since been disturbed and/or removed.

As required by California Health and Safety Code Section 7050.5, should human remains be found, 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. The County Coroner must be notified of the find immediately. If the remains are found to be prehistoric, the coroner would coordinate with the California Native American Heritage Commission as required by state law. As such, the Project will have a less-than-significant impact for the following cultural resources consideration:

- Disturbance of any human remains, including those interred outside of formal cemeteries.

***Geology and Soils***

The Project site is located in a region known to be seismically active, and seismic ground-shaking may be expected during an earthquake. However, the subject property is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known or suspected faults or fault traces within the site.

As implemented through the City's standard review and approval processes, a site and use-specific geotechnical study has been prepared for the Project, subject to review and approval by the City Engineer. In general, the geotechnical study addresses and reflects California Building Code design, engineering and construction requirements that act to minimize the effects of earthquakes and other geologic or soils conditions on structures. The Project would comply with the approved geotechnical study pursuant to City development permit review processes.

The Project site evidences no substantive internal elevation differences and, as such, is not internally susceptible to landsliding.

Construction activities associated with the Project would temporarily expose underlying soils, thereby increasing their interim susceptibility to erosion, until the Project is fully implemented. Potential erosion impacts incurred during construction activities are reduced below the level of significance through preparation of, and compliance with, a Storm Water Pollution Prevention Plan (SWPPP). In this regard, the Project proponent is required to file an approved SWPPP prior to initiation of construction activities. Compliance with the SWPPP is realized through ongoing inspection and monitoring of the subject site as provided for under the City's established building permit and site inspection processes.

The Project Geotechnical Study in total indicates that the Project site is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the

Project. Further, the Project would be required to comply with the requirements of a final City-approved geotechnical report, and applicable provisions of the Uniform Building Code (UBC) and California Building Code (CBC) that would act to minimize any unstable soils, unstable geologic units that may be encountered.

The Project site is currently provided sewer services. No septic tanks or other alternative wastewater disposal systems are proposed.

Based on the preceding, the Project would result in less-than-significant impacts, or have no impact, for the following geology and soils considerations:

- Exposure of 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; strong seismic ground shaking; seismic-related ground failure; or landslides;

- Substantial soil erosion or the loss of topsoil;

- Location 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;

- Location on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or

- 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.

***Hazards and Hazardous Materials***

During the normal course of construction activities, there will be limited transport of potentially hazardous materials (e.g., gasoline, diesel fuel, paints, solvents, fertilizer, etc.) to and from the Project site. The Project is required to meet all City Hazardous Materials Management Plans and regulations addressing transport, use, storage and disposal of these materials.

There are no known or proposed schools located within one-quarter mile of the Project site. Accordingly, the Project would have no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Neither would the Project potentially affect, or be affected by, off-site locations listed pursuant to Government Code Section 65962.5.

The Project does not propose or require designs or activities that would interfere with any identified emergency response or emergency evacuation plan. Emergency procedures or design features required by County, State and Federal guidelines will be implemented during construction and during operation of the Project. Temporary alterations to vehicle circulation routes associated with Project construction are addressed through City-mandated construction traffic management plans. Ongoing coordination with the local fire and police departments during construction will ensure that potential interference with emergency response and evacuation efforts are avoided.

The Project site is located in an urbanized area, with no proximate wildlands. Moreover, the Project site and surrounding areas are currently provided fire protection and emergency response services by the Moreno Valley Fire Department. Development fees and taxes paid by the Project act to offset its incremental demands for fire protection services.

Based on the preceding, the Project would have no or less-than-significant impacts under the following considerations:

- 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, create a significant hazard to the public or the environment;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and

- 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.

***Hydrology and Water Quality***

The Project would be provided water service by the Eastern Municipal Water District (EMWD) water system, and does not propose or require direct groundwater withdrawals. The Project would not impinge on, nor would otherwise affect, designated recharge areas. Further, construction proposed by the Project will not involve substructures at depths or other subsurface features that would significantly impair or alter the direction or rate of flow of groundwater.

The Project site does not lie within an identified 100-year flood hazard zone, nor is housing proposed as part of the Project. Accordingly, the Project would have no impacts regarding placement of housing within a 100-year flood hazard area. The Project is not subject to potential inundation as the result of failure of any other known dam or levee. General Plan Safety Element, Figure 6-4, Fl*ood Hazards* indicates that the Project site is located outside the identified Lake Perris Dam Potential Inundation Area.

The nearest body of water to the Project site is Lake Perris, located approximately 2.3 miles easterly of the Project site. The Project site is located approximately 40 miles easterly of coastal waters, and is approximately 1,470 feet above mean sea level. As such, the Project site is not subject to tsunami hazards. No slopes of significance have been identified on or near the Project site, and the Project site has not historically been affected by mudflows.

Based on the preceding discussion, the Project would result in less-than-significant impacts, or have no impact for the following hydrology and water quality considerations:

- 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 the 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);

- 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;

- 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; or

- Inundation by seiche, tsunami, or mudflow.

***Land Use***

The Project site is located within an area designated for industrial uses, within an urbanized area of similar land uses. No established communities exist within the Project site, nor does the Project propose or require elements or operations that would divide an off-site community. Uses proposed by the Project are consistent with the site's current Business Park/Light Industrial General Plan Land Use designation; and the site's Industrial Zoning designation established under the MVIAP. No change in land use designation is required or proposed. The Project would therefore not conflict with City General Plan and Zoning policies and requirements.

The Project site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) area. The Project will be implemented consistent with the requirements of the MSHCP. The Project is not subject to the provisions of any other any habitat conservation plan or natural communities conservation plan.

Based on the preceding, the Project would have less-than-significant impacts for the following land use considerations:

- 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; or

- Conflict with any applicable habitat conservation plan or natural communities conservation plan.

***Mineral Resources***

There are no mineral resources known to exist within the Project site that would be of value to the region and the residents of the state. As such, the Project would result in no impacts for the following mineral resources considerations:

- Loss of availability of a known mineral resource that would be of value to the region and to the residents of the state; and

- Loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

***Noise***

No private airstrips are located within the Project vicinity. As such, the Project would result in no impact for the following noise consideration:

- For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

***Population and Housing***

The Project does not propose residential development, nor would the Project otherwise induce substantial population growth in the area, either directly or indirectly. Development proposed by the Project site is consistent with that envisioned under the City General Plan; and the Project is located within an urbanized area that is already served by roadways, utilities, and other infrastructure. Therefore, development proposed by the Project, and any associated infrastructure improvements are unlikely to encourage unanticipated population growth.

Additionally, the General Plan Land Use designation of the Project site is Light Industrial/Business Park; Zoning for the site is Industrial. No housing exists within the Project site, and the Project does not propose uses or activities that would otherwise displace housing assets or persons.

On the basis of the preceding discussion, the Project would have less-than-significant or no impacts for the following population and housing considerations:

- Induce substantial population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure);

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

***Public Services, Recreation***

Employment opportunities created by the Project may result in increased secondary impacts to school and park facilities. Both the Moreno Valley Unified School District (MVUSD) and the Val Verde Unified School District (VVUSD) provide educational facilities and services to the City of Moreno Valley. Increased student population could result from requests for Intra-District Transfers from employees of the Project wanting to enroll their children in schools closer to their place of employment. Yet any impacts from such school transfers would be minimal. The Project does not propose elements (e.g., residential development) that would result in substantial increased demands for neighborhood or regional parks or other recreational facilities. The Project would pay required school impact fees, acting to offset any incremental effects to area school services and school facilities.

Development of the Project would require established public agency oversight including, but not limited to, plan check and permitting actions by the City Planning Division, City Public Works Department, Moreno Valley Police Department, and the Moreno Valley Fire Department. These actions typically fall within routine tasks of these agencies and are paid for via plan check and inspection fees.

Based on the preceding, the Project would have less-than-significant or no impacts for the following public services and recreation considerations:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities;

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

- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

***Transportation/Traffic***

The Project does not propose elements or aspects that would obstruct or restrict emergency access to or through the area. Nor does it propose elements that would conflict with adopted alternative transportation policies. On a long-term basis, the Project may result in increased demand for public transportation as light industrial employment opportunities become available onsite. Affected transit agencies routinely review and adjust their ridership schedules to accommodate public demand. The need for transit-related facilities, including but not limited to bus shelters and bicycle parking, would be coordinated between the City and the Project Applicant, with input from transit providers as applicable, as part of the City's standard development review process.

On this basis, the Project would have less-than-significant impacts for the following potential transportation considerations:

- Result in inadequate emergency access; 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.

***Utilities and Service Systems***

All necessary public services, infrastructure systems, and utilities are currently available to the Project site. No major new infrastructure or utilities improvements are proposed by the Project, nor are any required. The Project will implement necessary utilities improvements to include connections to existing services, and/or necessary realignment or modification of existing service lines. All connections to, and modification of, utilities necessary to serve the Project will be accomplished consistent with City and purveyor requirements. As discussed in the Initial Study, the Project would have less-than-significant impacts in regard to the following considerations:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- 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;

- 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;

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

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

- Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs; and

- Comply with federal, state, and local statutes and regulations related to solid waste.

## 1.7 AREAS OF CONCERN OR CONTROVERSY

Section 15123 of the *CEQA Guidelines* requires that the EIR summary identify areas of potential concern or controversy known to the lead agency, including issues raised by other agencies and the public. Issues of concern were identified by the Lead Agency, through responses to the Project Initial Study/Notice of Preparation (NOP), and other communications addressing the Project and the Project EIR.

Responses received pursuant to distribution of the NOP and Public Scoping Meeting are presented at EIR Appendix A. Table 1.7-1 presents a list of NOP respondents, and a corresponding summary of NOP comments, indicated by *italicized text.* Responses to comments, together with correlating EIR references are indicated in subsequent statements. Unless otherwise noted, all NOP respondent comments are addressed within the body of the EIR.

**Table 1.7-1**
**List of NOP Respondents and Summary of NOP Comments**

| Respondent | Summary of Comments |
|---|---|
| **State Agencies** | |
| State of California Office of Planning and Research, State Clearinghouse (SCH) | *SCH provided receipt and record of distribution of the NOP/IS and established the NOP review and comment period of March 14, 2016 through April 12, 2016.*<br><br>EIR Appendix A includes a copy of the Project IS/NOP and all NOP responses. |
| State of California Department of Transportation, District 8 (Caltrans) | *Caltrans provides detailed guidance for preparation of the Project Traffic Impact Analysis (TIA), to include evaluation of potential impacts to the State Highway System (SHS). Contact information is also provided.*<br><br>The Project Traffic Impact Analysis (TIA, EIR Appendix C) was prepared pursuant to applicable Caltrans Guidelines. Topics referenced by Caltrans in their NOP Response are addressed at Draft EIR Section 4.2, *Transportation/Traffic*. |

**Table 1.7-1**
**List of NOP Respondents and Summary of NOP Comments**

| Respondent | Summary of Comments |
|---|---|
| State of California Native American Heritage Commission (NAHC) | *The NAHC response provides procedural guidance in determining the Project's potential to impact cultural resources.*<br><br>As discussed at EIR Section 4.8, *Cultural Resources*, a comprehensive Cultural Resources Investigation was conducted for the Project site, and no cultural resources were identified within the Project site or vicinity. To avoid impacts to potential historic, prehistoric, or paleontological (fossil) resources that may be present onsite in a buried context, EIR mitigation measures require monitoring by a professional archaeologist during earth-moving activities; appropriate disposition of any recovered artifacts; and provisions for discovery of any Native American human remains. Representatives of the appropriate Indian tribes shall also be consulted with respect to the treatment of these resources, should they be discovered. |
| **Regional and County Agencies** | |
| Department of Toxic Substances Control (DTSC) | *DTSC (Department) notes that the Department is currently working with several other agencies to address groundwater contamination located east of the March Air Reserve Base; therefore, DTSC recommends that the Draft EIR address groundwater contamination.*<br><br>Groundwater contamination associated with March Air Reserve Base/Inland Port Airport (MARB/IPA) has been recorded by several governmental databases. Remediation efforts are currently underway at March ARB/IPA to address this concern.<br><br>MARB/IPA groundwater contamination concerns are specifically addressed in the Project Phase I Environmental Assessment (Phase I ESA, EIR Appendix F) and are determined unlikely to be an environmental concern at the Project site (Phase I ESA, p.1). Moreover, it is unlikely that former occupancies of the Project site have substantively contributed to existing groundwater contamination concerns (Phase I ESA, p. 2). The Project does not propose uses or activities that would affect, or be affected by, underlying groundwaters or groundwater contamination that may exist at March ARB/IPA. Please refer also to the Project Phase I ESA. |
| Eastern Municipal Water District (EMWD) | *EMWD's NOP response identifies the Project site as being within the agency's service area, and provides submittal requirements in regard to obtaining water and sewer service from EMWD. Additionally, contact information is provided.*<br><br>The EIR has identified EMWD as the Project's provider of water and sewer service. Coordination in regard to the specific submittal requirements would be conducted subsequent to the Project's approval. |
| Riverside County Flood Control and Water Conservation District (RCFCWCD) | *RCFCWCD (District) notes that the Project would not be impacted by District Master Drainage Plan (MDP) Facilities, or other drainage facilities of regional interest. The District further outlines drainage fee requirements that would apply to the Project.*<br><br>*The District presents general information addressing National Pollutant Discharge Elimination System (NPDES), Federal Emergency Management Agency (FEMA), California Department of Fish and Wildlife (CDFW), Clean Water Act (CWA), and Army Corps of Engineers (ACOE) requirements and responsibilities.* |

**Table 1.7-1**
**List of NOP Respondents and Summary of NOP Comments**

| Respondent | Summary of Comments |
|---|---|
| | The Project would comply with all District drainage fee requirements pursuant to the Lead Agency Conditions of Approval. Applicable federal, state, and local regulatory requirements addressing hydrology, stormwater management, natural watercourses and related concerns are discussed within the EIR. Please refer to EIR Section 4.6, Hydrology/Water Quality and Section 4.7, Biological Resources. |
| South Coast Air Quality Management District (SCAQMD) | *SCAQMD provides detailed guidance in regard to the preparation of the Project air quality impact analysis and greenhouse gas analysis, and requests that modeling data and electronic copies air quality technical studies accompany submittal of the Draft EIR to SCAQMD.*<br><br>The Project Air Quality Impact Analysis and Greenhouse Gas Analysis are presented at EIR Appendices C and D, respectively. Specific topics referenced by SCAQMD in their NOP response are addressed at EIR Section 4.2, *Air Quality*; and EIR Section 4.3, *Global Climate Change and Greenhouse Gas Emissions*. Modeling data files, technical studies and supporting air quality documentation have been provided to SCAQMD in electronic format(s) as requested. |
| Southern California Association of Governments (SCAG) | *SCAG requests that the Draft EIR include an analysis of the Project's consistency with goal statements articulated in SCAG 2016 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).*<br><br>The Lead Agency appreciates SCAG participation in the CEQA process. As noted in the SCAG NOP Response, SCAG EIR RTP/SCS consistency analyses are appropriately directed to projects of regional significance. The instant Project is not regionally significant per criteria outlined at *CEQA Guidelines* Section 15206, accordingly an RTP/SCS consistency analysis is not provided. |
| **Individuals and Local Agencies** | |
| Johnson and Sedlack | *The commentor requests various topical issues be evaluated in the EIR.*<br><br>Topical issues evaluated in this EIR are listed at Section 1.8, *EIR Topical Issues*. Please refer also to correlating topical Sections within this EIR. |
| Pechanga Band of Luiseno Indians | *The Pechanga Band requests "to be notified and involved in the entire CEQA environmental review process for the duration of the…project."*<br><br>The City acknowledges the request of the Pechanga Band of Luiseno Indians for consultation, and will work with tribal representatives to this end, pursuant to all applicable regulations. Additionally, as requested, the Pechanga Band of Luiseno Indians will be added to the City's list of organizations receiving notifications of public meetings and information related to the proposed Project. |
| San Manuel Band of Mission Indians | *The commentor states that the Project site is located outside of their Tribe's ancestral territory.*<br><br>The City appreciates the commentor's review of the Project Initial Study. No response is required. |

## 1.8 EIR TOPICAL ISSUES

Based on the Initial Study analysis, and comments received pursuant to circulation of the NOP, the EIR analyses have been focused on the following topics:

- Air Quality;
- Biological Resources;
- Cultural Resources/Tribal Cultural Resources;
- Greenhouse Gas (GHG) Emissions/Global Climate Change;
- Hazards and Hazardous Materials;
- Hydrology/Water Quality;
- Noise; and
- Transportation/Traffic.

Additionally, EIR Section 5.0, *Other CEQA Considerations*, presents discussions of other mandatory CEQA topics, including:

- Cumulative Impact Analysis;
- Alternatives Analysis;
- Growth-Inducing Impacts of the Proposed Action;
- Significant Environmental Effects;
- Significant and Irreversible Environmental Changes; and
- Energy Conservation.

## 1.9 SUMMARY OF SIGNIFICANT PROJECT IMPACTS

Implementation of the Project as proposed would result in certain impacts which are determined to be significant. These impacts are discussed in detail in the body of the EIR text under their associated topical headings, and are summarized below.

## Summary of Significant and Unavoidable Impacts

| Environmental Consideration | Comments |
|---|---|
| **Traffic** | |
| | The Project would construct, or pay required fees toward, completion of all necessary Study Area transportation/traffic system improvements. At the significantly-impacted locations noted below, the Project cannot feasibly construct the required improvements, and/or payment of fees would not assure their timely completion.<br><br>**<u>Cumulatively Significant Impacts</u>**<br><br>***Intersections***<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following intersections are considered cumulatively significant and unavoidable:<br><br>**Intersection ID No.** — **Intersection Location**<br>1 — I-215 SB Ramps/Harley Knox Blvd.<br>2 — I-215 NB Ramps/Harley Knox Blvd.<br>3 — Western Way / Harley Knox Blvd.<br>4 — Patterson Ave. / Harley Knox Blvd.<br>7 — Indian St. / Grove View Rd.<br>10 — Indian St. / Harley Knox Blvd.<br><br>***Roadway Segments***<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following roadway segments are considered cumulatively significant and unavoidable:<br><br>**Roadway Segment ID No.** — **Roadway** — **Segment Limits**<br>2 — Harley Knox Blvd. — I-215 NB Ramps to Western Way<br>3 — Harley Knox Blvd. — East of Western Way<br>4 — Harley Knox Blvd. — West of Patterson Ave.<br>9 — Indian St. — South of Nandina Ave.<br>10 — Indian St. — North of Grove View Rd.<br>11 — Indian St. — South of Grove View Rd.<br><br>***Freeway Facilities***<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Cumulative traffic impacts at or affecting the following freeway facilities are considered cumulatively significant and unavoidable:<br><br>**Freeway Segment**<br>1 I-215, Northbound, University Avenue to Martin Luther King Boulevard<br>2 I-215, Northbound, Box Springs Road to SR-60/I-215 Freeway<br>3 I-215, Northbound, Eucalyptus Avenue to Alessandro Boulevard |

**Summary of Significant and Unavoidable Impacts**

| Environmental Consideration | Comments |
|---|---|
| | 4 I-215, Northbound, Ramona Expressway to Nuevo Road<br>5 I-215, Southbound, Eucalyptus Avenue to Alessandro Boulevard<br>6 I-215, Southbound, Ramona Expressway to Nuevo Road<br>7 SR-91, Westbound, Riverwalk Parkway to Magnolia Avenue |
| **Air Quality** | |
| | **Project-Specific Significant Impacts**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Even after compliance with South Coast Air Quality Management District (SCAQMD) rules and regulations, and the application of EIR mitigation measures, operational pollutant emissions would exceed applicable SCAQMD regional emission thresholds for $NO_x$. These impacts are therefore individually significant.<br><br>**Cumulatively Significant Impacts**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Project-specific operational-source $NO_x$ emissions exceedances are cumulatively significant over the life of the Project.<br><br>**Non-Attainment Area Impacts**<br>Project operational source $NO_x$ emissions exceedances ($NO_x$ is an ozone precursor; $NO_x$ is also a $PM_{10}/PM_{2.5}$ precursor), in combination with $NO_x$ emissions generated by other sources affecting the SCAB ozone and $PM_{10}/PM_{2.5}$ non-attainment areas, would result in a cumulatively considerable net increase in ozone and $PM_{10}/PM_{2.5}$ within the non-attainment areas. These are cumulatively significant impacts. |
| **Greenhouse Gases/Global Climate Change** | |
| | **Project-Specific Impacts**<br>Project GHG emissions would individually exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City. Project GHG emissions would also not conform to State GHG emissions reductions targets established under AB32.<br><br>**Cumulatively Significant Impacts**<br>Project-specific GHG emissions exceedances would be cumulatively considerable in the context of existing GHG emissions levels and GHG emissions that would be generated by other known or probable GHG emissions sources. |

All other potential environmental effects of the Project are determined to be less-than-significant as substantiated within this EIR and accompanying Initial Study, or are reduced below levels of significance with application of mitigation measures

identified herein. A summary of all Project impacts and proposed mitigation measures is presented at EIR Section 1.11, *Summary of Impacts and Mitigation Measures*.

## 1.10 ALTERNATIVES TO THE PROJECT

Consistent with provisions of the *CEQA Guidelines*, the EIR Alternatives Analysis (EIR Section 5.3) presents and evaluates alternatives to the Project that would lessen its significant environmental effects while allowing for attainment of the basic Project Objectives. The rationale underlying the selection of alternatives is presented together with a summary description of each alternative. Merits of the alternatives compared with the Project are described and evaluated. Alternatives considered in this EIR include:

- CEQA-mandated "No Project" Alternative;
- Alternative Sites;
- "No Threshold Exceedance" Alternative for Significant Traffic Impacts;
- "No Threshold Exceedance" Alternative for Significant Air Quality Impacts;
- Reduced Intensity Alternative.

The above-listed Alternatives are summarized below, and are described in greater detail at Section 5.3.2, *Description of Alternatives*.

### 1.10.1 No Project Alternative

**Overview**

The *CEQA Guidelines* specifically require that the EIR include in its evaluation a No Project Alternative. The No Project Alternative should make a reasoned assessment as to future disposition of the subject site should the Project under consideration not be developed. In this latter regard, the *CEQA Guidelines* state in pertinent part:

> If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property

> remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (*CEQA Guidelines*, Section 15126.6 (e)(3)(b)).

**No Project/No Build Alternative**

In this instance, development of the subject site is substantively defined by Moreno Valley Industrial Area Plan (MVIAP). The No Project Alternative would be required to conform to land uses approved for, and overarching performance standards and development regulations established under, the MVIAP. It is therefore considered unlikely that the subject site would remain vacant or in a "No Build" condition. That is, failure to proceed with the Project would not result in preservation of existing environmental conditions, and the practical result of the Project's non-approval would be the development of the subject site with some other variety or configuration of approved Specific Plan land uses.

Any development of the subject site under a No Project Alternative would therefore likely be materially consistent with the Project, though internal land use configurations, development intensities, and specific uses may be realigned within the constraints and allowances of the MVIAP. Environmental impacts resulting from development of the subject site under a No Project Alternative would likely therefore be comparable to those occurring under the Project.

If, however, development of the subject site was significantly delayed by economic, political, or other outside influences, existing environmental conditions would likely prevail, and in most instances, environmental impacts would be reduced when

compared to the Project. To provide an analysis differentiated from that presented within the body of this EIR, the No Project Alternative considered herein is assumed to represent a "No Build" condition.

### 1.10.2 Reduced Intensity Alternative-Indian Street Commerce Center Land Uses

As detailed at EIR Section 4.3, *Global Climate Change and Greenhouse Gas Emissions*, Project GHG emissions would exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City of Moreno Valley. The Project's GHG emissions threshold exceedances constitute individually and cumulatively significant air quality impacts.

More specifically, even after application of all feasible mitigation measures, Project GHG emissions would result in exceedances of applicable City thresholds, as summarized below.

- Project Operational GHG emissions = 12,154.98 MTCO2e/year
  City of Moreno Valley threshold = 10,000 MTCO2e/year
  (City of Moreno Valley threshold = approximately 83 percent of Project Operational GHG emissions)

In order to achieve the 10,000 MTCO2e threshold established by the City, the Project GHG emissions would need be reduced from 12,154.98 MTCO2e/year to less than 10,000 MTCO2e/year; or by approximately 17 percent or greater.

Vehicular sources account for approximately 89 percent of the Project GHG emissions, the remaining 11 percent resulting from various on-site stationary/area sources. In order to achieve meaningful reductions in Project GHG emissions, correlating reductions in Project traffic generation would therefore be required.

Project GHG emissions could be reduced to levels that are less-than-significant through a reduction in the Project scope that would sufficiently reduce vehicular trips and associated vehicular-source GHG emissions. Such a reduction in operational-source

emissions would also decrease the Project's contributions to cumulative GHG emissions impacts to levels that are less-than-significant.

### 1.10.3 Alternative Sites Considered and Rejected

As stated in the *CEQA Guidelines* §15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." *Guidelines* §15126.6 (f)(1) also provides that when considering the feasibility of potential alternative sites, the factors that may be taken into account 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). None of these factors establishes a fixed limit on the scope of reasonable alternatives."

The Project considered herein is not subject to relocation to an alternative site. That is, the Project is in large part defined by its location and implements a location-specific portion of the land uses and development approved under MVIAP. At a different location, the development would be something other than the Project considered here. Moreover, relocation of the Project would compromise the fundamental Project Objectives and would not avoid or substantively reduce the Project's significant environmental impacts. Based on the preceding considerations, the analysis of an Alternative Site was not further considered.

### 1.10.4 "No Threshold Exceedance" Alternative for Significant Traffic Impacts Considered and Rejected

Specific improvements identified in the Project TIA (EIR Appendix B) and summarized at Draft EIR Section 4.1 would provide a physical solution to identified potentially significant cumulative traffic impacts. Project mitigation responsibilities at affected Study

Area facilities would be satisfied through fee payments directed to completion of the required improvements. Notwithstanding, Project fee payments would not ensure timely implementation of improvements required as mitigation for potentially significant cumulative traffic impacts, and impacts are therefore considered cumulatively significant and unavoidable pending completion of the required improvements.

Any measurable additional traffic contributed to the above-noted facilities would result in cumulatively significant traffic impacts similar to those occurring under the Project, requiring some manner of currently infeasible mitigation. In that any viable development of the subject site would generate trips likely affecting some or all of the above-referenced facilities, an alternative to the Project developed specifically to alleviate cumulatively significant traffic impacts at Study Area intersections and freeway facilities was not further evaluated. Notwithstanding, the Reduced Intensity Alternative considered herein would act to generally reduce traffic volumes within the Study Area and would likely diminish the magnitude of traffic impacts; but would not avoid cumulatively significant traffic impacts affecting Study Area faculties.

**1.10.5 "No Threshold Exceedance" Alternative for Project Significant Air Quality Impacts Considered and Rejected**

As presented at EIR Section 4.2, *Air Quality*, Project maximum daily operational-source $NO_x$ emissions would exceed SCAQMD regional thresholds for $NO_x$. The Project's operational-source $NO_x$ emissions threshold exceedances constitute individually and cumulatively significant air quality impacts. Because $NO_x$ is a precursor to ozone and to $PM_{10}/PM_{2.5}$, Project operational-source $NO_x$ emissions exceedances would result in a cumulatively considerably net increase in ozone and $PM_{10}/PM_{2.5}$ within a region designated as non-attainment for ozone and $PM_{10}/PM_{2.5}$.

More specifically, even after application of all feasible mitigation measures, Project operational-source $NO_x$ emissions would result in exceedances of applicable SCAQMD regional thresholds, as summarized below. Maximum impact summer/winter seasonal conditions are reflected in these discussions.

- Total Mitigated Project Operational $NO_x$ emissions = 190.61 pounds per day
  SCAQMD threshold = 55 pounds per day
  (SCAQMD threshold = approximately 29 percent of Project Operational $NO_x$ emissions)

Project operational-source $NO_x$ emissions would need to be reduced from 190.61 pounds per day to less than 55 pounds per day, or by a minimum of 71 percent, in order to achieve the SCAQMD regional threshold for operational-source $NO_x$ emissions.

Vehicular sources account for approximately 98 percent of the Project operational-source $NO_x$ emissions, the remaining 2 percent resulting from various on-site stationary/area sources. In order to achieve meaningful reductions in Project operational-source $NO_x$ emissions, correlating reductions in Project traffic generation would therefore be required.

The Project's operational-source air pollutant $NO_x$ emissions could therefore be reduced to levels that are less-than-significant through a minimum 71 percent reduction in the Project scope; sufficient to reduce vehicular trips and associated vehicular-source $NO_x$ emissions below SCAQMD thresholds. Such a reduction in operational-source emissions would also decrease the Project's contributions to cumulative $NO_x$ air quality impacts to levels that are less-than-significant.

At a 71 percent reduction in scope however, the resulting development would fundamentally not be the Project considered herein; and the Project Objectives would not be realized in any meaningful sense. As such, potential alternatives with the specific goal of avoiding all significant operational-source $NO_x$ emissions impacts resulting from the Project were rejected from consideration, and were not further evaluated. Notwithstanding, in achieving the GHG emissions thresholds for the Project, the Reduced Intensity Alternative considered herein would also act to diminish Project operational source $NO_x$ emissions. Operational-source $NO_x$ emissions exceedances otherwise occurring under the Project would however remain significant and unavoidable.

### 1.10.6 Environmentally Superior Alternative

For the purposes of CEQA, the EIR Alternatives Analysis has identified the Reduced Intensity Alternative as the environmentally superior alternative. Please refer also to EIR Section 5.3 for the complete Alternatives Analysis.

## 1.11 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1.11-1 summarizes potential impacts resulting from implementation and operations of the Project. The impacts identified at Table 1.11-1 correspond with environmental topics and impacts discussed at EIR Section 4.0, *Environmental Impact Analysis*. Table 1.11-1 also lists measures proposed to mitigate potentially significant environmental impacts of the Project, and indicates the level of significance after application of proposed mitigation.

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| ***4.1 Traffic and Circulation*** | | | |
| 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. | **Existing Conditions**<br>Less-Than-Significant<br><br>**Opening Year Conditions**<br>Potentially Significant | *4.1.1 Prior to the issuance of building permits, the Project Applicant shall pay requisite fees toward the construction of Year 2020 improvements as indicated at following Table 4.1-9 and summarized at Table 4.1-12 and illustrated at Figure 4.1-9 at the conclusion of this Section.* | **Cumulatively Significant and Unavoidable.** |
| Conflict with an applicable congestion management program, including, but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. | Potentially Cumulatively Significant at Study Area Intersection No.'s 1 and 2. | *Please refer to previous Mitigation Measure 4.1.1.* | **Cumulatively Significant and Unavoidable.** |
| Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). | Less-Than-Significant | No mitigation is required | Not Applicable |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| 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. | Less-Than-Significant | No mitigation is required | Not Applicable |
| ***4.2 Air Quality*** | | | |
| Conflict with or obstruct implementation of the applicable air quality plan. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Violate any air quality standard or contribute substantially to an existing or projected air quality violation. | Potentially Significant (Exceedance of SCAQMD regional thresholds for VOC and NOx during construction. Additionally, Project operational-source NOx emissions would exceed applicable SCAQMD regional thresholds.)<br><br>Potentially Significant ($PM_{10}$ emissions concentrations) | *4.2.1 The following requirements shall be incorporated into Project plans and specifications in order to ensure implementation of SCAQMD Rule 403 and limit fugitive dust emissions:*<br>• *All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour;*<br>• *The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project site are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day; and*<br>• *The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 miles per hour or less.*<br><br>*4.2.2 Grading plans shall reference the requirement that a sign shall be posted on-site stating that* | Construction-source emissions: Less-Than-Significant. Implementation of Mitigation Measures 4.2.1 through 4.2.4 would reduce Project construction-source air pollutant emissions in aggregate, and in so doing would also achieve SCAQMD regional thresholds for VOC and NOx.<br><br>Operational-source emissions: Even after implementation of the Mitigation Measures 4.2.5, Project operational-source NOx emissions exceedances would persist. Individually and cumulatively, these are significant and unavoidable air quality impacts. |

**Table 1.11-1**
**Summary of Impacts and Mitigation**

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| | | *construction workers need to shut off engines at or before five minutes of idling. This requirement is based on the California Air Resources Board regulation in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations, which imposes a requirement that heavy duty trucks not idle for greater than five (5) minutes at any location.*<br><br>4.2.3 *All off-road diesel-powered construction equipment ≥ 150 hp shall meet California Air Resources Board (CARB) Tier 4 emission standards.*<br><br>4.2.4 *Only "Zero-Volatile Organic Compounds" paints (no more than 50 grams/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.*<br><br>4.2.5 *The following requirements shall be incorporated into Project plans and specifications:*<br>• *Any gasoline-powered cargo-handling equipment shall be equipped with catalytic converters.*<br>• *Install signs stating that the idling of trucks shall not exceed three minutes.*<br>• *Provide preferential parking locations for EVs, CNG vehicles, and carpool/vanpool vehicles.* | With application of Mitigation Measures 4.2.1 through 4.2.3, Project construction-source LST impacts would be less-than-significant. |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| Expose sensitive receptors to substantial pollutant concentrations. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| ***Cumulative Air Quality Impacts*** | | | |
| 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. | Potentially Cumulatively Significant | Please refer to previous Mitigation Measure 4.2.5. | **Cumulatively Significant.** Mitigation Measure 4.2.5 would reduce Project-source air pollutant emissions, including NOx emissions, to the extent feasible. The Project would also comply with all applicable SCAQMD Rules and would be required to comply with development standards and energy efficiency performance standards established by the City of Moreno Valley. |
| ***4.3 Global Climate Change and Greenhouse Gas Emissions*** | | | |
| Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. | Potentially Significant | Please refer to previous discussion of GHG emissions reduction attributes and programs incorporated in the Project. No further feasible measures are available that would substantively mitigate the Project's operational-source GHG emissions. | **Significant and Unavoidable.** |
| Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. | Potentially Significant | Please refer to previous discussion of GHG emissions reduction attributes and programs incorporated in the Project. No further feasible measures are available that would substantively mitigate the Project's operational-source GHG emissions. | **Significant and Unavoidable.** |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| ***4.4 Noise*** | | | |
| Construction activities and associated noise would result in 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. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Construction activities and associated noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Construction activities and associated noise would 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 | No mitigation is required. | Not Applicable |
| Vehicular-source noise would result in exposure of persons to, or generation of, noise levels in excess of standards established in the City's General Plan or Noise Ordinance, or other applicable standards of other agencies. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Vehicular-source noise would 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 | No mitigation is required. | Not Applicable |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| Vehicular-source noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Project operational noise would result in exposure of persons to, or generation of, noise levels in excess of standards established in the City's General Plan or Noise Ordinance. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Project operational noise would 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 | No mitigation is required. | Not Applicable |
| Project operational noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| 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, expose people residing or working in the Project area to excessive noise levels. | Less-Than-Significant | No mitigation is required. | Not Applicable |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| ***4.5 Hazards/Hazardous Materials*** | | | |
| Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. | Potentially Significant | *4.5.1 All plans, construction documents, and contracts shall contain the following or similar language: Contractors and developers are advised that underground Transite pipelines may be encountered within the Project site. If encountered, these features shall be documented and evaluated by a licensed environmental hazards remediation consultant/contractor. A final report of Transite pipe hazards encountered (if any) and associated remedial actions (if any) shall be submitted to the City. Abatement/disposal of asbestos resulting from removal of Transite pipelines shall be accomplished as detailed at EIR Section 4.5.4, Hazardous Waste Handling.* | Less-Than-Significant |
| Result in a safety hazard for people residing or working in the project area 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, or within the vicinity of an airstrip. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| ***4.6 Hydrology and Water Quality*** | | | |
| Violate any water quality standards or waste discharge requirements. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| 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 | Less-Than-Significant. Mitigation Measures 4.6.1 and 4.6.2 are incorporated to ensure | *4.6.1 Prior to grading plan approval and the issuance of a grading permit by the City of Moreno Valley, the Project Applicant shall provide evidence to the City that a notice of intent (NOI) has been filed with the* | Less-Than-Significant |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| the rate or amount of surface runoff in a manner which would result in flooding or substantial erosion or siltation on- or off-site; or create or contribute runoff water which would exceed the capacity of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality. | timely monitored compliance with Project SWPPP, WQMP, NPDES, and SARWQCB requirements. | *Regional Water Quality Control Board for coverage under the State NPDES General Construction Permit for discharge of stormwater associated with construction activities. The SWPPP shall identify Best Management Practices (BMPs) intended to prevent the release of sediment and pollutants into downstream waterways. Examples of construction BMPs to be incorporated in the Project include, but are not limited to, the following:*<br>• *Silt Fences;*<br>• *Check Dams;*<br>• *Gravel Bag Berms;*<br>• *Street Sweeping and Vacuuming;*<br>• *Sand Bag Barriers;*<br>• *Storm Drain Inlet Protection;*<br>• *Wind Erosion Control;*<br>• *Stabilized Construction Entrance/Exit; and*<br>• *Entrance/Outlet Tire Wash.*<br><br>*Post-construction BMPs to reduce sediments and other pollutants include, but are not limited to, the following:*<br>• *Providing permanent cover to stabilize the disturbed surfaces after construction has been completed;*<br>• *Incorporating structural BMPs (e.g., grease traps, debris, screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the Project's design to provide detention and filtering of contaminants in urban runoff prior to discharge to stormwater facilities;* | |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| | | • *Precluding non-stormwater discharges to the stormwater system; and*<br>• *Performing monitoring of discharges to the stormwater system.*<br><br>*4.6.2 Prior to the issuance of grading permits, the Project Applicant shall submit a final Water Quality Management Plan (WQMP) to the City of Moreno Valley. The WQMP shall identify Best Management Practices (BMPs) addressing all post-construction pollutant discharges. Examples of BMPs included in the Project's Preliminary WQMP include the following:*<br><br><u>Source Control/Non-Structural BMPs</u><br>• *Education of property owners, operators, tenants, occupants, or employees;*<br>• *Street Sweeping of Private Streets and Parking Lots;*<br>• *Drainage facility inspection and maintenance;*<br>• *Roof Runoff Controls;*<br>• *Efficient Irrigation;*<br>• *Protection of Slopes and Channels;*<br>• *Storm Drain stenciling and signage;*<br>• *Trash Storage Areas and Litter Control;*<br>• *Irrigation system and landscape maintenance; and*<br>• *Loading dock drainage controls.*<br><br><u>Site Design/Structural BMPs</u><br>• *Maximize permeable areas;*<br>• *Minimize street, sidewalk, and parking lot aisle* | |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| | | *widths;*<br>• *Maintain natural drainage patterns;*<br>• *Incorporate drought-tolerant landscaping;*<br>• *On-site ponding areas or retention facilities to increase opportunities for infiltration;*<br>• *Convey roof runoff to landscaping/permeable areas prior to discharge to storm drains;*<br>• *Drain sidewalks and walkways to adjacent landscaped areas; and*<br>• *Integration of landscaping and drainage designs.* | |
| ***4.7 Biological Resources*** | | | |
| Substantially affect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) or United States Fish and Wildlife Service (USFWS). | Potentially Significant (impacts to nesting birds and the burrowing owl). | *4.7.1 To avoid impacts to nesting birds and to comply with the federal Migratory Bird Treaty Act of 1918 (MBTA):*<br>• *If possible, all vegetation removal activities shall be scheduled from August 1 to February 15, which is outside the nesting season. This would ensure that no active nests would be disturbed and that removal could proceed rapidly.*<br>• *If vegetation is to be cleared during the nesting season (February 15 – July 31), all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist 72 hours prior to clearing. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 50-foot buffer and up to 300 feet for raptors, with the final buffer distance to be determined by the qualified* | Less-Than-Significant |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| | | *biologist. The buffer area shall be avoided until the nesting cycle is complete or it is determined that the nest has failed. In addition, the biologist will be present on the site to monitor the vegetation removal to ensure that any nests, which were not detected during the initial survey, are not disturbed.*<br><br>*4.7.2 Within 30 days prior to grading, a qualified biologist shall conduct a Project site survey and make a final determination regarding the presence or absence of the burrowing owl. The determination shall be documented and shall be submitted, reviewed, and accepted by the City of Moreno Valley Planning Division prior to the issuance of a grading permit. Survey documentation shall incorporate following provisions:*<br><br>• *In the event that the pre-construction survey identifies no burrowing owls on the property, a grading permit may be issued without restriction.*<br><br>• *In the event that the pre-construction survey identifies the presence of burrowing owl(s,) the Applicant shall implement incumbent CDFW burrowing owl mitigation protocols.* | |
| Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or California plans, policies or | Less-Than-Significant | No mitigation is required. | Not Applicable |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| regulations or by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS); 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 wildlife nursery sites. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| ***4.8 Cultural Resources*** | | | |
| Cause a substantial adverse change in the significance of historic and archaeological resources as defined in §15064.5. | Less-Than-Significant | No mitigation is required. | Not Applicable |
| Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. | Potentially Significant | *4.8.1 Any excavation exceeding five feet below the current grade shall be monitored by a qualified paleontological monitor. If older alluvial deposits are encountered in shallower contexts, monitoring should be initiated once these deposits area encountered. The paleontological monitoring program should follow the local protocols of the* | Less-Than-Significant |

## Table 1.11-1
## Summary of Impacts and Mitigation

**General Note:** *To facilitate coordination and effective implementation of mitigation measures, the mitigation measures provided herein shall appear on all grading plans, construction specifications, and bid documents. Incorporation of required notations shall be verified by the City prior to issuance of first development permit.*

| Impact | Level of Significance Without Mitigation | Mitigation Measures | Level of Significance With Mitigation |
|---|---|---|---|
| | | *Western Center (Hemet) and a paleontological monitoring plan should be developed prior to the ground altering activities. The extent and duration of the monitoring can be determined once the grading plan is understood and approved.* | |
| Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074. | Potentially Significant | *4.8.2 If previously unidentified prehistoric/Native American resources are identified, a qualified archaeologist must be notified and, in consultation with the local Native American representative(s), be recovered and analyzed in accordance with CEQA guidelines, and curated at the University of California, Riverside, Archaeological Research Unit; the Western Center; or with the appropriate Native American repository (e.g., Pechanga facility in Temecula). In addition, an archaeological monitoring program should be initiated and continued until the archaeological consultant concludes the program is no longer necessary.* | Less-Than-Significant |

# 2.0 INTRODUCTION

# 2.0 INTRODUCTION

## 2.1 OVERVIEW

This Draft Environmental Impact Report (Draft EIR, DEIR, EIR) evaluates and discloses potential environmental impacts of the proposed Indian Street Commerce Center (the Project). In summary, the Project proposes approximately 446,350 square feet of light industrial uses within an approximately 19.64-acre site. As currently proposed, 347,080 square feet of the Project building area would be allocated for distribution warehouse uses; 89,270 square feet would be assigned to manufacturing uses; and 10,000 square feet would be assigned to office uses. The Project is further described at Draft EIR Section 3.0, *Project Description*.

An EIR is an informational document intended to apprise decision-makers and the general public of potentially significant environmental impacts of a project. An EIR also proposes mitigation to preclude or minimize significant impacts, and describes reasonable alternatives to the Project that may also reduce or avoid significant impacts. Having the authority to take action on the Project, the City of Moreno Valley will consider the information in this EIR in their evaluation of the proposal. Findings and conclusions of the EIR do not control the City's discretion to approve, deny, or modify the Project, but instead are presented as information to aid the decision-making process.

## 2.2 AUTHORIZATION

This EIR has been prepared by the City of Moreno Valley pursuant to *Guidelines for the Implementation of the California Environmental Quality Act (Guidelines)*, (§§ 15000–15387, California Code of Regulations). The proposed Indian Street Commerce Center is a "project," as defined at § 15378 of the *Guidelines*. The *Guidelines* stipulate that an EIR must be prepared for any project that may have a significant impact on the environment. The City has determined that the Project may have one or more

significant impacts on the environment and, therefore, the preparation of an EIR is required.

## 2.3 LEAD AND RESPONSIBLE AGENCIES

CEQA defines a "lead agency" as the public agency which has the principal responsibility for carrying out or approving a Project which may have a significant effect upon the environment. Other agencies, e.g., the California Department of Transportation (Caltrans), the South Coast Air Quality Management District (SCAQMD) or the Regional Water Quality Control Board (RWQCB), which also have some authority or responsibility to issue permits for Project implementation, are designated as "responsible agencies." Both the lead agency and responsible agencies must consider the information contained in the EIR prior to acting upon or approving the Project. The City of Moreno Valley is the Lead Agency for the Project. Contact information for the Lead Agency is presented below.

**Lead Agency:** City of Moreno Valley, Community Development Department
14177 Frederick Street
Moreno Valley, CA 92552

**Contact:** Julia Descoteaux, Associate Planner
Phone: (951) 413-3209
Email: juliad@moval.org

## 2.4 PROJECT APPLICANT

Contact information for the Project Applicant is presented below.

**Applicant:** Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612
Phone: (949) 756-5959

**Contact:** Patrick Russell, Senior Vice President, Commercial Development

## 2.5 THE EIR PROCESS

When a public agency determines that there is substantial evidence that a Project may have a significant effect on the environment, the agency must prepare an EIR before a decision is made to approve or deny the Project. The purpose of the EIR is to disclose a project's potential environmental impacts and recommend measures to reduce or avoid significant impacts. The basic content of an EIR includes: a description of the project under consideration and its objectives; a description of the existing environmental conditions; a discussion of the potentially significant environmental effects of the project; recommended measures for reducing these effects; and identification and evaluation of feasible alternatives to the project which may also reduce potentially significant impacts of the proposal.

Typically, EIRs consist of two documents: a Draft EIR, distributed by the lead agency for review and comment by the general public and any interested governmental agencies; and a Final EIR, which consists of responses to comments received on, together with any necessary modifications to, the Draft EIR. After the Draft EIR has been circulated for review and the Final EIR has been prepared, the EIR must be certified by the lead agency as having complied with CEQA and considered by the agency's decision-making body before any action can be taken on a project.

When a public agency receives a complete project application or decides to undertake a project of its own, it first determines if the project is subject to environmental review under CEQA and, if it is, the agency then typically prepares an Initial Study (IS) to determine if the project under consideration has the potential to cause significant adverse environmental effects. The IS serves as a tool to help the agency determine if an EIR is required, and if so, the focal issues to be examined in the EIR. The lead agency may skip the Initial Study process if it is evident that a project could result in significant environmental effects and that an EIR will be required.

The EIR process is initiated by the distribution of a Notice of Preparation (NOP). Together with the Initial Study (if prepared), the NOP is sent to agencies and interested

individuals as notice of commencement of the EIR process, and to solicit their suggestions for appropriate EIR issues and topical analyses. The completed Draft EIR is then circulated to responsible agencies, other affected or interested agencies, and interested members of the public for review and comment. The review period for a Draft EIR is typically 45 days. To provide for appropriate consideration and inclusion in the Final EIR, all comments and concerns regarding the Draft EIR should be received by the lead agency during this 45-day period.

Responses to comments received on the Draft EIR are prepared by the lead agency and included in the Final EIR. The Final EIR may also contain additional information about the project's potential impacts and minor corrections or modifications to the Draft EIR. The Final EIR must be certified by the lead agency's decision-making body before, or in conjunction with, any action to approve a project. Customarily, EIR certification coincides with City Planning Commission and/or City Council public hearing(s).

CEQA requires that the EIR address only significant adverse impacts. The *CEQA Guidelines* suggest thresholds or standards which define the significance of various types of impacts. The *CEQA Guidelines* also state that the significance of impacts should be considered in relation to their severity and probability of occurrence. However, ultimately, the determination of the significance of impacts is at the discretion of the lead agency. The identification of significant impacts in the EIR does not prevent an agency from approving a project. A project may be approved if the lead agency determines that impacts cannot be feasibly mitigated below a level of significance and if the agency determines that there are important overriding considerations, such as social and economic benefits, which are sufficient to justify approval of the considered project.

## 2.6 EIR CONTENT AND FORMAT

This Draft EIR is organized into seven Chapters or Sections, each addressing a separate aspect of the required content of an EIR as described in the *Guidelines*. A summary of the Project's impacts and recommended mitigation measures is provided at Chapter 1.0. An introduction and general overview of the environmental process and the format of this EIR are presented in this Chapter 2.0. Chapter 3.0 contains a complete description of the Project, including its location, objectives, and physical and operational characteristics. The complete and detailed environmental impact analysis is presented at Chapter 4.0. The topical issues mandated by CEQA dealing with cumulative impacts, alternatives, long-term implications of the Project, and energy conservation are found at Chapter 5.0. Chapter 6.0 lists and defines the acronyms and abbreviations contained in this document. Chapter 7.0 lists the information sources and persons consulted during the environmental analysis process, and presents a list of the persons who prepared the Draft EIR. The Initial Study and responses to the NOP, with supporting technical studies, are appended to the body of the EIR document.

Chapter 4.0, *Environmental Impact Analysis*, is the focal component of the Draft EIR. The environmental impact analysis has been organized into a series of sections, each addressing an environmental topic or area of concern identified through the Initial Study process (e.g., Land Use and Planning, Traffic and Circulation, Air Quality, Noise, etc.). To assist the reader in understanding the organization and basis of the analysis, the sections covering each individual environmental topic are typically divided into the following subsections:

- **Reader's Abstract:** An introductory reader's abstract, summarizing content and findings, is provided at the beginning of each topical section.

- **Introduction:** The introduction summarizes the content of the section and references other important studies and reports, such as technical studies appended to the EIR.

- **Setting:** This subsection describes baseline environmental conditions which may be subject to change as a result of implementation of the Project. Separate descriptions of existing environmental conditions are provided for each environmental topic.

- **Existing Policies and Regulations:** Various relevant policies, regulations, and programs related to the environmental topic are briefly described. Often, these existing policies and regulations serve to reduce or avoid potential environmental impacts.

- **Standards (Thresholds) of Significance:** Before potential impacts are evaluated, the standards which will serve as the basis for judging significance are presented.

- **Potential Impacts and Mitigation Measures:** This subsection states and explains potential impacts caused by the Project. Based on the standards of significance, impacts are categorized as either potentially significant or less-than-significant. If the impacts are considered to be potentially significant, mitigation measures are proposed to reduce the impacts. At the conclusion of each discussion for a potentially significant impact, a determination is made as to whether the impact can be reduced to a less-than-significant level with the application of proposed mitigation measures. Impacts that cannot be reduced to levels that are less-than-significant are identified as "significant and unavoidable."

The summary presented at Chapter 1.0 provides a comprehensive overview of the Project's impacts. For a more detailed description of Project impacts, it is recommended that the reader review the Project description (Chapter 3.0), and then read the sections on the topics of interest in the environmental impact analysis (Chapter 4.0).

## 2.7 INTENDED USE OF THIS EIR

This EIR addresses the potential environmental effects of the implementation and operation of the proposed Indian Street Commerce Center Project. The City of Moreno Valley (City) is the Lead Agency for the purposes of CEQA because it has the principal responsibility and authority for deciding whether or not to approve the Project, and how it will be implemented. As the Lead Agency, the City is also responsible for preparing environmental documentation for the Project in compliance with CEQA.

The Lead Agency will employ this EIR in its evaluation of potential environmental impacts resulting from, or associated with, approval and implementation of the Project, to include potential effects of the Project's component elements. This EIR will also be used by various Responsible Agencies, e.g., Air Quality Management District(s), California Department of Transportation, Regional Water Quality Control Board(s), *et al*.; as well as utilities and service providers when such entities issue permits necessary to carry out the project. For example, if this EIR and/or its Mitigation Measures require encroachment permits from Caltrans, this EIR will serve as the environmental assessment for such improvements. (Please refer to California Code of Regulations, sections 15050 and 15162.)

In employing this EIR, the City and other agencies need recognize that Project plans and development concepts identified herein are just that, plans and concepts which are subject to refinement as the Project is further defined. Recognizing the potential for these future minor alterations to the Project, this EIR in all instances evaluates likely maximum impact scenarios that would account for these minor alterations. These refinements and/or minor revisions to development proposals do not typically warrant modified or revised environmental documentation. Notwithstanding, at the discretion and direction of the City, substantive modifications to the Project described herein may warrant additional environmental evaluation.

## 2.8 DOCUMENTS INCORPORATED BY REFERENCE

Section 15150 of the *Guidelines* permits and encourages an environmental document to incorporate, by reference, other documents that provide relevant information. The documents summarized below are incorporated by reference, and the pertinent material is summarized throughout this EIR, where that information is relevant to the analysis of potential impacts of the Project. All documents incorporated by reference are available for review at, or can be obtained through, the City of Moreno Valley Community Development Department. Technical studies cited below were specifically developed in conjunction with the Project, and are appended to the body of the Draft EIR.

### 2.8.1 City of Moreno Valley General Plan

The City of Moreno Valley General Plan (General Plan) establishes Goals and Policies and provides guidance for future development of the City. The General Plan, which was adopted in 2006, incorporates and relies upon its Implementation Plan to provide the guidance necessary for successful implementation of General Plan Goals and Policies.

The General Plan includes seven elements: "Community Development"; "Economic Development"; "Parks, Recreation and Open Spaces"; "Circulation"; "Safety"; "Conservation"; and "Housing." All proposed development projects (inclusive of the Project) are evaluated for consistency with the intent and purpose of the applicable General Plan land use designation(s) and related General Plan Goals, Policies and Implementation Plan actions. Physical development within the General Plan Area will be shaped by the General Plan's Goals, Policies and Programs integral to each of the General Plan Elements.

### 2.8.2 City of Moreno Valley Municipal Code

The City of Moreno Valley Municipal Code (Municipal Code) codifies and complements the City General Plan. The Municipal Code, in effect, provides the mechanism to implement and enforce the goals, objectives, policies and programs articulated in the General Plan. Many of the potential environmental concerns

considered in this EIR are adequately addressed through application of existing guidelines and regulations contained in the Municipal Code.

### 2.8.3 Project Technical Studies/EIR Appendices

Following are summary descriptions of documents and supporting technical studies which are appended to the main body of the Draft EIR. Working titles of these documents generically refer to the Project and its physical attributes, and may not necessarily reflect the currently assigned "Indian Street Commerce Center" development title.

#### 2.8.3.1 Initial Study, NOP, and NOP Responses - EIR Appendix A

The EIR Initial Study (IS), Notice of Preparation (NOP) and responses received pursuant to distribution of the IS/NOP are presented at EIR Appendix A. Based on the Initial Study and responses to the NOP, this EIR addresses the following environmental topics:

- Air Quality;
- Biological Resources;
- Cultural Resources/Tribal Cultural Resources;
- Greenhouse Gas (GHG) Emissions/Global Climate Change;
- Hazards and Hazardous Materials;
- Hydrology/Water Quality;
- Noise; and
- Transportation/Traffic.

#### 2.8.3.2 Traffic Impact Analysis - EIR Appendix B

The detailed evaluation of Project-related traffic/transportation impacts is documented in the *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 29, 2016 (TIA). Project-related traffic issues have been evaluated within the TIA in the context of the California Environmental Quality Act (CEQA) and as directed by the City of Moreno Valley. The TIA also reflects and incorporates

guidance provided by the California Department of Transportation, District 8 (Caltrans District 8). Additionally, a freeway segment impact analysis has been prepared for the Project pursuant to protocols and methodologies, as outlined in Caltrans District 8 *Guide for the Preparation of Traffic Impact Studies*. The Project freeway segment analysis is provided in *Indian Street Commerce Center Supplemental Basic Freeway Segment Analysis* (Urban Crossroads, Inc.) April 27, 2016.

#### 2.8.3.3 Air Quality Impact Analyses - EIR Appendix C

Air quality impact analyses prepared for the Project include: *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016; and *Indian Street Commerce Center Mobile Source Diesel Health Risk Assessment, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

#### 2.8.3.4 Greenhouse Gas Analysis - EIR Appendix D

Detailed analysis of the Project's potential Greenhouse Gas and Global Climate Change impacts are presented in *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

#### 2.8.3.5 Noise Impact Analysis - EIR Appendix E

Potential noise impacts of the Project, including construction-source and operational-source noise impacts are assessed within *Indian Street Commerce Center Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

#### 2.8.3.6 Environmental Site Assessment - EIR Appendix F

An assessment of potential hazards associated with historic use of the Project site; and the potential for hazardous materials to currently exist within or proximate to the Project site is provided in: *Phase I Environmental Site Assessment (Phase I ESA), 17845 Indian Street, Moreno Valley, California* (Ardent Environmental Group, Inc.) July 15, 2015 and *Results of Pesticide and Herbicide Sampling, 17845 Indian Street, Moreno Valley, California* (Ardent Environmental Group, Inc.) July 13, 2016.

#### 2.8.3.7 Stormwater Management - EIR Appendix G

Drainage and stormwater runoff water quality considerations are evaluated and addressed in: *Preliminary Hydrology Report for Moreno Valley Vogel Industrial [Indian Street Commerce Center Project]* (Huitt-Zollars, Inc.) Revised July 7, 2016 (Project Drainage Study); and *Project Specific Water Quality Management Plan for Moreno Valley Vogel Industrial [Indian Street Commerce Center Project]* (Huitt-Zollars, Inc.) Revised March 29, 2016 (Project WQMP).

#### 2.8.3.9 Biological Resources Assessment - EIR Appendix H

Biological resources potentially affected by the Project are assessed in: *Biological Property Evaluation for Sensitive Biological Resources for a Proposed Project Located at 17845 Indian Street Located in the City of Moreno Valley, Riverside County, California* (Michael Baker International) August 21, 2015.

#### 2.8.3.10 Airport Compatibility Documentation- EIR Appendix I

The Project is located proximate to March Air Reserve Base/Inland Port Airport (March ARB/IPA). Documentation provided at EIR Appendix I substantiates Project compatibility with March ARB/IPA facilities and operations.

#### 2.8.3.11 Cultural Resources Investigation

A cultural resources investigation was also prepared for the Project: *A Phase I Cultural Resources Survey for the Proposed Commercial Development (Approximately 20 Acres) in the City of Moreno Valley, Riverside County, California* (McKenna et al.) February 21, 2016.

Due to the relative sensitivity of archaeological and historic sites to disturbance, cultural resource reports which identify the locations of potential resources are generally not circulated publicly. A copy of the Phase I Cultural Resources Investigation may, however, be reviewed at the City of Moreno Valley Community Development Department.

# 3.0 PROJECT DESCRIPTION

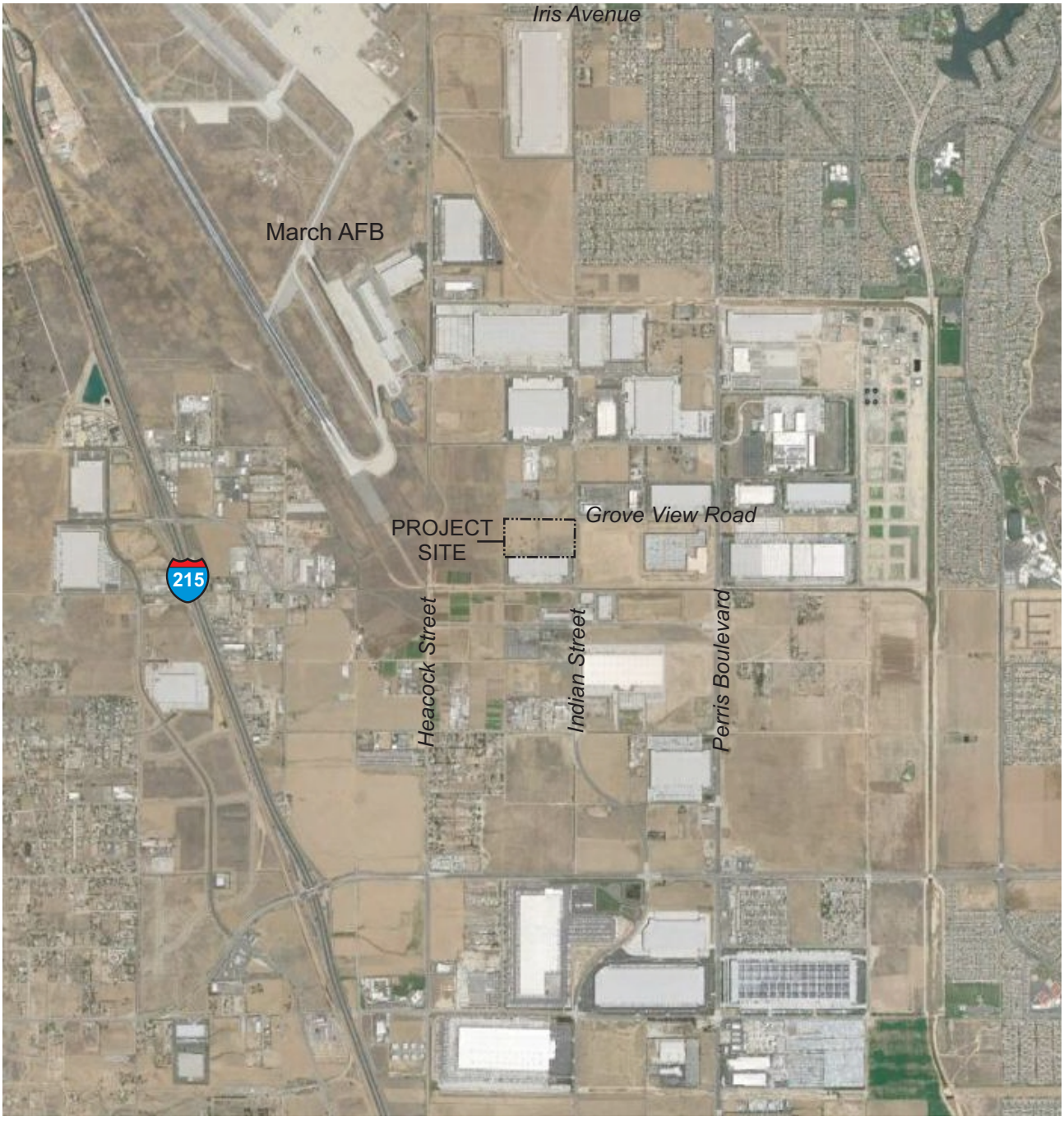
# 3.0 PROJECT DESCRIPTION

## 3.1 OVERVIEW

The proposed Indian Street Commerce Center Project (Project), including all facilities proposed within the Project site, on- and off-site supporting improvements, and associated discretionary actions, is the Project considered in this EIR. In summary, the Project proposes approximately 446,350 square feet of light industrial uses within an approximately 19.64-acre site. As currently proposed, 347,080 square feet of the Project building area would be allocated for distribution warehouse uses; 89,270 square feet would be assigned to manufacturing uses; and 10,000 square feet would be assigned to office uses. The Project does not include a refrigerated/cold storage component.

## 3.2 PROJECT LOCATION AND BOUNDARIES

The Project site is located in the southern portion of the City of Moreno Valley, in western Riverside County. The Project site is located approximately one-half mile westerly of Perris Boulevard and is bounded by Indian Street to the east. Grove View Road (alignment) comprises the Project site northerly boundary. March Air Force Base is located approximately one-third mile westerly of the Project site. Please refer to Figure 3.2-1, *Project Location*.

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NOT TO SCALE

Source: Google Earth; Applied Planning, Inc.

Figure 3.2-1
Project Location

## 3.3 EXISTING LAND USES AND LAND USE DESIGNATIONS

The following discussions summarize existing land use conditions in the Project vicinity and provide general context for the Project.

### 3.3.1 Existing Land Uses

Project site and vicinity land uses are denoted at Figure 3.3-1 and area land uses are described below. Representative photos of the Project site are presented at Figures 3.3-2 through 3.3-3.

#### 3.3.1.1 Project Site Land Use

The Project site is a roughly rectangular-shaped parcel, totaling 19.64 acres. The Project site address is 17845 Indian Street, Moreno Valley; the site comprises current Assessor's Parcel Numbers (APNs) 316-210-019; 316-210-020; 316-210-057; and 316-210-077. The Project site is essentially level, evidencing elevations generally ranging from 1,464 feet above mean sea level to approximately 1,468 feet MSL. The subject site is vacant and undeveloped and is devoid of notable topographic features or substantial terrain differentials.

The Project site is heavily disturbed by general human activities including routine weed abatement. The subject site is generally characterized as a disturbed field dominated by tumbleweed. A small number of ornamental pines and Chinaberry trees exist in the southwesterly portion of the Project site. Disturbance of the subject site and surrounding properties has reduced the suitability of any remaining habitat to support sensitive plant and wildlife species. Based on habitat requirements for specific species and the availability and quality of habitats needed by each sensitive plant species, it was determined that the Project site does not provide suitable habitat that would support any of the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS), or Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) listed plant species known to occur in the general vicinity of the Project site (Project Biological Report, pp. 2 - 3).


N

NOT TO SCALE

Source: Google Earth; Applied Planning, Inc.

applied planning inc

Figure 3.3-1
Existing Land Uses

**Photograph 1:** From the southwest corner of the project site, looking west.

**Photograph 3:** From the northern boundary of the project site looking south.

**Photograph 2:** Looking north at the eastern boundary of the project site.

**Photograph 4:** Looking southwest at the middle portion of the project site. The ornamental pines and Chinaberry trees are in the background.

Source: Michael Baker, International; Applied Planning, Inc.

applied planning inc

Figure 3.3-2
Site Photos

**Photograph 5:** From the western border of the project site looking east.

**Photograph 6:** Looking east at the ornamental pines located in the southwestern portion of the project site.

**Photograph 7:** From the southern border of the project site looking northeast.

**Photograph 8:** From the southeast corner of the project site looking west.

Source: Michael Baker, International; Applied Planning, Inc.

applied planning inc

Figure 3.3-3
Site Photos

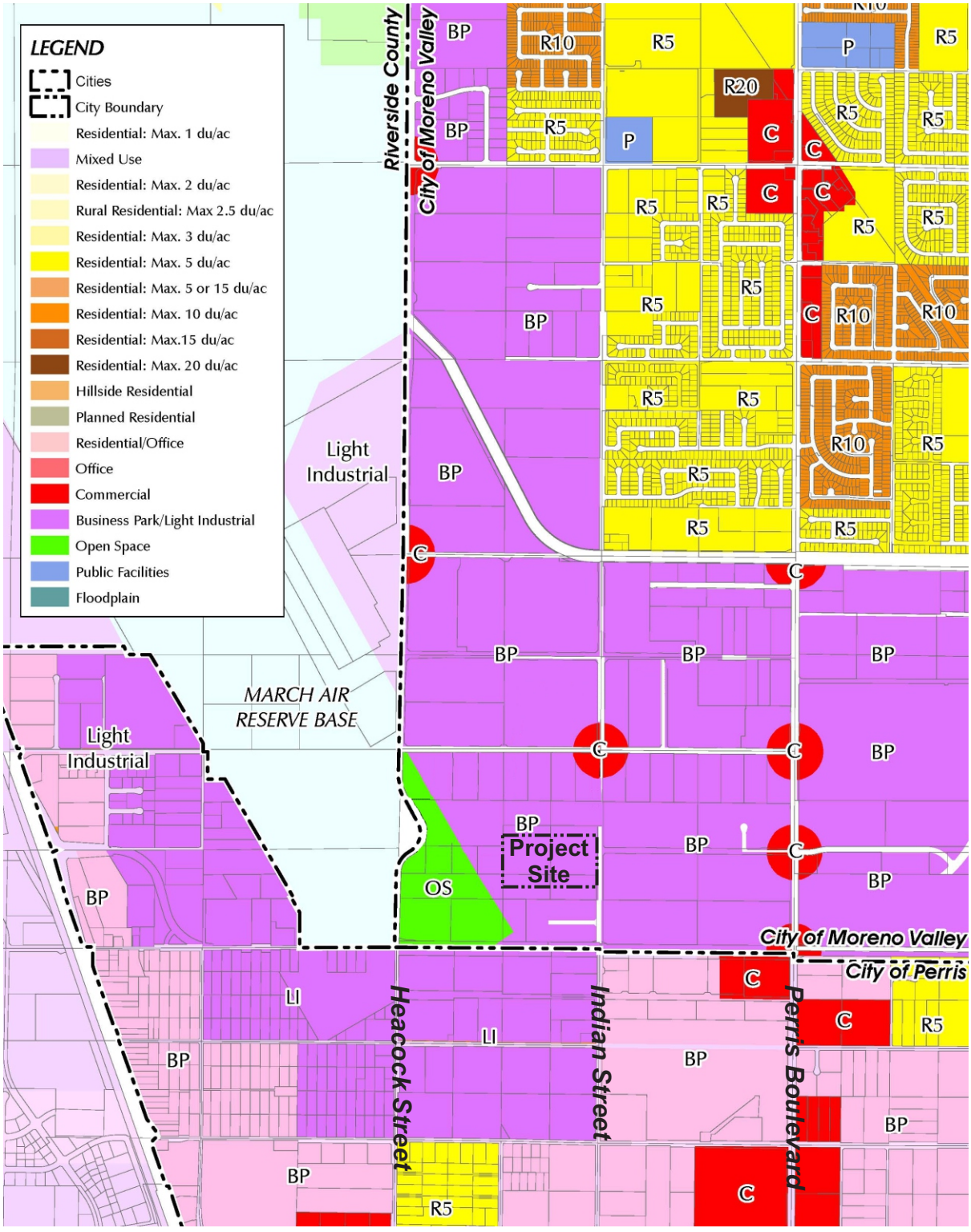
#### 3.3.1.2 Vicinity Land Uses

Northerly adjacent to the Project site, properties are currently vacant or evidence paved parking and storage areas. Easterly of the Project site across Indian Street, properties are vacant and undeveloped. Southerly adjacent to the Project site are distribution warehouse uses similar to those proposed by the Project. Properties westerly adjacent to the Project site are vacant and undeveloped.

### 3.3.2 Existing Land Use Designations

#### 3.3.2.1 General Plan Land Use

Existing General Plan Land Use and Zoning designations for the Project site and vicinity properties are depicted at Figures 3.3-4 and 3.3-5, respectively. The City of Moreno Valley General Plan Land Use Map designates the Project site as "Business Park/Light Industrial." As described in the General Plan, "[t]he primary purpose of areas designated Business Park/Industrial is to provide for manufacturing, research and development, warehousing and distribution, as well as office and support commercial activities. The zoning regulations shall identify the particular uses permitted on each parcel of land. Development intensity should not exceed a Floor Area Ratio [FAR] of 1.00 and the average floor area ratio should be significantly less . . ." (City of Moreno Valley General Plan, p. 9-7). Distribution warehouse uses implemented under the Project would total a maximum of approximately 446,350 square feet on approximately 19.64 acres, yielding a FAR of approximately 0.51. Properties adjacent to the Project site on all sides are also designated Business Park/Light Industrial. Approximately 500 feet westerly of the Project site properties are designated "Open Space," recognizing the Clear Zone (CZ) area established at the southerly terminus of the March Air Force Base runway(s).

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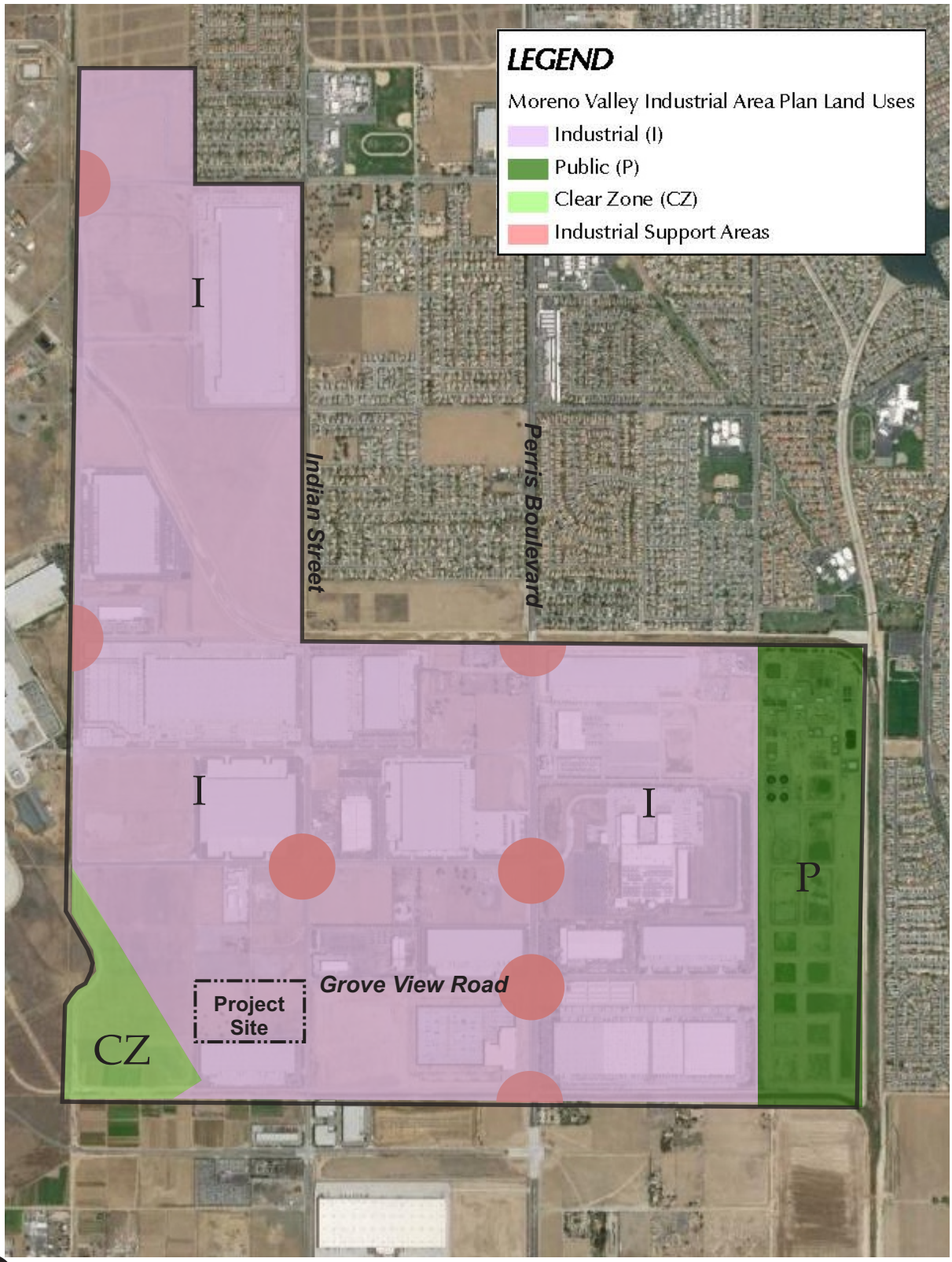
Source: T&B Planning; RCTLMA; Applied Planning, Inc.

Figure 3.3-4
General Plan Land Use Designations




Source: T&B Planning; RCTLMA; Google Earth; Applied Planning, Inc.

Figure 3.3-5
Existing Zoning Designations

#### 3.3.3.2 Zoning

Current zoning of the Project site and surrounding properties is established under Specific Plan 208 (SP 208), Moreno Valley Industrial Area Plan (MVIAP) (formerly the Oleander Specific Plan). SP 208 land uses, including the Project site, are designated *Industrial*. Development concepts and uses proposed by the Project are permitted or conditionally permitted under the site's current SP 208 Industrial zoning designation.

## 3.4 PROJECT ELEMENTS

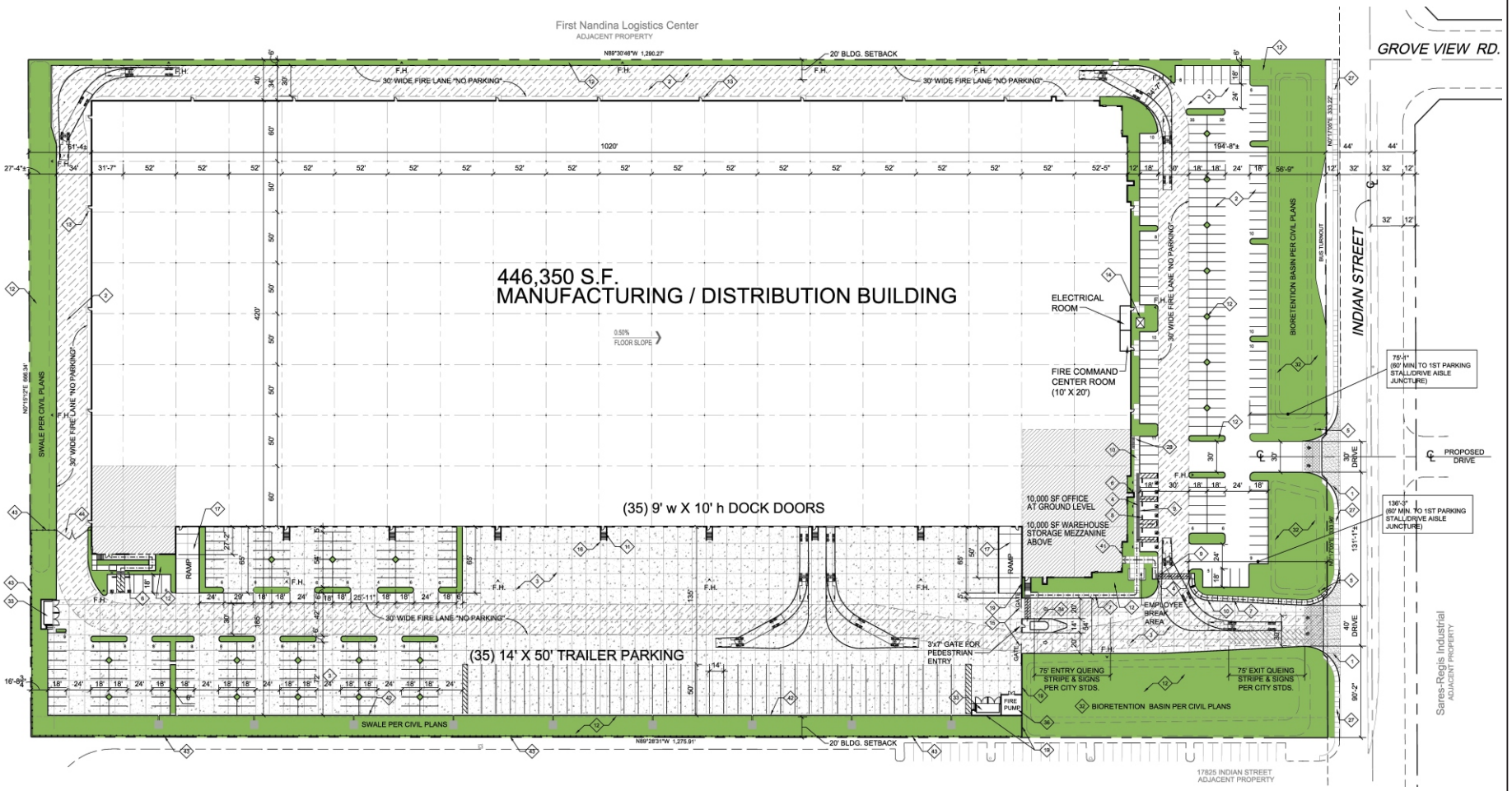
### 3.4.1 Site Preparation

The Project area would be grubbed, rough-graded, and fine-graded in preparation of building construction. Any debris generated during site preparation activities would be disposed of and/or recycled consistent with the City's Source Reduction and Recycling Element (SRRE). Existing grades within the Project site would be modified to establish suitable building pads and to facilitate site drainage. Allowing for varying soils characteristics, approximately 3,000 cubic yards of soil import/export may be required over the course of Project site preparation and construction.

### 3.4.2 Project Development Concept

The Project proposes approximately 446,350 square feet of light industrial uses within an approximately 19.64-acre site. As currently proposed, 347,080 square feet of the Project building area would be allocated for distribution warehouse uses; 89,270 square feet would be assigned to manufacturing uses; and 10,000 square feet would be assigned to office uses. Approximately 35 loading dock doors would be provided along the warehouse's southerly face.

The Project Site Plan Concept is presented at Figure 3.4-1. Final designs of the Project building will be realized consistent with industrial design requirements and standards of the encompassing Moreno Valley Industrial Area Plan and Municipal Code Section 9.05.040, "Industrial Site Development Standards."

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NOT TO SCALE

Source: Herdman Rierson Architecture + Design (August 2016); Applied Planning, Inc.

Figure 3.4-1
Site Plan

### 3.4.3 Access and Circulation

Under the Project Site Plan Concept, primary access to the Project would be provided by two driveways onto existing Indian Street along the site's easterly boundary. Both driveways would be STOP-controlled, and would allow left- and right- turn movements. The Project would also construct site-adjacent roadway improvements as presented in the Project TIA and summarized at EIR Section 4.2, *Transportation/Traffic.*

#### 3.4.3.1 Construction Traffic Management Plan

Temporary and short-term traffic detours and traffic disruptions could result during Project construction activities including implementation of access and circulation improvements noted above. Accordingly, the Project Applicant would be responsible for the preparation and submittal of a construction area traffic management plan (Plan) to be reviewed and approved by the City Public Works Department. Typical elements and information incorporated in the Plan would include but would not be limited to:

- **Name of on-site construction superintendent and contact phone number.**

- **Identification of Construction Contract Responsibilities** - For example for excavation and grading activities, describe the approximate depth of excavation, and quantity of soil import/export (if any).

- **Identification and Description of Truck Routes** - to include the number of trucks and their staging location(s) (if any).

- **Identification and Description of Material Storage Locations (if any).**

- **Location and Description of Construction Trailer (if any).**

- **Identification and Description of Traffic Controls** - Traffic controls shall be provided per the Manual of Uniform Traffic Control Devices (MUTCD) if the occupation or closure of any traffic lanes, parking lanes, parkways or any other

public right-of way is required. If the right-of-way occupation requires configurations or controls not identified in the MUTCD, a separate traffic control plan must be submitted to the City for review and approval. All right-of-way encroachments would require permitting through the City.

- **Identification and Description of Parking** - Estimate the number of workers and identify parking areas for their vehicles.

- **Identification and Description of Maintenance Measures** - Identify and describe measures taken to ensure that the work site and public right-of-way would be maintained (including dust control).

The Plan must be reviewed and approved by the City prior to the issuance of the building permit. The Plan and its requirements would also be required to be provided to all contractors as one component of building plan/contract document packages.

### 3.4.4 Landscape/Hardscape

The Project would incorporate perimeter and interior landscaping and streetscape elements, acting to generally enhance the Project's visual qualities. Proposed landscaping includes varied trees, shrubs, and ground cover. Design accents, including all landscape/hardscape designs and features are subject to City review and approval. Landscaping will also be provided within and adjacent to the Project retention/detention areas acting to screen and enhance these areas as well as provide treatment for stormwater runoff from the Project site. Final design of the Project's landscaping and hardscape are subject to the City's Design Review processes.

### 3.4.5 Walls/Screening

An approximately 50-foot wide, bermed landscape setback along Indian Street would be provided, acting to screen Project parking areas and generally enhance public views of the Project site. Additionally, a minimum 20-foot landscape setback/edge treatment along the Project's southerly boundary, and an approximately 25-foot wide landscape setback/edge treatment along the Project site westerly boundary would be provided, acting to further screen and enhance views of the Project site. Landscape setbacks and edge treatments would conform to applicable provisions of the MVIAP, and requirements stipulated at Municipal Code Section 9.05.040, "Industrial Site Development Standards."

Internal site features and appurtenances including but not limited to loading dock areas, trash collection areas, and utility pedestals/surface utility boxes, would also be screened.

All walls/screening elements would be designed and implemented consistent with applicable provisions of the encompassing Moreno Valley Industrial Area Plan, Municipal Code Section 9.08.150, "Screening Requirements," and Section 9.10.160, "Outdoor Storage, Trash Areas, and Service Areas."

Project screening elements, including all screening walls, would be architecturally compatible with other Project facilities. Final design of all proposed screening elements are subject to City Design Review and Approval processes.

### 3.4.6 Lighting

All Project lighting would be designed and implemented in a manner that precludes potential adverse effects of light overspill consistent with requirements of the MVIAP and as identified at City Municipal Code Section 9.10.110, "Light and Glare." Municipal Code Section 9.16.280, "Applications for Lighting, General Requirements," subsection A. states:

> Lighting serves both safety and aesthetic purposes, illuminating dark areas and providing for highlights and accents. Effective lighting would highlight building features, add emphasis to important spaces and create an ambience of vitality and security. The intent of these guidelines is to encourage effective and innovative lighting to be incorporated as an integral component of a project.

Potential light overspill, is addressed through Municipal Code Section 9.10.110, "Performance Standards, Light and Glare," and would be minimized through limited use of freestanding lighting and use of fixed and shielded directional wall-mounted fixtures. The Project lies within 45 miles of the Mt. Palomar Observatory, and would comply with applicable provisions of County of Riverside Ordinance 655 which addresses protection of the night sky from light pollution that would interfere with astronomical observations.

Final design of the Project lighting plan including locations, heights, and performance standards for all Project lighting features and fixtures is subject to the City's Design Review processes. Detailed lighting plans would be prepared in conjunction with building plan submittals, and would be subject to City Design Review and Approval processes prior to issuance of building permits.

### 3.4.7 Signs

Signs for the Project would be designed and implemented consistent with applicable provisions of the MVIAP and Municipal Code Section 9.12, "Sign Regulations." The Project Sign Program would provide detailed guidelines and requirements for facility and informational signs and other graphic displays within the Project area. The Sign Program would afford prospective tenants with the maximum possible exposure in a manner that is consistent with the encompassing Project design concept, and responsive to community visual and aesthetic sensibilities.

### 3.4.8 Parking

The City of Moreno Valley Municipal Code at Section 9.11.040 "Off-street parking requirements," Table 9.11.040C-12 [Industrial] *Off-Street Parking Requirements* specifies a parking ratio of one parking space for each 1,000 square feet of gross floor area in a warehouse/distribution building for the first 20,000 square feet; one additional space for each 2,000 square feet of floor area within the second 20,000 square feet; and one additional space for each 4,000 square feet of floor area for areas in excess of the initial 40,000 square feet. Additionally, one parking space is required for every 500 square feet of manufacturing uses; and one parking space is required for every 250 square feet of office uses. Pursuant to City parking requirements, the Project would be required to provide an estimated 323 parking spaces. The Preliminary Site Plan Concept provides 326 parking spaces (318 standard spaces, 8 ADA spaces); and 35 additional trailer spaces. No off-site parking is proposed, nor would it be required. Final design of parking areas would be as reviewed and approved by the City through the City's Design Review processes.

### 3.4.9 Infrastructure/Utilities

The Project site is served by existing mainline utilities services. Primary utilities services are described below.

#### 3.4.9.1 Water/Sewer Services

Water and sewer services would be provided to the Project by the Eastern Municipal Water District (EMWD). Water service extensions to the Project site from existing facilities located in the abutting Indian Street right-of-way would be realized during improvement of the surrounding street system. Sanitary sewer services to the Project would similarly be provided by connection to the existing sewer main located within Indian Street. Alignment of service lines, and connection to existing services would be as required by EMWD. Wastewater would be conveyed from the Project for treatment at the 300-acre Perris Valley Regional Water Reclamation Facility (PVRWRF).

#### 3.4.9.2 Stormwater Management Systems

The Project stormwater management systems comprehensively include proposed drainage improvements, and facilities and programs which act to control and treat stormwater pollutants. Under the preliminary Project Storm Water Management System concept, stormwater runoff from the developed Project site would be directed to on-site bio-retention basins and released in a controlled manner to the existing storm drains located within the Grove View Road and/or Indian Street rights-of-way.

The Project would implement a Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) consistent with City requirements. In this manner the Project would also comply with requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit and other water quality requirements or stormwater management programs specified by the Regional Water Quality Control Board (RWQCB). In combination, implementation of the Project SWPPP, WQMP, and compliance with NPDES Permit and RWQCB requirements acts to protect City and regional water quality by preventing or minimizing potential pollutant discharges to the watershed.

#### 3.4.9.3 Solid Waste Management

It is anticipated that Project-generated solid waste would be conveyed by Waste Management of the Inland Empire, to one of three nearby landfills. Solid waste generated by the Project, and related potential effects on landfill capacities, are minimized through compliance with requirements of the City's Source Reduction and Recycling Element (SRRE). In this regard, City SRRE programs and policies provide for a 50 percent target diversion rate for solid waste, thereby reducing solid waste conveyance and disposal demands.

#### 3.4.9.4 Electricity

Electrical service within the City is provided by Southern California Edison (SCE) and the Moreno Valley Electric Utility. The Moreno Valley Electric Utility (MVU) would provide service to the Project site. Existing overhead lines and poles along the Project's

easterly, Indian Street boundary would be converted to underground facilities and installed within the public right-of-way. New lines installed by the Project would be placed underground. Alignment of service lines and connection to existing services would be as required by the Moreno Valley Electric Utility. Any necessary surface-mounted equipment, such as transformers, meters, service cabinets, and the like, would be screened and would conform to building setback requirements.

It is further noted that to allow for, and facilitate Project construction activities, provision of temporary MVU electrical services improvements would be required. The scope of such temporary improvements are considered to be consistent with, and reflected within the total scope of development proposed by the Project. Similarly, impacts resulting from the provision of temporary MVU services would not be substantively different from, or greater than, impacts resulting from development of the Project in total.

#### 3.4.9.5 Natural Gas

Natural gas service would be provided by the Gas Company. Existing service lines would be extended to the Project uses. Alignment of service lines and connection to existing services would be as required by the Gas Company.

#### 3.4.9.6 Communications Services

Communications services, including wired and wireless telephone and internet services, are available through numerous private providers and would be provided on an as-needed basis. As with electrical service lines, all existing and proposed wires, conductors, conduits, raceways, and similar communications improvements within the Project area would be installed underground. Any necessary surface-mounted equipment, e.g., terminal boxes, transformers, meters, service cabinets, etc., would be screened and would conform to building setback requirements.

### 3.4.10 Energy Efficiency/Sustainability

Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project in total would provide sustainable design features necessary to achieve a "Certified" rating under the United States Green Building Council's Leadership in Energy & Environmental Design (LEED) programs. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City.

- All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

    - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

- Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy).[1] Development proposals within the Project site would also be required to implement the following:

  - Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

[1] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

## 3.5 PROJECT OPENING YEAR

The proposed Indian Street Commerce Center Project in total would be developed in a manner responsive to market conditions and in concert with availability of necessary infrastructure and services. The anticipated Project Opening Year is 2018.[2]

## 3.6 PROJECT OBJECTIVES

The primary goal of the Project is to develop high quality light industrial/business park uses accommodating a variety of prospective tenants. Complementary Project Objectives include the following:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs;
- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision;
- Provide adequate roadway and wet and dry utility infrastructure to serve the Project;
- Accommodate warehouse and manufacturing uses that are compatible with adjacent land uses;
- Provide an attractive, efficient and safe environment for warehouse uses that is cognizant of natural and man-made conditions;
- Accommodate a mix of warehouse and manufacturing uses responsive to current and anticipated market demands;
- Establish new development that would increase locally available employment opportunities and would further the City's near-term and long-range fiscal goals and objectives; and

[2] The anticipated Project Opening Year is 2018. Notwithstanding, consistent with City Traffic Impact Analysis (TIA) methodology requirements establishing a likely maximum cumulative traffic impact scenario, the Project opening year is assumed to occur a minimum of 5 years from existing (2015) conditions. Accordingly, the Project TIA reflects an assumed 2020 "opening year" condition.

- Establish new development that would increase locally available employment opportunities thereby improving jobs/housing balance within the City.

## 3.7 PROJECT DISCRETIONARY ACTIONS, PERMITS, CONSULTATIONS

Discretionary actions, permits and related consultation(s) necessary to approve and implement the Project include, but are not limited to the following.

### 3.7.1 Lead Agency Discretionary Actions and Permits

- **Certification of the EIR (City Case #P16-003).** The proposed development is a Project under CEQA, and may result in significant environmental impacts. Lead Agency certification of the Project EIR is required;

- **Plot Plan Review and Approval** to include Project design and architectural reviews;

- **Construction, grading, and encroachment permits** allowing implementation of the Project facilities within City of Moreno Valley jurisdictional areas; and

- **Vacation and/or dedication of public rights-of-way and easements** as elements of the proposed parcel map, or independent of the map. Rights-of-way and easements would provide public access, and ensure appropriate alignment of and access to infrastructure and utilities.

### 3.7.2 Other Consultation and Permits

*CEQA Guidelines* Section 15124 also states that the EIR should, to the extent known, include a list of all the agencies expected to use the EIR in their decision-making (Responsible Agencies, Trustee Agencies), and a list of other permits or approvals required to implement the Project. Based on the current Project design concept, anticipated permits necessary to realize the proposal would likely include, but are not limited to the following:

- Tribal Resources consultation with requesting Tribes as provided for under *AB 52, Gatto. Native Americans: California Environmental Quality Act*;

- Permitting may be required by/through the Regional Water Quality Control Board (RWQCB) pursuant to requirements of the City's National Pollutant Discharge Elimination System (NPDES) Permit;

- Permitting may be required by/through the South Coast Air Quality Management District (SCAQMD) for certain equipment or land uses that may be implemented within the Project area; and

- Various construction, grading, and encroachment permits allowing implementation of the Project facilities.

### 3.7.3 City Development Applications

In support of requested discretionary approvals and permits noted above, development applications submitted by the Project Applicant include:

- **Plot Plan** approval for the Project facilities; and

- **Tentative Parcel Map** approval to combine and reconfigure existing parcels comprising the Project site.

# 4.0 ENVIRONMENTAL IMPACT ANALYSIS

# 4.0 ENVIRONMENTAL IMPACT ANALYSIS

This chapter of the EIR analyzes and describes the potential environmental impacts associated with the adoption and implementation of the Indian Street Commerce Center Project (Project). The environmental impact analysis has been organized into a series of sections, each addressing a separate environmental topic. Environmental topics addressed in this EIR are presented in the following sections:

| Section | Topic |
|---|---|
| 4.1 | Transportation/Traffic |
| 4.2 | Air Quality |
| 4.3 | Global Climate Change/Greenhouse Gas Emissions |
| 4.4 | Noise |
| 4.5 | Hazards/Hazardous Materials |
| 4.6 | Hydrology and Water Quality |
| 4.7 | Biological Resources |
| 4.8 | Cultural Resources/Tribal Cultural Resources |

Within each of the above topical Sections, the discussion is typically divided into subsections which: summarize the findings of the section; present the framework for the discussion by listing the sources of information used in the section; describe the "setting" or existing environmental conditions; identify regulations and policies, which through their observance typically resolve many potential environmental concerns; identify thresholds of significance applicable to potential environmental effects of the Project; describe the significance of Project-related environmental effects in the context of applicable significance thresholds; and for impacts which are potentially significant or significant, recommend mitigation measures to eliminate or reduce their effects. In this latter regard, it is recognized that the intent of the California Environmental Quality

Act (CEQA) is to focus on significant, or potentially significant adverse effects of the Project, and therefore, mitigation is proposed only for potential impacts of this magnitude.

As noted above, before potential impacts are evaluated, the standards or thresholds which will serve as the basis for judging the relative significance of impacts are presented. Often thresholds serve as a general guide or gauge for determining an impact's potential relative significance, rather than defining its absolute effects. Subsequent to identification of relevant significance thresholds, potential Project-related effects and impacts are identified and explained. If an impact is considered to be potentially significant, mitigation measures are proposed to avoid the impact, or reduce its effects to the extent feasible. In determining the potential significance of impacts, the adequacy of existing policies and regulations in addressing each impact is taken into consideration. At the conclusion of each discussion for a potentially significant impact, a determination is made as to whether the impact can be reduced to a less-than-significant level with the application of mitigation measures.

In the environmental analysis, the following terms are used to describe the potential effects of the Project:

- **Less-Than-Significant Impacts**: Minor changes or effects on the environment caused by the Project which do not meet or exceed the criteria, standards, or thresholds established to gauge significance are considered to be less-than-significant impacts. Less-than-significant impacts do not require mitigation. In some cases, these impacts may appear to be potentially significant. However, existing public policies, regulations, and procedures adequately address these potential effects, thereby reducing them to a less-than-significant level, without the need for additional mitigation.

- **Potentially Significant Impacts**: Potentially significant impacts are defined as a substantial, or potentially substantial, adverse change in the environment. The CEQA Guidelines and various responsible agencies provide guidance for

determining the significance of impacts. However, the determination of impact significance is ultimately based on the judgment of the lead agency. Similarly, the establishment of any criteria to be used in evaluating the significance of impacts is the responsibility of the lead agency. Wherever possible, mitigation is proposed in the EIR to avoid or reduce the magnitude of potentially significant impacts.

- **Significant Impacts**: Impacts identified in the EIR which cannot be mitigated below thresholds of significance through the application of feasible mitigation measures are categorized as "significant."

- **Cumulative Impacts**: A discussion of cumulative impacts is provided in Section 5.0 of this environmental analysis. Cumulative impacts refer to the impacts of the Project as they are combined or interact with anticipated impacts of other vicinity projects and physical effects of projected ambient regional growth.

# 4.1 TRANSPORTATION/TRAFFIC

# 4.1 TRANSPORTATION/TRAFFIC

***Abstract***

*This Section addresses the Project's potential to result in potentially significant transportation/traffic impacts. More specifically, this Section of the EIR examines 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 a 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; or*

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

*Consistent with the methodology established by the Lead Agency, the Project's potential traffic impacts have been evaluated in detail in* Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA *(Urban Crossroads, Inc.) June 29, 2016 (Project TIA), EIR Appendix B. Consistent with the Lead Agency TIA methodology and analytic protocols, the Project TIA evaluates potential traffic impacts under Existing (2015) and assumed Opening Year (Existing plus 5 years, or Year 2020) traffic conditions.[1] The Project TIA identifies specific physical improvements (e.g., traffic signals, lane improvements) that, when completed, would successfully mitigate potentially significant impacts affecting Study Area facilities.*

***Project-Specific Impacts and Mitigation***

*The Project would construct traffic improvements necessary to mitigate its specific impacts, and ensure efficient and safe access to and within the Project site. Additionally, where necessary, mitigation measures have been identified to ensure that potential Project-specific circulation system impacts affecting Study Area facilities are reduced to levels that are less-than-significant.*

***Cumulative Impacts and Mitigation***

*As discussed herein, area-serving traffic improvements are funded by fees collected and allocated under established programs including the City of Moreno Valley Development Impact Fee (DIF) Program, Project-related fair-share participation, and the Western Regional Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program. Collectively, these fee programs provide for construction of necessary traffic improvements within the Study Area. Project mitigation responsibilities for incremental contributions to cumulative traffic impacts affecting Study Area facilities are fulfilled by payment of requisite traffic impact fees that would be assigned to the construction of necessary improvements. Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the Study Area. In these instances, Project traffic impacts would not be individually significant, but would however be considered cumulatively significant. Pending completion of*

[1] The anticipated physical Project Opening Year is 2018. Notwithstanding, consistent with City Traffic Impact Analysis (TIA) methodology requirements establishing a likely maximum cumulative traffic impact scenario, the Project opening year is assumed to occur a minimum of 5 years from existing (2015) conditions. Accordingly, the Project TIA reflects an assumed 2020 "opening year" condition.

*required improvements, the Project's contributions to cumulative traffic impact deficiencies identified within this Section are therefore cumulatively considerable and the identified cumulative impacts are significant and unavoidable.*

***Congestion Management Plan (CMP) Impacts and Mitigation***

*The Project would pay all requisite fees for improvements at Study Area CMP facilities. However, as discussed above, fee payments would not ensure timely completion of improvements required for mitigation of cumulatively significant impacts within the Study Area. Pending completion of required improvements, Project contributions to impacts affecting Study Area CMP facilities are therefore considered cumulatively considerable and the identified cumulative impacts are significant and unavoidable.*

***Other***

*Other areas of potential concern, e.g., increased hazards due to design features; effects on air traffic patterns; and adequacy of emergency access, are evaluated herein in the context of the Project design concepts, City design and engineering requirements, and adopted plans and regulations.*

*Additionally, as discussed in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to be less-than-significant, and are not further substantively discussed here:*

- *Result in inadequate emergency access; and*

- *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

*Please refer also to Initial Study Checklist Item XVII.,* Transportation/Traffic.

### 4.1.1 INTRODUCTION

The Project TIA was developed and prepared consistent with City of Moreno Valley *Traffic Impact Analysis Preparation Guide* (City of Moreno Valley Transportation Engineering Division) August 2007, and the California Department of Transportation

*Guide for the Preparation of Traffic Impact Studies* (California Department of Transportation, Caltrans) December 2002. Detailed TIA content and analytic protocols are presented in the TIA Scoping Agreement (TIA Appendix 1.1).

To establish a likely maximum cumulative impact scenario, and consistent with the Lead Agency's TIA methodology and protocols, for the purposes of the Project TIA the Project Opening Year is assumed to occur a minimum of 5 years from the TIA Existing Conditions (2015) analysis timeframe; in the case of the instant Project, 2020 is the evaluated Opening Year condition.

Pursuant to the TIA Scoping Agreement, analyses of traffic conditions are presented for the following analytic scenarios: Existing Conditions (2015) and Project Opening Year Conditions (2020). Trip generation rates and vehicle mix characteristics employed in the Project TIA analytic scenarios are also consistent with the TIA Scoping Agreement.

Discussions were held with the Lead Agency and the Project Applicant to obtain a comprehensive understanding of the Project and identify Study Area Key Intersections requiring analysis. Study Area Key Intersections are identified at Figure 4.1-1.

Discussions with the Lead Agency also defined Project trip distribution and level-of-service (LOS) analysis methodologies, including the determination of traffic impact significance criteria. Approved or planned projects ("related" projects) within the Study Area which would be considered as part of the cumulative development setting were also identified.

### 4.1.2 STUDY AREA JURISDICTIONAL AGENCIES

As indicated at Table 4.1-1, certain of the Study Area intersection locations are extra-jurisdictional to the City of Moreno Valley, and are located in the City of Perris and unincorporated Riverside County. As also indicated at Table 4.1-1, Study Area highway and freeway facilities, including on- and off-ramps are under Caltrans jurisdiction or are under shared jurisdiction with Caltrans.

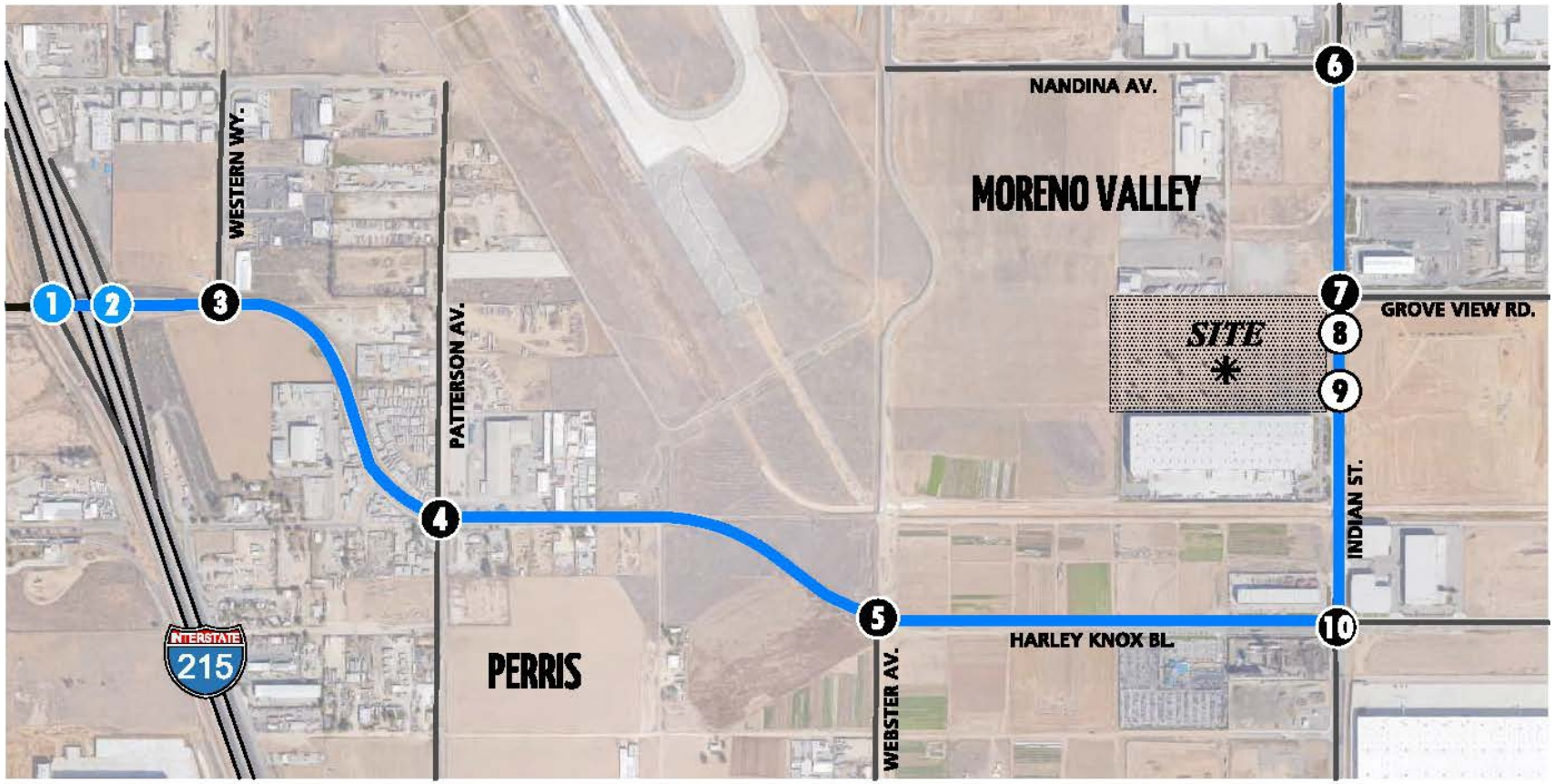
#### 4.1.2.1 Study Area Intersections

A total of 10 existing and planned Study Area intersections were selected for evaluation as part of the Project TIA. Table 4.1-1 identifies these intersections, and indicates the jurisdiction of each. The City of Moreno Valley *Traffic Impact Analysis Preparation Guide* (City TIA Preparation Guide) require the analysis of all intersections at which a proposed project is anticipated to contribute 50 or more peak hour trips. The "50 or more peak hour trips" intersection analytic protocol stipulated in the City TIA Preparation Guide is consistent with standard industry practice. The 50 peak hour trip analytic protocol is employed by other agencies throughout southern California including Caltrans, County of Riverside, County of San Bernardino, and the County of Orange.

**Table 4.1-1**
**TIA Study Area Intersections**

| ID No. | Location | Jurisdiction | CMP Facility |
|---|---|---|---|
| 1 | I-215 Southbound Ramps / Harley Knox Boulevard | Caltrans, Riverside Co. | Yes |
| 2 | I-215 Northbound Ramps / Harley Knox Boulevard | Caltrans, Perris | Yes |
| 3 | Western Way / Harley Knox Boulevard | Perris | No |
| 4 | Patterson Avenue / Harley Knox Boulevard | Perris | No |
| 5 | Webster Avenue / Harley Knox Boulevard | Perris | No |
| 6 | Indian Street / Nandina Avenue | Moreno Valley | No |
| 7 | Indian Street / Grove View Road | Moreno Valley | No |
| 8 | Indian Street / Driveway 1 | Moreno Valley | No |
| 9 | Indian Street / Driveway 2 | Moreno Valley | No |
| 10 | Indian Street / Harley Knox Boulevard | Perris | No |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.




**LEGEND:**

- EXISTING INTERSECTION ANALYSIS LOCATION
- FUTURE INTERSECTION ANALYSIS LOCATION
- RIVERSIDE COUNTY CMP INTERSECTION ANALYSIS LOCATION
- ROADWAY SEGMENT ANALYSIS LOCATION

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.1-1
Study Area Intersections

#### 4.1.2.2 Study Area Roadway Segments

A total of 12 existing and future roadway segments were evaluated in the TIA, and are listed in Table 4.1-2, and are identified at previous Figure 4.1-1. Consistent with the City TIA Preparation Guide, Study Area Roadway segments analyzed comprise those on either side of Study Area intersections to which the Project would contribute 50 or more peak hour trips.

**Table 4.1-2**
**Study Area Roadway Segments**

| ID | Street | Segment | Jurisdiction |
|---|---|---|---|
| 1 | Harley Knox Bl. | I-215 SB Ramps to I-215 NB Ramps | Perris |
| 2 | Harley Knox Bl. | I-215 NB Ramps to Western Way | Perris |
| 3 | Harley Knox Bl. | East of Western Way | Perris |
| 4 | Harley Knox Bl. | West of Patterson Ave. | Perris |
| 5 | Harley Knox Bl. | East of Patterson Ave. | Perris |
| 6 | Harley Knox Bl. | West of Webster Ave. | Perris |
| 7 | Harley Knox Bl. | East of Webster Ave. | Perris |
| 8 | Harley Knox Bl. | West of Indian St. | Perris |
| 9 | Indian St. | South of Nandina Ave. | Moreno Valley |
| 10 | Indian St. | North of Grove View Rd. | Moreno Valley |
| 11 | Indian St. | South Grove View Rd. | Moreno Valley |
| 12 | Indian St. | North of Harley Knox Bl. | Perris |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

#### 4.1.2.3 Study Area Freeway Ramps

The Project TIA evaluated freeway off-ramp operations at the freeway-to-arterial interchange of the I-215 Freeway at Harley Knox Boulevard. Locations of these off-ramps (Study Area Intersections No.s 1 and 2) are listed at previous Table 4.1-1, and are identified at previous Figure 4.1-1.

#### 4.1.2.4 Study Area Congestion Management Plan (CMP) Facilities

The I-215 Freeway at Harley Knox Boulevard freeway-to-arterial interchanges (noted above at Section 4.1.2.3) are the only evaluated Congestion Management Plan (CMP) facilities in the Study Area.

### 4.1.3 LEVELS OF SERVICE AND TIA METHODOLOGIES

Level of Service (LOS) is a term which denotes "quality of flow" in traffic operating conditions. LOS classifications of "A" through "F" correlate to traffic congestion from best to worst, respectively. Level A represents free-flow conditions with no congestion. Conversely, Level F represents severe congestion with stop-and-go conditions, and is considered to be unsatisfactory.

#### 4.1.3.1 Intersection Analysis Methodology

**Signalized Intersections**

**City of Moreno Valley, City of Perris, County of Riverside**

Level of Service (LOS) criteria identified in *Highway Capacity Manual* (Transportation Research Board) 2010 (HCM) are employed by the City of Moreno Valley, the City of Perris, and the County of Riverside in evaluation of intersection operations. For signalized intersections, average stopped vehicle delay is used to determine LOS. Table 4.1-3 presents applicable HCM LOS criteria for signalized intersections.

**Table 4.1-3**
**Signalized Intersection LOS Criteria**

| Level of Service | Description | Average Control Delay, seconds |
|---|---|---|
| A | Operations with very low delay occurring with favorable progression and/or short cycle length. | 0 to 10.00 |
| B | Operations with low delay occurring with good progression and/or short cycle lengths. | 10.01 to 20.00 |
| C | Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear. | 20.01 to 35.00 |
| D | Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and | 35.01 to 55.00 |

**Table 4.1-3**
**Signalized Intersection LOS Criteria**

| Level of Service | Description | Average Control Delay, seconds |
|---|---|---|
| | individual cycle failures are noticeable. | |
| E | Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay. | 55.01 to 80.00 |
| F | Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths. | 80.01 and up |

**Source:** *Highway Capacity Manual* (Transportation Research Board) 2010; Chapter 16.

### Caltrans

Per Caltrans TIA Guidance, the Project TIA employed Synchro (Version 8 Build 806) intersection modeling in evaluation of Caltrans signalized intersection operations. Signal timing for the evaluated intersections was obtained from Caltrans District 8.

### Unsignalized Intersections

All unsignalized intersections in the Study Area are located within the City of Moreno Valley. The City of Moreno Valley requires the operations of unsignalized intersections be evaluated using the methodology described the HCM. Unsignalized intersection LOS is based on the weighted average control delay expressed in seconds per vehicle as summarized at Table 4.1-4.

**Table 4.1-4**
**Unsignalized Intersection LOS Criteria**

| LOS | Description | Average Control Delay |
|---|---|---|
| A | Little or no delays. | 0 to 10.00 |
| B | Short traffic delays. | 10.01 to 15.00 |
| C | Average traffic delays. | 15.01 to 25.00 |
| D | Long traffic delays. | 25.01 to 35.00 |
| E | Very long traffic delays. | 35.01 to 50.00 |
| F | Extreme traffic delays with intersection capacity exceeded. | > 50.00 |

**Source:** *Highway Capacity Manual* (Transportation Research Board) 2010; Chapter 17.

### 4.1.3.2 Roadway Segment Capacity Analysis

City of Moreno Valley roadway segment operations were evaluated pursuant to methodologies identified in the City TIA Preparation Guide. Roadway segments within the City of Perris were evaluated employing the City of Perris Daily Roadway Capacity Values presented in the City of Perris General Plan Circulation Element.

Roadway segment capacities for various roadway classifications within the City of Moreno Valley and the City of Perris are summarized at Table 4.1-5. These roadway capacities are baseline estimates employed for master planning purposes. Under real world conditions, roadway segment functional capacities are determined in large part by controlling intersection efficiencies.[2]

**Table 4.1-5**
**Roadway Segment Capacity LOS Descriptors**

| **City of Moreno Valley** | | | | | |
|---|---|---|---|---|---|
| **Facility Type** | **Level of Service Capacity** | | | | |
| | **A** | **B** | **C** | **D** | **E** |
| Six Lane Divided Arterial | 33,900 | 39,400 | 45,000 | 50,600 | 56,300 |
| Four Lane Divided Arterial | 22,500 | 26,300 | 30,000 | 33,800 | 37,500 |
| Four Lane Undivided Arterial | 15,000 | 17,500 | 20,000 | 22,500 | 25,000 |
| Two Lane Industrial Collector | 7,500 | 8,800 | 10,000 | 11,300 | 12,500 |
| Two Lane Undivided Residential | N/A | N/A | N/A | N/A | 2,000 |
| **City of Perris** | | | | | |
| **Facility Type** | **Level of Service Capacity** | | | | |
| | **A** | **B** | **C** | **D** | **E** |
| Six Lane Urban Arterial | 32,340 | 37,730 | 43,100 | 48,500 | 53,900 |
| Four Lane Urban Arterial | 21,540 | 25,130 | 28,700 | 32,300 | 35,900 |
| Two Lane Arterial | 10,800 | 12,600 | 14,400 | 16,200 | 18,000 |
| Four Lane Secondary Arterial | 15,540 | 18,130 | 20,700 | 23,300 | 25,900 |
| Two Lane Collector | 7,800 | 9,100 | 10,400 | 11,700 | 13,000 |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

[2] Other factors that can affect functional roadway capacities include but are not limited to: roadway access control; roadway grades; roadway design geometrics; sight distance; vehicle mix; and accommodation of pedestrian/bicycle traffic.

Recognizing the defining effects of intersection efficiencies on roadway segments, a review of the more detailed peak hour intersection and progression analysis is warranted in connection with any roadway segment capacity analyses. The more detailed peak hour intersection analyses explicitly account for factors that act to determine functional, as opposed to theoretic baseline roadway segment capacities and operational efficiencies. Typically, roadway segment widening is only recommended if the peak hour analysis for controlling intersections indicates a requirement for additional intermediary roadway segment lanes.

#### 4.1.3.3 Freeway Off-Ramp Queuing Analysis Methodology

Consistent with Caltrans requirements, freeway ramp vehicle progression has been assessed to determine potential queuing impacts at potentially affected Study Area freeway ramp locations. A vehicle is considered "queued" whenever it is traveling at less than 10 feet/second and is either at the STOP bar or behind another queued vehicle. The 50th percentile or average queue represents the typical queue length for peak hour traffic conditions. The 95th percentile queue is not necessarily ever observed; rather, it is based on statistical estimates. That is, if traffic were observed for 100 cycles, the 95th percentile queue would be the queue experienced during the 95th busiest cycle (or five percent of the time). Please refer to the Project TIA (EIR Appendix B) for additional detail regarding freeway off-ramp queuing analysis methodology and protocols.

### 4.1.4 Regional and Local Funding Mechanisms and Required Fees

Transportation improvements within the Study Area are funded via a combination of fee assessments and monies collected through the Western Riverside Council of Governments Transportation Uniform Mitigation Fee (TUMF) program, the City of Moreno Valley Development Impact Fee (DIF) program, and proportional Fair Share Fees. These fee assessment mechanisms are described below.

#### 4.1.4.1 Western Riverside Council of Governments TUMF Program

The Western Riverside Council of Governments (WRCOG) is responsible for establishing and updating TUMF rates. TUMF assessments are based on the Transportation Uniform Mitigation Fee Nexus Study 2009 Update Final Report (and

amendments).[3] In summary, the Nexus Study correlates projected growth within the TUMF assessment area with related transportation improvements needed to support that growth. Under the TUMF program, developers may be credited for dedication of land or the construction of facilities otherwise paid through TUMF assessments.

The County of Riverside collects TUMF for new development located in the City of Moreno Valley, including TUMF that would be assessed of the Project. Fees submitted to the County are passed on to the WRCOG, the TUMF program administrator.

The TUMF Program empowers area Zone Committees to prioritize implementation of TUMF facilities. The Project is located in the TUMF Program Central Zone. TUMF Central Zone Program Improvements are illustrated TIA Appendix 1.2, *Central TUMF Zone Transportation Improvement Program*. The TUMF Central Zone Map can be accessed at: <http://www.wrcog.cog.ca.us/tumf/tumf-jurisdictional-maps>. Within the Central Zone and the TIA Study Area, the I-215/Harley Knox Boulevard interchange, Harley Knox Boulevard, Indian Street, and Perris Boulevard are designated TUMF facilities.

#### 4.1.4.2 City of Moreno Valley Development Impact Fee (DIF) Program

The City of Moreno Valley Development Impact Fee (DIF) program imposes and collects fees to fund infrastructure and services necessary to support growth within the City. The transportation facilities component of the City DIF program provides funding for roadways and intersections necessary to accommodate traffic growth projected to occur pursuant to buildout of the City General Plan as reflected in the City General Plan Circulation Element. The City DIF program provides for funding of transportation facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. Under the City DIF program, the City may grant to developers a credit against fees for construction of facilities identified in the list of DIF-funded improvements. Periodic traffic counts, review of traffic accidents, and evaluation of traffic trends are performed periodically in order to identify necessary transportation

[3] An updated Nexus Study is expected to be finalized and released in late 2016. The 2015 Draft TUMF Nexus Study & Appendices are available for review at http://www.wrcog.cog.ca.us/tumf/resources.

facilities improvements, and to assign DIF monies to those improvements through the City Capital Improvements Program (CIP).

The Project Applicant would pay requisite DIF pursuant to incumbent City ordinance requirements. Payment of requisite DIF would satisfy the Applicant's mitigation responsibilities for potentially significant cumulative impacts affecting DIF-funded facilities.

#### 4.1.4.3 Fair Share Fees

The Project Applicant's mitigation responsibilities for cumulative impacts affecting area transportation facilities may also be fulfilled through payment of fair-share fees. Fair share fees would be paid in instances where required transportation system improvements are not otherwise funded by TUMF and/or DIF programs noted above.

### 4.1.5 Jurisdictional LOS Deficiency Definitions

LOS deficiencies as defined by the City of Moreno Valley and other potentially affected jurisdictions are presented below. For intersections and roadway segments outside of the City of Moreno Valley, this EIR evaluates the Project LOS impacts based LOS deficiencies as defined by the governing jurisdictional agency.

**City of Moreno Valley**

LOS D is applicable to intersections and roadway segments that are adjacent to freeway on/off ramps, and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.

To determine whether the addition of Project traffic at a Study Area intersection would result in a deficient intersection LOS condition, the City of Moreno Valley employs the following criteria:

- A deficiency would occur at a Study Area intersection if the addition of Project trips would cause the peak hour level of service of the Study Area intersection to change from acceptable "pre-project" LOS to an unacceptable LOS.

- For Study Area intersections already operating at an unacceptable LOS, a deficiency would occur if the Project would add 50 trips or more.

Roadway segment deficiencies would occur when operating conditions would be degraded below LOS D.

**City of Perris**

Per the City of Perris General Plan Circulation Element, the minimum acceptable operating condition for City of Perris intersections within the Study Area is LOS D. LOS D is also the minimum acceptable operating condition for City of Perris roadway segments within the Study Area.

Intersection deficiencies would occur when operating conditions are degraded below LOS D.

Roadway segment deficiencies would occur when operating conditions would be degraded below LOS D.

**Caltrans**

Caltrans guidelines (excerpted below) were employed in the analysis of Study Area Caltrans facilities, or facilities under shared Caltrans jurisdiction.

> The LOS for operating State highway facilities is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.[4]

[4] *Guide for the Preparation of Traffic Impact Studies* (State of California, Department of Transportation) December 2002.

Within these analyses, LOS D is defined as the minimum acceptable operating condition for Caltrans-maintained facilities. Deficiencies at Caltrans facilities would occur when operating conditions are degraded below LOS D.

### 4.1.6 EXISTING CONDITIONS

#### 4.1.6.1 Overview

The following discussions describe the existing Study Area circulation network as well as other transportation modes that exist within, or are available to, the Study Area.

#### 4.1.6.2 Existing Roadway System

Factors affecting access to the Project site are the location of the site and the efficiency of the serving roadway system. Efficiency of access is a function of travel time, convenience, directness, and available capacity of the routes utilized in accessing the development.

**Regional Access**

Interstate 215 (I-215) exists in a generally northeast to southwest orientation approximately 1 mile westerly of the Project site. I-215 is a six-lane freeway traversing western Riverside County, and connects Interstate 15 (I-15) to the south to the High Desert communities located in San Bernardino County to the north.

State Route 60 (SR-60) is a major regional transportation route existing in an east-west orientation approximately 5 miles northerly of the Project site; and interchanges with I-215 approximately 6.25 miles northwesterly of the Project site. SR-60 is a six-lane (including two HOV lanes) freeway providing connection between Los Angeles to the west and Interstate 10 (I-10) to the east.

**Project Site Access**

Access to the Project site will be provided via two driveways onto Indian Street, the Project site easterly boundary. Indian Street connects to Harley Knox Boulevard approximately 0.1 miles southerly of the Project site. Harley Knox Boulevard interchanges with I-215 approximately 1.5 miles easterly of the Project site.

#### 4.1.6.3 Truck Routes

Figure 4.1-2 depicts City of Moreno Valley truck routes. Within the Study Area, Indian Street and Nandina Avenue are designated City of Moreno Valley truck routes. City of Perris truck routes are depicted at Figure 4.1-3. Within the Study Area, Harley Knox Boulevard (east of the I-215 Freeway), Western Way, and Indian Street are designated City of Perris truck routes.

#### 4.1.6.4 Alternative Transportation Modes

**Bus Service**

Bus service is currently provided to the Project area by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region and the City of Moreno Valley. In the vicinity of the Project site, RTA currently provides bus service along Perris Boulevard via Route 19. Transit route and schedules are available at: http://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules.

**Pedestrian and Bicycle Facilities**

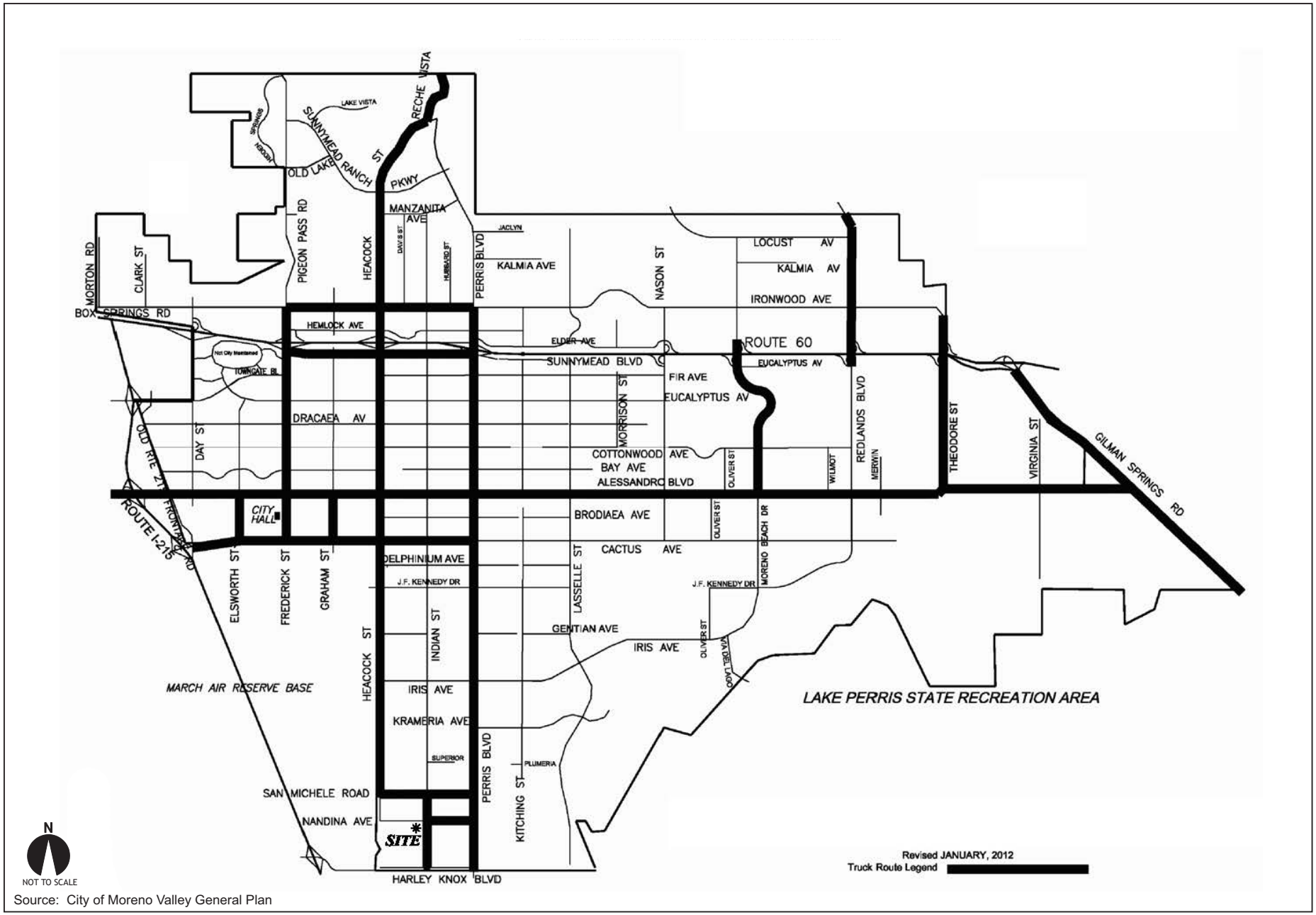
City of Moreno Valley Master Plan of Trails and Bikeway Plan are presented at Figures 4.1-4 and 4.1-5, respectively. Within the Study Area, Indian Street is a Class III Bike Route. Class III Bike Routes are on-street signed routes shared with motor vehicle traffic.

#### 4.1.6.5 Existing Traffic Volumes

Existing peak hour traffic volumes within the Study Area were determined by field traffic counts conducted April 2015, while schools were in session. Weekday morning (AM) peak traffic conditions are represented by traffic counts conducted for the two-hour period between 7:00 and 9:00 a.m. Weekday evening (PM) peak hour traffic conditions are represented by traffic counts conducted for the two-hour period from 4:00 to 6:00 p.m.

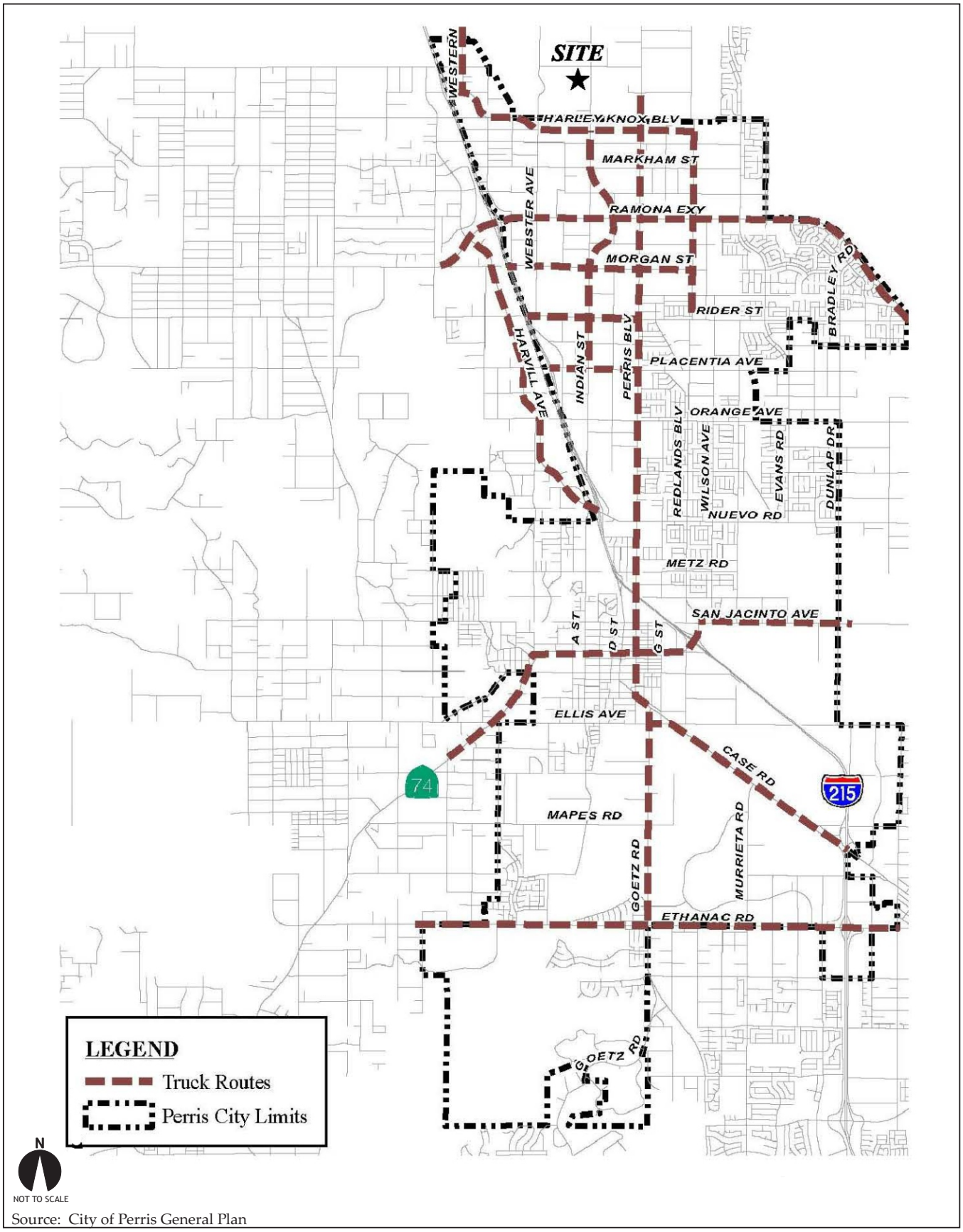
#### 4.1.6.6 Intersection LOS Analysis, Existing Conditions

Under Existing Conditions, all Study Area intersections operate at acceptable LOS. Please refer also to TIA Table 3-1.



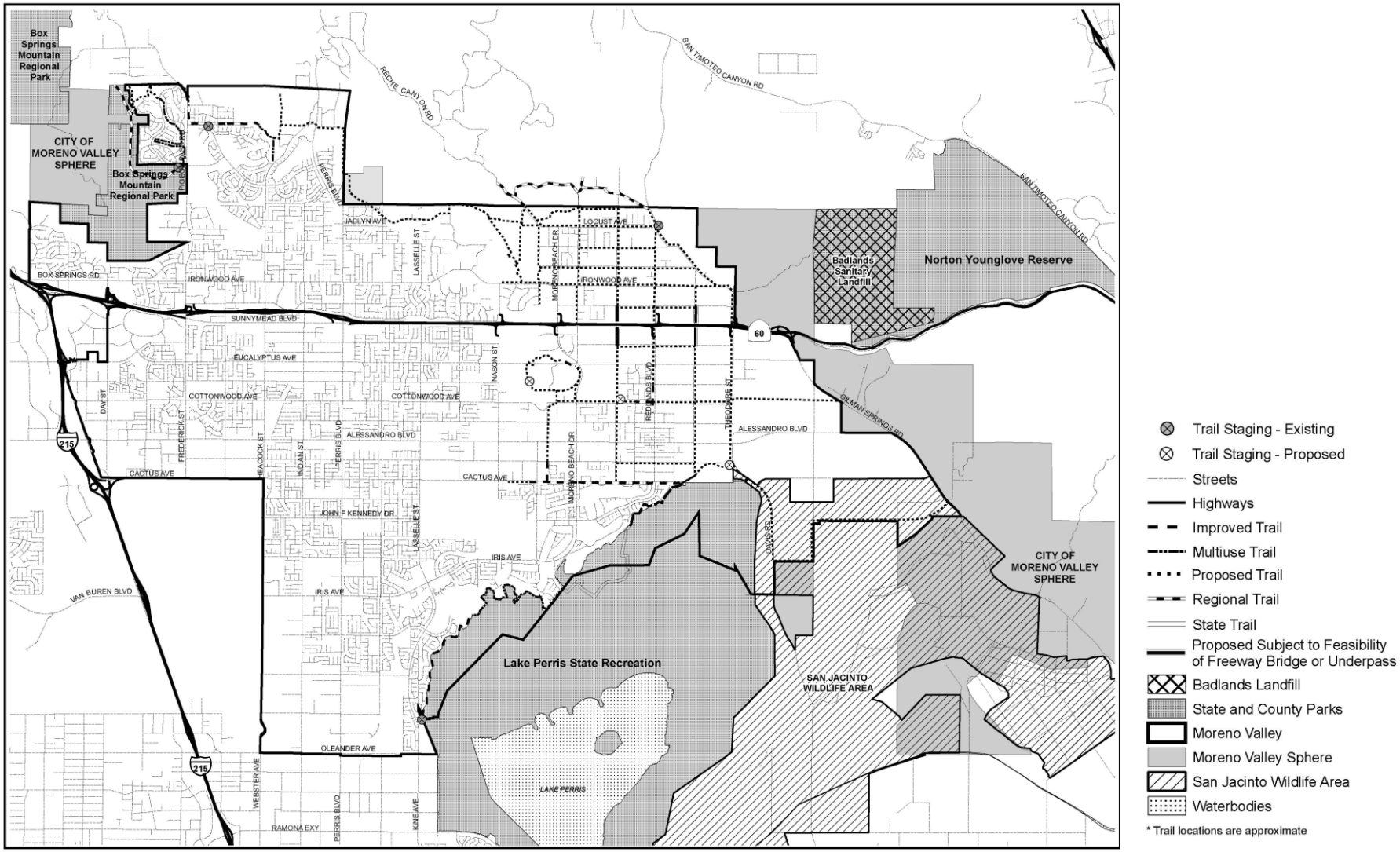

Source: City of Moreno Valley General Plan

Figure 4.1-2
City of Moreno Valley Truck Routes




Source: City of Perris General Plan

Figure 4.1-3
City of Perris Truck Routes




Source: City of Moreno Valley General Plan

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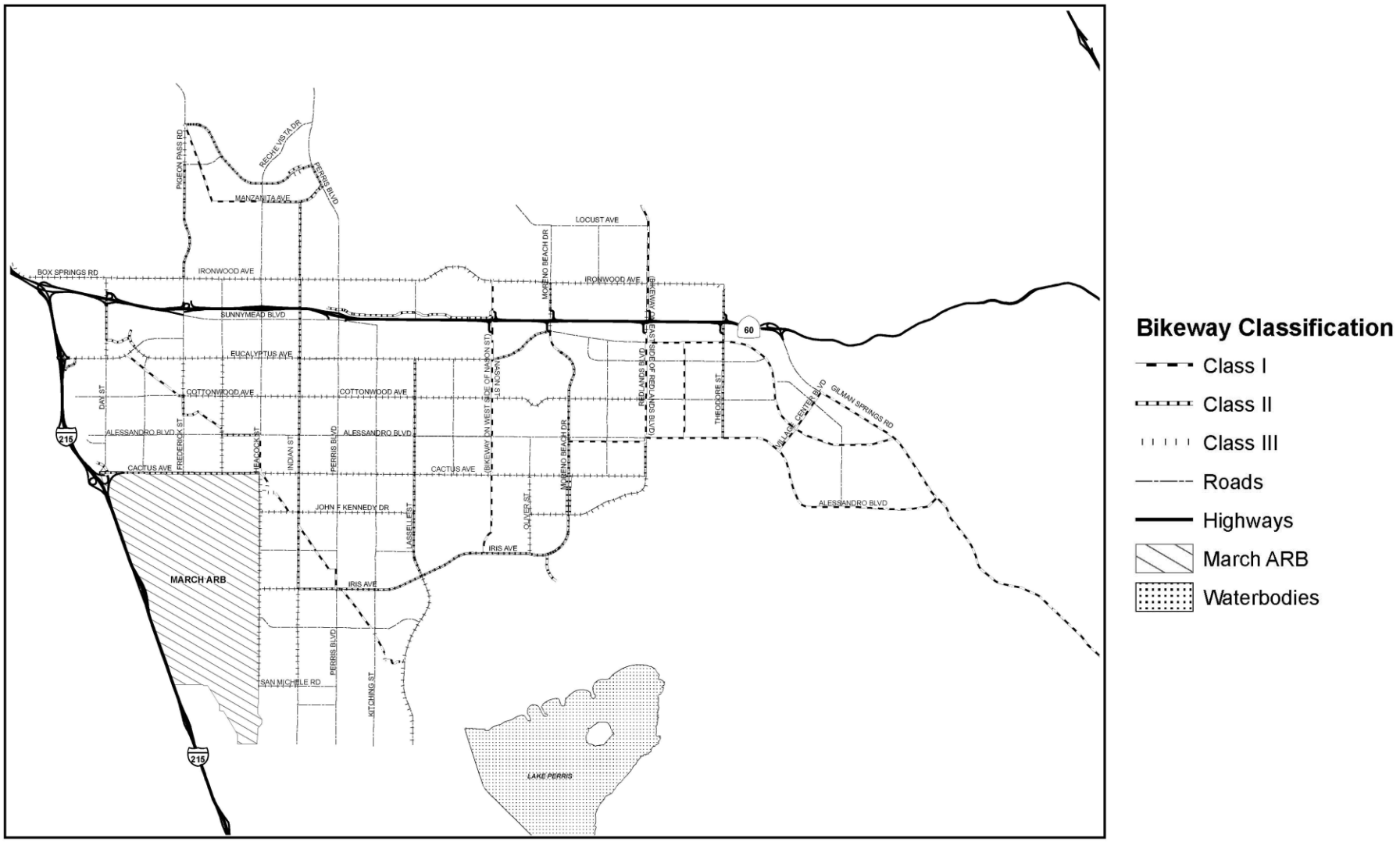
Figure 4.1-4
Moreno Valley Master Plan of Trails




Source: City of Moreno Valley General Plan

Figure 4.1-5
Moreno Valley Bikeway Plan

#### 4.1.6.7 Roadway Segment Analysis, Existing Conditions

Under Existing Conditions, all Study Area roadway segments operate at acceptable LOS. Please refer to TIA Table 3-2.

#### 4.1.6.8 Freeway Ramp Queuing Analysis, Existing Conditions

Under Existing Conditions, all Study Area freeway ramp queue lengths would not exceed ramp queuing capacities. Please refer also to TIA Table 3-3.

### 4.1.7 FUTURE TRAFFIC CONDITIONS

Traffic that would be generated by the Project, and traffic attributable to other growth and development within the Study Area, are described below.

#### 4.1.7.1 Project Trip Generation

**ITE Trip Generation Rates**

Trip generation rates used in this analysis establish likely maximum traffic volumes and related impacts attributable to the Project. Trip generation rates were obtained from Institute of Transportation Engineers (ITE) *Trip Generation Manual*; 9th Edition, 2012 (ITE Trip Generation Manual). Consistent with the land uses proposed by the Project, ITE land use categories employed are:

- ITE Land Use 140 (Manufacturing); and
- ITE Land Use 152 (High-Cube Warehouse).

**PCE Trips**

To account for the varying sizes and operational characteristics of the range of cars and trucks accessing the Project site, trip generation rates for High Cube Warehouse and Manufacturing uses reflect conversion of passenger car and truck trips to Passenger Car Equivalents (PCEs). PCE conversion rates employed in the TIA area as follows:

- Passenger cars (PCE baseline) = 1.0 PCE;
- 2-axle trucks = 1.5 PCE;

- 3-axle trucks = 2.0 PCE;
- 4-axle trucks = 3.0 PCE.

The Project would generate an estimated 1,472 PCE trip-ends per day; approximately 158 AM PCE peak hour trips; and approximately 167 PM PCE peak hour trips. Project passenger car and truck trip generation expressed as PCEs are summarized at Table 4.1-6. Please refer also to the Project TIA Section 4.1, *Project Trip Generation* for further details regarding Project trip generation characteristics.

**Table 4.1-6**
**Project Trip Generation Summary (PCEs)**

| Land Use | Quantity | Units Thousand Square Feet (TSF) | AM Peak Hour | | | PM Peak Hour | | | Daily |
|---|---|---|---|---|---|---|---|---|---|
| | | | In | Out | Total | In | Out | Total | |
| Manufacturing | 89.270 | TSF | | | | | | | |
| Passenger Cars: | | | 31 | 9 | 40 | 14 | 26 | 40 | 209 |
| Truck Trips: | | | | | | | | | |
| *2-axle:* | | | 5 | 1 | 6 | 2 | 4 | 6 | 31 |
| *3-axle:* | | | 13 | 4 | 17 | 6 | 11 | 17 | 87 |
| *4+-axle:* | | | 30 | 9 | 39 | 14 | 25 | 39 | 204 |
| *Net Truck Trips (PCE)* | | | 48 | 14 | 62 | 22 | 40 | 62 | 322 |
| ***Subtotal Mfg. Trips (PCE)*** | | | ***79*** | ***23*** | ***102*** | ***36*** | ***66*** | ***102*** | ***531*** |
| High-Cube Warehouse | 357.080 | TSF | | | | | | | |
| Passenger Cars: | | | 20 | 9 | 29 | 9 | 20 | 29 | 371 |
| Truck Trips: | | | | | | | | | |
| *2-axle:* | | | 2 | 1 | 4 | 1 | 3 | 5 | 75 |
| *3-axle:* | | | 3 | 1 | 4 | 2 | 3 | 5 | 81 |
| *4+-axle:* | | | 13 | 6 | 19 | 8 | 18 | 26 | 414 |
| *Net Truck Trips (PCE)* | | | 18 | 8 | 27 | 11 | 24 | 36 | 570 |
| ***Subtotal Whse. Trips (PCE)*** | | | ***38*** | ***17*** | ***56*** | ***20*** | ***44*** | ***65*** | ***941*** |
| **TOTAL NET TRIPS (PCE)** | | | **117** | **40** | **158** | **56** | **110** | **167** | **1,472** |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

While available or planned alternative travel modes (e.g., public transit, walking, or bicycling) may diminish the Project's forecasted traffic volumes, the traffic-reducing potentials of alternative travel modes were not considered in the Project trip generation estimates. Project traffic volumes considered in this analysis therefore represent the likely maximum Project traffic generation and traffic impact condition.

#### 4.1.7.2 Project Trip Distribution

Trip distribution establishes directional orientation of approaching and departing traffic. Trip distribution is influenced by location of the site in relation to nearby residential, employment and recreational opportunities, and proximity to the regional freeway system. Based on the Project truck and passenger trip distribution patterns, peak hour trips were assigned at Study Area intersections. Please refer to Figures 4.1-6, 4.1-7.

#### 4.1.7.3 Traffic Growth

**Opening Year Traffic Conditions**

To account for growth in traffic between Existing Conditions (2015) and the Project Opening Year (2020), a compounded annual traffic growth rate of 2 percent was assumed (10.41 percent aggregate growth in background traffic for the period 2015—2020). The 2 percent annual growth rate is intended to capture non-specific ambient traffic growth.

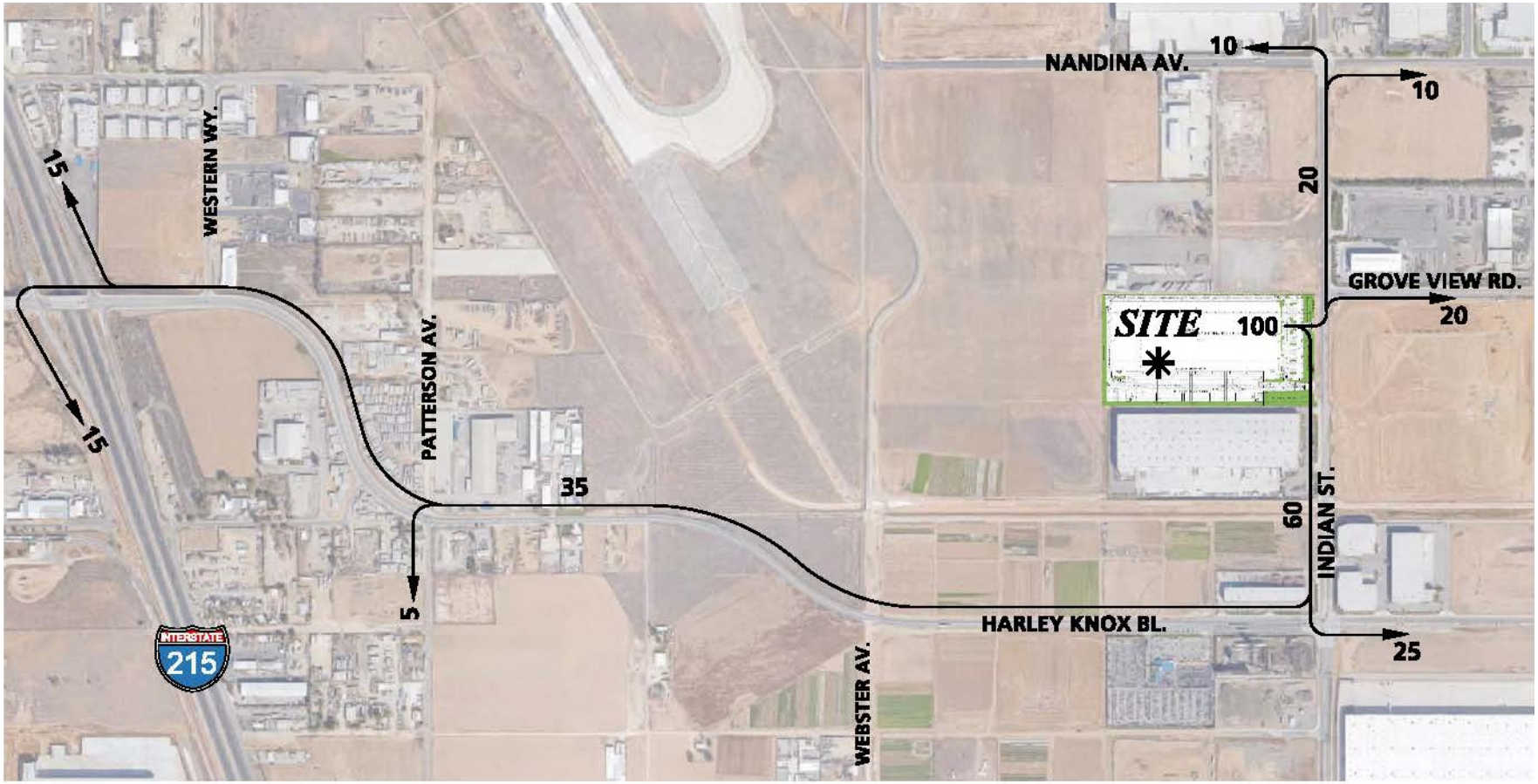
In context, the TIA's assumed 2 percent compounded annual growth rate is considered a reasonable approximation of future traffic growth when compared to demographic projections reflected in other local and regional growth modeling efforts. More specifically, the Southern California Association of Governments SCAG 2012—2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the City of Moreno Valley assume the City population to increase from 187,400 in 2008 to 255,200 by the year 2035, or an approximate 1.15 percent growth rate

compounded annually.[5] The RTP/SCS assumed growth in households over the same 27-year period reflects an increase from 51,100 households to 72,800 households; a rate of 1.32 percent compounded annually. At the upper end of assumed RTP/SCS growth rates, employment over the same 27-year period is projected to increase from 32,300 jobs to 64,400 jobs; a rate of approximately 2.59 percent compounded annually.

The 2 percent compounded annual traffic growth rate employed in the TIA reflects the fact that not all persons comprising population growth, household growth, or employment growth would translate on a one to one basis as a new vehicle trip in the region; and establishes a judicious midrange estimate lying between the RTP/SCS assumed regional population growth rate (1.15 percent) and the RTP/SCS assumed regional employment growth rate (2.59 percent).

Traffic generated by other known or probable related projects was then added to the TIA ambient traffic growth estimates. These related projects are in part already accounted for in the assumed annual 2 percent increase in ambient traffic growth noted above; and in certain instances these related projects would likely not be implemented and functional within the 2020 Opening Year time frame assumed for the Project. The resultant assumed traffic growth rate employed in the TIA (2 percent annual ambient growth + traffic generated by all related projects) would therefore tend to overstate rather than understate background cumulative traffic impacts under 2020 conditions.

[5] On March 9, 2015, SCAG, as Lead Agency, published a Notice of Preparation (NOP) of a Program Environmental Impact Report ("PEIR") for the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy ("2016 RTP/SCS"). The 2016 RTP/SCS was adopted April 7, 2016, subsequent to distribution of the EIR NOP (March 14, 2016). The 2016 RTP/SCS forecasts reflect reduced growth rates and total growth when compared to the 2012 – 2035 RTP/SCS forecasts reflected in the EIR. The EIR 2012 – 2035 RTP/SCS growth projections, and traffic impacts related to that growth are therefore likely overstated when compared to the 2016 – 2040 RTP/SCS growth projections.




**LEGEND:**

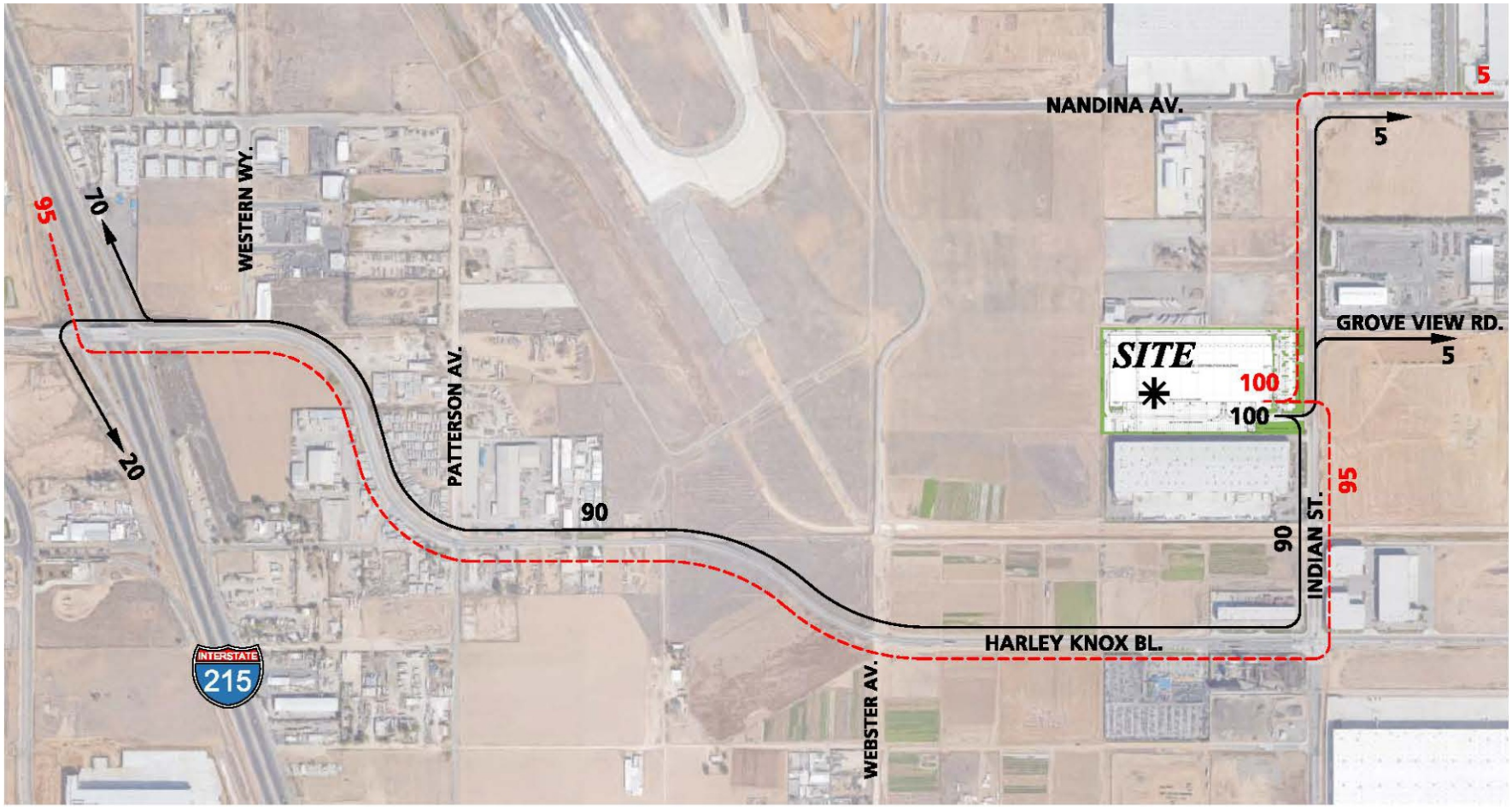
10 = PERCENT TO/FROM PROJECT

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

Figure 4.1-6
Project (Passenger Car) Trip Distribution




Source: Urban Crossroads, Inc.

Figure 4.1-7
Project (Truck) Trip Distribution

#### 4.1.7.4 Project Improvements

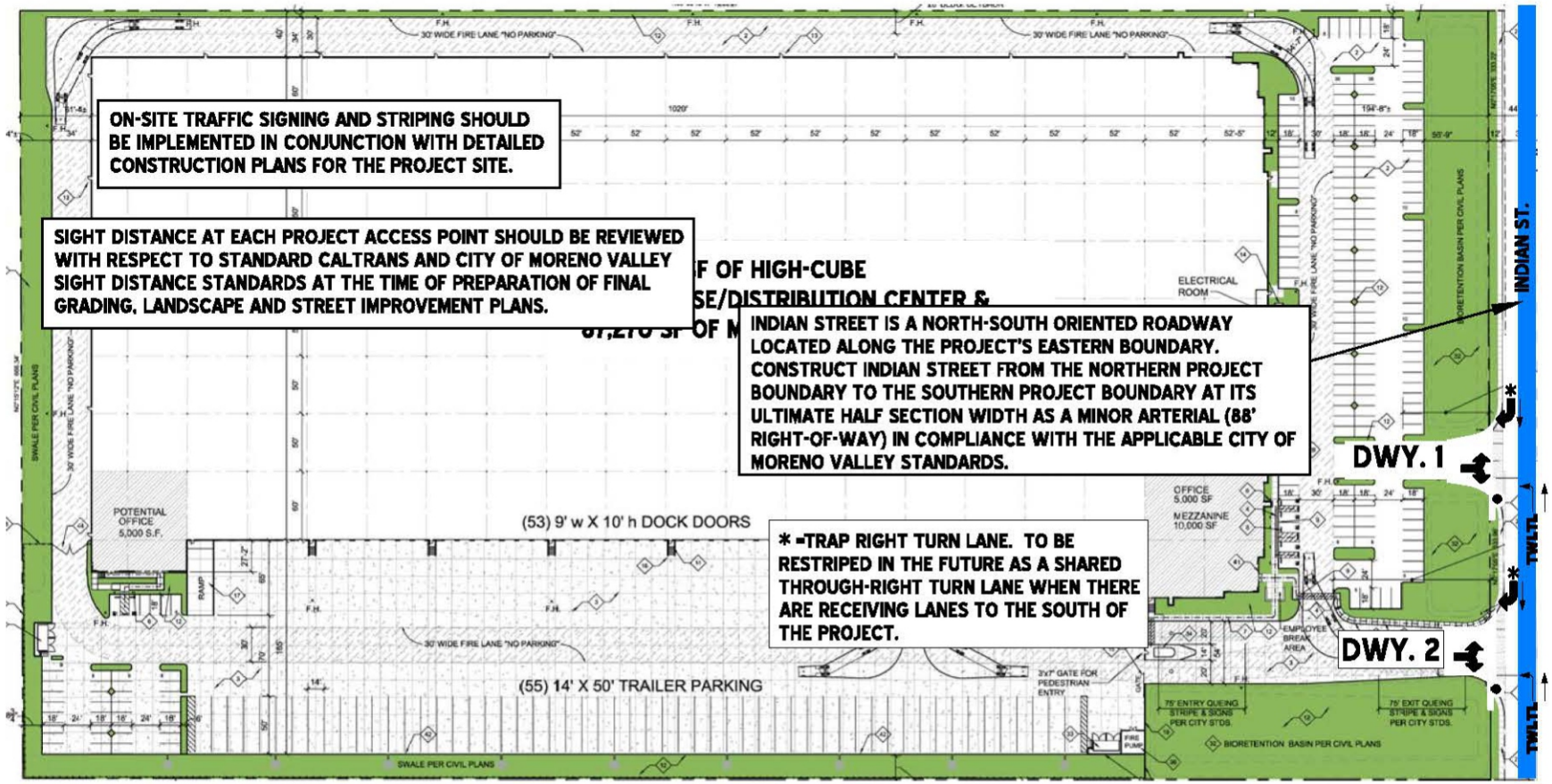
As discussed at EIR Section 3.0, *Project Description*, Project implementation would involve the construction of on-site and site adjacent roadway and intersection improvements. Under Existing-with-Project Conditions, these improvements would act to avoid or preclude potentially significant traffic/transportation impacts in the vicinity of the Project site. These same improvements would, under Opening Year with Project Conditions, would act to incrementally reduce potential future localized circulation system impacts. Improvements that would be constructed by the Project illustrated at Figure 4.1-8, and are described below.

**General:**

- Unless otherwise stipulated by the Lead Agency, roadways adjacent to the Project site, site access points and site-adjacent intersections would be designed and constructed consistent with City of Moreno Valley General Plan Circulation Element roadway classifications and respective cross-sections.
- On-site traffic signing and striping plans would be submitted concurrent with submittal of Project construction plans and would be subject to City review and approval.
- Sight distance at each Project access point would conform to City of Moreno Valley sight distance standards and would be subject to City review and approval.

**Indian Street:**

- Construct Indian Street from the northern Project boundary to the southern Project boundary at its ultimate half-section width as a Minor Arterial (88-foot right-of-way), in compliance with applicable City of Moreno Valley standards.




**LEGEND:**

- ● = STOP SIGN IMPROVEMENT
- = EXISTING LANE
- = LANE IMPROVEMENT
- TWLTL = TWO WAY LEFT TURN LANE
- = MINOR ARTERIAL (88' R.O.W.)

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.1-8
Site Access Improvements

### 4.1.8 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines*, traffic and circulation impacts would be considered potentially significant if 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 to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

- Result in inadequate emergency access; 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.

## 4.1.9 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.1.9.1 Introduction

The following discussions focus on topical issues where it has been determined that the Project may result in potentially significant traffic and circulation impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study. Of the CEQA standards of significance considerations identified above at Section 4.1.8, and as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics are determined to be less-than-significant, and are not further substantively discussed here:

- Result in inadequate emergency access; 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.

All other CEQA topics addressing the Project's potential traffic/transportation impacts are discussed below. Please also refer to Initial Study Checklist Item XVII., *Transportation/Traffic*.

### 4.1.9.2 Impact Considerations

Study Area traffic conditions without and with the Project are summarized within the subsequent discussions, followed by identification of the Project's potential impacts to Study Area traffic/transportation facilities.

Under the CEQA topic: "Potential to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system . . ." potential impacts are identified for Existing and Opening Year Conditions. Sub-topics evaluated under each of these scenarios include:

- Intersection LOS Analysis;
- Roadway Segment LOS Analysis; and
- Freeway Ramp Progression Analysis.

Under the CEQA topic: "Conflict with an applicable congestion management program [CMP] but not limited to a level of service standards and travel demand measures. . ." CMP facilities within the Study Area are identified, and potentially significant Project impacts affecting these facilities are summarized. Interstate 215 (I-215) facilities within the Study Area are designated CMP components. Project impacts to CMP facilities are coincident with analyses of Intersection LOS noted above.

Under the CEQA topic: "Substantially increase hazards to a design feature . . ." the analysis presented summarizes Project design and operational concepts that act to avoid hazardous conditions and ensure adequate emergency access.

#### 4.1.9.3 Mitigation Considerations

Mitigation or avoidance of potentially significant transportation/circulation system impacts attributable to the Project would be achieved through construction of necessary improvements and/or Project fee payments that would be assigned to construction of required improvements.

**Project Improvements**

The Project would construct improvements necessary to ensure safe and efficient access and operating conditions along adjacent roadways. These improvements are summarized below.

**General:**

- Unless otherwise stipulated by the Lead Agency, roadways adjacent to the Project site, site access points and site-adjacent intersections would be designed and constructed consistent with City of Moreno Valley General Plan Circulation Element roadway classifications and respective cross-sections.

- On-site traffic signing and striping plans would be submitted concurrent with submittal of Project construction plans and would be subject to City review and approval.
- Sight distance at each Project access point would conform to City of Moreno Valley sight distance standards and would be subject to City review and approval.

**Indian Street:**

- Construct Indian Street from the northern Project boundary to the southern Project boundary at its ultimate half-section width as a Minor Arterial (88-foot right-of-way), in compliance with applicable City of Moreno Valley standards.

**Improvements Funded by Directed Fee Assessments**

The Project would also pay all requisite fees directed to the completion of other necessary Study Area traffic improvements at locations where Project traffic would contribute to projected cumulative circulation system deficiencies. Required fees would be assessed and collected in total prior to Project implementation, or as otherwise stipulated by the Lead Agency.

The Project would participate in, and would be subject to requirements of, the following fee programs: Fair Share Fee assessments; City of Moreno Valley Development Impact Fee (DIF) Program; and the WRCOG Transportation Uniform Mitigation Fee (TUMF) Program.

Notwithstanding the Project's full compliance with fee assessments and fee programs noted above, Project payment of fees would not ensure timely completion of required improvements. Within these discussions, potentially significant impacts that are addressed through Project fee payments are considered to remain significant and unavoidable pending completion of the required improvements. Traffic/transportation fees that would be assessed of the Project along with a description of fee programs assessment and fee assignment mechanisms are summarized below.

**Fair Share Fees**

The Project TIA recommends improvements for each potentially impacted facility within the Study Area, and compares these with improvements already identified and included in other established fee programs (i.e., TUMF, City of Moreno Valley DIF). If an impacted facility requires improvements other than, or in addition to, those already identified within a regional or local fee program, the Project would contribute a "fair-share" percentage toward the costs of the recommended improvements. Fair share fees assessed of the Project in this manner would be collected by the City and deposited to a dedicated Capital Improvement Project account, created for the express purpose of constructing the required improvements.

Providing context for and summarizing traffic volumes generated by the Project, Table 4.1-7 identifies Project peak hour traffic volumes as a percentage additional peak hour traffic that would be generated between Existing (2015) Conditions and Opening Year (2020) Conditions. The Project's increment of new traffic volumes also provide an indication of the relative effects of Project traffic in the context of additional traffic that would be generated within the Study Area. The Project's proportional impacts at affected intersections would be the basis for fair share fee assessments. Please refer also to TIA Table 1-6, *Project Fair Share Contributions*.

**Table 4.1-7**
**Project Traffic Volumes as Percent of Total New Traffic for the Period 2015—2020**
**(AM and PM peak hours)**

| ID No. | Location | Existing [A] | Project [B] | 2020 With Project [C] | Total New Traffic [C—A]=[D] | Project Fair Share [B]÷[D] |
|---|---|---|---|---|---|---|
| 3 | Western Way/ Harley Knox Bl. | | | | | |
| | AM Peak Hour | 1,597 | 103 | 3,720 | 2,123 | 4.9% |
| | PM Peak Hour | 1,549 | 109 | 3,946 | 2,397 | 4.5% |
| 7 | Indian St./<br>Grove View Rd. | | | | | |
| | AM Peak Hour | 607 | 34 | 2,658 | 2,051 | 1.3% |
| | PM Peak Hour | 1,026 | 35 | 3,178 | 2,152 | 1.1% |

**Table 4.1-7**
**Project Traffic Volumes as Percent of Total New Traffic for the Period 2015—2020**
**(AM and PM peak hours)**

| ID No. | Location | Existing [A] | Project [B] | 2020 With Project [C] | Total New Traffic [C—A]=[D] | Project Fair Share [B]÷[D] |
|---|---|---|---|---|---|---|
| 10 | Indian St./ Harley Knox Bl. | | | | | |
| | AM Peak Hour | 1,508 | 125 | 3,667 | 2,159 | 3.4% |
| | PM Peak Hour | 1,739 | 131 | 4,205 | 2,466 | 3.1% |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

**Riverside County Transportation Uniform Mitigation Fee (TUMF) Program**

The TUMF program is administered by the Western Riverside Council of Governments (WRCOG) based on a regional Nexus Study completed in early 2003 and updated in 2009 to address major changes in right of way acquisition and improvement cost factors. The TUMF Program (Program) identifies a network of backbone and local roadways that are needed to accommodate growth of the region through 2035. The Program was established to ensure that new development contributes equitably to construction of area-serving facilities needed to maintain requisite level of services.

TUMF assessments are imposed on new residential, industrial, and commercial development through application of the TUMF Ordinance, and assessed fees are collected at the building or occupancy permit stage. TUMF assessments are adjusted on a regular basis to ensure that fees collected keep pace with inflation, and local construction and labor costs. The Project Applicant would pay requisite TUMF assessments at the prevailing rate in effect pursuant to the TUMF Ordinance.

Project payment of requisite TUMF assessments satisfies its obligations under the TUMF Ordinance, acting to sustain the regional transportation system. WRCOG is responsible for administration of the TUMF program, to include assignment of fees toward completion of TUMF-funded improvements within the region.

**City of Moreno Valley Development Impact Fee (DIF) Program**

City of Moreno Valley Development Impact Fee (DIF) payments are collected from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to support buildout of the City pursuant to the City General. The City's DIF program includes facilities that are not part of, or which may exceed improvements identified and covered by, the WRCOG TUMF program.

The Project Applicant would be subject to the City's DIF program, and would pay the requisite City DIF at incumbent City Ordinance rates. Under the City's DIF program, the City may grant developers a credit against specific components of fees when those developers construct certain facilities identified in the list of improvements funded by the DIF program.

### 4.1.9.4 Impact Statements

**Potential Impact**: *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.*

**Impact Analysis:**

**Existing (2015) and Opening Year (2020) Traffic Conditions**

**OVERVIEW**

The following discussions summarize potential traffic impacts within the Study Area reflecting implementation of the Project under Existing (2015) and Opening Year (2020) Conditions. Less-than-significant impacts are noted, and mitigation measures are proposed for those impacts determined to be potentially significant.

**EXISTING CONDITIONS WITHOUT-PROJECT AND WITH-PROJECT TRAFFIC ANALYSIS**

The Existing Conditions without-Project and with-Project Traffic Analysis identifies potential traffic/transportation impacts that would occur assuming implementation of the Project under Existing Conditions, and provides an indication of the incremental effects of the Project without the addition of assumed future cumulative traffic growth. This analysis indicates where Project traffic alone would cause or result in new potentially significant impacts. In these instances, the Project Applicant would timely construct required improvements.

The Existing-with-Project analysis also identifies currently deficient LOS conditions to which the Project would contribute additional traffic; and/or extra-jurisdictional or shared jurisdictional locations that would be adversely affected by Project traffic. Improvements that would resolve these pre-existing and/or extra-jurisdictional or shared jurisdictional deficiencies are identified. Project mitigation responsibilities in these instances, where impacts are cumulative or affect extra-jurisdictional or shared jurisdictional deficiencies, are addressed through payment of requisite traffic impact fees. Under the Existing-with-Project Condition, all site access and site-adjacent roadway facilities to be constructed by the Project are assumed to be in place.

**Intersection LOS Analysis–Existing Conditions**

Under Existing and Existing-with-Project Conditions, all Study Area intersections would operate at acceptable LOS, and no additional improvements would be required. Please refer also to TIA Table 5-1.

**Level of Significance:** Less-Than-Significant.

**Roadway Segment LOS Analysis—Existing Conditions**

Under Existing and Existing-with-Project Conditions, all Study Area roadway segments would operate at acceptable LOS, and no additional improvements would be required. Please refer also to TIA Table 5-2.

**Level of Significance:** Less-Than-Significant.

**Freeway Off-Ramp Queuing Analysis**

Under Existing and Existing-with-Project Conditions, Study Area freeway off-ramp queueing capacities would not be exceeded, and no additional improvements would be required. Please refer also to TIA Table 5-3.

**Level of Significance:** Less-Than-Significant.

**OPENING YEAR (2020) WITHOUT-PROJECT AND WITH-PROJECT TRAFFIC ANALYSIS**

The Year 2020-without-Project Condition reflects existing (2015) traffic volumes, plus additional background traffic that would be generated by generalized ambient growth within the region, as well as traffic generated by known or probable related projects. The Opening Year (2020) with Project Condition reflects addition of Project traffic to the Year 2020-without-Project Condition.

**Intersection LOS Analysis–Opening Year (2020) Conditions**

Intersections with identified deficiencies under either Opening Year (2020)-without-Project Conditions or Opening Year (2020)-with-Project Conditions are presented at Table 4.1-8. These are considered potentially significant cumulative impacts resulting from existing traffic, ambient traffic growth within the region, traffic generated by related projects, and Project traffic. Recommended improvements for each potentially affected intersection are listed subsequently at Table 4.1-9.

**Level of Significance:** Potentially Cumulatively Significant. Under Opening Year-with-Project Conditions, traffic generated by the Project in combination with traffic from regional growth and related projects would result in potentially significant cumulative impacts at the Study Area intersections listed at Table 4.1-8.

**Table 4.1-8**
**Opening Year (2020) Conditions**
**Peak Hour Intersection Deficiencies**

| ID No. | Intersection | LOS Std. | Year 2020 Without Project | | | | Year 2020 With Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay[1] (secs.) | | LOS[3] | | Delay[1] (secs.) | | LOS[3] | |
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 1 | I-215 SB Ramps/Harley Knox Bl. | D | **180.2** | **120.3** | **F** | **F** | **199.3** | **131.2** | **F** | **F** |
| 2 | I-215 NB Ramps/Harley Knox Bl. | D | **78.5** | **>200.0** | **E** | **F** | **81.9** | **>200.0** | **F** | **F** |
| 3 | Western Way / Harley Knox Bl. | D | **>100.0** | **>100.0** | **F** | **F** | **>100.0** | **>100.0** | **F** | **F** |
| 4 | Patterson Ave. / Harley Knox Bl. | D | **74.0** | **85.2** | **E** | **F** | **86.5** | **114.1** | **F** | **F** |
| 7 | Indian St. / Grove View Rd. | D | **78.5** | 25.6 | **F** | D | **98.4** | 26.3 | **F** | D |
| 10 | Indian St. / Harley Knox Bl. | D | 29.6 | **>200.0** | C | **F** | 34.4 | **>200.0** | C | **F** |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

### Mitigation Measures:

*4.1.1 Prior to the issuance of building permits, the Project Applicant shall pay requisite fees toward the construction of Year 2020 improvements as indicated at following Table 4.1-9 and summarized at Table 4.1-12 and illustrated at Figure 4.1-9 at the conclusion of this Section.*

**Table 4.1-9**
**Opening Year (2020) Conditions**
**Peak Hour Intersection LOS-With Improvements**

| ID No. | Intersection | Traffic Control | Intersection Approach Lanes | | | | | | | | | | | | Delay (secs.) | | Level of Service | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | | | | |
| | | | L | T | R | L | T | R | L | T | R | L | T | R | AM | PM | AM | PM |
| 1 | I-215 SB Ramps / Harley Knox Bl. | | | | | | | | | | | | | | | | | |
| | - Without Project | TS | 0 | 0 | 0 | **2** | 1 | 0 | 0 | 2 | d | **2** | 2 | 0 | 39.4 | 45.5 | D | D |
| | - With Project | TS | 0 | 0 | 0 | **2** | 1 | 0 | 0 | 2 | d | **2** | 2 | 0 | 42.1 | 46.6 | D | D |
| 2 | I-215 NB Ramps / Harley Knox Bl. | | | | | | | | | | | | | | | | | |
| | - Without Project | TS | 0 | 1 | 1 | 0 | 0 | 0 | **2** | 2 | 0 | 0 | 2 | **1>>** | 30.8 | 20.7 | C | C |
| | - With Project | TS | 0 | 1 | 1 | 0 | 0 | 0 | **2** | 2 | 0 | 0 | 2 | **1>>** | 31.8 | 20.8 | C | C |
| 3 | Western Way / Harley Knox Bl. | | | | | | | | | | | | | | | | | |
| | - Without Project | **TS** | 0 | 0 | 0 | 0 | 1 | 0 | **1** | 2 | 0 | 0 | 2 | d | 17.4 | 35.8 | B | D |
| | - With Project | **TS** | 0 | 0 | 0 | 0 | 1 | 0 | **1** | 2 | 0 | 0 | 2 | d | 21.3 | 39.6 | C | D |

**Table 4.1-9**
**Opening Year (2020) Conditions**
**Peak Hour Intersection LOS-With Improvements**

| ID No. | Intersection | Traffic Control | Intersection Approach Lanes | | | | | | | | | | | | Delay (secs.) | | Level of Service | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | | | | |
| | | | L | T | R | L | T | R | L | T | R | L | T | R | AM | PM | AM | PM |
| 4 | Patterson Ave. / Harley Knox Bl. | | | | | | | | | | | | | | | | | |
| | - Without Project | TS | 0 | 1 | 0 | 0 | 1 | d | 1 | **3** | 1 | 1 | **3** | 1 | 24.4 | 22.2 | C | C |
| | - With Project | TS | 0 | 1 | 0 | 0 | 1 | d | 1 | **3** | 1 | 1 | **3** | 1 | 25.3 | 29.0 | C | C |
| 7 | Indian St. / Grove View Rd. | | | | | | | | | | | | | | | | | |
| | - Without Project | **TS** | 0 | **2** | 0 | 1 | **2** | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 6.5 | 7.1 | A | A |
| | - With Project | **TS** | 0 | **2** | 0 | 1 | **2** | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 9.1 | 8.7 | A | A |
| 10 | Indian St. / Harley Knox Bl. | | | | | | | | | | | | | | | | | |
| | - Without Project | TS | 2 | 2 | 1 | 1 | 2 | **1>** | **2** | 3 | d | 1 | 3 | 0 | 17.9 | 53.3 | B | D |
| | - With Project | TS | 2 | 2 | 1 | 1 | 2 | **1>** | **2** | 3 | d | 1 | 3 | 0 | 18.9 | 53.8 | B | D |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.
L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; **1** = Improvement

**Level of Significance after Mitigation:** ***Cumulatively Significant and Unavoidable.*** The Project Applicant would pay all requisite fees, acting to offset the Project's proportional contributions to cumulative traffic impacts projected to occur under Opening Year-with-Project Conditions. Notwithstanding, payment of fees pursuant to Mitigation Measure 4.1.1 would not ensure timely completion of required improvements. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be assured. Moreover, there are not any plans to improve the affected intersection(s) within the Project's estimated opening date, and the City of Moreno Valley does not have an existing agreement with extra-jurisdictional agencies regarding the improvement or timing of improvements at locations along, or beyond the City of Moreno Valley corporate boundaries.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative impacts under Opening Year-with-Project Conditions are recognized as cumulatively significant and unavoidable at all Study Area intersections listed at previous Table 4.1-8.

**Roadway Segment LOS Analysis—Year 2020 Conditions**

Peak hour assessment of intersections located on either side of potentially deficient Study Area roadway segments was conducted to determine if peak hour traffic flows can be accommodated by the roadway segment in question. If it is determined that intersection peak hour traffic flows can be accommodated at the City's stated intersection LOS thresholds, then widening of connecting roadway segments is not recommended.

As indicated at Table 4.1-10, modeled traffic flows for certain Study Area roadway segments indicate potentially significant cumulative LOS deficiencies under Opening Year-with-Project Conditions. Functionally nonetheless, these roadway segments are projected operate acceptably given that the (improved) controlling intersections along the affected roadways would operate acceptably.

**Table 4.1-10**
**Opening Year (2020) Roadway Segment Deficiencies**

| ID No. | Roadway | Segment Limits | LOS Capacity (ADT) | 2020 w/o Project (ADT) | V/C | LOS | 2020 w/ Project (ADT) | V/C | LOS | LOS Std. |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Harley Knox Blvd. | I-215 NB Ramps to Western Way | 35,900 | 35,262 | **0.98** | **E** | 36,263 | **1.01** | **F** | D |
| 3 | Harley Knox Blvd. | East of Western Way | 25,900 | 36,133 | **1.40** | **F** | 37,133 | **1.43** | **F** | D |
| 4 | Harley Knox Blvd. | West of Patterson Ave. | 25,900 | 35,118 | **1.36** | **F** | 36,118 | **1.39** | **F** | D |
| 9 | Indian St. | South of Nandina Ave. | 18,750 | 34,847 | **1.86** | **F** | 35,007 | **1.87** | **F** | D |
| 10 | Indian St. | North of Grove View Rd. | 18,750 | 33,724 | **1.80** | **F** | 33,884 | **1.81** | **F** | D |
| 11 | Indian St. | South of Grove View Rd. | 18,750 | 26,361 | **1.40** | **F** | 26,659 | **1.42** | **F** | D |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

**Level of Significance:** Potentially Cumulatively Significant.

**Mitigation Measure:** Required improvements necessary to achieve acceptable Study Area roadway segment LOS are coincident with through lane improvements required to achieve acceptable LOS at controlling intersections. Pursuant to previous Mitigation Measure 4.1.1, the Project would pay requisite fees toward implementation of required improvements at all Study Area intersections affected by potentially significant

cumulative impacts under Opening Year with Project conditions. Payment of fees in this manner fulfills the Project's mitigation responsibilities.

**Level of Significance after Mitigation:** ***Cumulatively Significant and Unavoidable.*** The peak hour intersection analysis presented in the TIA substantiates that the controlling Study Area intersections along potentially deficient roadway segments are anticipated to operate at acceptable LOS with the incorporation of required intersection and lane improvements. As such, roadway lane improvements beyond those identified in Table 4.1-9 does not appear necessary and is not recommended.

Pursuant to Mitigation Measure 4.1.1, the Project would pay requisite fees addressing Study Area intersection LOS deficiencies projected to occur under Opening Year-with-Project Conditions, and in so doing would also address potential roadway segment deficiencies. No additional mitigation is required or recommended.

Payment of fees pursuant to Mitigation Measure 4.1.1 would not however, ensure timely completion of required improvements. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be assured. Moreover, there are not any plans to improve the affected intersection(s) within the Project's estimated opening date, and the City of Moreno Valley does not have an existing agreement with extra-jurisdictional agencies regarding the improvement or timing of improvements at locations along, or beyond the City of Moreno Valley corporate boundaries.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative impacts under Opening Year-with-Project Conditions are recognized as cumulatively significant and unavoidable at all Study Area roadway segments listed at previous Table 4.1-10.

**Freeway Off-Ramp Queuing Analysis**

Under Year 2020-with-Project Conditions, all Study Area freeway ramps queues would conform to Caltrans 95$^{th}$ percentile performance standards with the exception of the I-215 SB Ramps/Harley Knox Boulevard(AM peak hour only). Addition of Project traffic

under Opening Year Conditions at this location would result in potentially adverse queuing deficiencies, and Project contributions to freeway ramp queuing impacts would be considered cumulatively significant.

**Level of Significance:** Potentially Cumulatively Significant at I-215 SB Ramps/Harley Knox Boulevard (AM peak hour only).

**Mitigation Measures:** Required improvements necessary to achieve acceptable queues at I-215 SB Ramps/Harley Knox Boulevard are coincident with improvements required to achieve acceptable intersection LOS at I-215 SB Ramps/Harley Knox Boulevard (Study Area Intersection No.1). Pursuant to previous Mitigation Measure 4.1.1, the Project would pay requisite fees toward implementation of required improvements at all intersections affected by potentially significant cumulative impacts under Opening Year with Project conditions. Payment of fees in this manner fulfills the Project's mitigation responsibilities.

**Level of Significance after Mitigation:** ***Cumulatively Significant and Unavoidable.*** The Project Applicant would pay all requisite fees, acting to offset the Project's proportional contributions to cumulative traffic impacts projected to occur under Opening Year-with-Project Conditions. Notwithstanding, payment of fees pursuant to Mitigation Measure 4.1.1 would not ensure timely completion of required improvements. Thus, while the physical improvements identified may be capable of mitigating potentially significant impacts, these improvements cannot be assured. Moreover, there are not any plans to improve the affected intersection(s) within the Project's estimated opening date, and the City of Moreno Valley does not have an existing agreement with extra-jurisdictional agencies regarding the improvement or timing of improvements at locations along, or beyond the City of Moreno Valley corporate boundaries.

Based on the preceding, pending completion of the required improvements, Project contributions to cumulative ramp queuing impacts under Opening Year-with-Project Conditions are recognized as cumulatively significant and unavoidable at I-215 SB Ramps / Harley Knox Boulevard (AM peak hour only).

**Freeway Mainline Segment Impact Considerations**

A freeway segment impact analysis has been prepared for the Project pursuant to protocols and methodologies, as outlined in Caltrans District 8 *Guide for the Preparation of Traffic Impact Studies*. The Project freeway segment analysis, *Indian Street Commerce Center Supplemental Basic Freeway Segment Analysis* (Urban Crossroads, Inc.) April 27, 2016 is provided in its entirety at EIR Appendix B. Results and conclusions of the Project Freeway Segment Analysis are summarized below.

Caltrans has established level of service (LOS) "D" as the minimum acceptable mainline freeway segment operational condition within the Study Area. Employing this threshold, the addition of Project traffic would result in a less-than-significant traffic impact on the analysis segments for Existing Plus Project traffic conditions. Opening Year Cumulative (2020) traffic growth along the SR-91 and I-215 Freeway is anticipated to exceed the capacity of existing lanes, and would thus result in deficient LOS conditions for seven Study Area freeway mainline segments under Opening Year Cumulative (2020) traffic conditions (please refer to Table 4.1-11, below). The addition of Project traffic would not, however, result in any new freeway segment deficiencies. The Project is anticipated to contribute no more than 25 peak hour one-way trips to the deficient freeway mainline segments.

**Table 4.1-11**
**Freeway Segment Deficiencies (2020 Conditions)**

| | |
|---|---|
| 1 | I-215, Northbound, University Avenue to Martin Luther King Boulevard |
| 2 | I-215, Northbound, Box Springs Road to SR-60/I-215 Freeway |
| 3 | I-215, Northbound, Eucalyptus Avenue to Alessandro Boulevard |
| 4 | I-215, Northbound, Ramona Expressway to Nuevo Road |
| 5 | I-215, Southbound, Eucalyptus Avenue to Alessandro Boulevard |
| 6 | I-215, Southbound, Ramona Expressway to Nuevo Road |
| 7 | SR-91, Westbound, Riverwalk Parkway to Magnolia Avenue |

Source: *Indian Street Commerce Center Supplemental Basic Freeway Segment Analysis* (Urban Crossroads, Inc.) April 27, 2016.

**Level of Significance:** Potentially Cumulatively Significant

**Mitigation Measures:** There are no near-term solutions for the deficiencies noted above; and these freeway mainline segment deficiencies are therefore projected to carry forward to the Project Opening Year Cumulative (2020) conditions evaluated in this Section. Under Opening Year Cumulative (2020) Conditions, the Project would contribute additional traffic to the already deficient I-215 and SR-91 Freeway mainline segment deficiencies noted above. Globally, Project payment of TUMF would fulfill its mitigation responsibilities for contributions for cumulative traffic impacts deficiencies affecting I-215 Freeway mainline segments. However, it is not within the jurisdictional authority or purview of the Lead Agency or Applicant to adopt, implement, or enforce mitigation measures requiring the construction of improvements by Caltrans, or upon facilities within Caltrans' jurisdiction.

There are no feasible mitigation measures that would reduce cumulative freeway mainline segments impacts below significance thresholds. As such, the Project's contributions to Opening Year Cumulative traffic impacts affecting the Study Area freeway segments considered herein are considered cumulatively significant and unavoidable.

**Level of Significance after Mitigation:** ***Cumulatively Significant and Unavoidable.***

**FEE-BASED MITIGATION REQUIREMENTS AND ASSOCIATED INTERSECTION IMPROVEMENTS**

Table 4.1-12 summarizes transportation/traffic mitigation improvements necessary to achieve acceptable LOS within the Study Area. Required improvements are identified for each development/analytic scenario considered herein (Existing Conditions, Year 2020 Conditions). DIF, TUMF, and fair share fees paid by the Project would be directed to fund the required improvements. TIA Table 1-5, *Summary of Improvements by Analysis Scenario* provides further detail regarding Study Area traffic improvements, jurisdictional responsibilities and improvement funding sources.

**Table 4.1-12**
**Improvements by Analytic Scenario**

| ID No. | Intersection Location | Jurisdiction | Improvements | | | |
|---|---|---|---|---|---|---|
| | | | Existing (2015) | Existing w/ Project | 2020 w/o Project | 2020 w/ Project |
| 1 | I-215 SB Ramps / Harley Knox Bl. | Caltrans, Riverside Co. | None | None | Restripe SB approach w/ 2 left turn lanes and shared through-right turn lane | Same |
| | | | | | 2nd WB left turn lane | Same |
| 2 | I-215 NB Ramps / Harley Knox Bl. | Caltrans, Perris | None | None | 2nd EB left turn lane | Same |
| | | | | | WB free-right turn lane | Same |
| 3 | Western Way / Harley Knox Bl. | Perris | None | None | Traffic signal | Same |
| | | | | | EB left turn lane | Same |
| 4 | Patterson Ave. / Harley Knox Bl. | Perris | None | None | 3rd EB through lane | Same |
| | | | | | 3rd WB through lane | Same |
| 7 | Indian St. / Grove View Rd. | Moreno Valley | None | None | Traffic signal | Same |
| | | | | | Add 2nd NB through lane | Same |
| | | | | | Add 2nd SB through lane | Same |
| 10 | Indian St. / Harley Knox Bl. | Perris | None | None | SB right turn lane w/ overlap phasing | Same |
| | | | | | 2nd EB left turn lane | Same |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

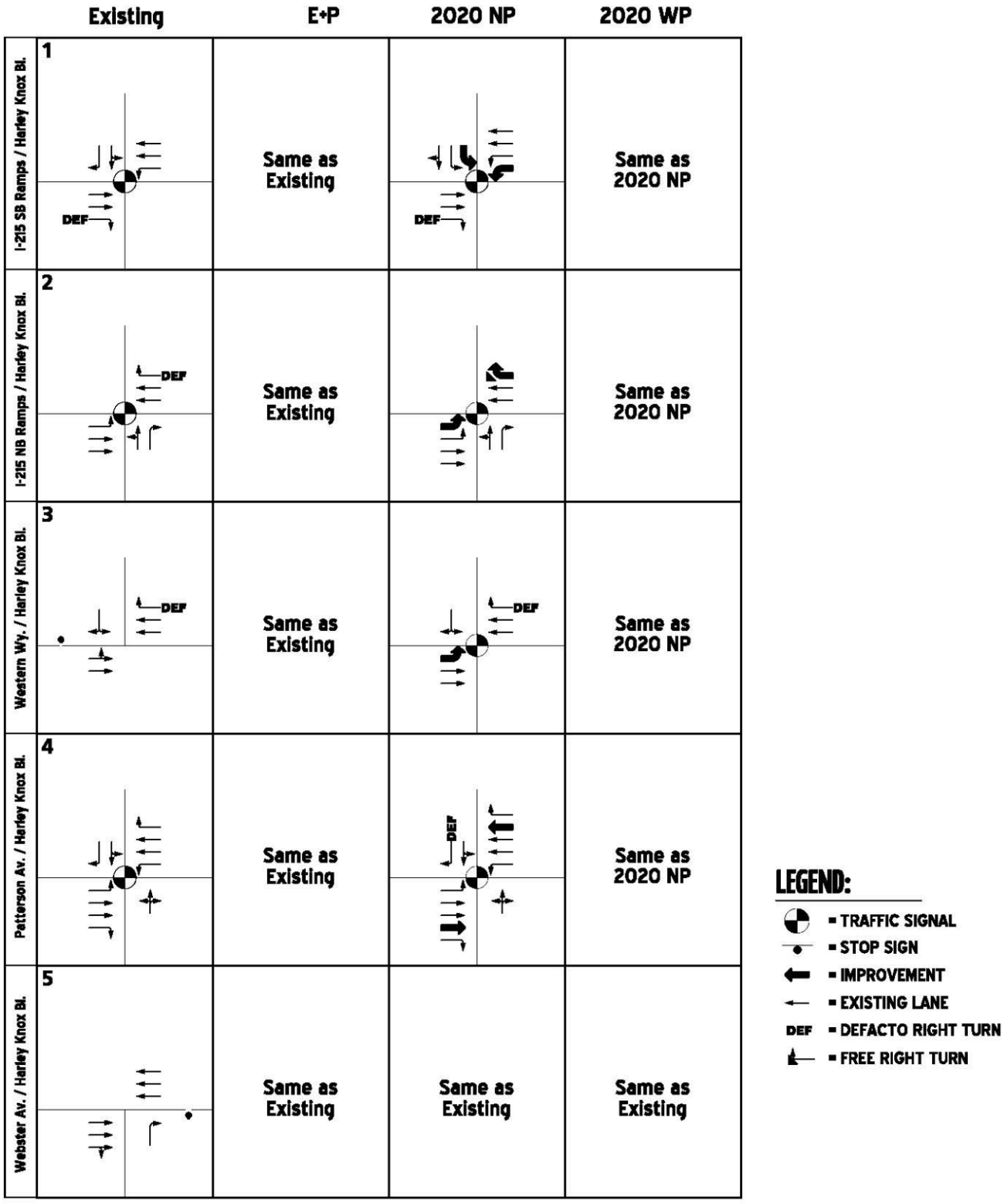
Figure 4.1-9 schematically illustrates ultimate configurations of required intersection improvements under Existing-with-Project Conditions, and Opening Year (2020) With Project Conditions.

**Potential Impact:** *Conflict with an applicable congestion management program, including, but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.*

**Impact Analysis:**

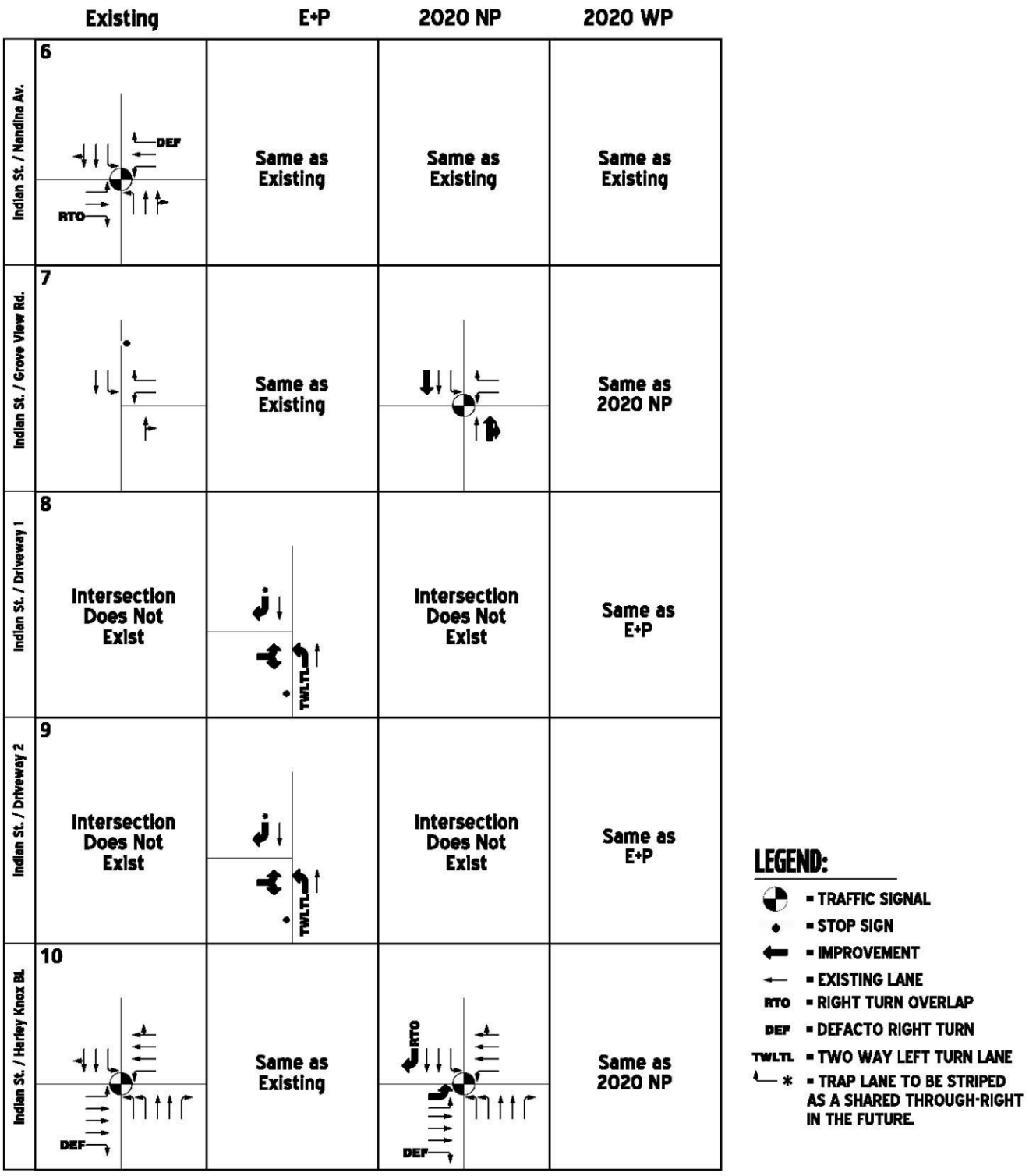
**CMP Intersections**

Study Area CMP intersections; governing jurisdictional agencies; and LOS Standards are summarized at Table 4.1-13.




Source: Urban Crossroads, Inc.

Figure 4.1-9
Summary of Improvements (1 of 2)




Source: Urban Crossroads, Inc.

Figure 4.1-9
Summary of Improvements (2 of 2)

**Table 4.1-13**
**Study Area CMP Intersections**

| ID No. | Intersection Location | Jurisdiction | LOS Std. |
|---|---|---|---|
| 1 | I-215 Southbound Ramps / Harley Knox Boulevard | Caltrans, Riverside Co. | D |
| 2 | I-215 Northbound Ramps / Harley Knox Boulevard | Caltrans, Perris | D |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

Under Existing (2015) without and with Project Conditions, all CMP intersections would operate at acceptable LOS.

CMP deficiencies projected to occur under Opening Year (2020) without and with Project Conditions are summarized at Table 4.1-14.

**Table 4.1-14**
**Study Area Opening Year (2020) CMP Deficiencies**

| ID No. | Intersection | LOS Std. | Year 2020 Without Project | | | | Year 2020 With Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay[1] (secs.) | | LOS[3] | | Delay[1] (secs.) | | LOS[3] | |
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 1 | I-215 SB Ramps / Harley Knox Bl. | D | **180.2** | **120.3** | **F** | **F** | **199.3** | **131.2** | **F** | **F** |
| 2 | I-215 NB Ramps / Harley Knox Bl. | D | **78.5** | **>200.0** | **E** | **F** | **81.9** | **>200.0** | **F** | **F** |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

CMP intersection deficiencies noted at Table 4.1-14 are coincident with impacts affecting Study Area intersections as presented previously in this analysis. Project contributions to impacts at the CMP intersections listed at Table 4.1-14 would be cumulatively considerable under Opening Year-with-Project Conditions. These are potentially significant cumulative impacts.

**Level of Significance:** Potentially Cumulatively Significant (Study Area Intersection No.'s 1 and 2).

**Mitigation Measures:** Mitigation for CMP intersection deficiencies is coincident with other Study Area intersection mitigation identified herein. Please refer to previous Mitigation Measure 4.1.1.

***Level of Significance after Mitigation: Cumulatively Significant and Unavoidable.***
The Project would pay all requisite fees for improvements at Study Area CMP facilities. However, as discussed herein, fee payments would not ensure timely completion of improvements required for mitigation of cumulatively significant impacts within the Study Area. Pending completion of required improvements, Project contributions to impacts affecting Study Area CMP facilities are therefore considered cumulatively significant and unavoidable.

**Potential Impact:** *Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).*

**Impact Analysis:** Efficient and safe access within, and access to, the Project is provided by the Project site plan design concept, site access improvements, and site adjacent roadway improvements included as components of the Project. On-site traffic signing and striping would be implemented in conjunction with detailed construction plans for the Project site.

To ensure appropriate design and implementation of all Project circulation improvements; and the final design of the Project site plan, to include locations and design of proposed driveways, are subject to review and approval by the City prior to the issuance of development permits. In addition, Police and Fire Department representatives would review the Project's plans to ensure that emergency access is provided consistent with Department(s) requirements.

Based on the preceding, the implemented Project inclusive of the design features noted at EIR Section 3.0, *Project Description* would not substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

It is also recognized that temporary and short-term traffic detours and traffic disruption could result during Project construction activities. Management and control of construction traffic would be addressed through the preparation and submittal of a construction area traffic management plan, to be reviewed and approved by City prior to or concurrent with Project building plan review(s). The Project Construction Traffic Management Plan (Plan), also summarized within the EIR Project Description, would identify traffic controls for any street closures, detours, or other potential disruptions to traffic circulation during Project construction. The Plan would also be required to identify construction vehicle access routes, and hours of construction traffic.

As supported by the preceding discussions and information presented in the EIR Project Description, the potential for the Project to substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** *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.*

**Impact Analysis:** MARB/IPA is located westerly of the Project site. No other airports of airfields are located proximate to the Project site or would otherwise be potentially affected by the Project.

The Project does not propose or require development or operations that would conflict with state law, federal regulations and/or adopted master plans and land use compatibility plans for MARB/IPA. Nor does the Project propose elements or aspects that would interfere with or obstruct City coordination with laws, regulations or plans for MARB/IPA.

The Project does not propose or require amendment to the Riverside County Airport Land Use Compatibility Plan (Riverside County ALUCP). Nor would the Project

otherwise interfere or obstruct administration and maintenance of the Riverside County ALUCP.

Project compliance with land use planning provisions and restrictions established under the Riverside County ALUCP is implemented through City and Riverside County ALUC review of Project plans.

The Project's proposed warehouse/manufacturing uses are consistent with permitted or conditionally permitted uses identified under the Riverside County ALUCP Airport Compatibility Matrix (please refer to EIR Section 4.5, *Hazards and Hazardous Materials,* Figure 4.5-1). Further, the EIR discussions of potential Noise impacts (EIR Section 4.4), and potential Hazards/Hazardous Materials impacts (EIR Section 4.5) substantiate that the Project would not be adversely affected by the Airport or Airport operations. Project compatibility with the Airport and Airport Operations is documented further through the Project's Federal Aviation Administration (FAA) *Determination(s) of No Hazard to Air Navigation* (available through the City Community Development Department).

Pursuant to the Riverside County ALUCP, an avigation easement would be recorded against all Project properties within ALUCP Zone B2; deed notice and disclosure would be provided for all Project properties within ALUCP Zone C1.

As supported by the preceding discussion, the potential for the Project to 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 is considered less-than-significant.

**Level of Significance:** Less-Than-Significant.

# 4.2 AIR QUALITY

# 4.2 AIR QUALITY

***Abstract***

*This Section identifies and addresses potential air quality impacts that may result from construction and implementation of the Project. More specifically, the air quality analysis evaluates the potential for the Project to result in the following impacts:*

- *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;*
- *Create objectionable odors affecting a substantial number of people.*

*The following analysis of Project-related air quality impacts supports the following conclusions:*

- *Even with application of mitigation, Project operational-source $NO_x$ emissions would exceed applicable South Coast Air Quality Management District (SCAQMD) regional thresholds.*

- *Project operational-source $NO_x$ emissions exceeding applicable SCAQMD regional thresholds would result in cumulatively considerable air quality impacts.*

- *Project operational-source $NO_x$ emissions exceedances would result in a cumulatively considerable net increase in criteria pollutants (ozone and $PM_{10}$/$PM_{2.5}$) for which the Project region is non-attainment.*

*Other potential air quality impacts of the Project addressed in this Section are either less-than-significant or can be reduced to levels that are less-than-significant with application of the mitigation measures described herein.*

### 4.2.1 INTRODUCTION

This Section presents existing air quality conditions and identifies potential air quality impacts resulting from construction and operations of the Project. Local and regional climate, meteorology and air quality are discussed, as well as existing federal, state and regional air quality regulations. The information presented in this Section is summarized from: *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016 (Project AQIA); and *Indian Street Commerce Center Mobile Source Diesel Health Risk Assessment, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016 (Project HRA). The Project AQIA, Project HRA and all supporting modeling data are presented at EIR Appendix C.

### 4.2.2 AIR QUALITY FUNDAMENTALS

Air pollution comprises many substances generated from a variety of sources, both man-made and natural. Since the rapid industrialization of the twentieth century, almost every human endeavor, especially those relying on the burning of fossil fuels, creates air pollution. Most contaminants are actually wasted energy in the form of unburned fuels or by-products of the combustion process. Motor vehicles are by far the most significant source of air pollutants in urban areas, emitting photochemically reactive hydrocarbons (unburned fuel), carbon monoxide, and oxides of nitrogen. These primary pollutants chemically react in the atmosphere with sunlight and the passage of time to form secondary pollutants such as ozone.

Air pollutants are generally classified as either primary or secondary pollutants. Primary pollutants are generated daily and emitted directly from the source, whereas secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. Examples of primary pollutants include carbon monoxide (CO), oxides of nitrogen ($NO_2$ and NO), sulfur dioxide ($SO_2$), particulate matter ($PM_{10}$ and $PM_{2.5}$), and various hydrocarbons or volatile organic compounds (VOC). Examples of secondary pollutants include ozone ($O_3$), which is a product of the reaction between $NO_x$ and VOC in the presence of sunlight. Other secondary pollutants include photochemical aerosols.

To aid in the review of discussions presented subsequently in this Section, recurring terms, abbreviations, and acronyms are defined as follows: PPM - Parts per Million; $\mu g/m^3$ - Micrograms Per Cubic Meter; $PM_{10}$ - Particulate Matter Less Than 10 Microns In Diameter; $PM_{2.5}$ - Particulate Matter Less Than 2.5 Microns In Diameter.

#### 4.2.2.1 Criteria Air Pollutants

Criteria air pollutants are those air contaminants for which air quality standards currently exist. Currently, state and federal air quality standards exist for ozone, nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), carbon monoxide (CO), suspended particulate matter ($PM_{10}$ and $PM_{2.5}$), and lead. California has also set standards for visibility, sulfates, hydrogen sulfide, and vinyl chloride. Evaluated criteria air contaminants, or their precursors, typically also include volatile organic compounds (VOC), oxides of nitrogen ($NO_x$), sulfur oxides ($SO_x$), and respirable particulate matter ($PM_{10}$ and $PM_{2.5}$). In general, the Basin as a whole has experienced decreases in criteria air pollutant levels when compared to historic conditions (please refer to EIR Section 4.2.5, Regional Air Quality Trends). Pollutant properties and sources, and potential health effects are summarized below.

**Carbon Monoxide**

***Properties and Sources***

Carbon monoxide (CO) is a colorless, odorless, toxic gas formed by incomplete combustion of fossil fuels. CO levels tend to be highest during the winter mornings, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest CO concentrations are generally found near congested transportation corridors and intersections. Other sources include aircraft, off-road vehicles, stationary equipment (e.g., fuel-fired furnaces, gas water heaters, fireplaces, gas stoves, gas dryers, charcoal grills), and landscape maintenance equipment such as lawnmowers and leaf blowers.

***Human Health Effects***

A consistent association between increased ambient CO levels and higher-than-average rates of hospital admissions for heart diseases (such as congestive heart failure) has been observed. Carbon monoxide can cause decreased exercise capacity, and adversely affects conditions with an increased demand for oxygen supply (fetal development, chronic hypoxemia, anemia, and diseases involving the heart and blood vessels). Exposure to CO can cause impairment of time interval estimation and visual function.

**Ozone**

***Properties and Sources***

Ozone ($O_3$) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOC) and oxides of nitrogen ($NO_x$), which are both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of the pollutant.

***Human Health Effects***

Short-term exposure to ozone can cause a decline in pulmonary function in healthy individuals including breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue and immunological changes. Additionally, an increase in the frequency of asthma attacks, cough, chest discomfort and headache can result.

A correlation has been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality as a result of long-term ozone exposure. A risk to public health implied by altered connective tissue metabolism and host defense in animals has also been reported.

**Oxides of Nitrogen**

***Properties and Sources***

Oxides of nitrogen ($NO_x$) serve as integral participants in the process of photochemical smog production. During combustion, oxygen reacts with nitrogen to produce $NO_x$. Two major forms of $NO_x$ are nitric oxide (NO) and nitrogen dioxide ($NO_2$). Natural causal sources or originators of $NO_x$ include lightning, soils, wildfires, stratospheric intrusion, and the oceans. Natural sources accounted for approximately seven percent of 1990 emissions of $NO_x$ for the United States (EPA 1997). Atmospheric deposition of $NO_x$ occurs when atmospheric or airborne nitrogen is transferred to water, vegetation, soil, or other materials. Acid deposition involves the deposition of nitrogen and/or sulfur acidic compounds that can harm natural resources and materials. The major source of $NO_x$ in the Basin is on-road vehicles. Stationary commercial and service source fuel combustion are other contributors.

***Human Health Effects***

Exposure to $NO_x$ may alter sensory responses or impair pulmonary function, and may increase incidence of acute respiratory disease including infections and respiratory symptoms in children. Difficulty in breathing in healthy individuals as well as bronchitic groups may also occur. $NO_x$ is also an ozone precursor. Health effects of ground-level ozone include: aggravated asthma; reduced lung capacity; increased

respiratory illness susceptibility; increased respiratory and cardiovascular hospitalizations; and premature deaths.

**Sulfur Dioxide**

***Properties and Sources***

Sulfur dioxide ($SO_2$) is a colorless, pungent gas. At levels greater than 0.5 ppm, $SO_2$ has a strong odor. Sulfuric acid is formed from sulfur dioxide, which is an aerosol particle component that affects acid deposition. Anthropogenic, or human-caused, sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. $SO_2$ is a precursor to sulfates and $PM_{10}$.

***Human Health Effects***

Health effects of $SO_2$ include higher frequencies of acute respiratory symptoms (including airway constriction in some asthmatics and reduction in breathing capacity leading to severe difficulties) and diminished ventilatory function in children. Very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

**Lead**

***Properties and Sources***

Lead (Pb) is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. It was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. The exclusion of lead from gasoline helped to decrease emissions of lead in the United States from 219,000 to 4,000 short tons per year between 1970 and 1997. Lead-ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources emanate from the dust of soils contaminated with lead-based paint and solid waste disposal.

Lead concentrations once exceeded the state and federal air quality standards by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982. Lead is no longer a gasoline additive, accounting for substantive reductions in airborne lead concentrations throughout the Basin.

***Human Health Effects***

Lead adversely affects the development and function of the central nervous system, leading to learning disorders, distractibility, lower IQ and increased blood pressure. An increase in blood lead levels may impair or decrease hemoglobin synthesis. Lead poisoning can cause anemia, lethargy, seizures, and death.

**Particulate Matter**

***Properties and Sources***

Particulate matter is a generic term that defines a broad group of chemically and physically different particles (either liquid droplets or solids) that can exist over a wide range of sizes. Examples of atmospheric particles include those produced from combustion (diesel soot or fly ash), light (urban haze), sea spray (salt particles), and soil-like particles from re-suspended dust. Fugitive dust is defined as any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of human activities (Rule 403, Fugitive Dust, SCAQMD).

Within air quality analyses, particulate matter is categorized by diameter: $PM_{10}$ and $PM_{2.5}$. $PM_{10}$ refers to particulate matter that is 10 microns or less in diameter (1 micron is one millionth of a meter, or one micrometer [µm]). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. The size of particles can determine the residence time of the material in the atmosphere. $PM_{2.5}$ has a longer atmospheric lifetime than $PM_{10}$ and, therefore, can be transported over longer distances.

Particulate matter originates from a variety of stationary and mobile sources. Stationary sources that generate particulate matter include: fuel combustion for electric 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 that generate particulate matter include highway vehicles, non-road vehicles and fugitive dust from paved and unpaved roads. Diesel Particulate Matter (DPM) is a mixture of many exhaust particles and gases that is produced when an engine burns diesel fuel. As the result of California Air Resources Board (CARB) regulatory actions, DPM emissions within the Basin have been reduced when compared to historic levels, and will continue to decline.

***Human Health Effects***

A consistent correlation between elevated ambient $PM_{10}$ levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed.

Many compounds found in diesel exhaust are carcinogenic, including sixteen compounds that are classified as possibly carcinogenic by the International Agency for Research on Cancer. DPM includes the particle-phase constituents in diesel exhaust. Some short-term (acute) effects of diesel exhaust include eye, nose, throat and lung irritation, as well as coughs, headaches, light-headedness and nausea. Diesel exhaust is a major source of ambient particulate matter pollution, and numerous studies have linked elevated particle levels in the air to increased hospital admission, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. DPM in the Basin poses the greatest cancer risk of all identified toxic air pollutants.

Valley Fever may also be transmitted through $PM_{10}$ and $PM_{2.5}$ emissions. "Valley Fever is a fungal infection caused by coccidioides organisms. It can cause fever, chest pain and coughing, among other signs and symptoms. Two species of coccidioides fungi cause valley fever. These fungi are commonly found in the soil in specific areas and can be stirred into the air by anything that disrupts the soil, such as farming, construction and wind. The fungi can then be breathed into the lungs and cause valley fever, also known as acute coccidioidomycosis. Mild cases of valley fever usually resolve on their own. In

more severe cases, doctors prescribe antifungal medications that can treat the underlying infection."[1]

**Volatile Organic Compounds**

***Properties and Sources***

Volatile Organic Compounds (VOCs), also termed Reactive Organic Gases (ROGs) are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. It should be noted that there is no state or national ambient air quality standard for VOCs because they are not classified as criteria pollutants. They are regulated, however, because a reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, which contribute to higher $PM_{10}$ and lower visibility. The major sources of VOCs in the Basin are on-road motor vehicles and solvent evaporation. VOCs are also an ozone precursor.

Benzene is a commonly occurring VOC within the Basin. Typical sources of benzene emissions include: gasoline service stations (fuel evaporation), motor vehicle exhaust, tobacco smoke, and oil and coal incineration. Benzene is also sometimes employed as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts. It is also used in the manufacture of detergents, explosives, dyestuffs, and pharmaceuticals.

***Human Health Effects***

Health effects of ground-level ozone include: aggravated asthma; reduced lung capacity; increased respiratory illness susceptibility; increased respiratory and cardiovascular hospitalizations; and premature deaths.

[1] Mayo Clinic Staff. "Diseases and Conditions-Valley Fever." *Mayo Clinic*. N.p., 27 May 2015. Web. 13 Oct. 2015.

Benzene is a known carcinogen. Short-term (acute) exposure to high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, unconsciousness can occur. Long-term (chronic) occupational exposure to high doses by inhalation has caused blood disorders, including aplastic anemia and lower levels of red blood cells.

### 4.2.3 SETTING

#### 4.2.3.1 Local and Regional Climate

The Project site is located in the South Coast Air Basin (SCAB, Basin) within the jurisdiction of SCAQMD. The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties), and the Riverside County portions of the Salton Sea Air Basin and Mojave Desert Air Basin.

The 6,745-square-mile SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles/Kern County border to the north, and the Los Angeles/San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

Persistent climatic conditions and variations in temperature, wind, humidity, precipitation, and ambient sunshine significantly influence air quality in the SCAB. Annual average temperatures throughout the SCAB vary from the low to mid 60s (degrees Fahrenheit). Due to a decreased marine influence, easterly portions of the SCAB exhibit greater variability in average annual temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures ranging from 47°F

in central Los Angeles to 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures exceeding 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. It should be noted that these effects decrease with distance from the coast.

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

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14-½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas," each year. During the dry season, which coincides with the months of

maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind.

Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal areas.

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

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

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with

high mountains forming the remainder of the perimeter. Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

#### 4.2.3.2 Existing Air Quality

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well as a summary of the health effects of each pollutant regulated under these standards are included in the following Table 4.2-1.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for $O_3$, CO, $SO_2$, $NO_2$, $PM_{10}$, and $PM_{2.5}$ are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than $O_3$, $PM_{10}$, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The $O_3$ standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

**Table 4.2-1**
**State and National Criteria Pollutant Standards, Effects, and Sources**

| Pollutant | Averaging Time | State Standard | National Primary Standard | National Secondary Standard | Human Health and Atmospheric Effects | Major Sources |
|---|---|---|---|---|---|---|
| **Ozone** | 1 hour<br>8 hours | 0.09 ppm[1]<br>0.07 ppm[2] | --<br>0.075 ppm | Same as Primary Standard | High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue. | Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment. |
| **Carbon Monoxide** | 1 hour<br>8 hours | 20 ppm<br>9 ppm | 35 ppm<br>9 ppm | --<br>-- | Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen. | Internal combustion engines, primarily gasoline-powered motor vehicles. |
| **Nitrogen Dioxide** | 1 hour<br>Annual Average | 0.18 ppm<br>0.030 ppm | 100 ppb<br>0.053 ppm | --<br>Same as Primary Standard | Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. | Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads. |
| **Sulfur Dioxide** | 1 hour<br>3 hours<br>24 hours<br>Annual Average | 0.25 ppm<br>--<br>0.04 ppm<br>-- | 75 ppb<br>--<br>0.14 ppm<br>0.030 ppm | --<br>0.5 ppm<br>--<br>-- | Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight. | Fuel combustion, chemical plants, sulfur recovery plants, and metal processing. |
| **Respirable Particulate Matter ($PM_{10}$)** | 24 hours<br>Annual Average | 50 $\mu g/m^3$<br>20 $\mu g/m^3$ | 150 $\mu g/m^3$<br>-- | Same as Primary Standard | May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility. | Dust and fume-producing industrial and agricultural operations, fuel combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays). |
| **Fine Particulate Matter ($PM_{2.5}$)** | 24 hours<br>Annual Average | --<br>12 $\mu g/m^3$ | 35 $\mu g/m^3$<br>12 $\mu g/m^3$ | Same as Primary Standard | Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling. | Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of |

**Table 4.2-1**
**State and National Criteria Pollutant Standards, Effects, and Sources**

| Pollutant | Averaging Time | State Standard | National Primary Standard | National Secondary Standard | Human Health and Atmospheric Effects | Major Sources |
|---|---|---|---|---|---|---|
| | | | | | | other pollutants, including NOx, sulfur oxides, and organics. |
| **Lead** | Monthly Average<br>Quarterly<br>Rolling 3-Mo. Avg. | 1.5 $\mu$g/m$^3$<br>--<br>-- | --<br>1.5 $\mu$g/m$^3$<br>0.15 $\mu$g/m$^3$ | Same as Primary Standard | Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction. | Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline. |
| **Hydrogen Sulfide** | 1 hour | 0.03 ppm | None | None | Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations) | Geothermal Power Plants, Petroleum Production and Refining. |
| **Sulfates** | 24 hour | 25 $\mu$g/m$^3$ | None | None | Breathing difficulties, aggravates asthma, reduced visibility | Produced by the reaction in the air of $SO_2$. |
| **Visibility Reducing Particles** | 8 hour | Light extinction of 0.23/km; visibility of 10 miles or more | None | None | Reduces visibility, reduced airport safety, lower real estate value, discourages tourism. | See $PM_{10}$/$PM_{2.5}$. |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.
Notes:
[1] PPM = parts per million; $\mu$g/m$^3$ = micrograms per cubic meter
[2] This concentration was approved by the California Air Resources Board on April 28, 2005 and became effective May 17, 2006.

**Regional Air Quality**

The SCAQMD monitors regional air quality through measurement and quantification of various criteria pollutants at 30 monitoring stations located throughout the air district. In 2012, the latest year of record, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, $PM_{10}$, and $PM_{2.5}$ at most monitoring locations. No areas of the SCAB exceeded federal or state standards for $SO_2$, CO, or sulfates. Attainment designations for the SCAB are provided at Table 4.2-2.

**Table 4.2-2**
**Attainment Status of Criteria Pollutants in the South Coast Air Basin (SCAB)**

| Pollutant | State Designation | Federal Designation |
|---|---|---|
| Ozone (1-hour) | Non-attainment | No Standard |
| Ozone (8-hour) | Non-attainment | Extreme Non-attainment[1] |
| Particulate Matter ($PM_{10}$) | Non-attainment | Serious Non-attainment |
| Particulate Matter ($PM_{2.5}$) | Non-attainment | Non-attainment |
| Carbon Monoxide | Attainment | Attainment/Maintenance |
| Nitrogen Dioxide | Non-attainment[2] | Attainment/Maintenance |
| Sulfur Dioxide | Attainment | Attainment |
| Lead | Attainment/Non-attainment[3] | Attainment/Non-attainment[4] |
| All others | Attainment/Unclassified | Attainment/Unclassified |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Notes:**

[1] The USEPA approved redesignation from Severe 17 to Extreme Nonattainment on May 5, 2010, effective June 4, 2010.

[2] The SCAB was reclassified from attainment to non-attainment for nitrogen dioxide on March 25, 2010.

[3] Los Angeles County was reclassified from attainment to non-attainment for lead on March 25, 2010; the remainder of the SCAB is in attainment of the State standard.

[4] The Los Angeles County portion of the SCAB is classified as non-attainment for lead; the remainder of the SCAB meets State attainment standards.

**Local Air Quality**

Relative to the Project site, the nearest long-term air quality monitoring site for Particulate Matter ≤ 10 Microns ($PM_{10}$) and Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$) is the SCAQMD Perris monitoring station (SRA 24), located approximately 4.8 miles north of the Project site. Data for Carbon Monoxide (CO), Nitrogen Dioxide ($NO_2$), and Ultra-Fine Particulates ($PM_{2.5}$) was obtained from the Metropolitan Riverside County 2

monitoring station (SRA 23), located approximately 10.6 miles northwest of the Project site. Data from the Metropolitan Riverside County 2 monitoring station was utilized in lieu of the Perris monitoring station only where data was not available from the nearest monitoring site.

The most recent three years of monitoring data available is presented at Table 4.2-3, and identifies the number of days ambient air quality standards were exceeded for the study area, which was considered to be representative of the local air quality at the Project site (data for $SO_2$ has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure $SO_2$ concentrations).

**Table 4.2-3**
**Project Area Air Quality Monitoring Summary 2012–2014**

| POLLUTANT | STANDARD | YEAR | | |
|---|---|---|---|---|
| | | 2012 | 2013 | 2014 |
| Ozone ($O_3$) | | | | |
| Maximum 1-Hour Concentration (ppm) | | 0.136 | 0.143 | 0.126 |
| Maximum 8-Hour Concentration (ppm) | | 0.111 | 0.111 | 0.101 |
| Number of Days Exceeding State 1-Hour Standard | > 0.09 ppm | 42 | -- | 34 |
| Number of Days Exceeding State 8-Hour Standard | > 0.07 ppm | 66 | -- | 60 |
| Number of Days Exceeding Federal 1-Hour Standard | > 0.12 ppm | 4 | 3 | 1 |
| Number of Days Exceeding Federal 8-Hour Standard | > 0.075 ppm | 45 | 27 | 42 |
| Number of Days Exceeding Health Advisory | ≥ 0.15 ppm | 0 | 0 | 0 |
| Carbon Monoxide (CO) | | | | |
| Maximum 1-Hour Concentration (ppm) | | -- | -- | 2.0 |
| Maximum 8-Hour Concentration (ppm) | | 1.5 | 1.6 | 1.4 |
| Number of Days Exceeding State 1-Hour Standard | > 20 ppm | -- | 0 | 0 |
| Number of Days Exceeding Federal / State 8-Hour Standard | > 9.0 ppm | 0 | 0 | 0 |
| Number of Days Exceeding Federal 1-Hour Standard | > 35 ppm | 0 | 0 | 0 |
| Nitrogen Dioxide ($NO_2$) | | | | |
| Maximum 1-Hour Concentration (ppm) | | 0.060 | 0.058 | 0.056 |
| Annual Arithmetic Mean Concentration (ppm) | | 0.017 | 0.016 | 0.016 |
| Number of Days Exceeding State 1-Hour Standard | > 0.18 ppm | 0 | 0 | 0 |

**Table 4.2-3**
**Project Area Air Quality Monitoring Summary 2012–2014**

| POLLUTANT | STANDARD | YEAR | | |
|---|---|---|---|---|
| | | 2012 | 2013 | 2014 |
| Particulate Matter ≤ 10 Microns ($PM_{10}$) | | | | |
| Maximum 24-Hour Concentration (μg/m3) | | 62 | 70 | 87 |
| Number of Samples | | 60 | 57 | 60 |
| Number of Samples Exceeding State Standard | > 50 μg/m³ | 1 | 10 | 8 |
| Number of Samples Exceeding Federal Standard | > 150 μg/m³ | 0 | 0 | 0 |
| Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$) | | | | |
| Maximum 24-Hour Concentration (μg/m³) | | 30.2 | 53.7 | 30.9 |
| Annual Arithmetic Mean (μg/m³) | | 11.4 | 11.2 | 10.9 |
| Number of Samples Exceeding Federal 24-Hour Standard | > 35 μg/m³ | 0 | 0 | 0 |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

#### 4.2.3.3 Air Pollutant Emissions Generated by Existing Activities

The Project site is currently vacant and undeveloped and is not a source substantive source of air pollutant emissions.

### 4.2.4 REGULATORY BACKGROUND AND GENERAL PLAN GOALS

#### 4.2.4.1 Federal Regulations

The U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing the NAAQS for $O_3$, CO, $NO_x$, $SO_2$, $PM_{10}$, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the California Air Resource Board (CARB).

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA

establishes the National Ambient Air Quality Standards (NAAQS), and specifies Standards compliance dates. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these Standards. SIPs must include pollution control measures demonstrating how Standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants $O_3$, $NO_2$, $SO_2$, $PM_{10}$, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to include an additional standard for $O_3$ and to adopt a NAAQS for $PM_{2.5}$. Table 4.2-1 (previously presented) provides the NAAQS within the Basin.

Mobile-source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and $NO_x$. $NO_x$ is a collective term that includes all forms of nitrogen oxides (NO, $NO_2$, $NO_3$) which are emitted as byproducts of the combustion process.

#### 4.2.4.2 California Regulations

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for

all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District-permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, $NO_x$, CO and $PM_{10}$. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

#### 4.2.4.3 Regional Air Quality Management Planning

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided subsequently within the analysis discussion in this Section.

### 4.2.5 REGIONAL AIR QUALITY TRENDS

SCAQMD is the agency responsible for regulating stationary air pollution sources within the Basin.[2] To these ends, SCAQMD develops comprehensive plans and regulatory programs for the region in order to attain federal air quality standards by dates specified under federal law. SCAQMD responsibilities also include attainment of state air quality standards at the earliest achievable date, employing reasonably available control measures.

SCAQMD rule development through the 1970s and 1980s realized substantial improvement in Basin air quality. Subsequent SCAQMD pollution prevention and control programs developed during the 1990s relied on: (i) development and application of cleaner technologies; (ii) add-on emission controls; and (iii) uniform CEQA review throughout the Basin. Industrial-source air pollutant emissions within the Basin have been significantly reduced through this approach. Additionally, Basin-wide vehicular-source emissions have been reduced by technologies implemented at the state level by the California Air Resources Board (CARB).

[2] Separately, the California Air Resources Board (CARB) regulates mobile-source air pollutants within the Basin.

#### 4.2.5.1 Criteria Pollutants Reduced Basin-wide

Air Quality Management Plans (AQMPs) prepared and periodically updated by SCAQMD establish air quality attainment targets and related strategies intended to achieve federal and state air quality standards. The Basin's historical improvement in air quality since the 1970's is the direct result of the comprehensive, multi-year air pollution reduction strategies outlined in the AQMP(s), and by utilizing uniform CEQA review throughout the Basin. Under the AQMPs, Ozone, $NO_x$, VOC, and CO emissions within the Basin have demonstrably decreased since 1975, with continuing substantive decreases anticipated through 2020.

Diminished air pollutant emissions with the Basin are primarily the result of replacement of older vehicles with newer more fuel-efficient and/or alternative fuel vehicles; and increasingly effective motor vehicle emissions controls, including evaporative emissions controls. Because of the mandated controls on motor vehicles and the replacement of older polluting vehicles, although vehicle miles traveled in the Basin continue to increase, $NO_x$ and VOC levels continue to decrease. $NO_x$ emissions resulting from electric power generation have also decreased, largely due to use of cleaner fuels and renewable energy. Relative decreases in ambient levels of Ozone, particulate matter ($PM_{10}$ and $PM_{2.5}$), and CO are also evident Basin-wide. Ozone air quality in the SCAB has improved substantially over historic conditions. For example:

- During the 1960s, maximum 1-hour concentrations exceeded 0.60 ppm. Currently, maximum measured concentrations approximate 0.20 ppm or less;

- The 2007 peak 8-hour indicator value for Ozone was 42 percent lower than the 1988 value;

- The 2008 three-year average of the maximum 8-hour concentration for Ozone was over 41 percent lower than in 1990; and

- The number of days that the Basin Ozone levels exceeded state and federal standards has also declined dramatically.

Trends for particulate matter emissions ($PM_{10}$ and $PM_{2.5}$) also show an overall improvement when compared to historic conditions. Direct emissions of $PM_{10}$ have remained somewhat constant in the Basin and direct emissions of $PM_{2.5}$ have decreased slightly since 1975. Area-wide sources (fugitive dust from roads, dust from construction and demolition, and other sources) contribute the greatest amount of direct particulate matter emissions. Despite the overall decrease, ambient concentrations still exceed the State annual and 24-hour $PM_{10}$ standards; and the Basin is also currently designated as nonattainment under the State and national $PM_{2.5}$ standards. Measures adopted under the Basin $PM_{2.5}$ State Implementation Plan (SIP), as well as programs to reduce ozone and diesel particulate matter (DPM) will help in reducing regional ambient $PM_{2.5}$ levels.

CO concentrations in the Basin have also decreased markedly when compared to past conditions — evidenced by more than 72 percent in the peak 8-hour CO indicator since 1988. The number of CO exceedance days has also declined. During 1988, there were 73 days above the State standard and 65 days above the national standard. However, since 2003, there were no exceedance days for either standard. The Basin in its entirety is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

#### 4.2.5.2 Diesel Emissions and Diesel Particulate Matter (DPM) Reduced Basin-wide

CARB and the Ports of Los Angeles and Long Beach have adopted regulations acting to reduce levels of DPM. In summary, these regulations require that older, more polluting trucks be replaced with newer, cleaner trucks. These regulatory requirements have yielded reductions in DPM emissions generated per mile traveled and associated reductions in ambient DPM levels within the Basin. Further DPM emissions reductions are anticipated as additional inefficient and polluting vehicles are retired from service.

DPM emissions are a known source of increased cancer risks. Paralleling the decline in Basin-wide DPM levels noted above, information available from CARB indicates that overall cancer risk throughout the basin has had a declining trend since 1990. Additional reductions in diesel risk exposure are anticipated to result from CARB's Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. The key elements of the Plan include: retrofit emission control devices for older diesel engines; adoption of stringent standards for new diesel engines; and reduced sulfur content of diesel fuel to protect advanced technology emission control devices on newer diesel engines.

### 4.2.6 STANDARDS OF SIGNIFICANCE

As identified within the *CEQA Guidelines*, air quality impacts would be considered potentially significant if 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; or
- Create objectionable odors affecting a substantial number of people.

#### 4.2.6.1 SCAQMD Thresholds

The SCAQMD's CEQA Air Quality Significance Thresholds (Revision: March 2015)[3] indicate that projects in the SCAB with emissions exceeding applicable SCAQMD thresholds would be considered as having individually and cumulatively significant air quality impacts. Conversely, air quality impacts for projects not exceeding applicable emissions thresholds would be considered individually and cumulatively less-than-significant. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State *CEQA Guidelines*, the SCAQMD recommends that its regional and local air quality thresholds for regulated pollutants (summarized below) be employed by lead agencies in determining whether criteria air pollutant emissions impacts generated by construction or operations of a given project are significant.

**Regional Thresholds**

SCAQMD regional significance thresholds for maximum daily emissions of regulated pollutants are listed at Table 4.2-4. Project emissions exceeding these thresholds would be considered potentially significant.

**Table 4.2-4**
**Maximum Daily Emissions-Regional Thresholds**

| Pollutant | Construction-source | Operational-source |
|---|---|---|
| NOx | 100 lbs/day | 55 lbs/day |
| VOC | 75 lbs/day | 55 lbs/day |
| $PM_{10}$ | 150 lbs/day | 150 lbs/day |
| $PM_{2.5}$ | 55 lbs/day | 55 lbs/day |
| $SO_x$ | 150 lbs/day | 150 lbs/day |
| CO | 550 lbs/day | 550 lbs/day |
| Lead | 3 lbs/day | 3 lbs/day |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

[3] "SCAQMD Air Quality Significance Thresholds." *South Coast Air Quality Management District*. South Coast Air Quality Management District, n.d. Web. 13 Oct. 2015.

**Carbon Monoxide Concentrations (CO "hot spots") Thresholds**

CO "hot spots" are areas of carbon monoxide concentrations exceeding national or state air quality standards. CO hot spots typically occur as a result of excessive vehicular idling, often associated with traffic backups at underperforming intersections or congested roadway links. SCAQMD also recommends an evaluation of potential localized CO "hot spot" impacts for projects which may adversely affect, or substantially contribute to, level of service impacts along area roadway segments or at area intersections.

Pursuant to SCAQMD thresholds, a project's localized CO emissions impacts would be potentially significant if they exceed the following California standards for localized CO concentrations:

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

**Localized Significance Thresholds (LSTs)**

LSTs represent the maximum localized emissions concentrations that would not cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (NAAQS or CAAQS) at the nearest residence or sensitive receptor. LSTs apply to carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter less than 10 microns ($PM_{10}$), and particulate matter less than 2.5 microns ($PM_{2.5}$). The SCAQMD states that the Lead Agency may, at the Agency's discretion, employ LSTs as another indicator of significance in air quality impact analyses.

**Health Risk Assessment (HRA) Thresholds**

***Carcinogenic Risks***

Pursuant to SCAQMD thresholds, impacts of Toxic Air Contaminants (TACs) are considered potentially significant if a Health Risk Assessment (HRA) shows an increased cancer risk of greater than 10 incidents per million population.

***Noncarcinogenic Risks***

Noncarcinogenic risks are numerically expressed as a Hazard Index (HI), with a threshold HI of 1.0. Pursuant to SCAQMD thresholds, noncarcinogenic Hazard Indices calculated to be greater than 1.0 are considered potentially significant.

## 4.2.7 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.2.7.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant air quality impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study (EIR Appendix A). Please refer also to Initial Study Checklist Item III., *Air Quality*.

Of the CEQA threshold considerations identified above at Section 4.2.6, and as substantiated in the Initial Study, the Project's potential impacts under the following topic are determined to have a less-than-significant impact and are not further substantively discussed here:

- Create objectionable odors affecting a substantial number of people.

All other CEQA topics concerning the Project's potential impacts to air quality are discussed below. Please refer also to Draft EIR Appendix A, Initial Study Checklist Item III., *Air Quality*.

### 4.2.7.2 Impact Statements

Following is an analysis of potential air quality impacts that are expected to occur as a result of the Project. Potential emissions are considered for Project construction and operation. For each topical discussion, potential impacts are evaluated under applicable criteria established above at Section 4.2.6, *Standards of Significance.*

**Potential Impact:** ***Conflict with or obstruct implementation of the applicable air quality plan.***

**Impact Analysis:** The Project site is located within the SCAB, which is characterized by relatively poor air quality in the context of NAAQS and CAAQS. The SCAQMD has jurisdiction over an approximately 12,000-square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what used to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, and local governments, as well as state and federal agencies to control and reduce Basin air pollutant emissions.

Currently, NAAQS and CAAQS are exceeded in most parts of the Basin. In response, the SCAQMD has developed and adopted a series of Air Quality Management Plans (AQMPs) outlining strategies to achieve state and national ambient air quality standards. AQMPs are periodically updated to reflect technological advances, recognize new or pending regulations, more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy.

**AQMP Consistency**

The SCAQMD AQMP, last updated in 2012, incorporates the latest scientific and technical information and planning assumptions; updated emission inventory methodologies for various emissions source categories; and reflects information, plans, and programs presented in the SCAG 2012 Regional Transportation Plan/Sustainable Communities Strategy (2012 RTP). Air quality conditions and trends presented in the 2012 AQMP assume that regional development will occur in accordance with population growth projections identified by SCAG in its 2012 RTP.

The SCAG 2012 RTP in turn derives its assumptions, in part, from general plans of cities located within the SCAG region. Accordingly, if a project is consistent with the development and growth projections reflected in an adopted general plan, that project

is considered consistent with the growth assumptions in the 2012 AQMP. The 2012 AQMP further assumes that development projects within the region will implement appropriate strategies to reduce air pollutant emissions, thereby promoting timely implementation of the AQMP.

Criteria for determining consistency with the AQMP are identified at Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD *CEQA Air Quality Handbook* (1993), as listed below. Project consistency with, and support of these criteria is presented subsequently.

- **Criterion No. 1**: The project under consideration will not result in an increase in the frequency or severity of existing NAAQS/CAAQS air quality violations or cause or contribute to new NAAQS/CAAQS violations; or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

- **Criterion No. 2**: The project under consideration will not exceed the assumptions in the AQMP in 2011 or increments based on the years of Project build-out phase.

**Criterion No. 1**

The CAAQS and NAAQS comprise, and are reflected in, the SCAQMD Localized Significance Thresholds (LSTs) described within this Section.[4] As discussed subsequently in this Section, the Project LST analysis substantiates that Project

[4] The CAAQS and NAAQS are not equivalent to SCAQMD regional emissions thresholds. The first AQMP consistency criterion specifically inquires whether or not a project would "result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations . . ." The only way to effectively answer this question is to determine if the NAAQS or CAAQS are exceeded – both of which are concentration-based thresholds, as opposed to the regional burden emissions "pounds per day" thresholds established by the SCAQMD. Regarding the latter, the SCAQMD employs regional thresholds to allow for and establish uniform mitigation requirements for all projects. However, evaluating whether a project would generate emissions exceeding SCAQMD regional thresholds does not answer the first criterion question since these regional thresholds are not tied back to the CAAQS/NAAQS.

construction-source emissions and operational-source emissions would not exceed applicable LSTs, and therefore would not violate NAAQS or CAAQS. Further, the Project would implement applicable best available control measures (BACMs), and would comply with applicable SCAQMD rules, acting to further reduce its already less-than-significant air pollutant emissions. Moreover, the Project at its current location, proximate to local and regional transportation facilities, acts to reduce vehicle miles traveled (VMT) and associated mobile-source (vehicular) emissions. Additionally, Project incorporation of contemporary energy-efficiency/energy conservation technologies and operational programs; and compliance with SCAQMD emissions reductions and control requirements act to reduce stationary-source air emissions. These Project attributes and features are consistent with and support AQMP air pollution reduction strategies and promote timely attainment of AQMP air quality standards. On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

**Criterion No. 2**

Criterion No. 2 addresses consistency (or inconsistency) of a given project with approved local and regional land use plans, and associated potential AQMP implications. That is, AQMP emissions models and emissions control strategies are based in part on land use data provided by local general plan documentation; and complementary regional plans, which reflect and incorporate local general plan information. Projects that propose general plan amendments may increase the intensity of use and/or result in higher traffic volumes, thereby resulting in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. However, if a given project is consistent with and does not otherwise exceed the growth projections in the applicable local general plan, then that project would be considered consistent with the growth assumptions in the AQMP and would not affect the AQMP's regional emissions inventory for the Basin.

The Project does not propose or require any change in land use designations, nor any increase in development intensity beyond that currently anticipated for the subject site. Because the land uses and development intensities proposed by the Project are consistent with the currently adopted City General Plan and applicable zoning standards, the Project is in compliance with Consistency Criterion No. 2.

**AQMP Consistency Conclusion**

The Project would not result in or cause NAAQS or CAAQS violations. The Project does not propose or require any change in land use designations, nor any increase in development intensity beyond that currently anticipated for the subject site. The Project would not generate operational-source criteria pollutant emissions not already reflected in the current AQMP regional emissions inventory. Based on the preceding, the Project is considered to be consistent with the AQMP. The potential for the Project to conflict with or obstruct implementation of the applicable air quality plan is therefore considered less-than-significant.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Violate any air quality standard or contribute substantially to an existing or projected air quality violation.***

**Impact Analysis:** The latest SCAQMD/California Air Pollution Control Officers Association (CAPCOA)-approved version of the California Emissions Estimator Model (CalEEMod, v2013.2.2) was utilized to estimate Project-related air pollutant emissions levels. Project emissions levels were then compared to applicable SCAQMD thresholds in order to determine if air quality standards would be exceeded; or if Project emissions would contribute substantially to existing or projected air quality violations. Unless otherwise noted, CalEEMod default values and assumptions were applied throughout.

## REGIONAL IMPACTS

### Construction-Source Air Pollutant Emissions

Construction activities associated with the Project will result in emissions of CO, VOCs, $NO_x$, $SO_x$, $PM_{10}$, and $PM_{2.5}$. These emissions would be generated by the following construction activities:

- Site Preparation;
- Grading;
- Building Construction;
- Architectural Coatings; and
- Paving.

Within the scope of the Project activities listed above, vehicular emissions generated by construction worker commutes and construction materials deliveries are also reflected.

The approximate Project construction schedule is summarized at Table 4.2-5. Air pollutant emissions based on the construction schedule presented here represents a "worst-case" analysis scenario. That is, should construction occur any time after the dates presented here, incremental and aggregate construction-source emissions would likely decrease since emission factors for construction equipment would progressively decrease in the future. This is due to the natural turnover of the older vehicle fleet and replacement with more fuel efficient equipment with enhanced emissions controls; and implementation of more stringent regulations which collectively act to reduce construction-source (and operational-source) emissions.

**Table 4.2-5**
**Project Construction Schedule**

| Activity | Start Date | End Date | Number of Days Total |
|---|---|---|---|
| Site Preparation | 01/28/2017 | 02/10/2017 | 10 |
| Grading | 02/11/2017 | 03/24/2017 | 30 |

**Table 4.2-5**
**Project Construction Schedule**

| Activity | Start Date | End Date | Number of Days Total |
|---|---|---|---|
| Building Construction | 03/25/2017 | 05/18/2018 | 300 |
| Paving | 05/19/2018 | 06/15/2018 | 20 |
| Architectural Coating | 06/16/2018 | 08/10/2018 | 40 |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

Construction equipment use by activity and duration is summarized at Table 4.2-6 and represents a reasonable approximation of the types and quantity of construction equipment employed on any given day.

**Table 4.2-6**
**Summary of Construction Equipment Use by Activity**

| Activity | Equipment Type | Number of Equipment | Hours per day |
|---|---|---|---|
| Site Preparation | Water Trucks | 2 | 8 |
| | Rubber Tired Dozers | 4 | 8 |
| | Crawler Tractor | 2 | 8 |
| | Excavators | 4 | 8 |
| Grading | Water Trucks | 2 | 8 |
| | Scrapers | 4 | 8 |
| | Graders | 4 | 8 |
| | Rubber Tired Dozers | 2 | 8 |
| | Crawler Tractors | 2 | 8 |
| Building Construction | Cranes | 1 | 8 |
| | Forklifts | 3 | 8 |
| | Generator Sets | 1 | 8 |
| | Tractors/Loaders/Backhoes | 3 | 8 |
| | Welders | 1 | 8 |
| Paving | Pavers | 2 | 8 |
| | Paving Equipment | 2 | 8 |
| | Rollers | 2 | 8 |

**Table 4.2-6**
**Summary of Construction Equipment Use by Activity**

| Activity | Equipment Type | Number of Equipment | Hours per day |
|---|---|---|---|
| Architectural Coating | Air Compressors | 4 | 8 |
| | Aerial Lifts | 4 | 8 |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

Modeled maximum daily construction-source air quality impacts reflecting the above information is summarized at Table 4.2-7.

**Table 4.2-7**
**Maximum Daily Construction-Source Air Pollutant Emissions Summary**
**Without Mitigation (pounds per day)**

| Year | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SOx | $PM_{10}$ | $PM_{2.5}$ |
| 2017 | 14.48 | 166.37 | 95.93 | 0.15 | 30.05 | 17.65 |
| 2018 | 76.44 | 33.54 | 41.61 | 0.09 | 5.15 | 2.55 |
| **Maximum Daily Emissions** | **76.44** | **166.37** | **95.93** | **0.15** | **30.05** | **17.65** |
| SCAQMD Regional Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | **YES** | **YES** | **NO** | **NO** | **NO** | **NO** |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Level of Significance:** Potentially Significant. As shown at Table 4.2-7, maximum daily Project construction-source air pollutant emissions would exceed applicable SCAQMD regional thresholds for VOCs and NOx. These are potentially significant impacts. It is noted however, that the impacts stated do not take credit for pollutant emissions reductions achieved through implementation of Best Available Control Measures (BACMs), or reductions achieved through standard regulatory requirements (e.g., SCAQMD Rule 403). To ensure their timely implementation and monitored compliance, application of standard BACMs and mandated SCAQMD rule compliance are restated as construction-source air quality impact mitigation measures presented below.

**Mitigation Measures:**

*4.2.1 The following requirements shall be incorporated into Project plans and specifications in order to ensure implementation of SCAQMD Rule 403 and limit fugitive dust emissions:*

- *All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour;*
- *The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project site are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day; and*
- *The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 miles per hour or less.*

*4.2.2 Grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling. This requirement is based on the California Air Resources Board regulation in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations, which imposes a requirement that heavy duty trucks not idle for greater than five (5) minutes at any location.*

*4.2.3 All off-road diesel-powered construction equipment ≥ 150 hp shall meet California Air Resources Board (CARB) Tier 4 emission standards.*

*4.2.4 Only "Zero-Volatile Organic Compounds" paints (no more than 150 grams/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.*

**Level of Significance after Mitigation:** Less-Than-Significant. As indicated at Table 4.2-8, implementation of Mitigation Measures 4.2.1 through 4.2.4 would reduce Project construction-source air pollutant emissions in aggregate, and in so doing would also achieve SCAQMD regional thresholds for VOC and NOx.

**Table 4.2-8**
**Maximum Daily Construction-Source Air Pollutant Emissions Summary**
**With Mitigation (pounds per day)**

| Year | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** | **$NO_x$** | **CO** | **$SO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2017 | 5.08 | 66.91 | 81.21 | 0.15 | 11.84 | 6.99 |
| 2018 | 16.83 | 33.54 | 41.61 | 0.09 | 5.15 | 2.55 |
| **Maximum Daily Emissions** | **16.83** | **66.91** | **81.21** | **0.15** | **11.84** | **6.99** |
| SCAQMD Regional Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | No | No | No | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Operational-Source Air Pollutant Emissions**

Project operational activities would generate emissions of VOC, $NO_X$, CO, $SO_X$, $PM_{10}$, and $PM_{2.5}$. Operational air pollutant emissions would be generated by the following primary sources:

- Mobile Sources
  - Tailpipe emissions; and
  - Fugitive dust related to vehicular travel.

- Stationary/Area Sources
  - Combustion emissions associated with natural gas and electricity use;
  - Landscape maintenance equipment;
  - On-Site Equipment Operations;
  - Emissions from consumer products; and
  - Architectural coatings.

Each of these operational emissions sources are described in the following paragraphs and the estimated emissions from each source are summarized subsequently. Within the following discussions, full Project buildout and occupancy under Opening Year Conditions are assumed.

**Mobile Sources (vehicles)**

***Vehicle Exhaust/Tailpipe Emissions***

Project-related operational air quality impacts derive predominantly from mobile sources. In this regard, approximately 98 percent (by weight) of all Project operational-source emissions would be generated by mobile sources (vehicles). Vehicle exhaust impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. Vehicle trip characteristics available from the Project Traffic Impact Analysis (Project TIA, EIR Appendix B) were employed in the Project AQIA. For the Project mobile-source emissions, air quality impacts have been evaluated employing assumptions and protocols reflected in the South Coast Air Quality Management District *Draft Warehouse Truck Trip Study* (SCAQMD) December 2014 (Draft Warehouse Truck Trip Study); and reflecting likely maximum trip lengths as follows:

- For passenger car trips, the CalEEMod default for a one-way trip length of 16.6 miles was assumed.

- For heavy duty trucks, average trip length were employed reflecting distances from the Project site to the far edges of the South Coast Air Basin (SCAB.)

    - Project site to the Port of Los Angeles/Long Beach: 80 miles;
    - Project site to East on State Route 60: 30 miles;
    - Project site to San Diego County line: 60 miles;
    - Project site to Inland Empire: 50 miles;
    - Project site to Perris destinations: 10 miles;
    - Project site to Moreno Valley destinations: 10 miles.

Assuming that 50% of all delivery trips will travel to and from the Project and the Port of Los Angeles/Long Beach, 10% go East on the State Route 60, 20% go to San Diego,

10% go to the Inland Empire, 5% go to Perris destinations and the remainder as Moreno Valley destinations. The average truck trip length is calculated as 61 miles.

Mobile-source vehicle tail pipe emissions cannot be materially controlled or mitigated by the Lead Agency or the Project Applicant. Rather, these emissions sources are regulated by CARB and USEPA. As summarized herein at Section 4.2.5, Regional Air Quality Trends, as the result of CARB and USEPA actions, Basin-wide vehicular-source emissions have been reduced dramatically over the past years and are expected to further decline as clean vehicle and fuel technologies improve. Future CARB and USEPA actions could be expected to have a positive effect on Project-related vehicular-source emissions, resulting in incremental reductions in vehicular-source emissions when compared to either the Project AQIA emissions estimates.

***Fugitive Dust Related to Vehicular Travel***

Project traffic would be a source of fugitive emissions due to the generation of road dust including particulate matter resulting from tire wear.

**Stationary/Area Sources**

***Combustion Emissions Associated with Natural Gas and Electricity***

Electricity and natural gas are used by almost every development project. Criteria pollutants are emitted through the generation of electricity and the consumption of natural gas. Because electrical generating facilities for the Project area are located either outside the region, are separately evaluated under their own environmental analyses, and/or are offset through the use of pollution credit, criteria pollutant emissions from offsite generation of electricity have been excluded from the analysis presented here.

***Landscape Maintenance Emissions***

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include

lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project.

***On-Site Equipment Operations***

Industrial warehouse uses such as those that would be implemented under the Project typically require use of cargo handling equipment for on-site movement of containers and chassis. The most common type of cargo handling equipment is the yard truck which is designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors (UTRs), hustlers, yard hostlers, and yard tractors. Yard trucks typically have a horsepower (hp) range of approximately 175 hp to 200 hp. SCAQMD information indicates that high-cube warehouse projects typically employ 3.6 yard trucks per million square feet of building space. For the Project, on-site modeled operational equipment assumes two (2) yard tractors operating at 4 hours/day, 365 days/year. Other assumed on-site operational equipment supporting the Project industrial land uses would include a total of two 89-hp yard forklifts, operating 4 hours/day, 365 days/year. All on-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be powered by non-diesel fueled engines and all on-site indoor forklifts shall be powered by electricity, compressed natural gas, or propane.

***Consumer Products***

Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which, when released in the atmosphere, can react to form ozone and other photochemically reactive pollutants.

***Architectural Coatings***

Over time, maintenance of Project facilities would require exterior application of architectural coatings. Such facility maintenance would generate air pollutant emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings.

**Operational Emissions Summary**

Maximum daily Project operational-source air pollutant emissions are summarized at Table 4.2-9. Applicable SCAQMD regional significance thresholds are also indicated.

**Table 4.2-9**
**Maximum Daily Operational-Source Air Pollutant Emissions Summary**
**Without Mitigation (pounds per day)**

| Land Use/Emissions Source | Pollutants | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** | **$NO_x$** | **CO** | **$SO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| ***Summer Scenario*** | | | | | | |
| Area-Source | 14.20 | 7.90E-04 | 0.09 | 1.00E-05 | 3.00E-04 | 3.00E-04 |
| Energy-Source | 0.10 | 0.89 | 0.76 | 5.38E-03 | 0.07 | 0.07 |
| Mobile-Source (Trucks) | 10.45 | 174.75 | 94.33 | 0.62 | 22.01 | 8.15 |
| Mobile-Source (Passenger Cars) | 1.22 | 1.64 | 22.48 | 0.08 | 7.27 | 1.95 |
| On-Site Equipment | 0.34 | 4.50 | 1.61 | 0.01 | 0.15 | 0.13 |
| **Total Maximum Daily Emissions** | **26.31** | **177.28** | **117.66** | **0.71** | **29.35** | **10.17** |
| SCAQMD Regional Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | No | **YES** | No | No | No | No |
| ***Winter Scenario*** | | | | | | |
| Area Source | 14.20 | 7.90E-04 | 0.09 | 1.00E-05 | 3.00E-04 | 3.00E-04 |
| Energy Source | 0.10 | 0.89 | 0.76 | 5.38E-03 | 0.07 | 0.07 |
| Mobile (Trucks) | 10.64 | 181.76 | 100.66 | 0.61 | 22.01 | 8.15 |
| Mobile (Passenger Cars) | 1.20 | 1.79 | 20.34 | 0.08 | 7.27 | 1.95 |
| On-Site Equipment | 0.34 | 4.50 | 1.61 | 0.01 | 0.15 | 0.13 |
| **Total Maximum Daily Emissions** | **26.48** | **184.44** | **121.85** | **0.70** | **29.35** | **10.17** |
| SCAQMD Regional Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | No | **YES** | No | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Level of Significance:** Potentially Significant. Project operational-source NOx emissions would exceed applicable SCAQMD regional thresholds. As shown at Table 4.2-14, Project operational-source NOx emissions would exceed applicable SCAQMD regional thresholds. Mitigation measures that would act to reduce Project operational-source emissions are presented below.

**Project Design Features and Operational Programs**

Operational-source emissions are reduced in part through the Project's conservation/sustainability design features and operational programs described at EIR Section 3.4.10, *Energy Efficiency/Sustainability*, and restated below:

Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project in total would provide sustainable design features necessary to achieve a "Certified" rating under the United States Green Building Council's Leadership in Energy & Environmental Design (LEED) programs. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City.

- All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

    - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access

encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

- Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy).[5] Development proposals within the Project site would also be required to implement the following:

  - Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

[5] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

**Mitigation Measure:** Requirements listed below at Mitigation Measure 4.2.5 would provide for generalized reductions in Project area-source air pollutant emissions. Notwithstanding, these reductions cannot be definitively quantified; and in any case, such reductions as may be realized would not materially affect the analyses or conclusions presented herein. Accordingly, for the purposes of this analysis, unmitigated and mitigated area-source air pollutant emissions generated by the Project are considered substantively equal.

*4.2.5 The following requirements shall be incorporated into Project plans and specifications:*

- *Any gasoline-powered cargo-handling equipment shall be equipped with catalytic converters.*
- *Install signs stating that the idling of trucks shall not exceed three minutes.*
- *Provide preferential parking locations for EVs, CNG vehicles, and carpool/vanpool vehicles.*

**Level of Significance After Mitigation:** ***Significant (NOx regional threshold exceedances)***. Mitigated Project operational-source emissions are summarized at Table 4.2-10. Any reductions as may be realized through the above mitigation measures would not materially affect the analyses or conclusions presented herein.

Moreover, and as noted previously in this Section, approximately 98 percent of all operational-source emissions (by weight) would be generated by Project mobile sources (traffic). Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project mobile-source emissions.

Accordingly, and as indicated at Table 4.2-10, even after implementation of the recommended mitigation measure, Project operational-source NOx emissions exceedances would persist. ***Individually and cumulatively, these are significant and unavoidable air quality impacts.***

**Table 4.2-10**
**Maximum Daily Operational-Source Air Pollutant Emissions Summary**
**With Mitigation (pounds per day)**

| Land Use/Emissions Source | Pollutants | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** | **$NO_x$** | **CO** | **$SO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| ***Summer Scenario*** | | | | | | |
| Area-Source | 12.36 | 7.90E-04 | 0.09 | 1.00E-05 | 3.00E-04 | 3.00E-04 |
| Energy-Source | 0.10 | 0.89 | 0.76 | 5.38E-03 | 0.07 | 0.07 |
| Mobile-Source (Trucks) | 10.33 | 174.75 | 94.33 | 0.62 | 22.01 | 8.15 |
| Mobile-Source (Passenger Cars) | 1.21 | 1.64 | 22.48 | 0.08 | 7.27 | 1.95 |
| On-Site Equipment | 0.34 | 4.50 | 1.61 | 0.01 | 0.15 | 0.13 |
| **Total Maximum Daily Emissions** | **24.34** | **177.28** | **117.66** | **0.71** | **29.35** | **10.17** |
| SCAQMD Regional Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | No | **YES** | No | No | No | No |
| ***Winter Scenario*** | | | | | | |
| Area Source | 12.36 | 7.90E-04 | 0.09 | 1.00E-05 | 3.00E-04 | 3.00E-04 |
| Energy Source | 0.10 | 0.89 | 0.76 | 5.38E-03 | 0.07 | 0.07 |
| Mobile (Trucks) | 10.52 | 181.76 | 100.66 | 0.61 | 22.01 | 8.15 |
| Mobile (Passenger Cars) | 1.2 | 1.79 | 20.34 | 0.08 | 7.27 | 1.95 |
| On-Site Equipment | 0.34 | 4.50 | 1.61 | 0.01 | 0.15 | 0.13 |
| **Total Maximum Daily Emissions** | **24.52** | **184.44** | **121.85** | **0.70** | **29.35** | **10.17** |
| SCAQMD Regional Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Threshold Exceeded?** | No | **YES** | No | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

## LOCALIZED IMPACTS

### Localized Significance Threshold (LST) Analysis

The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the national and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, the NAAQS/CAAQS establish LSTs.

LSTs were developed in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. More specifically, to address potential Environmental Justice implications of localized air pollutant impacts, the SCAQMD adopted LSTs indicating whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. Though not required, lead agencies may employ LSTs as another indicator of significance in its air quality impact analyses.

LSTs apply to carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter less than 10 microns ($PM_{10}$), and particulate matter less than 2.5 microns ($PM_{2.5}$). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard at the nearest residence or sensitive receptor.

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of the project are above or below state standards. In the case of CO and $NO_2$, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. For the nonattainment pollutants $PM_{10}$ and $PM_{2.5}$, background ambient concentrations already exceed state and/or national standards. LSTs for $PM_{10}$ and $PM_{2.5}$ are therefore based on SCAQMD Rules 403/1303 (construction-source/operational-source emissions respectively) and are established as an allowable change in concentration; background $PM_{10}$ and $PM_{2.5}$ concentrations are irrelevant.

***Emissions Considered/Methodology***

LSTs apply to carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter less than 10 microns ($PM_{10}$), and particulate matter less than 2.5 microns ($PM_{2.5}$). The Project LST analysis incorporates, and is consistent with, protocols and procedures established by the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (SCAQMD, June 2003). The SCAQMD Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs." Accordingly only "on-site" emissions are considered in the LST analysis.

***Receptors***

Localized air quality impacts were evaluated at proximate sensitive receptor land uses. Proximate sensitive receptors are described below. Location of the nearest sensitive receptor land use relative to the Project site is indicated at Figure 4.2-1.

**R1:** Located approximately 1,968 feet northeasterly of the Project site on Nandina Avenue, R1 represents an existing single-family residential home.

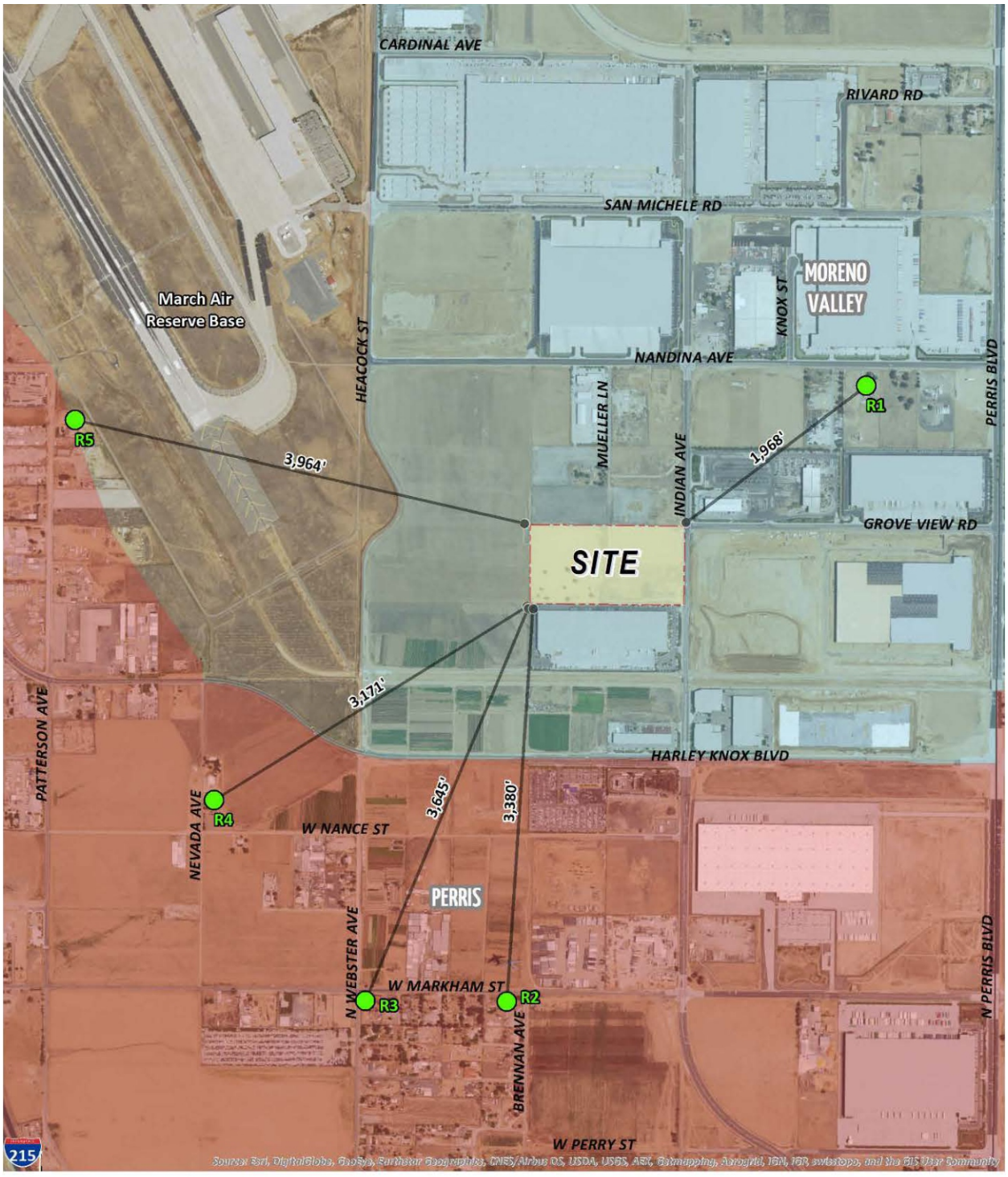
**R2:** Location R2 represents the existing residential home located roughly 3,380 feet southerly of the Project site on Markham Street.

**R3:** Location R3 represents the existing residential homes on Markham Street, southwesterly of the Project site at a distance of approximately 3,645 feet.

**R4:** Location R4 represents the existing residential homes situated approximately 3,171 feet southwest of the Project site on Nevada Avenue.

**R5:** At a distance of approximately 3,964 feet, location R5 represents a single-family residential home situated on Patterson Avenue west of the Project site.

Additionally, 1-hour and 8-hour CO and $NO_2$ concentrations were modeled at discrete receptors placed immediately adjacent to the fence-line. Modeled pollutant concentrations at these locations reflect potential "worker" exposures.




**LEGEND:**

Receptor Locations

Distance from receptor to Project site boundary (in feet)

Project Site Boundaries

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.2-1
Sensitive Receptor Locations

***Construction-Source Emissions LST Analysis***

The SCAQMD has issued guidance on applying CalEEMod to LST analyses. In this regard, CalEEMod calculates construction emissions (off-road exhaust and fugitive dust) based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment.

Since CalEEMod calculates construction-source emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the information at Table 4.2-11 is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

**Table 4.2-11**
**Maximum Daily Project Construction Equipment Operations Summary**

| Activity | Equipment Type | Equipment Quantity | Acres Graded per 8-hour Day | Operating Hours per day | Acres Graded Per Day |
|---|---|---|---|---|---|
| Grading | Rubber Tired Dozers | 2 | 0.5 | 8 | 1 |
| | Crawler Tractors | 2 | 0.5 | 8 | 1 |
| | Graders | 4 | 0.5 | 8 | 2 |
| | Scrapers | 4 | 1 | 8 | 4 |
| **Total acres graded per day** | | | | | **8** |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

Based on the information presented at Table 4.2-11, localized construction-source emissions concentrations were estimated. Detailed modeling protocols are presented in the Project AQIA, included at EIR Appendix C. Table 4.2-12 summarizes maximum daily localized construction-source emissions impacts at the nearest sensitive receptors. As indicated, unmitigated maximum daily construction-source emissions would exceed applicable LST for $PM_{10,}$ and would therefore be potentially significant.

**Level of Significance:** Potentially Significant ($PM_{10}$ emissions concentrations).

**Table 4.2-12**
**Maximum Construction-Source Emissions Concentrations-Unmitigated**

| Emissions Concentrations | Pollutant | | | | |
|---|---|---|---|---|---|
| | CO | | $NO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| | Averaging Time | | | | |
| | 1-Hour | 8-Hour | 1-Hour | 24-Hours | |
| Peak Concentrations at Nearest Receptor | 1.12 | 0.77 | 0.14 | 7.67. | 10.3 |
| Background Concentration* | 2.0 | 1.6 | 0.06 | --- | --- |
| **Total Concentration** | **3.12** | **2.43** | **0.20** | **7.67.19.50** | **10.3** |
| SCAQMD LST | 20 | 9 | 0.18 | 10.4 | 10.4 |
| Threshold Exceeded? | No | No | **YES** | **No** | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.
**Notes:** * Highest concentration from the last three years of available data. Background $PM_{10}$ and $PM_{2.5}$ concentrations are not considered under SCAQMD LST modeling protocols. $PM_{10}$ and $PM_{2.5}$ concentrations are expressed in $\mu g/m^3$. All others are expressed in ppm.

**Mitigation Measures:** Previous Mitigation Measures 4.2.1 through 4.2.3 would act to reduce Project construction-source emissions generally, and would also reduce construction-source $NO_2$ emissions concentrations to levels below applicable LTSs. As indicated at Table 4.2-13, with application of Mitigation Measures 4.2.1 through 4.2.3, Project construction-source LST impacts would be less-than-significant.

**Table 4.2-13**
**Maximum Construction-Source Emissions Concentrations-Mitigated**

| Emissions Concentrations | Pollutant | | | | |
|---|---|---|---|---|---|
| | CO | | $NO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| | Averaging Time | | | | |
| | 1-Hour | 8-Hour | 1-Hour | 24-Hours | |
| Peak Concentrations at Nearest Receptor | 0.91 | 0.71 | 0.09 | 3.16 | 3.95 |
| Background Concentration* | 2.0 | 1.6 | 0.06 | | |
| **Total Concentration** | **2.91** | **2.31** | **0.16** | **3.16** | **3.95** |
| SCAQMD LST | 20 | 9 | 0.18 | 10.4 | 10.4 |
| Threshold Exceeded? | No | No | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.
**Notes:** * Highest concentration from the last three years of available data. Background $PM_{10}$ and $PM_{2.5}$ concentrations are not considered under SCAQMD LST modeling protocols. $PM_{10}$ and $PM_{2.5}$ concentrations are expressed in $\mu g/m^3$. All others are expressed in ppm.

**Level of Significance After Mitigation:** Less-Than-Significant.

***Operational-Source Emissions LST Analysis***

The Project Operational-Source Emissions LST Analysis evaluates emissions generated by all on-site stationary/area sources inclusive of on-site landscaping/maintenance activities, facility energy consumption, on-site equipment use (yard trucks, etc.), and all on-site passenger car and truck travel. Detailed operational-source localized emissions modeling information is presented in the Project AQIA. Project operational-source localized emissions impacts are summarized at Table 4.2-14. As indicated, Project maximum daily operational-source emissions concentrations would not exceed applicable LSTs, and would therefore be less-than-significant.

**Table 4.2-14**
**Localized Operational-Source Emissions Impacts Summary (lbs/day)**

| | CO | | $NO_2$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|
| | Averaging Time | | | | |
| | 1-Hour | 8-Hour | 1-Hour | 24-Hours (Operations) | |
| Peak Day Localized Emissions | 0.01 | 0.01 | 0.0005 | 0.385 | 0.371 |
| Background Concentration* | 2.0 | 1.6 | 0.06 | --- | --- |
| **Total Concentration** | **2.01** | **1.61** | **0.06** | **0.385** | **0.371** |
| SCAQMD Localized Significance Threshold | 20 | 9 | 0.18 | 2.50 | 2.50 |
| **Threshold Exceeded?** | No | No | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Level of Significance:** Less-Than-Significant.

**CO "Hot Spot" Analysis**

As discussed below, the Project would not result in potentially adverse localized CO concentrations or "hot spots." Adverse localized CO concentrations ("hot spots") are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a

maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations in the Project vicinity have declined over time, and have not violated applicable AAQS in the last three years of record.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. When the SCAQMD CEQA Handbook was first prepared in 1993, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO. As identified in the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) and subsequently within the SCAQMD's 2003 AQMP, peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon traffic periods. This hot spot analysis did not predict any violation of CO standards (please refer to Table 4.2-15).

**Table 4.2-15**
**SCAQMD 2003 Los Angeles CO Hot Spot Analysis**
**Peak CO Emissions Concentrations Summary**

| Intersection Location | Carbon Monoxide Concentrations (ppm) | | |
|---|---|---|---|
| | Morning 1-hour | Afternoon 1-hour | 8-hour |
| Wilshire-Veteran | 4.6 | 3.5 | 4.2 |
| Sunset-Highland | 4 | 4.5 | 3.9 |
| La Cienega-Century | 3.7 | 3.1 | 5.8 |
| Long Beach-Imperial | 3 | 3.1 | 8.4 |
| CO Standard (ppm) | 20.0 ppm | 9.0 ppm | 9.0 ppm |
| Standard Exceeded | No | No | No |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

It can, therefore, be reasonably concluded that projects (such as the Indian Street Commerce Center Project evaluated here) that are not subject to the extremes in vehicle volumes and vehicle congestion that was evidenced in the 2003 Los Angeles Hot Spot Analysis would similarly not create or result in CO hot spots. As indicated by comparing the traffic volumes at Tables 4.2-16 and 4.2-17, none of the Project Study Area intersections would exceed total AM/PM daily traffic volumes and traffic congestion reflected in the 2003 Los Angeles Hot Spot Analysis.

**Table 4.2-16**
**SCAQMD 2003 Los Angeles CO Hot Spot Analysis**
**Study Area Intersection Maximum Peak Hour and Daily Traffic Volumes**

| Intersection | Northbound (AM/PM) | Southbound (AM/PM) | Eastbound (AM/PM) | Westbound (AM/PM) | Total (AM/PM) |
|---|---|---|---|---|---|
| Wilshire-Veteran | 4,954/2,069 | 1,830/3,317 | 721/1,400 | 560/933 | 8,062/7,719 |
| Sunset-Highland | 1,417/1,764 | 1,342/1,540 | 2,304/1,832 | 1,551/2,238 | 6,614/5,374 |
| La Cienega-Century | 2,540/2,243 | 1,890/2,728 | 1,384/2,029 | 821/1,674 | 6,634/8,674 |
| Long Beach-Imperial | 1,217/2,020 | 1,760/1,400 | 479/944 | 756/1,150 | 4,212/5,514 |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Table 4.2-17**
**Project**
**Study Area Intersection Maximum Peak Hour and Daily Traffic Volumes**

| Intersection | Northbound (AM/PM) | Southbound (AM/PM) | Eastbound (AM/PM) | Westbound (AM/PM) | Total (AM/PM) |
|---|---|---|---|---|---|
| I-215 NB Ramps - Harley Knox Blvd. | 511/348 | 0/0 | 2,298/1,586 | 1,414/2,552 | 4,223/4,486 |
| Western Way - Harley Knox Blvd. | 0/0 | 77/108 | 2,275/1,374 | 1,369/2,464 | 3,721/3,946 |
| Patterson Ave. - Harley Knox Blvd. | 141/96 | 27/103 | 2,130/1,333 | 1,246/2,313 | 3,544/3,845 |
| Indian St. - Harley Knox Blvd. | 357/400 | 573/1,569 | 2,048/1,317 | 691/919 | 3,669/4,205 |

**Source:** *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

It is further noted that peak 8-hr CO concentrations noted at previous Table 4.2-15 were the result of atypical meteorological and topographical conditions affecting the Los Angeles Hot Spot Analysis study area; and not the result of intersection traffic volumes and/or congestion. As evidence of this, for example, the 8.4 ppm CO concentration measured at the Long Beach Boulevard and Imperial Highway intersection (greatest 8-hr CO concentration recorded in the 2003 Los Angeles CO Hot Spot Analysis) only 0.7 ppm of the measured 8-hr CO concentration was attributable to mobile-source emissions at this intersection; the remaining 7.7 ppm accruing to ambient air CO concentrations at the time the Analysis was prepared. In contrast, the ambient 8-hr CO concentration within the Project Study Area is estimated at 1.4 ppm—1.6 ppm (please refer to previous Table 4.2-3). Therefore, even if the traffic volumes for the Project were double or even triple of the traffic volumes generated at the Long Beach Boulevard and Imperial Highway Intersection, the Project would not be capable of resulting in a CO "hot spot" at any of the Project Study Area intersections. Moreover, ambient CO concentrations within the Basin in total have improved substantially since completion of the 2003 Los Angeles CO Hot Spot Analysis, further indicating that Project CO emissions concentrations, when added to background CO concentrations would not result in or cause CO hot spots.

Additionally, similar considerations are employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant localized CO emissions impact. The Project would not produce maximum peak hour traffic volumes traffic required to generate a CO hot spot either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO hot spots are not an environmental impact of concern for the Project.

**Level of Significance:** Less-Than-Significant.

**TOXIC AIR CONTAMINANTS HEALTH RISK ANALYSIS**

Toxic Air Contaminants (TACs) of primary concern for the Project would be Diesel Particulate Matter (DPM) emissions generated by trucks accessing the Project site. Project DPM sources are discussed below. Potential health risks of Project-related DPM emissions are described and evaluated subsequently.

***Diesel Particulate Matter (DPM) Emissions***

The Project would generate truck traffic, a portion of which is assumed to be diesel-powered. DPM emissions are known carcinogens and could increase area health risks. Accordingly, an analysis of potential long-term diesel exposure health risks is provided. To this end, the Project Health Risk Assessment (included at EIR Appendix C) characterizes and quantifies potential diesel emissions generated by, and health risk exposure resulting from, Project operations.

Truck trip generation characteristics presented in the Project TIA (*Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* [Urban Crossroads, Inc.]March 2016) were utilized in the Project HRA. It should be noted that the Project TIA presents truck trips in terms of Passenger Car Equivalents (PCEs) in an effort to recognize and acknowledge the effects of larger/longer truck vehicles at Study Area intersections. For purposes of the HRA, however, the actual number and types of vehicles accessing the Project site (not PCEs) establishes the basis of the emissions quantification and analysis. Accordingly, the actual number of vehicles, by vehicle classification (e.g., passenger cars [including light trucks], heavy trucks) were used in the analysis. Please refer also to HRA Section 2.2, *Emissions Estimation*.

The Project is required to comply with CARB's on-site truck idling limit of 5 minutes. SCAQMD staff recommends that HRA's assume a minimum of 15 minutes of on-site truck idling, which would take into account potential protracted on-site idling which could occur at loading/unloading areas, or other areas or instances where on-site truck

traffic movements may be impeded or delayed. Consistent with SCAQMD recommendations, the Project HRA analysis assumed on-site truck idling for a period of 15 minutes.

***Carcinogenic and Chronic Illness Impacts***

The SCAQMD *CEQA Air Quality Handbook* (1993) states that emissions of Toxic Air Contaminants (TACs) are considered significant if a Health Risk Assessment shows an increased cancer risk of greater than 10 incidents per million population. Consistent with the stated SCAQMD *Handbook* cancer risk threshold, for the purposes of this analysis, an increase in cancer risk of 10 incidents per million population is considered significant. Also germane to the Project HRA, specific guidance in determining health risks from diesel emissions is provided in *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis* (SCAQMD) 2003.

Health risks associated with exposure to carcinogenic compounds are defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of carcinogenic potential of a chemical when a dose is received through the inhalation pathway, and represents an upper-bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a 70-year lifetime. The URFs utilized in this analysis were obtained from the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA). Please refer also to the Project HRA presented at EIR Appendix C for greater detail regarding calculated DPM exposures and resulting health DPM-source cancer risks. Consistent with OEHHA guidance and SCAQMD HRA protocols, Project-related DPM-source cancer risks were evaluated for three exposure scenarios: "Residential," "Worker," and "School Site/School Child." OEHHA-recommended exposure parameters for each scenario are summarized at Table 4.2-18.

**Table 4.2-18**
**OEHHA Recommended Exposure Scenario Parameters**

| Exposure Parameter | Units | Residential | Worker | School Site/Child |
|---|---|---|---|---|
| Frequency | days/year | 350 | 245 | 180 |
| Duration | years | 70 | 40 | 9 |
| Inhalation Rate | L/kg-day | 302 | 149 | 581 |
| Exposure Duration | Years | 70 | 40 | 9 |
| Exposure Time | hours/day | 24 | 12 | 10 |

**Source:** *Indian Street Commerce Center Mobile Source Diesel Health Risk Assessment, City of Moreno Valley*(Urban Crossroads, Inc.) July 7, 2016.

***Carcinogenic Risk Exposure: Quantification Results***

The Project HRA results for residential (maximally exposed individual receptor, MEIR), worker (maximally exposed individual worker, MEIW), and school site (maximally exposed individual school child, MEISC), carcinogenic risk exposures are summarized below. Locations of the MEIR, MEIW, and MEISC relative to the Project site are presented at Figures 4.2-2 through 4.2-4. Please refer also to the Project HRA (included at EIR Appendix C) for detailed exposure modeling inputs and results.

**Residential Exposures**

For the Residential Exposure Scenario, the Project HRA indicates that DPM emissions generated by the Project will have a less-than-significant health risk at the maximally impacted residential land use. More specifically, for the maximally exposed individual receptor (MEIR), the maximum risk is estimated to be 0.16 in one million, which does not exceed the SCAQMD DPM-source cancer risk threshold of 10 in one million.

**Worker Exposures**

For the Worker Exposure Scenario, the Project HRA indicates that DPM emissions generated by the Project will have a less-than-significant health risk at the maximally impacted worker location. More specifically, for the maximally exposed individual worker (MEIW), the maximum risk is estimated to be 0.47 in one million, which does not exceed the SCAQMD DPM-source cancer risk threshold of 10 in one million.


**LEGEND:**

Residential Receptor

Maximally Exposed Individual Receptor

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.2-2
MEIR Locations


**LEGEND:**

- Worker Receptor
- Maximally Exposed Individual Worker

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.2-3
MEIW Locations


**LEGEND:**

School Receptor

Maximally Exposed Individual School Child

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.2-4
MEISC Locations

**School Site Exposures**

For the School Child Exposure Scenario, the Project HRA indicates that DPM emissions generated by the Project will have a less-than-significant health risk at the maximally impacted school site. More specifically, for the maximally exposed individual school child (MEISC), the maximum risk is estimated to be 0.004 in one million, which does not exceed the SCAQMD DPM-source cancer risk threshold of 10 in one million.

***Non-Carcinogenic Risk***

An evaluation of the potential non-carcinogenic effects of chronic exposure to TACs was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). RELs employed in the Project HRA were obtained from the California Environmental Protection Agency, Office of Environmental Health Hazard (OEHHA); http://www.oehha.org/risk/chemicaldb/index.asp. Noncarcinogenic risks are numerically expressed as a Hazard Index (HI), with a threshold HI of 1.0. Noncarcinogenic Hazard Indices calculated to be less than 1.0 are considered less-than-significant.

***Non-Carcinogenic Risk Exposure: Quantification Results***

Non-carcinogenic risk exposures were quantified consistent with applicable SCAQMD methodology, and are expressed relative to Hazard Index threshold of 1.0. As noted above, non-carcinogenic Hazard Indices calculated to be less than 1.0 are considered less-than-significant. The Project HRA results for residential, worker, and school non-carcinogenic risk exposures are summarized below.

**Residential Exposures**

The calculated HI at the MEIR is estimated to be 0.0001, which would not exceed the applicable threshold of 1.0, and is therefore less-than-significant.

**Worker Exposures**

The calculated HI at the MEIW is estimated to be 0.002, which would not exceed the applicable threshold of 1.0, and is therefore less-than-significant.

**School Site Exposures**

The calculated HI at the MEISC is estimated to be 0.00002, which would not exceed the applicable threshold of 1.0, and is therefore less-than-significant.

## Cumulative TAC Impacts

### *Background*

The South Coast Air Quality Management District (SCAQMD)[6] has conducted an analysis of the cumulative effects of Toxic Air Contaminants (TACs) within the South Coast Air Basin (Basin). This cumulative analysis, *Draft Final Report*, *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV)* (SCAQMD) April 2015, expresses cumulative TAC impacts in terms of potential increased cancer risks.[7] MATES-IV modeling predicts an excess cancer risk of 522.63 in one million for the Project area. [8] DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68% of the total risk shown in MATES-IV.

The SCAQMD has established a significance threshold for incremental project-level TAC impacts. Specifically, if a given project would generate TACs resulting in or causing an increase in cancer risks of 10 or more incidents per million population, that project's incremental cancer risk would be considered significant. This same significance threshold (10 in one million) is applied by SCAQMD in determining whether a given project's incremental contribution to ambient TAC-source cancer risks

[6] SCAQMD is the Responsible Agency providing guidance on applicable air quality analysis methodologies and air quality-related issues.

[7] Cancer risk refers to the probability of contracting cancer associated with exposure to a substance. It is expressed as the chance per million of a cancer case occurring. A risk of one per million, for example, would mean that in a population of one million individuals exposed over a 70-year lifetime, one additional cancer case would be expected.

[8] "MATES IV-Multiple Air Toxics Exposure Study." *South Coast Air Quality Management District*. South Coast Air Quality Management District, n.d. Web. 28 Feb. 2016. Localized background TAC-source cancer risk estimates are extrapolated from TAC monitoring data collected at 10 fixed sites within the South Coast Air Basin. *MATES-IV* extrapolates cancer risk levels throughout the Basin at 1.25 mile by 1.25 mile grids.

is cumulatively considerable. The SCAQMD has not however established a significance threshold for ambient cumulative TAC impacts affecting the Basin. Likewise, the City of Moreno Valley (the Lead Agency) has no adopted cumulative TAC impacts significance threshold.

Absent an established threshold for cumulative TAC impacts, the following discussion assesses whether, in the light of other available existing information, the ambient cumulative TAC-source impacts affecting the Basin and the area encompassing the Project site could be characterized as significant.

Comparing the Study Area ambient cumulative TAC-source cancer risk (522.63 per million) to the SCAQMD's established threshold for project-level TAC-source cancer risks (10 in one million), the ambient cumulative TAC-source cancer risk is approximately 52.3 times greater than the incremental risk at which project-level TAC-source cancer risks would be considered significant.

Although there is not yet an established significance threshold for ambient cumulative TAC impacts, given the magnitude by which the ambient cumulative condition exceeds SCAQMD's established project-level significance threshold (ambient cumulative TAC conditions are 52.3 times greater than the project-level threshold), the ambient cumulative condition would likely exceed whatever significance threshold may be established for cumulative impacts affecting the Basin. On this basis, and absent a prevailing threshold adopted by the Lead or Responsible Agency, ambient cumulative TAC impacts are presumed to be significant.

***Related Projects Contribution to Cumulative TAC Impacts***

In addition to the *MATES-IV* cumulative TAC-source cancer risk noted above, other new or proposed potential TAC-generating projects (related projects) in the Study Area could contribute to cumulative TAC impacts. These related projects, due to their recency and/or tentative nature, are not reflected in the cumulative TAC impacts identified in the *MATES-IV* study.

In consultation with the Lead Agency, related TAC-generating projects located within a one-quarter mile radius of the Project were identified and are reflected in this cumulative TAC analysis. The one-quarter mile radius encompassed within the cumulative TAC analysis reflects CARB and South Coast District analyses indicating an 80-percent drop-off in TAC concentrations at approximately 1,000 feet from the TAC source under consideration (California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.) Beyond 1,000 feet, the TAC emissions would be reduced and diffused such that they would not substantively and discernibly contribute to or interact with TAC emissions from other distinct sources. The one-quarter mile (1,320 feet) Study Area radius employed in the Project HRA therefore encompasses and extends beyond the distance at which related projects would generate TACs that would likely interact with TACs generated by the proposed Indian Street Commerce Center Project. The related projects listed below were selected based on their propensity to generate TACs that would contribute to, or interact with, TACs generated by the Project.

- PA 06-0152 & PA 06-0153 (First Park Nandina I & II) (483,767 square feet of high-cube warehouse);
- First Inland Logistics Center (400,130 square feet of high-cube warehouse);
- PA 09-0004 (Vogel) & Sares Regis (2,400,000 square feet of high-cube warehouse);
- First Nandina Logistics Center (1,450,000 square feet of high-cube warehouse);
- First Park Nandina III & Moreno Valley Commerce Park (1,046,282 square feet of high-cube warehouse);
- IDS/Real Estate Group - Nandina Distribution Center (697,000 square feet of high-cube warehouse);
- Moval Assemblage (459,945 square feet of high-cube warehouse);
- SP 341; PP 21552 (Majestic Freeway Business Center) (6,100,715 square feet of high-cube warehouse);
- PP 20699 (Oleander Business Park) (1,206,710 square feet of warehouse);
- 05-0113 (IDI) (1,750,000 square feet of high-cube warehouse);
- P 07-09-0018 (170,000 square feet of warehouse);
- P 05-0411 (Concrete Batch Plant) (2,000 square feet of manufacturing);

- P 04-0343 (41,650 square feet of warehouse);
- PM 34199 & DPR 05-0387 & DPR 05-0452 & TPM 34697 & DPR 06-0396 (103,754 square feet of general light industrial use and 191,023 square feet of warehouse); and
- Integra Pacific Industrial Facility (880,000 square feet of high-cube warehouse).

***Project Contribution to Cumulative TAC Impacts***

Project-source TACs would incrementally increase the background cancer risk by a maximum of 0.47 incidents per million population. The applicable SCAQMD significance threshold for Project-level TAC-source cancer risk impacts is 10 incidents per million population. Similarly, SCAQMD significance thresholds state that project contributions to cumulative TAC-source cancer risks would be cumulatively considerable if greater than 10 incidents per million population would occur. The 0.47 incidents per million population increment resulting from the Project is therefore not significant, nor cumulatively considerable.

***Study Area Cumulative TAC Impacts***

To provide context for, and quantify cumulative TAC effects within the Study Area, the Project TAC-source cancer risk, was added to the total background risk derived from the *MATES-IV* study, yielding a maximum potential cumulative TAC-source risk affecting the Study Area. As indicated at Table 4.2-19, the maximum potential cumulative cancer risk within the Study Area is estimated at 839.36 incidents per million.

**Table 4.2-19**
**Study Area Cumulative Cancer Risk**

| Cumulative Impact Scenario | Risk Sources | | | Maximum Cumulative Risk |
|---|---|---|---|---|
| | Background TACs | Related Projects TACs | Project TACs | |
| | Cancer Risk Per Million Population | | | |
| Ambient Cumulative Impact | 522.63 | --- | --- | **522.63** |
| Cumulative Impact With Project Alone | 522.63 | 0 | 0.47 | **523.10** |
| Cumulative Impact With Project and Related Projects | 522.63 | 316.26 | 0.47 | **839.36** |

**Source:** *Indian Street Commerce Center Mobile Source Diesel Health Risk Assessment, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.
**Notes:** Background TAC risk from: *MATES-IV Carcinogenic Risk Interactive Map* http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv

The *MATES-IV* ambient cumulative TAC impact represents approximately 62.3 percent of the total cumulative impact identified at Table 4.2-19 and, due to its magnitude when compared to project-level TAC impact significance thresholds, is presumed to be cumulatively significant. The Project would incrementally contribute to this presumably significant cumulative impact. However, the Project's maximum incremental contribution of 0.47 incidents per million population would not exceed, or even approach the established SCAQMD threshold (10 incidents per million population) at which project-level TAC contributions would be determined cumulatively considerable. On this basis, Project TAC emissions impacts are not considered cumulatively considerable. Please refer also to the Project Air Quality Impact Analysis (AQIA) and Project Health Risk Analysis (HRA) presented at EIR Appendix C.

**Level of Significance:** Less-Than-Significant.

**Localized Air Quality Impact Analysis Summary**

As substantiated by the preceding discussions, maximum mitigated Project construction-source and operational-source emissions would not exceed applicable SCAQMD LSTs at the nearest sensitive receptors. Nor would the Project create or result in localized CO hot spots. Further, Project TACs would not result in or cause potentially

significant health risks, either at the project-level or cumulatively. On this basis, the potential for the Project's localized emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation is considered less-than-significant.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Expose sensitive receptors to substantial pollutant concentrations.***

**Impact Analysis:** Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors. As concluded in the above discussion of Localized Air Quality Impacts, the sensitive receptors nearest the Project site would not be subject to emissions exceeding SCAQMD LSTs. Nor would the Project create or result in localized CO hot spots. The Project HRA, summarized herein, substantiates that the Project would not generate or result in localized concentrations of TACs that would create or result in potentially significant health risks.

Based on the preceding, the potential for the Project to expose sensitive receptors to substantial pollutant concentrations is considered less-than-significant.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***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.***

**Impact Analysis:** The Project area is designated as an extreme non-attainment area for ozone; a serious non-attainment area for $PM_{10}$; and a non-attainment area for $PM_{2.5}$. Germane to these regional non-attainment conditions, the Project-specific evaluation of

emissions presented in this Section indicates that even after application of mitigation, Project operational-source $NO_x$ emissions would exceed applicable SCAQMD regional significance thresholds. The fact that the Project operational-source NOx emissions would exceed applicable SCAQMD thresholds indicates that the Project impacts in these regards are significant on an individual basis, and under SCAQMD significance criteria, would therefore also be cumulatively considerable.

$NO_x$ is an ozone precursor. Project operational-source emissions of $NO_x$ would therefore contribute to a cumulatively considerable net increase in the ozone precursor $NO_x$ within the encompassing ozone non-attainment area. Additionally, $NO_x$ is a precursor to $PM_{10}/PM_{2.5}$, and Project operational-source emissions of $NO_x$ would therefore contribute to a cumulatively considerable net increase in $PM_{10}/PM_{2.5}$ levels within the encompassing $PM_{10}/PM_{2.5}$ nonattainment area. These are potentially significant cumulative air quality impacts.

Please refer also to the discussion of cumulative air quality impacts presented at EIR Section 5.0, *Other CEQA Considerations*.

**Level of Significance:** Potentially Cumulatively Significant.

**Mitigation Measures:** Please refer to previous Mitigation Measure 4.2.5.

**Level of Significance after Mitigation:** ***Cumulatively Significant.*** Mitigation Measure 4.2.5 would reduce Project-source air pollutant emissions, including $NO_x$ emissions, to the extent feasible. The Project would also comply with all applicable SCAQMD Rules and would be required to comply with development standards and energy efficiency performance standards established by the City of Moreno Valley.

Approximately 96 percent of the Project $NO_x$ emissions (by weight) would be generated by vehicles accessing the Project site. Mobile-source vehicle tail pipe emissions cannot be materially controlled or mitigated by the Lead Agency or the Project Applicant.

Rather, these emissions sources are regulated by CARB and USEPA. As summarized herein at Section 4.2.5, Regional Air Quality Trends, as the result of CARB and USEPA actions, Basin-wide vehicular-source emissions have been reduced dramatically over the past years and are expected to further decline as clean vehicle and fuel technologies improve. Future CARB and USEPA actions could be expected to have a positive effect on Project-related vehicular-source emissions, resulting in incremental reductions in vehicular-source emissions when compared to either the Project AQIA emissions estimates. No further feasible measures are available that would substantively mitigate the Project's operational-source $NO_x$ emissions.

# 4.3 GLOBAL CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

# 4.3 GLOBAL CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

***Abstract***

*This Section identifies and addresses potential air greenhouse gas (GHG) emissions impacts that may result from construction and implementation of the Project. More specifically, the GHG emissions impacts analysis evaluates the potential for the Project to cause or result in the following impacts:*

- *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.*

*On the basis of the analysis presented in the Project GHG Analysis as summarized herein, even with the application of mitigation and compliance with practices, policies, and strategies outlined in the* City of Moreno Valley Energy Efficiency and Climate Action Strategy, *the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Project-source GHG emissions would also conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Project GHG emissions impacts would therefore be significant and unavoidable. Please refer also to related discussion of cumulative GHG emissions impacts presented at EIR Section 5.0,* Other CEQA Considerations, *5.2.3,* Cumulative Impacts Related to GHG Emissions/Global Climate Change.

### 4.3.1 INTRODUCTION

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the Earth with respect to temperature, precipitation, and storms. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Most scientists believe that recent increases in greenhouse gases resulting from human activity and industrialization have accelerated and amplified GCC effects.

An individual development proposal, such as the Project considered herein, cannot generate enough greenhouse gas (GHG) emissions to effect a discernible change in global climate. However, the Project may contribute to the global climate change through its increment of greenhouse gases in combination with the cumulative increase in GHGs from all other sources, which when taken together constitute potential influences on global climate change. This Section summarizes the potential for the Project GHG emissions to have a potentially significant environmental impact. Detailed analysis of the Project's potential GHG/GCC impacts is presented in *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016 (Project GHG Analysis, EIR Appendix D).

### 4.3.2 EXISTING CONDITIONS

#### 4.3.2.1 Global Climate Change

Global Climate Change refers to the change in average meteorological conditions with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, $CO_2$ (Carbon Dioxide), $N_2O$ (Nitrous Oxide), $CH_4$ (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the atmosphere, but prevent heat from escaping, thus warming the atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board

(CARB), the climate change that is currently in effect differs from previous climate changes in both rate and magnitude (CARB, 2004, *Technical Support document for Staff Proposal Regarding Reduction of Greenhouse Gas Emissions from Motor Vehicles*).

#### 4.3.2.2 Greenhouse Gases

Gases that trap heat in the atmosphere are often referred to as greenhouse gases or GHGs. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The accumulation of these gases in the atmosphere is considered to be the cause for the observed increase in the Earth's temperature.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor. In 2004, the state is estimated to have produced 492 million gross metric tons of carbon dioxide equivalent greenhouse gas emissions. For the purposes of this analysis, Project-related emissions of carbon dioxide, methane, and nitrous oxide were evaluated because these gases are the primary contributors to global climate change from development projects. Emissions from Project facilities and stationary sources as well as emissions generated by Project-related vehicular traffic were included in the evaluation of potential GHG emissions impacts.

Greenhouse gases exhibit varying global warming potentials (GWPs). GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the baseline GWP reference gas, and thus has a GWP of 1. The atmospheric lifetime and GWP of greenhouse gases typically generated by urban development, and would be generated by the Project, are summarized at Table 4.3-1.

**Table 4.3-1**
**Global Warming Potentials and Atmospheric Lifetimes**

| Gas | Atmospheric Lifetime (years) | Global Warming Potential (100-year time horizon) |
|---|---|---|
| Carbon Dioxide | 50 - 200 | 1 |
| Methane | 12 (+/-3) | 25 |
| Nitrous Oxide | 120 | 298 |

**Source:** *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

The following discussions summarize and describe commonly occurring greenhouse gases, their sources, and general characteristics.

**Water Vapor**

Water vapor ($H_20$) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. For example, increased atmospheric water vapor translates to increased cloud cover and increased reflection of

incoming solar radiation (thus diminishing potential radiant heating of the Earth's surface).

The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

**Carbon Dioxide**

Carbon dioxide ($CO_2$) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, $CO_2$ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

**Methane**

Methane ($CH_4$) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.

Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

**Nitrous Oxide**

Nitrous oxide ($N_2O$), also known as laughing gas, is a colorless greenhouse gas. Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. By 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction.

**Chlorofluorocarbons**

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane ($C_2H_6$) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface).

CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are

now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

**Hydrofluorocarbons**

Hydrofluorocarbons (HFCs) are synthetic, fabricated chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases; they are one of three groups with the highest global warming potential. The HFCs with the greatest measured atmospheric abundances are (in order), HFC-23 ($CHF_3$), HFC-134a ($CF_3CH_2F$), and HFC-152a ($CH_3CHF_2$). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt.

**Perfluorocarbons**

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Not until the PFCs reach the mesosphere, about 60 kilometers above Earth, do very high-energy ultraviolet rays from the sun destroy them. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane ($CF_4$) and hexafluoroethane ($C_2F_6$). The U.S. EPA estimates that concentrations of $CF_4$ in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

**Sulfur Hexafluoride**

Sulfur hexafluoride ($SF_6$) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

#### 4.3.2.3 Greenhouse Gases Emissions Inventories

**Global**

Worldwide anthropogenic (man-made) GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions data for Annex I nations are available through 2012. Global GHG emissions are summarized at Table 4.3-2. As indicated, global emissions totaled approximately 28,865,994 gigagrams (Gg) Carbon Dioxide Equivalent ($CO_2e$) for the Year 2012. The GHG emissions in more recent years may differ from the inventories presented in Table 4.3-2; however, the data is representative of currently available inventory data.

**National**

Table 4.3-2 summarizes 2011 GHG emissions inventories by major source countries. As indicated at Table 4.3-2, the United States was the number two producer of GHG emissions in 2012. The primary greenhouse gas emitted by human activities in the United States was $CO_2$, representing approximately 83 percent of U.S. total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion accounted for approximately 78 percent of U.S. GHG emissions.[1]

**Table 4.3-2**
**Global GHG Emissions by**
**Major GHG Source Countries-2012**

| Source Countries | GHG Emissions (Gg $CO_2e$) |
|---|---|
| China | 10,975,500 |
| United States | 6,665,700 |
| European Union (27 member countries) | 4,544,224 |
| Russian Federation | 2,322,220 |
| India | 3,013,770 |

[1] Project GHG Analysis, p. 12.

**Table 4.3-2**
**Global GHG Emissions by**
**Major GHG Source Countries-2012**

| Source Countries | GHG Emissions (Gg $CO_2e$) |
|---|---|
| Japan | 1,344,580 |
| **Total** | **28,865,994** |

**Source:** *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**State of California**

CARB compiles GHG inventories for the State of California. CARB GHG inventory data indicates that in 2013 (the most recent inventory of record) California GHG emissions totaled approximately 459.3 Million Metric Tons of Carbon Dioxide Equivalent ($MMTCO_2e$).[2] "In 2010, California accounted for 6.8 percent of all emissions in the country [United States], and ranked second highest among the states with total emissions of 453 $MMTCO_2e$, only behind Texas with 763 $MMTCO_2e$. From a per capita standpoint, California has the 45th lowest emissions with 12.1 $MMTCO_2e$/person in 2010."[3]

**City of Moreno Valley**

Year 2010 Baseline Community GHG emissions for the City of Moreno Valley are estimated at 920,712 MTCO2e/year, as summarized at Table 4.3-3.

**Table 4.3-3**
**City of Moreno Valley GHG Emissions Inventory**

| Source/Sector | $MTCO_2e$/year | Percent of Total |
|---|---|---|
| Transportation | 513,581 | 56% |
| Energy | 277,230 | 30% |
| Area Sources | 69,437 | 7% |

[2] Cal EPA. "California Greenhouse Gas Emission Inventory - 2015 Edition." *California's Greenhouse Gas Emission Inventory*. Cal EPA, n.d. Web. 29 Oct. 2015.
[3] California Environmental Protection Agency. Air Resources Board. *California's Greenhouse Gas Emission Inventory - 2014 Edition* (May 2014), p. 28.

**Table 4.3-3**
**City of Moreno Valley GHG Emissions Inventory**

| Source/Sector | $MTCO_2e$/year | Percent of Total |
|---|---|---|
| Solid Waste | 43,633 | 5% |
| Water and Wastewater | 16,831 | 2% |
| **Totals** | **920,712** | **100%** |

**Source:** *Final City of Moreno Valley Greenhouse Gas Analysis* (Atkins) February 2012; Table 3-6.

**Project Site Greenhouse Gas Emissions**

The Project site is currently vacant and undeveloped, and is not a substantive source of GHG emissions.

#### 4.3.2.4 Effects of Global Climate Change

**Climate**

*Scenarios of Climate Change in California: An Overview* (California Climate Change Center) February 2006 (Climate Scenarios Report) is generally instructive about the potential effects of Global Climate Change within California. The Climate Scenarios Report employs a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential "warming ranges" that may occur in California during the 21st century: lower warming range (3.0-5.5°F); medium warming range (5.5-8.0°F); and higher warming range (8.0-10.5°F). The Climate Scenarios Report then presents an analysis of future climatic conditions in California under each warming range, that while uncertain, are descriptive of potential impacts of global climate change trends in California.

*California Climate Adaptation Strategy* (California Natural Resources Agency) August 5, 2009 (Climate Adaptation Strategy) presents a range of potential vulnerabilities arising from climate change including: temperature extremes, sea level rise, wildfires, floods, droughts, and altered precipitation patterns. The Climate Adaptation Strategy responds to the Executive Order S-13-2008 requiring state agencies to develop strategic responses to anticipated climate impacts.

The Climate Scenarios Report and Climate Adaptation Strategy indicate that substantial temperature increases arising from increased GHG emissions could result in a broad range of impacts to the people, economy, and environment of California. Impacts of global climate change in California have the potential to include, but are not limited to, the following.

**Public Health**

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios Report indicates that large wildfires could become more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

**Water Resources**

A network of man-made reservoirs and aqueducts captures and transports water throughout the state. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there may be years with marginal insufficient snow for skiing and snowboarding, as was evidenced for the period 2013–2014.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major source of fresh water for the state.

**Agriculture**

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher $CO_2$ levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate $O_3$ pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

**Forests and Landscapes**

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors (e.g., precipitation, winds, temperature, terrain, and vegetation) future risks would likely not be uniform throughout the state.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

**Rising Sea Levels**

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Increased sea level elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12 to 14 inches.

#### 4.3.2.5 GHG Health Effects

Health effects of greenhouse gases are summarized below.

***Water Vapor***

There are no known direct health effects related to water vapor at this time. Water vapor may however act as a transport mechanism for pollutants to enter the human body.

***Carbon Dioxide***

The National Institute for Occupational Safety and Health (NIOSH) has determined that high concentrations of carbon dioxide can result in health effects including: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. Current concentrations of carbon dioxide in the earth's atmosphere are estimated at approximately 370 ppm, while the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek; and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period (NIOSH 2005).

***Methane***

Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds, may displace oxygen in an enclosed space and act as an asphyxiant (Occupational Safety and Health Administration [OSHA] 2003).

***Nitrous Oxide***

Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage (OSHA 1999).

***Chlorofluorocarbons***

CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

***Fluorinated Gases (HFCs, PFCs, $SF_6$)***

High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (NIOSH 1989, 1997).

#### 4.3.2.6 Regulatory Setting

**2015 United Nations Paris Climate Change Conference**

On December 12, 2015, 195 nations, including the United States and China, established a strategy for combatting global climate change, targeted to effective by 2020. COP 21 participating nations agreed to a universal long-term goal of maintaining a global temperature at 2°C (3.6°F) above pre-industrial levels. The COP 21 agreement also encouraged individual participating nations to limit temperature increases to 1.5°C (2.7°F) above pre-industrial levels. COP21 participants agreed further to initiate GHG

reduction strategies as soon as possible, recognizing that this process may be protracted for developing nations. Subsequent GHG emissions reductions are to be achieved in accordance to best available technological advances.

**Western Regional Climate Action Initiative (WCI)**

The Western Regional Climate Action Initiative (WCI) is a partnership among seven states, including California, and four Canadian provinces to implement a regional, economy-wide cap-and-trade system to reduce global warming pollution. The WCI will cap GHG emissions from the region's electricity, industrial, and transportation sectors with the goal to reduce the heat trapping emissions that cause global warming to 15% below 2005 levels by 2020. When the WCI adopted this goal in 2007, it estimated that this would require 2007 levels to be reduced worldwide between 50% and 85% by 2050. California is working closely with the other states and provinces to design a regional GHG reduction program that includes a cap-and-trade approach.

**EPA Actions and the Clean Air Act**

Coinciding the 2009 meeting in Copenhagen, on December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of greenhouse gases. The Endangerment Finding notes that greenhouse gas emissions threaten public health and welfare and are subject to regulation under the Clean Air Act. Current EPA GHG emissions initiatives, plans, and standards can be accessed at: http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html

**Vehicle Standards**

Other regulations have been adopted to address vehicle standards including United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) joint rulemaking for vehicle standards. Recent actions are summarized below:

- USEPA and NHTSA have issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal greenhouse gas and fuel economy standards for model year 2017–2025 light-duty vehicles. The NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

- USEPA and the NHTSA have established enhanced fuel economy and GHG standards for medium- and heavy-duty vehicles, which applies to vehicles from model years 2014–2018.

- USEPA and the NHTSA have proposed enhanced fuel economy and GHG standards for medium- and heavy-duty vehicles for model years 2018 and beyond.

**Energy Independence and Security Act**

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA, Act) was signed into law. Among other key measures, the Act promotes nation-wide GHG emissions reductions from mobile and non-mobile sources.

**Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Guidelines on GHG**

Draft guidance prepared by the Council on Environmental Quality (CEQ) addresses consideration and evaluation of greenhouse gases and climate change within NEPA analyses. The guidance recommends that proposed federal actions that are reasonably expected to directly emit 25,000 metric tons of $CO_2e$/year should prepare a quantitative and qualitative NEPA analysis of direct and indirect greenhouse gas emissions.

The draft guidance provides reporting tools and instructions on how to assess the effects of climate change. The draft guidance does not apply to land and resource management actions, nor does it propose to regulate greenhouse gases. Although CEQ has not yet issued final guidance, various NEPA documents are beginning to incorporate the approach recommended in the draft guidance.

**California Title 24 Energy Standards**

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (Energy Efficiency Standards, California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from development projects subject to the Energy Efficiency Standards. The CEC's most recent, 2013 Building Energy Efficiency Standards, took effect on January 1, 2014. The *2013 Building Energy Efficiency Standards for Residential and Nonresidential Building* Abstract summarizes key attributes and anticipated environmental benefits of the 2013 Energy Efficiency Standards, as excerpted below:

> The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that will enable both demand reductions during critical peak periods and future solar electric and thermal system installations. The most significant efficiency improvements to the residential Standards are proposed for windows, envelope insulation and HVAC system testing. The most significant efficiency improvements to the nonresidential Standards are proposed for lighting controls, windows, unitary HVAC equipment and building commissioning. New efficiency requirements for process loads such as commercial refrigeration, data centers, kitchen exhaust systems and compressed air systems are included in the nonresidential Standards. The 2013 Standards include expanded criteria for acceptance testing of mechanical and lighting systems, as well as new requirements for code compliance data to be collected in a California Energy Commission-managed repository.

> The 2013 Standards also include updates to the energy efficiency divisions of the California Green Building Code Standards (Title 24, Part 11). A set of prerequisites has been established for both the residential and nonresidential Reach Standards, which include efficiency measures that should be installed in any building project striving to meet advanced levels of energy efficiency. The residential Reach Standards have also been updated to require additional energy efficiency or on-site renewable electricity generation to meet a specific threshold of expected electricity use. Both the residential and nonresidential Reach Standards include requirements for additions and alterations to existing buildings.
>
> Energy Commission staff estimates that the implementation of the 2013 Building Energy Efficiency Standards may reduce statewide annual electricity consumption by approximately 613 gigawatt-hours per year, electrical peak demand by 195 megawatts, and natural gas consumption by 10 million therms per year. The potential effect of these energy savings to air quality may be a net reduction in the emission of nitric oxide by approximately 59 tons per year, sulfur oxides by 2.4 tons per year, carbon monoxide by 41 tons per year and particulate matter less than 2.5 microns in diameter by 10 tons per year. Additionally, Energy Commission staff estimates that the implementation of the 2013 Standards may reduce statewide carbon dioxide equivalent emissions by 215 thousand metric tons per year (*2013 Building Energy Efficiency Standards for Residential and Nonresidential Building*, Abstract).

The 2013 Energy Efficiency Standards also include updates to the energy efficiency divisions of the California Green Building Code Standards, (CALGreen Code, Title 24, Part 11). The stated purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design;

(2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality" (2013 CALGreen Code, p. 1). The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released the 2010 California Green Building Standards Code on its web site. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject to the requirements of the CALGreen Code.

**California Assembly Bill No. 1493 (AB 1493)**

California Assembly Bill 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California; and stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. Subsequent lawsuits filed against CARB prevented enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1.

Litigation against CARB culminated in the USEPA and the U.S. Department of Transportation adoption of a federal program to reduce greenhouse gases and improve fuel economy from passenger vehicles in order to achieve greenhouse gas benefits equivalent to, or greater than, benefits that would be realized pursuant to AB 1493

regulations. Additionally, the State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by "pooling" California and specified State vehicle sales; (2) revise its standards for 2012–2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California's standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal Corporate Average Fuel Economy (CAFE) program to demonstrate compliance with the AB 1493 regulations.

**Executive Order S-3-05**

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

**Executive Order B-30-15**

Executive Order B-30-15 (April 29, 2015) states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. As of this writing, the state

legislature has not enacted law, nor has CARB adopted regulations or standards implementing the Executive Order's goal statements.

**California Assembly Bill 32 (AB 32)**

California Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006, requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. To date, this reduction is being accomplished through an enforceable phased statewide cap on GHG emissions. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 indicates further that regulations adopted in response to AB 1493 should address GHG emissions from vehicles. Assembly Bill 32 contingencies also include provisions stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons $CO_2$ equivalent ($MMTCO_2e$). Accordingly, 427 $MMTCO_2e$ was established as the emissions limit for 2020. In comparison, CARB's estimate for baseline GHG emissions was 473 $MMTCO_2e$ for 2000 and 532 $MMTCO_2e$ for 2010. "Business as usual" conditions (estimated GHG emissions levels absent CARB regulatory actions) for 2020 were projected to be 596 $MMTCO_2e$.

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plants, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source $CO_2$ emissions in the State.

On December 11, 2008, CARB adopted a Scoping Plan (CARB Scoping Plan, Scoping Plan) to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. In order to achieve 2020 greenhouse gas emissions reductions targets, the CARB Scoping Plan indicates that implementation of individual measures should have been initiated no later than January 1, 2012. The Project GHG Analysis (EIR Appendix D) summarizes estimated year 2020 GHG emissions reductions from regulations and programs outlined in the Scoping Plan.

**California Senate Bill No. 1368**

In 2006, the State Legislature adopted Senate Bill 1368 (SB 1368), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a greenhouse gas emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Coal-fired plants cannot meet this standard because such plants emit roughly twice as much carbon as combined cycle natural gas power plants.

SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State.

Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand.

**CEQA Guidelines**

*CEQA Guidelines* § 15064.4(a) states "A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance based standards."

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See: *CEQA Guidelines* Section 15130(f)).

Section 15064.4(b) of the *CEQA Guidelines* provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

**City of Moreno Valley Energy Efficiency and Climate Action Strategy**

The *City of Moreno Valley Energy Efficiency and Climate Action Strategy* (City of Moreno Valley) October 9, 2012 (CAS) establishes practices, policies, and strategies directed at the conservation and efficient use of energy and water that would collectively act to reduce municipal and community greenhouse gas emissions. The CAS establishes a year 2020 GHG emissions reductions target representing a 15% decrease in baseline (2010) City GHG emissions levels.

### 4.3.3 GCC Significance Thresholds and Performance Standards

**CEQA Guidelines**

The *CEQA Guidelines* do not identify a threshold of significance for greenhouse gas emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Rather, the *Guidelines* call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project" (*CEQA Guidelines* §15064.4 [a]).

The *Guidelines* encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The *Guidelines* also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. *CEQA Guidelines'* suggested Environmental Checklist GHG topical issues have been incorporated into the analytic discussions presented subsequently within this Section.

**Executive Order S-01-07**

Executive Order S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuel by at least ten percent by 2020. The Order requires further that a California-specific Low Carbon Fuel Standard be established for transportation fuels.

**Senate Bills 1078 and 107 and Executive Order S-14-08**

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least twenty percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. Executive Order S-14-08 expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020.

**Senate Bill 375**

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) prescribing land use allocations in that MPO's regional transportation plan (RTP). Under SB 375, CARB provides each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035.

CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned GHG reduction targets. If MPOs do not meet their assigned GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

Senate Bill 375 also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) consistency with the regional transportation plan (and associated SCS or APS) is not required. However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

The Southern California Association of Governments (SCAG) is required by law to update the Southern California Regional Transportation Plan (RTP) every four years. On April 4, 2012, the Regional Council of the SCAG adopted: *2012-2035 Regional*

*Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future*. The RTP/SCS incorporates land use and housing policies to meet the greenhouse gas emissions targets established by the CARB.

**Executive Order B-30-15**

Executive Order B-30-15 (April 29, 2015) states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. As of this writing, the state legislature has not enacted law, nor has CARB adopted regulations or standards implementing the Executive Order's goal statements.

**South Coast Air Quality Management District Recommendations**

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group." The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the Working Group with a significance threshold that could be applied to various types of projects—residential, non-residential, industrial, etc. However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) as a screening numerical threshold for stationary sources. More importantly, it should be noted that when setting the 10,000 $MTCO_2e$ threshold, the SCAQMD did not consider mobile sources (vehicular travel). Rather the threshold is applicable to stationary source generators such as boilers, refineries, power plants, etc. Therefore, it would be misleading to apply this threshold, developed without consideration for mobile sources, to a Project where the majority of emissions are related to mobile sources. Moreover, by its terms, the threshold applies only to projects

where the SCAQMD is the lead agency, and would therefore not be applicable here. There is no SCAQMD threshold that can be applied to this Project.

In September 2010, the Working Group released additional revisions which recommended a threshold of 3,500 $MTCO_2e$ for residential projects, 1,400 $MTCO_2e$ for commercial projects, and 3,000 $MTCO_2e$ for mixed use projects. Additionally, the working group identified a project-level efficiency target of 4.8 $MTCO_2e$ per service population as a 2020 target and 3.0 $MTCO_2e$ per service population as a 2035 target. The recommended plan-level target for 2020 was 6.6 $MTCO_2e$ and the plan level target for 2035 was 4.1 $MTCO_2e$. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board; thus, these proposed thresholds are not applicable to the proposed project. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable to boilers and process heaters, forestry, and manure management projects, none of which are germane to the Project considered herein. To date, the SCAQMD and CARB have not established quantified GHG emissions significance thresholds for projects being evaluated under CEQA.

**Lead Agency Threshold as Applied in This Analysis**

Under CEQA, the City has discretion to select and employ substantiated GHG emissions thresholds and significance criterion. To this end, the City has established a GHG emissions threshold of 10,000 MTCO2e per year for industrial stationary-source GHG emissions. This threshold correlates with the adopted AQMD GHG emissions threshold for industrial uses. In this latter regard, the Project is considered analogous to industrial uses considered by the AQMD. That is, the Project proposes a relatively large building (approximately 446,350 square feet) with loading bays and fenced truck courts that are expected to house a tenant (or tenants) providing mid-stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, trip generation for the Project is based on the Institute of Transportation Engineers (ITE) trip generation rates for industrial and warehouse uses. The 10,000 MTCO2e/year threshold has also been used by other area lead agencies in determining GHG emissions impacts significance for similar logistics projects.

Use of the 10,000 MTCO2e/year threshold also comports with guidance provided in the CAPCOA *CEQA and Climate Change Handbook* (Handbook). More specifically, Handbook Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold that would capture approximately 90 percent of GHG emissions from future development. SCAQMD employed this method in developing the 10,000 MTCO2e/year threshold for industrial uses described above.

To ensure that the 10,000 MTCO2e threshold is conservatively applied within this analysis, the threshold is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other. In contrast, the AQMD considers only stationary/area-source emissions when determining a given project's GHG emissions impact significance.

### 4.3.4 IMPACT STATEMENTS

**Potential Impact:** ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.***

**Impact Analysis:**

**California Emissions Estimator Model (CalEEMod) Employed to Estimate GHG Emissions**

*CEQA Guidelines* 15064.4 (b) (1) states that a Lead Agency may employ a model or methodology of its choice to quantify greenhouse gas emissions associated with a project. The SCAQMD-approved California Emissions Estimator Model (CalEEMod, Model) is accepted by the Lead Agency for modeling of greenhouse gas (GHG) emissions, and was employed in the analysis of Project GHG emissions impacts. CalEEMod calculates air pollutant/GHG emissions from direct and indirect sources, and quantifies pollutant/GHG emissions reductions achieved from mitigation measures. The Model includes and evaluates GHG emissions from the following source categories: construction, area, energy, mobile, waste, water. Considerations applicable to each of these categories are addressed briefly in the following discussions.

**Construction-Source GHG Emissions**

Project construction activities would generate the GHG emissions of $CO_2$ and $CH_4$. Construction-source GHG emissions are quantified and amortized over the life of the Project. To this end, and consistent with SCAQMD-recommended methodology, greenhouse gas emissions generated by Project construction activities were totaled and then divided by 30, reflecting an assumed 30-year Project life.

**Operational-Source GHG Emissions**

As described below, Project operational GHG emissions sources would include: area sources, on-site equipment operations; building energy use; water supply, treatment and distribution (water use); solid waste management; and mobile-sources (vehicular) energy consumption.

***Area Sources***

Area Sources (generalized activities associated with landscape and building maintenance) would generate GHG emissions over the life of the Project.

***On-site Equipment Operations***

Industrial warehouse uses such as those that would be implemented under the Project typically require use of cargo handling equipment for on-site movement of containers and chassis. The most common type of cargo handling equipment is the yard truck which is designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors (UTRs), hustlers, yard hostlers, and yard tractors. Yard trucks typically have a horsepower (hp) range of approximately 175 hp to 200 hp. SCAQMD information indicates that high-cube warehouse projects typically employ 3.6 yard trucks per million square feet of building space. For the Project, on-site modeled operational equipment assumes two (2) yard tractors operating at 4 hours/day, 365 days/year. Other assumed on-site operational equipment supporting the Project industrial land uses would include two 89-hp yard forklifts, operating 4 hours/day, 365 days/year. All on-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be

powered by non-diesel fueled engines and all on-site indoor forklifts shall be powered by electricity, compressed natural gas, or propane.

***Building Energy Use***

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits $CO_2$ and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod default parameters were employed in estimating GHG emissions generated by building energy use.

***Water Supply, Treatment and Distribution (Water Use)***

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water is determined by the volume of water used, as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were employed in estimating GHG emissions generated by water supply, treatment and distribution activities and processes.

***Solid Waste Management***

Commercial land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. Unless otherwise noted, CalEEMod default parameters were employed in estimating GHG emissions generated by solid waste management activities and processes.

***Mobile-Source Emissions***

GHG emissions would also be generated by Project-related mobile sources. These mobile-source emissions would result from daily operation of motor vehicles by patrons and employees accessing the Project site. Project mobile-source emissions are dependent on overall daily vehicle trip generation. Trip characteristics available from the Project Traffic Impact Analysis (EIR Appendix B) were utilized in this analysis. Please refer also to the discussion presented at Project GHG Analysis Section 3.6.3, *Mobile Source Emissions*.

**Project GHG Emissions Summary**

**Project GHG Emissions are Potentially Significant in Context of the Lead Agency Threshold**

Project GHG emissions would total an estimated 12,154.98 MTCO2e/year as summarized at Table 4.3-4. Project GHG emissions would therefore exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City of Moreno Valley. The 10,000 MTCO2e/year GHG emissions threshold employed by the City of Moreno Valley is intended to reduce GHG emissions so as to minimize or preclude significant environmental impacts. Project exceedance of the City's GHG emissions threshold would therefore *result in levels of greenhouse gas emissions that may either directly or indirectly have a significant impact on the environment. This is a potentially significant cumulative impact.*

**Level of Significance:** Potentially Significant.

**Table 4.3-4**
**Project GHG Emissions Summary**

| Emission Source | Emissions (metric tons per year) | | | |
|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | Total $CO_2E$ |
| Annual construction-related emissions amortized over 30 years | 45.02 | 6.67E-03 | -- | 45.16 |
| **High-Cube** | | | | |
| Area | 0.02 | 4.00E-05 | -- | 0.02 |

**Table 4.3-4**
**Project GHG Emissions Summary**

| Emission Source | Emissions (metric tons per year) | | | |
|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | Total $CO_2E$ |
| Energy | 2,297.67 | 0.11 | 0.03 | 262.43 |
| Mobile Sources (Trucks) | 6,252.59 | 0.05 | -- | 6,253.70 |
| Mobile Sources (Passenger Cars) | 616.63 | 0.03 | -- | 617.17 |
| On-site Emissions | 105.33 | 0.03 | | 106.02 |
| Waste | 68.14 | 4.03 | -- | 152.70 |
| Water Usage | 208.38 | 2.16 | 0.05 | 270.27 |
| **Manufacturing** | | | | |
| Area | 4.05E-03 | 1.00E-05 | -- | 4.28E-03 |
| Energy | 362.73 | 0.01 | 5.29E-03 | 364.70 |
| Mobile Sources (Trucks) | 3,598.15 | 0.03 | 0.02 | 3,598.73 |
| Mobile Sources (Passenger Cars) | 346.85 | 0.01 | -- | 347.16 |
| Waste | 22.47 | 1.33 | -- | 50.35 |
| Water Usage | 67.22 | 0.68 | 0.02 | 86.57 |
| **Total $CO_2E$ (All Sources)** | **12,154.98** | | | |

**Source:** *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Mitigation Measures:** EIR Section 3.0, *Project Description*, 3.4.10, *Energy Efficiency/Sustainability* (excerpted below) summarizes features and attributes that would act to reduce Project GHG emissions.

> **3.4.10 Energy Efficiency/Sustainability**
>
> Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project in total would provide sustainable design features necessary to achieve a "Certified" rating under the United States Green Building Council's Leadership in Energy & Environmental Design (LEED) programs. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City.

- All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

  - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

  - Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water

Conservation Strategy).[4] Development proposals within the Project site would also be required to implement the following:

- Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

- Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

- U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

The above design features and operational programs would act to generally reduce Project GHG emissions from area sources, energy sources, and other on-site emissions sources which combined, account for approximately 11 percent of the Project total GHG emissions.

The remaining approximately 89 percent of Project GHG emissions are attributable to mobile sources. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project mobile-source GHG emissions. Mobile source

[4] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

emissions sources are regulated by CARB and USEPA. As summarized at EIR Section 4.2, *Air Quality*, 4.2.5, *Regional Air Quality Trends*, as the result of CARB and USEPA actions, Basin-wide vehicular-source emissions (including attendant GHG Emissions) have been reduced dramatically over the past years and are expected to further decline as clean vehicle and fuel technologies improve. Future CARB and USEPA actions could be expected to have a positive effect on Project-related vehicular-source emissions, resulting in incremental reductions in coincident vehicular-source GHG emissions when compared to GHG emissions estimates presented here. No further feasible measures are available that would substantively mitigate the Project's operational-source GHG emissions.[5]

**Level of Significance After Mitigation:** ***Significant and Unavoidable.***

**GHG Emissions are Potentially Significant in Context of CARB AB32 Scoping Plan Emissions Reductions Targets**

To further evaluate the potential significance of Project GHG emissions, GHG emissions that would be generated pursuant to development of the Project are compared with GHG emissions targets established under the CARB AB32 Scoping Plan (Scoping Plan). The Scoping Plan provides for a 28.5% reduction in statewide and local GHG emissions by the year 2020, when compared to projected GHG emissions that would result from a continuing year 2005 "Business As Usual" (BAU) Scenario.

As indicated at Table 4.3-5, Project GHG emissions would be reduced by approximately 23.08% when compared to the 2005 BAU scenario; and would not achieve the 28.5% GHG emissions reduction targets established under the Scoping Plan. The GHG emissions reductions targets established under the Scoping Plan are intended to reduce

[5] It is noted further, that in developing the 10,000 MTCO2e/year significance threshold for industrial uses, SCAQMD specifically excluded GHG emissions from mobile sources. If this same protocol was employed here rather than the conservative approach taken, Project GHG emissions would total less than 1,400 MTCO2e/year; substantively less than the 10,000 MTCO2e/year significance threshold employed by SCAQMD.

GHG emissions so as to minimize or preclude significant environmental impacts. Project inconsistency with the Scoping Plan GHG emissions reduction targets would therefore result in levels of greenhouse gas emissions that may either directly or indirectly have a significant impact on the environment. This is a potentially significant cumulative impact.

**Table 4.3-5**
**Comparison of 2005 BAU Scenario and Project GHG Emissions**

| Emission Source | CO2e Emissions Levels by Year (Metric Tons Per Year) | |
|---|---|---|
| | 2005 BAU | 2020 Project |
| Construction Source Emissions( amortized over 30 years) | 45.16 | 45.16 |
| Area | 0.02 | 0.02 |
| Energy Use | 870.08 | 587.56 |
| Mobile Sources | 13,193.19 | 10,237.08 |
| On-Site Emissions | 123.07 | 102.36 |
| Waste | 203.05 | 203.05 |
| Water Usage | 514.06 | 323.37 |
| Total | 14,948.63 | 11,498.60 |
| Project GHG Emissions Reduction over BAU | **23.08%** | |
| CARB GHG Reduction Target | **28.5%** | |
| Consistent with CARB GHG Emissions Reduction Target | **NO** | |

**Source:** *Indian Street Commerce Center Greenhouse Gas Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Level of Significance:** Potentially Significant.

**Mitigation Measures:** Please refer to previous discussion of GHG emissions reduction attributes and programs incorporated in the Project. No further feasible measures are available that would substantively mitigate the Project's operational-source GHG emissions.

**Level of Significance After Mitigation:** ***Significant and Unavoidable.***

**Potential Impact:** ***Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.***

As substantiated in the preceding discussions, the Project would conflict with attainment of GHG emissions reductions identified in the Scoping Plan. Further GHG emissions generated by the Project would exceed GHG emissions significance thresholds established by the City of Moreno Valley.

Based on the preceding, the Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This is a potentially significant impact.

**Level of Significance:** Potentially Significant.

**Mitigation Measures:** Please refer to previous discussion of GHG emissions reduction attributes and programs incorporated in the Project. No further feasible measures are available that would substantively mitigate the Project's operational-source GHG emissions.

**Level of Significance After Mitigation:** ***Significant and Unavoidable.***

## 4.4 NOISE

# 4.4 NOISE

***Abstract***

*This Section assesses whether the Project would substantially increase ambient noise levels, or expose land uses to noise, groundborne noise, or groundborne vibration levels exceeding established standards. In this regard, potential impacts considered within this Section include:*

- *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; or*

- *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, expose people residing or working in the Project area to excessive noise levels.*

*As presented in the following analyses, all potential noise impacts of the Project are determined to be less-than-significant, or can be mitigated to levels that are less-than-significant.*

### 4.4.1 INTRODUCTION

This Section presents the noise setting, methodology, standards of significance, and potential noise impacts associated with the Project. Where impacts are determined to be potentially significant, mitigation measures are proposed to avoid or reduce the severity of impacts. The information presented herein has been summarized from the *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016 (Noise Impact Analysis). The Noise Impact Analysis in its entirety is presented at EIR Appendix E.

### 4.4.2 SETTING

Following are discussions of noise fundamentals applicable to the Project, together with assessments of existing ambient noise levels and noise sources in the Project vicinity.

#### 4.4.2.1 Fundamentals of Noise

Noise levels are measured on a logarithmic scale in decibels which are then weighted and added over a 24-hour period to reflect not only the magnitude of the sound, but also its duration, frequency, and time of occurrence. In this manner, various acoustical scales and units of measurement have been developed, including: equivalent sound levels (Leq), day-night average sound levels (Ldn) and community noise equivalent levels (CNEL).

"A-weighted" decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against the very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. The decibel scale has a value of 0.0 dBA at the threshold of hearing and 120 dBA at the threshold of pain. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. Thus, a 1.0 decibel increase is just audible, whereas a 10 decibel increase means the sound is perceived as being twice as loud as before.

Examples of the decibel level of various noise sources are provided in the following Figure 4.4-1.

# TYPICAL NOISE LEVELS AND THEIR SUBJECTIVE LOUDNESS AND EFFECTS

| COMMON OUTDOOR ACTIVITIES | COMMON INDOOR ACTIVITIES | A - WEIGHTED SOUND LEVEL dBA | SUBJECTIVE LOUDNESS | EFFECTS OF NOISE |
|---|---|---|---|---|
| THRESHOLD OF PAIN | | 140 | INTOLERABLE OR DEAFENING | HEARING LOSS |
| NEAR JET ENGINE | | 130 | | |
| | | 120 | | |
| JET FLY-OVER AT 300m (1000 ft) | ROCK BAND | 110 | | |
| LOUD AUTO HORN | | 100 | VERY NOISY | |
| GAS LAWN MOWER AT 1m (3 ft) | | 90 | | |
| DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph) | FOOD BLENDER AT 1m (3 ft) | 80 | | SPEECH INTERFERENCE |
| NOISY URBAN AREA, DAYTIME | VACUUM CLEANER AT 3m (10 ft) | 70 | LOUD | |
| HEAVY TRAFFIC AT 90m (300 ft) | NORMAL SPEECH AT 1m (3 ft) | 60 | | |
| QUIET URBAN DAYTIME | LARGE BUSINESS OFFICE | 50 | MODERATE | SLEEP DISTURBANCE |
| QUIET URBAN NIGHTTIME | THEATER, LARGE CONFERENCE ROOM (BACKGROUND) | 40 | | |
| QUIET SUBURBAN NIGHTTIME | LIBRARY | 30 | FAINT | NO EFFECT |
| QUIET RURAL NIGHTTIME | BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND) | 20 | | |
| | BROADCAST/RECORDING STUDIO | 10 | VERY FAINT | |
| LOWEST THRESHOLD OF HUMAN HEARING | LOWEST THRESHOLD OF HUMAN HEARING | 0 | | |

*SOURCE: NOISE TECHNICAL SUPPLEMENT BY CALTRANS*

Source: Urban Crossroads, Inc.

**Noise Rating Schemes**

Equivalent sound levels are not measured directly but rather, are calculated from sound pressure levels typically measured in dBA. The equivalent sound level (Leq) is the constant level that, over a given time period, transmits the same amount of acoustic energy as the actual time-varying sound. Equivalent sound levels are the basis for both the Ldn and CNEL scales.

Day-night average sound levels (Ldn) are a measure of the cumulative noise exposure of the community. The Ldn value results from a summation of hourly Leqs over a 24-hour time period with an increased weighting factor applied to the nighttime period between 10:00 p.m. and 7:00 a.m. This noise rating scheme takes into account those subjectively more annoying noise events which occur during normal sleep hours.

Community noise equivalent levels (CNEL) also carry a weighting penalty for noise that occurs during nighttime hours. In addition, CNEL levels include a penalty for noise events that occur during the evening hours between 10:00 p.m. and 7:00 a.m. Because of the weighting factors applied, CNEL values at a given location will always be larger than Ldn values, which in turn will exceed Leq values. However, CNEL values are typically within one decibel of the Ldn value.

**Sound Propagation**

For a "line source" of noise such as a heavily traveled roadway, the noise level drops off by a nominal value of 3.0 decibels for each doubling of distance between the noise source and the noise receptor. The nominal value of 3.0 dBA with doubling applies to sound propagation from a line source: (1) over the top of a barrier greater than 3 meters in height; or (2) where there is a clear unobstructed view of the highway, the ground is hard, no intervening structures exist and the line-of-sight between the noise source and receptor averages more than three meters above the ground.

Notwithstanding, environmental factors such as wind conditions, temperature gradients, characteristics of the ground (hard or soft) and the air (relative humidity), and the presence of vegetation combine to typically increase the attenuation achieved outside laboratory conditions to approximately 4.5 decibels per doubling of distance. The increase in noise

attenuation in exterior environments is particularly true: (1) for freeways with an elevated or depressed profile or exhibiting expanses of intervening buildings or topography; (2) where the view of a roadway is interrupted by isolated buildings, clumps of bushes, scattered trees; (3) when the intervening ground is soft or covered with vegetation; or (4) where the source or receptor is located more than three meters above the ground.

In an area which is relatively flat and free of barriers, the sound level resulting from a single "point source" of noise drops by six decibels for each doubling of distance or 20 decibels for each factor of ten in distance. This applies to fixed noise sources and mobile noise sources which are temporarily stationary, such as an idling truck or other heavy duty equipment operating within a confined area (such as industrial processes or construction).

**Noise Barrier Attenuation**

Effective noise barriers can reduce noise levels by 10 to 15 dBA. Noise barriers are most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the view of the noise source.

#### 4.4.2.2 Factors Affecting Motor Vehicle Noise

According to the Highway Traffic Noise Analysis and Abatement Policy and Guidance, provided by the Federal Highway Administration (FHWA), the level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels will increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway.

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site

conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. The Project Noise Study indicates that generally, soft site conditions better reflect predicted noise levels within the Study Area. Related, California Department of Transportation (Caltrans) research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

#### 4.4.2.3 Community Responses to Noise

Approximately ten percent of the population has a very low tolerance for noise, and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another 25 percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1.0 dBA cannot be perceived except in carefully controlled laboratory experiments. A 3.0 dBA increase may be perceptible outside of the laboratory. An increase of 5.0 dBA is often necessary before any noticeable change in community response (i.e., complaints) would be expected.

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon each individual's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Noise receptor's perception that they are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Receptor's belief that the noise source can be controlled.

Recent studies have shown that changes in long-term noise levels are noticeable, and are responded to by people. For example, about ten percent of the people exposed to traffic noise of 60 Ldn will report being highly annoyed with the noise, and each increase of one Ldn is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 Ldn or aircraft noise exceeds 55 Ldn, people begin complaining. Group or legal actions to stop the noise should be expected to begin at traffic noise levels near 70 Ldn and aircraft noise levels near 65 Ldn.

#### 4.4.2.4 Land Use Compatibility With Noise

Some land uses are less tolerant of noise than others. For example, schools, hospitals, churches and residences are more sensitive to noise intrusion than are commercial or industrial activities. As ambient noise levels affect the perceived amenity or liveability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process.

#### 4.4.2.5 Sensitive Receptors

Land uses classified as noise-sensitive by the State of California include: schools, hospitals, rest homes, long-term care centers, and mental care facilities. Some jurisdictions also consider day care centers, single-family dwellings, mobile home parks, churches, libraries, and recreation areas to be noise-sensitive. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs.

Land uses which are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

The closest sensitive receptors in the vicinity of the Project site are scattered residential uses located a minimum of one-half mile from the site.

#### 4.4.2.6 Current Noise Exposure

To assess existing noise levels in the Project vicinity, four long-term 24-hour measurements were taken at locations throughout the Study Area. These locations are illustrated at Figure 4.4-2, and are representative of sites that may be affected by Project-generated noise. Measurements were taken at the nearest noise sensitive uses, to assess the existing ambient hourly noise levels surrounding the Project site. Noise measurement locations included the following:

- Location L1 represents the noise levels on Nandina Avenue west of Perris Boulevard and north of existing residential homes.

- Location L2 represents the noise levels at the Project site on Indian Avenue north of the existing iHerb, Inc. distribution building.

- Location L3 represents the noise levels at the southwest corner of Nevada Avenue and Harley Knox Boulevard, north of existing residential homes, near the MARB/IPA runway.

- Located southwest of the Project site on Webster Avenue, location L4 represents the noise levels near existing residential homes.

The results of the ambient noise level measurements are presented at Table 4.4-1, below.

**Table 4.4-1**
**24 Hour Ambient Noise Level Measurements**

| Location | Distance To Project Boundary | Energy Average Hourly Noise Level (dBA Leq) | | CNEL |
|---|---|---|---|---|
| | | Daytime | Nighttime | |
| L1 | 2,675' | 64.0 | 62.9 | 69.5 |
| L2 | 0' | 62.8 | 63.7 | 70.2 |
| L3 | 2,920' | 57.1 | 56.5 | 63.3 |
| L4 | 3,285' | 57.4 | 57.2 | 63.3 |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.
Daytime = 8:00 a.m. to 10:00 p.m.; Nighttime = 10:01 p.m. to 7:59 a.m.


**LEGEND:**

▲ Noise Measurement Locations

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.4-2
Ambient Noise Measurement Locations

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network and the MARB/IPA airport. This includes the auto, heavy truck, and aircraft flyover activities near the noise level measurement locations.

### 4.4.3 EXISTING POLICIES AND REGULATIONS

To limit population exposure to physically and/or psychologically damaging, as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

#### 4.4.3.1 State of California

**Noise Requirements**

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards and provides noise/land use compatibility guidance. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to "limit the exposure of the community to excessive noise levels." In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

**California Green Building Standards Code**

The 2014 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.506 on Environmental Comfort. These noise standards are applied to new construction in California for the

purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA Leq for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

#### 4.4.3.2 City Transportation-Source Noise Standards

The Indian Street Commerce Center site is located in the City of Moreno Valley, however, the off-site transportation noise contributions associated with the traffic generated by the Project may potentially affect sensitive land uses along roadways in the City of Perris. Therefore, the following transportation noise standards for each jurisdiction are used in this analysis to evaluate the potential off-site traffic noise impacts as a result of the Project.

**City of Moreno Valley General Plan Safety Element**

The City Noise Element typically provides the standards for land use compatibility for community noise exposure. However, the City of Moreno Valley General Plan does not include a noise element or specific transportation-related noise standards. Rather, noise is considered in the Environmental Safety section of the General Plan Safety Element. While the General Plan provides background and noise fundamentals, it does not identify criteria to assess the impacts associated with off-site transportation-related noise impacts. Therefore, for the purpose of this analysis, the transportation noise criteria are derived from standards contained in the California Office of Planning and Research (OPR) General Plan Guidelines. The OPR land use/noise compatibility guidelines are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources.

The OPR Guidelines present noise compatibility criteria for industrial land uses such as the Project. Per the Guidelines, when the unmitigated exterior noise levels approach 70 dBA CNEL industrial land uses are considered normally acceptable. With exterior noise levels ranging from 70 to 80 dBA CNEL, industrial land uses are considered conditionally acceptable, and with exterior noise levels greater than 80 dBA CNEL, they are considered normally unacceptable. For normally unacceptable land use, new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. The Project does not propose outdoor living areas requiring exterior noise mitigation as outlined in the OPR Guidelines, and therefore, only the interior noise levels experienced by employees at the Project site are evaluated against the appropriate noise level standards.

The purpose of the transportation noise criteria is to protect, create, and maintain an environment free from noise and vibration that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. City General Policies (City of Moreno Valley General Plan, pp.9-31, 9-32) act to ensure that when exterior noise levels exceed 65 dBA CNEL at sensitive receptors, mitigation is provided to confirm that interior noise levels of 45 dBA CNEL are maintained. General Plan Policies in this regard are consistent with, and support, the California Building Code interior noise standards.

**City of Perris General Plan Noise Element**

The City of Perris has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of Perris from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies the following noise policies and implementation measures designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life.

I.A.1: All new development proposals will be evaluated with respect to the State Noise/Land Use Compatibility Criteria. Placement of noise sensitive uses will be discouraged within any area exposed to exterior noise levels that fall into the "Normally Unacceptable" range and prohibited within areas exposed to "Clearly Unacceptable" noise ranges.

I.A.2: Site plans for new residential development near roadway and train noise sources shall incorporate increased building setbacks and/or provide for sufficient noise barriers for usable exterior yard areas so that the noise exposure in those areas does not exceed the levels considered "Normally Acceptable" in The State of California Noise/Land Use Compatibility Criteria.

I.A.3: Acoustical studies shall be prepared for all new development proposals involving noise sensitive land uses, as defined in Section 16.22.020J of the Perris Municipal Code, where such projects are adjacent to roadways and within existing or projected roadway CNEL levels of 60 dBA or greater.

I.A.4: As part of any approvals of noise sensitive projects where reduction of exterior noise to 65 dBA is not reasonably feasible, the City will require the developer to issue disclosure statements to be identified on all real estate transfers associated with the affected property that identifies regular exposure to roadway noise.

I.A.5: No new residential dwellings shall be placed in areas with mitigated or unmitigated exterior noise levels that exceed 76 dBA CNEL.

The noise standards identified in the City of Perris General Plan are guidelines to evaluate the acceptability of the transportation-related noise level impacts. These standards are based on the guidelines set forth by the OPR and are used to assess the long-term traffic noise impacts on land uses. According to the City's Land Use Compatibility for Community Noise Exposure (Exhibit N-1), noise-sensitive land uses such as single-family residences are normally acceptable with exterior noise levels below 60 dBA CNEL and conditionally acceptable with noise levels below 65 dBA CNEL.

#### 4.4.3.3 City Stationary/Area-Source Noise Standards

To analyze noise impacts originating from a designated fixed location or private property such as the Indian Street Commerce Center Project, stationary-source (operational) noise such as the expected idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods are typically evaluated against standards established under a City's Municipal Code.

Although the Project site is located within the City of Moreno Valley, noise-sensitive receivers potentially impacted by stationary/area-source noise activities are also located in the City of Perris. Therefore, to accurately describe the potential Project-related operational noise level contributions, this analysis presents the appropriate standards for each jurisdiction.

**City of Moreno Valley Stationary/Area-Source Noise Standards**

The City of Moreno Valley Municipal Code, Chapter 11.80, *Noise Regulation*, provides performance standards and noise control guidelines for determining and mitigating non-transportation or stationary-source noise impacts from operations at private properties. The City of Moreno Valley Municipal Code defines Maximum Sound Levels (in dBA) for Residential and Commercial land uses in Table 11.80.030-2. As defined by the Municipal Code, Section 11.80.020 *Definitions*, Commercial land use means all uses of land not otherwise classified as residential, and Residential land use means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly. For the purpose of this analysis, the Indian Street Commerce Center Project is considered Commercial land use since it is not classified as residential. Based on this standard, the operational noise level limits for commercial land use of 65 dBA Leq during the daytime (8:00 a.m. to 10:00 p.m.) hours and 60 dBA Leq during the nighttime (10:01 p.m. to 7:59 a.m.) hours shall apply to the operational noise from the Project.

Further, Section 11.80.030 (C), *Prohibited Acts, Nonimpulsive Sound Decibel Limits*, states: "No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real

property line of the source of the sound, if the sound occurs on a privately owned property…" Therefore, at a distance of 200 feet from the property line, the Project's operational noise levels shall not exceed the 65 dBA Leq daytime and 60 dBA Leq nighttime noise level standards for commercial land uses.

**City of Perris Stationary/Area-Source Noise Standards**

The City of Perris Municipal Code, Chapter 7.34, *Noise Control*, Section 7.34.040, establishes the permissible noise level that may intrude into a neighbor's property from the use of sound amplifying equipment. The Municipal Code exterior noise level criteria for residential properties affected by stationary/area noise sources is included in Section 7.34.050, *General Prohibition*, which states that the Section 7.34.040 sound amplifying equipment noise standards shall apply. Therefore, for residential properties, the exterior noise level shall not exceed 80 dBA Leq during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 60 dBA Leq during the nighttime hours (10:00 p.m. to 7:00 a.m.).

#### 4.4.3.4 City Construction-Source Noise Standards

To analyze noise impacts originating from the construction of the Indian Street Commerce Center Project, noise from construction activities are typically limited to the hours of operation established under a City's Municipal Code. To accurately describe the potential Project-related construction noise level contributions to the existing noise environment, this analysis presents the appropriate construction noise standards for each jurisdiction adjacent to the Project site.

**City of Moreno Valley Construction-Source Noise Standards**

The City of Moreno Valley Municipal Code noise standards for construction are described below to determine the potential noise impacts at nearby sensitive receiver locations. As a subset of its stationary-source noise regulations, the City Municipal Code establishes additional restrictions on construction-source noise. More specifically, Municipal Code Section 11.80.030 (D) (7), *Construction and Demolition*, provides the following:

> "No person shall operate or cause operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound

there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee."

A noise disturbance, as defined by the City of Moreno Valley Municipal Code, means any sound which:

- Disturbs a reasonable person of normal sensitivities;
- Exceeds the sound level limits set forth in this chapter [Table 11.80.030-2];
- Is plainly audible as defined in this section. Where no specific distance is set forth for the determination of audibility, references to noise disturbance shall be deemed to mean plainly audible at a distance of two hundred (200) feet from the real property line of the source of the sound, if the sound occurs on a privately owned property, or from the source of the sound, if the sound occurs on public right, public space or other publicly owned property.

Therefore, based on the Section 11.80.030 (D) construction regulations, a construction-related noise disturbance occurs when the noise levels exceed the commercial land use criteria of 65 dBA Leq during the daytime hours and 60 dBA Leq during the nighttime hours at a distance of 200 feet from the property line of the source (Project site). In addition, grading operations shall be limited to the hours identified in Section 8.21.050 (O) of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 4:00 p.m. on weekends and holidays or as approved by the City Engineer.

**City of Perris Construction-Source Noise Standards**

The City of Perris Municipal Code, Section 7.34.060, identifies the City's construction noise standards and permitted hours of construction activity. Since the Project site is located in the City of Moreno Valley, the City of Perris would not have jurisdictional control over permitted hours of Project construction. Notwithstanding, the City of Perris Municipal Code, Section 7.34.060, noise level standard of 80 dBA Leq at residential properties would apply to the noise-sensitive receiver locations located in the City of Perris.

#### 4.4.3.5 Vibration Standards

The City of Moreno Valley and the City of Perris have not identified or adopted specific vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep.

Operational and construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generate little or no ground vibration. Large bulldozers and loaded trucks can cause perceptible vibration levels proximate receptors. The FTA guidelines of 80 VdB for sensitive land uses provide a substantiated basis for determining the relative significance of potential Project-related vibration impacts due to on-site operational and construction activities.

#### 4.4.3.6 March Air Reserve Base/Inland Port Airport Land Use Compatibility

The March Air Reserve Base/Inland Port Airport (MARB/IPA) is located approximately one-half mile westerly of the Project site. The Riverside County Airport Land Use Compatibility Plan Policy Document (RC ALUCP) includes policies for determining the land use compatibility of the Project since it is located within 2 miles of an airport runway. Policy 4.1.5 of the RC ALUCP requires that land uses, such as the proposed industrial land use of the Project site, demonstrate compatibility with determined acceptable noise levels. The RC ALUCP indicates that clearly compatible industrial land uses experience exterior noise levels below 65 dBA CNEL. For clearly compatible noise levels, the activities associated with the specified land use can be carried out with essentially no interference from the noise exposure. Normally acceptable noise levels for industrial land uses range from 65 to 70 dBA CNEL, and noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.

### 4.4.4 STANDARDS OF SIGNIFICANCE

Based on the noise criteria presented above, and direction provided within the *CEQA Guidelines* as implemented by the City of Moreno Valley, Project noise impacts would be considered potentially significant if the Project is determined to result in or cause the following conditions:

- 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;

- A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project;

- A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project;

- Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels;

- 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, expose people residing or working in the Project area to excessive noise levels; or

- For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

In evaluating the above CEQA concerns, the discussion of potential noise impacts (subsequent Section 4.4.5) is organized to reflect categories or types of noise sources, including construction-source noise; vehicular-source noise; operational/area-source noise; vibration; and exposure to airport/aircraft noise.

Summarizing the discussions presented previously at Section 4.4.3, Table 4.4-2 presents applicable noise impact thresholds for each of the five categories presented above. For ease of reference, thresholds from both the City of Moreno Valley and the City of Perris are presented. Project-related noise impacts would be considered excessive and/or substantial if any of the thresholds presented below are exceeded.

**Table 4.4-2**
**Summary of Significance Thresholds[1]**

| Analysis Scenario | Receptor Land Use | City | Ambient Condition/ Exposure Scenario | Significance Criteria | |
|---|---|---|---|---|---|
| | | | | Daytime | Nighttime |
| Construction-Source | Noise-Sensitive | Moreno Valley | General Activity: 7:00 a.m. to 8:00 p.m. on any day. Grading is limited to 7:00 a.m. to 6:00 p.m. Monday to Friday; 8:00 a.m. to 4:00 p.m. on weekends and holidays. | | |
| | | | At 200' from the property line of the source | 65 dBA Leq | n/a |
| | | Perris | At residential land use | 80 dBA Leq | n/a |
| Vehicular-Source | Noise-Sensitive | All | if ambient is < 65 dBA | Project plus ambient is > 65 dBA; and a ≥ 3 dBA Project increase | |
| | | | if ambient is > 65 dBA | ≥ 1.5 dBA Project increase | |
| | Non-Noise-Sensitive | | if ambient is < 70 dBA | Project plus ambient is > 70 dBA; and a ≥ 3 dBA Project increase | |
| Operational/ Area-Source | Noise-Sensitive | Moreno Valley | At 200' from the property line of the source | 65 dBA Leq | 60 dBA Leq |
| | | Perris | At residential land use | 80 dBA Leq | 60 dBA Leq |
| | | All | if ambient is ≤ 65 dBA | Project plus ambient is > 65 dBA; and a ≥ 3 dBA Project increase | |
| Vibration | Noise-Sensitive | All | Operational & Construction | 80 VdB | 80 VdB |
| Aircraft-Related | All | All | Proposed land use must be compatible with the criteria presented within the applicable ALCUP (i.e., considered a compatible land use for the noise contour in which the project site is located). | | |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.
[1] Please refer to Noise Impact Analysis Section 4.2 for further detail regarding applicable thresholds.

## 4.4.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.4.5.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant noise/vibration impacts, based on the analysis presented within this Section and included within the EIR Initial Study (EIR Appendix A). Please refer also to Initial Study Checklist Item XIII. *Noise*.

Of the CEQA threshold considerations identified above at Section 4.4.4, and as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topic are determined to have no impact and are not further substantively discussed here:

- For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

All other CEQA topics concerning the Project's potential impacts to noise are discussed below. Please refer also to Draft EIR Appendix A, Initial Study Checklist Item XIII., *Noise*.

### 4.4.5.2 Impact Statements

Following is an analysis of potential noise impacts that are expected to occur as a result of the Project. Noise levels will change both on-site and off-site if the Project is approved and implemented. The discussion of potential noise impacts is organized to reflect categories or types of noise sources, including:

- Construction-Source Noise;
- Vehicular-Source Noise;
- Operational/Area-Source Noise;
- Vibration; and
- Exposure to Airport/Aircraft Noise.

For each topical discussion, potential impacts are evaluated under applicable criteria established above at Section 4.4.4, *Standards of Significance*.

**CONSTRUCTION-SOURCE NOISE**

As previously presented, the following thresholds were used in analyzing potential construction-source noise impacts of the Project.

**Table 4.4-3**
**Construction-Source Noise Thresholds**

| Analysis Scenario | Receptor Land Use | City | Ambient Condition/ Exposure Scenario | Significance Criteria | |
|---|---|---|---|---|---|
| | | | | Daytime | Nighttime |
| Construction-Source | Noise-Sensitive | Moreno Valley | General Activity: 7:00 a.m. to 8:00 p.m. on any day. Grading is limited to 7:00 a.m. to 6:00 p.m. Monday to Friday; 8:00 a.m. to 4:00 p.m. on weekends and holidays. | | |
| | | | At 200' from the property line of the source | 65 dBA Leq | n/a |
| | | Perris | At residential land use | 80 dBA Leq | n/a |

**Potential Impact:** ***Construction activities and associated noise would result in 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.***

**Impact Analysis:** The construction noise analysis was prepared using reference noise level measurements taken to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements, provided at Table 10-1 of the Noise Impact Analysis, represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 56 dBA to in excess of 68 dBA when measured at 200 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 68 dBA measured at 200 feet from the noise source to the receiver would be reduced to 62 dBA at 400 feet from the source to the receiver, and would be further reduced to 56 dBA at 800 feet from the source to the receiver.

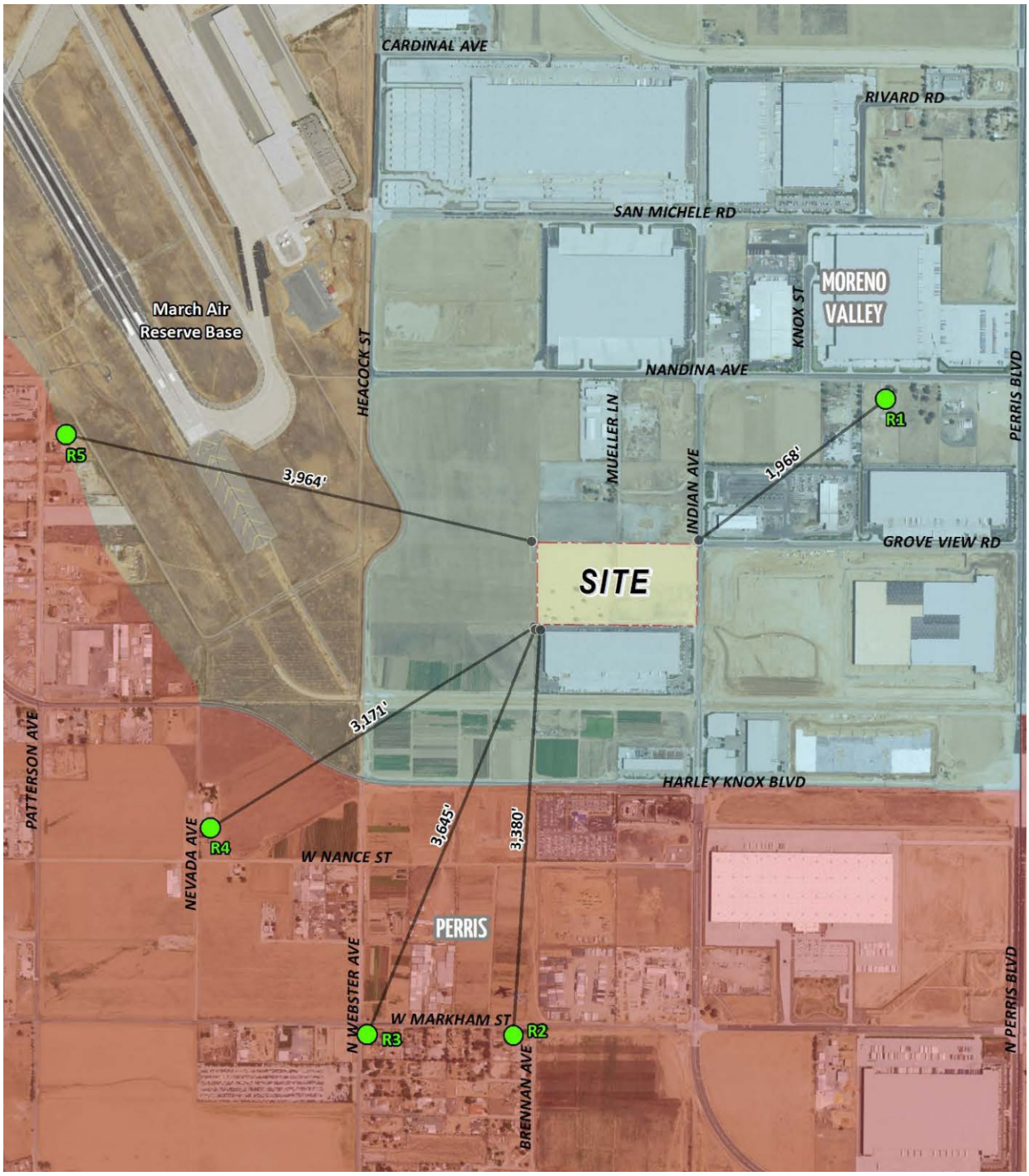
Construction activities within the Project site are anticipated to occur within five stages: site preparation, grading, building construction, paving, and architectural coating. To assess potential noise impacts associated with construction activities, five noise sensitive receptor locations were identified, as illustrated at Figure 4.4-3.

Based construction equipment reference noise levels and distance to the Project site, representative noise levels at the receptor locations have been developed, and are presented below.

**Table 4.4-4**
**Construction Noise Levels**

| Receiver Location | Distance To Receiver | Construction Noise Levels (dBA Leq) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Site Preparation | Grading | Building Construction | Paving | Architectural Coating | Peak |
| @200' | 200' | 67.5 | 67.5 | 67.2 | 59.6 | 56.1 | 67.5 |
| R1 | 1,968' | 47.7 | 47.7 | 47.4 | 39.7 | 36.3 | 47.7 |
| R2 | 3,380' | 43.0 | 43.0 | 42.7 | 35.0 | 31.6 | 43.0 |
| R3 | 3,645' | 42.3 | 42.3 | 42.0 | 34.3 | 30.9 | 42.3 |
| R4 | 3,171' | 43.5 | 43.5 | 43.2 | 35.6 | 32.1 | 43.5 |
| R5 | 3,964' | 41.6 | 41.6 | 41.3 | 33.6 | 30.2 | 41.6 |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.




Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.4-3
Noise Receiver Locations

The unmitigated peak construction noise levels are expected to range from 56.1 to 67.5 dBA Leq at a distance of 200 feet from the Project site boundary. At this distance, Project construction noise may exceed the 65 dBA Leq daytime City of Moreno Valley Municipal Code standard. However, there are no sensitive receiver locations located within 200 feet of the Project site boundary. As shown at Table 4.4-4, the peak construction noise levels experienced at the nearest sensitive receiver locations (R1—R5) are expected to range from 41.6 to 47.7 dBA Leq and will not exceed the 65 dBA Leq daytime City of Moreno Valley Municipal Code standard or the 80 dBA Leq City of Perris Municipal Code standard for construction activity.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Construction activities and associated noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** Construction-source noise is not considered a source of permanent noise increases, and associated threshold questions are not germane.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Construction activities and associated noise would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** As indicated previously, construction-source noise levels would not exceed City standards. Please refer to Table 4.4-4.

**Level of Significance:** Less-Than-Significant.

**VEHICULAR-SOURCE NOISE**

As previously presented, the following thresholds were used in analyzing potential vehicle-source noise impacts of the Project.

**Table 4.4-5**
**Vehicular-Source Noise Thresholds**

| Analysis Scenario | Receptor Land Use | City | Ambient Condition/ Exposure Scenario | Significance Criteria | |
|---|---|---|---|---|---|
| | | | | Daytime | Nighttime |
| Vehicular-Source | Noise-Sensitive | All | if ambient is < 65 dBA | Project plus ambient is > 65 dBA; and a ≥ 3 dBA Project increase | |
| | | | if ambient is > 65 dBA | ≥ 1.5 dBA Project increase | |
| | Non-Noise-Sensitive | | if ambient is < 70 dBA | Project plus ambient is > 70 dBA; and a ≥ 3 dBA Project increase | |

**Potential Impact:** ***Vehicular source noise would result in exposure of persons to, or generation of, noise levels in excess of standards established in the City's General Plan or Noise Ordinance, or other applicable standards of other agencies.***

**Impact Analysis:** To assess impacts resulting from offsite Project-related vehicular-source noise, the Noise Impact Analysis developed noise contours based on roadway average daily trip (ADT) estimates, and trip generation and distribution as presented in *Indian Street Commerce Center Traffic Impact Analysis* (Project TIA, Draft EIR Appendix B). The Project TIA reflects and analyzes traffic generated under assumed maximum buildout conditions for the Project. Noise contours were developed for the following traffic scenarios:

- Existing Without / With Project: This scenario refers to the existing present-day noise conditions, without and with the proposed Project.

- Opening Year 2020 Without / With Project: This scenario refers to the background noise conditions at future Year 2020 without and with the proposed Project. This scenario corresponds to 2020 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.

Noise Impact Analysis Tables 7-1 through 7-4 present the noise contours developed for the above scenarios for all Study Area roadways. Please refer to EIR Appendix E.

Based on the noise contours, Tables 4.4-6 and 4.4-7 present a comparison of noise conditions along Study Area roadways without and with development realized pursuant to the Project under the above-described scenarios.

**Table 4.4-6**
**Existing Conditions**
**Traffic Noise Impacts Without and With Project**

| ID | Road | Segment | Adjacent Planned Land Use | CNEL at Adjacent Land Use (dBA) | | | Threshold Exceeded? |
|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | |
| 1 | Indian St. | n/o Grove View Rd. | Business Park | 78.9 | 78.9 | 0.0 | No |
| 2 | Indian St. | s/o Grove View Rd. | Business Park | 79.4 | 80.0 | 0.6 | No |
| 3 | Indian St. | s/o Driveway 1 | Business Park | 79.0 | 79.6 | 0.6 | No |
| 4 | Indian St. | n/o Harley Knox Bl. | Business Park | 79.4 | 79.9 | 0.5 | No |
| 5 | Nandina Av. | w/o Indian St. | Business Park | 75.5 | 75.5 | 0.0 | No |
| 6 | Nandina Av. | e/o Indian St. | Business Park | 73.6 | 73.7 | 0.1 | No |
| 7 | Harley Knox Bl. | w/o I-215 NB Ramps | Light Industrial | 77.8 | 78.3 | 0.5 | No |
| 8 | Harley Knox Bl. | e/o I-215 NB Ramps | Business Park | 78.9 | 79.3 | 0.4 | No |
| 9 | Harley Knox Bl. | w/o Patterson Av. | Light Industrial | 78.9 | 79.3 | 0.4 | No |
| 10 | Harley Knox Bl. | w/o Webster Av. | Light Industrial | 78.6 | 79.0 | 0.4 | No |
| 11 | Harley Knox Bl. | w/o Indian St. | Light Industrial | 79.4 | 79.7 | 0.3 | No |
| 12 | Harley Knox Bl. | e/o Indian St. | Business Park | 75.4 | 75.5 | 0.1 | No |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

As shown above, under Existing Conditions, Project traffic would not cause or result in increased noise levels that would exceed the 65 dBA CNEL threshold condition; nor would Project traffic cause or result in increased noise levels of greater than 1.5 dBA CNEL when the without-Project condition already exceeds 65 dBA CNEL.

**Table 4.4-7**
**Year 2020 Conditions**
**Traffic Noise Impacts Without and With Project**

| ID | Road | Segment | Adjacent Planned Land Use | CNEL at Adjacent Land Use (dBA) | | | Threshold Exceeded? |
|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | |
| 1 | Indian St. | n/o Grove View Rd. | Business Park | 83.0 | 83.0 | 0.0 | No |
| 2 | Indian St. | s/o Grove View Rd. | Business Park | 82.2 | 82.5 | 0.3 | No |

**Table 4.4-7**
**Year 2020 Conditions**
**Traffic Noise Impacts Without and With Project**

| ID | Road | Segment | Adjacent Planned Land Use | CNEL at Adjacent Land Use (dBA) | | | Threshold Exceeded? |
|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | |
| 3 | Indian St. | s/o Driveway 1 | Business Park | 82.0 | 82.3 | 0.3 | No |
| 4 | Indian St. | n/o Harley Knox Bl. | Business Park | 81.8 | 82.1 | 0.3 | No |
| 5 | Nandina Av. | w/o Indian St. | Business Park | 76.7 | 76.7 | 0.0 | No |
| 6 | Nandina Av. | e/o Indian St. | Business Park | 75.7 | 75.8 | 0.1 | No |
| 7 | Harley Knox Bl. | w/o I-215 NB Ramps | Light Industrial | 80.4 | 80.7 | 0.3 | No |
| 8 | Harley Knox Bl. | e/o I-215 NB Ramps | Business Park | 81.6 | 81.8 | 0.2 | No |
| 9 | Harley Knox Bl. | w/o Patterson Av. | Light Industrial | 81.6 | 81.8 | 0.2 | No |
| 10 | Harley Knox Bl. | w/o Webster Av. | Light Industrial | 81.4 | 81.6 | 0.2 | No |
| 11 | Harley Knox Bl. | w/o Indian St. | Light Industrial | 81.8 | 82.0 | 0.2 | No |
| 12 | Harley Knox Bl. | e/o Indian St. | Business Park | 77.4 | 77.4 | 0.0 | No |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

As shown above, under Year 2020 Conditions, Project traffic would not cause or result in increased noise levels that would exceed the 65 dBA CNEL threshold condition; nor would Project traffic cause or result in increased noise levels of greater than 1.5 dBA CNEL when the without-Project condition already exceeds 65 dBA CNEL.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Vehicular-source noise would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** Vehicular-source noise is addressed as a permanent source of noise, rather than a temporary or periodic source of noise increases. As such, associated threshold questions are not germane.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Vehicular-source noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** As discussed previously, Project traffic would not cause or result in increased noise levels that would exceed the City's 65 dBA CNEL threshold condition; nor would Project traffic cause or result in increased noise levels of greater than 1.5 dBA CNEL when the without-Project condition already exceeds 65 dBA CNEL. As such, vehicular-source noise would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

**Level of Significance:** Less-Than-Significant.

**OPERATIONAL/AREA-SOURCE NOISE**

As previously presented, the following thresholds were used in analyzing potential operational/area-source noise impacts of the Project.

**Table 4.4-8**
**Operational/Area-Source Noise Thresholds**

| Analysis Scenario | Receptor Land Use | City | Ambient Condition/ Exposure Scenario | Significance Criteria | |
|---|---|---|---|---|---|
| | | | | Daytime | Nighttime |
| Operational/ Area-Source | Noise-Sensitive | Moreno Valley | At 200' from the property line of the source | 65 dBA Leq | 60 dBA Leq |
| | | Perris | At residential land use | 80 dBA Leq | 60 dBA Leq |
| | | All | if ambient is ≤ 65 dBA | Project plus ambient is > 65 dBA; and a ≥ 3 dBA Project increase | |

**Potential Impact:** ***Project operational noise would result in exposure of persons to, or generation of, noise levels in excess of standards established in the City's General Plan or Noise Ordinance.***

**Impact Analysis:** The future tenants of the proposed Project are currently unknown. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Business operations would primarily be conducted within the enclosed building, with the exception of the loading and

unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: roof-top HVAC equipment, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods.

The Project's stationary/area-source noise levels were estimated based on reference noise level measurements of similar logistics warehouse buildings. Please refer to Section 9.3 of the Project Noise Impact Analysis, presented as Appendix E to this EIR, for a detailed description of the reference noise level sources and locations.

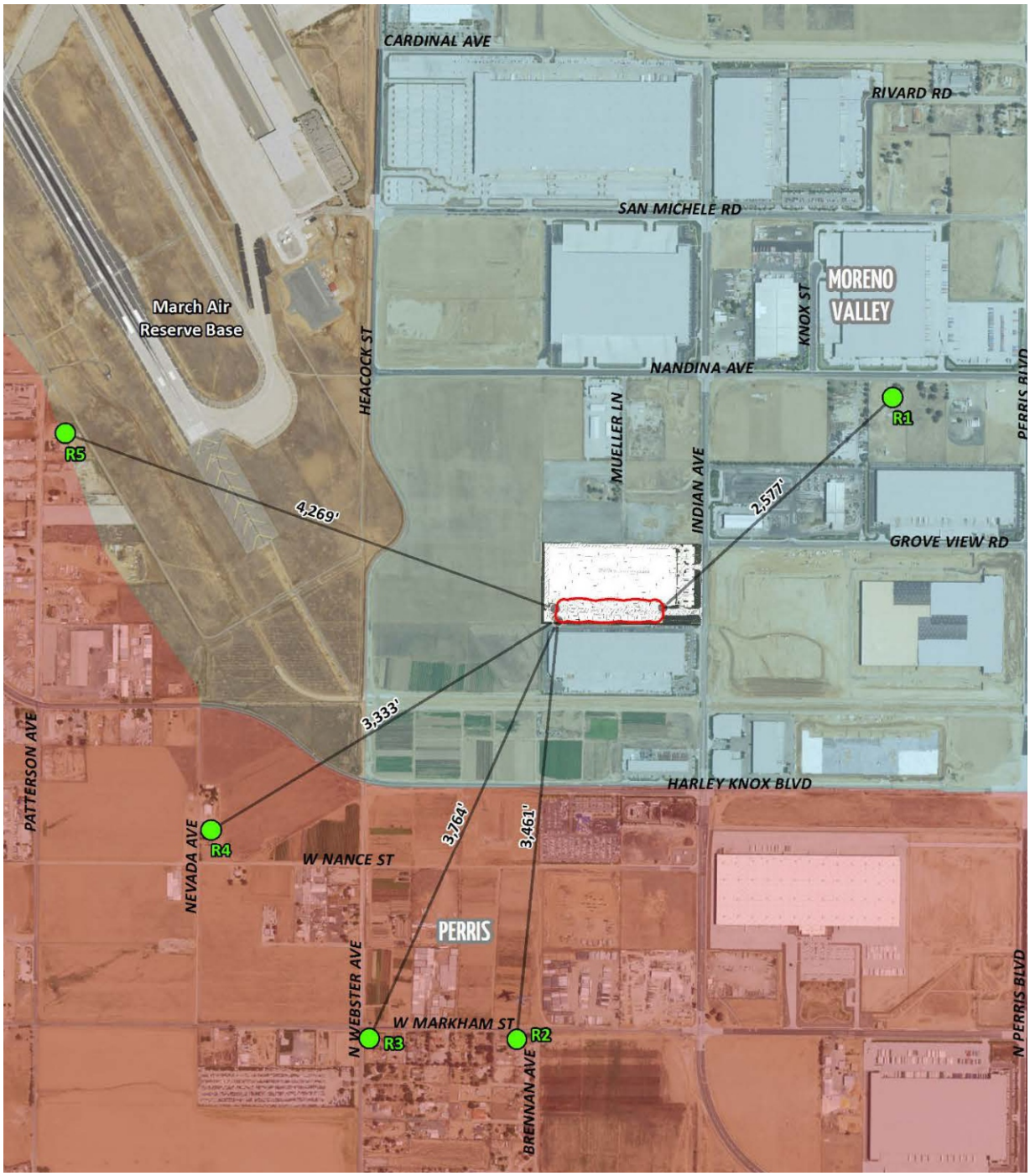
Using the reference noise levels, it is possible to estimate the operational source noise levels generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receptor locations. The operational noise level calculations account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source (idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods). Proposed noise sources, and their relationship to vicinity sensitive receptors, are illustrated at Figure 4.4-4.

Operational noise levels generated by the Project and received at proximate receptors are summarized at Table 4.4-9, below.

**Table 4.4-9**
**Operational Noise Levels Projections**

| Receiver Location | Project Noise (dBA Leq) | Distance From Source To Receiver | Attenuation (dBA Leq) | | Noise Level At Receiver Locations (dBA Leq) |
|---|---|---|---|---|---|
| | | | Distance | Existing Noise Barriers | |
| R1 | 70.1 | 2,577' | -38.7 | 0.0 | 31.9 |
| R2 | 70.1 | 3,461' | -41.2 | 0.0 | 29.3 |
| R3 | 70.1 | 3,764' | -42.0 | 0.0 | 28.5 |
| R4 | 70.1 | 3,333' | -40.9 | 0.0 | 29.6 |
| R5 | 70.1 | 4,269' | -43.1 | 0.0 | 27.4 |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.




Source: Urban Crossroads, Inc.

Figure 4.4-4
Operational-Source Noise Locations

Table 4.4-9 indicates that the hourly noise levels associated with the Project at the five sensitive receiver locations are expected to range from 27.0 to 31.4 dBA Leq. As such, the Project-related stationary/area-source noise levels will satisfy the City of Moreno Valley 65 dBA Leq daytime and 60 dBA Leq nighttime, as well as the City of Perris 80 dBA Leq daytime and 60 dBA Leq nighttime exterior noise level standards at the nearby sensitive receiver locations.

The Project-related noise level contribution is evaluated at each receiver location based on the magnitude of the Project-related increase on the ambient noise levels. To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise level measurements at the sensitive receiver locations. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when Project-source noise is added to ambient daytime and nighttime conditions are presented at Tables 4.4-10 and 4.4-11, respectively.

**Table 4.4-10**
**Project Daytime Noise Level Contributions**

| Receiver Location | Total Project Operational Noise Level | Measurement Location | Reference Ambient Noise Levels | Combined Project and Ambient | Project Contribution | Threshold Exceeded? |
|---|---|---|---|---|---|---|
| R1 | 31.9 | L1 | 64.0 | 64.0 | 0.0 | No |
| R2 | 29.3 | L4 | 57.4 | 57.4 | 0.0 | No |
| R3 | 28.5 | L4 | 57.4 | 57.4 | 0.0 | No |
| R4 | 29.6 | L3 | 57.1 | 57.1 | 0.0 | No |
| R5 | 27.4 | L3 | 57.1 | 57.1 | 0.0 | No |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

**Table 4.4-11**
**Project Nighttime Noise Level Contributions**

| Receiver Location | Total Project Operational Noise Level | Measurement Location | Reference Ambient Noise Levels | Combined Project and Ambient | Project Contribution | Threshold Exceeded? |
|---|---|---|---|---|---|---|
| R1 | 31.9 | L1 | 62.9 | 62.9 | 0.0 | No |
| R2 | 29.3 | L4 | 57.2 | 57.2 | 0.0 | No |
| R3 | 28.5 | L4 | 57.2 | 57.2 | 0.0 | No |
| R4 | 29.6 | L3 | 56.5 | 56.5 | 0.0 | No |
| R5 | 27.4 | L3 | 56.5 | 56.5 | 0.0 | No |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

As indicated at the preceding tables, the Project would not substantively contribute to daytime or nighttime ambient noise levels at nearby receiver locations. Therefore, the Project-related operational noise level contributions to the daytime or nighttime ambient noise levels at nearby sensitive receiver locations would not exceed the previously-presented significance thresholds.

Based on the preceding discussions, Project operational noise would not result in exposure of persons to, or generation of, noise levels in excess of standards established in the City's General Plan or Noise Ordinance.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Project operational noise would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** As discussed above, noise levels attributable to ongoing operational activities within the Project site would not exceed City Noise Ordinance Standards. Similarly, temporary and periodic peak noise events generated by operational activity within the Project site would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** ***Project operational noise would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.***

**Impact Analysis:** As discussed above, noise levels attributable to ongoing operational activities within the Project site would not exceed City Noise Ordinance Standards. Similarly, operational activity within the Project site would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

**Level of Significance:** Less-Than-Significant.

**VIBRATION**

As previously presented, the following thresholds were used in analyzing potential vibration impacts of the Project.

**Table 4.4-12**
**Vibration Thresholds**

| Analysis Scenario | Receptor Land Use | City | Ambient Condition/ Exposure Scenario | Significance Criteria | |
|---|---|---|---|---|---|
| | | | | Daytime | Nighttime |
| Vibration | Noise-Sensitive | All | Operational & Construction | 80 VdB | 80 VdB |

**Potential Impact:** ***Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise.***

**Impact Analysis:** The following discussion addresses the potential groundborne vibration/groundborne noise impacts that may be generated by Project site construction activities and/or operational activities within the Project site.

**Construction Vibration**

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. It is expected that groundborne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences or buildings to cause a vibration impact.

- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Groundborne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the FTA. Construction activities that would have the potential to generate low levels of groundborne vibration within the Project site include grading and paving. Using the vibration source level of construction equipment provided on Table 6-7 of the Noise Impact Analysis and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 4.4-13 presents the expected Project-related vibration levels at the five receptor locations.

**Table 4.4-13**
**Construction Equipment Vibration Levels**

| Receiver Location | Distance To Construction Activity | Receiver Vibration Levels (VdB) | | | | | Threshold Exceeded? |
|---|---|---|---|---|---|---|---|
| | | Small Bulldozer | Jackhammer | Loaded Trucks | Large Bulldozer | Peak Vibration | |
| R1 | 1,968' | 1.1 | 22.1 | 29.1 | 30.1 | 30.1 | No |
| R2 | 3,380' | 0.0 | 15.1 | 22.1 | 23.1 | 23.1 | No |
| R3 | 3,645' | 0.0 | 14.1 | 21.1 | 22.1 | 22.1 | No |
| R4 | 3,171' | 0.0 | 15.9 | 22.9 | 23.9 | 23.9 | No |
| R5 | 3,964' | 0.0 | 13.0 | 20.0 | 21.0 | 21.0 | No |

Source: *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.

As shown above, construction of the Project is not expected to generate vibration levels exceeding the FTA maximum acceptable vibration standard of 80 (VdB). Further, impacts at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

**Operational Vibration**

Although the human threshold of perception for vibration is around 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement condition. Typical vibration levels for heavy trucks at normal traffic speeds do not exceed 65 VdB, and therefore, will be below the FTA vibration threshold of 80 VdB at nearby sensitive receiver locations. Truck deliveries transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will not exceed the 80 VdB vibration threshold.

Based on the preceding discussion, the potential for the Project to result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise is less-than-significant.

**Level of Significance:** Less-Than-Significant.

**EXPOSURE TO AIRPORT/AIRCRAFT NOISE**

As previously presented, the following thresholds were used in analyzing potential airport/aircraft-related noise impacts of the Project.

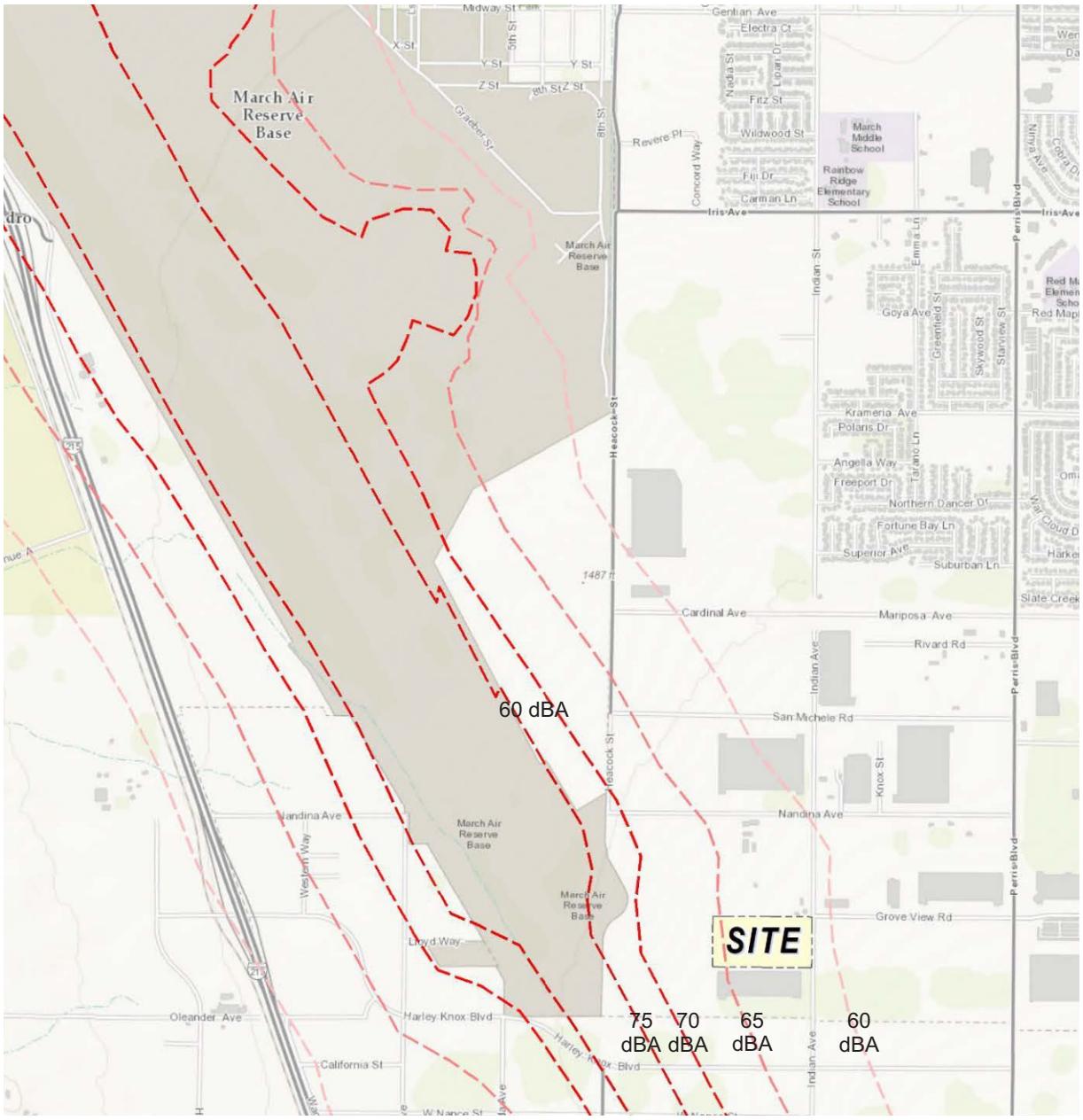
**Table 4.4-14**
**Airport/Aircraft-Related Thresholds**

| Analysis Scenario | Receptor Land Use | City | Significance Criteria |
|---|---|---|---|
| Aircraft-Related | All | All | Proposed land use must be compatible with the criteria presented within the applicable ALCUP (i.e., considered a compatible land use for the noise contour in which the project site is located). |

**Potential Impact:** ***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, expose people residing or working in the Project area to excessive noise levels.***

**Impact Analysis:** The noise contour boundaries that are used to determine potential aircraft-related noise impacts associated with MARB are presented within the RC ALUCP and excerpted here at Figure 4.4-5. As shown, the Project site is located within the 60 to 65 dBA CNEL noise level contours, and therefore, represents a normally acceptable land use based on RC ALUCP compatibility criteria. Typical construction practices would therefore be sufficient to eliminate substantial noise intrusion upon indoor activities.

**Level of Significance:** Less-Than-Significant.




**LEGEND:**

- Unmitigated 60 dBA CNEL Noise Level Contour Boundary
- Unmitigated 65 dBA CNEL Noise Level Contour Boundary
- Unmitigated 70 dBA CNEL Noise Level Contour Boundary
- Unmitigated 75 dBA CNEL Noise Level Contour Boundary
- Unmitigated 80 dBA CNEL Noise Level Contour Boundary

*Source: Riverside County, Airport Land Use Compatibility Plan, Exhibit MA-4.*

N

NOT TO SCALE

Source: Urban Crossroads, Inc.

applied planning inc

Figure 4.4-5
MARB/IPA Noise Contours

# 4.5 HAZARDS/HAZARDOUS MATERIALS

# 4.5 HAZARDS/HAZARDOUS MATERIALS

***Abstract***

*This Section identifies and addresses potential hazards and hazardous materials impacts that may result from the implementation and operation of the Indian Street Commerce Center Project (Project). More specifically, the hazards and hazardous materials analysis presented here examines whether the Project would:*

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*

- *Result in a safety hazard for people residing or working in the project area 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; or*

- *Result in a safety hazard for people residing or working in the project area for a project within the vicinity of an airstrip.*

*As supported by the analysis presented in this Section, potential hazards and hazardous materials impacts of the Project would be less-than-significant.*

*Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to be less-than-significant, and are not further substantively discussed here:*

- *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 Section 65962.5 and, as a result, create a significant hazard to the public or the environment;*

- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or*

- *Potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires.*

*Please refer also to Initial Study Checklist Item IX., Hazards and Hazardous Materials.*

### 4.5.1 INTRODUCTION

Information presented in this Section is summarized in part from the *Phase I Environmental Site Assessment (Phase I ESA), 17845 Indian Street, Moreno Valley, California* (Ardent Environmental Group, Inc.) July 15, 2015 and *Results of Pesticide and Herbicide Sampling* (Pesticide and Herbicide Sampling Report), *17845 Indian Street, Moreno Valley, California* (Ardent Environmental Group, Inc.) July 13, 2016. The Phase I ESA and Pesticide and Herbicide Sampling Report are provided in EIR Appendix F.

### 4.5.2 SETTING

The physical setting of the Project provided here serves as context for potential hazards affecting, or resulting from, the Project.

#### 4.5.2.1 Project Location

The Project site is located in the easterly portion of the City of Moreno Valley, in western Riverside County. The Project site is located approximately one-half mile westerly of Perris Boulevard and is bounded by Indian Street to the east. Grove View Road (alignment) comprises the Project site northerly boundary. March Air Force Base

is located approximately one-third mile westerly of the Project site. Please refer also to EIR Section 3.0, *Project Description*, Figure 3.2-1, *Project Location*.

#### 4.5.2.2 Project Site Land Use

The Project site is a roughly rectangular-shaped parcel, totaling 19.64 acres. The Project site is a vacant dirt lot with no occupants and is heavily disturbed by general human activities including routine weed abatement. The subject site is generally characterized as a disturbed field dominated by tumbleweed.

**Project Site History Summary**

An overview of the past use of the site was developed through review of historic data and records. Copies of historical data are provided at Appendix C of the Phase I ESA. The site was vacant land from at least 1938 through the 1960s with possible agricultural usage during the 1930s. From at least 1978 to 2008, the southeastern parcel was occupied by a single-family residence. A prior Phase I ESA reported that the southwestern and two northern parcels were used as a sod farm in 2004. The southeastern parcel was briefly used to store truck trailers during the mid-2000s.The residential building demolition in 2008 included the removal of a septic tank. From 2008 to present-day, the site has remained a vacant lot (Phase I ESA, p. 13).

#### 4.5.2.3 Vicinity Land Uses

In general, the site vicinity consists of commercial warehouse and distribution facilities and vacant land. The site is bound to the south by a warehouse and distribution facility. Westerly of the Project site is vacant land. Adjoining north and east (across Indian Street) are vacant properties with signage indicating future development of these properties as commercial warehouse and distribution facilities.

#### 4.5.2.4 Sensitive Land Uses

Sensitive land uses are considered to include residential land uses, schools, hospitals, daycare centers, or any other land uses that provide long-term occupancy and/or accommodate vulnerable populations (e.g., children, the elderly, and the infirm). Sensitive land uses are located throughout the City of Moreno Valley. The land uses

specifically discussed herein are those nearest the Project site. These land uses represent locations with the maximum potential exposure to any Project-related hazards, and thus establish a likely maximum potential impact scenario with regard to hazards/hazardous materials. Sensitive land uses nearest the Project site are Morning Dove Christian School (approximately 1.5 miles to the northeast) and Mary McLeod Bethune Elementary School (approximately 1.7 miles northeasterly). No other sensitive land uses, existing or proposed, are located proximate to the Project site.

### 4.5.3 EXISTING HAZARDS/HAZARDOUS CONDITIONS

Information addressing and describing existing hazards/hazardous conditions affecting the Project site was obtained from a variety of sources including:

**User Provided Information** - This included title and judicial records for environmental liens or activity and use limitations, recorded environmental liens, actual or specialized knowledge or commonly known information regarding environmental conditions at the site, the relationship of the purchase price of the property to the fair market value, readily available maps, environmental reports, and other environmental documents pertaining to the site (Phase I ESA, p. 4).

**Records Review** - This included review of: federal, state, tribal, and local regulatory agency databases and records for the site and vicinity properties; local regulatory agency files for the site and selected nearby properties of potential environmental concern; physical setting sources, including topographic maps, geologic maps, and geologic and hydrogeologic reference documents. Historic land use information was also reviewed including: historical aerial photographs, historical fire insurance rate maps, building department records, and city directories (Phase I ESA, p. 4).

**Site Reconnaissance** - Site reconnaissance was conducted to observe the site in context and under current conditions, and to obtain information indicating the likelihood of any recognized environmental conditions (RECs). Potential RECs include general site setting, site usage, use and storage of hazardous materials and petroleum products, disposal of waste products and materials, sources of polychlorinated biphenyls (PCBs),

and evidence of releases and possible risks of contamination from activities at adjacent properties (Phase I ESA, p. 5).

**Interviews** - To the extent necessary and such persons were available, interviews were conducted with site representatives, property owners, occupants, and site managers, regarding the environmental condition of the site. Interviews with state and/or local government officials were also conducted as necessary (Phase I ESA, p. 5).

#### 4.5.3.1 Potential Project Site Hazards and Hazardous Conditions

Past agricultural activities have resulted in certain potential hazards and potentially hazardous conditions affecting the Project site. The following discussions, summarized and excerpted from the Phase I ESA, identify specific potential concerns associated with, or affecting the Project site.

- There are no structures at the site; therefore, friable asbestos-containing building materials (ACM) and lead-based paints (LBP) are not likely present. Based on the historical agricultural usage at the site, there is a moderate potential for the presence of transite piping. If encountered, transite pipes should be removed by a licensed asbestos abatement contractor prior to or during redevelopment activities.

- No other on- or off-site environmental concerns were noted.

[Project Phase I ESA, p. 2]

Additionally, recognizing past agricultural use on the Project site, and the related potential for presence of residual pesticides and herbicides, a site-specific Pesticide and Herbicide Sampling Report (Report) was prepared. Report methodology, results, and conclusions are summarized below.

The Project site was divided into eight separate sampling grids and one soil boring was placed in the approximate center of each grid. Two additional soil borings were placed

adjacent to the water retention pond located immediately northwest of the Project site. Soil sampling was completed on June 26, 2016. Soil samples were collected from each of the ten soil borings at depths of approximately 1 foot. Laboratory results of the sampling activities are presented at Table 4.5-1.

**Table 4.5-1**
**Summary of Soil Sample Laboratory Results**

| Sample ID | Organochlorine Pesticides (mg/kg) | | Organophosphorous Pesticides (mg/kg) | Chlorinated Herbicides (mg/kg) |
|---|---|---|---|---|
| | 4,4-DDE | All Others | | |
| B1-1 | ND<0.0020 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B2-1 | 0.0038 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B3-1 | 0.0027 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B4-1 | 0.0086 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B5-1 | 0.0031 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B6-1 | ND<0.0020 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B7-1 | 0.0047 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B8-1 | 0.0037 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B9-1 | ND<0.0020 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| B10-1 | 0.0025 | ND<0.001-0.05 | ND<0.05-0.1 | ND<0.05-0.1 |
| DTSC-SLi (threshold) | NA | Various | Various | Various |
| EPA RSLi (threshold) | 9.3 | Various | Various | Various |

**Source:** *Results of Pesticide and Herbicide Sampling, 17845 Indian Street, Moreno Valley, California* (Ardent Environmental Group, Inc.) July 13, 2016.
**Notes:**
Sample ID - sample identification
Feet bgs – feet below the ground surface
Organochlorine pesticides analyzed in general accordance with EPA Method No. 8081A
Organophosphorus Pesticides analyzed in general accordance with EPA Method No.8141A
Chlorinated Herbicides analyzed in general accordance with EPA Method No.8151A
4,4-DDE - 4,4-dichlorodiphenyldichloroethylene
mg/kg - milligrams per kilogram
ND - no detectable concentration above the reporting limit
DTSC-SLi - Department of Toxic Substance Control (DTSC), Human Ecological Risk Office (HERO), Human Health Risk Assessment (HHRA) Note 3, Screening Levels for industrial/commercial land use, dated January 2016.
EPA RSLi - EPA, Region 9, Regional Screening Levels for industrial/commercial land use, dated November 2015.

Laboratory results were compared to both the State of California DTSC Screening Levels for industrial/commercial land use (DTSC-SLi) and the Federal EPA Regional Screening Levels for industrial/commercial land use (RSLi). Both of these regulatory guidelines are

based on a human health risk criteria. Laboratory results indicated no detectable concentrations of OCPs, OPPs, and chlorinated herbicides, with the exception of 4,4-DDE, a breakdown product of 4,4-DDT. The analytical results indicated concentrations of up to 0.0086 milligrams per kilogram (mg/kg) of 4,4-DDE in seven samples. As noted at Table 4.5-1, these concentrations are well below the RSLi guidelines of 9.3 mg/kg; the DTSC does not maintain guidelines for 4,4-DDE.

As can be seen from Table 4.5-1, laboratory results indicated non-detectable to low concentrations of Organochlorine Pesticides, specifically 4,4-DDE. Based on these results, Ardent Environmental Group concluded that "*there is a low likelihood that residual pesticides would pose a significant human health risk to future workers or occupants of the site, or a threat to groundwater below the site.*" Based on these results, the potential for the Project to result in or cause a significant hazard associated with contaminated soils is determined to be less-than-significant. Please refer also to the detailed discussion and evaluation of soil sampling presented at Appendix F.

#### 4.5.3.2 Potential Vicinity Hazards and Hazardous Conditions

**Unauthorized Releases of Hazardous Substances**

As one component of the Phase I ESA, environmental information databases were researched to identify potential area hazards/hazardous conditions affecting the Project site and vicinity properties. The research was conducted to determine whether the Project site and/or properties within the vicinity of the Project site have been reported as having experienced significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects. The research encompassed federal, state, local, and tribal databases. A summary of the environmental databases searched and noted facilities of environmental concern are presented at Appendix E of the Phase I ESA.

No unmapped properties were identified in the database research report as potential sources of off-site hazards. Please refer also to the detailed discussion and evaluation of potential off-site hazards presented at Phase I ESA, pp. 18-23.

**March Air Reserve Base Airport**

The March Air Reserve Base/Inland Port Airport (March ARB/IPA) is located approximately one-third mile westerly of the Project site. March ARB/IPA is classified as a joint use facility airport; it is owned and operated by the U.S. Air Force, but facilities are available for use by civil aviation. Operation of March ARB/IPA could result in potential hazard/safety impacts affecting the Project site.

## 4.5.4 HAZARDS/HAZARDOUS MATERIALS POLICIES AND REGULATIONS

### 4.5.4.1 Overview

As summarized below, the City has developed and adopted General Plan Goals and Policies addressing hazards and hazardous materials. Applicable federal, state, and local regulations which act to reduce potential creation of, or exposure to, hazards and hazardous materials are also presented.

### 4.5.4.2 City of Moreno Valley General Plan Goals and Policies

The City of Moreno Valley General Plan Safety Element establishes Goals, Objectives, Policies, and Actions addressing community health and safety, including potential hazards and hazardous materials concerns. Goals, Objectives, Policies, and Actions implemented by the City through its General Plan support prevention and education measures acting to minimize the occurrence and effects of hazards, emergencies and disasters; and include measures to ensure the City is able to respond appropriately under hazardous, emergency, or disaster conditions.

### 4.5.4.3 Regulatory Context

In addition to the above-referenced General Plan Goals, Objectives, Policies, and Actions, a number of federal, state, and local laws have been enacted to regulate and manage hazardous materials. Implementation of these laws and the associated 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 regulatory agencies and certain key hazardous materials laws

and regulations applicable to the Project, and to which the Project must conform, is provided below.

**Federal**

**Overview**

Several federal agencies regulate hazardous materials. These include the U.S. EPA, the United States Occupational Safety and Health Administration (USOSHA), and the United States Department of Transportation (USDOT). Applicable Federal Regulations are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). Some of the major federal laws and issue areas include the following statutes and implementing regulations:

- Resources Conservation and Recovery Act (RCRA) - hazardous waste management;
- Hazardous and Solid Waste Amendments Act (HSWA) - hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - cleanup of contamination;
- Superfund Amendments and Reauthorization Act (SARA) - cleanup of contamination; and
- Emergency Planning and Community Right-to-Know (SARA Title III) - business inventories and emergency response planning.

The U.S. 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.

#### Hazardous Waste Handling

The U.S. EPA has authorized the California Department of Toxic Substances Control (DTSC) to enforce hazardous waste laws and regulations in California. Requirements place "cradle-to-grave" responsibility for hazardous waste disposal on the shoulders of hazardous waste generators. Waste generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., a ban on the disposal of many types of hazardous wastes in landfills).

#### Airforce Air Installation Compatibility Use Zone(s)

The Project site is located within the March Air Reserve Base Airforce Air Installation Compatibility Use Zone (MARB AICUZ) study area. The MARB AICUZ facilitates and promotes establishment and development of compatible land uses which may be subject to aircraft noise and accident hazards. To these ends, the AICUZ provides information concerning aircraft accident hazards to surrounding communities and acts to prevent incompatible development in areas affected by aircraft operations.

The 2005 AICUZ Report mapped and classified hazards areas into various categories indicating the potential for these areas to be subject to aircraft crashes. These areas included: areas on or adjacent to the runway; clear zone areas under runway approach/departure paths; Accident Potential Zone (APZ) I; and Accident Potential Zone (APZ) II. Aircraft Noise Compatibility Zones are also identified in the Report.

### State

#### Overview

The primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the State Water Quality Control Board (SWQCB). Other state agencies involved in hazardous materials management and oversight are the

Department of Industrial Relations, California OSHA (Cal OSHA) implementation, Office of Emergency Services (OES - California Accidental Release Prevention Implementation), Air Resources Board (ARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA - Proposition 65 implementation) and CalRecycle (formerly the California Integrated Waste Management Board, CIWMB). The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and Caltrans. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations.

Relevant hazardous materials management laws in California include, but are not limited to, the following statutes and implementation regulations:

- Hazardous Materials Management Act - business plan reporting;
- Hazardous Waste Control Act - hazardous waste management;
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) - release of and exposure to carcinogenic chemicals;
- Hazardous Substance Act - cleanup of contamination; and
- Hazardous Materials Storage and Emergency Response.

Airport operations, airport planning, airport land use compatibility, and associated hazards and safety concerns are regulated through the California State Aeronautics Act (SAA), Public Utilities Code (PUC), Section 21001 et seq. The Caltrans Division of Aeronautics is, in large part, responsible for administration of the SAA.

**California Environmental Protection Agency**

The California Environmental Protection Agency (CalEPA) has broad jurisdiction over hazardous materials management in the state. Within CalEPA, 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 SWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. SWQCB 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 Resource Conservation and Recovery Act (RCRA) of 1976 is the principal federal law that regulates the generation, management, and transportation of hazardous materials and other wastes. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA, and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. In addition, DTSC reviews and monitors legislation to ensure that the position reflects the DTSC's goals. From these laws, DTSC's major program areas develop regulations and consistent program policies and procedures. The regulations spell out what those who handle hazardous waste must do to comply with the laws.

California law provides the general framework for regulation 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 wastes," and requires permits for, and inspections of, facilities involved in generation and/or treatment, storage and disposal of hazardous wastes.

The oversight of hazardous materials release sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and SWQCB are the two (2) 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 subject 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. The DTSC has developed standards for the investigation of sites where hazardous materials contamination have been identified or could exist based on current or past uses. The standards identify approaches to determine if a release of hazardous wastes/substances exists at a site and delineate the general extent of contamination; estimate the potential threat to public health and/or the environment from the release and provide an indicator of relative risk; determine if an expedited response action is required to reduce an existing or potential threat; and complete preliminary project scoping activities to determine data gaps and identify possible remedial action strategies to form the basis for development of a site strategy.

**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 a certain volume of specific regulated substances at their facilities. The list of regulated substances is found in Article 8, Section 2770.5 of the CalARP program regulations. The businesses that use a regulated substance above the noted threshold quantity must implement an accidental release prevention program, and some may be required to complete a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The purpose of an RMP is to decrease the risk of an off-site release of a regulated substance that might harm the surrounding environment and community. An RMP includes the following components: safety information, hazard review, operating procedures, training, maintenance, compliance audits, and incident investigation. The RMP must consider the proximity to sensitive populations located in schools, residential areas, general acute care hospitals, long-term health care facilities, and child day-care facilities, and must also consider external events such as seismic activity.

**Caltrans Division of Aeronautics**

The Caltrans Division of Aeronautics (Division) is, in large part, responsible for administration of the California State Aeronautics Act (SAA), Public Utilities Code (PUC), Section 21001 et seq. The purpose of the SAA "is to protect the public interest in aeronautics and aeronautical progress."[1] The SAA is the implementing statute requiring the formation of a county Airport Land Use Commission or comparable designated airport regulatory commission. The SAA at Section 21675. (a) (excerpted in pertinent part below) assigns the ALUC or other designated airport regulatory commission with the responsibility to prepare and adopt an Airport Land Use Compatibility Plan (ALUCP):

> 21675. (a) Each commission shall formulate an airport land use compatibility plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The commission's airport land use compatibility plan shall include and shall be based on a long-range master plan or an airport layout plan, as determined by the Division of Aeronautics of the Department of Transportation, that reflects the anticipated growth of the airport during at least the next 20 years. In formulating an airport land use compatibility plan, the commission may develop height restrictions on buildings, specify use of land, and determine building standards, including soundproofing adjacent to airports, within the airport influence area. The airport land use compatibility plan shall be reviewed as often as necessary in order to accomplish its purposes, but shall not be amended more than once in any calendar year.

[1] *California Airport Land Use Planning Handbook* (Caltrans Division of Aeronautics) October 2011, p. vii.

## Regional

### South Coast Air Quality Management District (SCAQMD)

The SCAQMD establishes Rules that regulate or control various air pollutant emissions and emissions sources, including hazardous emissions sources, within the South Coast Air Basin (Basin). The SCAQMD coordinates its actions with local, state, and federal government agencies, the business community, and private citizens to achieve and maintain healthy air quality for Riverside County, including the City of Moreno Valley.

## Local

### Riverside County Fire Department, Hazardous Materials Division

Under the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program, (Chapter 6.11, Division 20, Section 25404 of the Health and Safety Code), hazards/hazardous materials management is addressed locally though the Certified Unified Program Agency (CUPA). The primary CUPA for the City of Moreno Valley is the County of Riverside Health Department, Environmental Health Division. In its CUPA capacity, Riverside County Department of Environmental Health Hazardous Materials Branch manages the following six hazardous material and hazardous waste programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan);
- California Accidental Release Program (CalARP);
- Underground Storage Tanks (UST);
- Aboveground Petroleum Storage Act (APSA)/Spill Prevention, Control, and Countermeasure Plan (SPCC Plan);
- Hazardous Waste Generation and Onsite Treatment; and
- Hazardous Materials Management Plans and Inventory Statements under Uniform Fire Code Article 80.

**Riverside County Airport Land Use Compatibility Plan (ALUCP)**

California law mandates preparation and adoption of airport land use compatibility plans (ALUCPs) for each public-use and military airport in the state (California Public Utilities Code (PUC) §21675). ALUCPs act to "…protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around airports to the extent that these areas are not already devoted to incompatible uses" (PUC §21670(a)(2)).

In this regard, the Riverside County Airport Land Use Compatibility Plan for March Air Reserve Base/Inland Port Airport (March ARB/IPA ALUCP, ALUCP) acts to ensure mutual compatibility of the MARB/IPA with surrounding land uses, thereby reducing potential airport/aircraft related hazards. [2]

### 4.5.5 STANDARDS OF SIGNIFICANCE

Pursuant to the *CEQA Guidelines* as adopted and implemented by the City of Moreno Valley, and for purposes of this EIR, implementation of the Project may result in or cause potentially significant hazards/hazardous materials impacts if it 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 likely 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;

[2] The compatibility zones and criteria established in the Riverside County ALUCP for March ARB/IPA provide noise and safety compatibility protection equivalent to or greater than correlating criteria presented in the Airforce AICUZ for March ARB/IPA (ALUCP, p.1).

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

- Result in a safety hazard for people residing or working in the project area 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;

- Result in a safety hazard for people residing or working in the project area for a project within the vicinity of an airstrip.

- Impair implementation of or physically interfere with an adopted emergency response plan or 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.

## 4.5.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.5.6.1 Introduction

The following discussions focus on areas where it has been determined that the Project may result in potentially significant hazards and hazardous materials impacts, pursuant to comments received through the NOP process, and based on the analysis presented within this Section and included within the EIR Initial Study.

As discussed within the Initial Study (EIR Appendix A), the potential for the Project to result in any of the following conditions was determined to be potentially significant, and these potential impacts are discussed further within this Section.

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonably foreseeable upset*

*and accident conditions involving the release of hazardous materials into the environment;*

- Result in a safety hazard for people residing or working in the project area 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; or

- Result in a safety hazard for people residing or working in the project area for a project within the vicinity of an airstrip.

Other CEQA hazards/hazardous materials considerations were determined within the Initial Study to be less-than-significant. These considerations include:

- 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 Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

- Potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires.

These potential impacts are therefore not substantively discussed further within this Section. Please refer also to EIR Section 1.5, *Impacts Considered Previously but Not Found to Be Potentially Significant*, and Initial Study Checklist Item IX., *Hazards and Hazardous Materials*.

#### 4.5.6.2 Impact Statements

**Potential Impact:** ***Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.***

**Impact Analysis:** The following discussions summarize the findings of the Phase I ESA prepared for the Project site regarding existing on-site hazards, as well as potential hazards associated with operations of facilities proposed under the Project.

There are no structures at the site; therefore, friable asbestos-containing building materials (ACM) and lead-based paints (LBP) are not likely present. Based on the historical agricultural usage at the site, there is a moderate potential for the presence of transite piping. If encountered, transite pipes should be removed by a licensed asbestos abatement contractor prior to or during redevelopment activities.

**Level of Significance:** Potentially Significant.

**Mitigation Measures:**

4.5.1 *All plans, construction documents, and contracts shall contain the following or similar language: Contractors and developers are advised that underground Transite pipelines may be encountered within the Project site. If encountered, these features shall be documented and evaluated by a licensed environmental hazards remediation consultant/contractor. A final report of Transite pipe hazards encountered (if any) and associated remedial actions (if any) shall be submitted to the City. Abatement/disposal of asbestos resulting from removal of Transite pipelines shall be accomplished as detailed at EIR Section 4.5.4, Hazardous Waste Handling.*

**Level of Significance after Mitigation:** Less-Than-Significant.

**Potential Impact:** *Result in a safety hazard for people residing or working in the project area 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, or within the vicinity of an airstrip***.**

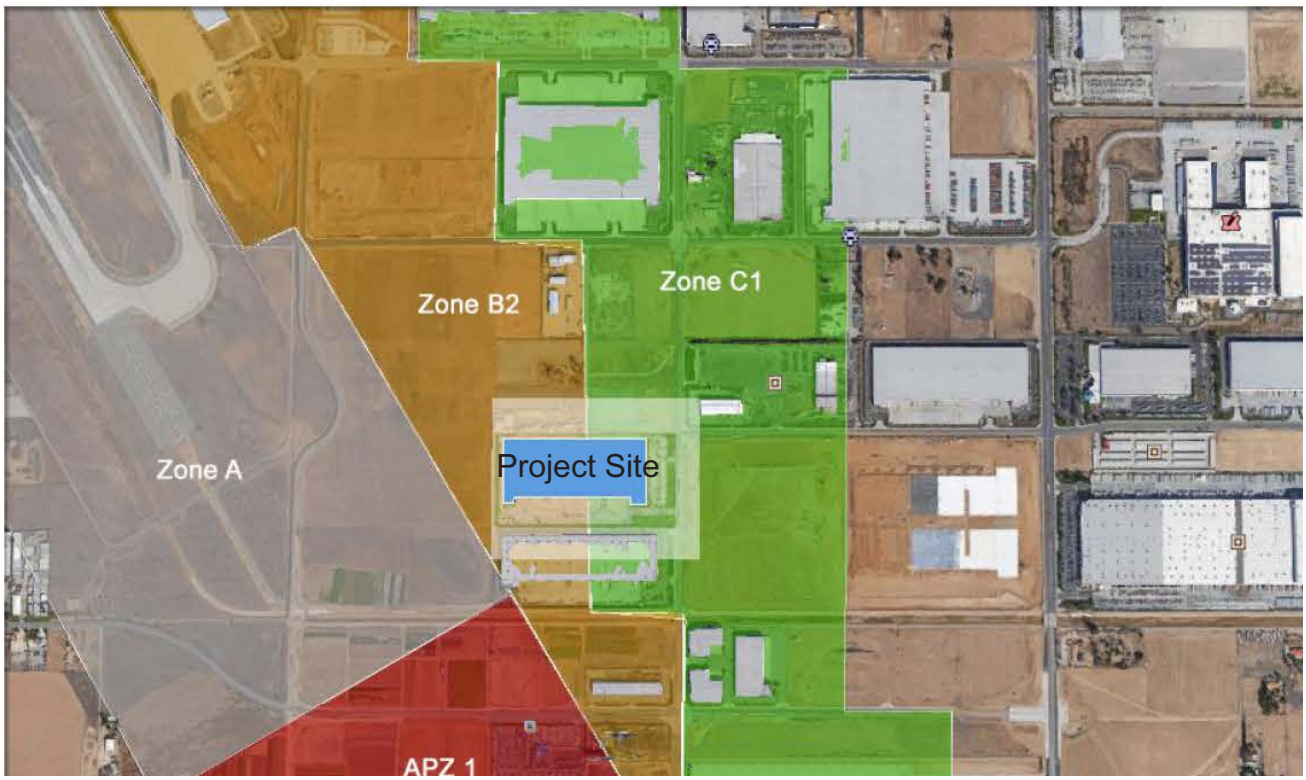
**Impact Analysis:** The Project site lies within the area regulated under the 2014 Riverside County ALUCP for March ARB/IPA (ALUCP) and the 2005 March Air Reserve Base Air Installation Compatibility Use Zone Study (MARB AICUZ, AICUZ). The compatibility zones and associated criteria set forth in the ALUCP provide noise and safety compatibility protection equivalent to or greater than correlating criteria presented in the AICUZ (ALUCP, p.1). The analysis presented herein reflects the more stringent criteria established under the ALUCP.

Under the ALUCP, the Project site is overlain by Compatibility Zones B2 and C1 (please refer to Figure 4.5-1). Basic Compatibility Criteria for these Zones are also presented at Figure 4.5-1. Project consistency with applicable Zone Criteria is summarized below.

**Zone B2**

The westerly portion of the Project site is overlain by Zone B2, as delineated under the ALUCP. Consistent with the Basic Compatibility Criteria for Zone B2, this portion of the Project site would not be developed, nor otherwise accommodate, any of the following: children's schools; daycare centers; libraries; hospitals; congregate care facilities; hotels/ motels; places of assembly; buildings with more than three above ground habitable floors; noise-sensitive outdoor non-residential uses; critical community infrastructure facilities; or hazards to flight.

Consistent with other development conditions articulated for Zone B2, the Project site plan and building design concepts comply with the following criteria: Project structures would be located as far as possible from extended runway centerline(s); sound attenuation would be provided for all Project office uses in Zone B2 ensuring that interior noise levels would not exceed 45 dBA CNEL (please refer also to EIR Section 4.4, *Noise*); above-ground bulk storage of hazardous materials is not proposed or required.




| Zone | Locations | Residential (du/ac)[1] | Average[5] (pple/ac) | Single Acre[6] | Required Open Land | Prohibited Uses[3] | Other Development Conditions[4] |
|---|---|---|---|---|---|---|---|
| B2 | High Noise Zone | No new dwellings allowed [10] | 100 | 250 | No Req't | Children's schools, day care centers, libraries; Hospitals, congregate care facilities, hotels/ motels, places of assembly; Bldgs with >3 aboveground habitable floors; Noise-sensitive outdoor nonresidential uses [5]; Critical community infrastructure facilities [15]; Hazards to flight [8] | Locate structures max. distance from runway; Sound attenuation as necessary to meet interior noise level criteria [18]; Aboveground bulk storage of hazardous materials discouraged [14,20]; Airspace review req'd for objects >35 ft. tall [19]; Electromagnetic radiation notification [9]; Avigation easement dedication and disclosure [4] |
| C1 | Primary Approach/ Departure Zone | ≤3.0 | 100 | 250 | No Req't | Children's schools, day care centers, libraries, Hospitals, congregate care facilities, places of assembly; Noise-sensitive outdoor nonresidential uses [15]; Hazards to flight [8] | Critical community infrastructure facilities discouraged [16,20]; Aboveground bulk storage of hazardous materials discouraged [14,20]; Sound attenuation as necessary to meet interior noise level criteria [18]; Airspace review req'd for objects >70 ft. tall [19]; Electromagnetic radiation notification [9]; Deed notice and disclosure [4] |

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NOT TO SCALE

Source: ALUCP; Applied Planning, Inc.

applied planning inc

Figure 4.5-1
ALUCP Zone Overlay

The Project does not propose designs or uses that would not encroach on restricted air space(s) nor would the Project structures otherwise would adversely affect airfield operations. Federal Aviation Administration (FAA) airspace review has been completed for the Project, and the FAA has issued *No Hazard to Air Navigation Determinations* for all Project facilities; the Riverside County ALUC has reviewed the Project and determined the Project to be consistent with the March Air Reserve Base/Inland Port Airport ALUCP (please refer to EIR Appendix I, Airport Compatibility Documentation). The Project does not propose or require facilities or uses that would generate electromagnetic radiation; an avigation easement would be recorded against all properties within Zone B2.

**Zone C1**

The easterly portion of the Project site is overlain by ALUCP Zone C1. Consistent with the Basic Compatibility Criteria for Zone C1, this portion of the Project site would not be developed with, nor otherwise accommodate any of the following: children's schools; daycare centers; libraries; hospitals; congregate care facilities; places of assembly; noise-sensitive outdoor non-residential uses; or hazards to flight.

Consistent with other development conditions articulated for Zone C1, the Project site plan concept and concept building designs comply with the following criteria: critical community infrastructure facilities are not required or proposed; above-ground bulk storage of hazardous materials is not required or proposed; sound attenuation would be provided for all Project office uses in Zone B2 ensuring that interior noise levels would not exceed 45 dBA CNEL (please refer also to EIR Section 4.4, *Noise*). The Project does not propose or require facilities or uses that would generate electromagnetic radiation; deed notice and disclosure would be provided for all properties within Zone C1. The Project does not propose designs or uses that would not encroach on restricted air space(s) nor would the Project structures otherwise would adversely affect airfield operations. Federal Aviation Administration (FAA) airspace review has been completed for the Project, and the FAA has issued *No Hazard to Air Navigation Determinations* for all Project facilities; the Riverside County ALUC has reviewed the Project and determined the Project to be consistent with the March Air Reserve Base/Inland Port Airport

ALUCP (please refer to EIR Appendix I, Airport Compatibility Documentation). The Project does not propose or require facilities or uses that would generate electromagnetic radiation; an avigation easement would be recorded against all properties within Zone B2.

**Other Considerations**

As noted at EIR Section 3.0, *Project Description*, the Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power (approximately 160,350 kWh/year) to serve all Project office areas (*Project Description*, p. 3-19). Given the Project's proximity to March ARB/IPA, there is the potential for the Project PV solar panel array to cause reflective glare that could adversely affect March ARB/IPA operations. The Federal Aviation Administration recommends analysis of these potential glare impacts employing the Sandia National Laboratories Solar Glare Hazard Analysis Tool (SGHAT). The SGHAT analysis of the concept Project PV panel array design (please refer to EIR Appendix I, Airport Compatibility Documentation) indicates that, if implemented, the Project PV solar panels would not result in or cause significant glare impacts that would adversely affect operations of March ARB/IPA.

Based on the preceding, the potential for the Project to: result in or cause a safety hazard for people residing or working in the Project area due to airport/airstrip operations; or to adversely affect airport/airstrip operations is considered less-than-significant.

**Level of Significance:** Less-Than-Significant.

# 4.6 HYDROLOGY AND WATER QUALITY

# 4.6 HYDROLOGY AND WATER QUALITY

***Abstract***

*This Section of the EIR addresses potential impacts of the Project related to hydrology and water quality. The analysis presented herein focuses on the potential for the Project to:*

- *Violate any water quality standards or waste discharge requirements;*
- *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 that 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 that would result in flooding on- or off-site;*
- *Create or contribute runoff water that would exceed the capacity of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- *Otherwise substantially degrade water quality.*

*As supported by the analysis presented in this Section, the above-noted potential hydrology/water quality impacts are determined to be less-than-significant.*

*Additionally, as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics were previously determined to have no impact or impacts would be less-than-significant, and are not further substantively discussed here:*

- *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 the 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);*

- *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;*

- *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; or*

- *Inundation by seiche, tsunami, or mudflow.*

*Please also refer to Initial Study Checklist Item X.* Hydrology and Water Quality.

### 4.6.1 INTRODUCTION

This Section evaluates potential impacts of the Project on hydrology and water quality. Information contained in this Section has been summarized or excerpted from: *Preliminary Hydrology Report for Moreno Valley Vogel Industrial* [Indian Street Commerce Center Project] (Huitt-Zollars, Inc.) Revised July 7, 2016 (Project Drainage Study); and Project Specific Water Quality Management Plan for *Moreno Valley Vogel Industrial* [Indian Street Commerce Center Project] (Huitt-Zollars, Inc.) Revised March 29, 2016 (Project WQMP). The Project Drainage Study and Project WQMP are presented at EIR Appendix G.

Additional source and background information was obtained from the Indian Street Commerce Center Site Plan Concept; the City of Moreno Valley General Plan and General Plan EIR; the Santa Ana Regional Water Quality Control Board (SARWQCB); and the California State Water Resources Control Board (SWRCB).

### 4.6.2 SETTING

Please refer to EIR Section 3.0, *Project Description*, for a general discussion of the Project's regional and vicinity setting. The hydrologic setting described below establishes the baseline against which the Project's potential hydrology/water quality impacts were evaluated.

#### 4.6.2.1 Regional Drainage Systems

The majority of the City, including the Project site, drains to the San Jacinto River. The San Jacinto River drains approximately 540 square miles to the Railroad Canyon Reservoir (Canyon Lake) which discharges to Lake Elsinore, which then discharges to a tributary of the Santa Ana River.

The Riverside County Flood Control and Water Conservation District (RCFCWCD) is the agency responsible for the regional flood control system. The RCFCWCD has prepared three Master Drainage Plans (Sunnymead Area, West End, and Moreno), each of which covers a different portion of the City. Three major storm drains/channels (Sunnymead, Kitching, and Perris Valley) serve the City. These facilities generally trend north to south. These channels drain to the San Jacinto River, Canyon Lake and ultimately to Lake Elsinore.

#### 4.6.2.2 Surface Water

Surface water quality in the planning area is regulated by the Santa Ana Regional Water Quality Control Board (SARWQCB) Region 8. The SARWQCB Basin Plan (Basin Plan) establishes water quality standards for all ground and surface waters within the Region. The Santa Ana Region includes the upper and lower Santa Ana River watersheds, the San Jacinto River watershed, and several other small drainage areas.

#### 4.6.2.3 Groundwater

The majority of the City lies in the Perris North Groundwater Basin, and the easternmost portions of the City lie within the San Jacinto Groundwater Basin. Depth to groundwater under the City on averages ranges from approximately 100 feet to 150 feet below ground

surface (BGS).[1] The Project Geotechnical Investigation indicates that depth to groundwater at the Project site is greater than 50 feet BGS.[2]

#### 4.6.2.4 Stormwater Management and Flood Control

Regional flood control planning and facilities serving the City and the Project site are under the jurisdiction of the Riverside County Flood Control and Water Conservation District (RCFCWCD). The City of Moreno Valley has jurisdictional authority and responsibility for implementation of local drainage facilities. Road curb and gutter and roadside drainage swales supplement and complement storm drains and other components of flood control / stormwater management system.

Portions of the City are located within mapped 100-year flood hazard areas. As means of alleviating these flood hazards and improve the area-wide stormwater management system, RCFCWCD has prepared five "Master Drainage Plans" (MDPs) encompassing the City and surrounding areas. The MDPs comprise a system of open channels and underground storm drains, which in conjunction with roadway curb/gutter systems and drainage swales, allow for the safe and efficient passage of stormwaters through urbanized areas of the City. The Project site is located within the *Perris Valley MDP*. *Perris Valley MDP* Lateral B-3 exists within Indian Street, the Project site's easterly boundary. General Plan Safety Element, Figure 6-4, *Flood Hazards* indicates that the Project site is not located within a 100-year flood hazard zone.

#### 4.6.2.5 Project Site Hydrology

Project site elevations range from approximately 1,471 feet above mean sea level (MSL) in the northwesterly portions of the Project site, to approximately 1,465 feet in the southeasterly area of the site – yielding a gradient of less than less than 1.0 percent, trending from the northwest to southeast. Runoff from the undeveloped Project site flows to a private headwall structure in the southeast corner of the site and then drains to the

1 General Plan EIR, p. 5.7-6.

2 *Geotechnical Investigation Proposed Warehouse Development Southwest Corner of Indian Avenue and Grove View Road Moreno Valley*, California (NorCal Engineering) July 21, 2014, p. 4.

existing public storm drain located in abutting Indian Street. Stormwaters are then conveyed by the Indian Street storm drain to the Perris Valley Storm Drain Channel, ultimately discharging to the Santa Ana River.

### 4.6.3 REGULATORY SETTING

Applicable federal, state, and local policies and regulations which act to reduce potential hydrologic impacts and/or act to protect and preserve water quality are summarized below.

#### 4.6.3.1 Federal Water Pollution Control Act, Federal Clean Water Act (CWA)

The principal law governing pollution of the nation's surface waters is the Federal Water Pollution Control Act, or Clean Water Act (CWA), which was substantially revised by amendments in 1972 that created the bulk of the current statutory scheme. The CWA requires states to adopt water quality standards. To achieve its objectives, the CWA is based on the concept that all discharges into the nation's waters are unlawful, unless specifically authorized by a permit. Moreover, the CWA states that discharge of pollutants into waters of the United States from any point source is unlawful unless the discharge complies with the National Pollution Discharge Elimination System (NPDES) permit.

The NPDES is a national program under Section 402 of the CWA. The CWA establishes the framework for regulating municipal and industrial (point sources) stormwater discharges under the NPDES program. In California, the NPDES program is administered through the nine Regional Water Quality Control Boards, including the Santa Ana Regional Water Quality Control Board (SARWQCB). Locally, the SARWQCB is responsible for determining the City of Moreno Valley's compliance with the water quality requirements of the CWA.

Non-point pollution sources are also regulated by the SARWQCB through the General Construction Activity Storm Water NPDES permits, which are issued for stormwater discharges. Construction activities that are subject to this general permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation that result in soil disturbances. Storm water pollution prevention plans (SWPPPs) are required for the

issuance of a construction NPDES permit and typically include both structural and non-structural Best Management Practices (BMPs) to reduce water quality impacts.

The Project would implement and comply with applicable provisions of the Federal Water Pollution Control Act, and Federal Clean Water Act.

#### 4.6.3.2 State of California and Riverside County

At the federal level, the CWA allows the Environmental Protection Agency (EPA) to delegate its NPDES system permitting authority to states with an approved regulatory program. The CWA authorizes discharge of pollutants into waters of the State by issuance of NPDES permits. Moreno Valley, Riverside County and 23 other cities and agencies obtained a joint NPDES permit from the SARWQCB. As a co-permittee, the City has the following authority and responsibilities:

- Conduct storm drain system inspections;
- Conduct and coordinate with the County any surveys and characterizations needed to identify the pollutant sources and drainage areas;
- Implement management programs, monitoring programs and implementation plans;
- Enact legislation and ordinances as necessary to establish legal authority;
- Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans; and
- Respond to emergency situations (e.g., accidental spills, leaks, illegal discharges and illicit connections) to prevent or reduce the discharge of pollutants to storm drain systems and streams.

Regulated entities acting as co-permittees must obtain coverage under an NPDES stormwater permit and implement construction SWPPPs and operational Water Quality Management Plans (WQMPs), both using BMPs that effectively reduce or prevent the discharge of pollutants into receiving waters. The NPDES permit imposes various requirements on dischargers. In general, provided the discharger complies with such requirements, the discharger is deemed to be in compliance with the CWA and the Permit.

Most of the requirements imposed by the Permit consist of BMPs, which are construction and operational discharge control practices and mechanisms that have been deemed to achieve compliance with the CWA requirements. Additional details regarding the required SWPPP and WQMP are provided below.

**Construction Storm Water Pollution Prevention Plan (SWPPP) Required**

In December 1999, the State Water Resources Control Board (SWRCB) issued an NPDES General Permit for the discharge of stormwater associated with construction activities. Federal regulations promulgated by USEPA (40 CFR Parts, 9, 122, 123, and 124) expanded the NPDES stormwater program to include stormwater discharges from municipal separate storm sewer systems (MS4s) and construction sites that were smaller than those previously included in the program. Accordingly, SWRCB issued a NPDES General Permit (Permit) for the discharge of stormwater associated with construction activities. The current Permit and its amendments, regulate stormwater discharges associated with construction activities. The Permit is applicable to all of California, which includes the City of Moreno Valley and the Project site.

Requirements of this Permit include a mandate that all dischargers shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Section A of the NPDES General Permit. Pursuant to NPDES General Permit Section A SWPPP requirements:

- All pollutant sources shall be identified;
- BMPs shall be implemented in order to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction; and
- A maintenance schedule for BMPs installed during construction shall be implemented. BMPs shall be described for control of discharges from waste handling and disposal areas and methods of on-site storage and disposal of construction materials and construction waste.

An effective combination of erosion and sediment control on all disturbed areas during the rainy season must be implemented. The SWPPP shall include a description of the erosion control practices. The SWPPP shall include descriptions of the BMPs to reduce pollutants in stormwater discharges subsequent to construction activities. The beneficial uses of the receiving waters are protected through implementation of these BMPs.

BMP stormwater pollutant source controls are articulated in the NPDES Permit, and include such measures as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, education programs, and maintenance practices. The NPDES permitting program also includes measures to reduce the release of pollutants such as sediment, construction materials, or accidental spillage of polluting materials during construction. Consistent with provisions of the NPDES Permit, the City of Moreno Valley requires implementation of development-specific SWPPPs and incorporation of BMPs that reduce, to the extent practicable, stormwater and urban runoff pollutant discharges to the waters of Southern California.

**Water Quality Management Plan (WQMP)**

The Project is also required to develop and implement a WQMP addressing potential operational stormwater pollutant discharges over the life of the Project. As with the Project SWPPP, the Project's mandated WQMP would act to control potential discharge of pollutants, and avoid discharge of sediments into streets, stormwater channels, or waterways. A copy of the draft WQMP prepared for the Project site has been included at EIR Appendix G.

Typical SWPPP and WQMP elements include, but would not be limited to:

- Introduction and Purpose
- Compliance Requirements and Certifications
- Facility Information/Pollution Prevention Team Members
- Site Map
- List of Significant Materials
- Potential Stormwater Pollutants and Sources
- Best Management Practices

- Summary of Pollutants, Sources, and BMPs
- Annual Comprehensive Site Evaluation
- Definitions
- State Notice of Intent (NOI) Form and Instructions

#### 4.6.3.3 Porter-Cologne Water Quality Act

Section 303 of the federal Clean Water Act and the State's Porter-Cologne Water Quality Act establish applicable water quality objectives for ground and surface waters in the State. In general, protection and maintenance of surface water quality is the combined responsibility of the applicable Regional Water Quality Control Board (RWQCB), water supply and wastewater management agencies (Inland Empire Utilities Agency [IEUA]), City (City of Moreno Valley) and County (Riverside County) governments.

The RWQCB has purview over point and non-point sources of pollution. Point source water pollutants consist of controlled wastewater releases that are commonly generated by activities that use water to collect pollutants and transport them from the processing facility. When such wastewater discharges are proposed, the applicant must obtain a set of Waste Discharge Requirements from the RWQCB which serve to control water pollution to a non-significant level from such point sources.

Non-point sources of water pollution consist of surface runoff from a site or area during or following a storm where the source of pollution cannot be traced to a specific location. Typical non-point water pollution sources consist of agricultural fields with sediment and fertilizers, construction sites with sediment and debris, and roads with oil, tire particles, and debris common to roads. The Project will implement and comply with applicable Porter-Cologne water quality protection policies and mandates.

#### 4.6.3.4 Santa Ana Watershed Project Authority, Water Resources Plan

The Santa Ana Watershed Project Authority (SAWPA) was formed to promote a mutually beneficial way of protecting water quality in the Santa Ana Watershed. Orange County Water District, Inland Empire Utilities Agencies, San Bernardino Valley Municipal Water District, Western Municipal Water District, and Eastern Municipal Water District represent

all the major areas of water use in the Santa Ana Watershed. The Eastern Municipal Water District (EMWD) serves the City of Moreno Valley. SAWPA operates a desalter that removes contaminants from groundwater to make the water suitable for use.

#### 4.6.3.5 Moreno Valley Municipal Code

All required Project storm drain facilities will be funded, designed, implemented, and maintained consistent with City of Moreno Valley policies and requirements as outlined in the City Municipal Code. General requirements are outlined below. Please refer also to the City of Moreno Valley Municipal Code available at the following website: http://qcode.us/codes/morenovalley/. More specifically, Municipal Code Title 8, *Buildings and Construction*; Chapter 8.10, *Stormwater/Urban Runoff Management and Discharge Controls*, identifies the following requirements for new development.

> 8.10.050 Reduction of pollutants in stormwater.
> C. New Development and Redevelopment. New development or redevelopment projects shall control stormwater runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water. The city engineer shall identify the BMPs [Best Management Practices] that may be implemented to prevent such deterioration and shall identify the manner of implementation. The BMPs may, among other things, require new developments or redevelopments to do any of the following:
>
> 1. Increase permeable areas by leaving highly porous soil and low lying areas undisturbed; by incorporating landscaping, green roofs and open space into the project design; by using porous materials for or near driveways, drive aisles, parking stalls and low volume roads and walkways; and by incorporating detention ponds and infiltration pits into the project design.
> 2. Direct runoff to permeable areas by orienting it away from impermeable areas to swales, berms, green strip filters, gravel beds, rain gardens, pervious pavement or other approved green infrastructure and French drains; by installing rain-gutters oriented towards permeable areas; by modifying the grade of the property to divert flow to permeable areas and minimize the

amount of stormwater runoff leaving the property; and by designing curbs, berms or other structures such that they do not isolate permeable or landscaped areas.

3. Maximize stormwater storage for reuse by using retention structures, subsurface areas, cisterns, or other structures to store stormwater runoff for reuse or slow release.

4. Rain gardens may be proposed in-lieu of a water quality basin when applicable and approved by the city engineer.

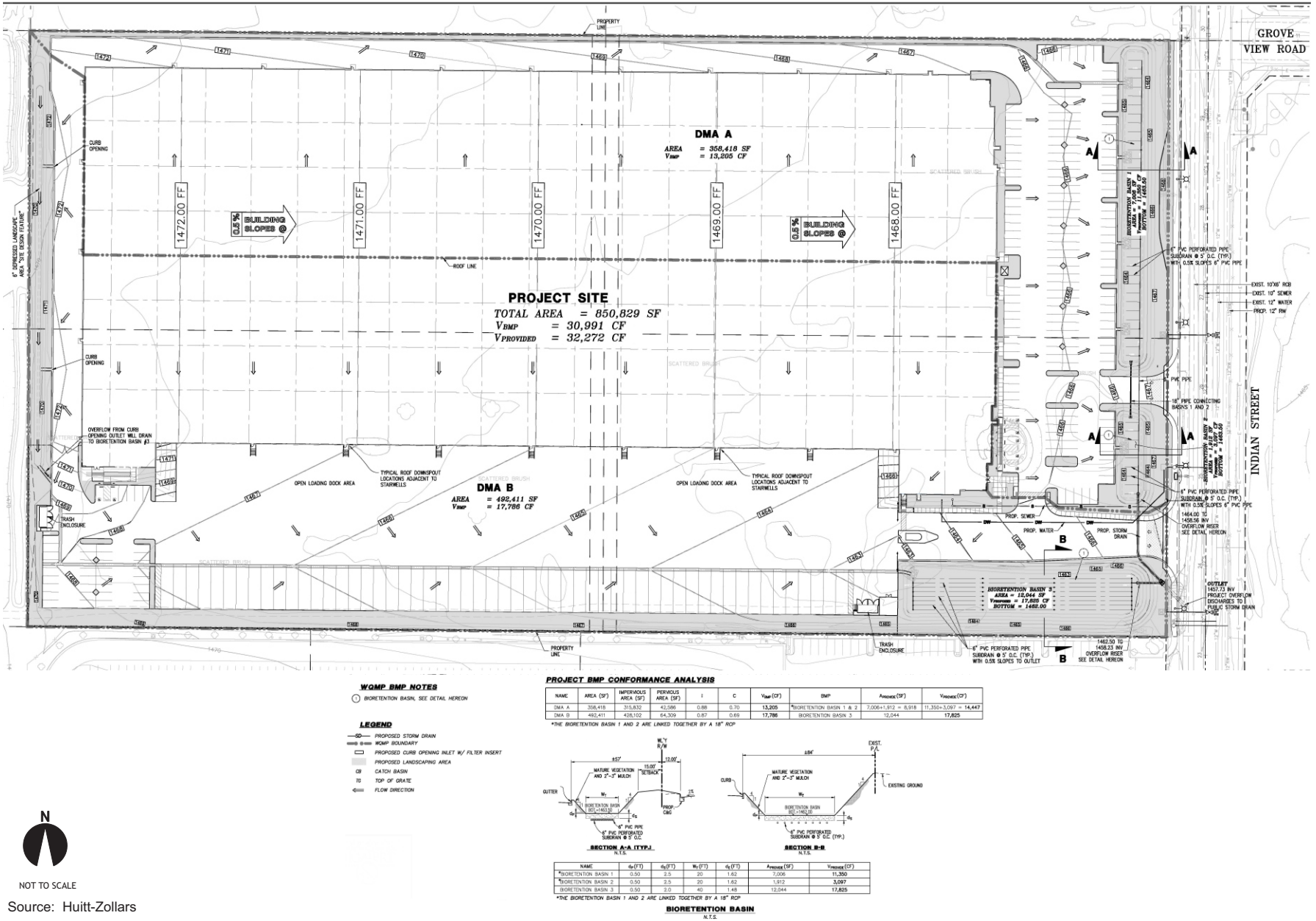
### 4.6.4 PROJECT DRAINAGE IMPROVEMENTS

#### 4.6.4.1 Overview

At present, stormwater runoff from the majority of the Project site sheet flows across the site toward Indian Street. Under post-development conditions, the Project stormwater management system would convey and discharge stormwater runoff in a manner comparable to pre-development discharge patterns.

#### 4.6.4.2 Project Stormwater Management System Concept

The Project Stormwater Management System Concept is presented at Figure 4.6-1. Under the illustrated Concept, runoff from the northerly and easterly areas of the Project site would sheet flow easterly and discharge through curb openings to onsite bio-retention basins No.1 and No. 2 paralleling adjacent Indian Street. These basins are connected by an onsite 18-inch storm drainage pipe that would direct stormwaters southerly/southeasterly, connecting ultimately to an onsite 30 to 36 inch storm drain. This storm drain then connects to the existing Master Drainage Plan (MDP) 6 foot high by 10 foot wide reinforced concrete box storm drain located in Indian Street. This MPD storm drain has been designed and constructed pursuant to the *Perris Valley MDP*, and in anticipation of stormwater discharges resulting from areawide development such as that proposed by the Project. Because the Project is consistent with and is anticipated under the *Perris Valley MDP*, the Project would not result in exceedance of available storm drain capacities or flooding due to the introduction of substantial, unanticipated stormwater flows. The existing Indian Street storm drain has adequate capacity to accept and convey 100-year Project stormwater flows to the Perris Valley Storm Drain Channel.




**WQMP BMP NOTES**

1. BIORETENTION BASIN, SEE DETAIL HEREON

**LEGEND**

- SD — PROPOSED STORM DRAIN
- WQMP BOUNDARY
- PROPOSED CURB OPENING INLET W/ FILTER INSERT
- PROPOSED LANDSCAPING AREA
- CB CATCH BASIN
- TG TOP OF GRATE
- FLOW DIRECTION

**PROJECT BMP CONFORMANCE ANALYSIS**

| NAME | AREA (SF) | IMPERVIOUS AREA (SF) | PERVIOUS AREA (SF) | I | C | $V_{BMP}$ (CF) | BMP | $A_{PROVIDED}$ (SF) | $V_{PROVIDED}$ (CF) |
|---|---|---|---|---|---|---|---|---|---|
| DMA A | 358,418 | 315,832 | 42,586 | 0.88 | 0.70 | 13,205 | *BIORETENTION BASIN 1 & 2 | 7,006+1,912 = 8,918 | 11,350+3,097 = 14,447 |
| DMA B | 492,411 | 428,102 | 64,309 | 0.87 | 0.69 | 17,786 | BIORETENTION BASIN 3 | 12,044 | 17,825 |

*THE BIORETENTION BASIN 1 AND 2 ARE LINKED TOGETHER BY A 18" RCP




SECTION A-A (TYP.) N.T.S.

SECTION B-B N.T.S.

| NAME | $d_B$ (FT) | $d_S$ (FT) | $W_T$ (FT) | $d_T$ (FT) | $A_{PROVIDED}$ (SF) | $V_{PROVIDED}$ (CF) |
|---|---|---|---|---|---|---|
| *BIORETENTION BASIN 1 | 0.50 | 2.5 | 20 | 1.62 | 7,006 | 11,350 |
| *BIORETENTION BASIN 2 | 0.50 | 2.5 | 20 | 1.62 | 1,912 | 3,097 |
| BIORETENTION BASIN 3 | 0.50 | 2.0 | 40 | 1.48 | 12,044 | 17,825 |

*THE BIORETENTION BASIN 1 AND 2 ARE LINKED TOGETHER BY A 18" RCP

**BIORETENTION BASIN** N.T.S.

N

NOT TO SCALE

Source: Huitt-Zollars

applied planning inc

Figure 4.6-1
Project Stormwater Management System Concept

Runoff from the westerly portions of the Project site would sheet flow to a north - south drainage swale and would then be directed southerly to an onsite east - west cross gutter located along the site's southerly boundary. Runoff from the southerly portion of the site would sheet flow directly to this cross gutter. All stormwaters from this cross gutter would be conveyed to on-site bio-retention basin No. 3 located in the southeast corner of the Project site. Discharges from basin No. 3 would be conveyed via an onsite storm drain connecting easterly to the proposed onsite 30 to 36 inch storm drain at the southeasterly corner of the Project site.

The Project bio-retention basins would serve dual functions as stormwater quality treatment facilities and as flood control features. The basins have been designed consistent with the Riverside County Low Impact Development Design BMP Handbook and the City's Water Quality Basin Civil Design Guidelines. More specifically, the Project bio-retention basins have been sized to capture and treat the required volume of stormwater based on current Riverside County and City of Moreno Valley water quality management plan guidance materials. The Project bio-retention basins would act to attenuate stormwater discharge volumes and rates of runoff during minor storm events comparable to pre-development conditions. Preliminary WQMP estimates establish the required stormwater capture volume at approximately 31,257 cubic feet; the basins have been designed to capture 33,274 cubic feet of stormwater. Any stormwater discharge volumes exceeding bio retention capacities would be conveyed via the on-site storm drain system to the existing Indian Street storm drain box structure.

The Project bio-retention basins would collect and treat stormwater runoff via filter media placed within the bottom of each basin. The design allows for the collected stormwater to permeate through the media bottom and dissipate within a maximum of 48 hours after the end of each storm event. The basins shall be maintained regularly to ensure that there is no standing water beyond 48 hours after a rainfall event. To ensure compatibility with the March Air Reserve Base and Inland Airport operations, the proposed landscaping and vegetation in and around the retention basins and the project site will be selected in full compliance with the MARB and Inland Airport design standards and operational guidelines.

### 4.6.5 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines*, hydrology/water quality impacts would be considered potentially significant if 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 the 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 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 the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

- Otherwise substantially degrade water quality;

- 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;

- 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; or

- Cause or result in inundation by seiche, tsunami, or mudflow.

## 4.6.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.6.6.1 Introduction

The following discussions focus on topical areas and issues where it has been determined pursuant to the EIR Initial Study/NOP processes, that the Project may result in or cause potentially significant hydrology/water quality impacts. Of the CEQA threshold considerations identified above at Section 4.6.5, and as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics are determined to have no impact or impacts would be less-than-significant, and are not further substantively discussed here:

- 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 the 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);

- 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;

- 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; or

- Inundation by seiche, tsunami, or mudflow.

All other CEQA topics concerning the Project's potential hydrology/water quality impacts are discussed below. Please also refer to Initial Study Checklist Item X. *Hydrology and Water Quality*.

#### 4.6.6.2 Impact Statements

**Potential Impact:** *Would the Project violate any water quality standards or waste discharge requirements?*

**Impact Analysis:**

**The Project is Required to Comply with Stormwater Discharge Standards; Project SWPPP, WQMP and Stormwater Management System Address Potential Stormwater Pollutant Discharge Impacts**

The Project is mandated to acquire all necessary permits, and comply with City of Moreno Valley and RWQCB requirements for the Santa Ana Region, acting to preclude, or substantively reduce the potential of the Project to violate any water quality standards or waste discharge requirements. As discussed below, and consistent with established City building code regulations, a site-specific drainage study, SWPPP, and WQMP reflecting precise pad locations, proposed drainage structures, detention facilities, water quality management features, BMPs, etc., would be required prior to the issuance of building permits. Project compliance in these regards acts to preclude stormwater discharges that would potentially violate water quality standards.

- The Project would be developed and operated in compliance with City/SARWQCB regulations and water quality standards. More specifically, the Project would provide connection to, and interface with, existing and proposed drainage systems

in the least invasive manner possible. Design, configuration, and locations of proposed drainage system improvements will be reviewed and approved by the City prior to, or concurrent with, application for grading permits.

- The Project's bio-retention basins would provide for elimination/reduction of pollutant discharges, including capture and treatment of dry weather and first flush runoff in a manner consistent with City and SARWQCB policies and requirements. Other permeable areas, such as landscape planters, fingers, and perimeter planters act to further enhance on-site capture and absorption of storm flows.

- All stormwater discharges would be required to comply with performance standards established under the RCFCWCD NPDES permit. Consistent with SARWQCB, RCFCWCD and City requirements, discharge of waste materials to drainage areas, streambeds, or streams would be prohibited. Appropriate BMPs will be employed throughout construction processes, thereby controlling potential discharge of pollutants, preventing sewage spills, and avoiding discharge of sediments into streets, stormwater channels, or waterways. Selected BMPs would act to:

    - Control and prevent potential contaminant spills;

    - Prevent runoff from off-site areas from flow across the construction site(s);

    - Slow runoff rates across the site;

    - Provide soils stabilization; and

    - Remove sediment from on-site runoff before it leaves the site.

- Similarly, the Project's mandated WQMP would act to control potential discharge of pollutants, prevent sewage spills, and avoid discharge of sediments into streets, stormwater channels, or waterways due to operational activities over the life of the Project. All required drainage improvements would be designed and implemented

consistent with City, SARWQCB, and RCFCWCD design and performance standards. Please refer also to the Project WQMP provided at EIR Appendix G.

**The Project Does Not Propose or Require Elements that Would Violate Waste Discharge Requirements**

The Project would connect to the existing sanitary sewer system serving the Project area, and does not propose or require septic systems or other alternative treatment of wastewater that would potentially result in violation of waste discharge requirements. Further, the Project's plans for connection to existing sanitary sewer infrastructure facilities are subject to review and approval by the City and EMWD. The Project Applicant would also be required to apply for service and pay a mandated Connection Fee and ongoing Service Fees. Fees paid by the Project would be applied toward maintenance and expansion of City and EMWD wastewater conveyance and treatment facilities. Wastewater generated by the Project is typical of commercial generators and wastewater resulting from the Project uses would not require treatment beyond that provided by existing EMWD facilities. Project compliance in these regards would act to preclude violation of waste discharge requirements.

Based on the preceding discussion, the potential for the Project to violate any waste discharge requirements is determined to be less-than-significant.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** *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 or substantial erosion or siltation on- or off-site; or create or contribute runoff water which would exceed the capacity of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.*

**Impact Analysis:**

**Project Stormwater Management System Addresses Potential Hydrologic Impacts**

The Project incorporates all necessary drainage and stormwater management systems, and would comply with all stormwater system design, construction, and operational requirements mandated under the City Municipal Code and pursuant to policies and regulations established by other agencies including: RCFCWCD, SARWQCB, and SWRCB. In combination, the Project's stormwater management components, and compliance with regulatory requirements would act to preclude potentially adverse drainage and stormwater runoff impacts.

At present, stormwater runoff from the majority of the Project site sheet flows easterly/southeasterly across the site to Indian Street. Under post-development conditions, the Project stormwater management system would convey and discharge stormwater runoff in a manner comparable to pre-development discharge patterns.

Under developed site conditions, stormwater runoff would sheet flow to on-site drainage swales and cross gutters and would be directed easterly/southeasterly to bio-retention basins located along the site's easterly and southerly boundaries. The bio-retention basins have been designed consistent with applicable WQMP requirements for the Project. More specifically, pursuant to the September 2011 RCFCWCD *Design Handbook for Low Impact Development (LID) Best Management Practices*, design specifications and performance standards, the total required Volume-based BMP ($V_{BMP}$) retention capacity for the Project is approximately 31,257 cubic feet. The Project bio-retention basins are designed to provide an estimated 33,274 cubic feet of retention capacity (Project Drainage Study, p. 1) and therefore comply with RCFCWCD LID specifications and requirements. Maximum drawdown times for these basins would not exceed 48 hours. Please refer also to the Project WQMP presented at EIR Appendix G.

The Project bio-retention basins would then discharge via an underground storm drain system connecting to the existing MDP storm drain located in adjacent Indian Street. This

storm drain has been designed and constructed in anticipation of stormwater discharges that would result from development such as that proposed by the Project.

All Project stormwater management system improvements would be constructed by the Project Applicant, or would otherwise be assured (via Project Conditions of Approval or other means established by the Lead Agency) to be in place and operational prior to issuance of the first Certificate of Occupancy for the Project.

The Project stormwater management system would be developed and operated in compliance with City, RCFCWCD, SARWQCB, and SWRCB polices and regulations and water quality performance standards. The Project would provide connection to existing and proposed drainage systems in the least invasive manner possible. Design, configuration, and locations of proposed drainage system improvements would be reviewed and approved by the City and RCFCWCD prior to, or concurrent with, application for grading permits.

Based on the preceding, implementation of the Project stormwater management system would maintain existing drainage patterns and would not increase runoff in a manner which would exceed the capacity of the existing or planned stormwater drainage systems.

**Project SWPPP and Compliance with Regulatory Requirements Address Potential Construction-Source Water Quality Impacts**

During site preparation activities prior to construction, existing groundcover would be removed from the site, exposing the Project site to increased wind and water erosion potentials. Further, construction site stormwater runoff may carry increased loads of sediment, heavy metals and petroleum hydrocarbons (from construction equipment operations) which could degrade water quality. In accordance with NPDES and SWPPP requirements, the Project Applicant would be required to prepare a construction activities erosion control plan to alleviate potential sedimentation and stormwater discharge contamination impacts that could result from Project construction activities.

The Project Applicant would also be responsible for compliance with the General Construction NPDES permit from the SARWQCB by filing a Notice of Intent to Commence Construction Activities. Under the General Construction Permit, discharge of materials other than stormwaters is prohibited. The Project Applicant would be required to prepare, retain at the construction site, and implement a SWPPP which identifies the sources of sediments and other pollutants that affect the quality of stormwater discharge, and implement practices to reduce sediment and other pollutants to stormwater discharge. The SWPPP would identify both construction and post-construction BMPs to reduce sediments and other pollutants.

Implementation of the Project SWPPP and compliance with applicable NPDES and SARWQCB requirements would ensure that potential construction-source water quality impacts of the Project are reduced below the level of significance. Mitigation Measure 4.6.1 (presented subsequently) is incorporated to ensure timely monitored compliance with Project SWPPP, NPDES, and SARWQCB requirements.

**Project WQMP and Compliance with Regulatory Requirements Address Potential Operational-Source Water Quality Impacts**

Over the life of the Project, contaminants such as oil, fuel and grease that are spilled or left behind by vehicular traffic, would collect and concentrate on paved surfaces. During storm events, these contaminants are washed into the storm drain system and may potentially degrade receiving water quality. Stormwater runoff from paved surfaces within the developed Project area could carry a variety of urban wastes, including greases and oils and small amounts of metals which are common by-products of vehicular travel. In addition, storm runoff would likely contain residual amounts of fertilizers and plant additives washed off from landscaped areas within the Project site.

Recognizing the potential hazards of such urban runoff, the EPA has issued regulations which require municipalities to participate in the NPDES. As part of this program, the SARWQCB has issued an NPDES permit for urban runoff to the RCFCWCD, and the City of Moreno Valley has been established as a co-permittee. Compliance with the provisions

specified in the NPDES permit ensures proper management and disposal of urban runoff from the Project.

The Project Applicant would be responsible for obtaining a General Permit for stormwater discharge from the SARWQCB, in accordance with the Notice of Intent instructions. Under the General Permit, discharge of materials other than stormwater is prohibited. In support of the above requirements, the Project Applicant would also be required to develop and implement a Project-specific WQMP addressing all post-construction pollutant discharges. A draft of the Project WQMP is included at EIR Appendix G. As required under Mitigation Measure 4.6.2, below, the Project would be required to submit a final WQMP prior to the issuance of grading permits.

Based on compliance with applicable NPDES requirements, and implementation of the Project WQMP to include any additional requirements stipulated by the City and/or SARWQCB the potential for the Project to result in a potential for discharge of stormwater pollutants from post-construction activities; otherwise result in any other potential impacts to stormwater runoff from post-construction activities; or otherwise substantially degrade water quality would be reduced below the level of significance. Mitigation Measure 4.6.2 (presented subsequently) is incorporated to ensure timely monitored compliance with Project WQMP, NPDES, and SARWQCB requirements.

**Level of Significance: Less-Than-Significant.** As supported by the preceding discussions, the Project would implement stormwater management system improvements and comply with all regulatory requirements acting to reduce potential impacts related to or affecting the rate or amount of surface runoff; erosion or siltation on- or off-site; capacity exceedance of existing or planned stormwater drainage systems; introduction of substantial additional sources of polluted runoff; or otherwise substantially degrade water quality is determined to be less-than-significant. Mitigation Measures 4.6.1 and 4.6.2 (below) are incorporated to ensure timely monitored compliance with Project SWPPP, WQMP, NPDES, and SARWQCB requirements.

**Mitigation Measures:**

*4.6.1 Prior to grading plan approval and the issuance of a grading permit by the City of Moreno Valley, the Project Applicant shall provide evidence to the City that a notice of intent (NOI) has been filed with the Regional Water Quality Control Board for coverage under the State NPDES General Construction Permit for discharge of stormwater associated with construction activities. The SWPPP shall identify Best Management Practices (BMPs) intended to prevent the release of sediment and pollutants into downstream waterways. Examples of construction BMPs to be incorporated in the Project include, but are not limited to, the following:*

- *Silt Fences;*
- *Check Dams;*
- *Gravel Bag Berms;*
- *Street Sweeping and Vacuuming;*
- *Sand Bag Barriers;*
- *Storm Drain Inlet Protection;*
- *Wind Erosion Control;*
- *Stabilized Construction Entrance/Exit; and*
- *Entrance/Outlet Tire Wash.*

*Post-construction BMPs to reduce sediments and other pollutants include, but are not limited to, the following:*

- *Providing permanent cover to stabilize the disturbed surfaces after construction has been completed;*
- *Incorporating structural BMPs (e.g., grease traps, debris, screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the Project's design to provide detention and filtering of contaminants in urban runoff prior to discharge to stormwater facilities;*
- *Precluding non-stormwater discharges to the stormwater system; and*
- *Performing monitoring of discharges to the stormwater system.*

4.6.2 *Prior to the issuance of grading permits, the Project Applicant shall submit a final Water Quality Management Plan (WQMP) to the City of Moreno Valley. The WQMP shall identify Best Management Practices (BMPs) addressing all post-construction pollutant discharges. Examples of BMPs included in the Project's Preliminary WQMP include the following:*

*Source Control/Non-Structural BMPs*

- *Education of property owners, operators, tenants, occupants, or employees;*
- *Street Sweeping of Private Streets and Parking Lots;*
- *Drainage facility inspection and maintenance;*
- *Roof Runoff Controls;*
- *Efficient Irrigation;*
- *Protection of Slopes and Channels;*
- *Storm Drain stenciling and signage;*
- *Trash Storage Areas and Litter Control;*
- *Irrigation system and landscape maintenance; and*
- *Loading dock drainage controls.*

*Site Design/Structural BMPs*

- *Maximize permeable areas;*
- *Minimize street, sidewalk, and parking lot aisle widths;*
- *Maintain natural drainage patterns;*
- *Incorporate drought-tolerant landscaping;*
- *On-site ponding areas or retention facilities to increase opportunities for infiltration;*
- *Convey roof runoff to landscaping/permeable areas prior to discharge to storm drains;*
- *Drain sidewalks and walkways to adjacent landscaped areas; and*
- *Integration of landscaping and drainage designs.*

**Conclusion**

Based on site-specific hydrologic modeling presented at EIR Appendix G, the Project stormwater management system concept incorporates those improvements and

operational elements necessary to adequately collect and convey on- and off-site stormwaters resulting from development of the Project site. Mitigation Measures 4.6.1 and 4.6.2 are incorporated to ensure timely monitored compliance with Project SWPPP, WQMP, NPDES, and SARWQCB requirements acting to reduce the potential for the Project to: substantially alter the existing drainage pattern of the site or area; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; result in substantial erosion or siltation on- or off-site; create or contribute runoff water which would exceed the capacity of the existing or planned stormwater drainage systems; provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality to levels that would be less-than-significant.

# 4.7 BIOLOGICAL RESOURCES

# 4.7 BIOLOGICAL RESOURCES

***Abstract***

*This Section identifies and addresses potential impacts to biological resources resulting from the Project. More specifically, the analysis presented here examines 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 Wildlife (CDFW, formerly California Department of Fish and Game) or United States Fish and Wildlife Service (USFWS);*

- *Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or California plans, policies or regulations or by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS);*

- *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; or*

- *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 wildlife nursery sites.*

*As supported by the analysis presented in this Section, with application of proposed mitigation measures, the Project's potential impacts to biological resources are determined to be less-than-significant.*

### 4.7.1 INTRODUCTION

Following are discussions of existing biological resources characteristic of the Project area, with focused consideration on species of special interest known to occur, or that could potentially occur on the Project site. Potential impacts to biological resources are identified, and mitigation of potentially significant impacts is proposed. Information presented in this Section is summarized and excerpted from: *Biological Property Evaluation for Sensitive Biological Resources for a Proposed Project Located at 17845 Indian Street Located in the City of Moreno Valley, Riverside County, California* (Michael Baker International) August 21, 2015 (Project Biological Resources Report). The Project Biological Resources Report is included in its entirety at EIR Appendix H.

### 4.7.2 SETTING

#### 4.7.2.1 Overview

The Project site occurs in an area that has been converted from natural habitats into industrial land uses. On-site and surrounding land uses have heavily disturbed, if not completely eliminated, most of the naturally-occurring habitats around the surrounding area, reducing the suitability of the habitat to support sensitive plant and wildlife species. The Project site is relatively flat with no areas of significant topographic relief. Site topography ranges from an elevation of approximately 1,464 to 1,468 feet above mean sea level (msl).

A literature review and records search was conducted to determine which sensitive biological resources have the potential to occur on or within the general vicinity of the Project site. This review included database records from the California Natural Diversity Database (CNDDB); the California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California; the California Department of Fish and Wildlife (CDFW) lists of special-status species; and United States Fish and Wildlife Service (USFWS) species listings. In addition to literature/database reviews, a field survey of the Project site was also conducted.

#### 4.7.2.2 Biologic Setting

The following discussions provide the existing biologic setting for the Project site.

**Vegetation**

As a result of routine maintenance and weed abatement activities, undisturbed native plant communities are no longer present within the boundaries of the Project site. The site consists of a heavily disturbed, undeveloped field that is dominated by tumbleweed (*Salsola tragus*). A small number of ornamental pines (*Pinus* sp.) and Chinaberry (*Melia azedarach*) trees are found in the southwestern portion of the Project site.

**Wildlife**

The Project site provides limited habitat for wildlife species adapted to a high degree of human presence and development. The majority of the wildlife observed during the habitat assessment consisted of avian species. Six (6) avian species were detected which included house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), western kingbird (*Tyrannus verticalis*), rock pigeon (*Columba livia*), and Anna's hummingbird (*Calypte anna*).

No mammals or reptiles were detected during the habitat assessment. However, mammalian species expected to occur on the Project site are those adapted to continual human presence and development (e.g., California ground squirrel [*Otospermophilus beecheyi*], and deer mouse [*Peromyscu*s sp.]). Reptilian species expected to occur include western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Elgaria coerulea*), and side-blotched lizard (*Uta stansburiana*).

**Nesting Birds**

On-site vegetation provides limited nesting opportunities for avian species; no nesting birds or breeding behaviors were observed during the field survey. The Project site has the potential to provide suitable nesting opportunities for ground-nesting avian species (e.g., killdeer [*Charadrius vociferous*]). However, the disturbed nature of the Project site and its routine maintenance activities greatly reduces the potential for birds to nest on-site.

**Special-Status Species**

Based on a review of CNDDB and CNPS, fifteen (15) special-status plant species and forty-two (42) special-status wildlife species were identified as having the potential to occur within the general vicinity of the Project site. No CDFW sensitive habitats were identified as occurring within the general vicinity. Species determined to have the potential to occur on-site are presented at Attachment D to the Biological Resources Report. Attachment D provides details of the analysis and field surveys regarding the potential occurrence of listed and special-status plant and wildlife species within the Project site.

*Sensitive Plants*

The Project site is heavily disturbed from routine weed abatement activities. Based on habitat requirements for specific species and the availability and quality of habitats needed by each sensitive plant species, it was determined that the Project site does not provide suitable habitat that would support any likely known occurring CNDDB, CNPS, or MSHCP listed plant species.[1]

*Sensitive Wildlife*

Based on the results of the habitat assessment, it was determined that the Project site has a low potential to support Cooper's hawk (*Accipiter cooperii*) foraging and a low potential to support the burrowing owl. All other special-status wildlife species are presumed absent. The Cooper's hawk, if present in the area, would be transient to the Project site and moreover would seek more productive foraging areas. Mitigation is included to ensure that the Project would not adversely affect the burrowing owl.

**Migratory Corridors and Linkages**

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear

[1] Previously recorded occurrences of special-status plant and wildlife species and their proximity, specifically within 2 miles, to the Project site were determined through a query of the CDFWs CNDDB Rarefind 5 software, the California Native Plant Society's (CNPS) Electronic Inventory of Rare, Threatened, and Endangered Plants of California, Calflora Database, compendia of special-status species published by the CDFW, and United States Fish and Wildlife Service (USFWS) species listings.

landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The Project site is surrounded by developed properties, which has removed any existing vicinity natural plant communities. Project development activities would be limited to previously disturbed areas. There are no riparian corridors, creeks, or substantive habitat areas within or connecting to the Project site. The Project would not disrupt or have any adverse effects on any migratory corridors or linkages that may occur in the general vicinity of the Project. Additionally, the Project site is not located within any MSHCP identified corridor or linkage.

**Jurisdictional Areas**

No jurisdictional drainage features or isolated wetland features that would qualify as "waters of the United States" or "waters of the state" were observed within the Project site. The Project, therefore, will not require regulatory permits from any regulatory agencies.

## 4.7.3 EXISTING POLICIES AND REGULATIONS

### 4.7.3.1 Federal Endangered Species Act/California Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (ESA) in 1973 to protect those species that are endangered or threatened with extinction. The State of California enacted a similar law, the California Endangered Species Act (CESA) in 1984. The State and Federal Endangered Species Acts are intended to operate in conjunction with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The United States Fish and Wildlife Service (USFWS) is responsible for implementation of ESA, while the CDFW implements CESA. During Project review, each

agency is given the opportunity to comment on the potential for the Project to affect listed plants and animals.

#### 4.7.3.2 State of California, Fish and Game Code Section 1600 *et seq.*

The CDFW has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code over fish and wildlife resources of the state. Under Section 1602, a private party must notify the CDFW if a project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the initiating party, they may enter into an agreement with the CDFW identifying the approved activities and associated mitigation measures.

#### 4.7.3.3 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP), focusing on conservation of species and their associated habitat in western Riverside County. The goal of the MSHCP is to maintain biological and ecological diversity within a rapidly urbanizing region. The MSHCP is administered by the Riverside County Regional Conservation Authority (RCA).

The MSHCP allows participating jurisdictions within the plan area to incorporate projects onto the incidental "take" permit for all species covered by the MSHCP, including State and federally listed species as well as other identified sensitive species and/or their habitat. Each city or local agency imposes a Development Mitigation Fee for projects within their jurisdiction.

Payment of the mitigation fee and compliance with the requirements of the MSHCP are intended to provide full mitigation under CEQA, although certain areas within the MSHCP boundaries require additional surveys to determine the presence or absence of specific

MSHCP-covered resources, including sensitive plants, burrowing owls, and riparian or riverine areas. Depending upon the outcome of the survey(s), the area could be considered occupied suitable habitat and, if it is unfeasible to conserve at least 90 percent of this area, then the applicant must submit an analysis supporting a Determination of Biologically Equivalent or Superior Preservation (DBESP). The DBESP discussion details the reasons that avoidance is not possible, quantifies unavoidable impacts, proposes project design features and mitigation measures that reduce indirect effects, and demonstrates that the project would be biologically equivalent or superior to avoidance. The Project is required by ordinance to, and would comply with the MSHCP (City of Moreno Valley Municipal Code Chapter 3.48, *Western Riverside County Multiple Species Habitat Conservation Plan Fee Program*). At Building Permit Issuance, MSHCP fees shall be paid based on the current fee in place at the time of issuance.

#### 4.7.3.4 Habitat Conservation Plan for the Stephens' Kangaroo Rat (SKR) in Western Riverside County, California" (SKRHCP)

The City of Moreno Valley has adopted "The Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California" (SKRHCP) and has been issued an incidental take permit for SKR from the United States Fish and Wildlife Service and a Management Authorization from the California Department of Fish and Wildlife. Mitigation for impacts to SKR and SKR habitat is realized through payment of SKR Impact Mitigation Fees. The Project is required by ordinance to, and would comply with the SKR Impact Mitigation Fee requirements (City of Moreno Valley Municipal Code Chapter 8.60, *Threatened and Endangered Species*). Prior to any disturbance of the site/grading permit issuance, Stephen's Kangaroo Rat (SKR) Impacts Mitigation fees shall be paid based on the current fee in place at the time of lands disturbance.

#### 4.7.3.5 Other Statutes, Codes, and Policies

In addition to ESA and CESA listings, plant and wildlife species receive consideration during the CEQA review processes, as discussed below.

**Species of Special Concern**

Species of Special Concern are generally defined as those California species whose numbers, reproductive success, or habitat may be threatened. Potential impacts to Species of Special Concern receive consideration under CEQA review.

**CNPS-Listed Plants**

The California Native Plant Society (CNPS) maintains a list of plant species native to California with minimal populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

**Raptors and Migratory Birds**

Raptors (birds of prey), migratory birds, and other avian species are protected by state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Potential impacts to raptors and migratory birds receive consideration under CEQA review.

### 4.7.4 STANDARDS OF SIGNIFICANCE

CEQA has identified the following significance thresholds relative to biological resources. If the Project would result in any one of the following, its impacts to biological resources would be considered significant.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game, CDFG) or United States Fish and Wildlife Service (USFWS);

- Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or California plans, policies or regulations or by the CDFW or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act 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 tree preservation policy or ordinance; or

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

## 4.7.5 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.7.5.1 Introduction

The following discussions focus on those areas where it has been determined that the Project may result in potentially significant biological resources impacts, based on the analysis presented within this Section; analysis included within the EIR Initial Study (EIR Appendix A), and responses received pursuant to the EIR Notice of Preparation.

Of the CEQA threshold considerations identified above at Section 4.7.4, and as substantiated in the Initial Study (EIR Appendix A), the Project's potential impacts under the following topics are determined to be less-than-significant, and are not further substantively discussed here:

- Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance; or

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

All other CEQA topics concerning the Project's potential impacts to biological resources are discussed below. Please refer also to Draft EIR Appendix A, Initial Study Checklist Item IV., *Biological Resources*.

#### 4.7.5.2 Impact Statements

**Potential Impact:** *Substantially affect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) or United States Fish and Wildlife Service (USFWS).*

**Impact Analysis:** As previously stated, no special-status plant or wildlife species were identified at the Project site during the field survey. Due to extensive disturbance of the Project site, no special-status plant species are considered to be present onsite. Thus, no potentially significant impacts to special-status plant species are anticipated as a result of site development. Due to the absence of native vegetation and the disturbance at the Project site, special-status wildlife species are unlikely to be present at the Project site.

Existing and proposed industrial development, as well as ongoing human activities, effectively isolated the Project site from connecting to undisturbed, natural habitats still available in the area. The isolation and disturbance level of the Project site limits the site's viability to provide suitable habitat for sensitive biological resources (i.e., sensitive plant and wildlife species, drainage features).

No nesting birds were observed and, given the heavy level of disturbance and routine maintenance activities, none are expected to occur. However, the Project site has the potential to provide suitable nesting opportunities for ground-nesting avian species (e.g., killdeer (*Charadrius vociferous*)). Additionally, the ornamental pines and Chinaberry trees located on the southwestern portion of the Project site have the potential to provide suitable nesting opportunities for avian species. Further, the Project site and surrounding properties may provide limited potential habitat for the burrowing owl. Mitigation Measures 4.7.1 and 4.7.2 (following) has been incorporated to ensure avoidance of any potential impacts, in accordance with MBTA and California Fish and Game Code requirements. With the implementation of Mitigation Measures 4.7.1, and 4.7.2, the Project's potential impacts to nesting migratory bird species and the burrowing owl are considered less-than-significant.

**Level of Significance before Mitigation:** Potentially Significant (impacts to nesting birds and the burrowing owl).

**Mitigation Measures:**

*4.7.1 To avoid impacts to nesting birds and to comply with the federal Migratory Bird Treaty Act of 1918 (MBTA):*

- *If possible, all vegetation removal activities shall be scheduled from August 1 to February 15, which is outside the nesting season. This would ensure that no active nests would be disturbed and that removal could proceed rapidly.*

- *If vegetation is to be cleared during the nesting season (February 15 – July 31), all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist 72 hours prior to clearing. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 50-foot buffer and up to 300 feet for raptors, with the final buffer distance to be determined by the qualified biologist. The buffer area shall be avoided until the nesting cycle is complete or it is determined that the nest has failed. In*

*addition, the biologist will be present on the site to monitor the vegetation removal to ensure that any nests, which were not detected during the initial survey, are not disturbed.*

4.7.2 *Within 30 days prior to grading, a qualified biologist shall conduct a Project site survey and make a final determination regarding the presence or absence of the burrowing owl. The determination shall be documented and shall be submitted, reviewed, and accepted by the City of Moreno Valley Planning Division prior to the issuance of a grading permit. Survey documentation shall incorporate following provisions:*

- *In the event that the pre-construction survey identifies no burrowing owls on the property, a grading permit may be issued without restriction.*
- *In the event that the pre-construction survey identifies the presence of burrowing owl(s,) the Applicant shall implement incumbent CDFW burrowing owl mitigation protocols.*

**Level of Significance after Mitigation:** Less-Than-Significant.

**Potential Impact:** *Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or California plans, policies or regulations or by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS); 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.*

**Impact Analysis:** No wetlands, riparian habitat or other sensitive communities exist within the Project site. Nor does the Project propose uses or activities that would substantially or adversely affect any off-site wetlands or riparian areas. As such, the Project will not affect any riparian habitat, any other sensitive natural community, or federally protected wetlands.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** *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 wildlife nursery sites.*

**Impact Analysis:** During preparation of the MSHCP, wildlife corridors and habitat linkages throughout western Riverside County were analyzed extensively. No MSHCP wildlife habitat linkages or movement corridors were identified at the Project site. Nor does the Project propose facilities or activities that would substantively and adversely affect any offsite designated wildlife habitat linkage or movement corridor. Based on the preceding, impacts to wildlife corridors, habitat linkages, or wildlife nursery sites that would occur as a result of the Project are determined to be less-than-significant.

**Level of Significance:** Less-Than-Significant.

# 4.8 CULTURAL RESOURCES/TRIBAL CULTURAL RESOURCES

# 4.8 CULTURAL RESOURCES/ TRIBAL CULTURAL RESOURCES

***Abstract***

*This Section examines the potential for implementation of the Project to impact cultural and historic resources in the Project area. Of primary concern are the protection of historic cultural resources, and conservation of known or currently unknown (buried or undiscovered) archaeological and paleontologic resources that may be present in locations proposed for future development. Specifically, this analysis seeks to determine whether the Project would result in any of the following:*

- *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;*
- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*
- *Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.*

*Information contained within this Section is based on* A Phase I Cultural Resources Survey for the Proposed Commercial Development (Approximately 20 Acres) in the City of Moreno Valley, Riverside County, California (McKenna et al.) February 21, 2016. *In order to protect the location of sensitive cultural resources that may be identified as part of the Project Cultural Resources Survey, a copy of the report has not been included in this EIR. Copies are available, upon request, at the City of Moreno Valley Planning Department. As supported by the analysis presented in this Section, as mitigated, the Project's potential to impact cultural resources is determined to be less-than-significant.*

## 4.8.1 INTRODUCTION

Cultural resources can be of scientific, aesthetic, educational, archaeological, architectural, or historical significance to the community. The following discussion identifies and classifies the significance of prehistoric and/or historic cultural resources which may exist on the subject site, and assesses the Project's potential to impact such resources.

## 4.8.2 SETTING

### 4.8.2.1 Regional

The Project area is directly associated with the Moreno Valley which is a northwestern extension of both the San Jacinto Valley and Perris Valley, and is associated with geology of the larger Perris Plain, extending west from the San Jacinto Mountains. The Moreno Valley (and San Jacinto Valley and Perris Plains) are described as:

> "... a broad, nearly flat surface dotted with bedrock hills ... this plain has an average elevation of about 520 meters (1700 feet) ... The numerous bed-rock hills that interrupt its surface have been described as residual knobs of resistant rock, which survived prolonged erosion (monadnocks). It has been suggested that a surface of low relief was developed on the crystalline bedrock, leaving behind the scattered monadnocks."[1]

The Moreno Valley is equated with the geomorphologic Peninsula Ranges of Southern California with Cretaceous and pre-Cretaceous materials that include limestone, schist, and gneiss. Igneous rock includes the intrusive gabbros, quartz diorite, tonalite, and/or granodiorite. Post-Cretaceous rocks include crystallines, sandstones, siltstones, and conglomerates. Quaternary deposits include volcanics and coastal marine terraces. Located south and west of the San Jacinto Mountains, this general area is known to contain banded gneiss and quartz diorite, including great fossil landslides. Hot springs, in this case associated with the San Jacinto and Elsinore Fault Zones, were known and utilized by prehistoric and historic populations.

[1] *Geology of California*, Robert M. Norris and Robert W. Webb, 1990.

#### 4.8.2.2 Project Site

As part of the Cultural Resources Survey, a field survey of the Project site was completed on February 10, 2016. The property was found to be relatively flat and exhibited evidence of disking, weed abatement, and some recent demolition of modern improvements. There was also evidence of commercial grade gravel used as a parking surface. There were no structures within the property, but the presence of felled power poles suggests there were once service hook-ups on the property. Vegetation consisted of short, dry grasses and weeds and a few immature trees. Overall, the surface was 70 to 80 percent visible for inspection. There was no evidence of exposed bedrock (no outcroppings or evidence of buried and broken bedrock). Furrows from the recent disking were evident. Refuse in the form of modern debris (paper, plastic, etc.) was noted along Indian Street. There was no evidence of illegal dumping or vandalism.

### 4.8.3 HISTORIC BACKGROUND

The Sonoran Desert is known to have been occupied during both the prehistoric and historic periods. As such, the resources were exploited and, in some cases, the terrain was altered or impacted by the human occupations. The Project area is located within an area of Riverside County that borders the traditional and ethnographic boundaries of the Luiseño Native American populations. The Luiseño are more directly associated with coastal and inland areas of present-day Orange and southern Riverside counties and their inland cultural characteristics being similar to those of the Cahuilla, a population generally associated with areas northeast of the San Jacinto Mountains.

The Luiseño are described as hunters and gatherers who lived in semi-sedentary villages, practiced a complex form of territoriality and exploitation, and are known throughout Southern California for their rock art. Exchange between the Luiseño and Cahuilla has been documented. In context, the Project area is considered a Luiseño area, though evidence of a Cahuilla presence may be identified.

Moreno Valley can be tentatively associated with numerous Native American villages and/or settlements. The Luiseño relied on intermittent drainages and springs for fresh water sources and villages were established near the natural springs. Smaller

encampments were founded in other areas. Trails, temporary small camp sites, and other limited use areas have been recorded throughout the Valley and attest to the wide-spread use of the Valley by prehistoric man.

The Luiseño practiced a relatively complex social organization based on lineages and clans. Individual clans occupied village sites and exploited individualized territories. Interactions provided exchange in the forms of trade, marriage alliances, and social/ceremonial contact. Marriage occurred between moieties, thereby avoiding marriages between blood relatives. Clan associations were more directly related to the exploitation of resources, trade, and social interaction. Analysis of ethnographic data and archaeological data has resulted in the development of various chronologies for the Sonoran Desert, as follows.

**Table 4.8-1**

**Chronology of the Sonoran Desert (1)**

| Time Period | Known as | Characteristics |
|---|---|---|
| 10,000 to 6,000 B.C. | The Lake Mojave/San Dieguito Complex and/or Western Lithic Co-Tradition | Characterized by the presence of projectile points, large knives, chopping tools, scraper planes, and scrapers. Items associated with vegetal food processing and hunting and the presence of coniferous woodland and pluvial lakes. |
| 6,000 B.C.-A.D. 500 | Archaic or Pinto Armagosa periods | Characterized by diagnostic projectile points, leaf shaped blades, choppers, and scraper planes. Some sites exhibit a small assemblage of milling stones. A shift in climate and vegetation led to a shift in exploitation with an emphasis on vegetal resources. |
| A.D. 500 to Historic | unnamed | Characterized by the presence of the bow and arrow (as opposed to darts), ceramics, and cremations. Milling tools increase, including mortars and pestles. There is evidence of limited agriculture and the appearance of Shoshonean-speakers displacing local Hokan-speaking populations. |

**Source:** *A Phase I Cultural Resources Survey for the Proposed Commercial Development (Approximately 20 Acres) in the City of Moreno Valley, Riverside County, California* (McKenna et al.) February 21, 2016.

More recent archaeological investigations in portions of the San Jacinto Valley areas suggest Native Americans can be identified in the area as early as 8,000 to 9,000 B.P. Such studies have resulted in the development of a revised general chronological sequence for these inland areas of Southern California, as follows:

**Table 4.8-2**
**Chronology of the Sonoran Desert (2)**

| Time Period | Known as |
|---|---|
| 11,000-8,000 B.P. | Pleistocene/Early Holocene (Early Man) Period |
| 8,000-5,500 B.P. | San Dieguito Period |
| 5,500-1,500 B.P. | Millingstone/La Jolla-Pauma/Archaic/Encinitas Period |
| 1,500-300 B.P. | Late Prehistoric/Luiseño Period |

**Source:** *A Phase I Cultural Resources Survey for the Proposed Commercial Development (Approximately 20 Acres) in the City of Moreno Valley, Riverside County, California* (McKenna et al.) February 21, 2016.

Research oriented towards the understanding of contact between Native American populations and non-Native populations emphasizes the impacts of European contact, chronologically presented by many anthropologists and historians as follows:

**Table 4.8-3**
**Understanding of Contact**

| Time Period | Period |
|---|---|
| 1500s-1760s | Long distance contact with Europeans |
| 1770s-1820s | Mission Period |
| 1830s-1840s | Rancho Period |
| 1850s-1870s | American Migration to California |
| 1880s-present | Reservation Period |

**Source:** *A Phase I Cultural Resources Survey for the Proposed Commercial Development (Approximately 20 Acres) in the City of Moreno Valley, Riverside County, California* (McKenna et al.) February 21, 2016.

The "historic" period of California history begins in 1769 with the initiation of the Mission system in San Diego and the subsequent establishment of Missions throughout Alta California. Missionization was followed by many years of sporadic settlement by Spanish populations traveling from Mexico and into Alta California. Spanish explorers, such as Pedro Fages and Juan Bautista de Anza, traveled through the San Jacinto Plains as early as 1772-1774. However, no European settlement occurred in the vicinity until after 1800.

The first European-American settlers in western Riverside County arrived in the late 1860s and were generally concentrated in the area of San Jacinto, the oldest non-Native community in the general area. A land boom swept through much of Southern California in the 1880s and other settlements (e.g., Perris, Hemet, and Valle Vista) appeared. With respect to the Moreno Valley:

> "MORENO. When this town was first platted in 1890, the Bear Valley and Alessandro Development Co., owners of the land, announced that it would be named New Haven [RP&H Oct. 11, 1890], but on November 1, 1890, The Citrograph carried a small item that stated simply, "The new town at this end of Alessandro Valley has had its name changed from New Haven to Moreno (Spanish for Brown)" ... there was no one living there at that time, the land still being prepared ...
>
> "Moreno post office was established on February 19, 1891 ... Moreno was called "the new town on the Alessandro tract at the upper end of the Perris Valley" ... The surrounding farmland became known as MORENO VALLEY."[2]

The settlement within the Moreno Valley was sporadic and the City of Moreno Valley was not incorporated until 1984. Research through the Bureau of Land Management General Land Office records showed that this area of Riverside County was purchased in 1870. The land was later transferred to the Bear Valley and Alessandro Development Company. Alessandro was a reference to the "rich and fertile portion of the San Jacinto Valley," also purchased by the Bear Valley and Alessandro Development Company. When established, the area associated with the Bear Valley and Alessandro Development Company was part of San Bernardino County. With the division of San Bernardino County and the establishment of Riverside County in 1893, this area became part of Riverside County.

[2] *Riverside County, California, Place Names: Their Origins and Their Names* (Jane Davies Gunther) 1984.

Research at the Riverside County archives was not possible during the Cultural Resources Survey (the archives are currently closed to research until a new archivist is hired). However, a review of historic maps and photographs was completed. The 1901 USGS Elsinore 30' map and 1943 Perris 15' map illustrate the Project area as being within the community of Val Verde with no structural improvements. A dirt road bisects the Project area (north/south axis). Val Verde is described as:

> VAL VERDE. The name, popular with land developers in the 1890s, is a contraction of the Spanish valle verde, meaning "green valley." Val Verde Tract, as it was called by owner, J.R. Nance, one of the principal promoters of Perris and one of the "capitalists" who had put the adjoining Riverside Tract [see] on the market in 1891, was platted in July, 1893. Located five miles northwest of Perris and three miles southeast of Alessandro, the property was bisected by the California Southern Railway (later Santa Fe). The railroad company built a siding and station and by November, 1893, a "fine new brick hotel" had been built [RP&H Nov. 18, 1893]. A small community grew up around the railroad station and "at one time this town was a prosperous Santa Fe shipping point, with an agent and two opera-tors. Principal crops raised were grain, grapes, potatoes, melons, alfalfa, and green vegetables. Today it is a blind siding." (Santa Fe Coast History 1940 p. 780). All vestiges of the "town" are now gone and, although the railroad siding is still in operation, the Val Verde sign has been removed. Val Verde post office was established on March 6, 1894, with James S. Williams as first postmaster, but was discontinued on August 31, 1904, when mail was sent to Perris. On December 28, 1918, the post office was reopened, but under the name of Vel Verde, and continued in operation until January 31, 1930, when mail was sent to Perris. VAL VERDE CUT, TUNNEL. Both were named for their location at Val Verde. Part of the Colorado River Aqueduct [see], the cut is a mile-long unlined canal constructed by the Metropolitan Water District in 1939 to conduct Colorado River water to Lake Mathews. It is the only section of unlined canal on the aqueduct, an economical type of construction which was

> adequate for this purpose and also desirable because of high ground water and considerable seepage inflow from the disintegrated granite in the area. Prior to entering the cut the water has flowed through Val Verde Tunnel and several inverted syphons [MWD].[3]

The 1943 USGS Perris quadrangle appears to illustrate a dirt access road that runs between the two western parcels (19 and 20) and the two eastern parcels (57 and 77), leading to improvements further north, further suggesting these properties were held in unison.

Historic aerial photographs show the Project site as part of a larger grain field with no structures and no north/south trending dirt access road. This general condition continues until after 1978. The currently available USGS Perris quadrangle dates to 1979, indicating a structural improvement along Indian Street was a 1978-1979 improvement with no additional indications of farming. Aerial photographs show the structure was still evident in 1997, but replaced by a truck-parking area by 2005.

Historic maps indicate the north/south trending access road was still present in ca. 1965, but absent shortly thereafter. The maps dating between 1954 and 1961 illustrate a blue-line stream along the western property boundary, but absent by 1969. In summary, the Project site was agricultural during the historic period; but these activities were abandoned in ca. 1978. Shortly thereafter, and suggesting a sale of the property, a structure was erected along Indian Street. This modern improvement was demolished before 2005. Today, there is little evidence of the modern structure.

[3] *Riverside County, California, Place Names: Their Origins and Their Names* (Jane Davies Gunther) 1984.

## 4.8.4 EXISTING POLICIES AND REGULATIONS

### 4.8.4.1 Federal

**National Historic Preservation Act**

The National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources (e.g., archeological sites, historic built environment features, or Native American sites) that are listed, or determined to be eligible for listing, on the National Register of Historic Places. The implementing regulations of this mandate, found in the Code of Federal Regulations (36 CFR 800), outline an involved consultative process known as the Section 106 process. The Section 106 process requires a project lead federal agency to consult with the State Historic Preservation Officer.

**American Indian Religious Freedom Act**

The American Indian Religious Freedom Act, passed in 1978, serves to protect and preserve the traditional religious rights of American Indians, Eskimos, Aleuts, and Native Hawaiians. Before the Act was passed, certain federal laws interfered with the traditional religious practices of many American Indians.

**Native American Graves Protection and Repatriation Act of 1990**

*The Native American Graves Protection and Repatriation Act* establishes a federal policy of respect for, and protection of, Native American religious practices. It also has provisions for allowing limited access to Native American religious sites. The Act provides for the repatriation of certain items from the federal government and certain museums to the native groups to which they once belonged. The Act defines "cultural items," "sacred objects," and "objects of cultural patrimony" and establishes a means for determining ownership of these items. However, the provisions for repatriation only apply to items found on federal lands.

**Executive Order 13007 and Executive Order 13084**

Executive Order 13007 requires federal agencies with land management responsibilities to allow access to and use of Indian sacred sites on public lands, and to avoid adversely affecting these sites. Executive Order 13084 reaffirms the government-to-government relationship between the federal government and recognized Indian tribes, and requires federal agencies to establish procedures for consultation with tribes. These executive orders only apply to projects that include federal undertakings.

#### 4.8.4.2 State

**CEQA and the California Register of Historical Resources**

Historical resources are recognized as part of the environment under the California Environmental Quality Act (CEQA). The California Register of Historical Resources (California Register) is the authoritative guide for the State's historical resources, and properties included in the California Register are considered significant for the purposes of CEQA. The California Register includes resources listed, or formally determined eligible for listing, on the National Register of Historic Places, and some California State Landmarks and Points of Historical Interest. Properties of local significance designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the California Register and are presumed to be significant resources for the purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC § 5024.1, 14 CCR § 4850).

An archaeological site may be considered a historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC § 5020.1(j)), or if it meets the criteria for listing on the California Register (14 CCR § 4850).

The *CEQA Guidelines* direct lead agencies to evaluate an archaeological site to determine if it meets the criteria for listing in the California Register. If it does, potential adverse impacts must be considered. If an archaeological site is not a historical resource, but

meets the definition of a "unique archaeological resource" as defined in PRC §21583.2, then it should be treated in accordance with the provisions of that section.

Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired (PRC § 5020.1(q)). While demolition and destruction would constitute significant impacts, it is sometimes more difficult to assess when change, alteration, or relocation results in a substantial adverse change. The *CEQA Guidelines* provide that a project that alters those physical characteristics of historical resources that convey its significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

**California Native American Graves Protection and Repatriation Act (2001)**

The California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010-8030) contains broad provisions for the protection of Native American cultural resources. The California Native American Graves Protection and Repatriation Act establishes policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The Act also provides the mechanism for disclosure and return of these items held by publicly-funded agencies and museums in California. Additionally, the Act outlines the mechanism by which California Native American tribes not recognized by the federal government may file claims for human remains and cultural items held in agencies or museums.

**California Public Resources Code**

The California Public Resources Code contains several sections applicable to the preservation of cultural resources and human remains. These sections detail procedures to be followed whenever Native American remains are found, and delineate the unauthorized disturbance or removal of archaeological, historical, paleontological resources, or human remains as an act punishable by law (Sections 5020, 5097.5, 5097.9-5097.996, 7050.5, 7051). As matter of law, the Project would comply with applicable provisions of the California Public Resources Code addressing preservation and protection of cultural resources and human remains.

**California Code of Regulations**

Under Title 14, Division 3, Section 4308, no person shall remove, injure, disfigure, deface, or destroy any object of archeological or historical interest or value.

**Tribal Consultation**

A sacred lands search request was sent to the Native American Heritage Commission; a response was received on January 28, 2016. On January 29, 2016, letters were sent to 21 local Native American representatives wishing to be informed of projects within their traditional territories. One response has been received from the Rincon Band of Luiseño Indians (Tribe). In the response, the Tribe states that although the Project site is within the Luiseño Aboriginal Territory, it is not located within Rincon's Historic Boundaries. The Tribe also states that they do not have any additional information regarding the site. To date, no other responses have been received.

**Assembly Bill 52 (AB 52) Tribal Cultural Resources**

Enacted as of July 1, 2015, AB 52 established a new category of resources under CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigations. The Bill was built on the concept that California Native American tribes have the expertise "with regard to tribal history and practices" to identify significant cultural resources. To this end, AB 52 requires early consultation in the CEQA process to ensure that local and Tribal governments, public agencies, and project proponents have information available, early in the CEQA environmental review process, for the purpose of identifying and addressing potential adverse impacts to tribal cultural resources.

AB 52 requires that the lead agency contact (in writing) all culturally affiliated tribes that could be affected by a project, within 14 days of deeming a development application complete. The notice commences a 30-day period for the tribe to request consultation. Upon receipt of a request consultation, the lead agency has an additional 30 days to begin the consultation process. AB 52 states that the consultation concludes when either "1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal resource, or 2) a party, acting on good faith and

after a reasonable effort, concludes that mutual agreement cannot be reached." AB 52 notes that the consultation can be ongoing throughout the CEQA process.

### 4.8.5 STANDARDS OF SIGNIFICANCE

Consistent with the standards of significance outlined in the *CEQA Guidelines*, Project-related impacts to cultural resources would be considered potentially significant if they cause or result in any of the following:

- 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;

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

- Disturb any human remains, including those interred outside of formal cemeteries; or

- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.

For the purposes of CEQA, an "important archaeological, historical, or paleontological resource" is defined as follows.

A) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.

B) A resource included in a local register of historical resources, or identified as significant in an historical resource survey, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant

unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

C) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources, including the following:

1) A resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2) A resource is associated with the lives of persons important in our past.

3) A resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or has yielded, or may be likely to yield, information important in prehistory or history.

## 4.8.6 POTENTIAL IMPACTS AND MITIGATION MEASURES

### 4.8.6.1 Introduction

The following analysis is focused on areas where it has been determined that the Project may result in potentially significant impacts, based on the analysis included within the Initial Study. In this regard, as substantiated in the Initial Study, the Project's potential to disturb any human remains, including those interred outside of formal cemeteries was previously determined to be less-than-significant. Please refer to EIR Appendix A,

Initial Study Checklist Items V., *Cultural Resources* and VI., *Tribal Cultural Resources*. All other potential cultural resources impacts of the Project are discussed below.

#### 4.8.6.2 Impact Statements

**Potential Impact:** *Would the Project cause a substantial adverse change in the significance of historic and archaeological resources as defined in §15064.5?*

**Impact Analysis:** A site-specific field survey was completed by two trained archaeological surveyors walking east/west transects originating at the northeastern corner of the property (Indian Street at Grove View Road) and proceeding from north to south. Transects averaged 15 meters apart (45 feet); where the vegetation was sparse, transects were lessened to 10 meter intervals. The survey was supplemented by field notes and a detailed photographic record. No evidence of historic or prehistoric archaeological resources was identified during the recent survey. The soils were sufficiently disturbed by years of agriculture harvesting (grains) and more recent disking and weed abatement to suggest that buried resources may have been brought to the surface, if present. The Cultural Resources Survey determined the property lacks any evidence of historic or prehistoric archaeological resources and should be considered clear of any such resources.

**Level of Significance:** Less-Than-Significant.

**Potential Impact:** *Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Impact Analysis:** According to the City of Moreno Valley General Plan, as well as previous studies in the Project vicinity, the site consists of both younger and older Quaternary deposits. The older alluvial deposits have been identified as sensitive for the presence of fossils in a buried context. Therefore, excavations within the Project site could impact the older alluvial deposits and, there is a potential for the site to yield fossil specimens similar to those identified on other properties in the Moreno/San

Jacinto/Perris Valleys areas. Although the site-specific field survey failed to identify any surface evidence of fossil specimens, the Cultural Resources Survey concluded that the site has a moderate to high level of sensitivity for paleontological resources. As such, the Survey recommended subsurface monitoring, as required by Mitigation Measure 4.8.1.

**Level of Significance:** Potentially Significant.

**Mitigation Measure:**

4.8.1 *Any excavation exceeding five feet below the current grade shall be monitored by a qualified paleontological monitor. If older alluvial deposits are encountered in shallower contexts, monitoring should be initiated once these deposits area encountered. The paleontological monitoring program should follow the local protocols of the Western Center (Hemet) and a paleontological monitoring plan should be developed prior to the ground altering activities. The extent and duration of the monitoring can be determined once the grading plan is understood and approved.*

**Level of Significance After Mitigation:** Less-Than-Significant.

**Potential Impact:** *Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?*

**Impact Analysis:** As previously mentioned, a sacred lands search request was sent to the Native American Heritage Commission; a response was received on January 28, 2016. On January 29, 2016, letters were sent to 21 local Native American representatives wishing to be informed of projects within their traditional territories. To date, one response has been received from the Rincon Band of Luiseño Indians (Tribe). In the response, the Tribe states that although the Project site is within the Luiseño Aboriginal Territory, it is not located within Rincon's Historic Boundaries. The Tribe also states that they do not have any additional information regarding the site.

Should additional responses be received, consultation pursuant to AB 52 will be undertaken by the City. Additionally, the Cultural Resources Survey recommended the following mitigation to preclude impacts to tribal cultural resources.

**Level of Significance:** Potentially Significant.

**Mitigation Measure:**

4.8.2 *If previously unidentified prehistoric/Native American resources are identified, a qualified archaeologist must be notified and, in consultation with the local Native American representative(s), be recovered and analyzed in accordance with CEQA guidelines, and curated at the University of California, Riverside, Archaeological Research Unit; the Western Center; or with the appropriate Native American repository (e.g., Pechanga facility in Temecula). In addition, an archaeological monitoring program should be initiated and continued until the archaeological consultant concludes the program is no longer necessary.*

**Level of Significance After Mitigation:** Less-Than-Significant.

# 5.0 OTHER CEQA CONSIDERATIONS

# 5.0 OTHER CEQA CONSIDERATIONS

This Section of the EIR addresses other environmental considerations and topics mandated under the California Environmental Quality Act (CEQA). These topics include Cumulative Impacts, Alternatives to the Project, Growth Inducement, Significant Environmental Effects of the Project, Significant and Irreversible Environmental Changes, and Energy Conservation.

## 5.1 CUMULATIVE IMPACT ANALYSIS

The *CEQA Guidelines* (*Guidelines*) require that an EIR identify any significant cumulative impacts associated with a project [*Guidelines*, Section 15130 (a)]. When potential cumulative impacts are determined to be not significant, the EIR should explain the basis for that conclusion.

Cumulative impacts are "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." [*Guidelines*, Section 15355]. Thus, a legally adequate cumulative impact analysis is an analysis of a particular project viewed over time and with other related past, present, and foreseeable probable future projects, whose impacts might compound or interrelate with those of the Project considered here.

CEQA notes that the discussion of cumulative impacts should be guided by standards of practicality and reasonableness [*Guidelines*, Section 15130 (b)]. Only those projects whose impacts might compound or interrelate with those of the Project under consideration require evaluation. CEQA does not require as much detail in the analysis of cumulative environmental impacts as must be provided for the Project alone. The *Guidelines* identify two basic methods for satisfying the cumulative impacts analysis requirement: the list-of-projects methodology, and the summary-of-projections

methodology. Because each environmental resource is affected by its surroundings in different manners, either of the two methodologies, or a combination of both, may be applied to the analysis of cumulative impacts to each resource. For example, because the approval process and construction phase of development typically takes at least one to two years, the list-of-projects method is likely to provide a more accurate projection of growth in the near term. However, this method may overstate potential cumulative impacts because the considered list-of-projects may include proposals that would never be developed. On the other hand, because development proposals are rarely publicly known until within five years of the expected development, the summary-of-projections method may provide a more accurate projection of growth over the long term. This method may not accurately predict growth in any given year, but aggregates various growth trends over the long term.

For each topical discussion, the cumulative geographic context is identified, which in turn relates to the amount and type of growth that is anticipated to occur within the geographic area under consideration. Where appropriate to the analysis in question, cumulative impacts are assessed with reference to a list of off-site "related projects," as described at *CEQA Guidelines* §15130(b). In this manner, the EIR appropriately characterizes and evaluates potential cumulative impacts.

Consistent with direction provided in the *CEQA Guidelines,* related projects considered in these cumulative analyses are "only those projects whose impacts might compound or interrelate with those of the Project under consideration." Within the context of the cumulative impacts analysis, varied criteria are employed in determining the scope and type of "cumulative projects" considered. For example, the analysis of cumulative traffic impacts evaluates the Project's traffic impacts in the context of other known or probable "related" development proposals that would discernibly affect traffic conditions within the Traffic Impact Analysis Study Area. As another example, cumulative air quality impacts are evaluated in the context of the Project's contribution to other air emissions impacts affecting the encompassing Air Basin.

The manner in which each resource may be affected also dictates the geographic scope of the cumulative impacts analysis. For example, cumulative traffic impacts would typically be localized to the vicinity of a given project site because after a relatively short distance, traffic patterns tend to normalize; whereas cumulative air quality impacts are more appropriately analyzed within a Basin-wide context because the Basin's meteorological and geographic conditions generally define the extent of cumulative air quality considerations. Similar considerations are employed in evaluating potential cumulative impacts for each of the EIR's environmental topics.

Unless otherwise noted herein, the cumulative impact analysis ultimately evaluates effects of the Project within the context of anticipated buildout of the City as envisioned under the General Plan and related regional plans. Specific cumulative projects have also been identified where this information may be different, more detailed than that provided within the General Plan or applicable regional plans, or where such specific information otherwise benefits the cumulative impact analyses.

### 5.1.1 Cumulative Impact Topical Discussions

Section 15139(a) of the *CEQA Guidelines (Guidelines)* notes that:

> An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined at *Guidelines* Section 15065(c). Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

Cumulative impacts for each of the EIR's environmental topics are listed below:

- Transportation/Traffic;
- Air Quality;
- Global Climate Change and Greenhouse Gas Emissions;
- Noise;

- Hazards/Hazardous Materials;
- Hydrology and Water Quality;
- Biological Resources; and
- Cultural Resources/Tribal Cultural Resources.

For other environmental topics, Project impacts have been previously determined to be less-than-significant. Under these topics, there are no known or anticipated projects or conditions, impacts of which might compound with those of the Project, and thereby result in potentially significant cumulative impacts. No further substantive analysis is provided under these topics. Please refer also to the EIR Section 1.6, *Impacts Not Found to be Potentially Significant*.

### 5.1.2 Related Previous Discussions of Cumulative Impacts

*CEQA Guidelines* Section 15130 (d) states:

> Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. 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 proposed project have already been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

The Project would realize development that is consistent with and supports land uses and development anticipated under the City of Moreno Valley General Plan. Accordingly, the following discussions of cumulative impacts rely in part on, and expand upon correlating cumulative impact analyses presented in the City of Moreno Valley General Plan EIR.

## 5.2 DISCUSSION OF CUMULATIVE IMPACTS

### 5.2.1 Cumulative Impacts Related to Transportation/Traffic

The cumulative impact area for traffic circulation impacts is defined by the Traffic Impact Study Area (Study Area), as described in *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016 (Project TIA, TIA).

The TIA Study Area (illustrated at EIR Section 4.1, *Transportation/Traffic*, Figure 4.1-1) includes potentially affected facilities under the jurisdiction of the City of Moreno Valley, and certain facilities under the City of Perris. All potentially affected California Department of Transportation (Caltrans) and Congestion Management Program (CMP) facilities are also included within the Study Area.

**Cumulative Traffic Growth**

The Project TIA comprehensively reflects anticipated cumulative traffic increases affecting the Study Area and addresses related potential cumulative traffic impacts. To account for growth in traffic between Existing Conditions (2015) and the Project Opening Year (2020), a compounded annual traffic growth rate of 2 percent was assumed (10.41 percent aggregate growth in background traffic for the period 2015—2020). The 2 percent annual growth rate captures non-specific ambient traffic growth within the Study Area.

In context, the TIA's assumed 2 percent compounded annual growth rate is considered a reasonable approximation of future traffic growth when compared to demographic projections reflected in other local and regional growth modeling efforts. More specifically, the Southern California Association of Governments SCAG 2012—2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the City of Moreno Valley assume the City population to increase from

187,400 in 2008 to 255,200 by the year 2035, or an approximate 1.15 percent growth rate compounded annually.[1] The RTP/SCS assumed growth in households over the same 27-year period reflects an increase from 51,100 households to 72,800 households; a rate of 1.32 percent compounded annually. At the upper end of assumed RTP/SCS growth rates, employment over the same 27-year period is projected to increase from 32,300 jobs to 64,400 jobs; a rate of approximately 2.59 percent compounded annually.

The 2 percent compounded annual traffic growth rate employed in the TIA reflects the fact that not all persons comprising population growth, household growth, or employment growth would translate on a one-to-one basis as a new vehicle trip in the region. The 2 percent compounded annual traffic growth rate establishes a judicious midrange estimate lying between the RTP/SCS assumed regional population growth rate (1.15 percent) and the RTP/SCS assumed regional employment growth rate (2.59 percent).

Traffic generated by other known or probable related projects was then added to the TIA ambient traffic growth estimates. These related projects are in part already accounted for in the assumed annual 2 percent increase in ambient traffic growth noted above; and in certain instances, these related projects would likely not be implemented and functional within the 2020 Opening Year time frame assumed for the Project. The resultant assumed traffic growth rate employed in the TIA (2 percent annual ambient growth + traffic generated by all related projects) would therefore tend to overstate rather than understate background cumulative traffic impacts under 2020 conditions.

[1] On March 9, 2015, SCAG, as Lead Agency, published a Notice of Preparation (NOP) of a Program Environmental Impact Report ("PEIR") for the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy ("2016 RTP/SCS"). The 2016 RTP/SCS was adopted April 7, 2016, subsequent to distribution of the EIR NOP (March 14, 2016). The 2016 RTP/SCS forecasts reflect reduced growth rates and total growth when compared to the 2012 – 2035 RTP/SCS forecasts reflected in the EIR. The EIR 2012 – 2035 RTP/SCS growth projections, and traffic impacts related to that growth are therefore likely overstated when compared to the 2016 – 2040 RTP/SCS growth projections.

Please refer to TIA Table 4-4, *Cumulative Development Land Use Summary* for a complete listing of all cumulative development considered within the analysis.

## Cumulative Impacts

### Intersections

***Opening Year (2020) Cumulative Intersection LOS Impacts***

Under Opening Year with Project conditions, Project traffic would contribute to potentially significant cumulative LOS impacts at the Study Area Intersections listed at Table 5.2-1.

**Table 5.2-1**
**Opening Year**
**Cumulatively Significant Intersection LOS Impacts**

| Intersection ID No. | Intersection Location |
|---|---|
| 1 | I-215 SB Ramps/Harley Knox Blvd. |
| 2 | I-215 NB Ramps/Harley Knox Blvd. |
| 3 | Western Way/Harley Knox Blvd. |
| 4 | Patterson Ave./Harley Knox Blvd. |
| 7 | Indian St./Grove View Rd. |
| 10 | Indian St./Harley Knox Blvd. |

**Source:** *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

***Mitigation***

To mitigate incremental contributions to cumulative traffic impacts affecting Study Area intersections, the Project Applicant would pay requisite fees toward the construction of the necessary improvements.

Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the study area. ***On this basis, pending completion of required improvements, the Project's contributions to Opening Year (2020) cumulative LOS***

***impacts at intersections identified above are considered cumulatively significant and unavoidable.***

**Roadway Segments**

*Opening Year (2020) Cumulative Roadway Segment Impacts*

Roadway segment capacities were calculated based on existing travel lanes, and the associated forecasted peak hour directional traffic flows. Traffic modeling of roadway segments indicating that lane capacities could be exceeded; e.g., where the modeled roadway segment volume to capacity (V/C) ratio exceeds 1.0, would indicate that segments may experience operational deficiencies. Notwithstanding, roadway segment widening is typically employed only when the controlling intersections on either side of the affected segment indicate a requirement for additional through lanes. As summarized at Table 5.2-2, Study Area roadway segments 2, 3, 4, 9, 10, and 11 could experience certain capacity deficiencies under Opening Year Without Project and Opening Year With Project Conditions. These are potentially significant cumulative impacts.

**Table 5.2-2**
**Opening Year**
**Cumulatively Significant Roadway Segment Impacts**

| Roadway Segment ID No. | Roadway | Segment Limits |
|---|---|---|
| 2 | Harley Knox Blvd. | I-215 NB Ramps to Western Way |
| 3 | Harley Knox Blvd. | East of Western Way |
| 4 | Harley Knox Blvd. | West of Patterson Ave. |
| 9 | Indian St. | South of Nandina Ave. |
| 10 | Indian St. | North of Grove View Rd. |
| 11 | Indian St. | South of Grove View Rd. |

**Source**: *Indian Street Commerce Center Traffic Impact Analysis, City of Moreno Valley, CA* (Urban Crossroads, Inc.) June 29, 2016.

***Mitigation***

Required improvements necessary to achieve acceptable Study Area roadway segment LOS are coincident with through lane improvements required to achieve acceptable LOS at controlling intersections. Pursuant to EIR Mitigation Measure 4.1.1, the Project would pay requisite fees addressing Study Area intersection LOS deficiencies projected to occur under Opening Year-with-Project Conditions, and in so doing would address potential roadway segment deficiencies. No additional mitigation is required or recommended. Payment of fees in this manner fulfills the Project's mitigation responsibilities.

Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the study area. ***On this basis, pending completion of required improvements, the Project's contributions to Opening Year (2020) cumulative impacts at roadway segments identified above are considered cumulatively significant and unavoidable.***

**Freeway Facilities**

Opening Year Cumulative (2020) traffic growth along the SR-91 and I-215 Freeway is anticipated to exceed the capacity of existing lanes, and would thus result in deficient LOS conditions for six Study Area freeway mainline segments under Opening Year Cumulative (2020) traffic conditions (please refer to Table 5.2-3, below). The addition of Project traffic would not, however, result in any new freeway segment deficiencies. The Project is anticipated to contribute no more than 25 peak hour one-way trips to the deficient freeway mainline segments.

**Table 5.2-3**
**Freeway Segment Deficiencies (2020 Conditions)**

| | |
|---|---|
| 1 | I-215, Northbound, University Avenue to Martin Luther King Boulevard |
| 2 | I-215, Northbound, Box Springs Road to SR-60/I-215 Freeway |
| 3 | I-215, Northbound, Eucalyptus Avenue to Alessandro Boulevard |
| 4 | I-215, Northbound, Ramona Expressway to Nuevo Road |
| 5 | I-215, Southbound, Eucalyptus Avenue to Alessandro Boulevard |

**Table 5.2-3**
**Freeway Segment Deficiencies (2020 Conditions)**

| | |
|---|---|
| 6 | I-215, Southbound, Ramona Expressway to Nuevo Road |
| 7 | SR-91, Westbound, Riverwalk Parkway to Magnolia Avenue |

Source: *Indian Street Commerce Center Supplemental Basic Freeway Segment Analysis* (Urban Crossroads, Inc.) April 27, 2016.

***Mitigation***

There are no near-term solutions for the deficiencies noted above. These freeway mainline segment deficiencies are therefore projected to carry forward to the Project Opening Year Cumulative (2020) conditions evaluated in this Section. Under Opening Year Cumulative (2020) Conditions, the Project would contribute additional traffic to the noted deficient I-215 Freeway mainline segment deficiencies. Globally, Project payment of TUMF would fulfill its mitigation responsibilities for contributions for cumulative traffic impacts deficiencies affecting I-215 Freeway mainline segments. However, it is not within the jurisdictional authority or purview of the Lead Agency or Applicant to adopt, implement, or enforce mitigation measures requiring the construction of improvements by Caltrans, or upon facilities within Caltrans' jurisdiction. There are no feasible mitigation measures that would reduce cumulative freeway mainline segment impacts to levels that would be less-than-significant. The Project's contribution to Opening Year Cumulative traffic impacts affecting the I-215 Freeway is therefore considered significant and unavoidable.

**Site Access**

Site access driveways, traffic controls, and on-site circulation improvement concepts proposed by the Project act to reduce potential access and on-site circulation impacts. Final site access and on-site circulation designs would incorporate any additional provisions or modifications suggested within the Project TIA, or as may otherwise be required by the City. City design review processes, and any resultant modifications incorporated in the Project Final Site Plan, would ensure that potential parking, site access, and internal circulation impacts are less-than-significant. On this basis, the Project's potential contribution to cumulative impacts in regard to site access are not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

**Summary**

To mitigate incremental contributions to cumulative traffic impacts affecting Study Area transportation/traffic facilities the Project Applicant would pay requisite fees toward the construction of necessary improvements. Notwithstanding, payment of traffic impact fees does not ensure timely completion of those traffic improvements necessary to mitigate potentially significant cumulative traffic impacts affecting the Study Area. In these instances, while Project-specific traffic impacts would not be individually significant, they would be cumulatively significant. On this basis, pending completion of required improvements, the Project's contributions to Opening Year (2020) cumulative traffic impacts at Study Area transportation/traffic facilities identified within this Section are therefore considered cumulatively significant and unavoidable.

### 5.2.2 Cumulative Impacts Related to Air Quality

The cumulative impact area for air quality considerations is defined by the encompassing Air Basin, and jurisdiction of the controlling Air Quality Management District. In this case, the South Coast Air Basin (SCAB, Air Basin) and the South Coast Air Quality Management District (SCAQMD) respectively. Project emissions within the context of SCAQMD's regional emissions thresholds provide an indicator of potential cumulative impacts within the Air Basin. Due to the defining geographic and meteorological characteristics of the Air Basin, criteria pollutant emissions that could cumulatively impact air quality would be, for practical purposes, restricted to the Air Basin. Accordingly, the geographic area encompassed by the Air Basin is the appropriate limit for this cumulative Air Quality analysis.

#### 5.2.2.1 Construction-Source Air Quality Impacts

As discussed at EIR Section 4.4, *Air Quality*, and EIR Appendix D, mitigated Project construction-source air quality impacts would be less-than-significant, and by SCAQMD criteria, not cumulatively considerable. The potential for Project construction-source emissions to result in or cause cumulatively significant air quality impacts is therefore considered less-than-significant.

#### 5.2.2.2 Operational-Source Air Quality Impacts

Compliance with existing regulations and application of mitigation measures proposed in this EIR would act to minimize the Project's operational-source pollutant emissions levels. However, no feasible mitigation measures exist which would reduce these impacts to levels that are less-than-significant. Even with application of mitigation, Project operational-source nitrogen oxide ($NO_x$) emissions would exceed applicable SCAQMD regional thresholds. By SCAQMD criteria, cumulative impacts in these regards are similarly considered significant. Operational-source $NO_x$ emissions regional threshold exceedances are therefore determined to be individually significant and cumulatively considerable.

#### 5.2.2.3 Non-Attainment Impacts

The Project is located within ozone and $PM_{10}/PM_{2.5}$ non-attainment areas ($NO_x$ is a precursor to ozone and $PM_{10}/PM_{2.5}$). Over the life of the Project, operational-source $NO_x$ emissions exceedances would result in a cumulatively considerable net increase in criteria pollutants (ozone, $PM_{10}$ and $PM_{2.5}$) for which the encompassing region is non-attainment. These are cumulatively significant air quality impacts.

#### 5.2.2.4 Air Quality Management Plan (AQMP) Consistency Impacts

The Project would be consistent with AQMP Consistency Criteria No. 1 and 2, and would therefore not result in cumulatively significant AQMP impacts.

#### 5.2.2.5 CO Hot Spot Impacts

The Project would generate additional vehicular traffic, and therefore would generate mobile source emissions that could cause or contribute to adverse CO concentrations (CO "hot spots"). Potential CO hot spot impacts were evaluated in the Project Air Quality Impact Analysis (EIR Appendix C), and were determined to be less-than-significant. By SCAQMD criteria, less-than-significant CO hot spot impacts at the Project level are not cumulatively considerable.

#### 5.2.2.6 Toxic Air Contaminants (TACs) Emissions Impacts

***Background***

The South Coast Air Quality Management District (SCAQMD)[2] has conducted an analysis of the cumulative effects of Toxic Air Contaminants (TACs) within the South Coast Air Basin (Basin). This cumulative analysis, *Draft Final Report*, *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV)* (SCAQMD) April 2015, expresses cumulative TAC impacts in terms of potential increased cancer risks.[3] MATES-IV modeling predicts an excess cancer risk of 522.63 in one million for the Project area. [4] DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68% of the total risk shown in MATES-IV.

The SCAQMD has established a significance threshold for incremental project-level TAC impacts. Specifically, if a given project would generate TACs resulting in or causing an increase in cancer risks of 10 or more incidents per million population, that project's incremental cancer risk would be considered significant. This same significance threshold (10 in one million) is applied by SCAQMD in determining whether a given project-source contribution to ambient TAC-source cancer risks is cumulatively considerable. The SCAQMD has not however established a significance threshold for ambient cumulative TAC impacts affecting the Basin. Likewise, the City of Moreno Valley (the Lead Agency) has no adopted cumulative TAC impacts significance threshold.

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[2] SCAQMD is the Responsible Agency providing guidance on applicable air quality analysis methodologies and air quality-related issues.

[3] Cancer risk refers to the probability of contracting cancer associated with exposure to a substance. It is expressed as the chance per million of a cancer case occurring. A risk of one per million, for example, would mean that in a population of one million individuals exposed over a 70-year lifetime, one additional cancer case would be expected.

[4] "MATES IV-Multiple Air Toxics Exposure Study." *South Coast Air Quality Management District*. South Coast Air Quality Management District, n.d. Web. 28 Feb. 2016. Localized background TAC-source cancer risk estimates are extrapolated from TAC monitoring data collected at 10 fixed sites within the South Coast Air Basin. *MATES-IV* extrapolates cancer risk levels throughout the Basin at 1.25 mile by 1.25 mile grids.

Absent an established threshold for cumulative TAC impacts, the following discussion assesses whether, in the light of other available existing information, the ambient cumulative TAC-source impacts affecting the Basin and the area encompassing the Project site could be characterized as significant.

Comparing the Study Area ambient cumulative TAC-source cancer risk (522.63 per million) to the SCAQMD's established threshold for project-level TAC-source cancer risks (10 in one million), the ambient cumulative TAC-source cancer risk is approximately 52.3 times greater than the incremental risk at which project-level TAC-source cancer risks would be considered significant.

Although there is not yet an established significance threshold for ambient cumulative TAC impacts, given the magnitude by which the ambient cumulative condition exceeds SCAQMD's established project-level significance threshold (ambient cumulative TAC conditions are 52.3 times greater than the project-level threshold), the ambient cumulative condition would likely exceed whatever significance threshold may be established for cumulative impacts affecting the Basin. On this basis, and absent a prevailing threshold adopted by the Lead or Responsible Agency, ambient cumulative TAC impacts are presumed to be significant.

***Related Projects Contribution to Cumulative TAC Impacts***

In addition to the *MATES-IV* cumulative TAC-source cancer risk noted above, other new or proposed potential TAC-generating projects (related projects) in the Study Area could contribute to cumulative TAC impacts. These related projects, due to their recency and/or tentative nature, are not reflected in the cumulative TAC impacts identified in the *MATES-IV* study.

In consultation with the Lead Agency, related TAC-generating projects located within a one-quarter mile radius of the Project were identified and are reflected in this cumulative TAC analysis. The one-quarter mile radius encompassed within the cumulative TAC analysis reflects CARB and South Coast District analyses indicating an 80-percent drop-off in TAC concentrations at approximately 1,000 feet from the TAC source under

consideration (California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.) Beyond 1,000 feet, the TAC emissions would be reduced and diffused such that they would not substantively and discernibly contribute to or interact with TAC emissions from other distinct sources. The one-quarter mile (1,320 feet) Study Area radius employed in the Project HRA therefore encompasses and extends beyond the distance at which related projects would generate TACs that would likely interact with TACs generated by the proposed Indian Street Commerce Center Project. The related projects listed below were selected based on their propensity to generate TACs that would contribute to, or interact with, TACs generated by the Project.

- PA 06-0152 & PA 06-0153 (First Park Nandina I & II) (483,767 square feet of high-cube warehouse);
- First Inland Logistics Center (400,130 square feet of high-cube warehouse);
- PA 09-0004 (Vogel) & Sares Regis (2,400,000 square feet of high-cube warehouse);
- First Nandina Logistics Center (1,450,000 square feet high-cube warehouse);
- First Park Nandina III & Moreno Valley Commerce Park (1,046,282 square feet of high-cube warehouse);
- IDS/Real Estate Group - Nandina Distribution Center (697,000 square feet of high-cube warehouse);
- Moval Assemblage (459,945 square feet of high-cube warehouse);
- SP 341; PP 21552 (Majestic Freeway Business Center) (6,100,715 square feet of high-cube warehouse);
- PP 20699 (Oleander Business Park) (1,206,710 square feet of warehouse);
- 05-0113 (IDI) (1,750,000 square feet of high-cube warehouse);
- P 07-09-0018 (170,000 square feet of warehouse);
- P 05-0411 (Concrete Batch Plant) (2,000 square feet of manufacturing);
- P 04-0343 (41,650 square feet of warehouse);
- PM 34199 & DPR 05-0387 & DPR 05-0452 & TPM 34697 & DPR 06-0396 (103,754 square feet of general light industrial use and 191,023 square feet of warehouse); and
- Integra Pacific Industrial Facility (880,000 square feet of high-cube warehouse).

***Project Contribution to Cumulative TAC Impacts***

Project-source TACs would incrementally increase the background cancer risk by a maximum of 0.47 incidents per million population. The applicable SCAQMD significance threshold for Project-level TAC-source cancer risk impacts is 10 incidents per million population. Similarly, SCAQMD significance thresholds state that project contributions to cumulative TAC-source cancer risks would be cumulatively considerable if greater than 10 incidents per million population would occur. The 0.47 incidents per million population increment resulting from the Project is therefore not significant, nor cumulatively considerable.

***Study Area Cumulative TAC Impacts***

To provide context for and quantify cumulative TAC effects within the Study Area, the Project TAC-source cancer risk was added to the total background risk derived from the *MATES-IV* study, yielding a maximum potential cumulative TAC-source risk affecting the Study Area. As indicated at Table 5.2-4, the maximum potential cumulative cancer risk within the Study Area is estimated at 839.36 incidents per million.

**Table 5.2-4**
**Study Area Cumulative Cancer Risk**

| Cumulative Impact Scenario | Risk Sources | | | Maximum Cumulative Risk |
|---|---|---|---|---|
| | Background TACs | Related Projects TACs | Project TACs | |
| | Cancer Risk Per Million Population | | | |
| Ambient Cumulative Impact | 522.63 | --- | --- | **522.63** |
| Cumulative Impact With Project Alone | 522.63 | --- | 0.47 | **523.10** |
| Cumulative Impact With Project and Related Projects | 522.63 | 316.26 | 0.47 | **839.36** |

**Source:** *Indian Street Commerce Center Mobile Source Diesel Health Risk Assessment, City of Moreno Valley, California* (Urban Crossroads, Inc.) July 7, 2016.
**Notes:** Background TAC risk from: *MATES-IV Carcinogenic Risk Interactive Map* http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv

The *MATES-IV* ambient cumulative TAC impact represents approximately 62.3 percent of the total cumulative impact identified at Table 5.2-4; and due to its magnitude when

compared to project-level TAC impact significance thresholds, is presumed to be cumulatively significant. The Project would incrementally contribute to this presumably significant cumulative impact. However, the Project's maximum incremental contribution of 0.47 incidents per million population does not exceed, or even approach the established SCAQMD threshold (10 incidents per million population) at which project-level TAC contributions would be determined cumulatively considerable. On this basis, Project TAC emissions impacts are not considered cumulatively considerable. Please refer also to the Project Air Quality Impact Analysis (AQIA) and Project Health Risk Analysis (HRA) presented at EIR Appendix C.

### 5.2.3 Cumulative Impacts Related to Greenhouse Gas Emissions/Global Climate Change

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be evaluated in the context of CEQA's requirements for cumulative impacts analysis (*CEQA Guidelines* Section 15130(f)). In this regard, the Project Greenhouse Gas (GHG) Analysis (EIR Appendix D) is by its nature a cumulative analysis.

As demonstrated in the Project Greenhouse Gas Analysis and the information presented at EIR Section 4.3, *Global Climate Change and Greenhouse Gas Emissions*, the Project would generate GHG emissions exceeding the City's threshold condition of 10,000 MTCO2e/year. On this basis, Project GHG emissions would be cumulatively considerable and significant. Further, the Project GHG analysis demonstrates that Project GHG emissions would not conform to GHG emissions reductions target established under AB32, and on this basis, Project GHG emissions would also be cumulatively considerable and significant.

***Mitigation***

EIR Section 3.0, *Project Description*, 3.4.10, *Energy Efficiency/Sustainability* (excerpted below) summarizes features and attributes that would act to reduce Project GHG emissions.

### 3.4.10 Energy Efficiency/Sustainability

Energy-saving and sustainable design features and operational programs would be incorporated into all facilities developed pursuant to the Project. Notably, the Project in total would provide sustainable design features necessary to achieve a "Certified" rating under the United States Green Building Council's Leadership in Energy & Environmental Design (LEED) programs. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City. All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

    - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

    - Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by

consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy).[5] Development proposals within the Project site would also be required to implement the following:

  - Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

  - U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

[5] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

The above design features and operational programs would act to generally reduce Project GHG emissions from area sources, energy sources, and other on-site emissions sources which combined, account for approximately 11 percent of the Project total GHG emissions.

The remaining approximately 89 percent of Project GHG emissions are attributable to mobile sources. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project mobile-source GHG emissions. Mobile source emissions sources are regulated by CARB and USEPA. As summarized at EIR Section 4.2, *Air Quality*, 4.2.5, *Regional Air Quality Trends*, as the result of CARB and USEPA actions, Basin-wide vehicular-source emissions (including attendant GHG Emissions) have been reduced dramatically over the past years and are expected to further decline as clean vehicle and fuel technologies improve. Future CARB and USEPA actions could be expected to have a positive effect on Project-related vehicular-source emissions, resulting in incremental reductions in coincident vehicular-source GHG emissions when compared to GHG emissions estimates presented here. No further feasible measures are available that would substantively mitigate the Project's GHG emissions.[6]

Based on the preceding discussions, the Project's GHG emissions impacts are considered cumulatively significant and unavoidable.

[6] It is noted further, that in developing the 10,000 MTCO2e/year significance threshold for industrial uses, SCAQMD specifically excluded GHG emissions from mobile sources. If this same protocol was employed here rather than the conservative approach taken, Project GHG emissions would total less than 1,400 MTCO2e/year; substantively less than the 10,000 MTCO2e/year significance threshold employed by SCAQMD.

### 5.2.4 Cumulative Impacts Related to Noise

#### 5.2.4.1 Construction-Source Noise

Project construction-source noise levels received at nearby properties would conform to City noise standards, and would therefore be less-than-significant. Further, as indicated at Table 5.2-5, Project construction-source noise in combination with ambient noise would not result in cumulatively significant noise impacts. At the nearest sensitive receptor (Receptor R1), the received peak Project construction-source noise levels (47.7 dBA) when added to ambient conditions (64.0 dBA daytime average) would temporarily increase ambient noise levels by approximately 0.1 dBA and would not be discernible against background conditions. Nor would the addition of Project construction-source noise to ambient noise conditions at any receptor result in or cause and exceedance of acceptable noise standard(s).

**Table 5.2-5**
**Cumulative Effects of Construction-Source Noise**

| Receptor Location | Ambient Daytime Average Hourly Noise Level (dBA Leq) | Maximum Received Construction-Source Noise Level (dBA Leq) | Cumulative Noise Level (dBA Leq) | Project Contribution to Cumulative Noise Level (dBA Leq) |
|---|---|---|---|---|
| R1 | 64.0 | 47.7 | 64.1 | 0.1 |
| R2-R3 | 57.4 | 43.0 | 57.6 | 0.2 |
| R4-R5 | 57.1 | 43.5 | 57.3 | 0.2 |

**Sources**: *Indian Street Commerce Center Noise Impact Analysis* (Urban Crossroads, Inc.) June 23, 2016; Applied Planning, Inc.
"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m. Noise levels rounded to nearest tenth dBA.

#### 5.2.4.2 Operational-Source Noise

*Operational-Source Noise - Stationary/Area Sources*

Noise generated by Project stationary/area sources received at nearby properties would conform to City noise standards, and would therefore be less-than-significant.

Further, as indicated at Table 5.2-6, noise generated by Project stationary/area sources in combination with ambient noise would not result in cumulatively significant noise impacts. At the nearest sensitive receptor (Receptor R1), the received peak noise levels

from Project area/stationary sources (31.4 dBA) when added to ambient conditions (64.0 dBA daytime average; 62.9 dBA nighttime average) would not, within the limits of practical measurement, affect ambient noise levels. Nor would the addition of Project construction-source noise to ambient noise conditions at any receptor result in or cause an exceedance of acceptable noise standard(s).

**Table 5.2-6**
**Cumulative Effects of Operational-Source Noise**

| Receptor Location | Ambient Daytime Average Hourly Noise Level (dBA Leq) | Ambient Nighttime Average Hourly Noise Level (dBA Leq) | Maximum Received Operational-Source Noise (dBA Leq) | Cumulative Noise Level (dBA Leq) | Project Contribution to Cumulative Noise Level (dBA Leq) |
|---|---|---|---|---|---|
| R1 | 64.0 | 62.9 | 31.4 | 62.9—64.0 | --- |
| R2-R3 | 57.4 | 57.2 | 28.9 | 57.2—57.4 | --- |
| R4-R5 | 57.1 | 56.5 | 29.2 | 56.5—57.1 | --- |

Sources: *Indian Street Commerce Center Noise Impact Analysis* (Urban Crossroads, Inc.) June 23, 2016; Applied Planning, Inc.
"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

*Operational-Source Noise - Traffic*

Cumulative effects of vehicular-source (traffic) noise are demonstrated by comparing noise levels under Existing (2015) Conditions to noise levels with the Project Opening Year (2020) Conditions.

When considering the cumulative effects of vehicular-source noise, the City's 65 dBA CNEL standard reflected in the City General Plan is defined as the maximum acceptable ambient condition. When ambient noise conditions are within acceptable parameters (65 dBA CNEL) and cumulative effects of vehicular-source noise would exceed 65 dBA CNEL, cumulative increases in ambient conditions could adversely affect area land uses, and land/use noise compatibility standards may not be maintained. Cumulative vehicular-source noise that would cause ambient conditions to exceed 65dBA CNEL would, on this basis, be considered potentially significant.

If, however, ambient baseline conditions already exceed minimum acceptable standards, subsequent increases in noise levels may be considered cumulatively

significant as they would contribute to already deficient conditions. Neither the City nor the State have established a quantified incremental increase in noise levels that could be considered cumulatively significant where ambient conditions may already be considered unacceptable. Federal guidance in this regard is provided by the Federal Interagency Committee on Noise (FICON).[7] FICON guidance facilitates assessment of project-generated increases in noise levels that take into account ambient noise conditions. FICON guidance was specifically developed to assess aircraft noise impacts. Notwithstanding, this guidance is broadly relevant to all environmental analyses addressing the perceived effects of noise. Germane to the analysis presented herein, FICON guidance indicates that when ambient noise conditions are at or above normally acceptable standards, increases in noise of 1.5 dBA or greater would contribute to existing deficiencies, potentially resulting in increased community annoyance, citizen complaints, and potential litigation.

FICON guidance, as applied within this analysis, would indicate that when ambient conditions equal or exceed the City's maximum acceptable standards for vehicular sources (65 dBA CNEL), cumulative increases of 1.5 dBA or greater in ambient conditions could result in increased community annoyance, citizen complaints, and potential litigation. For the purposes of this analysis then, when cumulative ambient noise conditions equal or exceed maximum acceptable standards for vehicular sources (65 dBA CNEL), cumulative noise increases of 1.5 dBA or greater would be cumulatively significant, and Project noise that would contribute 1.5 dBA or more to cumulative noise conditions would be cumulatively considerable. Cumulative traffic vehicular-source noise impacts and Project contributions to cumulative vehicular-source noise impacts are summarized at Table 5.2-7.

[7] *Federal Agency Review of Selected Airport Noise Analysis* (Federal Interagency Committee on Noise) 1992.

**Table 5.2-7**
**Cumulative Traffic Noise Impacts**

| Roadway | Segment | 2015 CNEL at 100 Feet (dBA)* | | | 2020 CNEL at 100 Feet (dBA)* | | | Cumulative Increase 2015 w/o Project– 2020 w/Project |
|---|---|---|---|---|---|---|---|---|
| | | No Project | With Project | Project Addition | No Project | With Project | Project Addition | |
| Indian St. | n/o Grove View Rd. | 78.9 | 78.9 | 0.0 | 83.0 | 83.0 | 0.0 | 0.0 |
| ***Indian St.*** | ***s/o Grove View Rd.*** | ***79.4*** | ***80.0*** | ***0.6*** | ***82.2*** | ***82.5*** | ***0.3*** | ***2.6*** |
| ***Indian St.*** | ***s/o Driveway 1*** | ***79.0*** | ***79.6*** | ***0.6*** | ***82.0*** | ***82.3*** | ***0.3*** | ***3.3*** |
| ***Indian St.*** | ***n/o Harley Knox Blvd.*** | ***79.4*** | ***79.9*** | ***0.5*** | ***81.8*** | ***82.1*** | ***0.3*** | ***2.7*** |
| Nandina Av. | w/o Indian St. | 75.5 | 75.5 | 0.0 | 76.7 | 76.7 | 0.0 | 1.2 |
| ***Nandina Av.*** | ***e/o Indian St.*** | ***73.6*** | ***73.7*** | ***0.1*** | ***75.7*** | ***75.8*** | ***0.1*** | ***2.1*** |
| Harley Knox Blvd. | w/o I-215 NB Ramps | 77.8 | 78.3 | 0.5 | 80.4 | 80.7 | 0.3 | 1.3 |
| ***Harley Knox Blvd.*** | ***e/o I-215 NB Ramps*** | ***78.9*** | ***79.3*** | ***0.4*** | ***81.6*** | ***81.8*** | ***0.2*** | ***2.9*** |
| ***Harley Knox Blvd.*** | ***w/o Patterson Av.*** | ***78.9*** | ***79.3*** | ***0.4*** | ***81.6*** | ***81.8*** | ***0.2*** | ***2.9*** |
| ***Harley Knox Blvd.*** | ***w/o Webster Av.*** | ***78.6*** | ***79.0*** | ***0.4*** | ***81.4*** | ***81.6*** | ***0.2*** | ***3.0*** |
| ***Harley Knox Blvd.*** | ***w/o Indian St.*** | ***79.4*** | ***79.7*** | ***0.3*** | ***81.8*** | ***82.0*** | ***0.2*** | ***2.6*** |
| ***Harley Knox Blvd.*** | ***e/o Indian St.*** | ***75.4*** | ***75.5*** | ***0.1*** | ***77.4*** | ***77.4*** | ***0.0*** | ***2.0*** |

**Source:** *Indian Street Commerce Center, Noise Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) June 23, 2016.
**Notes:** *May not sum to total due to rounding.

As indicated at Table 5.2-7, the total cumulative noise increase along roadways within the Study Area over the considered 5-year cumulative timeframe would range from 0.0 dBA CNEL to 3.3 dBA CNEL. Study Area roadway segments affected by cumulatively significant vehicular-source noise impacts are indicated by ***bold italicized text***. Along these roadway segments, the ambient noise levels already exceed 65 dBA CNEL and cumulative increases in the ambient conditions noise of 1.5 dBA CNEL or greater would occur. Along these segments, vehicular-source noise increases from Existing (2015) Conditions to Opening Year (2020) Conditions would be potentially cumulatively significant.

In all instances, the potentially significant cumulative vehicular-source noise impacts identified at Table 5.2-7 would occur irrespective of the Project, and the Project's incremental contributions would be less than 1.5 dBA, and would therefore not be cumulatively considerable. Nor would Project vehicular-source noise contributions to

cumulative noise levels cause or result in a transition from below 65 dBA CNEL to above 65 dBA CNEL. On this basis, the Project's vehicular-source noise impacts are not cumulatively considerable.

The Project is consistent with land uses and development anticipated by the City of Moreno Valley General Plan, and evaluated in the City of Moreno Valley General Plan EIR. The General Plan EIR by its nature addresses cumulative impacts associated with buildout of the City, including potential cumulative noise impacts. In this regard, the General Plan EIR at Section 5.4, *Noise* concludes that future development of the City consistent with the General Plan, to include development-specific noise impact analyses and associated mitigation where necessary, would result in less-than-significant noise impacts.

**Summary**

Project construction-source noise levels would be less-than-significant, and would not be cumulatively considerable. Project stationary/area-source noise impacts would also be less-than-significant and not cumulatively considerable. Noise increases along certain roadway segments within the Study Area would be cumulatively significant over the time frame 2015 to 2020; however, these impacts would occur irrespective of the Project, and the Project's contributions to these impacts would be less than 1.5 dBA CNEL, and therefore not cumulatively considerable. The General Plan EIR concludes that development that is consistent with the General Plan and that complies with analytic performance standards and policies outlined in the General Plan, would result in less-than-significant cumulative noise impacts. The Project comports with qualifying conditions outlined in the General Plan and General Plan EIR, and would therefore not contribute considerably to potential cumulative noise impacts.

### 5.2.5 Cumulative Impacts Related to Hazards and Hazardous Materials

For the purposes of this analysis, the cumulative impact area when considering potential hazards and hazardous materials issues generally includes the area to be developed within the Project site, as well as off-site locations that might be affected by or contribute to hazards or hazardous conditions resulting from the Project and its

operations. These areas generally include neighboring properties within the City of Moreno Valley. The cumulative hazards and hazardous materials impact analysis evaluates effects of the Project construction and operations, and reflects long-term buildout conditions within the cumulative impact area.

As substantiated at EIR Section 4.5, *Hazards/Hazardous Materials* development and operation of land uses within the Project site would not create, or result in exposure to potentially significant hazardous conditions. Further, the Project would not be adversely affected by any hazards or hazardous conditions associated with MARB/Inland Port Airport (Airport); nor would the Project result in or cause hazards or hazardous conditions that would adversely affect the Airport or its operations.

The Project does not propose uses or activities that would require substantive handling or use of hazardous materials, hazardous substances, or hazardous waste that could result in potential adverse effects. To the extent that such materials or substances may be present during Project construction or operations they would be transported, stored, used and disposed of consistent with the multiple and broad regulatory requirements.

Further, the Project represents buildout of the site consistent with land uses envisioned under the City of Moreno Valley General Plan and as evaluated in the City of Moreno Valley General Plan EIR. The General Plan EIR by its nature addresses cumulative impacts associated with buildout of the City, including potential cumulative hazards/hazardous materials impacts. In this regard, the General Plan EIR at Section 5.5, *Hazards* concludes that future development of the City consistent with the General Plan would result in less-than-significant hazard/hazardous materials impacts. On this basis, the General Plan EIR substantiates that development of the Project would not contribute considerably to potential cumulative hazards/hazardous materials impacts.

**Summary**

As substantiated in the preceding discussions, the Project's potential contribution to hazards/hazardous materials impacts is not considerable, and the cumulative effects of the Project are less-than-significant. The General Plan EIR concludes that development

that is consistent with the General Plan would result in less-than-significant cumulative noise impacts. The Project comports with qualifying conditions outlined in the General Plan and General Plan EIR, and would therefore not contribute considerably to cumulative hazards/hazardous materials impacts.

Based on the preceding discussion, the Project's potential contribution to cumulative hazards/hazardous materials impacts is not considerable, and the cumulative effects of the Project are less-than-significant.

### 5.2.6 Cumulative Impacts Related to Hydrology/Water Quality

The area encompassed within the jurisdictional Regional Water Quality Control Board (RWQCB); in this case, the Santa Ana Regional Water Quality Control Board (SARWQCB), defines the cumulative impact area for hydrology/water quality impact considerations. Local oversight addressing hydrology/water quality impact considerations is provided by the City of Moreno Valley and Riverside County.

Development of the Project site would incrementally increase impervious surfaces within the cumulative impact area, with related potential increases in the rate and quantity of local stormwater discharges. As summarized at EIR Section 4.6, and presented in detail within the Project Drainage Study, (EIR Appendix G), the Project incorporates those stormwater management components, including drainage facilities, stormwater retention basins, and structural and non-structural Best Management Practices, which collectively act to ensure that post-development stormwater discharge rates are adequately conveyed within available system capacities.

The Project bio-retention basins (basins) would act to attenuate stormwater discharge volumes and rates of runoff during minor storm events comparable to pre-development conditions. The basins have been designed consistent with the Riverside County Low Impact Development Design BMP Handbook and the City's Water Quality Basin Civil Design Guidelines.

The Project basins provide storage capacities surpassing the required design stormwater volume capacity. Stormwater discharge volumes exceeding the basin capacities would be conveyed via the on-site storm drain system to the existing Master Drainage Plan (MDP) 6-foot high by 10-foot wide reinforced concrete box storm drain located in abutting Indian Street. This MDP storm drain has been designed and constructed pursuant to the *Perris Valley MDP*, and in anticipation of stormwater discharges resulting from areawide development such as that proposed by the Project. The existing Indian Street storm drain has adequate capacity to accept and convey 100-year Project stormwater flows to the Perris Valley Storm Drain Channel. Because the Project is consistent with, and is anticipated by the *Perris Valley MDP*, the Project would not result in exceedance of available storm drain capacities or flooding due to the introduction of substantial, unanticipated stormwater flows. In this manner, the Project's contributions to cumulative stormwater discharges are limited consistent with available stormwater system capacities, and the Project's contributions would not be cumulatively considerable.

The Project would implement stormwater quality treatment facilities and programs consistent with requirements and policies identified in the September 2011 RCFCWCD *Design Handbook for Low Impact Development Best Management Practices* (LID BMPs) and within the *Riverside County SARQWCB Basin Plan* (Basin Plan). The Project LID BMPs and the Basin Plan, as implemented, act to ensure that cumulative water quality impacts within the SARQWCB jurisdictional area are less-than-significant.

Further, the Project represents buildout of the site consistent with land uses envisioned under the City of Moreno Valley General Plan and as evaluated in the City of Moreno Valley General Plan EIR. The General Plan EIR by its nature addresses cumulative impacts associated with buildout of the City, including potential Hydrology/Water Quality cumulative impacts. In this regard, the General Plan EIR at Section 5.7, *Hydrology/Water Quality* concludes that future development of the City consistent with the General Plan and in compliance with NPDES, RCFCWCD, and RWQCB as would occur under the Project, would result in less-than-significant hydrology/water quality

impacts. On this basis, the General Plan EIR substantiates that development of the Project would not result in cumulatively significant hydrology/water quality impacts.

**Summary**

The Project would comply with established stormwater management policies and regulations including, but not limited to provisions of the RCFCWCD Design Handbook for LID BMPs, and the SARQWCB Basin Plan. Regulatory and policy compliance, complemented by implementation of Project-specific stormwater management components, reduces the Project's potential contribution to cumulative hydrology/water quality impacts to levels that are not cumulatively considerable. Further, the General Plan EIR concludes that development that is consistent with the General Plan would result in less-than-significant cumulative hydrology/water quality impacts. The Project comports with qualifying conditions outlined in the General Plan and General Plan EIR, and would therefore not contribute considerably to cumulative hydrology/water quality impacts.

Based on the preceding discussion, the Project's potential contribution to cumulative hydrology/water quality impacts is not considerable, and the cumulative effects of the Project are less-than-significant.

### 5.2.7 Cumulative Impacts Related to Biological Resources

The cumulative impact areas for biological resources are generally defined by available habitat, species' range(s), physical constraints, and other limiting factors as discussed within the Project Biological Survey, EIR Appendix H. Biological resources occurring, or potentially occurring within the Project site, and any related potentially significant impacts and mitigation are summarized below.

**Sensitive Plant Communities and Species**

The Project site is heavily disturbed, and comprises undeveloped fields dominated by tumbleweed (*Salsola tragus*). A small number of ornamental pines (*Pinus* sp.) and Chinaberry (*Melia azedarach*) trees exist in the southwesterly portion of the Project site. No special interest plant species or areas of native habitat were observed during

surveys of the Project site. Nor do historic records indicate previous occurrence of special interest plant species within the Project site.

The absence of any native habitat, extensive site disturbance, and lack of any historic presence indicate that no special interest plant species exist, or would likely occur on-site. No potentially significant impacts to special status plant species would result from implementation and operation of the Project, and no mitigation is required.

**Wildlife Species**

The Project site provides limited disturbed habitat for wildlife species adapted to a high degree of human presence and development. No special status wildlife species were detected during surveys of the Project site, and none are considered to exist within the Project site. No potentially significant impacts to special status wildlife species would result from implementation and operation of the Project, and no mitigation is required.

**Jurisdictional Areas**

No jurisdictional areas or wetlands occur within the Project site. No potentially significant impacts to jurisdictional areas would result from implementation and operation of the Project, and no mitigation is required.

**Wildlife Movement Corridors**

The Project site is bounded by traveled roadways and developed or developing properties. As such, the site does not represent a connecting link between significant habitat or wildlife areas. Based on its location within an urban context, the potential for the site to function as a significant wildlife movement corridor is considered low. No potentially significant impacts to wildlife movement corridors would result from implementation and operation of the Project, and no mitigation is required.

**Nesting Birds**

The Project site provides limited suitable habitat for ground-nesting birds. Nesting birds are universally protected under provisions of the Migratory Bird Treaty Act (Act). The Project would comply with applicable provisions of the Act as specified in the

mitigation measures presented at EIR Section 4.7, *Biological Resources*. As mitigated, the Project's potential impacts to nesting birds are reduced to levels that are less-than-significant.

The Project is consistent with land uses and development anticipated by the City of Moreno Valley General Plan, and evaluated in the City of Moreno Valley General Plan EIR. The General Plan EIR by its nature addresses cumulative impacts associated with buildout of the City, including potential cumulative biological resources impacts. In this regard, the General Plan EIR at Section 5.9, *Biological Resources* concludes that future development of the City consistent with the General Plan, to include development-specific biological resources investigations and associated mitigation where necessary; and mandated compliance with the Riverside County MSHCP, would result in less-than-significant impacts to biological resources.

**Summary**

Mitigation proposed in the EIR reduces potential impacts to biological resources to levels that are less-than-significant. In this regard, mitigation of Project-specific biological resources impacts would also reduce the Project's potential incremental contributions to cumulative biological resources impacts within the region to levels that are not cumulatively considerable. The General Plan EIR concludes that development that is consistent with the General Plan and that complies with analytic performance standards and policies outlined in the General Plan, would result in less-than-significant impacts to biological resources. The Project comports with qualifying conditions outlined in the General Plan and General Plan EIR, and would therefore not contribute considerably to potential biological resources impacts.

Based on the preceding discussion, the Project's potential contribution to cumulative biological resources impacts is not considerable, and the cumulative effects of the Project are less-than-significant.

### 5.2.8 Cumulative Impacts Related to Cultural Resources/Tribal Cultural Resources

The cumulative impact area for prehistoric, archaeological, historic, and tribal cultural resources generally includes the City of Moreno Valley and surrounding areas. Impacts to any cultural resources or tribal cultural resources within this area would be site-specific. In the event that potentially significant cultural or tribal resources are encountered at any development sites within the cumulative impact area, specific mitigation measures would be applied before construction activities could proceed. Potential impacts to cultural resources and tribal cultural resources are determined to be less-than-significant as mitigated. In this regard, mitigation proposed for the Project (i.e., monitoring of construction activities for potential discovery of cultural resources) is typical of, and consistent with, mitigation required for construction within urban and suburban areas throughout the City of Moreno Valley and surrounding region.

The lead agency has initiated Tribal Cultural Consultation processes pursuant to *AB 52, Gatto. Native Americans: California Environmental Quality Act*. As of the date of this EIR, no potentially significant tribal cultural resources impacts have been identified.

The Project is consistent with land uses and development anticipated by the City of Moreno Valley General Plan, and evaluated in the City of Moreno Valley General Plan EIR. The General Plan EIR by its nature addresses cumulative impacts associated with buildout of the City, including potential cumulative cultural resources impacts. In this regard, the General Plan EIR at Section 5.10, *Cultural and Paleontological Resources* concludes that future development of the City consistent with the General Plan, to include development-specific cultural resources investigations and associated mitigation where necessary, would result in less-than-significant impacts to cultural and paleontological resources.

**Summary**

As required by the City, site and development-specific cultural resources investigation has been prepared for the Project. Mitigation proposed in this EIR reduces potential impacts to cultural/tribal resources to levels that are less-than-significant. In this regard, mitigation of Project-specific cultural resources impacts would also reduce the Project's

potential incremental contributions to cumulative cultural resources impacts within the region. Moreover, the General Plan EIR substantiates that development of the Project to include incorporation of mitigation identified herein, would not result in cumulatively significant cultural resources impacts.

Tribal consultation pursuant to AB 52, *Gatto. Native Americans: California Environmental Quality Act* has been initiated by the Lead Agency. As of this writing, no potential impacts to tribal cultural resources have been identified, and Project contributions to potential cumulative Tribal Cultural Resources impacts is therefore not cumulatively considerable.

Based on the preceding discussion, the Project's potential contribution to cumulative cultural resources/tribal resources impacts is not considerable, and the cumulative effects of the Project are determined to be less-than-significant.

## 5.3 ALTERNATIVES ANALYSIS

Pursuant to *CEQA Guidelines* §15126.6, an EIR must describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain the Project objectives, but would avoid or substantially lessen any of the significant environmental effects of the proposal. As further presented in the *CEQA Guidelines*, an EIR need not consider every conceivable alternative, but rather, the discussion of alternatives and their relative merits and impacts should be provided in a manner that fosters informed decision-making and public participation. To this end, the *CEQA Guidelines* indicate that the range of alternatives selected for examination in an EIR should be governed by "rule of reason," and requires the EIR to set forth only those alternatives necessary to permit an informed decision. Consistent with the provisions of the *CEQA Guidelines*, the following analysis presents alternatives to the Project that would potentially lessen its environmental effects while allowing for attainment of Project Objectives.

### 5.3.1 Alternatives Overview

Descriptions of, and the rationale underlying, the alternatives considered in this EIR are presented below. As provided for under CEQA, the ultimate rationale underlying the development and selection of alternatives to the Project is the reduction or avoidance of otherwise resulting significant environmental impacts, while allowing for attainment of the basic Project Objectives. Alternatives considered within this analysis include:

- CEQA-mandated "No Project" Alternative;
- Alternative Sites;
- "No Threshold Exceedance" Alternative for Significant Traffic Impacts;
- "No Threshold Exceedance" Alternative for Significant Air Quality Impacts; and
- Reduced Intensity Alternative-Indian Street Commerce Center Land Uses.

Please refer also to Section 5.3.2, *Description of Alternatives*. To provide context for the subsequent consideration of Alternatives, significant Project impacts are summarized at Table 5.3-1, and the Project Objectives are restated subsequently.

**Table 5.3-1**
**Summary of Significant and Unavoidable Impacts**

<table>
<tr><th>Environmental Consideration</th><th>Comments</th></tr>
<tr><td>Traffic</td><td></td></tr>
<tr><td></td><td>The Project would construct, or pay required fees toward, completion of all necessary Study Area transportation/traffic system improvements. At the significantly-impacted locations noted below, the Project cannot feasibly construct the required improvements, and/or payment of fees would not assure their timely completion.<br><u>Cumulatively Significant Impacts</u><br><br>Intersections<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following intersections are considered cumulatively significant and unavoidable:<br><br>
<table>
<tr><th>Intersection ID No.</th><th>Intersection Location</th></tr>
<tr><td>1</td><td>I-215 SB Ramps/Harley Knox Blvd.</td></tr>
<tr><td>2</td><td>I-215 NB Ramps/Harley Knox Blvd.</td></tr>
<tr><td>3</td><td>Western Way / Harley Knox Blvd.</td></tr>
<tr><td>4</td><td>Patterson Ave. / Harley Knox Blvd.</td></tr>
<tr><td>7</td><td>Indian St. / Grove View Rd.</td></tr>
</table>
</td></tr>
</table>

## Table 5.3-1
## Summary of Significant and Unavoidable Impacts

| Environmental Consideration | Comments |
|---|---|

| | |
|---|---|
| | 10 Indian St. / Harley Knox Blvd. |

*Roadway Segments*

Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following roadway segments are considered cumulatively significant and unavoidable:

| Roadway Segment ID No. | Roadway | Segment Limits |
|---|---|---|
| 2 | Harley Knox Blvd. | I-215 NB Ramps to Western Way |
| 3 | Harley Knox Blvd. | East of Western Way |
| 4 | Harley Knox Blvd. | West of Patterson Ave. |
| 9 | Indian St. | South of Nandina Ave. |
| 10 | Indian St. | North of Grove View Rd. |
| 11 | Indian St. | South of Grove View Rd. |

*Freeway Facilities*

The Project's incremental contributions to Opening Year Cumulative traffic impacts at or affecting the following freeway facilities are considered cumulatively significant and unavoidable:

| | Freeway Segment |
|---|---|
| 1 | I-215, Northbound, University Avenue to Martin Luther King Boulevard |
| 2 | I-215, Northbound, Box Springs Road to SR-60/I-215 Freeway |
| 3 | I-215, Northbound, Eucalyptus Avenue to Alessandro Boulevard |
| 4 | I-215, Northbound, Ramona Expressway to Nuevo Road |
| 5 | I-215, Southbound, Eucalyptus Avenue to Alessandro Boulevard |
| 6 | I-215, Southbound, Ramona Expressway to Nuevo Road |
| 7 | SR-91, Westbound, Riverwalk Parkway to Magnolia Avenue |

| | |
|---|---|
| **Air Quality** | |
| | **<u>Project-Specific Significant Impacts</u>**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Even after compliance with South Coast Air Quality Management District (SCAQMD) rules and regulations, and the application of EIR mitigation measures, operational pollutant emissions would exceed applicable SCAQMD regional emission thresholds for $NO_x$. These impacts are therefore individually significant.<br><br>**<u>Cumulatively Significant Impacts</u>**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Project-specific operational-source $NO_x$ emissions exceedances are cumulatively significant over the life of the Project. |

**Table 5.3-1**
**Summary of Significant and Unavoidable Impacts**

| Environmental Consideration | Comments |
|---|---|
| | **Non-Attainment Area Impacts**<br>Project operational source $NO_x$ emissions exceedances ($NO_x$ is an ozone precursor; $NO_x$ is also a $PM_{10}/PM_{2.5}$ precursor), in combination with $NO_x$ emissions generated by other sources affecting the SCAB ozone and $PM_{10}/PM_{2.5}$ non-attainment areas, would result in a cumulatively considerable net increase in ozone and $PM_{10}/PM_{2.5}$ within the non-attainment areas. These are cumulatively significant impacts. |
| **Greenhouse Gases/Global Climate Change** | |
| | **Project-Specific Impacts**<br>Project GHG emissions would individually exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City. Project GHG emissions would also not conform to State GHG emissions reductions targets established under AB32.<br><br>**Cumulatively Significant Impacts**<br>Project-specific GHG emissions exceedances would be cumulatively considerable in the context of existing GHG emissions levels and GHG emissions that would be generated by other known or probable GHG emissions sources. |

## PROJECT OBJECTIVES

The primary goal of the Project is to develop high quality light industrial/business park uses accommodating a variety of prospective tenants. Complementary Project Objectives include the following:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs;
- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision;
- Provide adequate roadway and wet and dry utility infrastructure to serve the Project;
- Accommodate warehouse and manufacturing uses that are compatible with adjacent land uses;

- Provide an attractive, efficient and safe environment for warehouse uses that is cognizant of natural and man-made conditions;
- Accommodate a mix of warehouse and manufacturing uses responsive to current and anticipated market demands;
- Establish new development that would increase locally available employment opportunities and would further the City's near-term and long-range fiscal goals and objectives; and
- Establish new development that would increase locally available employment opportunities thereby improving jobs/housing balance within the City.

Please refer also to Draft EIR Section 3.6, *Project Objectives*.

### 5.3.2 Description of Alternatives

Six alternatives to the Project, listed subsequently, are evaluated herein. Descriptions of the selected Alternatives are provided in the following paragraphs.

- CEQA-mandated "No Project" Alternative;
- Alternative Sites;
- "No Threshold Exceedance" Alternative for Significant Traffic Impacts;
- "No Threshold Exceedance" Alternative for Significant Air Quality Impacts; and
- Reduced Intensity Alternative-Indian Street Commerce Center Land Uses.

#### 5.3.2.1 No Project Alternative

**Overview**

The *CEQA Guidelines* specifically require that an EIR include in its evaluation a No Project Alternative. The No Project Alternative should make a reasoned assessment as to future disposition of the subject site should the Project under consideration not be developed. In this latter regard, the *CEQA Guidelines* state in pertinent part:

> If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative

> is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (*CEQA Guidelines*, Section 15126.6 (e)(3)(b)).

**No Project/No Build Alternative**

In this instance, development of the subject site is substantively defined by Moreno Valley Industrial Area Plan (MVIAP). The No Project Alternative would be required to conform to land uses approved for, and overarching performance standards and development regulations established under, the MVIAP. It is therefore considered unlikely that the subject site would remain vacant or in a "No Build" condition. That is, failure to proceed with the Project would not result in preservation of existing environmental conditions, and the practical result of the Project's non-approval would be the development of the subject site with some other variety or configuration of approved Specific Plan land uses.

Any development of the subject site under a No Project Alternative would therefore likely be materially consistent with the Project, though internal land use configurations, development intensities, and specific uses may be realigned within the constraints and allowances of the MVIAP. Environmental impacts resulting from development of the subject site under a No Project Alternative would likely therefore be comparable to those occurring under the Project.

If, however, development of the subject site was significantly delayed by economic, political, or other outside influences, existing environmental conditions would likely prevail, and in most instances, environmental impacts would be reduced when compared to the Project. To provide an analysis differentiated from that presented within the body of this EIR, the No Project Alternative considered herein is assumed to represent a "No Build" condition.

#### 5.3.2.2 Reduced Intensity Alternative

As detailed at EIR Section 4.3, *Global Climate Change and Greenhouse Gas Emissions,* Project GHG emissions would exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City of Moreno Valley. The Project's GHG emissions threshold exceedances constitute individually and cumulatively significant air quality impacts.

More specifically, even after application of all feasible mitigation measures, Project GHG emissions would result in exceedances of applicable City thresholds, as summarized below.

- Project Operational GHG emissions = 12,154.98 MTCO2e/year
  City of Moreno Valley threshold = 10,000 MTCO2e/year
  (City of Moreno Valley threshold = approximately 83 percent of Project Operational GHG emissions)

In order to achieve the 10,000 MTCO2e threshold established by the City, the Project GHG emissions would need be reduced from 12,154.98 MTCO2e/year to less than 10,000 MTCO2e/year; or by approximately 17 percent or greater.

Vehicular sources account for approximately 89 percent of the Project GHG emissions, the remaining 11 percent resulting from various on-site stationary/area sources. In order to achieve meaningful reductions in Project GHG emissions, correlating reductions in Project traffic generation would therefore be required.

Project GHG emissions could be reduced to levels that are less-than-significant through a reduction in the Project scope that would sufficiently reduce vehicular trips and associated vehicular-source GHG emissions. Such a reduction in operational-source emissions would also decrease the Project's contributions to cumulative GHG emissions impacts to levels that are less-than-significant.

**Reduced Intensity Alternative Scoped to Achieve GHG Emissions Threshold**

The Reduced Intensity Alternative considered here would maintain the types and general configurations of land uses proposed under the Project, but would reduce their respective scopes in order to achieve a 17 percent overall reduction in Project GHG emissions. Allowing for a margin of error, and for discussion and analytic purposes, a 20 percent GHG emissions reduction target is established for the Reduced Intensity Alternative. A correlating 20 percent reduction in development scope is assumed. This would achieve the 10,000 MTCO2e threshold established by the City, reducing Project GHG emissions impacts to levels that would be less-than-significant. Table 5.3-2 compares the composition and scope of uses under the Project with the 20 percent reduction in development scope that would occur under the Reduced Intensity Alternative.

**Table 5.3-2**
**Site Development Comparison**
**Project and Reduced Intensity Alternative**

| Land Use | Total Building Area (sf) | |
|---|---|---|
| | **Project** | **Reduced Intensity Alternative** (rounded to 10 sf) |
| General Light Industrial (Mfg.) | 89,270 | 71,420 |
| High Cube Warehouse/Distribution Center | 357,080 | 285,660 |
| **Totals** | **446,350** | **357,080** |

**Sources:** Project land uses- Indian Street Commerce Center Development Concept, January 2016; Reduced Intensity Alternative- Applied Planning, Inc.

#### 5.3.2.3 Alternative Sites Considered and Rejected

As stated in the *CEQA Guidelines* §15126.6 (f)(1)(2)(A), the "key question and first step in [the] analysis [of alternative locations] is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." *CEQA Guidelines* §15126.6 (f) (1) also provides that when considering the feasibility of potential alternative sites, the factors that may be taken into account 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). None of these factors establishes a fixed limit on the scope of reasonable alternatives."

The Project considered herein is not subject to relocation to an alternative site. That is, the Project is in large part defined by its location and implements a portion of the land uses and development approved under the Moreno Valley Industrial Area Plan (MVIAP). At a different location, the development would be something other than the Project considered here. Moreover, relocation of the Project would compromise fundamental Project Objectives to:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs. ***Relocation of the Project elsewhere would likely require amendment to the City General Plan with potentially adverse implications for attainment of General Plan Goals.***

- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision. ***Relocation of the Project elsewhere would not***

***realize development that is consistent with the MVIAP land uses and development concepts, and would not support the MVIAP vision.***

Moreover, in the case of the Project, relocation to an Alternative Site within the City of Moreno Valley would not achieve any substantive reduction in the Project's traffic impacts. That is, implementation of area-serving traffic improvements, including intersection signalization and roadway segment widening as envisioned under the City General Plan Circulation Element is an on-going process undertaken in conjunction with the development of vacant or underutilized properties throughout the City. As such, it is highly unlikely that a suitable Alternative Site could be identified that would distribute Project trips only to roadways that have already been improved to their ultimate Moreno Valley General Plan configurations, thus avoiding the Project's significant impacts at area transportation facilities.

Additionally, improvements necessary to resolve significant cumulative traffic impacts affecting Study Area freeway facilities would occur at, or would require improvement of, Caltrans jurisdictional facilities. Ultimately, planned and programmed improvements to Caltrans facilities would alleviate regionally and locally cumulatively significant impacts, including the Project's contributions to these impacts. Such improvements, however, are beyond the scope and purview of the Lead Agency and the Applicant. If not implemented at the current site, the Project uses would still contribute essentially the same volumes and types of traffic to Caltrans facilities, resulting in significant traffic impacts similar to those of the current Project at its current location; the impacts differentiated principally (if not solely) by their location(s) within the freeway system serving the City.

Regarding criteria pollutant air quality impacts, the Project's operational-source $NO_x$ emissions impacts are regional effects, and location of the Project anywhere within the City, or for that matter, anywhere within the South Coast Air Basin, would result in similarly significant impacts. Relocation of the Project to an alternative site would therefore not substantively reduce the Project's operational-source $NO_x$ emissions impacts.

Similarly, GHG emissions/GCC impacts result from the Project are by definition global in scope, and not location specific. Relocation of the Project to an alternative site within would therefore not substantively reduce the Project GHG emissions impacts.

Based on the preceding considerations, an Alternative Site is not further considered in this Section.

#### 5.3.2.4 "No Threshold Exceedance" Alternative for Significant Traffic Impacts Considered and Rejected

Specific improvements identified in the Project TIA (EIR Appendix B) and summarized at Draft EIR Section 4.1 would provide a physical solution to identified potentially significant cumulative traffic impacts. Project mitigation responsibilities at affected Study Area facilities would be satisfied through fee payments directed to completion of the required improvements. Notwithstanding, Project fee payments would not ensure timely implementation of improvements required as mitigation for potentially significant cumulative traffic impacts, and impacts are therefore considered cumulatively significant and unavoidable pending completion of the required improvements.

Any measurable additional traffic contributed to the above-noted facilities would result in cumulatively significant traffic impacts similar to those occurring under the Project, requiring some manner of currently infeasible mitigation. In that any viable development of the subject site would generate trips likely affecting some or all of the above-referenced facilities, an alternative to the Project developed specifically to alleviate cumulatively significant traffic impacts at Study Area intersections and freeway facilities was not further evaluated. Notwithstanding, the Reduced Intensity Alternative considered herein would act to generally reduce traffic volumes within the Study Area and would likely diminish the magnitude of traffic impacts; but would not avoid cumulatively significant traffic impacts affecting Study Area faculties.

#### 5.3.2.5 "No Threshold Exceedance" Alternative for Significant $NO_x$ Emissions Impacts Considered and Rejected

As presented at EIR Section 4.2, *Air Quality*, Project maximum daily operational-source $NO_x$ emissions would exceed SCAQMD regional thresholds for $NO_x$. The Project's operational-source $NO_x$ emissions threshold exceedances constitute individually and cumulatively significant air quality impacts. Because $NO_x$ is a precursor to ozone and to $PM_{10}/PM_{2.5}$, Project operational-source $NO_x$ emissions exceedances would result in a cumulatively considerably net increase in ozone and $PM_{10}/PM_{2.5}$ within a region designated as non-attainment for ozone and $PM_{10}/PM_{2.5}$.

More specifically, even after application of all feasible mitigation measures, Project operational-source $NO_x$ emissions would result in exceedances of applicable SCAQMD regional thresholds, as summarized below. Maximum impact summer/winter seasonal conditions are reflected in these discussions.

- Total Mitigated Project Operational $NO_x$ emissions = 190.61 pounds per day
  SCAQMD threshold = 55 pounds per day
  (SCAQMD threshold = approximately 29 percent of Project Operational $NO_x$ emissions)

Project operational-source $NO_x$ emissions would need to be reduced from 190.61 pounds per day to less than 55 pounds per day, or by a minimum of 71 percent, in order to achieve the SCAQMD regional threshold for operational-source $NO_x$ emissions.

Vehicular sources account for approximately 98 percent of the Project operational-source $NO_x$ emissions, the remaining 2 percent resulting from various on-site stationary/area sources. In order to achieve meaningful reductions in Project operational-source $NO_x$ emissions, correlating reductions in Project traffic generation would therefore be required.

The Project's operational-source air pollutant $NO_x$ emissions could therefore be reduced to levels that are less-than-significant through a minimum 71 percent reduction in the Project scope; sufficient to reduce vehicular trips and associated vehicular-source $NO_x$ emissions below SCAQMD thresholds. Such a reduction in operational-source emissions would also decrease the Project's contributions to cumulative $NO_x$ air quality impacts to levels that are less-than-significant.

At a 71 percent reduction in scope however, the resulting development would fundamentally not be the Project considered herein; and the Project Objectives would not be realized in any meaningful sense. As such, potential alternatives with the specific goal of avoiding all significant operational-source $NO_x$ emissions impacts resulting from the Project were rejected from consideration, and were not further evaluated. Notwithstanding, in achieving the GHG emissions thresholds for the Project, the Reduced Intensity Alternative considered herein would also act to diminish Project operational source $NO_x$ emissions. Operational-source $NO_x$ emissions exceedances otherwise occurring under the Project would however remain significant and unavoidable.

### 5.3.3 Comparative Impacts of Alternatives

For each environmental topic addressed in the Draft EIR, the alternative analyses present an assessment of comparative impacts. Although significant and unavoidable impacts have not been identified under every EIR topic, the environmental impacts associated with each of the considered Alternatives are described relative to the potential and identified impacts of the Project. At the conclusion of these discussions, Table 5.3-3 summarizes and compares relative impacts of the considered Alternatives.

#### 5.3.3.1 Comparative Traffic/Transportation Impacts

As discussed at EIR Section 4.1, *Transportation/Traffic* at full buildout, implementation of the Project would result in an increase of approximately 1,472 net average daily trips (PCEs) on the Study Area roadway system. Of these additional trips, 158 would occur during the morning peak-hour period, and 167 would occur during the evening peak-hour period.

***No Build Alternative***

Under the No Build Alternative, no additional traffic would be generated and traffic impacts would be reduced when compared to the Project. No mitigation would be required. However, improvements implemented by the Project would also not be realized. Nor would fees be paid toward planned and programmed near-term and long-range traffic improvements within the Study Area. Additionally, cumulatively significant near-term and long-range traffic impacts would persist at the predominance of facilities within the Study Area, with or without implementation of the Project.

***Reduced Intensity Alternative***

Assuming proportional reduction based on the reduced scope of development, the Reduced Intensity Alternative would generate approximately 80 percent of the trips generated by the Project. Based on this reduction in traffic volumes, the Reduced Intensity Alternative might require less extensive traffic improvements, although the reduction in trip generation under this Alternative may not be sufficient to realize any discernible difference in the extent or configuration of required traffic improvements. Proportional fair share fees for these improvements are reduced under the Reduced Intensity Alternative. Under either the Project or Reduced Intensity Alternative, cumulatively significant traffic impacts listed previously at Table 5.3-1 would persist.

#### 5.3.3.2 Comparative Air Quality Impacts

Project construction and operations would generate additional air pollutant emissions. Even with application of mitigation, Project's operational-source $NO_x$ emissions would exceed SCAQMD regional thresholds. These are significant Project-specific and cumulative air quality impacts. Additionally, the Project lies within a region classified as non-attainment for ozone and $PM_{10}/PM_{2.5}$. Project operational-source VOC and $NO_x$ exceedances within the encompassing ozone nonattainment area (VOC and $NO_x$ are ozone precursors) and $PM_{10}/PM_{2.5}$ non-attainment area ($NO_x$ is precursor to $PM_{10}/PM_{2.5}$) would be cumulatively significant.

***No Build Alternative***

Under the No Build Alternative, no construction activities or resultant site development would occur; and additional construction-source and/or operational-source air pollutant emissions would not be generated. Operational-source $NO_x$ exceedances otherwise resulting from the Project would not occur. Air quality impacts in aggregate would be reduced when compared to the Project.

***Reduced Intensity Alternative***

Under the Reduced Intensity Alternative, the duration of site preparation and associated duration and frequency of peak construction-source air pollutant emissions may be reduced. Notwithstanding, the types of and scope of construction equipment used; disturbed acreage; and peak daily air pollutant emissions levels would not be substantively different than would otherwise result from the Project. As with the Project, construction-source air quality impacts would be less-than-significant under the Reduced Intensity Alternative.

The Reduced Intensity Alternative presented here would generally reduce operational source air pollutant emissions otherwise generated by the Project. As with the Project, operational-source $NO_x$ emissions would however exceed applicable regional thresholds, and would be considered individually and cumulatively significant. The Reduced Intensity Alternative's operational-source $NO_x$ exceedances within the encompassing ozone and $PM_{10}/PM_{2.5}$ non-attainment areas would be cumulatively significant. All other air quality impacts, already less than-significant under the Project (e.g., localized criteria pollutant emissions impacts, CO Hot Spots impacts, HRA impacts, and odors impacts) would be diminished under the Reduced Intensity Alternative.

#### 5.3.3.3 Comparative Greenhouse Gas/Global Climate Change Impacts

As demonstrated in the Project Greenhouse Gas Analysis and the information presented at EIR Section 4.3, *Global Climate Change and Greenhouse Gas Emissions*, the Project would generate GHG emissions exceeding the City's threshold condition of 10,000 MTCO2e/year. On this basis, Project GHG emissions would be cumulatively

considerable and significant. Further, the Project GHG analysis demonstrates that Project GHG emissions would not conform to GHG emissions reductions target established under AB32, and on this basis, Project GHG emissions would also be cumulatively considerable and significant.

***No Build Alternative***

No additional development would be implemented under the No Build Alternative, and no additional GHG emissions would generated. Significant GHG emissions impacts otherwise occurring under the Project would be avoided.

***Reduced Intensity Alternative***

The 20 percent reduction in development under this Alternative is specifically scoped to achieve the 10,000 MTCO2e/year GHG emissions threshold established by the City. The Reduced Intensity Alternative would generate approximately 9,680 MTCO2e/year, or 80 percent of GHG emissions otherwise generated by the Project.

Contributing to the aggregate reduction in GHG emissions noted above, the Reduced Intensity Alternative would result in diminished construction activities, thereby reducing construction-source GHG emissions. Building area and building energy consumption would also be reduced, thereby reducing the extent and scope of area-source GHG emissions otherwise generated by the Project. Yielding the greatest net reduction in GHG emissions, traffic and associated vehicular-source GHG emissions would be diminished under this Alternative. The Reduced Intensity Alternative would conform to practices, policies, and strategies outlined in the *City of Moreno Valley Energy Efficiency and Climate Action Strategy*.

On this basis, the Reduced Intensity Alternative would not cause or result in a substantial increase in Greenhouse Gas (GHG) emissions; would not exceed an applicable Lead Agency threshold of significance; and would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. The Reduced Intensity Alternative's potential to contribute considerably (either individually or cumulatively)

to a global climate change impact through GHG emissions would be incrementally reduced when compared to the Project, and would be considered less-than-significant.

#### 5.3.3.4 Comparative Noise Impacts

Construction-source and operational-source noise impacts caused by, or resulting from, the Project would be less-than-significant.

***No Build Alternative***

No construction would occur under the No Build Alternative. Cumulatively significant construction-source noise impacts otherwise resulting from the Project would not occur under the No Build Alternative. Impacts would be diminished when compared to the Project.

No additional area/operational-source or traffic or vehicular-source noise would be generated under the No Build Alternative. Impacts would be decreased when compared to the Project.

***Reduced Intensity Alternative***

Under the Reduced Intensity Alternative, the duration of site preparation and associated duration and frequency of peak construction-source noise may be reduced. Notwithstanding, the types of construction equipment employed and their operational characteristics, including peak operating noise levels, would not be substantively different than would otherwise result from the Project. As with the Project, construction-source noise impacts would be less-than-significant under the Reduced Intensity Alternative.

Peak operational/area-source noise would likely be similar to the Project, and would be less-than-significant. The approximately 20 percent reduction in vehicle trips under the

Reduced Intensity Alternative would act to reduce vehicular (mobile-source) noise levels along area roadways, although this decrease would likely be imperceptible.[8]

#### 5.3.3.5 Comparative Hazards/Hazardous Materials Impacts

Hazards/hazardous materials impacts occurring under the Project would be less-than-significant.

***No Build Alternative***

Under the No Build Alternative, the Project site would be subject to potential hazards/hazardous conditions associated with operations of March Air Reserve Base/Inland Port Airport (MARB/IPA). The subject site is not otherwise substantively affected by hazards or hazardous conditions. No development of the site would occur under the No Build Alternative. Compared to the Project, the No Build Alternative would therefore result in diminished exposure of people and structures to MARB/Inland Port Airport operations. Less-than-significant hazards/hazardous materials impacts occurring under the Project would be diminished under the No Build Alternative.

***Reduced Intensity Alternative***

As with the Project, the Reduced Intensity Alternative would be required to demonstrate consistency with applicable Airport Land Use Compatibility Plan(s). The diminished scope of development under the Reduced Intensity Alternative would tend to reduce potential exposure to hazards and hazardous conditions associated with operations of MARB/Inland Port Airport. Less-than-significant hazards/hazardous materials impacts occurring under the Project would be further diminished under the under the Reduced Intensity Alternative**.**

[8] An audible (3.0 dBA) decrease/increase in vehicular-source noise typically requires a 50 percent reduction/doubling in traffic volumes.

#### 5.3.3.6 Comparative Hydrology/Water Quality Impacts

The Project would implement stormwater management system improvements and operational programs designed to ensure that Project stormwater discharges would be consistent with, and would not exceed, stormwater discharge rates and volumes anticipated under the RCFCWCD Master Plan of Drainage (MPD). Further, the Project would implement construction Storm Water Pollution Prevention Plans (SWPPPs) and operational Water Quality Management Plans (WQMPs) ensuring that stormwater discharges from the Project site would not adversely affect water quality. On this basis, the Project's impacts to hydrology and water quality as mitigated are considered less-than-significant.

***No Build Alternative***

Under the No Build Alternative, no development within the Project site would occur, and no additional stormwater runoff would be generated. The No Build Alternative would also preclude stormwater management system improvements that would otherwise be implemented under the Project. In this latter regard, controlled and treated stormwater discharges from the developed Project site would not result in new or increased adverse stormwater discharge conditions; and would likely represent improved stormwater discharge conditions in aggregate when compared to the current state of uncontrolled and untreated stormwaters released from the subject site. Potential hydrology/water quality impacts under the No Build Alternative would be less-than-significant.

***Reduced Intensity Alternative***

The diminished scope of development under the Reduced Intensity Alternative would tend to decrease the amount of impervious areas within the subject, and could reduce the rate and quantity of post-development stormwater runoff when compared to the Project. In this regard, the Project's already less-than-significant hydrology impacts would be further reduced under this Alternative. As with the Project, the Reduced Intensity Alternative would also comply with mandated SWPPP and WQMP requirements.

#### 5.3.3.7 Comparative Biological Resources Impacts

With application of proposed mitigation measures, the Project's potential impacts to biological resources would be less-than-significant.

***No Build Alternative***

No development would occur under the No Build Alternative, and no biological resources mitigation would be required. Potential impacts to biological resources would be less-than-significant, and would be reduced when compared to the Project.

***Reduced Intensity Alternative***

The reduction in overall site development realized under this Alternative could result in a portion of the site remaining, for the time being, in an undeveloped condition. Realistically, however, given the extent of necessary construction activities and areas disturbed by development operations, potential impacts to biological resources would likely be similar to those of the Project. As with the Project, mitigation would be provided that reduces potential impacts to biological resources to levels that are less-than-significant.

#### 5.3.3.8 Comparative Cultural Resources/Tribal Cultural Resources Impacts

There are no known historic, archaeological, paleontological, or tribal cultural resources within the Project site. Additionally, the City has initiated consultation processes pursuant to *AB 52, Gatto. Native Americans: California Environmental Quality Act*, requirements. As of this writing, there is no indication from potentially affected Tribes that the Project would adversely affect any tribal cultural resources. Should as-yet-unidentified cultural/tribal cultural resources be encountered in the course of Project development, mitigation would be implemented requiring that construction activities be halted, allowing for identification, cataloguing; and as applicable, protection and preservation of resources. As mitigated, potential cultural/tribal cultural resources impacts of the Project would be less-than-significant.

***No Build Alternative***

Under the No Build Alternative, no development of the site would occur, and there would be no requirement for cultural/tribal resources monitoring or other cultural/tribal resources mitigation otherwise required under the Project. Less-than-significant cultural resources/tribal cultural resources impacts occurring under the Project would be diminished under the No Build Alternative.

***Reduced Intensity Alternative***

Under the Reduced Intensity Alternative, the area to be disturbed with the Project site could be reduced when compared to the Project. As such, potential impacts would be similar to those of the Project, albeit at a reduced scale and/or affecting different locations within the subject site. As with the Project, mitigation would be implemented to ensure that initial site disturbance activities are monitored, and would be halted if the presence of cultural resources/tribal cultural resources is suspected, allowing for identification, cataloguing, and as applicable, protection and preservation of resources. As with the Project, potential cultural resources/tribal cultural resources impacts would be less-than-significant as mitigated.

### 5.3.4 Comparative Attainment of Project Objectives

Comparative Attainment of Project Objectives is summarized for each of the Alternatives considered here. For ease of reference, the Project Objectives are restated below.

**Project Objectives**

The primary goal of the Project is to develop high quality light industrial/business park uses accommodating a variety of prospective tenants. Complementary Project Objectives include the following:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs;

- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision;
- Provide adequate roadway and wet and dry utility infrastructure to serve the Project;
- Accommodate warehouse and manufacturing uses that are compatible with adjacent land uses;
- Provide an attractive, efficient and safe environment for warehouse uses that is cognizant of natural and man-made conditions;
- Accommodate warehouse and manufacturing uses responsive to current and anticipated market demands;
- Establish new development that would increase locally available employment opportunities and would further the City's near-term and long-range fiscal goals and objectives; and
- Establish new development that would increase locally available employment opportunities thereby improving jobs/housing balance within the City.

***No Build Alternative***

Under the No Build Alternative, no development would occur, and none of the Project Objectives would be achieved.

***Reduced Intensity Alternative***

The Reduced Intensity Alternative would, to some degree, realize the Project Objectives. Reduced development intensity would however tend to diminish attainment of the following Objectives:

- Implement the City's General Plan through development that is consistent with the General Plan Community Development Element and applicable General Plan Goals, Objectives, Policies and Programs. *The Reduced Intensity Alternative at approximately 80 percent of the Project scope would eliminate or substantively reduce the scope of certain Project uses, acting to diminish full utilization and highest and best use of the subject site as envisioned under the General Plan.*

- Implement the Moreno Valley Industrial Area Plan through development that is consistent with the Area Plan land uses and development concepts, and in total supports the Area Plan Vision. *The Reduced Intensity Alternative at approximately 80 percent of the Project scope would eliminate or substantively reduce the scope of certain Project uses, acting to diminish full utilization and highest and best use of the subject site as envisioned under the Moreno Valley Industrial Area Plan.*

- Establish new development that would increase locally available employment opportunities and would further the City's near-term and long-range fiscal goals and objectives. *The Reduced Intensity Alternative at approximately 80 percent of the Project scope would eliminate or substantively reduce the scope of certain Project uses, acting to diminish the scope and range of employment opportunities otherwise generated by the Project.*

### 5.3.5 Comparison of Alternatives

The *CEQA Guidelines* require that the environmentally superior alternative, other than the No Build (No Project) Alternative, be identified among the Project and other Alternatives considered in an EIR. The following Table 5.3-3 provides a summary, by topic, of the preceding alternatives analysis. Comparative impacts that have been identified as potentially less than those of the Project are indicated with **bold** text. Instances where impacts would be reduced from significant levels to levels that would be less-than-significant are indicated by **bold, shaded** text. Instances where impacts would likely be increased, or attainment of Project objectives would be impaired or diminished are indicated by *italicized* text. Normal font indicates no substantive differing impacts.

**Table 5.3-3**
**Summary of Potential Impacts, Alternatives Compared to Project, By Topic**

| Topic of Analysis | No Build Alternative | Reduced Intensity Alternative |
|---|---|---|
| **Transportation/Traffic:** Project-related traffic impacts would be significant at the Study Area facilities listed at Table 5.2-1. | **No new development would occur, and no additional traffic would be generated. Significant cumulative impacts at Study Area facilities occurring under the Project would persist.** | **Traffic generation would be reduced; the scope of mitigation and proportional fair share requirements could be reduced. Significant traffic impacts otherwise occurring under the Project would persist.** |
| **Air Quality:** Exceedances of regional thresholds for $NO_x$ would be significant. $NO_x$ exceedances would also be cumulatively considerable within the encompassing ozone and $PM_{10}/PM_{2.5}$ non-attainment areas. All other air quality impacts would be less-than-significant, or could be mitigated to levels that are less-than-significant. | **No additional construction-source or operational-source criteria air pollutant emissions would be generated under the No Build. Operational-source $NO_x$ exceedances otherwise resulting from the Project would not occur.** | **Significant operational-source $NO_x$ emissions air quality impacts would be reduced, but not eliminated. $NO_x$ exceedances within ozone and $PM_{10}/PM_{2.5}$ non-attainment areas would remain cumulatively significant.** |
| **Greenhouse Gas Emissions (GHG)/Global Climate Change (GCC):** GHG/GCC impacts of the Project would be significant. | **No additional construction-source or operational-source GHG emissions would be generated under the No Build. Significant GHG emissions impacts resulting from the Project would not occur.** | **Under the Reduced Intensity Alternative, construction-source, area-source, energy-source and vehicular-source GHG emissions would be incrementally reduced. Significant GHG emissions impacts otherwise occurring under the Project would be reduced to levels that would be less-than-significant.** |
| **Noise:** Project construction-source and operational-source noise impacts would be less-than-significant. | **No construction would occur under the No Build Alternative. Less-than-significant construction-source noise impacts otherwise occurring under the Project would be diminished.**<br><br>**No additional area-source noise or vehicular-source noise would be generated under the No Build Alternative. Less-than-significant operational-source noise impacts otherwise occurring under the Project would be diminished.** | The duration of construction-source noise impacts could potentially be reduced in duration. However, peak noise levels would be consistent with those occurring under the Project, and would remain significant.<br><br>Daily traffic volumes and related vehicular-source noise levels may be reduced when compared to the Project. However, the reduction in traffic occurring under the Reduced Intensity Alternative would not be substantive enough to result in a perceptible difference in vehicular-source levels. In this latter regard, traffic |

**Table 5.3-3**
**Summary of Potential Impacts, Alternatives Compared to Project, By Topic**

| Topic of Analysis | No Build Alternative | Reduced Intensity Alternative |
|---|---|---|
| | | volumes would need to be halved (or doubled) in order for there to be a perceptible (3.0 dBA) change in vehicular-source noise levels. |
| **Hazards/Hazardous Materials:** As mitigated, potential hazards/hazardous materials impacts would be less-than-significant. | **No additional structures or populations would be exposed to potential hazards. Less-than-significant hazards/hazardous materials impacts otherwise occurring under the Project would be diminished.** | Impacts would be similar to those of the Project. |
| **Hydrology/Water Quality:** Stormwater management systems would be implemented to control and treat stormwater runoff, ensuring that storm drain systems and water quality are not adversely affected. Potential impacts are less-than-significant. | *Untreated and uncontrolled stormwater discharges for the subject site would persist. Hydrology/water quality impacts may be increased when compared to the controlled and treated stormwater discharge conditions resulting from the Project.* | Impacts would be similar to those of the Project. |
| **Biological Resources:** As mitigated, potential impacts to biological resources would be less-than-significant. | **No development would occur, and impacts would be incrementally decreased when compared to those of the Project. Less-than-significant biological resources impacts otherwise occurring under the Project would be diminished.** | Impacts would be similar to those of the Project. |
| **Cultural Resources/Tribal Cultural Resources**: Project site disturbance activities could affect cultural resources/tribal cultural resources; with mitigation, no significant impacts would result. | **No development would occur, and there would be no increased potential for disturbing buried cultural resources. Less-than-significant cultural resources/tribal cultural resources impacts otherwise occurring under the Project would be diminished.** | Impacts would be similar to those of the Project. |
| **Relative Attainment of Project Objectives:** | *None of the Project Objectives would be achieved.* | *The Reduced Intensity Alternative at approximately 80 percent of the Project scope would substantively diminish attainment of three fundamental Project Objectives.* |

As indicated at Table 5.3-3, on a topic-by-topic basis, the Reduced Intensity Alternative would result in the greatest reduction in environmental impacts when compared to the Project. This Alternative would avoid significant GHG emissions impacts otherwise occurring under the Project; and would reduce but not entirely eliminate or avoid the Project's significant traffic and air quality impacts. The Reduced Intensity Alternative would realize diminished attainment of certain of the basic Project Objectives. On this basis, and for the purposes of CEQA and the EIR Alternative Analysis, the Reduced Intensity Alternative would comprise the environmentally superior alternative.

While CEQA indicates that socioeconomic effects are not appropriate as a lone determinant in selection of an alternative, they are important considerations for decision-makers. With respect to socioeconomics, the Project and the Reduced Intensity Alternative would both have beneficial effects for the area. Either of these scenarios would contribute to area employment and the City's overall tax base. However, as noted previously, because the scope of land uses would be reduced under the Reduced Intensity Alternative, the resulting effective realization of the Project Objectives, to include economic benefits to the City and region, and full and comprehensive implementation of the City General Plan and the Moreno Valley Industrial Area Plan would likely be compromised.

## 5.4 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

### 5.4.1 Overview

The California Environmental Quality Act requires a discussion of the ways in which a project could be growth-inducing. (Pub. Resources Code, §21100, subd. (b)(5); *CEQA Guidelines*, § 15126, subd. (d), 15126.2, subd (d.).) The *CEQA Guidelines* identify a project as growth-inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of significance to the environment. New employees from commercial or industrial development and new population from residential development represent direct forms of growth. These direct forms of growth have a

secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

A project could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Development pressures are a result of economic investment in a particular locality. These pressures help to structure the local politics of growth and the local jurisdiction's posture on growth management and land use policy. The land use policies of local municipalities and counties regulate growth at the local level.

Impacts related to growth inducement would also be realized if a project provides infrastructure or service capacity which accommodates growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

### 5.4.2 Direct Growth-Inducing Effects

The Project would implement warehouse/light industrial uses allowed under, and in a manner consistent with, the Moreno Valley Industrial Area Plan and City General Plan. The Project does not propose or require a change in land use that would result in additional development and associated growth beyond that anticipated under the City General Plan. Nor does the Project propose or require a change in land use designations that would generate additional employment beyond that anticipated under the City General Plan.

Jobs which may be created by the Project would be characteristic of the types of warehouse/light industrial employment opportunities available within the region, and would likely be filled by the City's resident population, or that of neighboring

municipalities. On this basis, employment opportunities created by the Project would not result in or cause a significant influx of workers and related unanticipated permanent growth-inducing effects.

Based on the preceding, the Project would not directly result in unanticipated significant population growth or other significant direct growth-inducing effects.

### 5.4.3 Indirect Growth-Inducing Effects

Investment in the Project would have local and regional economic impacts which may result in indirect growth-inducing effects. The Project's potential economic benefits could indirectly result in employment growth in the region. This growth, in combination with other anticipated employment growth in the region, could indirectly result in population growth and an increased demand for housing. Such growth has a variety of potential effects on the physical environment, including but not limited to, effects on air quality, ambient noise levels, traffic impacts, and water quality. The Project, in combination with other planned or anticipated projects in the area, would contribute to employment and population growth of the region.

Development of the Project as envisioned would entail upgrades to infrastructure in the immediate Project vicinity, including abutting roadways. Infrastructure improvements necessitated by the implementation of the Project could serve to facilitate and encourage development of nearby properties; however, City of Moreno Valley properties adjacent to the Project site are already developed or would be entitled for development pursuant to the Moreno Valley Industrial Area Plan. Development of these properties within the context of Moreno Valley Industrial Area Plan would not result in unforeseen or unmitigable impacts.

## 5.5 SIGNIFICANT ENVIRONMENTAL EFFECTS

An EIR must identify any significant environmental effects that would result from the Project. (Pub. Resources Code, §21100, subd. (b)(2)(B).) The significant environmental impacts of the Project are summarized previously at Table 5.3-1, and restated below at Table 5.5-1.

**Table 5.5-1**
**Summary of Significant and Unavoidable Impacts**

<table>
<tr><th>Environmental Consideration</th><th>Comments</th></tr>
<tr><td>Traffic</td><td></td></tr>
<tr><td></td><td>The Project would construct, or pay required fees toward, completion of all necessary Study Area transportation/traffic system improvements. At the significantly-impacted locations noted below, the Project cannot feasibly construct the required improvements, and/or payment of fees would not assure their timely completion.<br><br><u>Cumulatively Significant Impacts</u><br><br>Intersections<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following intersections are considered cumulatively significant and unavoidable:<br><br>
<table>
<tr><th>Intersection ID No.</th><th>Intersection Location</th></tr>
<tr><td>1</td><td>I-215 SB Ramps/Harley Knox Blvd.</td></tr>
<tr><td>2</td><td>I-215 NB Ramps/Harley Knox Blvd.</td></tr>
<tr><td>3</td><td>Western Way/Harley Knox Blvd.</td></tr>
<tr><td>4</td><td>Patterson Ave./Harley Knox Blvd.</td></tr>
<tr><td>7</td><td>Indian St./Grove View Rd.</td></tr>
<tr><td>10</td><td>Indian St./Harley Knox Blvd.</td></tr>
</table>
<br>Roadway Segments<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Conditions cumulative traffic impacts at or affecting the following roadway segments are considered cumulatively significant and unavoidable:<br><br>
<table>
<tr><th>Roadway Segment ID No.</th><th>Roadway</th><th>Segment Limits</th></tr>
<tr><td>2</td><td>Harley Knox Blvd.</td><td>I-215 NB Ramps to Western Way</td></tr>
<tr><td>3</td><td>Harley Knox Blvd.</td><td>East of Western Way</td></tr>
<tr><td>4</td><td>Harley Knox Blvd.</td><td>West of Patterson Ave.</td></tr>
<tr><td>9</td><td>Indian St.</td><td>South of Nandina Ave.</td></tr>
<tr><td>10</td><td>Indian St.</td><td>North of Grove View Rd.</td></tr>
<tr><td>11</td><td>Indian St.</td><td>South of Grove View Rd.</td></tr>
</table>
</td></tr>
</table>

## Table 5.5-1
## Summary of Significant and Unavoidable Impacts

| Environmental Consideration | Comments |
|---|---|
| | *Freeway Facilities*<br>Pending completion of required improvements, the Project's incremental contributions to Opening Year Cumulative traffic impacts at or affecting the following freeway facilities are considered cumulatively significant and unavoidable:<br><br>**Freeway Segment**<br>1 I-215, Northbound, University Avenue to Martin Luther King Boulevard<br>2 I-215, Northbound, Box Springs Road to SR-60/I-215 Freeway<br>3 I-215, Northbound, Eucalyptus Avenue to Alessandro Boulevard<br>4 I-215, Northbound, Ramona Expressway to Nuevo Road<br>5 I-215, Southbound, Eucalyptus Avenue to Alessandro Boulevard<br>6 I-215, Southbound, Ramona Expressway to Nuevo Road<br>7 SR-91, Westbound, Riverwalk Parkway to Magnolia Avenue |
| **Air Quality** | |
| | **Project-Specific Significant Impacts**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Even after compliance with South Coast Air Quality Management District (SCAQMD) rules and regulations, and the application of EIR mitigation measures, operational pollutant emissions would exceed applicable SCAQMD regional emission thresholds for $NO_x$. These impacts are therefore individually significant.<br><br>**Cumulatively Significant Impacts**<br>**Operational-Source Pollutant Emissions Exceedances**<br>Project-specific operational-source $NO_x$ emissions exceedances are cumulatively significant over the life of the Project.<br><br>**Non-Attainment Area Impacts**<br>Project operational source $NO_x$ emissions exceedances ($NO_x$ is an ozone precursor; $NO_x$ is also a $PM_{10}/PM_{2.5}$ precursor), in combination with $NO_x$ emissions generated by other sources affecting the SCAB ozone and $PM_{10}/PM_{2.5}$ non-attainment areas, would result in a cumulatively considerable net increase in ozone and $PM_{10}/PM_{2.5}$ within the non-attainment areas. These are cumulatively significant impacts. |
| **Greenhouse Gases/Global Climate Change** | |
| | **Project-Specific Impacts**<br>Project GHG emissions would individually exceed the 10,000 MTCO2e/year GHG emissions threshold employed by the City. Project GHG emissions would also not conform to State GHG emissions reductions targets established under AB32. |

**Table 5.5-1**
**Summary of Significant and Unavoidable Impacts**

| Environmental Consideration | Comments |
|---|---|
| | **Cumulatively Significant Impacts**<br>Project-specific GHG emissions exceedances would be cumulatively considerable in the context of existing GHG emissions levels and GHG emissions that would be generated by other known or probable GHG emissions sources. |

## 5.6 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

*CEQA Guidelines* § § 15126, subd. (c), 15126.2, subd. (c), 15127, require that for certain types or categories of projects, an EIR must address significant irreversible environmental changes that would occur should the Project be implemented. As presented at *Guidelines* §15127, the topic of Significant Irreversible Environmental Changes need be addressed in EIRs prepared in connection with any of the following activities:

(a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;

(b) The adoption by a local agency formation commission of a resolution making determinations; or

(c) A project which will be subject to the requirements for preparing of an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4347.

The Project does not propose or require any of the above actions, and is not subject to *CEQA Guidelines* § § 15126, subd. (c), 15126.2, subd. (c), 15127 requirements.

## 5.7 ENERGY CONSERVATION

### 5.7.1 Overview

Consistent with *CEQA Guidelines* Appendix F, this Section of the EIR addresses the potential for the Project to result in the inefficient, wasteful, or unnecessary consumption of energy. For new development such as that proposed by the Indian Street Commerce Center Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy. As discussed below, the Project would provide for, and promote, energy efficiencies beyond those required under applicable state or federal standards and regulations, and in so doing would meet or exceed all Title 24 standards. Moreover, energy consumed by the Project would be comparable to, or less than, energy consumed by other development proposals of similar scale and intensity. On this basis, the Project would not result in the inefficient, wasteful or unnecessary consumption of energy, and potential Project impacts in these regards are less-than-significant. Further, the Project would not cause or result in the need for additional energy producing facilities or energy delivery systems. The Project, therefore, would not create or result in a potentially significant impact on energy resources.

### 5.7.2 Background and Introduction

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs; license thermal power plants of 50 megawatts or larger; develop energy technologies and renewable energy resources; plan for and direct responses to energy emergencies; and, perhaps most importantly, to promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards.

Germane to the Project and this EIR, AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the potential for wasteful, inefficient, and/or unnecessary consumption of energy caused by or resulting from a project. Appendix F to the *CEQA Guidelines* assists EIR preparers in this regard. More

specifically, Appendix F is an advisory document establishing parameters and context for determining whether a project would result in the inefficient, wasteful, and unnecessary consumption of energy.

### 5.7.3 Existing Conditions

#### 5.7.3.1 Overview

California's estimated annual energy use as of 2015 included:

- Approximately 287,104 gigawatt hours of electricity;[9]
- Approximately 12,687 million therms natural gas (approximately 3.5 billion cubic feet of natural gas per day);[10] and
- Approximately 18 billion gallons of gasoline.[11]

As of 2013, energy use in California by demand sector was:

- Approximately 37.8 percent transportation;
- Approximately 23.6 percent industrial;
- Approximately 19.3 percent residential; and
- Approximately 19.3 percent commercial.[12]

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[9] California Energy Commission. "California Energy Demand 2014-2024 Revised Forecast, Volume 1: Statewide Electricity Demand, End-User Natural Gas Demand, and Energy Efficiency - Staff Final Report" (page 2, Mid Energy Demand). *California Energy Commission*. Ed. California Energy Commission. CEC, 10 Jan. 2014. Web. 17 Oct. 2015.

[10] Ibid. page 5, Mid Energy Demand.

[11] California Energy Commission. "2013 Integrated Energy Policy Report" (p. 255). *California Energy Commission.* Ed. California Energy Commission. CEC, n.d. Web. 17 Oct. 2015.

A summary of, and context for, energy consumption and energy demands within the State is presented in *U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts* excerpted below:

- Excluding federal offshore areas, California ranked third in the nation in crude oil production in 2013, despite an overall decline in production rates since the mid-1980s.

- California also ranked third in the nation in refining capacity as of January 2014, with a combined capacity of almost 2 million barrels per calendar day from its 18 operable refineries.

- In 2012, California's per capita energy consumption ranked 49th in the nation; the state's low use of energy was due in part to its mild climate and its energy efficiency programs.

- In 2013, California ranked fourth in the nation in conventional hydroelectric generation, second in net electricity generation from other renewable energy resources, and first as a producer of electricity from geothermal energy.

- In 2013, California ranked 15th in net electricity generation from nuclear power after one of its two nuclear plants was taken out of service in January 2012; as of June 2013, operations permanently ceased at that plant, the San Onofre Nuclear Generating Station.

- Average site electricity consumption in California homes is among the lowest in the nation (6.9 megawatt hours per year), according to EIA's Residential Energy Consumption Survey. [13]

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[12] U.S. Energy Information Agency. "California State Profile and Energy Estimates." *U.S. Energy Information Agency*. U.S. IEA, 17 Sept. 2015. Web. 17 Oct. 2015.
[13] U.S. Energy Information Administration. "California State Profile and Energy Estimates. California Energy Consumption by End-Use Sector." *U.S. Energy Information Administration.* Web. 17 Oct. 2015.

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient.

#### 5.7.3.2 Electricity and Natural Gas Resources

**Electricity**

Electricity would be provided to the Project by Southern California Edison (SCE). SCE provides electric power to an estimated 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles.[14] SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator ("ISO") is a nonprofit public benefit corporation, and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California residential and commercial users. While utilities [such as SCE] still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that sufficient power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities.[15]

[14] Southern California Edison. "About Us. Who We Are." *Southern California Edison*. Web. 17 Oct. 2015.
[15] California ISO. "Understanding the ISO." *California ISO - Our Business*. California ISO, n.d. Web. 17 Oct. 2015.

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners (investor-owned utilities such as SCE) file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

**Natural Gas**

Natural gas would be provided to the Project by The Gas Company (Southern California Gas, SoCalGas). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (PUC).

> The California Public Utilities Commission (PUC) regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.
>
> The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32% of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68% of the natural gas delivered by California utilities in 2012.
>
> The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities'

transmission and distribution pipeline systems, storage, procurement, metering and billing.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. California gas utilities may soon also begin receiving biogas into their pipeline systems.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California consumers are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, the Ruby Pipeline, Questar Southern Trails and Mojave Pipeline. Another pipeline, the North Baja – Baja Norte Pipeline, takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, the PUC often participates in FERC regulatory proceedings to represent the interests of California natural gas consumers.

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities'

distribution pipeline systems. The PUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the total amount of natural gas delivered to California's gas consumers in 2012.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, and currently receive all of their natural gas from the SoCalGas system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Some of the natural gas delivered to California customers may be delivered directly to them without being transported over the regulated utility systems. For example, the Kern River/Mojave pipeline system can deliver natural gas directly to some large customers, "bypassing" the utilities' systems. Much of California-produced natural gas is also delivered directly to large consumers.

PG&E and SoCalGas own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and four independently owned storage utilities – Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. (A portion of the Gill Ranch facility is owned by PG&E).

California's regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980's and is determined by "market forces." However, the PUC decides

> whether California's utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers.[16]

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The PUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

#### 5.7.3.3 Transportation Energy Resources

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline. Gasoline (and other vehicle fuels) are commercially-provided commodities, and would be available to the Project patrons and employees via commercial outlets.

There are more than 27 million registered vehicles in California, and those vehicles consume an estimated 18 billion gallons of fuel each year. Petroleum comprises approximately 92 percent of California's transportation energy sources. Notwithstanding, technology advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total by 2020.[17]

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[16] California Public Utilities Commission. "Natural Gas and California." *Natural Gas and California*. CPUC, 7 Sept. 2013. Web. 17 Oct. 2015.

[17] CEC. "2013 Integrated Energy Policy Report." *2013 Integrated Energy Policy Report*. CEC, n.d. Web. 17 Oct. 2015.

In these regards, at the federal and state levels various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and reduce vehicle miles traveled (VMT). Market forces have spurred increases in the price of petroleum product and/or has acted to control supplies; and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of, and in response to these multiple factors, gasoline consumption within the state has declined in recent years, while availability of other alternative fuels/energy sources has increased. In total, the quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may likely continue and accelerate. Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the State.

### 5.7.4 Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below. Project consistency with applicable federal and state regulations is also presented in *italicized* text.

#### 5.7.4.1 Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 (Act) intends that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the United States Department of Transportation, is responsible for establishing

additional vehicle standards and for revising existing standards. *Vehicles accessing the Project site are subject to the Federal Energy Policy and Conservation Act (Act). The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of the Act.*

**5.7.4.2 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)**The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. *Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA.*

**5.7.4.3 The Transportation Equity Act for the 21st Century (TEA-21)**

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety. *The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access; acts to reduce vehicle miles traveled; takes advantage of existing infrastructure systems; and promotes land use compatibilities by implementing The City of Moreno Valley General Plan and The Moreno*

*Valley Industrial Area Plan (MVIAP) through the introduction of a warehouse/light industrial, development at the subject site. In this manner, the Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.*

#### 5.7.4.4 State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. *The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access; acts to reduce vehicle miles traveled; takes advantage of existing infrastructure systems; and promotes land use compatibilities by implementing The City of Moreno Valley General Plan and The Moreno Valley Industrial Area Plan (MVIAP) through the introduction of a warehouse/light industrial, development at the subject site. The Project therefore supports urban design and planning processes identified in the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.*

#### 5.7.4.5 California Code Title 24, Part 6, Energy Efficiency Standards

California Code Title 24, Part 6 (also referred to as the California Energy Code), was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential

buildings. According to the CEC, the Energy Commission's energy efficiency standards have saved Californians more than $74 billion in reduced electricity bills since 1977.[18]

California's building efficiency standards are updated on an approximately three-year cycle. The 2013 Standards would continue to improve upon the 2008 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2013 Standards went into effect on July 1, 2014, following approval of the California Building Standards Commission.

The 2013 Energy Efficiency Standards in their entirety may be reviewed at: http://www.energy.ca.gov/title24/2013standards/. The 2013 Energy Efficiency Standards may also be reviewed at the California Energy Commission, 1516 Ninth Street, MS-37, Sacramento, CA 95814-5512. *The Project would be designed, constructed and operated so as to meet or exceed incumbent Title 24 Energy Efficiency Standards. On this basis, the Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards.*

#### 5.7.4.6 City of Moreno Valley Energy Efficiency and Climate Action Strategy

The *City of Moreno Valley Energy Efficiency and Climate Action Strategy* (City of Moreno Valley) October 9, 2012 (CAS) establishes practices, policies, and strategies directed at conservation and efficient use of energy and water that would collectively act to reduce municipal and community greenhouse gas emissions. The CAS establishes a year 2020 GHG emissions reductions target representing a 15% decrease in baseline (2010) City GHG emissions levels.

*Development within the Project site would comply with the* City of Moreno Valley Energy Efficiency and Climate Action Strategy, *thereby promoting conservation of resources and*

[18] CEC. "California's Energy Efficiency Standards Have Saved $74 Billion." *California's Energy Efficiency Standards Have Saved $74 Billion*. CEC, n.d. Web. 17 Oct. 2015.

*efficient use of energy and water by Project facilities. Please refer also to EIR Section 3.0*, Project Description; *3.4.10,* Energy Efficiency/Sustainability.

### 5.7.5 Project Energy Demands and Energy Efficiency/Conservation Measures

Estimated energy demands of Project construction and Project operations are summarized in the following discussions. Project design features and operational programs, as well as regulations and EIR Mitigation Measures that promote energy conservation are also identified. The Project in total would surpass by a minimum of 5 percent incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Energy Efficiency Standards). Further, contractors and owners have vested financial incentives to avoid wasteful, inefficient, and unnecessary consumption of energy during construction and operations. In summary, there is growing recognition among developers and retailers that efficient and sustainable construction and operational practices yield both environmental and economic benefits.

#### 5.7.5.1 Construction Energy Demands and Energy Efficiency/Conservation Measures

**Construction Energy Demands**

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented at Table 5.6-1. Eight-hour daily use of all equipment is assumed. For the purposes of this analysis, it is assumed that all construction equipment would be diesel-powered. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region. The aggregate fuel consumption rate for all equipment is estimated at 18.5 hp-hr-gal., obtained from CARB 2013 Emissions Factors Tables and cited fuel consumption rate

factors presented in Table D-24 of the Moyer guidelines.[19] As presented at Table 5.7-1, Project construction activities would consume an estimated 162,156 gallons of diesel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

**Table 5.7-1**
**Construction-Source Fuel Consumption Estimates**

| Activity/ Duration | Equipment | HP Rating | Quantity | Use Hours/Day | Load Factor | HP-hrs./day | Total Fuel Consumption (gal. diesel fuel) |
|---|---|---|---|---|---|---|---|
| Site Preparation (10 days) | Crawler Tractors | 208 | 2 | 8 | 0.43 | 1,431 | 770 |
| | Excavators | 162 | 4 | 8 | 0.38 | 2,462 | 1,330 |
| | Water Trucks | 189 | 2 | 8 | 0.50 | 1,512 | 820 |
| | Rubber Tired Dozers | 255 | 4 | 8 | 0.40 | 3,264 | 1,760 |
| Grading (30 Days) | Crawler Tractors | 208 | 2 | 8 | 0.43 | 1,431 | 2,310 |
| | Graders | 174 | 4 | 8 | 0.41 | 2,283 | 3,690 |
| | Water Trucks | 189 | 2 | 8 | 0.50 | 1,512 | 2,460 |
| | Rubber Tired Dozers | 255 | 2 | 8 | 0.40 | 1,632 | 2,640 |
| | Scrapers | 361 | 4 | 8 | 0.48 | 5,560 | 9,030 |
| Building Construction (300 days) | Cranes | 226 | 1 | 8 | 0.29 | 524 | 8,400 |
| | Forklifts | 89 | 3 | 8 | 0.20 | 427 | 6,900 |
| | Generator Sets | 84 | 1 | 8 | 0.74 | 497 | 8,100 |
| | Tractors/Loaders/ Backhoes | 97 | 3 | 8 | 0.37 | 861 | 14,100 |
| | Welders | 46 | 1 | 8 | 0.45 | 166 | 2,700 |
| Paving (20 Days) | Pavers | 125 | 2 | 8 | 0.42 | 840 | 900 |
| | Paving Equipment | 130 | 2 | 8 | 0.36 | 749 | 800 |
| | Rollers | 80 | 2 | 8 | 0.38 | 486 | 520 |

[19] *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects for Evaluating Motor Vehicle Registration Fee Projects and Congestion Mitigation and Air Quality Improvement (CMAQ) Projects, Emission Factor Tables* (California Air Resources Board) May 2013; Table D-24 Moyers Guidelines Fuel Consumption Rate Factors -All Engines < 750 hp = 18.5 hp-hr-gal.

**Table 5.7-1**
**Construction-Source Fuel Consumption Estimates**

| Activity/ Duration | Equipment | HP Rating | Quantity | Use Hours/Day | Load Factor | HP-hrs./day | Total Fuel Consumption (gal. diesel fuel) |
|---|---|---|---|---|---|---|---|
| Architectural Coating (40 Days) | Air Compressors | 62 | 4 | 8 | 0.31 | 615 | 1,320 |
| | Aerial Lifts | 78 | 4 | 8 | 0.48 | 1,198 | 2,600 |
| ***TOTAL CONSTRUCTION FUEL DEMAND (gallons diesel fuel)*** | | | | | | | **71,150** |

**Notes:** Construction equipment schedules, power ratings, load factors populated from CalEEMod data presented in *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) July 7, 2016.

**Construction Energy Efficiency/Conservation Measures**

Equipment used for Project construction would conform to CARB regulations and CA emissions standards, and would evince related fuel efficiencies. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient, wasteful, or unnecessary consumption of fuel.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations, the City of Moreno Valley *Energy Efficiency and Climate Action Strategy* (City of Moreno Valley) April 2012 (Climate Action Strategy) and the EIR Mitigation Measures. More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. The City of Moreno Valley Climate Action Strategy and EIR Mitigation Measure 4.2.2 reinforce this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of recycled/recyclable materials and related procedures; and energy efficiencies realized from bulk purchase, transport and use of construction materials. In

general, the use of materials and construction processes described herein promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of recycled and recyclable materials and use of materials in bulk as described below also reduces energy demands associated with preparation and transport of construction materials as transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

**Construction Waste Management Plan**

Consistent with Section 5.408, *Construction Waste Reduction, Disposal, and Recycling* of the California Green Building Standards Code (CALGreen Code), as adopted by the City of Moreno Valley, the Project would recycle or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste. A Project Construction Waste Management Plan would also be prepared consistent with Section 5.408.1.1 of the CALGreen Code.

**Summary**

Construction equipment used by the Project would result in single event consumption of approximately 71,150 gallons of diesel fuel. Diesel fuel would be supplied by City and regional commercial vendors. Construction equipment use of fuel would not be atypical for the type of construction proposed, and Project construction equipment would conform to CARB emissions standards, acting to promote equipment fuel efficiencies. CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. The City of Moreno Valley Climate Action Strategy and EIR Mitigation Measure 4.2.2 reinforce State-mandated equipment idling restrictions. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of recycled/recyclable materials and related procedures; and energy

efficiencies realized from bulk purchase, transport and use of construction materials. As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

#### 5.7.5.2 Operational Energy Demands and Energy Efficiency/Conservation Measures

Energy consumption in support of, or related to, Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

**Transportation Energy Demands**

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. With respect to estimated VMT, the Project would generate an estimated total 35.9 million annual VMT along area roadways.[20] With regard to vehicle fuel economies, approximately 60 percent of the Project VMT would be generated by Light Duty Vehicles (LDVs); with the remaining approximately 40 percent of the Project VMT generated by Heavy Duty Vehicles (HDVs). Gasoline is assumed to be the primary fuel for LDVs; and diesel fuel is assumed as the primary fuel for HDVs. As presented in *Annual Energy Outlook 2015, with projections to 2040* (U.S. Energy Information Administration USEIA) April 2015, average fuel economies of LDVs are projected to improve from approximately 21.9 mpg in 2013, to approximately 37.0 mpg by 2040.[21] *Annual Energy Outlook 2015* also estimates that average fuel economies of HDVs are projected to improve from approximately 6.7 mpg in 2013, to approximately 7.8 mpg by 2040.[22] Fuel demands of all vehicles accessing the Project site would be met through commercial fuel providers. Estimated Project

[20] Estimated VMT from: *Indian Street Commerce Center Air Quality Impact Analysis, City of Moreno Valley* (Urban Crossroads, Inc.) March 8, 2016.
[21] "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." *Annual Energy Outlook 2015*. USIEA, 14 Apr. 2015. Web. 18 Oct. 2015.
[22] Ibid.

transportation energy demands resulting from vehicle fuel consumption are summarized at Table 5.7-2.

**Table 5.7-2**
**Project-Generated Traffic Annual Fuel Consumption**

| Annual Vehicle Miles Traveled | Average Vehicle Fuel Economy (mpg) | Estimated Annual Fuel Consumption (gallons) |
|---|---|---|
| **Light Duty Vehicles** | | |
| 2,199,046 | 21.9 | 100,413 |
| 2,199,046 | 37.0 | 59,434 |
| **Heavy Duty Vehicles** | | |
| 7,847,733 | 6.7 | 1,171,303 |
| 7,847,733 | 7.8 | 1,006,120 |

**Notes:** Estimated VMT from: *Indian Street Commerce Center Greenhouse Gas Analysis* (Urban Crossroads, Inc.) July 7, 2016; Average fuel economies from: *Annual Energy Outlook 2014, with projections to 2040* (U.S. Energy Information Administration, USEIA) April 2014, p. MT-14.

**Facilities Energy Demands**

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by The Gas Company; electricity would be supplied to the Project by SCE. Annual natural gas and electricity demands of the Project are summarized at Table 5.7-3.

**Table 5.7-3**
**Project Annual Operational Energy Demand Summary**

| Land Use | Electricity Use (kWh/yr.) | Natural Gas Use (kBTU/yr.) |
|---|---|---|
| Warehouse | 1,013,041 | 607,750 |
| Manufacturing | 920,154 | 2,669,840 |
| **Totals** | **1,933,195** | **3,277,590** |

**Source**: *Indian Street Commerce Center Greenhouse Gas Analysis* (Urban Crossroads, Inc.) July 7, 2016.

**Energy Efficiency/Sustainability**

Energy-saving and sustainable design features and operational programs incorporated in the Project are listed below. Please refer also to related discussions presented at EIR Section 3.0, *Project Description*; 3.4.10 *Energy Efficiency/Sustainability*.

- The Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City. All on-site cargo handling equipment (CHE) would be powered by non-diesel fueled engines.

- Regional vehicle miles traveled (VMT) and associated vehicular-source emissions are reduced by the following Project design features/attributes:

  - Sidewalks along the Project site's Indian Street frontage would be constructed as part of the Project, and would connect to existing and planned sidewalks to the north and south of the Project site. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.

  - Distribution warehouse uses proposed by the Project act to reduce truck travel distances and truck trips within the region by consolidating and reducing requirements for single-delivery vendor truck trips.

- To reduce water demands and associated energy use, development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water

Conservation Strategy).[23] Development proposals within the Project site would also be required to implement the following:

- Landscaping palette emphasizing drought tolerant plants consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

- Use of water-efficient irrigation techniques consistent with provisions of the MVIAP and/or City of Moreno Valley requirements;

- U.S. Environmental Protection Agency (EPA) Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and other plumbing fixtures.

Additionally, the Project in total would surpass, by a minimum of 5%, incumbent performance standards established under the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (Title 24, Title 24 Energy Efficiency Standards).

**Enhanced Vehicle Fuel Efficiencies**

Estimated annual fuel consumption estimates presented previously at Table 5.6-2 represent likely potential maximums that would occur under Project 2020 Conditions. Under future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel efficient vehicles are removed from

[23] Reduction of 20% indoor water usage is consistent with the current CalGreen Code performance standards for residential and non-residential land uses. Per CalGreen, the reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

circulation; and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

**Project Location and Access**

The Project proposes warehouse and manufacturing uses located proximate to patrons, and employees, and is readily accessible from regional and local roadways. In this manner, the Project at its current location acts to reduce vehicle miles traveled (VMT) within the region and associated consumption of resources.

**Alternative Transportation Modes**

***Bus Service***

Bus service is currently provided to the Project area by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region and the City of Moreno Valley. In the vicinity of the Project site, RTA currently provides bus service along Perris Boulevard via Route 19. Transit route and schedules are presented at: http://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules. Bus services available to the Project area act to reduce VMT within the region.

***Pedestrian and Bicycle Facilities***

The Project would provide perimeter and internal walkways consistent with City requirements, encouraging pedestrian access. Indian Street, the easterly Project boundary, is a Class III Bike Route. Class III Bike Routes are on-street signed routes shared with motor vehicle traffic. The Project would provide bicycle amenities consistent with City requirements, thereby facilitating use of bicycles and decreased dependency on personal vehicles.

**Landscaping**

Landscaping throughout the Project site would be provided consistent with City of Moreno Valley requirements, and recognizing competing demands for available water resources. Drought-tolerant plants would be used, where appropriate, reducing water consumption and power demand related to water delivery/irrigation systems. The Project would connect to the recycled water distribution system when available to the

Project site, further reducing potable water demands of the Project. Reduced water consumption provides corollary energy conservation benefits by reducing related water/wastewater conveyance and treatment energy consumption.

**Solid Waste Diversion/Recycling**

The Project would comply with State of California, County of San Bernardino, and City of Moreno Valley requirements acting to reduce the amount of solid waste transported to, and disposed at area landfills, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

**Summary**

***Transportation Energy Demands***

Vehicular trips and related VMT generated by the Project would result in an estimated 59,434 to 100,413 gallons of gasoline consumption per year; and an estimated 1,006,120 to 1,171,303 gallons of diesel consumption per year. Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other uses of similar scale and configuration. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, bio fuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to its patronage base, and proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. Collocation of complementary uses within the Project site also acts to reduce VMT by facilitating access to services and facilities by single rather than multiple vehicle trips.

The Project would also implement sidewalks and pedestrian paths, thereby encouraging pedestrian access. Bicycle facilities implemented and accommodated by

the Project would facilitate and encourage use of bicycles. Provision of pedestrian and bicycle facilities under the Project would reduce VMT and associated energy consumption.

Transit services are provided to the Project area by the Riverside Transit Authority. The need for transit-related facilities serving the Project would be coordinated between the City and the Project Applicant, with input from transit providers as applicable, as part of the City's standard development review process.

***Facilities Energy Demands***

Project facility operational energy demands are estimated at: 3,266,590 kBTU/year natural gas; and 1,933,195 kWh/year electricity. Natural gas would be supplied to the Project by The Gas Company; electricity would be supplied by SCE. The Project proposes conventional development types, reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other similar projects of like scale and configuration.

Additionally, the Project design concept allows for inclusion of a photo-voltaic electrical generation system (PV system) capable of generating sufficient power to serve all Project office areas. Energy savings from such a PV system is preliminarily estimated at 160,350 kilowatt hours per year. Alternatively, as a Condition of Approval, the Project would be required to obtain an equivalent amount of electricity from a utility provider that receives its energy from renewable (non-fossil fuel) sources, and provide documentation to this effect to the City. Use of renewable energy conserves energy resources and promotes sustainability.

Energy demands of the Project are reduced through design features and operational programs that in aggregate would ensure that Project energy efficiencies would surpass incumbent Title 24 energy efficiency requirements by a minimum of 5 percent. Various

energy conserving features and operational programs that would be realized under the Project are described previously.

Based on the preceding, Project facilities energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

### 5.7.6 Conclusion

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy, and potential Project impacts in these regards are less-than-significant. Further, energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities and would not create or result in a potentially significant impact affecting energy resources or energy delivery systems.

# 6.0 ACRONYMS AND ABBREVIATIONS

# 6.0 ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACMs | Asbestos Containing Materials |
| ADT | Average Daily Traffic |
| ALUCP | Airport Land Use Compatibility Plan |
| AQMD | Air Quality Management District |
| AQMP | Air Quality Management Plan |
| ARB | California Air Resources Board |
| AST | above-ground storage tank |
| AVO | Average Vehicle Occupancy |
| BAT | best available technology |
| BCT | best conventional pollutant control technology |
| BMP | Best Management Practice |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalARP | California Accidental Release Prevention Program |
| CalEPA | California Environmental Protection Agency |
| CALINE4 | California Line Source Dispersion Model |
| Cal/OSHA | California Department of Industrial Relations, Division of Occupational Safety and Health Administration |
| Caltrans | California Department of Transportation |
| CAO | Chino Airport Overlay |
| CARB | California Air Resources Board |
| CAT | Climate Action Team |
| CBC | California Building Code |
| CBDA | Chino Basin Dairy Area |
| CCAA | California Clean Air Act |
| CCAR | California Climate Action Registry |

| | |
|---|---|
| CCR | California Code of Regulations |
| CC&Rs | Covenants, Conditions and Restrictions |
| CDC | California Department of Conservation |
| CDFW | California Department of Fish and Wildlife |
| CEC | California Energy Commission |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CESA | California Endangered Species Act |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| cfs | cubic feet per second |
| $CH_4$ | Methane |
| CIWMB | California Integrated Waste Management Board |
| CMP | Congestion Management Plan |
| CNEL | Community Noise Equivalent Level |
| CO | Carbon monoxide |
| $CO_2$ | Carbon dioxide |
| CPUC | California Public Utilities Commission |
| CRA | Community Redevelopment Agency |
| CRWQCB | California Regional Water Quality Control Board |
| CTP | Comprehensive Transportation Plan |
| CUP | Conditional Use Permit |
| CUPA | Certified Unified Program Agency |
| CWA | Clean Water Act |
| dB | decibel |
| dBA | A-weighted decibel |
| DHS | California Department of Health Services |
| DIF | Development Impact Fees |
| DOT | U. S. Department of Transportation |
| DPM | Diesel Particulate Matter |
| DTSC | California Department of Toxic Substances Control |
| EIR | Environmental Impact Report |
| EPA | Environmental Protection Agency |

| | |
|---|---|
| ESA | Environmental Site Assessment |
| FCAA | Federal Clean Air Act |
| Fed/OSHA | Federal Occupational Safety and Health Administration |
| FEIR | Final Environmental Impact Report |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FICON | Federal Interagency Committee on Noise |
| FIRM | Flood Insurance Rating Map |
| FMMP | Farmland Mapping & Monitoring Program |
| fpm | feet per minute |
| GCC | Global Climate Change |
| GHG | Greenhouse Gas |
| GMP | Growth Management Plan |
| gpd | gallons per day |
| HCM | Highway Capacity Manual |
| HDV | Heavy-Duty Vehicle |
| HOV | High Occupancy Vehicle |
| HRA | Health Risk Assessment |
| HSC | Health and Safety Code |
| HSWA | Hazardous and Solid Waste Amendments Act |
| HUD | U. S. Department of Housing and Urban Development |
| ICU | Intersection Capacity Utilization |
| IEUA | Inland Empire Utilities Agency |
| IS | Initial Study |
| ISTEA | Intermodal Surface Transportation Efficiency Act |
| ITE | Institute of Transportation Engineers |
| kV | kilovolt |
| kVA | kilovolt-ampere |
| LBP | Lead-Based Paint |
| Ldn | day/night average sound level |
| LDV | Light-Duty Vehicle |
| LEA | Local Enforcement Agency |

| | |
|---|---|
| Leq | equivalent sound level |
| LEED | Leadership in Energy and Environmental Design |
| LOS | Level of Service |
| LST | Localized Significance Threshold |
| M | Richter Magnitude |
| MBTA | Migratory Bird Treaty Act |
| mgd | million gallons per day |
| MOE | Measure of Effectiveness |
| MPE | maximum probable earthquake |
| mph | miles per hour |
| MPO | Metropolitan Planning Organization |
| MPODC | Master Plan and Overall Design Concept |
| MRF | Material Recovery Facility |
| MSHCP | Multiple Species Habitat Conservation Plan |
| msl | mean sea level |
| MSW | Municipal Solid Waste |
| MTA | Metropolitan Transit Authority |
| $\mu g/m^3$ | micrograms per cubic meter |
| NAAQS | National Ambient Air Quality Standards |
| NDFE | Non-Disposal Facility Element |
| NIH | National Institutes of Health |
| $NO_2$ | Nitrogen dioxide |
| NOI | Notice of Intent |
| NOP | Notice of Preparation |
| $NO_x$ | Oxides of nitrogen |
| NPDES | National Pollutant Discharge Elimination System |
| NRC | Nuclear Regulatory Commission |
| NTS | Natural Treatment System |
| $O_3$ | Ozone |
| OAP | Ozone Attainment Plan |
| OEHHA | California Office of Environmental Health Hazard Assessment |
| OES | Office of Emergency Services |

| | |
|---|---|
| OSHA | Occupational Safety and Health Administration |
| PA | Preliminary Assessment |
| Pb | Lead |
| PCE | passenger car equivalency |
| $PM_{2.5}$ | Particulate Matter Less Than 2.5 Microns in Diameter |
| $PM_{10}$ | Particulate Matter Less Than 10 Microns in Diameter |
| ppm | parts per million |
| PV | Photovoltaic |
| RCRA | Resource Conservation and Recovery Act |
| REMEL | Reference Energy Mean Emission Level |
| RMP | Resources Management Plan |
| ROG | Reactive Organic Gases |
| RTA | Riverside Transit Authority |
| RWMP | Regional Water Management Plan |
| RWQCB | Regional Water Quality Control Board |
| SARA | Superfund Amendments & Reauthorization Act |
| SARWQCB | Santa Ana Regional Water Quality Control Board |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| SCE | Southern California Edison |
| SCH | State Clearinghouse |
| SCUP | Special Conditional Use Permit |
| SIP | State Implementation Plan |
| SLM | Sound Level Meter |
| $SO_x$ | Oxides of sulfur |
| SRRE | Source Reduction and Recycling Element |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TAC | Toxic Air Contaminants |
| TDS | total dissolved solids |
| TEA-21 | Transportation Equity Act for the 21st Century |
| TIA | Traffic Impact Analysis |

| | |
|---|---|
| TPD | tons per day |
| UBC | Uniform Building Code |
| UFC | Uniform Fire Code |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UST | underground storage tank |
| V/C | Volume to Capacity |
| VdB | vibration decibel |
| VMT | vehicle miles traveled |
| VOC | Volatile Organic Compound |
| WQMP | Water Quality Management Plan |
| WSA | Water Supply Assessment |

# 7.0 REFERENCES

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**PERSONS AND ORGANIZATIONS CONSULTED**

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# APPENDICES

**Please refer to accompanying CD-ROM**