

SECTION 3. ENVIRONMENTAL ANALYSIS

3.1 FORMAT OF THE ANALYSIS

This section of the EIR indicates the potential environmental impacts that may result from the construction and subsequent operation of the proposed project. The scope of the analysis is detailed herein in Section 1.5. The issue areas evaluated in this EIR include:

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| <ul style="list-style-type: none">● Air Quality (Section 3.2);● Biological Resources (Section 3.3);● Cultural Resources (Section 3.4);● Greenhouse Gas Emissions (Section 3.5);● Hazards and Hazardous Materials (Section 3.6);● Hydrology and Water Quality (Section 3.7);● Land Use and Planning (Section 3.8); | <ul style="list-style-type: none">● Noise (Section 3.9);● Public Services (Section 3.10);● Transportation and Traffic (Section 3.11);● Utilities (Section 3.12);● Urban Decay (Section 3.13). and,● Energy (Section 3.14). |
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The analysis of environmental effects considered in this section of the EIR will assist the City of Calexico in making a determination as to whether there is a potential for significant or adverse impacts on the environment associated with the project's implementation. In terms of the evaluation of potential environmental effects, there are four possible outcomes:

- *No Impact.* The proposed project will not have any measurable environmental impact on the environment.
- *Less Than Significant Impact.* The proposed project may have the potential for impacting the environment, although these impacts are likely to be below levels or thresholds that the City or other responsible agencies consider to be significant.
- *Potentially Significant Impact Unless Mitigated.* The proposed project may have the potential to generate impacts that are considered to represent a significant impact on the environment. However, the level of impact may be reduced to levels that are considered to be less than significant with the implementation of the recommended mitigation measures.
- *Potentially Significant Impact.* The proposed project may, or is known to represent impacts, which are considered significant, even after the adoption of all feasible mitigation. In these instances, the City Council would be required to make findings related to a Statement of Overriding Considerations if it wishes to approve the proposed project.

The analysis of each issue area considers the following:

- The discussion of each issue begins with a section entitled *Scope of Analysis* that provides an overview of the analysis called for in the Initial Study prepared for the proposed project.
- The *Environmental Setting* describes the regulatory framework and the existing conditions with respect to the issue being analyzed and serves as the baseline against which the environmental impacts are weighed.
- The *Thresholds of Significance* indicates those criteria and standards used by the City, responsible agencies, and trustee agencies in the identification of potentially significant effects.
- The *Environmental Impacts, Mitigation Measures, and Significant Impacts* discussion indicates the potential short-term (construction-related) and long-term (operational) impacts for each issue analyzed; the measures that will be effective in reducing or eliminating an impact; and whether there are any remaining unmitigable significant environmental impacts following mitigation.



3.2 AIR QUALITY IMPACTS

3.2.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The environmental analysis undertaken as part of the Initial Study's preparation indicated the EIR should evaluate the following issues:

- The proposed project's potential for conflicting with or obstructing the implementation of the applicable air quality plan;
- The proposed project's potential for violating any air quality standard or contributing substantially to an existing or projected air quality violation;
- The proposed project's potential for resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); and,
- The proposed project's potential for exposing sensitive receptors to substantial pollutant concentrations.

The analysis is potential impacts to air quality is based in part no the information contained in the Air Quality Worksheets which are included in this EIR as Appendix B.

3.2.2 ENVIRONMENTAL SETTING

3.2.2.1 REGULATORY SETTING

There are a number of Federal and State agencies involved in the development, implementation, and enforcement of regulations related to clean air. The primary agencies concerned with these clean air regulations and standards include the United States Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Imperial County Air Pollution Control Management District (ICAPCMD). These agencies are identified below.

- *Environmental Protection Agency (EPA)*. The EPA is the lead Federal Agency charged with the implementation and enforcement of the Clean Air Act (CAA). As part of this effort, the EPA is responsible for the establishment of national ambient air quality standards (referred to herein as the *Federal Standards*). The EPA also regulates mobile emission sources that include automobiles, trucks, aircraft, and recreational vehicles.⁹

⁹ Automobiles sold in California must meet the stricter emission standards established by the California Air Resources Board.

- *California Air Resources Board (CARB)*. The CARB is part of the California Environmental Protection Agency (CALEPA), and it is responsible for overseeing the implementation of the California Clean Air Act, overseeing the State requirements that implement the Federal CAA, and establishing the State ambient air quality standards. The CARB is responsible for setting emission standards for vehicles sold in California and for other emission-sources including consumer goods and off-road equipment. The CARB has also established vehicle fuel specifications.
- *Imperial County Air Pollution Control Management District (ICAPCD)*. The ICAPCD has jurisdiction over air quality for the project area and Imperial County. The ICAPCD has adopted an Air Quality Attainment Plan (AQAP) that includes rules and regulations that focus on the attainment of the State and Federal air quality standards. Conformance with the AQAP for development projects is determined by demonstrating compliance with the applicable local land use plans. All development projects within the ICAPCD are required to comply with existing District rules that are applicable to each specific project. The project site is located in the Salton Sea Air Basin (SSAB). The AQAP for the SSAB, through the implementation of *Imperial County Air Quality Attainment Plan for Ozone* and *State Implementation Plan for PM₁₀ in the Imperial Valley*, sets forth a comprehensive program that will lead the SSAB into compliance with all Federal and State air quality standards.¹⁰

The AQAP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics that were prepared in consultation with local governments. Local provisions that are applicable to the project include *ICAPCD Rule 800* that is related to the generation and control of fugitive dust. The use of Reasonably Available Control Measures (RACM) is required by Rule 800 during construction and operational activities as a means to reduce the amount of fugitive dust. Some examples of RACM's include the application of water or chemical soil stabilizers to disturbed soils, the reduction of construction vehicle speeds, the covering of vehicles transporting earth, and some form of approved Track-Out Prevention Device at access points where unpaved surfaces adjoins a paved surface. In addition, ICAPCD Rule 424 regulates the sale of architectural coatings and limits the content of volatile organic chemicals (VOC) in paints.

ICAPCD Rule 310 (Operational Development Fee) was adopted November 2007 with the purpose of providing the District with a method for mitigating the emissions produced from the operation of new commercial and residential development to less than significant levels.¹¹ All project proponents have the option to provide off-site mitigation, to pay an operational development fee, or doing a combination of both. This rule will assist the District in attaining the State and Federal ambient air quality standards for PM₁₀ and Ozone (O₃). All Applicants have the option to develop and implement an Alternative Emission Reduction Plan to mitigate the emissions associated with on-site and off-site sources. The developer has the option to provide full or partial mitigation of emissions, in which case, the applicable fee will be

¹⁰ Imperial County Air Pollution Control District. *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act, as Amended 1970*. November 2007.

¹¹ Ibid.

reduced on a proportional rate related to the emissions reduction.¹² The City of Calexico will also impose development impact fees pursuant to City Municipal Code §908§1. These fees may be used in conjunction with the collection of development impact fees from other area developments to fund the needed traffic-related improvements in order to maintain acceptable traffic flow on area intersections and roadway segments. Improving the flow of traffic will help reduce the amount of pollution caused by idling automobiles.¹³

3.2.2.2. REGULATED AIR CONTAMINANTS AND STANDARDS

Pollutants regulated by the Federal and State Clean Air Acts include criteria air pollutants, toxic air contaminants, and global warming and ozone-depleting gases.¹⁴ For some criteria pollutants, such as carbon monoxide, there are also secondary standards designed to protect the environment, in addition to human health. The EPA has established National Ambient Air Quality Standards (NAAQS) for the following air pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}). The Federal standards are shown in Table 3-1. The CARB has also established ambient air quality standards for six of the aforementioned pollutants regulated by the EPA (CARB has not established standards for PM_{2.5}). Some of the California ambient air quality standards are more stringent than the national ambient air quality standards. In addition, California has established ambient air quality standards for the following: sulfates, vinyl chloride, and visibility.¹⁵ Table 3-1 lists the California ambient air quality standards for each criteria pollutant. The City is a non-attainment area for O₃, PM₁₀, and PM_{2.5}.

**Table 3-1
 National and California Ambient Air Quality Standards**

Pollutants	National Standards	State Standards
Lead (Pb)	1.5 µg/m ³ (calendar quarter)	1.5 µg/m ³ (30-day average)
Sulfur Dioxide (So ₂)	0.14 ppm (24-hour)	0.25 ppm (1-hour) 0.04 ppm (24-hour)
Carbon Monoxide (CO)	9.0 ppm(8-hour) 35 ppm(1-hour)	9.0 ppm (8-hour) 20 ppm (1-hour)
Nitrogen Dioxide (NO ₂)	0.053 ppm (annual average)	0.25 ppm (1-hour)
Ozone (O ₃)	0.12 ppm (1-hour)	0.09 ppm (1-hour)
Fine Particulate Matter (PM ₁₀)	150 µg/m ³ (24-hour)	50 µg/m ³ (24-hour)
Sulfate	None	25 µg/m ³ (24-hour)
Visual Range	None	10 miles (8-hour) w/humidity < 70%

Source: California Air Resources Board.

¹² Imperial County Air Pollution Control District. *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act, as Amended 1970*. November 2007.

¹³ Imperial County Air Pollution Control District (ICAPCD), *Air Quality Management Plan*, August 1, 2005.

¹⁴ The pollutants that contribute to global warming impacts are analyzed herein in Section 3.3.2.2. This section provides a quantification of the greenhouse gas (GHG) emissions that contribute to global warming.

¹⁵ Ibid.

3.2.2.3 EFFECTS OF AIR POLLUTANTS

The focus of the air quality analysis provided herein is related to the potential emissions of criteria pollutants associated with future development arising as part of the proposed project's construction and subsequent operation. The criteria pollutants of special concern include the following:

- *Ozone (O₃)* is formed by photochemical reaction (when nitrogen dioxide is broken down by sunlight). The SSAB is classified as non-attainment for ozone.
- *Carbon Monoxide (CO)* is a colorless, odorless toxic gas that is produced by the incomplete combustion of hydrocarbon fuels.
- *Nitrogen dioxide (NO₂)* is formed when nitric oxide (a pollutant from burning processes) combines with oxygen. NO_x emissions are also a concern because of their contribution to the formation of O₃ and particulate matter.
- *Sulfur dioxide (SO₂)* is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels.
- *PM₁₀* refers to particulate matter less than ten microns in diameter. PM₁₀ causes a greater health risk than larger-sized particles, since fine particles can more easily cause respiratory irritation. The SSAB is classified as non-attainment for ozone.

The sources and potential health effects of the criteria pollutants are summarized in Table 3-2.

**Table 3-2
 Primary Sources and Health Effects of Criteria Pollutants**

Pollutants	Emissions Source	Primary Effects (including health effects)
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fuels • Smelting of sulfur-bearing metal ores • Industrial processes 	<ul style="list-style-type: none"> • Deterioration of metals, textiles, leather, and finishes • Irritation of eyes • Aggravation of respiratory diseases (asthma, emphysema)
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels • Natural events, such as decomposition of organic matter 	<ul style="list-style-type: none"> • Deterioration of metals, textiles, leather, finishes, coatings • Irritation of eyes • Aggravation of respiratory diseases (asthma, emphysema)
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust • High-temperature stationary combustion • Atmospheric reactions 	<ul style="list-style-type: none"> • Aggravation of respiratory illness • Reduced plant growth • Formation of acid rain
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight 	<ul style="list-style-type: none"> • Irritation of eyes • Aggravation of respiratory and cardiovascular diseases • Impairment of cardiopulmonary function
Fine Particulate Matter (PM ₁₀)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels • Construction activities • Industrial processes 	<ul style="list-style-type: none"> • Aggravation of the effects of gaseous pollutants • Increased cough and chest discomfort • Aggravation of respiratory and cardio-respiratory diseases

Source: California Air Resources Board.

The ICAPCMD has established the following thresholds of significance for reactive organic gasses (ROG), particulates (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO_x), and carbon monoxide (CO):

- PM₁₀ threshold is 150 pounds/day;
- SO₂ threshold is 150 pounds/day;
- ROG threshold is 55 pounds/day;
- NO₂ threshold is 55 pounds/day; and,
- CO threshold is 550 pounds/day.¹⁶

Projects that do not exceed the above thresholds are considered *Tier I* projects. If the project related emissions are below the above thresholds, and standard mitigation measures are implemented pursuant to the ICAPCD CEQA Air Quality Handbook, then emissions impacts may be considered less than significant. If these thresholds are exceeded, the project is considered a *Tier II* project, and impacts are considered significant. For Tier I projects, construction impacts are considered to be mitigated to a level of insignificance with the implementation of the required standard mitigation measures found in Section 7.1 of the ICAPCD *CEQA Air Quality Handbook*. Tier II projects are required to implement all standard mitigation measures as well as all feasible discretionary mitigation measures. If the Tier II project exceeds the construction thresholds, the project would be considered potentially significant and would require implementation of all applicable ICAPCD rules and regulations as well as standard, discretionary, and enhanced mitigation measures identified in the ICAPCD CEQA Air Quality Handbook.¹⁷

3.2.2.4 EXISTING AIR QUALITY

The project site is located in the City of Calexico, which is located within the Salton Sea Air Basin (SSAB). The SSAB includes all of Imperial County and the southeast portion of Riverside County. The Imperial County portion is under the jurisdiction of the ICAPCD. The terrain within the SSAB is generally flat and is bounded on the west by the Peninsular Mountain range and on the east by the Chocolate, Orocopia, and Cargo Muchacho Mountains.¹⁸

During the winter months, the area experiences radiation inversions in which the air envelope located near the ground surface cools by radiation, whereas the air layers located higher in the atmosphere remain warm. A shallow inversion layer is created between the two layers and this inversion prevents the vertical mixing of air, thus trapping pollutants. This inversion often leads to pollution being trapped close to the ground. The SSAB experiences surface inversions frequently throughout the year. These inversions in the SSAB often last for long periods, allowing for air stagnation and the build-up of pollutants. The presence of a high pressure system during certain periods of the year and the topography of area surrounding the SSAB generally exacerbates this condition and often limits the amount of precipitation for the area. As a result, the climate of the Imperial Valley is arid, with hot summers and mild winters.

¹⁶ Imperial County Air Pollution Control District. *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act, as Amended 1970*. November 2007.

¹⁷ Ibid.

¹⁸ Imperial County Air Pollution Control District (ICAPCD), *Air Quality Management Plan*, August 1, 2005.

3.2.2.5 SENSITIVE RECEPTORS

Sensitive receptors refer to land uses and/or activities that are especially sensitive to poor air quality. Sensitive receptors typically include homes, schools, playgrounds, hospitals, convalescent homes, and other facilities where children or the elderly may congregate. These population groups are generally more sensitive to poor air quality. Some people are especially sensitive to air pollution emissions and should be given special consideration when evaluating air quality impacts from projects. The ICAPCD defines a *sensitive receptor* as a land use or facility such as residences, schools, childcare centers, athletic facilities, playgrounds, retirement homes, and convalescent homes.

The project site is located between a recently constructed commercial center to the east, the Calexico International Airport to the north, the border fence and City of Mexicali to south, and vacant land to the west. Currently, there are no sensitive receptors within 1,000 feet of the project site that are located within Calexico. In addition, there are no future sensitive land uses planned in the City of Calexico located adjacent to the project site. There are sensitive receptors (residential uses) located within the City of Mexicali that are located within 80-feet of the U.S.-Mexico Border and approximately 145-feet from the project site. A map of the sensitive receptors within the City of Calexico is provided in Exhibit 3-1.

3.2.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally be deemed to have a significant adverse environmental impact, if it results in any of the following:

- The proposed project's potential for conflicting with or obstructing the implementation of the applicable air quality plan;
- The proposed project's potential for violating any air quality standard or contributes substantially to an existing or projected air quality violation;
- The proposed project's potential for resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors); and,
- The proposed project's potential for exposing sensitive receptors to substantial pollutant concentrations.

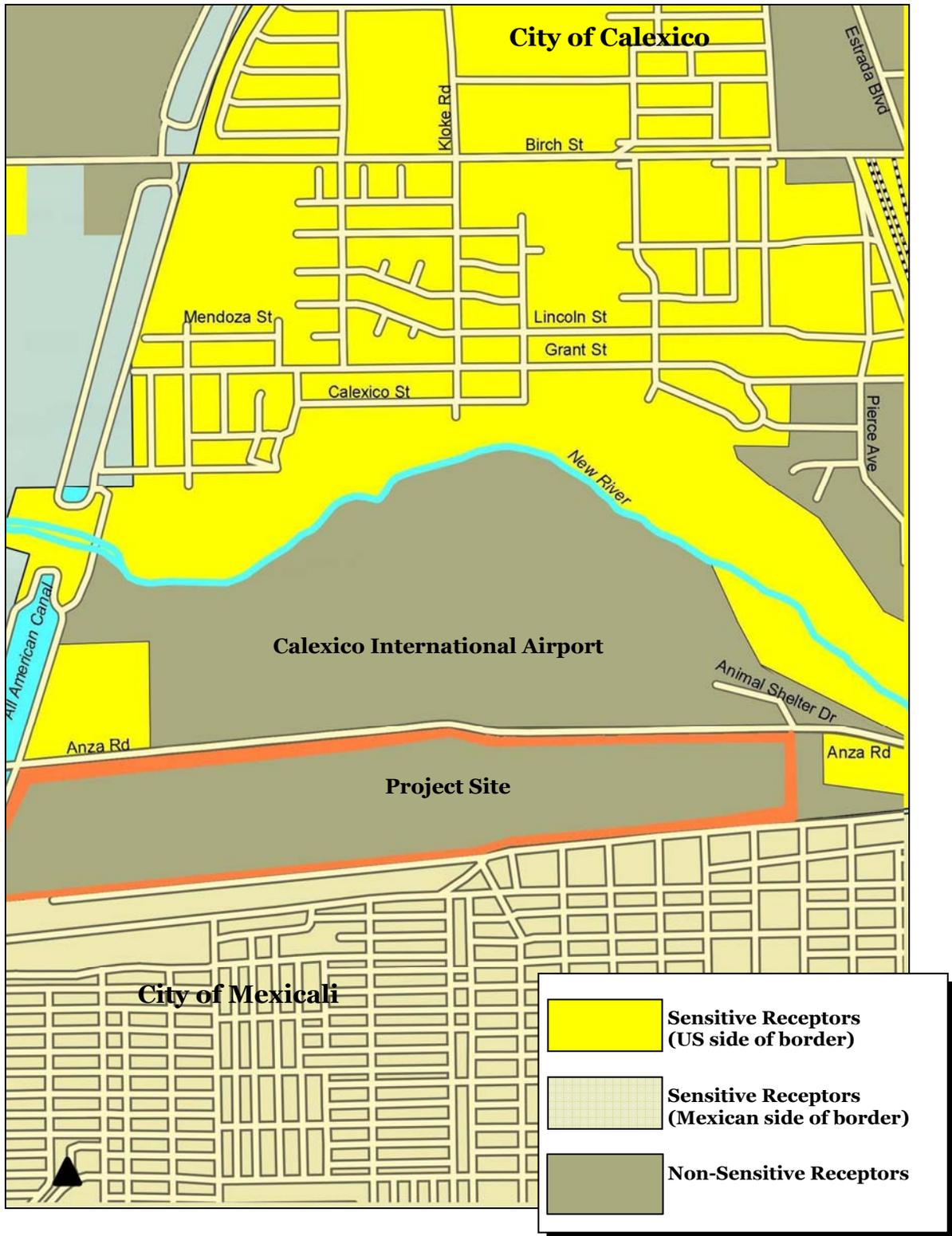


EXHIBIT 3-1
SENSITIVE RECEPTORS
Source: Blodgett/Baylosis Environmental Planning

3.2.4 ENVIRONMENTAL IMPACTS

3.2.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CONFLICTING WITH OR OBSTRUCTING THE IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

The AQAP for the SSAB, through the implementation of the *Imperial County Air Quality Attainment Plan for Ozone* and the *State Implementation Plan for PM₁₀ in the Imperial Valley* have established a comprehensive program that would lead the ICAPCD into compliance with all Federal and State air quality standards. The AQAP control measures and related emission reduction estimates are based upon emissions projections derived from land use, population, and employment characteristics that are based on local growth projections. Conformance with the AQAP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, conformity with the local general plan, and comparing assumed emissions in the AQAP to proposed emissions. The project must also demonstrate compliance with all ICAPCD applicable rules and regulations as well as local land use plans and population projections.¹⁹ The adopted City of Calexico General Plan Land Use Map designates the project site as *I (Industrial)*. Therefore, to maintain consistency with the Calexico General Plan, the developer is requesting a General Plan Amendment to change the land use designation from *I (Industrial)* to *CH (Commercial Highway)*. The implementation of the proposed project would generate more vehicle trips than anticipated in the AQAP due to the trip generation rates associated with commercial land uses compared to those typically associated with industrial land uses. The existing industrial zoning would allow for manufacturing and warehouse development potentially generating existing volumes of truck traffic. Truck traffic, in turn, will generate NO_x emissions associated with diesel engines. Finally, industrial uses will not benefit from the high pedestrian traffic volumes that are contemplated with the project. The proposed project will result in less operational emissions compared to that possible under the General Plan's industrial land use designation. As a result, the impacts will be less than significant.

Conclusion: The proposed project would have a significant impact related to applicable air quality management plans.

Mitigation Measures: The City shall request that the ICAPCD amend the AQAP to update its emissions projections and related information to take into account the proposed change in land use designation for the project site from *I (Industrial)* to *CH (Commercial Highway)*. No additional mitigation will be required.

Significance after Mitigation: The necessary amendment of the AQAP is within the responsibility and jurisdiction of the ICAPCD and not the City. Although the amendment can and should be adopted by the ICAPCD, the City cannot assure the timing and implementation of the recommended mitigation. Accordingly, the impacts are considered significant and unavoidable related to applicable air quality management plans.

¹⁹ Imperial County Air Pollution Control District. *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act, as Amended 1970*. November 2007.

3.2.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR VIOLATING ANY AIR QUALITY STANDARD OR CONTRIBUTES SUBSTANTIALLY TO AN EXISTING OR PROJECTED AIR QUALITY VIOLATION.

The potential air emissions include the following two categories: short-term (construction-related) emissions and long-term (operational) emissions. Airborne emissions would occur during the various development phases from the following sources:

- Activities related to ongoing land clearance, grading, and excavation would result in both equipment emissions and fugitive dust emissions. The majority of these NO_x emissions would be associated with the use of diesel-powered construction equipment and fugitive dust (PM₁₀) associated with the disturbance of the soil during grading and excavation activities.
- Equipment emissions associated with the use of construction equipment during site preparation and construction activities.
- Delivery vehicles and workers commuting to and from the work site would generate mobile emissions. The primary pollutant is CO with secondary emissions of ROG and NO_x. As indicated previously, the use of diesel trucks and other equipment would generate large amounts of NO_x.

As indicated previously, the use of diesel-power construction equipment would generate large amounts of nitrogen oxide (NO_x). Particulate dust would also be a byproduct of other site preparation activities. Table 3-3 indicates the projected construction emissions. These quantities represent a worse case condition in the absence of any mitigation. The emissions were calculated using a computer model, CalEEMod, developed for the CARB. Computer worksheets are included in the Appendix.

The entire project construction period is expected to last for approximately 24 months and would include the site clearance, grading and earthworks, erection of the new buildings, and the finishing of the project (paving, painting, and installation of landscaping). The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod V. 2013.2.2) which was adapted for the SSAB.

The estimated daily construction emissions (shown in Table 3-3) assume compliance with applicable rules and regulations for the control of fugitive dust and architectural coating emissions, which include, but are not limited to, the watering of active grading areas of the site and unpaved surfaces at least three times daily, the daily clean-up of mud and dirt carried onto paved streets from the site, and use of low VOC paint. As indicated in Table 3-3, the project will exceed thresholds for ROG, NO_x, and PM₁₀ in the absence of mitigation.

**Table 3-3
 Estimated Daily Construction Emissions (in lbs/day)**

Construction Phase	ROG	NO ₂	CO	SO ₂	PM ₁₀ ¹	PM _{2.5} ²
Demolition (on-site 2015)	4.50	48.36	36.07	0.03	2.45	1.23
Demolition (off-site 2015)	0.11	0.09	1.10	--	0.08	0.04
Total Demolition Phase 2015	4.61	48.45	37.17	0.03	2.53	1.27
Site Preparation (on-site 2015)	5.26	56.88	42.63	0.03	57.28	28.64
Site Preparation (off-site 2015)	0.13	0.11	1.32	--	0.10	0.05
Total Site Preparation 2015	5.39	56.99	43.95	0.03	57.38	28.69
Grading (on-site 2015)	3.83	40.41	26.67	0.02	45.23	22.62
Grading (off-site 2015)	0.15	0.13	1.47	--	0.11	0.06
Total Grading	3.98	40.54	28.14	0.02	45.34	22.67
Building Construction (on-site 2015)	3.65	30.02	18.74	0.02	2.11	1.06
Building Construction (off-site 2015)	5.06	20.89	53.02	0.06	177.00	88.50
Total Building Construction 2015	8.71	50.91	71.76	0.08	179.11	44.25
Paving (on-site 2016)	6.81	25.17	14.97	0.02	1.41	0.71
Paving (off-site 2016)	0.11	0.09	1.10	--	0.08	0.04
Total Paving 2016	6.92	25.26	16.07	0.02	1.49	0.75
Architectural Coatings (on-site 2016)	246.92	2.57	1.90	--	0.22	0.11
Architectural Coatings (off-site 2016)	0.51	0.44	5.01	--	0.38	0.19
Total Architectural Coatings 2016	246.91	3.01	6.91	--	0.60	0.30
Maximum Daily Emissions	246.92	57.00	71.77	0.09	89.95¹	44.95
Daily Thresholds	55	55	55⁰	150	150	--

1. The PM10 emissions were reduced by 50% with the regular watering of barren soils.
2. PM2.5 emissions were assumed to be 50% of total PM 10 emissions

Source: California Air Resources Board CalEEMod [computer program].

As indicated in Table 3-3, the proposed project's maximum daily construction emissions will exceed thresholds for ROG and NO_x. According to the AQAP, if a Tier II project exceeds the construction thresholds, the project would be considered potentially significant and would require implementation of all applicable ICAPCD rules and regulations as well as standard, discretionary, and enhanced mitigation measures identified in the ICAPCD CEQA Air Quality Handbook.²⁰ The proposed Gran Plaza Phase 2 is a Tier II project and will be subject to the aforementioned Tier II mitigation requirements. Adherence to these requirements would reduce the construction related impacts to levels that are less than significant.

²⁰ Imperial County Air Pollution Control District. *CEQA Air Quality Handbook, Guidelines for the Implementation of the California Environmental Quality Act, as Amended 1970*. November 2007.

Long-term emissions refer to those air quality impacts that would occur once the proposed project has been constructed and is operational. These impacts would continue over the operational life of the project. The long-term air quality impacts associated with the proposed project include mobile emissions associated with vehicular traffic and off-site stationary emissions associated with the generation of energy (natural gas and electrical). The new Gran Plaza Phase 2 development would have a total floor area of 1,069,400 square feet. The analysis of long-term operational impacts also used the CalEEMod computer model that was adapted for the SSAB. As indicated in Table 3-4, the projected long-term emissions would exceed daily thresholds considered to be a significant impact.

**Table 3-4
 Estimated Operational Emissions in lbs/day**

Emission Source	ROG	NO₂	CO	SO₂	PM₁₀	PM_{2.5}
Area-wide (lbs/day)	97.67	--	0.11	--	--	--
Energy (lbs/day)	0.07	0.66	0.55	--	0.05	0.05
Mobile (lbs/day)	294.92	454.86	2,450.12	2.48	162.03	81.02
Total (lbs/day)	392.68	455.52	2,450.80	2.48	162.08	81.07
Daily Thresholds	55	55	550	150	150	--

Source: California Air Resources Board CalEEMod [computer program].

As shown in Table 3-4, the proposed project would generate emissions that would exceed the long-term thresholds for ROG, NO_x, CO, and PM₁₀. As a result, the proposed project's short-term (construction-related) emissions and long-term (operational emissions) would exceed the daily thresholds established by the ICAPCD. The proposed project will be required to adhere to the Tier II control measures. Adherence to these requirements would reduce the construction related impacts to levels that are less than significant.

Conclusion: The project's short-term emissions will exceed thresholds for ROG, and NO_x. The proposed project would generate operational emissions that would exceed the thresholds for ROG, NO_x, CO, and PM₁₀. The proposed project will be required to adhere to the Tier II control measures. Adherence to these requirements would reduce the construction related impacts to levels that are less than significant.

Mitigation Measures. The following mitigation would be required to further reduce air emissions to levels that are less than significant:

Air Quality Mitigation: Measure No. 1. As provided by the ICAPCD CEQA Air Quality Handbook (2007), to further reduce impacts related to fugitive dust the project applicant shall implement all of the following standard mitigation measures for fugitive dust control and equipment emissions.

- *(Fugitive Dust Control Requirement).* All disturbed areas not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover.

- *Fugitive Dust Control Requirement*). All on-site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- *(Fugitive Dust Control Requirement)*. All unpaved traffic areas one acre or more with 75 or more average vehicle trips per day will be effectively stabilized, and visible emission shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- *(Fugitive Dust Control Requirement)*. The transport of bulk materials shall be completely covered unless 6-inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at a delivery site.
- *(Fugitive Dust Control Requirement)*. All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- *(Fugitive Dust Control Requirement)*. Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.
- *(Equipment Exhaust Control Requirement)*. The use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- *(Equipment Exhaust Control Requirement)*. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to five minutes as a maximum.
- *(Equipment Exhaust Control Requirement)*. Limit, to the extent feasible, the hours of operation of heavy equipment and/or the amount of equipment in use.
- *(Equipment Exhaust Control Requirement)*. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Air Quality Mitigation: Measure No. 2: As provided by the ICAPCD *CEQA Air Quality Handbook* (2007), the project applicant shall implement all of the following Tier 2 standard and discretionary mitigation measures for project operations:

- *(Standard Site Design Measures)*. The Applicant shall provide on-site bicycle lockers and/or racks.
- *(Standard Site Design Measures)*. The Applicant shall provide on-site eating, refrigeration, and food vending facilities to reduce lunchtime trips.

- *(Standard Energy Efficiency Measures)*. The Applicant shall implement measures which meet mandatory, prescriptive, and/or performance measures as required by Title 24.
- *(Discretionary Site Design Measures)*. The Applicant shall increase street tree planting.
- *(Discretionary Site Design Measures)*. The Applicant shall provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles.
- *(Discretionary Site Design Measures)*. The Applicant shall increase number of bicycle routes/lanes.
- *(Discretionary Site Design Measures)*. If the project is located on an established transit route, the Applicant shall improve public transit accessibility by providing transit turnouts with direct pedestrian access to protect or improve transit stop amenities.
- *(Discretionary Site Design Measures)*. The Applicant shall provide shower and locker facilities to encourage employees to bike and/or walk to work.
- *(Discretionary Site Design Measures)*. The Applicant shall provide for paving a minimum of 100 feet from the property line for commercial driveways that access County paved roads as per County Standard Commercial Driveway Detail 410B (formerly SW-131A).
- *(Discretionary Site Design Measures)*. For bus services within a ¼ mile of the project, the Applicant shall provide bus stop improvements such as shelters, route information, benches, and lighting.
- *(Discretionary Site Design Measures)*. The Applicant shall implement on-site circulation design elements in parking lots to reduce vehicle queuing and improve the pedestrian environment.
- *(Discretionary Site Design Measures)*. The Applicant shall provide pedestrian signalization and signage to improve pedestrian safety.
- *(Discretionary Site Design Measures)*. The Applicant shall synchronize traffic lights on streets impacted by the development.
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall use roof material with a solar reflectance value meeting the EPA/DOE Energy Star® rating to reduce summer cooling needs.
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall use built-in energy efficient appliances, where applicable.
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall use double-paned windows, where appropriate.

- *(Discretionary Energy Efficiency Measures)*. The Applicant shall provide use low energy parking lot and street lights (i.e. sodium).
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall use low energy traffic signals (i.e. light emitting diode).
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall install door sweeps and weather stripping if more efficient doors and windows are not available.
- *(Discretionary Energy Efficiency Measures)*. The Applicant shall install high efficiency gas/electric space heating.

In addition to the aforementioned mitigation measures, the ICAPCD as part of its review of the Draft EIR requested the following measures to be added:

- The project Applicant must submit a "Construction" Dust Control Plan at least 14 working days prior to any earthmoving activities.
- The project Applicant must submit a Construction Notification Form 10 days prior to any earthmoving activities.
- In order to assure that NO_x emissions remain less than significant the project Applicant must submit a current list of off-road equipment to be utilized during construction with the following minimum information: Make, Model, Horsepower, Year, hours of daily use and the total number of that piece of equipment.
- The list of off-road equipment must be updated periodically but no later than every two weeks.
- The use of the equipment will be analyzed by the air district and compared to the NO_x emissions that are resulting. Any emissions in excess of the NO_x emission thresholds found in the CEQA handbook will need to be mitigated with either an off-site project or in accordance with Policy 5.
- The project Applicant will pay all pertinent Rule 310 fees prior to the issuance of a building permit.

Significance after Mitigation: The proposed project's short-term (construction-related) emissions and long-term (operational) emissions would be mitigated to levels that are less than significant with adherence to the Tier II control measures.

3.2.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS IN NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD (INCLUDING RELEASING EMISSIONS, WHICH EXCEED QUANTITATIVE THRESHOLDS FOR OZONE PRECURSORS).

The City is a nonattainment area for O₃, PM₁₀, and PM_{2.5}. Regional air pollutant emissions associated with proposed project operations would be generated by the consumption of electricity and natural gas, and by the operation of on-road vehicles. Pollutant emissions associated with energy demand (i.e., electricity generation and natural gas consumption) are classified as regional stationary source emissions. As indicated previously, mobile-source emissions were calculated using the CalEEMod emissions inventory model. The model uses estimated average daily trip (ADT) generation rates to calculate mobile source emissions. The ADT used for the proposed project was extrapolated from the Traffic Impact Analysis prepared for the project. The CalEEMod worksheets for calculating regional operational daily emissions are provided in Appendix B of this EIR.

At full buildout, approximately 1,069,400 square feet of retail uses would be constructed. As shown previously in Tables 3-3 and 3-4, the project's operations emissions of ROG, NO_x, PM₁₀, and CO would exceed their respective ICAPCD regional significance thresholds. Implementation of the Air Quality Mitigation Measure No. 1 below would reduce ROG, NO_x, and CO emissions generated by the project to a less than significant level. Rule 310 requires the applicant to enter into an agreement with the ICAPCD to mitigate impacts from construction and operation to less than significant levels. This agreement will require the Applicant to pay an operational development fee, to provide off-site mitigation (e.g., fund emission reduction projects in the Basin), or a combination thereof.

Conclusions: The City is a nonattainment area for O₃, PM₁₀, and PM_{2.5}. As shown in Table 3.2-4, ROG, NO_x, CO, and PM₁₀ would exceed their respective ICAPCD regional significance thresholds in the absence of mitigation. Adherence to the mitigation, including the Tier II control measures, will reduce the potential impacts to levels that are less than significant.

Mitigation Measures: The project Applicant's implementation of Mitigation Measures AQ-1 and AQ-2 above will reduce the proposed project's net increase in criteria pollutants for which the region is in nonattainment status.

Significance after Mitigation: The proposed project's impacts would be less than significant with the implementation of the aforementioned mitigation, including the Tier II control measures.

3.2.4.4 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR EXPOSING SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Some population groups, such as children, the elderly, and acutely and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than others. Currently, there are no sensitive receptors within 1,000 feet of the project site that are located within Calexico. In addition, there are no future sensitive land uses planned in the City of Calexico adjacent to the project site. There are sensitive receptors (residential uses) located within the City of Mexicali that are located within 80-feet of the U.S.-Mexico Border and approximately 145-feet from the project site (refer to Exhibit 3-1). Even so, there would be construction workers located on-site during construction activities, and employees/patrons of the proposed project present upon completion of each phase of development. For construction, there is the possibility of the release of diesel particulate matter (DPM) associated with

heavy equipment operations during grading and excavation activities. In addition, incidental amounts of substances such as oils, solvents, and paints would be used. These substances would comply with all applicable ICAPCD rules for their manufacture and use.²¹

CARB has declared that DPM from diesel engine exhaust is a toxic air contaminant (TAC). Additionally, the California Office of Environmental Health Hazard Assessment (OEHHA) has determined that chronic exposure to DPM can cause carcinogenic and non-carcinogenic health effects. Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. *Individual Cancer Risk* is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the construction schedule of approximately one year for Phase 1 and one year for Phase 2, the proposed project would not result in a long-term (i.e., 70-years) substantial source of TAC emissions with no residual emissions after construction and corresponding individual cancer risk.²² As such, long-term project-related toxic emission impacts during construction would not be significant. In addition, the implementation of *Air Quality Mitigation Measures 1 and 2* identified in the previous sections would further reduce emissions from construction activities. For operations, there are no major industrial operations proposed or significant sources of TACs or DPM. As a result, the operational impacts are considered to be less than significant.

Conclusions: The analysis determined that the long-term project-related toxic emission impacts during construction would not be significant. In addition, the implementation of *Air Quality Mitigation Measure 1* identified in the previous section would further reduce emissions from construction activities. For operations, there are no major industrial operations proposed or significant sources of TACs or DPM. As a result, the operational impacts are considered less than significant.

Mitigation Measures: No additional mitigation beyond that identified in the previous section (*Air Quality Mitigation Measure No. 1*) would be required.

Significance after Mitigation: The implementation of the required mitigation measures (*Air Quality Mitigation Measures 1 and 2*) will reduce the impacts to levels that are less than significant.

²¹ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

²² Ibid.

3.3 BIOLOGICAL RESOURCES IMPACTS

3.3.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. Based on the results of the preliminary environmental analysis undertaken as part of the Initial Study's preparation, the following potential impacts related to biological resources were identified as requiring analysis in this EIR:

- The proposed project's potential for having 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) or the U. S. Fish and Wildlife Service (USFWS);
- The proposed project's potential for having a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; and,
- The proposed project's potential for having a substantial adverse effect on Federally protected wetlands as defined by §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.

3.3.2 ENVIRONMENTAL SETTING

3.3.2.1 REGULATORY SETTING

There are a number of existing regulations applicable to any new development that would be effective in further reducing potential impacts on biological resources. Those regulations that will serve as standard conditions with respect to biological resources are summarized below.

- *Federal Endangered Species Act.* The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA prohibits the taking of endangered or threatened wildlife species. A *take* is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, trapping, capturing, or collecting these endangered or threatened wildlife species.
- *Clean Water Act, Section 404.* The Federal Government's Section 404 Guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers must consult with the USFWS and National Oceanic Atmospheric Administration (NOAA) when threatened or endangered species may be affected by a proposed project to determine whether issuance of Section 404 permit would jeopardize the species. Portions of Calexico Creek are potentially subject to the aforementioned permit requirements.

- *Migratory Bird Treaty Act (MBTA)*. Raptors, migratory birds, and other avian species are protected by a number of State and Federal laws. The Federal MBTA prohibits the possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.
- *California Endangered Species Act*. The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA directs agencies to consult with California Department of Fish and Wildlife (CDFW) on projects or actions that could affect listed species and directs CDFW to determine whether jeopardy would occur, and allows the Agency to identify "reasonable and prudent alternatives" to the project consistent with conserving the species.
- *California Fish and Wildlife Code*. Section 3503 of the California Fish and *Wildlife* Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and *Wildlife* Code Section 3503.5 states specifically that it is unlawful to take, possess, or destroy any birds in the orders *Falconiformes* or *Strigiformes* (birds of-prey) 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. Fish and *Wildlife* Code Sections 3511, 4700, and 5050 provide the designation of certain fully protected birds, mammals, and reptiles/amphibians, respectively, stating that the fully protected species or parts thereof may not be taken or possessed at any time.
- *State Lands Commission*. The State Lands Commission administers lands owned by the State, which includes the beds of all naturally navigable waterways, such as major rivers, streams and lakes, and tidal and submerged lands below the high tide line. The State Lands Commission issues Land Use Leases or Permits for use of State lands that are determined to be consistent with the public trust values for fisheries, navigation, public access, recreation, wildlife habitat, and open space. No project components are proposed on lands subject to a State Land Use Lease.
- *City of Calexico General Plan*. The *City of Calexico General Plan* addresses many issues that are directly related to and influence land use decisions. The Conservation/Open Space Element of the General Plan outlines goals, objectives, and policies to identify, protect, and improve significant ecological and biological resources in and around the City. Specifically, the General Plan includes the following policies that pertain to ecological and biological resources:
 - *Policy 3.a*: Support regional and sub-regional efforts to conserve ecological and biological resources in the city and surrounding areas.
 - *Policy 3.b*: Support efforts to integrate natural wetlands treatment systems as part of the New River Improvement Project.
 - *Policy 3.c*: Projects of one acre or more involving alteration or development of undisturbed land shall be required to submit a biological survey conducted by a qualified biologist to the

City. A focused biological study may be required if habitat that could potentially support a listed or threatened species exists on the site.

- *The New River Committee.* The City of Calexico has established *The New River Committee*, a special committee created to focus on the New River Improvement Project and ongoing efforts to clean up the New River. As stated in the City of Calexico General Plan, the ultimate goal of the clean-up effort is to restore the New River back “into a resource with significantly improved water quality that minimizes threats to public health and improves the condition of water flowing into the Salton Sea.” The New River Improvement Project, led by the City of Calexico New River Committee and the City of Calexico, requires separate environmental review under CEQA. The City of Calexico does not include regulations or development standards for the New River within the General Plan.

3.3.2.2 EXISTING PLANT AND ANIMAL LIFE

The topography of the project site is mostly level and has been graded. The Phase 1A of the outlet center, located to the east of the project site, has been constructed and is now open for business. The majority of the Phase 2 Power Center project sites are heavily disturbed and regularly groomed and patrolled by the U.S. Border Patrol. Previously occurring patches of native saltbush scrub, tamarisk trees (*Tamarix ramosissima*), giant cane (*Arundo donax*), and fan palms (*Washingtonia robusta*) were cleared and graded as part of the Phase 1 development, except for a small triangular area of disturbed saltbush scrub just south of Calexico Airport and existing 2nd Street. Ruderal species such as Russian thistle (*Salsola iberica*) and pigweed (*Chenopodium album*) remain scattered throughout the site.²³

Previous biological surveys that were conducted as part of the Final EIR for the Calexico Gran Plaza project (October 2008) identified the following species within this immediate area: house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), roadrunner (*Geococcyx californianus*), brown-headed cowbird (*Malothrus ater*), mockingbird (*Mimus polyglottos*), phainopepla, (*Phainopepla nitens*), black phoebe (*Sayornis nigricans*), American kestrel (*Falco sparverius*), and western kingbird (*Tyrannus verticalis*).²⁴

During previous surveys, several bird species associated with aquatic habitats were also noted at the 2nd Street bridge crossing of the New River. These included the great blue heron, (*Ardea herodias*), great egret (*Ardea alba*), barn swallow (*Hirundo rustica*), mallard (*Anas platyrhynchos*), and great-tailed grackle (*Quiscalus mexicanus*).²⁵

Plant and animal species are accorded special status because of their recognized rarity or vulnerability to various causes of habitat loss or population decline. Some of these receive specific protection defined in Federal or State endangered species legislation. Others have been designated as *sensitive* or *special status*

²³ RBF Consulting, Inc. *Burrowing Owl Relocation Plan Calexico Gran Plaza Outlet Phase 1B, Power Center Development and 2nd Street Realignment*. Calexico, Imperial County, California. May 2014.

²⁴ Ibid.

²⁵ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives (see the regulatory discussion provided in the previous discussion).

A list of special status plant and animal species reported to occur within the vicinity of the project site was derived from scientific literature, a search of the California Natural Diversity Database, and biological reports collected on the area. Of the plants and animals identified in these surveys, only the burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), and mountain plover (*Charadrius montanus*) would be potentially present.²⁶ Because of the site's lack of suitable foraging habitat, only the burrowing owl is found within the project site. These species are described in greater detail below.

- *Burrowing Owl (Athene cunicularia)*. The burrowing owl is a Federal species of concern and a California species of special concern. The burrowing owl, a small ground-nesting bird of open grassland habitat, has adapted to altered habitats. Burrowing owls rely upon burrows dug by burrowing mammals, primarily ground squirrels, and require open fields with adequate food supply for foraging habitat, and low vegetative cover to allow owls to watch for predators. The majority of California's burrowing owl population (approximately 71 percent), an estimated 6,571 to 6,719 nesting pairs, inhabit the Imperial Valley. These owls occur almost exclusively in un-lined earthen banks along irrigation ditches surrounded by crops, and occur in densities that are among the highest ever recorded for the species. It has been estimated that 20 to 25 percent of the breeding population remains in the Imperial Valley during the winter months, with probable emigration from the north and emigration to the south in this period.²⁷
- *Ferruginous Hawk (Buteo regalis)*. The ferruginous hawk is a Federal species of concern and a California species of special concern. This species winters in open desert scrub, grasslands, sagebrush flats, low foothills, and along the fringes of pinyon-juniper habitats. It feeds primarily on rabbits, ground squirrels, and mice. A wintering bird was observed flying over a school in January 2003 about four miles east of El Centro. While wintering birds may occasionally fly over the project site, ferruginous hawks are not expected to nest or regularly occur due to the lack of appropriate habitat.
- *Mountain Plover (Charadrius montanus)*. The mountain plover is a Federal species of concern and a California species of special concern. The mountain plover is found mainly in the high plains and semi-desert regions of the western United States. Approximately 90 percent of the North American population winters in California and then migrates to breeding grounds in Colorado, Montana, Wyoming, New Mexico, and other areas in the spring. It forages on alkaline flats, plowed ground, grazed pastures, and dry short grass prairie searching for large insects such as grasshoppers, crickets, and flies. The birds arrive on the breeding grounds between March and April and egg laying occurs between the months of April and June. Sightings have been recorded in Imperial Valley and it is possible that the mountain plover could utilize the surrounding area.

²⁶ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

²⁷ Ibid.

The mountain plover would not be likely to nest or forage on the project site due to lack of suitable habitat.²⁸

3.3.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, in its capacity as Lead Agency, a project may be deemed to have a significant adverse impact if it results in any of the following:

- The proposed project's potential for having 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) or the U. S. Fish and Wildlife Service (USFWS);
- The proposed project's potential for having a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; and,
- The proposed project's potential for having a substantial adverse effect on Federally protected wetlands as defined by §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.

3.3.4 ENVIRONMENTAL IMPACTS AND MITIGATION

3.3.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR HAVING 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) OR THE U. S. FISH AND WILDLIFE SERVICE (USFWS).

Implementation of the proposed project would ultimately impact the entire site and although the site is highly disturbed, it does support a variety of birds, including special status species. During a previous survey (October 2008), two burrowing owls were observed utilizing a burrow and foraging near the western end of the project site. These burrowing owls were recently successfully relocated. In the absence of relocation, the previously identified burrowing owls nests identified within the project site would have been displaced by construction activities. This would be a significant impact and it has been recommended that additional burrowing owl surveys be conducted according to the *Burrowing Owl Survey Protocol and Mitigation Guidelines* of the California Burrowing Owl Consortium within 30 days of the start of construction. These surveys have been completed and the relocation is underway. There are two other special status species found in the larger region, the ferruginous hawk and mountain plover, though these species have a low potential for occurring on the site due to the lack of suitable habitat.²⁹

²⁸ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. October, 2008.

²⁹ Ibid.

During a more recent burrowing owl survey, five occupied burrows were identified. The five occupied burrows identified in Exhibit 3-2 are located outside the Phase 2 project boundary. These burrows were found to support at least one breeding pair that will need to be relocated away from burrows after the young have fledged. There is suitable relocation habitat within a disturbed saltbush scrub area located north of the western end of the Calexico Airport grounds and south of the New River, and there is suitable habitat along the banks of the New River that extends northwest of the survey area. These areas provide suitable burrowing owl habitat due to the presence of soft sandy soils, rocky terrain, and existing ground squirrel, gopher, and small mammal/rodent burrows that are conducive to burrowing owl burrow creation.

Indirect impacts to biological resources resulting from construction and operation of the project could include generation of noise levels in excess of those currently occurring on the site and in adjacent habitats, generation of fugitive dust, and generation of light and glare. Clearing and grading operations may result in the generation of excess noise and fugitive dust that could affect nearby wildlife species. However, the current agricultural activity in the vicinity typically generates these types of noise and dust impacts several times a year; thus, no indirect impacts from the project are anticipated.

Light and glare associated with operation of the proposed project may be directed onto adjacent properties, which may disturb nesting and foraging activities of resident wildlife species. However, existing intensive development is located to the south of the project (in Baja, California, Mexico). Agricultural uses are located mainly to the west, and the Calexico International Airport lies to the north of the project site. As such, no high quality native wildlife habitat is located in the immediate vicinity of the proposed project.

Birds foraging in the open waters of nearby canals may be affected, along with nesting burrowing owls on the adjacent agricultural areas. However, egrets have been noted to forage in canals adjacent to existing development and burrowing owls have been observed in areas adjacent to existing residential development. These birds did not seem to be impacted by the adjacent development. Section 17.07.140 (D) of the City of Calexico Zoning Ordinance regulates lighting and requires that all light sources shall be shielded in such a manner that no light is visible from streets or adjoining properties and all exterior lights shall be low pressure sodium. As a result, light and glare from the proposed project are expected to result in less than significant impacts to wildlife species on adjacent undeveloped parcels.

Conclusion: In the absence of mitigation, the project could have a potentially significant impact on the burrowing owl. The burrowing owls identified in the earlier field surveys, have been successfully relocated pursuant to California Fish and Wildlife protocols. As a result, no significant adverse impacts are anticipated.

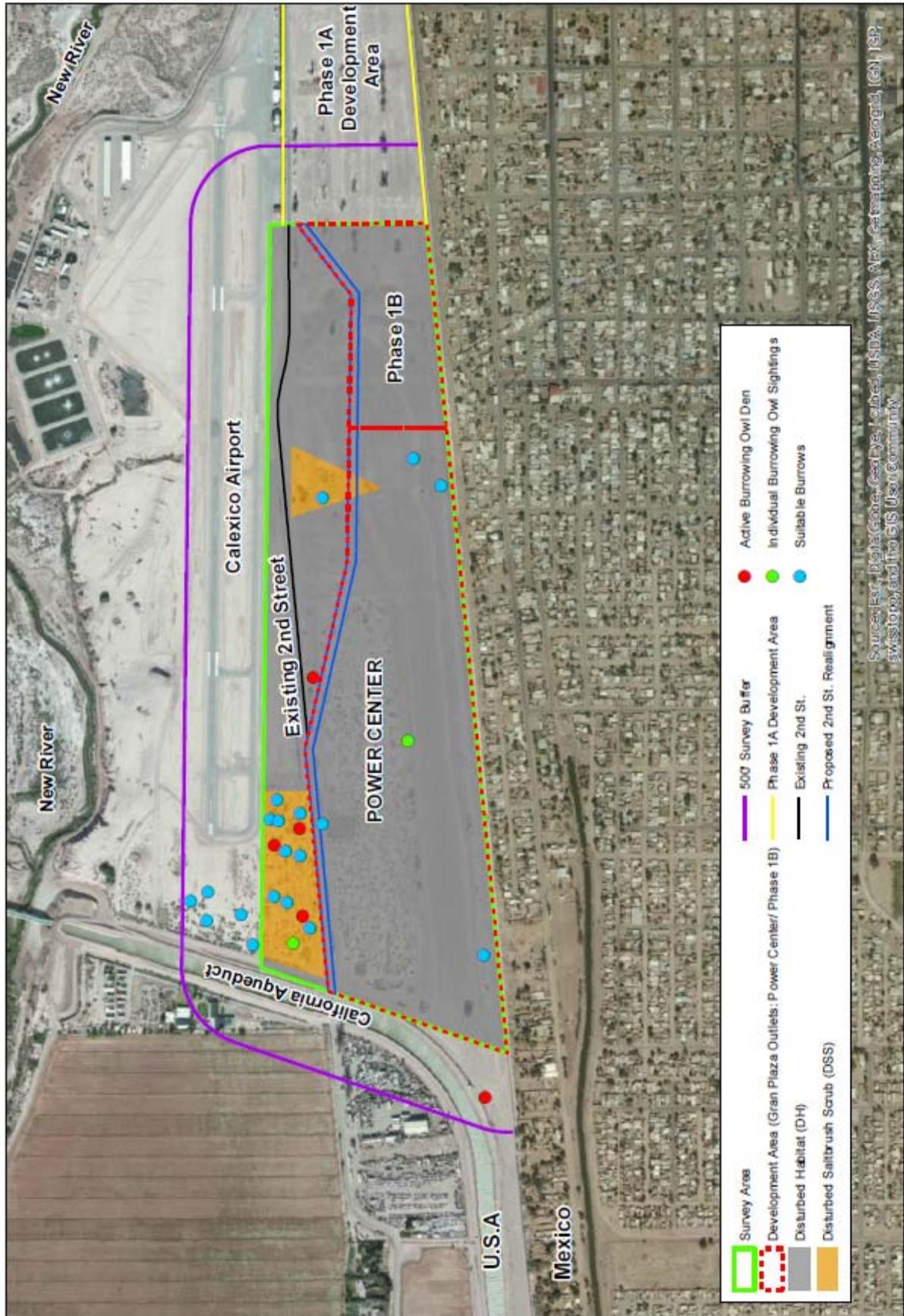


EXHIBIT 3-2
BURROWING OWL LOCATIONS
 Source: RBF Associates

Mitigation Measures: The following mitigation would be required to reduce the potential impacts to levels that are less than significant:

Biological Resources Mitigation Measure No. 1: Prior to the commencement of any grading or construction activities, the project applicant shall conduct a burrowing owl survey per the *Burrowing Owl Survey Protocol and Mitigation Guidelines* of the California Burrowing Owl Consortium (1993) or per the *Staff Report on Burrowing Owl Mitigation* prepared by CDFW (1995), and surveys for ferruginous hawks and mountain plovers, as follows:

- A qualified biologist, retained by the project applicant and approved by the City, shall conduct a pre-construction survey within and adjacent to ruderal habitat within 30 days of the commencement of any grading, demolition, or construction activities. This survey shall include two early morning surveys and two evening surveys to ensure that all owl pairs have been located.
- If preconstruction surveys undertaken during the breeding season (February 1st through August 31st) locate active nest burrows within 250 feet of construction zones, the qualified biologist, in consultation with the CDFW, shall delineate a buffer of 250 feet around them in which grading, demolition or other construction activities shall be prohibited until the breeding season is over.
- During the non-breeding season (September 1st through January 31st), resident owls may be relocated to alternative habitat. The relocation of resident owls shall be according to a relocation plan prepared by a qualified biologist in consultation with the CDFW. This plan shall provide for the owl's relocation to nearby lands possessing available nesting habitat. Suitable development-free buffers shall be maintained between replacement nest burrows and the nearest building, pathway, parking lot, or landscaping. The relocation of resident owls shall be in conformance with all necessary State and Federal permits.

Significance after Mitigation: The proposed project's impacts would be less than significant with the implementation of the aforementioned mitigation.

3.3.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR HAVING A SUBSTANTIAL ADVERSE EFFECT ON ANY RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY IDENTIFIED IN LOCAL OR REGIONAL PLANS, POLICIES, REGULATIONS, OR BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE OR U.S. FISH AND WILDLIFE SERVICE.

The jurisdictional report prepared for the Phase 1 development described the areas of permanent impact to waters of the State and waters of the U.S. associated with the storm drain culvert into the New River. The jurisdictional delineation estimated that 0.0083 acre of jurisdictional stream bed regulated by CDFW would be impacted, and 0.0036 acre of waters of the U.S. regulated by the USACE would be impacted. These areas are located within that portion of the project area that was developed as part of Phase 1. No other jurisdictional wetlands or natural community plans are located within the Phase 2 project site. The Phase 2 area has been disturbed due to grubbing and grading. The All American Canal, located to the west

of the project site, is a man-made channel that conveys water for irrigation and is not a jurisdictional wetland.

Conclusion: The project would not have a potentially significant impact on wetland areas under the jurisdiction of the USACE and one of the CDFW. The proposed project would not impact any areas that are subject to a natural community conservation plan.

Mitigation Measures: The analysis determined that the proposed project would not result in any significant impacts. As a result, no mitigation is required.

Significance after Mitigation: No significant impacts on any riparian habitat or other sensitive natural communities were identified.

3.3.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR HAVING A SUBSTANTIAL ADVERSE EFFECT ON FEDERALLY PROTECTED WETLANDS AS DEFINED BY §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.

As indicated in the previous analysis section (Section 3.3.4.2), the jurisdictional report prepared for the prepared for the Phase 1 Gran Plaza (refer to Appendix F of the Phase 1 Final EIR), as describes the areas of permanent impact to waters of the State and waters of the U.S. associated with the storm drain culvert into the New River. The jurisdictional delineation undertaken for the Phase 1 development estimated that 0.0083 acre of jurisdictional streambed regulated by CDFW would be impacted, and 0.0036 acre of waters of the U.S. regulated by the USACE would be impacted. These jurisdictional wetland areas identified previously are located outside of the current Phase 2 development boundaries. The water channel located to the west of the Phase 2 development site is an irrigation channel that conveys water for irrigation and is not a jurisdictional wetland.

Conclusion: The project would not have a potentially significant impact on wetland areas under the jurisdiction of the USACE, CDFW, and RWQCB.

Mitigation Measures: The analysis determined that the proposed project would not result in any impacts. As a result, no mitigation is required.

Significance after Mitigation: The proposed project's impacts would be less than significant without mitigation.

3.4 CULTURAL RESOURCES IMPACTS

3.4.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. Based on the results of the preliminary environmental analysis undertaken as part of the Initial Study's preparation, the project's potential for the following impacts are evaluated in this EIR:

- The proposed project's potential for disturbing any historic resources or structures as defined in GC §15064.5 and designated on a list of qualified historic structures as approved by the City as well as those structures, due to age and architectural style, symbolize Calexico's early development and are deemed worthy of preservation.
- The proposed project's potential for causing the loss and/or a substantial adverse change in the significance of known and unknown archaeological and paleontological resources pursuant to §15064.5 of the CEQA Guidelines.
- The proposed project's potential for directly or indirectly destroying a unique paleontological resource or site or unique geologic feature.
- The proposed project's potential for disturbing any human remains, including those interred outside of formal cemeteries.

3.4.2 ENVIRONMENTAL SETTING

3.4.2.1 Regulatory Setting

There are a number of existing regulations applicable to any new development that will be effective in further reducing potential cultural resources impacts. These regulations are considered to be standard conditions in that they are required regardless of whether an impact requires mitigation. Those regulations that will serve as standard conditions with respect to potential cultural resources impacts are listed below.

- *Historic Preservation Act.* Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, *Protection of Historic Properties*, are found in 36 Code of Federal Regulations (CFR), Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places. The criteria for determining National Register Eligibility are found in 36 CFR Part 60, Amendments to the Act (1986 and 1992) and subsequent

revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While Federal agencies must follow Federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a Federal permit or if it uses Federal money.

- *State Regulations.* State historic preservation regulations include the statutes and guidelines contained in the California Environmental Quality Act (CEQA); Public Resources Code. A historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, that is historically or archaeologically significant. Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the importance of cultural resources. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains. CEQA, as codified at PRC Sections 21000 et seq., is the principal statute governing the environmental review of projects in the State. As defined in PRC Section 21083.2, a “unique” archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
 - Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
 - Has a special and particular quality such as being the oldest of its type or the best available example of its type; and,
 - Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- *City of Calexico General Plan.* The Calexico General Plan, Element 2.0: Land Use contains the following objectives and policies concerning cultural resources:
 - *Objective 22:* To identify and preserve significant structures, sites, and life stories containing historic or cultural value for the enrichment and enjoyment of future generations.
 - *Policy 22.a:* Identify historic sites through historic landmark plaques and, where appropriate, seek applicable designation with the proper State and/or Federal historic preservation agency.
 - *Policy 22.b:* Support private efforts to reinvest in and restore historic or architecturally significant structures and to continue their use in the community.
 - *Policy 22.c:* Protect significant archaeological resources in accordance with the CEQA.
 - *Policy 22.d:* Encourage the use of the Mills Act (tax abatement program for owners of historic structures) to assist private owners in preserving and rehabilitating historic structures.

- *Policy 22.e:* The City should consider the development of a cultural center for the arts, possibly in an existing historic structure.
- *Policy 22.f:* The City shall continue to work with the Cultural Arts Commission and private parties to establish a museum.

3.4.2.2 PREHISTORIC SETTING

This first period of human occupation in the area is commonly referred to as the *Paleo-Indian Period* and is characterized by small groups of nomadic hunter gatherers. The key artifacts from the Paleo-Indian Period assemblage include fluted projectile points, flaked stone crescents, graters, perforators, scrapers, and choppers. The *Archaic Period* follows (approximately 9000 to 2000 B.C.), and is divided into three major subperiods (Early, Middle, and Late) representing a continuation of earlier Paleo-Indian traditions in conjunction with an increase in population size, a change in subsistence strategy, and the development of new technologies. In the *Early Archaic* (9000 to 6000 B.C.), a shift in subsistence and settlement strategies occurred, illustrating the abandonment of Paleo-Indian traditions for a more diverse exploitation of a broader natural environment, including a more successful utilization of coastal chaparral zones. These populations, commonly categorized as the San Dieguito Tradition, were semi-nomadic with a heavy dependence on the hunting of smaller game and the gathering of chaparral vegetal resources. In Southern California, the San Dieguito-Lake Mojave tradition likely existed from 12,000 to circa 4,000 years ago, during conditions that were wetter than what exist today.³⁰

During the *Middle Archaic* (6000 to 4000 B.C.), the diversification of prehistoric traditions continued with populations further exploiting local or regional resources all across California, creating more explicit regional differences. Many culturally-related groups identified through archaeological research have been grouped into regional traditions, one of which is of particular interest to the current project. The Pinto Basin Tradition dominated the deserts of eastern and southern California, as an extension of the Lake Mojave Tradition, continuing into the *Late Archaic* (4000 B.C. to 2000 B.C.). Population groups within the Pinto Basin Tradition had to adapt to a changed environment, which included the loss of Pleistocene lakes and their ecological resources. This adjustment is exemplified in the adoption of a migratory foraging strategy that included annual exploitation of multiple habitats such as mountain, foothill, spring and arroyo areas, and an increased dependence on hard seeds and other vegetal resources from arid zones.³¹

3.4.2.3 ETHNOGRAPHIC SETTING

The greater San Diego area was inhabited by a group of people known generally as the Diegueño. The term Diegueño is a descriptor used to describe those Native populations that came under the governance of the Mission San Diego de Alcalá. The territory of the Diegueño was constrained by the Pacific Ocean on the west and by several other Native groups to the north (the Luiseño, Cupeño, and Cahuilla). Culturally, the Diegueño share many similar traits with their northern Luiseño and Cahuilla neighbors. Within their

³⁰ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

³¹ Ibid.

cultural assemblage are numerous lithic tools such as projectile points, scrapers, baskets, pottery manufacture, twines for nets and other textile objects, houses of bulrush, the bow and arrow, and cremation burials.

The Kumeyaay or “Kamia” are one of many local Native tribes collectively referred to as the Diegueño, specifically representing populations occupying an area from present-day San Diego to just west of the lower Colorado River. Within the Kumeyaay sphere of influence were different linguistic dialects, one of which was known as the *Tipai*. The *Tipai* occupied territory south of the San Diego River, east toward the Colorado River, and south beyond the modern international border into Baja California.³²

To the east of the Kumeyaay and along the southern Colorado River area were the Yuman peoples (traditional Quechan tribal area) who arrived just prior to the formation of Lake Cahuilla. Cultural exchange between the Kumeyaay and the Quechen people continued over trade trails that surrounded the lake. By 1,000 A.D., the Kumeyaay had received cultural innovations such as projectile points and ceramics from the east. Horticulture had also been introduced to the area, enabling the production of beans, squash, and corn. Trade and migration trails joined these settlements with the Yuman people and also allowed occupation of the western watershed of the range, towards the coast. When the Colorado River resumed its natural course to the delta, the Kumeyaay followed its receding waters until the lake dried, which possibly occurred in the early Eighteenth century. Summer floods on the Colorado River would create spillage along weaker channels through the valley forming ponds and low basins. These drainages would eventually create the Alamo River and New River that enabled the Kumeyaay to maintain a limited horticultural economy, supplementing their hunting and gathering subsistence. In 1854, the first government surveyors in the valley made an inventory of 75 Native American garden plots located along these channels.³³

The project area is also located within the Pataya Cultural Area, a little understood cultural entity covering an area that extends from the northwestern corner of modern-day Arizona continuing south and southwest into southern California and northern Baja California, extending to the Pacific Ocean. When the Spanish-led De Anza Expedition crossed the area in 1774, the Valley was dry and they encountered few Native Americans during their travels through this portion of the desert. Once the lake had dried, Kumeyaay sojourns into the desert valley became less frequent and for shorter intervals. Certain resources, however, continued to attract them to the area, including their quarries of porphyry, hematite, and clay, seed gathering in spring, summer planting, mesquite bean harvesting in fall, and meeting with other tribal relations across the valley and along the Lower Colorado River.³⁴

3.4.2.5 HISTORIC-PERIOD SETTING

The historic period for southeastern California began in 1540 with the arrival of the Europeans and the Spanish *entradas* with Hernando de Alarcon who traveled up the Colorado River via the ocean and

³² City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

³³ Ibid.

³⁴ Ibid.

Melchior Diaz, who came by land to the Winterhaven/Yuma area. In 1769, Francisco Garces and Padre Juan Diaz established two small Franciscan missions on the Colorado River at Yuma and Andrade. As described above, the De Anza Expedition crossed into the area of Imperial Valley in 1774. In 1781, the Quechan people in the Yuma area rose against the colonialists, killing some 55 Spaniards, including Garces, and destroying their settlements. Neither the Spanish nor the later Mexican governments were successful in subjugating the Quechan Nation. In 1852, American forces defeated the Quechan after a continuous engagement and by destroying their crops.³⁵

In 1900, the town of Imperial was established (approximately 12 miles north/northwest of Calexico) as the first town in what would later become Imperial County. Initially, the only source of water for the area was from small lakes, including Mesquite Lake and French Lake, on the Alamo River. Water from the Colorado River arrived in Imperial via the new Imperial Canal in the fall of 1901. After this, development of the irrigation system was rapid. By 1905, 80,000 acres were under cultivation due to the 80 miles of main canals and 700 miles of distribution canals that had been constructed. In addition, in 1903, the Southern Pacific Railway extended a line from Niland (located near the Salton Sea) to Imperial, which was further extended to Calexico in 1904. Between 12,000 to 14,000 people lived in the valley during this period.

In 1905, flooding from the Colorado River compromised the Imperial Canal at the head gates and rapidly eroded the surrounding ground, which caused the entire flow of the Colorado River to pass through the existing canal bed and on to the Imperial Valley and Mexicali. This event created the Salton Sea. By 1907, the Colorado River had been diverted back to its primary channel after a lengthy effort headed by the Southern Pacific Railroad.³⁶ The cities of Brawley, Calexico, El Centro, and Holtville were incorporated in 1911.

3.4.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally have a significant adverse impact if it results in any of the following:

- The proposed project's potential for disturbing any historic resources or structures as defined in Government Code (GC) §15064.5 and designated on a list of qualified historic structures as approved by the City as well as those structures, due to age and architectural style, symbolize Calexico's early development and are deemed worthy of preservation;
- The proposed project's potential for causing the loss and/or a substantial adverse change in the significance of known and unknown archaeological and paleontological resources pursuant to GC §15064.5 of the CEQA Guidelines;
- The proposed project's potential for directly or indirectly, destroy a unique paleontological resource or site or unique geologic feature; and,

³⁵ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

³⁶ The current water level of the Salton Sea is maintained by agricultural and urban runoff. Imperial County was the last county to be created in California. It was formed in 1907 from the eastern portion of San Diego County.

- The proposed project's potential for disturbing human remains, including those interred outside of formal cemeteries.

3.4.4 ENVIRONMENTAL IMPACTS

3.4.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR DISTURBING ANY HISTORIC RESOURCES OR STRUCTURES AS DEFINED IN GC §15064.5 AND DESIGNATED ON A LIST OF QUALIFIED HISTORIC STRUCTURES AS APPROVED BY THE CITY AS WELL AS THOSE STRUCTURES, DUE TO AGE AND ARCHITECTURAL STYLE, SYMBOLIZE CALEXICO'S EARLY DEVELOPMENT AND ARE DEEMED WORTHY OF PRESERVATION.

Historic structures and sites are defined by local, State, and Federal criteria. A site or structure may be historically significant if it is locally protected through a local general plan or historic preservation ordinance. The State of California, through the State Historic Preservation Office (SHPO), also maintains an inventory of those sites and structures that are considered to be historically significant. Finally, the U. S. Department of Interior has established specific guidelines and criteria that indicates the manner in which a site, structure, or district is to be defined as having historic significance and in the determination of its eligibility for listing on the National Register of Historic Places. Once a site, structure, or district has been determined to be eligible for listing on the National Register, certain protocols related to its preservation must be adhered to. To be considered eligible for the National Register, a property must meet the *National Register Criteria for Evaluation*. This evaluation involves the examination of the property's age, integrity, and significance. A property may be historic if it is old enough to be considered historic (generally considered to be at least 50 years old and appearing the way it did in the past). Buildings and properties will qualify for a listing on the National Register if they are integral parts of districts that meet the criteria identified herein in Section 3.4.2.1.

A cultural resources records search was requested on August 28, 2008, and completed by the Southeast Information Center (SEIC), located at the Department of Anthropology, Imperial Valley College Desert Museum on September 4, 2008. Records were accessed by reviewing the Heber and Calexico (CA) USGS 7.5-minute quadrangles. This record search included the identification of previous cultural resource projects and resources located within the project area, as well as within a one-half mile buffer around the project area.³⁷

Results of the SEIC records search indicated that no cultural resource studies have been completed within the project area; six studies have been completed within a one-half mile radius of the project area. The research also indicated that there were no previously recorded cultural resources located within the project area though the SEIC identified two resources within a one-mile radius of the project area (P13-008019 and P13-008682) though both were historic. P13-008019 is the U.S. Inspection Station, also known as the U.S. Border Station Old Customs Building was constructed in 1933 and is listed on the National Register.

³⁷ Other sources accessed for the SEIC records search included the *National Register of Historical Places*, the *California Register of Historic Resources*, the *California State Historical Landmarks*, and the *California Points of Historical Interest*. Historic maps referenced include the eastern portion of the Blackburn's Map of Imperial County (1955), as well as the Heber and Calexico (CA) USGS 15-minute quadrangles.

Several buildings associated with this complex represent the Spanish Colonial Revival style. Site P13-008682 is the Imperial and Gulf Branch of the Southern Pacific Railroad.

No cultural resources were identified within the project area by the SEIC record search or by the pedestrian archaeological field survey completed for the Phase I EIR which also included the Phase 2 site. Remnants potentially associated with the former golf course were located within the easternmost portion of the larger project area next to the project site.³⁸ No cultural resources have been identified by the archival search or field survey. No buildings or structures are located within the project site. As a result, no impacts on historic resources are anticipated to result from the proposed project's implementation.

Conclusion: The project site has been completely disturbed and no structures that could be potentially historic remain within the project site.

Mitigation Measures: No mitigation is required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.4.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CAUSING THE LOSS AND/OR A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF KNOWN AND UNKNOWN ARCHAEOLOGICAL AND PALEONTOLOGICAL RESOURCES PURSUANT TO §15064.5 OF THE CEQA GUIDELINES.

A cultural resource records search was completed by the Southeast Information Center (SEIC) located at the Department of Anthropology, Imperial Valley College Desert Museum on September 4, 2008. Records were accessed by reviewing the Heber and Calexico (CA) USGS 7.5-minute quadrangles. This record search included the identification of previous cultural resource projects and resources located within the project area, as well as within a one-half mile buffer around the project area. Other sources accessed as part of the SEIC records search included the *National Register of Historical Places*, the *California Register of Historic Resources*, the *California State Historical Landmarks*, and the *California Points of Historical Interest*. Historic maps referenced include the eastern portion of the Blackburn's Map of Imperial County (1955), as well as the Heber and Calexico (CA) USGS 15-minute quadrangles.³⁹

A vehicular windshield assessment and "walkover" of the project area was completed as part of the EIR prepared for the Phase 1 project, with assistance from the U.S. Border Patrol. These surveys also included the portion of the project site that was ultimately included in the boundaries of the Phase 2 development. The purpose of this survey was to identify any cultural resources that may remain in the project area. No

³⁸ The poor condition of these remnants indicated a compromised integrity. In addition, the entire project area is scattered with an assortment of modern and possibly historic-period refuse. Constructed circa 1955, the golf course and associated club house meet the 50-year age threshold for listing in the NRHP. However, research did not reveal any important associations with significant events, or individuals, nor does it retain significant architectural merit. In addition, the course and club house have been abandoned, and the club house itself has been significantly damaged by fire and vandalism, which has greatly reduced its physical integrity. As such, neither the golf course nor any associated structures appear to be eligible for listing as historic resources.

³⁹ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

cultural resources were identified during the archaeological survey. At the time of the survey, the entire project area was littered with an assortment of small un-diagnostic pieces of modern and possibly historic-period refuse such as purple and aqua colored glass fragments, glazed white ceramic fragments, metallic piping, and other assorted refuse items including a 1906 “Indian Head” penny. The entire site has been further disturbed as part of weed abatement activities since the survey was completed and the eastern portion of the larger development site has undergone development.

As part of future grading and excavation activities, the potential exists for the inadvertent discovery of previously unidentified cultural resources or the discovery of subsurface cultural deposits within the development site. Information provided by the SEIC indicated that there will be an increased potential for encountering prehistoric lake shore deposits should ground-disturbance activities exceed a depth of 12-feet. There will be some excavation that will occur at this depth. However, the implementation of Cultural Resources Mitigation Measures No. 1 and No. 2 will minimize this impact to a less than significant level.

Conclusion: No historical resources have been identified by the archival search or field survey. However, it is possible that construction activities could potentially uncover subsurface cultural deposits. In addition, the project site has been completely disturbed and no structures that could be potentially historic are present on the project site.

Mitigation Measures: The following mitigation measures will be required to address potentially significant impacts related to subsurface resources.

Cultural Resources Mitigation Measure No. 1. If previously unidentified cultural materials are unearthed during construction, work shall cease within 50 feet of the find and the project applicant shall retain a qualified archaeologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the archaeologist, in consultation with Native American representatives, will meet to determine appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered will be, as necessary and at the discretion of the qualified archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.

Cultural Resources Mitigation Measure No. 2. A professionally qualified archaeological monitor, retained by the project applicant and approved by the City, shall be present during proposed construction activities anticipated to breach a depth of 12 feet, such as grading, trenching or infrastructure installation. If previously unidentified cultural materials are unearthed during construction, work shall cease within 50 feet of the find and the significance of the find shall be assessed by a qualified archaeologist retained by the project Applicant and approved by the City. If a find is significant, the Lead Agency and the archaeologist, in consultation with Native American representatives, will meet to determine appropriate avoidance measures or other appropriate mitigation.

Significance after Mitigation: The potential impacts will be less than significant with the implementation of the aforementioned mitigation.

3.4.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR DIRECTLY OR INDIRECTLY DESTROYING A UNIQUE PALEONTOLOGICAL RESOURCE OR A UNIQUE GEOLOGIC FEATURE.

Paleontological resources, or fossils, are the remains of extinct organisms, and provide the only direct evidence of ancient life. They are considered to be non-renewable resources because they cannot be replaced once they are destroyed. The Federal Land Policy and Management Act of 1976 (FLPMA) mandates the treatment of paleontological resources as having a scientific value (FLPMA section 102[8]). Scientifically significant paleontological resources are defined as vertebrate fossils that are identifiable to a particular taxon and/or element, noteworthy occurrences of invertebrate and plant fossils, and vertebrate trackways. In general, surface disturbing activities such as grading and excavation have the potential to cause adverse effects on surface and subsurface paleontological resources. Direct impacts include destruction due to breakage and fragmentation. Indirect impacts may result from increased accessibility to paleontological resources resulting in an increased likelihood of looting or vandalism.

The project site has undergone extensive disturbance due to previous human activities that have include land clearance and weed abatement. The neighboring area to the east has also undergone development as part of the construction activities for the Phase 1 development. The soils that underlie the site consist of recent alluvium associated with the alluvial deposition from the nearby New River. These soils are not conducive to the preservation of fossil materials. Holocene sedimentary deposits, such as the alluvium that underlies the project area, are considered to have low paleontological potential because the soil deposits are too recent to contain in-situ fossils. Excavation will be required for building footings and the installation of utilities though this excavation will not likely extend into any fossil-containing bedrock layers. However, the potential for the discovery of such resources cannot be completely discounted. For this reason, mitigation has been identified in the unlikely event that fossil resources are encountered during grading or excavation.

Conclusion: No paleontological resources are likely to be encountered given the degree of ground disturbance in the area associated with grading and construction activities. However, mitigation was recommended in the previous section as a means to mitigate potential impacts.

Mitigation Measures: The following mitigation measures will be required to address potentially significant impacts.

Cultural Resources Mitigation Measure No. 3. If previously unidentified paleontological resources are unearthed during construction, work shall cease within 50 feet of the find and the project Applicant shall retain a qualified paleontologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the paleontologist will determine appropriate avoidance measures or other appropriate mitigation. All significant fossil materials recovered will be, as necessary and at the discretion of the qualified paleontologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

Significance after Mitigation: The potential impacts will be less than significant with the implementation of the aforementioned mitigation.

3.4.4.4 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR THE DISTURBANCE OF ANY HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES.

There was no indication, either from the archival research or the archaeological survey, that the project area had been used for human burials in the recent or distant past. Although it is unlikely that human remains would be encountered during construction of the proposed Phase 2 project, the potential exists for the inadvertent discovery of previously unidentified human remains within the project site. As part of the grading for the Phase 1A development, five graves were discovered. The contractors adhered to the required protocols identified in the EIR prepared for the Phase 1 development.⁴⁰ In the event that human remains are discovered during Phase 2 subsurface activities, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact.

Conclusion: The proposed project could have the potential to adversely affecting undiscovered human remains during construction excavation activities.

Mitigation Measures: The potential impacts will be less than significant with the implementation of the following mitigation.

Cultural Resources Mitigation Measure No. 4. If human skeletal remains are uncovered during project construction, all work within 50 feet of the find shall stop and the project Applicant shall immediately contact the Imperial County Coroner to evaluate the remains following the procedures and protocols set forth in Section 15064.5 (e)(1) of the *CEQA Guidelines*. If the County coroner determines that the remains are Native American, the project Applicant will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Pursuant to Public Resources Code 5097.98, the project Applicant shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, are not damaged or disturbed by further development activity until the project Applicant has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Significance after Mitigation: The potential impacts will be less than significant with the implementation of the aforementioned mitigation.

⁴⁰ Personal communication with a Charles Company representative.

3.5 GREENHOUSE GAS EMISSIONS IMPACTS

3.5.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The environmental analysis undertaken as part of the Initial Study's preparation indicated the EIR should evaluate the following issues related to potential greenhouse gases:

- The proposed project's potential for resulting in the generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and,
- The proposed project's potential for increasing the potential for conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.

3.5.2 ENVIRONMENTAL SETTING

3.5.2.1 DESCRIPTION OF GREENHOUSE GAS (GHG) EMISSIONS

Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions. These greenhouse gases trap the heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). The key GHG include the following:

- *Carbon dioxide (CO₂)* is an odorless, colorless gas, which has both natural and anthropogenic (arising from human activities) sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out-gassing. Man-made sources of carbon dioxide are from burning coal, oil, natural gas, and wood. CO₂ emissions are mainly associated with fossil fuel combustion and fossil fuel combustion originating in California and out-of-state power plants that supply electricity to California. Other activities that produce CO₂ emissions include mineral production, waste combustion, and vegetation removal.
- *Methane (CH₄)* is a flammable gas and is the main component of natural gas. When one molecule of methane is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. A natural source of methane is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.
- *Nitrous oxide (N₂O)*, also known as laughing gas, is produced naturally by microbial processes in soil and water. Man-made sources of nitrous oxide include agricultural sources, industrial processing, fossil fuel-fired power plants, and vehicle emissions. Nitrous oxide is also used as an aerosol spray propellant and in medical applications. In addition to CO₂, CH₄, and N₂O, GHGs

include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. Of all the GHGs, CO₂ is the most abundant pollutant that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant but have higher global warming potential than CO₂. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO₂, denoted as CO₂e.

In addition, there are a number of man-made pollutants, such as CO, NO_x, non-methane VOC, and SO₂, that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other climate change emissions. As emissions of GHGs increase, temperatures in California are projected to rise significantly over the twenty-first century. The modeled magnitudes of the warming vary because of uncertainties in future emissions and in the climate sensitivity.

3.5.2.2 REGULATORY SETTING

There are a number of Federal and State agencies involved in the development, implementation, and enforcement of regulations related to greenhouse gas emissions. The primary agencies include the United States Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Imperial County Air Pollution Control District (ICAPCD).

- *Environmental Protection Agency (EPA)*. The EPA is the lead Federal Agency charged with the implementation and enforcement of the Clean Air Act. As part of this effort, the EPA is responsible for the establishment of national ambient air quality standards, including those related to greenhouse gas emissions.⁴¹
- *California Natural Resources Agency*. The California Natural Resources Agency is presently developing the State's Climate Adaptation Strategy. Recently, the U.S. Supreme Court ruled that the effects associated with climate change are serious and the EPA must regulate GHG as pollutants including the development of regulations for GHG emissions from new motor vehicles. A number of states, including California, have set statewide GHG emission targets. The passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, established the California target to achieve reductions in GHG to 1990 GHG emission levels by the year 2020.⁴²
- *California Air Resources Board (CARB)*. The CARB is part of the California Environmental Protection Agency (CALEPA) and is responsible for overseeing the implementation of the California Clean Air Act, meeting State requirements of the Federal Clean Air Act, and the establishment of the State ambient air quality standards. The CARB is responsible for the preparation setting emission standards for vehicles sold in California and for other emission-sources including consumer goods and off-road equipment. The CARB also established vehicle reformulated fuel specifications and the GHG reduction targets identified in SB 375.

⁴¹ Automobiles sold in California must meet the stricter emission standards established by the California Air Resources Board.

⁴² California, State of. OPR Technical Advisory – CEQA and Climate Change: Addressing Climate Change through the California Environmental Quality Act (CEQA) Review. June 19, 2008.

3.5.2.3 GHG REQUIREMENTS OF APPENDIX G OF THE CEQA

On April 13, 2009, the Governors Office of Planning and Research (OPR) submitted to the Secretary for Natural Resources its proposed amendments to the *CEQA Guidelines* for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). The adopted guidelines became effective on March 18, 2010. OPR emphasized the necessity of having a consistent threshold available to analyze projects, and the analyses should be performed based on the best available information. For example, if a lead agency determines that GHGs may be generated by a proposed project, the agency is responsible for assessing GHG emissions by type and source. In addition, the amendments add a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) to the *CEQA Guidelines* Appendix G. The new set includes the following two questions:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

3.5.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally be deemed to have a significant adverse environmental impact on greenhouse gas emissions, if it results in any of the following:

- The proposed project's potential for resulting in the generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and,
- The proposed project's potential for increasing the potential for conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.

3.5.4 ENVIRONMENTAL IMPACTS

3.5.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN THE GENERATION OF GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

Table 3-5 presents the CO₂, N₂O, and CH₄ emissions as well as their CO₂ equivalent values for the operational phase of the proposed project. The proposed project is not anticipated to generate other forms of GHG emissions in quantities that would facilitate a meaningful analysis. Therefore, this analysis focuses on direct and indirect GHG emissions. Direct project-related greenhouse gas emissions include emissions from both area sources and mobile sources. The CalEEMod computer model was used to calculate CO₂ emissions and relies upon default trip data and project specific land use data to calculate emissions. Estimates are based on energy emissions from natural gas usage, as well as automobile emissions. As seen in Table 3-5, the total project-related direct operational emissions would result in 210,079 pounds of CO₂ per day or 41,122 MTCO₂e/year.

**Table 3-5
 Greenhouse Gas Emissions Inventory (winter)**

Source	GHG Emissions (Lbs./Day)			
	CO ₂	CH ₄	N ₂ O	CO ₂ E
Construction Emissions				
Demolition (on-site) 2015	4,127.19	1.11	--	4,150.68
Demolition (off-site) 2015	80.41	--	--	80.56
Demolition Subtotal 2015	4,207.6	1.11	--	4,231.24
Site Preparation(on-site)-2015	4,111.74	1.22	--	4,137.52
Site Preparation (off-site)-2015	96.49	--	--	96.67
Site Preparation Subtotal 2015	4,208.23	1.22	--	4,234.19
Grading (on-site)-2015	3,129.01	0.93	--	3,148.63
Grading (off-site)-2015	107.21	--	--	107.42
Grading Subtotal 2015	3,236.22	0.93	--	3,245.3
Construction (on-site) 2016	2,689.57	0.67	--	2,703.74
Construction (off-site) 2016	6,214.59	0.19	--	6,218.69
Construction Subtotal 2016	8,904.16	0.86	--	8,922.43
Paving (on-site) 2017	2,339.89	0.69	--	2,354.56
Paving (off-site) 2017	80.41	--	--	80.56
Paving Subtotal 2017	2,420.30	0.69	--	2,435.12
Coatings (on-site) 2017	281.44	0.03	--	282.21
Coatings (off-site) 2017	364.53	0.03	--	365.23
Coatings Subtotal 2017	645.97	0.06	--	647.44
Long-Term Operational Emissions (Year 2018)				
Area	0.25	--	--	0.26
Energy	799.38	0.01	0.01	804.24
Mobile	209,025.89	11.84	--	209,274.72
Total	209,825.52	11.86	0.01	210,079.23

Source: CalEEMod V. 2013.2. Note: Slight variations may occur due to rounding.

The following are considered to be *indirect* project-related sources of greenhouse gases:

- *Electricity Consumption.* Energy Consumption emissions were calculated using the CalEEMod V.2013.2.2 computer modeling program. The proposed project will indirectly result in 11,339.91 MTCO_{2e}/year due to electricity usage.
- *Water Supply.* Water demand for the proposed uses would be approximately 391.9 acre-feet per year, based on indoor and outdoor water consumption figures estimated using the CalEEMod

V.2013.2.2 model. Emissions from indirect energy impacts due to water supply would result in 1,005.14 MTCO₂e/year according to the CalEEMod.

The total project-related operational emissions (direct and indirect) would result in 41,122 MTCO₂e/year without incorporation of project design features that promote energy and water conservation. The proposed project is also intended to promote sustainable development through infill and solid waste recycling and reduction, and other energy conservation strategies. As a result, the impacts are less than significant. With respect to Analysis No. 4, the City of Calexico, Imperial County, nor the ICAPCD have any plans, policies, or regulations adopted for the purpose of reducing GHG emissions. As a result, the project would not pose a conflict with any such plan.

Conclusion: The review of Items A, B, C, and D indicate that the project would not conflict with the State goals in AB 32 and, therefore, this impact would be less than significant. The State of California has not identified quantified thresholds of significance for GHG emissions. However, mitigation measures have been added to further reduce the proposed project's GHG impacts.

Mitigation Measures: Implementation of the following mitigation measures will reduce the proposed project's emission of greenhouse gases.

Greenhouse Gas Mitigation Measure 1. The Applicant shall design buildings to be energy efficient using the 2010 Draft California Green Building Standards Code (Effective January 1, 2011).

Greenhouse Gas Mitigation Measure 2. The Applicant shall install efficient lighting consisting of at least 90 percent ENERGY STAR qualified hard-wired fixtures. Use daylight as an integral part of lighting systems in buildings.

Greenhouse Gas Mitigation Measure 3. The Applicant shall install light colored "cool" roofs, cool pavements throughout the project site.

Greenhouse Gas Mitigation Measure 4. The Applicant shall provide information on energy management services for large energy users.

Greenhouse Gas Mitigation Measure 5. The Applicant shall install light emitting diodes (LEDs) for traffic, street, and other outdoor lighting.

Greenhouse Gas Mitigation Measure 6. The Applicant shall limit the hours of operation of outdoor lighting with the exception of security lighting.

Greenhouse Gas Mitigation Measure 7. The Applicant shall install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.

Greenhouse Gas Mitigation Measure 8. The Applicant shall prohibit the use of water for cleaning outdoor surfaces and washing vehicles, except at commercial vehicle washing facilities.

Greenhouse Gas Mitigation Measure 9. The Applicant shall limit idling time for commercial vehicles, including delivery and construction vehicles to five minutes.

Greenhouse Gas Mitigation Measure 10. The Applicant shall require all tenants and/or occupants of the proposed project to provide public transit incentives such as free or low-cost monthly transit passes to all employees.

Greenhouse Gas Mitigation Measure 11. The Applicant shall fund off-site mitigation projects (e.g., alternative energy projects, or energy or water audits for existing projects) that will reduce carbon emissions, conduct an audit of its other existing operations and agree to retrofit, or purchase carbon “credits” from another entity that will undertake mitigation.

Significance after Mitigation: The State of California has not quantified thresholds for significance for GHG emissions. However, mitigation measures have been added to further reduce the proposed project’s GHG impacts.

3.5.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR INCREASING THE POTENTIAL FOR CONFLICT WITH AN APPLICABLE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING EMISSIONS OF GREENHOUSE GASES.

The proposed project would contribute to the emissions of GHGs, primarily CO₂, emitted by construction and operational activities. GHG impacts generally are considered to be cumulative impacts from a climate change perspective. Thus, the analysis of GHG emissions is to determine whether the proposed project impact is cumulatively considerable. Four types of analyses are used in determining whether the project could conflict with the State goals for reducing GHG emissions. The four types of analysis and the conclusions are summarized in the remainder of this section.

- *Analysis No. 1. The proposed project’s potential for conflicting with the CARB’s thirty-nine recommended actions in California’s AB 32 Climate Change Scoping Plan.*

With regard to Analysis No. 1, the project does not pose any apparent conflict with the CARB recommended actions. Table 3-6 identifies which CARB *Recommended Actions* applies to the proposed project, and of those, whether the proposed project is consistent. Of the 39 measures identified, those that would be considered to be applicable to the proposed project would primarily be those actions related to electricity and natural gas use and water conservation.

Consistency of the proposed project with these measures is evaluated by each source-type measure in this analysis. AB 32 requires California to reduce its GHG emissions by approximately 28 to 33 percent below “business as usual.” CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. The proposed project would facilitate development that would directly generate GHG emissions. Potential indirect GHG emissions could also be generated by incremental electricity consumption and waste generation.

**Table 3-6
Recommended Actions for Climate Change**

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	No	No
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	No	No
T-3	Transportation	Regional Transportation-Related GHG Targets	Yes	No
T-4	Transportation	Vehicle Efficiency Measures	No	No
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	No	No
T-6	Transportation	Goods-movement Efficiency Measures	Yes	No
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	No	No
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	No	No
T-9	Transportation	High Speed Rail	No	No
E-1	Electricity and Natural Gas	Increased Utility Energy Efficiency Programs More Stringent Building and Appliance Standards	Yes	No
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	No	No
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	No	No
E-4	Electricity and Natural Gas	Million Solar Roofs	No	No
CR-1	Electricity and Natural Gas	Energy Efficiency	Yes	No
CR-2	Electricity and Natural Gas	Solar Water Heating	No	No
GB-1	Green Buildings	Green Buildings	Yes	No
W-1	Water	Water Use Efficiency	Yes	No
W-2	Water	Water Recycling	Yes	No
W-3	Water	Water System Energy Efficiency	No	No
W-4	Water	Reuse Urban Runoff	No	No
W-5	Water	Increase Renewable Energy Production	No	No
W-6	Water	Public Goods Charge (Water)	No	No
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	Yes	No
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	No	No
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	No	No
I-4	Industry	Refinery Flare Recovery Process Improvements	No	No
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	No	No
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	No	No
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	No	No

**Table 3-6
Recommended Actions for Climate Change (continued)**

ID #	Sector	Strategy Name	Applicable to Project?	Wilt Project Conflict With Implementation?
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	Yes	No
F-1	Forestry	Sustainable Forest Target	No	No
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	No	No
H-2	High Global Warming Potential Gases	SF6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	No	No
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	No	No
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	No	No
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	No	No
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	No	No
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	No	No
A-1	Agriculture	Methane Capture at Large Dairies	No	No

Source: California Air Resources Board, *Assembly Bill 32 Scoping Plan*, 2008.

AB 32 requires the reduction of GHG emissions to 1990 levels, which would require a minimum 28 percent reduction in "business as usual" GHG emissions for the entire State. The measures identified in Table 3-6 as being "applicable to the project" would be beneficial in reducing the overall GHG emissions:

- Program T-3 (Regional Transportation Related GHG Targets) would include the project's pedestrian and shuttle transit elements. The project's transit and pedestrian related improvements would reduce average daily traffic by as much as 50% (40% to 60% of the project's patronage would either use transit or walk to the center).
- Program T-6 (Goods Movement Efficiency Measures) would benefit from the concentration of commercial and retail development within the 100-acre site.
- Program E-1 (Increased Utility Energy Deficiency), Program CR-1 (Energy Efficiency), Program I-1 (Energy Efficiency and Co-Benefits Audits for Large Industrial Sources), and Program GB-1 (Green Buildings) embody the energy conservation elements that will be incorporated into the overall project design.
- Program W-1 (Water Use Efficiency) and Program W-2 (Water Recycling) reflect the water conservation that will be implemented as part of the proposed project's operations.

- Finally, the proposed project will be required to comply with all pertinent requirements related to the reduction of waste and recycling (identified in Program RW-3 [High Recycling/Zero Waste]).

The proposed project will not conflict with the CARB's thirty-nine recommended actions in California's AB 32 Climate Change Scoping Plan.

- *Analysis No. 2. The relative size of the project.*

The project's GHG emissions will be compared to the size of major facilities that are required to report GHG emissions (41,122 metric tons/year of CO₂e) to the State; and the project size will also be compared to the California GHG emissions limit of 427 million metric tons per year of CO₂e emissions by 2020. The 25,000 metric ton annual limit identifies the large stationary point sources in California that make up approximately 94 percent of the stationary emissions. If the project's total emissions are below this limit, its total emissions are equivalent in size to the smaller projects in California that as a group only make up 6 percent of all stationary emissions. It is assumed that the activities of these smaller projects generally would not conflict with State's ability to reach AB 32 overall goals. In reaching its goals, the CARB will focus upon the largest emitters of GHG emissions.

With respect to regard to Analysis No. 2, project construction greenhouse gas emissions were estimated to be approximately 251 metric tons/year of CO₂e for Phase 1 and 237 metric tons/year of CO₂e for Phase 2. The operational GHG emissions from vehicle trips would be approximately 9,633 metric tons of CO₂e/yr (4,144 metric tons for Phase 1, 5,489 metric tons for Phase 2) and operational GHG emissions from area sources would be 0.02 metric tons of CO₂e/yr. Indirect operation emissions from electricity generation and water conveyance would be approximately 2,013 metric tons of CO₂e/yr, totaling 12,345 metric tons of CO₂e/yr. The proposed project would not be classified as a major source of GHG emissions (total emissions would not exceed the lower reporting limit, which is 25,000 metric tons of CO₂e/yr).

When compared to the overall State emissions limit of approximately 427 million metric tons CO₂e/yr, the proposed project build-out (41,122 metric tons CO₂e/yr) would be 0.003 percent of the State goal. The project would not conflict with the State's ability to meet the AB 32 goals. For GHG calculations refer to Appendix B. When compared to the SCAQMD adopted interim GHG significance threshold for stationary projects where the SCAQMD is the lead agency. The commercial screening level of 3,000 metric tons/year CO₂e was used as the quantitative threshold for the proposed project GHG emissions. For the proposed project, the worst-case annual emissions associated with Phase 2 construction (8 metric tons per year CO₂e after amortization over 30 years per SCAQMD methodology) and operations including indirect emissions, would total 12,398 metric tons per year CO₂e per year. The worst-case annual emissions associated with Phase 2 construction would total 12,398 metric tons per year CO₂e per year.

- *Analysis No. 3. The basic energy efficiency parameters of a project to determine whether its design is inherently energy efficient.*

The proposed project will include a number of programs (project design features) that will have a beneficial impact with respect to reducing energy use. Program E-1 (Increased Utility Energy Deficiency), Program CR-1 (Energy Efficiency), Program I-1 (Energy Efficiency and Co-Benefits Audits for Large

Industrial Sources), and Program GB-1 (Green Buildings) embody the energy conservation elements that will be incorporated into the overall project design.

- *Analysis No. 4.* Any potential conflicts with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Total project-related “business as usual” operational emissions (direct and indirect) would result in 34,304 MTCO₂eq/year without incorporation of project design features (reduction measures). The proposed project would incorporate a number of design features that are consistent with the California Office of the Attorney General's recommended measures to reduce GHG emissions. A list of the Attorney General's recommended measures and the project's compliance with each applicable measure are listed in Table 3-6. The measures identified in Table 3-6 as being “applicable to the project” would be beneficial in reducing the overall GHG emissions. Program T-3 (Regional Transportation Related GHG Targets) would include the project's pedestrian and shuttle transit elements. The project's transit and pedestrian related improvements would reduce average daily traffic by as much as 50% (40% to 60% of the project's patronage would either use transit or walk to the center). Program T-6 (Goods Movement Efficiency Measures) would benefit from the concentration of commercial and retail development within the 100-acre site. Program E-1 (Increased Utility Energy Deficiency), Program CR-1 (Energy Efficiency), Program I-1 (Energy Efficiency and Co-Benefits Audits for Large Industrial Sources), and Program GB-1 (Green Buildings) embody the energy conservation elements that will be incorporated into the overall project design. Program W-1 (Water Use Efficiency) and Program W-2 (Water Recycling) reflect the water conservation that will be implemented as part of the proposed project's operations. Finally, the proposed project will be required to comply with all pertinent requirements related to the reduction of waste and recycling (identified in Program RW-3 [High Recycling/Zero Waste]).⁴³ As a result, no incompatibility with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases would occur.

Conclusion: The project would incorporate sustainable practices which include water, energy, solid waste, land use, and transportation efficiency measures. The proposed project would not be incompatible in conflict with the remaining CARB Programs identified in Table 3-6. As a result, no incompatibility with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases would occur.

Mitigation Measures: No mitigation is required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

⁴³ California Energy Commission, Water Energy Use in California. Accessed October 2009.
<http://www.energy.ca.gov/research/iaw/industry/water.html>

3.6 HAZARDS AND HAZARDOUS MATERIALS IMPACTS

3.6.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The preliminary environmental analysis undertaken as part of the Initial Study's preparation indicated this EIR should evaluate the following issues:

- The proposed project's potential for emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; and,
- The proposed project's potential for being located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area.
- The proposed project's potential for being located on a site, which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment.

3.6.2 ENVIRONMENTAL SETTING

3.6.2.1 REGULATORY SETTING

There are a number of existing regulations applicable to any new development that will be effective in further reducing potential impacts related to hazards and hazardous materials. These regulations are considered to be standard conditions in that they are required for all development projects. Those regulations that will serve as standard conditions with respect to hazards and hazardous materials are identified below:

- *Resource Conservation and Recovery Act (RCRA).* The California Department of Toxic Substance Control (DTSC) is authorized to implement the State's hazardous waste management program for the EPA. The EPA regulates hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986.
- *State of California Regulations.* The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board established rules governing the use of hazardous materials and the management of hazardous waste. Within the Cal-EPA, the Department of Toxic Substances Control (DTSC) has the primary regulatory responsibility for the management of

hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of Title I of the Hazardous Waste Control Law (HWCL).

- *Calexico International Airport Master Plan.* Calexico International Airport Master Plan (AMP) was commissioned by the City in 2001 to establish a direction for growth of the airport and surrounding land uses over time. The Airport Master Plan governs the development and expansion of the Calexico International Airport.
- *Airport Land Use Compatibility Plan.* The Airport Land Use Compatibility Plan (ALUCP) was prepared by the County of Imperial and the County's Airport Land Use Commission in 1996. The ALUCP identifies compatibility zones around the Calexico International Airport and suggests appropriate residential densities and criteria for other uses that will reduce conflicts between airport operations and adjacent users, and increases safety for those uses in proximity of the airport.
- *City of Calexico General Plan—Safety Element.* The primary purpose of the Safety Element is to identify and assess the natural and man-made safety hazards that should be considered in the planning for future land uses and development. The following objective and policies are applicable to the proposed project.
 - *Objective 5:* To ensure the health, safety, and welfare of the residents and guests of Calexico is protected through strict regulation and planning for the safe transport, storage, and usage of hazardous materials in the Calexico area.
 - *Policy 5.a:* Discourage the transport of hazardous materials through residential areas and critical facilities and limit transport through heavily developed areas as much as possible.
 - *Policy 5.b:* Prohibit incompatible land uses near sites that use, store, or produce hazardous materials.
 - *Policy 5.c:* Plan future industrial parks to the east, north, and northeast of the city such that the industrial uses, along with the Port of Entry (East Border Crossing), United States and Mexico International Border, will reduce truck traffic, especially those containing hazardous materials, as they will be diverted from the center of the City.

3.6.2.2 SITE CONDITIONS

As part of the site assessment undertaken for the original Phase 1 commercial center's development that was recently constructed, available historical aerial photographs were reviewed to determine the historic uses of the Phase 2 development site (which was identified in the original assessment that was completed in the EIR completed for the Phase 1 development. These past uses are summarized below:

- 1940. The project site was vacant, undeveloped land, and sparsely vegetated. Vacant land also was located adjacent to the site. Much of the surrounding property was in commercial use with gradual development occurring during those years.
- 1957. By this date, the project area had experienced development. The Phase 2 development area remained vacant and undeveloped however. The property located to the east had been developed. Spearman Avenue (unpaved) adjoins the property to the east, followed by agricultural fields and a residence.
- 1990-2008. No significant changes were noted within the project site.⁴⁴

At the present time, the site has been grubbed to remove weeds and no structural improvements are located on the project site. The EIR prepared for the Phase 1 development indicated there was a potential for certain hazardous materials being encountered during demolition, grading, and excavation activities. These materials included asbestos containing materials (ACMs), lead containing materials (LCMs), polychlorinated biphenyls (PCBs), and radon. Each of the aforementioned hazardous materials and their on-site potential are discussed below:

- *Asbestos* is a naturally occurring mineral fiber that was historically utilized in a multitude of building material products.⁴⁵ ACMs are considered high risk materials for abatement and their removal is classified under Class I removal activities. Other building materials such as "floor or ceiling tiles, siding, roofing, transite panels (floor sheeting, floor or roof mastics), are also considered to be potential sources of ACMs. No buildings are located on the development site and, as a result, the potential for encountering ACMs on the project site are minimal.
- *Lead and lead compounds* may be found in many types of paint. In 1978, the Consumer Product Safety Commission set the allowable lead levels in paint at 0.06 percent by weight in a dry film of newly applied paint. Lead based paints were commonly used on buildings built prior to 1970s. No buildings are located on the development site and, as a result, the potential for encountering lead containing compounds are minimal. The gun club was not located within the project site boundaries of the Phase 2 project.
- *Polychlorinated biphenyls (PCBs)* were once used as industrial chemicals whose high stability contributed to both their commercial usefulness and their long-term deleterious environmental and health effects. These substances have been listed as carcinogens by the USEPA. PCBs were banned from use in electrical capacitors, electrical transformers, vacuum pumps, and gas turbines in 1977.

⁴⁴ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

⁴⁵ The USEPA has defined asbestos materials as being either friable or non-friable materials. Friable material is defined as easily being broken or crushed by hand pressure. Non-friable asbestos is generally found in pre-manufactured products that bind the asbestos in an adhesive material, such as roofing felts, floor tile, transite pipe, and mastics. Due to the ability to create a fiber release and cause human exposure during normal activities, the presence of friable asbestos is considered significant.

- *Radon* is a naturally occurring colorless, odorless, and tasteless gas produced by the decay of uranium and radium. Medical and environmental studies have shown that radon can be a health risk, primarily as a cause of lung cancer. Radon levels vary from place to place depending on the underlying geology. Due to the general absence of radon gas hazard in the Imperial County region of southern California, no radon gas testing was performed at the proposed project site.

3.6.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project may be deemed to have a significant adverse impact if it results in any of the following:

- The proposed project's potential for emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; and,
- The proposed project's potential for being located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area.
- The proposed project's potential for being located on a site, which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment.

3.6.4 ENVIRONMENTAL IMPACTS

3.6.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR EMITTING HAZARDOUS EMISSIONS OR HANDLING HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL.

Construction projects, such as the one that would be undertaken for the proposed project, would require certain hazardous materials (fuels, adhesives, solvents), that, if improperly used and inadvertently released, could result in a temporary hazard to workers, the public, or the environment. However, the hazardous materials typically used on a construction site are transported onto the site packaged in consumer quantities and used in accordance with manufacturer recommendations. The overall quantities of the majority of these materials at any one time would not result in large bulk amounts that, if spilled, could cause a significant soil or groundwater contamination issue. However, the need to refuel heavy equipment at the site can require the storage of above ground storage tanks or refueling vehicles. The use of construction best management practices (BMPs) typically implemented as part of construction activities are required by the Storm Water Pollution Prevention Plan (discussed further in Section 3.7, Hydrology and Water Quality). The BMPs would minimize the potential adverse effects to groundwater and soils and could include the following:

- Adhering to the manufacturer's recommendations on use, storage, and disposal of chemical products used in construction;

- Avoiding the over-topping of the construction equipment's fuel tanks;
- Undertaking routine maintenance of construction equipment; and,
- Properly disposing of discarded chemical and fuel containers.

The nearest existing school to the project site, Mains Elementary, is located approximately 0.8 miles to the north of the project site. According to the General Plan, there are two potential future school sites within the City. One is located within the proposed La Jolla Palms development, which is approximately 2.4 miles to the northeast of the project site. The other future school location is located approximately 3 miles east of the project site. These existing and proposed school sites are located more than ¼ mile from the project site.

Conclusion: Since no schools are located within ¼ mile of the project site, no adverse impacts are anticipated.

Mitigation Measures: The following mitigation measures will be required to address potentially significant impacts related to hazardous materials.

Hazardous Materials Mitigation Measure 1. The use of construction best management practices (BMPs) shall be incorporated into the construction specifications and implemented as part of project construction. The BMPs would minimize potential negative effects to groundwater and soils and shall include the following:

- Contractors must follow manufacturer's recommendations on the use, storage, and disposal of chemical products used in construction;
- All refueling and maintenance activities shall occur at a dedicated area that is equipped with containment improvements and readily available spill control equipment and products;
- The overtopping construction equipment fuel gas tanks shall be avoided; and,
- During routine maintenance of construction equipment, maintenance personnel shall properly contain and properly dispose of discarded containers of fuels and other chemicals.

Significance after Mitigation: The potential impacts will be less than significant with the implementation of the aforementioned mitigation.

3.6.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR BEING LOCATED WITHIN AN AIRPORT LAND USE PLAN, OR WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR A PUBLIC USE AIRPORT, WOULD THE PROJECT RESULT IN A SAFETY HAZARD FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA.

Certain structures of the proposed project may be located within the Airport Land Use Compatibility Plan (ALUCP) of Calexico International Airport, as defined by Federal Aviation Regulation (FAR) Part 77: *Objects Affecting Navigable Airspace*. In the absence of appropriate planning within this jurisdictional area, land uses and development could subject people to the safety hazards associate with the close proximity of airport. However, as discussed in Section 3.8 Land Use, adherence to the standard regulations would reduce the potential hazards to a less than significant level. These regulations establish height limits and other restrictions on the proposed project as a means to maintain safe practices associated with airline transportation. The FAA also requires the project Applicant submit the development plans for an aeronautical review pursuant to the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, Part 77 to obtain a “Determination of No Hazards to Air Navigation” approval.⁴⁶ Development plans will also be submitted to the FAA for final approval.

Conclusion: The proposed project has the potential to result in a safety hazard for people residing or working in the vicinity of the airport without adopting measures.

Mitigation Measure: Airspace protection policies have been developed to prevent intrusions into protected airspace, as shown on an Airport Layout Plan and defined by Federal Aviation Regulation (FAR) Part 77, “Objects Affecting Navigable Airspace.” The following airspace protection policies from Imperial County’s ALUCP address the FAR Part 77 requirements concerning navigable airspace and apply to permanent and temporary structures and appurtenances associated with the proposed project: No mitigation measures are required with adherence to the pertinent FFA regulations that govern airport land use compatibility. No additional mitigation is required.

Significance after Mitigation: Since no additional mitigation measures were required, the proposed project’s impacts would be less than significant.

3.6.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR BEING LOCATED ON A SITE, WHICH IS INCLUDED ON A LIST OF HAZARDOUS MATERIAL SITES COMPILED PURSUANT TO GOVERNMENT CODE SECTION 65962.5, AND, AS A RESULT, WOULD IT CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT.

The project site is not included on a hazardous sites list compiled pursuant to Government Code Section 65962.5.⁴⁷ In addition, these are no sites in the City that are included on the Cortese List. As a result, no additional impacts related to this issue are anticipated.

Conclusion: The proposed project is not located over a site that is included on the Cortese listing. As a result, no impacts are anticipated.

⁴⁶ Federal Aviation Administration. <http://oeaaa.faa.gov/oeaaa/external/portal.jsp>.

⁴⁷ California, State of, Department of Toxic Substances Control, *DTSC’s Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)*, 2009.

http://www.envirostor.dtsc.ca.gov/public/search.asp?CMD=search&ocieerp=False&HWMP=False&business_name=&main_street_name=&city=Covina&zip=&county=&case_number=&apn=&Search=Get+Report

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.7 HYDROLOGY AND WATER QUALITY IMPACTS

3.7.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The environmental analysis undertaken as part of the Initial Study's preparation indicated this EIR should evaluate the following hydrology and water quality issues:

- The proposed project's potential for violating any water quality standards or waste discharge requirements.
- The proposed project's potential for substantially depleting groundwater supplies or interfering substantially with groundwater recharge in such a way that would cause a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- The proposed project's potential for substantially altering the existing drainage pattern of the site or area, including 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.
- The proposed project's potential for substantially altering the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner, which would result in flooding on- or off-site.
- The proposed project's potential for creating or contributing runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- The proposed project's potential for substantially degrading water quality.

3.7.2 ENVIRONMENTAL SETTING

3.7.2.1 REGULATORY SETTING

There are a number of existing regulations applicable to any new development that will be effective in further reducing potential water and hydrology impacts. Those existing regulations that will serve as standard conditions with respect to water and hydrology are summarized below and on the following pages:

- *Clean Water Act.* The Clean Water Act (CWA) is the primary Federal law in the United States governing water pollution. The act established the symbolic goals of eliminating releases of toxic substances into the water, eliminating additional water pollution, and ensuring that surface waters

would meet standards necessary for human sports and recreation. The U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into Waters of the United States under Section 404 of the CWA. Waters of the U.S. include a range of wetland environments such as lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, and wet meadows.

- *U. S. Army Corps of Engineers, Section 404 Guidelines.* The Federal Government's Section 404 Guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers must consult with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic Atmospheric Administration (NOAA) when threatened or endangered species may be affected by a proposed project to determine whether issuance of Section 404 permit would jeopardize the species.
- *Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping Program.* The Federal Emergency Management Agency oversees the preparation of maps that indicates those areas where there is a potential for inundation resulting from a 100-year flood and a 500-year flood. The maps serve as the basis as to whether flood insurance is required for homeowners. The mapping program serves an additional purpose in designating those areas of the City where flood-related mitigation may be required.
- *National Pollutant Discharge Elimination System (NPDES).* The system for granting and regulating discharge permits is called the National Pollutant Discharge Elimination System (NPDES), which regulates both point and non-point sources that discharge pollutants into waters of the United States. This regulation requires operators of regulated small municipal separate storm sewer systems to obtain a NPDES permit and develop a storm water management program that will prevent pollutants from being conveyed in storm water runoff into the storm sewer systems (or from being dumped directly into the storm drains). Under the NPDES program, the Colorado River Basin Regional Water Quality Control Board (RWQCB) has established permit requirements for the Calexico water treatment plant effluent and storm water runoff. The City holds an NPDES permit (CA 7000009) for its wastewater treatment facility, which treats 4.3 million gallons of flow per day. The facility provides secondary treatment through activated sludge and aerated lagoon treatment systems. The final effluent is discharged to the New River, which is then conveyed to the Salton Sea. The proposed project would increase water treatment and storm water runoff.
- *Porter-Cologne Water Quality Control Act (CWA).* In the State of California, the State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing the EPA's NPDES Program and other programs under the CWA. The primary water quality control law in California is the Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.). Under this Act, the SWRCB issues joint Federal NPDES Storm Water permits and State Waste Discharge Requirements (WDRs) to operators of municipal storm water and sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

- *Municipal Separate Storm Sewer System (MS4).* The City of Calexico holds a Phase II General MS4 municipal permit (CAS000001) for storm water discharges issued by the RWQCB. The Phase II General MS4 Permit is for municipalities serving between 10,000 and 100,000 people. The City has developed a *Draft Stormwater Management Plan (SWMP)* for its Phase II General MS4 Permit to reduce discharge of pollutants to the maximum extent practicable and to protect water quality. The SWMP specifies best management practices (BMPs) to address certain program areas. The program areas include public education and outreach, public participation and involvement, detection and elimination of illicit discharges, runoff control of construction activities, post-construction storm water management, and good housekeeping for municipal operations. The proposed project would adhere to the SWMP to reduce discharge of pollutants and protect water quality.

- *General Construction Permit.* Construction activities of one acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The project Applicant must submit a Notice of Intent to the RWQCB to be covered by the General Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared before project construction begins and must include specifications for BMPs that would be implemented during construction. BMPs are measures undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from the construction area. Additionally, the SWPPP describes measures to prevent or control runoff after construction is complete and identifies procedures for inspecting and maintaining facilities or other project elements. Required elements of an SWPPP include: site description addressing the site characteristics; a description of the BMPs to control erosion; BMPs for construction waste handling and disposal; how any approved local plans will be implemented; a description of the proposed post-construction controls; and non-storm water management.

- *City of Calexico General Plan.* Both the Land Use Element and the Safety Element indicates those areas of the City where there is a potential for flooding. Where flooding has been identified, special policies, programs, or other mechanisms must be considered as a means to reduce the damaging effects of potential flooding. The City of Calexico General Plan contains policies that regulate hydrology and water quality in the proposed project area. The Public Facilities/Services, Conservation/Open Space, and Safety Elements of the General Plan identify the following objectives and policies related to hydrology and water quality in the project area:
 - *Objective 4 (Storm Water):* To maintain the current system and to provide long-term solutions for storm water runoff for the city.

 - *Policy 4a (Storm Water):* The City shall continue to require developers to construct or finance the necessary storm water runoff facilities such as underground storm drains and retention basins.

- *Objective 1 (Water Supply and Quality):* Water supply and water quality should be maintained by implementing domestic conservation measures and protecting surface waters.
- *Policy 1.b (Water Supply and Quality):* New development projects should install water-conserving appliances (washing machines, dishwashers).
- *Policy 1.c (Water Supply and Quality):* Promote water conservation, reduce urban runoff, and prevent groundwater contamination within development projects, property maintenance, City operations, and all other related activities requiring discretionary approval.
- *Objective 2 (Soil Management):* The City shall continue using soil management techniques that minimize soil related problems, including erosion, shrink-swell behavior, and septic tank failure.
- *Policy 2.a (Soil Management):* In order to reduce or eliminate soil erosion and pollution, the City shall ensure that construction activity is in compliance with the State's General Permit for Construction Activities administered by the California Regional Water Quality Control Board, located in Palm Desert (Region 7). One condition of this permit is the development and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) that identifies Best Management Practices (BMPs) to reduce/eliminate erosion and sedimentation associated with construction.
- *Policy 2.b (Soil Management):* All development requiring City discretionary approval shall provide a geotechnical investigation by a registered geotechnical engineer that discusses, at least, liquefaction, subsidence, shrink/swell potential, soil strength, landslide potential, and distance to known fault rupture zones. All geotechnical studies shall be submitted to the City of Calexico Building and Safety Department for review and approval.

3.7.2.2 ENVIRONMENTAL SETTING

Regional Surface Water Characteristics

The project site is located within the Salton Sea Watershed. This watershed is the Priority Watershed in the Colorado River Basin Region. It encompasses one-third of the region (about 8,360 square miles) and contains five of the six of the Region's impaired surface water bodies. Most of the watershed is in Imperial County. The watershed has been identified as a Category I (impaired) Watershed under the 1997 California Unified Watershed Assessment.⁴⁸

Existing surface water runoff in the watershed comes from agricultural and urban land uses. Surface water runoff from agricultural activities contains fertilizers and pesticides. Surface water runoff from urban areas contains the following pollutants: (1) the outer surfaces of structures that may corrode, flake, decay,

⁴⁸ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

dissolve or leach over time, washing metals or other substances into storm runoff; (2) landscaped areas that contribute organic matter, nutrients, herbicides and pesticides; and (3) driveways and streets where leakage and/or inappropriate disposal causes automobile oil, grease, and related substances and heavy metals to accumulate and eventually enter storm water. During periods of wet weather, rain carries pollutants and sediments from all parts of the watershed into storm drains and surface water bodies such as streams, rivers, or reservoirs.⁴⁹

The following water bodies in the project area have been designated as impaired by the Colorado River Basin Regional Water Quality Control Board (RWQCB): Alamo River, Imperial Valley Agricultural Drains, the New River, and the Salton Sea. The New River originates in Mexico and then flows approximately 20 miles through the City of Mexicali, Mexico, crosses the International Boundary, continues through the City of Calexico in the United States, and travels northward about 60 miles until it discharges into the Salton Sea. The New River carries urban runoff, untreated and partially treated municipal wastes, untreated and partially treated industrial wastes, and agricultural runoff from Mexicali Valley, Mexico, across the International Boundary into the United States.

In addition, the New River carries urban runoff, agricultural runoff, treated industrial wastes, and treated, disinfected, and non-disinfected domestic wastes from the Imperial Valley. It also carries treated wastewater from point sources in Imperial Valley. As a result of the high level of pollutants, the New River is considered the most polluted river in North America and is included in the Federal Clean Water Act (CWA) Section 303(d) list of impaired waters. Since the New River crosses international jurisdictions, the clean up efforts and control of pollutants deposited into the river are challenging. The City of Calexico has established *The New River Committee*, which is a special committee created to focus on the New River Improvement Project, focuses on strategies to improve the water quality of the New River.⁵⁰ As stated in the City of Calexico General Plan, the ultimate goal of the clean-up efforts is to restore the New River back “into a resource with significantly improved water quality that minimizes threats to public health and improves the condition of water flowing into the Salton Sea.”

Groundwater

The project site is located within the 1,870-square mile Imperial Valley Groundwater Basin. The basin is bounded to the east by the Sand Hills and on the west by the impermeable rocks of the Fish Creek and Coyote Creek mountains. The northern portion of the basin is bounded by the Salton Sea, which is the discharge point for the groundwater basin. The physical groundwater basin extends across the U.S. border into Mexico; however, for the purpose of this analysis, the groundwater basin is presumed to be bounded to the south by the international border. The basin has two major aquifers that consist mostly of alluvial deposits of late Tertiary and Quaternary age.

Water levels vary within the basin due to differing hydraulic heads and the localized confining clay beds in the area. Groundwater levels remained stable within the majority of the basin from 1970 to 1990 because of relatively constant recharge and an extensive network of subsurface drains. The total storage capacity

⁴⁹ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

⁵⁰ Ibid.

for the basin is estimated to be 14,000,000 acre-feet (AF). However, a large portion of the groundwater is undesirable because of high total dissolved solids (TDS) concentrations; the TDS content in the basin ranges from 498 to 7,280 milligrams/liter (mg/L). In addition, groundwater in some areas of the basin has higher than recommended levels of fluoride and boron. Groundwater is primarily recharged from irrigation return. Other recharge sources are deep percolation of rainfall and surface runoff, underflow into the basin, and seepage from unlined canals that traverse the valley. Approximately 7,000 acre-feet per year (AFY) of groundwater is estimated to recharge the basin from surface flow from the New River.

Flood Hazards

Imperial County is subject to various degrees of flooding in the form of flash floods or slow floods caused by heavy precipitation. Aside from irrigated areas, most of Imperial County is a barren, sandy, low desert. The County is sometimes subject to heavy rains and subsequent flooding. Imperial County has proclaimed four states of emergency due to flooding and one state of emergency due to rain and high winds since 1958; and eight Federal declarations have been issued since 1950. The following areas have been identified as problematic flood areas: Ocotillo and Nomirage; East El Centro, North El Centro, South El Centro, Niland, Bombay Beach, Salton Sea, and county roads. With the exception of county roads, these flood areas are located over five miles from the project site.⁵¹

Project Setting

The climate of the Imperial Valley is arid, with hot summers and mild winters. While summers are intensely hot, the climate for the rest of the year is generally mild and enjoyable. Average annual precipitation in the area ranges from less than three inches over most of the City to about eight inches in the Coyote Mountains to the west.

Flood Zone

Within the City, flood control is the responsibility of the City of Calexico Public Works Department. According to FEMA flood maps, the project site is located outside of any FEMA-designated flood zone. The proposed storm drain outfall that will be constructed as part of the Phase 1 development is within Zone A and is within the special flood hazard area and is subject to inundation by a 100-year storm event.

3.7.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, in its capacity as Lead Agency, a project may be deemed to have a significant adverse impact if it results in any of the following:

- The proposed project's potential for violating any water quality standards or waste discharge requirements;

⁵¹ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

- The proposed project's potential for substantially depleting groundwater supplies or interfering substantially with groundwater recharge in such a way that would cause a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- The proposed project's potential for substantially altering the existing drainage pattern of the site or area, including 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;
- The proposed project's potential for substantially altering the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner, which would result in flooding on- or off-site;
- The proposed project's potential for creating or contributing runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; and,
- The proposed project's potential for substantially degrading water quality.

3.7.4 ENVIRONMENTAL IMPACTS

3.7.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR VIOLATING ANY WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS.

The project site is located within the Imperial watershed, which drains an area of approximately 2,500 square miles to the Salton Sea, which is listed on the State's 303(d) list of impaired water bodies that do not meet water quality standards, even with the minimum required levels of pollution control technology for point sources of pollution.⁵² The proposed project's implementation will be required to retain surface water runoff on-site for treatment. As a result, the project would not be expected to impair the watershed. Of the listed constituents, runoff from the proposed project site may be a source of bacteria, copper, lead, and trash based on the land use and activities planned for the site. Because the watershed is listed as impaired, any additional inputs of constituents of concern could be considered a significant impact in the absence of mitigation.

The proposed project would be required to comply with any regulations that are in place during construction and operation of the commercial complex. Construction activities require the use of gasoline and diesel-powered heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be utilized during construction. Construction activities could promote soil erosion discharging sediment to adjacent drainages. Sedimentation would degrade the water quality of the receiving waters. Hazardous materials associated

⁵² City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

with construction equipment such as fuels, oils, antifreeze, coolants, and other substances could adversely affect water quality if inadvertently released to surface waters. An accidental release of any of these substances could degrade the water quality of the surface water runoff and add pollution into local waterways. This would be a significant impact in the absence of any mitigation. The most likely runoff constituent of concern from the project site would be from sediment created by soil disturbance during or immediately after construction.

The NPDES storm water permitting program regulates storm water quality from construction sites. The developer would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for coverage under the State-wide storm water discharge NPDES permit. The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list any BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program.

Specific BMPs that may be applicable would include establishment of sediment basins and erosion control perimeter around active construction and contractor layout areas, silt fencing, jute netting, straw wattles, or other appropriate measures to control sediment from leaving the construction area. These temporary features serve to trap and absorb pollutants and sediments before they can leave the area. Construction contractors would be made aware of the required BMPs and good housekeeping measures for the project site and associated construction staging areas. Construction debris and waste materials would be collected at the end of each day and properly disposed in trash or recycle bins. For this project, implementation of standard BMPs will adequately protect against both typical and accidental discharges. Therefore, with the implementation of standard BMPs during construction and operations, impacts to water quality standards from the proposed project will be less than significant.

The project would result in a net increase in the amount of impermeable surface since the site currently consists of barren earth. The entire project site presently consists of impervious surfaces. Following development, approximately 95% of the site will be covered over in impervious surfaces (parking areas, buildings, and internal roadways). The proposed project would also be required to comply with the City's Storm Water Management Plan (SWMP) requirements for parking lots and commercial development. The Applicant would be required to incorporate design features and implement BMPs, specific for each category of development, to minimize the introduction of pollutants of concern to the storm water conveyance system to the maximum extent practicable. Most of the pollutants in runoff are contained in the "first flush" of runoff.

Conclusion: The proposed project has the potential to result in storm water runoff and water quality impact in the absence of mitigation.

Mitigation Measure: The following mitigation measures will be implemented to avoid or reduce potential impacts associated with storm water runoff and water quality impacts:

Hydrology and Water Quality Mitigation Measure 1. The project shall be designed and constructed in compliance with the NPDES permit and all applicable State and local water quality requirements prior to the commencement of construction.

Hydrology and Water Quality Mitigation Measure 2. A Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented for the project site that will identify pollutant sources that may affect storm water quality discharges during construction. The SWPPP will include various pollution prevention measures such as erosion and dust control. It will provide a comprehensive Best Management Practices (BMPs) Guide to contractors during site construction.

Hydrology and Water Quality Mitigation Measure 3. The project, over its operational life, shall comply with the local Standard Stormwater Mitigation Plan for parking lots and commercial development.

Hydrology and Water Quality Mitigation Measure 4. Erosion barriers and soil stabilizers shall be used on exposed slopes during site preparation and grading.

Hydrology and Water Quality Mitigation Measure 5. Required drainage facilities shall be constructed in compliance with approved grading and drainage plans, which detail type, size, and location of storm water lines, inlet/outlet drainage structures, and any detention basins.

Hydrology and Water Quality Mitigation Measure 6. Outside trash container areas shall have leak proof covers on dumpsters, a screened enclosure, and drainage routed around the area. This measure will be applicable over the project's operational lifetime.

Significance after Mitigation: The impacts will be less than significant with the implementation of the required mitigation.

3.7.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR SUBSTANTIALLY DEPLETING GROUNDWATER SUPPLIES OR INTERFERING SUBSTANTIALLY WITH GROUNDWATER RECHARGE IN SUCH A WAY THAT WOULD CAUSE A NET DEFICIT IN AQUIFER VOLUME OR A LOWERING OF THE LOCAL GROUNDWATER TABLE LEVEL (E.G., THE PRODUCTION RATE OF PRE-EXISTING NEARBY WELLS WOULD DROP TO A LEVEL WHICH WOULD NOT SUPPORT EXISTING LAND USES OR PLANNED USES FOR WHICH PERMITS HAVE BEEN GRANTED).

Groundwater in the project area is typically encountered at approximately 30 feet below the ground surface in the vicinity of the project site. There is uncertainty in the accuracy of short-term water level measurements, particularly in fine-grained soil. Groundwater levels fluctuate due to local precipitation, the irrigation of adjacent properties, drainage, and site grading. Construction activities, particularly related to excavation and pile driving, may intercept shallow or perched groundwater requiring temporary dewatering. In addition, the development of approximately 100 acres of vacant land would increase the

amount of impervious surfaces. This increase in the amount of impervious surfaces would result in reduced infiltration. There are no known wells that exist in the vicinity of the site that would be affected by the project. Site improvements to help increase groundwater recharge include the installation of vegetated swales at the perimeter of the site. Depending on the availability of water supplies, the Imperial Irrigation District may use either sources of groundwater or imported water to supply the project site.

The City requested that a Water Supply Assessment (WSA) be completed as part of the environmental review for GPP2. This WSA is intended for use by the City during the CEQA process in its evaluation of water supplies for the project, and existing and future land uses. The assessment examines the following water issues: water availability during a normal year; expected water availability during multiple dry years; water availability for a 22-year projection; pre-project water consumption and project water demands; and foreseeable planned water demands to be served by City.

This WSA has determined that the water supply is sufficient to meet project needs, in addition to existing and planned future uses. City water availability has been assessed for a 22-year protection between 2015 - 2037, which is concurrent with the proposed construction and operational life of the project. The project site lies within the service area of Imperial Irrigation District (IID) which is referred to as the Imperial Unit, specifically within the City of Calexico municipal boundary. IID is a raw water wholesaler that sells untreated Colorado River water to the City, a municipal provider who treats and retails potable water to users within its municipal boundary. The City developed plans like the 2010 Urban Water Management Plan in order to manage issues relating to present and future water supplies, demands and capacities, in order to adequately service existing and future potable water customers.

The WSA has determined that the City has a combination of existing adequate Water Treatment Plant (WTP) capacity, plans, and policies in place for expansion of City water facilities that allow for construction and operation of the proposed project for 22 years along with the ability to service existing and planned future users for 22 years. The proposed project is estimated to use 106,940 gallons per day (107 MGD) at build-out during operation. The 100-acre project site is currently vacant and does not involve any uses or activities that consume water at the present time. The Applicant proposes to use 0.53 MGD for construction (a 22-month estimated construction period). The result is an increase of 0.10 MGD from the baseline of 0 MGD under pre-project conditions. Construction is estimated to require 0.53 MGD, being an increase of 0.33 MGD for 22 months from the 0 MGD pre-project baseline. It is anticipated that the Applicant will procure construction water from the City of Calexico. IID offers temporary industrial water service for construction, which the applicant may use as an alternative means of supplying water needed for the project's construction period. Multiple applications may be filed with IID. The WSA in its entirety is included in Appendix D.

Conclusion: The proposed project would have a less than significant impact on groundwater volumes and groundwater table levels.

Mitigation Measure: No mitigation is required for the issue.

Significance after Mitigation: No mitigation measures are required and the proposed project's impacts would be less than significant.

3.7.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR SUBSTANTIALLY ALTERING THE EXISTING DRAINAGE PATTERN OF THE SITE OR AREA, INCLUDING 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.

The proposed project would not alter the course of a stream or river. However, the proposed project would introduce new impervious surfaces in the vicinity of the New River. As part of the proposed improvements, the project would include construction of new drainage infrastructure for the conveyance of storm water on the site. The project site's surface features will be designed to direct storm water to various collection points throughout the site. The water will then be conveyed into the New River by means of pipe flow. Those collection points will then connect to the proposed underground network of storm drain pipes. Onsite storm drain pipes will flow northerly toward West 2nd Street to a new public storm drain system. The public storm drain system located in West 2nd Street will flow easterly towards the New River and outlet by means of a headwall. The outfall will be designed to minimize any potential erosion or offsite sedimentation in New River.

The land area located between the proposed buildings and the U.S.-Mexico border will be graded to have high and low points with catch basins at the low points to collect the surface runoff. Storm water from the westerly areas will be collected with an underground storm drain system. Storm water will be collected at low points and flow in an underground storm drain. The site grading in the parking lots will direct water to catch basins. To attenuate the peak flow, the parking lot catch basins will be designed to limit outflow which will result in detained water ponding to a one-foot maximum depth from a 25-year storm event. After basins have filled to a one-foot depth, an overflow drainage system will convey excess storm water to the underground storm drain system.⁵³

The ultimate drainage outlet for the proposed project will be a headwall constructed within the New River channel limits. The drainage system is designed to meet all City requirements and will take into account future potential sources of incoming flow when sizing the public storm drain portion of the system. Erosional and water quality impacts would be mitigated through implementation of the SWPPP during construction and through the drainage control requirements set by City and State requirements.

Conclusion: The proposed project would not result in significant impacts to the existing drainage pattern resulting in substantial erosion on- or off-site.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: No mitigation measures are required and the proposed project's impacts would be less than significant.

⁵³ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

3.7.4.4 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR SUBSTANTIALLY ALTERING THE EXISTING DRAINAGE PATTERN OF THE SITE OR AREA, INCLUDING THE ALTERATION OF THE COURSE OF A STREAM OR RIVER, IN A MANNER, WHICH WOULD RESULT IN FLOODING ON-OR OFF-SITE.

As described previously, the proposed project would not alter the course of a stream or river but would substantially increase the amount of surface water runoff through the addition of impermeable surfaces. The increase in impervious surfaces would translate into an increase in storm-water runoff rates and quantities. Preliminary storm-water drainage system plans have been developed for the anticipated flows in the West 2nd Street public storm drain have been sized to accept storm water that falls in the West 2nd Street right-of-way bounded by the New River on the east and the Canal crossing on the west. The proposed drainage system will be designed to have adequate capacity for the proposed project improvements based on anticipated heavy storm events in accordance with City requirements and SWMP requirements. Runoff from the site under existing conditions and proposed improvements would be conveyed to the New River.

The conversion of approximately 100 acres of vacant land (project site) to commercial uses would increase the amount of impervious surfaces from less than one percent to approximately 85 percent. The increased impervious surfaces would result in reduced infiltration and increased runoff flow rates and volumes into the New River. For example, the existing 25-year peak flow runoff rate to the New River for the site is calculated to be about 39 cubic feet per second (cfs). The proposed 25-year peak flow runoff rate to the New River is calculated to be about 76 cfs. The post-construction (proposed condition) runoff rate at the headwall of the proposed outfall structure in the New River would be about 76 cfs for a 25 year peak flow.

Runoff waters would be discharged in a manner to prevent downstream or off-site flooding, erosion, or sedimentation in accordance with City and SWMP requirements. The ultimate drainage outlet for the proposed project will be a headwall constructed within the New River channel limits. The drainage system is designed to meet all City requirements and will take into account future potential sources of incoming flow when sizing the public storm drain portion of the system. Erosional and water quality impacts would be mitigated through implementation of the SWPPP during construction and through the drainage control requirements set by City and State requirements. Also, any impacts would be further mitigated through a series of site-specific BMPs and a drainage system that will be designed to handle a 25-year storm event pursuant to City regulations and local SWMP requirements.

Conclusion: The proposed project would not create a drainage pattern that would result in flooding on- or off-site.

Mitigation Measure: No additional mitigation beyond the project design features is required.

Significance after Mitigation: No mitigation measures are required and the proposed project's impacts would be less than significant.

3.7.4.5 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CREATING OR CONTRIBUTING RUNOFF WATER, WHICH WOULD EXCEED THE CAPACITY OF EXISTING OR PLANNED STORM WATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF.

As discussed above, the planned storm drain system will provide drainage improvements with suitable capacity to capture flows from the project site and discharge runoff to a new public storm water system. In addition, the public storm drain portion of the project will be sized to accept future storm water that falls in the West 2nd Street right-of-way bounded by the New River on the east and the All American Canal on the west. Storm water discharge and impacts to water quality could potentially occur from: construction activities; operational activities associated with the potential dissipation of pollutants generated by on-site vehicle use; and by the maintenance of landscaped areas. Construction activities with the potential for impacting water quality include cut/fill slopes that are subject to potential erosion prior to stabilization and potential pollutants from construction equipment. Potential operational impacts primarily would involve pollutant runoff from parking areas. The maintenance of landscape areas can also impact water quality with runoff from pesticides. A SWPPP will be prepared and implemented to control runoff from the project site and discharge into the New River.

Conclusion: The construction of the proposed project would be required to construct all new drainage infrastructures in accordance with NPDES and City SWMP requirements, which are based on its MS4 permit from the RWQCB. Compliance with applicable permitting requirements and design standards associated with storm water runoff, grading and drainage, and infrastructure design as part of the construction and operation of the proposed project will not result in exceeding existing or planned storm water drainage systems or provide a substantial source of polluted runoff. These requirements state that storm-water must be controlled to limit the offsite transport of pollutants to the maximum extent practical.

Mitigation Measure: No mitigation is required.

Significance after Mitigation: No mitigation measures are required. The proposed project's impacts would be less than significant.

3.7.4.6 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR SUBSTANTIALLY DEGRADING WATER QUALITY.

The NPDES storm water permitting program regulates storm water quality from construction sites. The developer would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for coverage under the State-wide storm water discharge NPDES permit. The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list any BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program.

Specific BMPs that may be applicable would include establishment of sediment basins and erosion control perimeter around active construction and contractor layout areas, silt fencing, jute netting, straw wattles, or other appropriate measures to control sediment from leaving the construction area. These temporary features serve to trap and absorb pollutants and sediments before they can leave the area. Construction contractors would be made aware of the required BMPs and good housekeeping measures for the project site and associated construction staging areas. Construction debris and waste materials would be collected at the end of each day and properly disposed in trash or recycle bins. For this project, implementation of standard BMPs will adequately protect against both typical and accidental discharges. Therefore, with the implementation of standard BMPs during construction and operations, impacts to water quality standards from the proposed project will be less than significant.

Conclusion: Compliance of the proposed project with regulations (NPDES and SWMP) as described above governing storm water discharge will result in no substantial degradation of water quality.

Mitigation Measure: No additional mitigation measures beyond Hydrology and Water Quality Mitigation Measures 1 through 6 are required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.8 LAND USE AND PLANNING IMPACTS

3.8.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the Draft General Plan, directed the preparation of an Initial Study to determine the nature and scope of the analysis of land use and planning impacts that would be required as part of this EIR's preparation. The preliminary environmental analysis indicated the EIR should evaluate the following:

- The proposed project's potential for conflicting with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

3.8.2 ENVIRONMENTAL SETTING

3.8.2.1 REGULATORY SETTING

There are a number of existing regulations that will be applicable to any new development and these policies and regulations will be effective in further reducing potential land use impacts. These regulations are considered to be standard conditions in that they are required regardless of whether an impact requires mitigation. Those regulations that will serve as standard conditions with respect to land use and planning impacts are listed below and on the following pages:

- *City of Calexico General Plan.* The General Plan serves as the blueprint for future growth and development in Calexico. The plan contains policies and programs designed to provide decision makers with a basis for decisions related to land use and development. The adopted Calexico General Plan Land Use Map indicates the location and extent of permitted uses in the City. The land use applicable to the project site is *I (Industrial)*. Surrounding land use designations are *I* to the east and west and *AP (Airport)* and *OS (Open Space)* to the north. The General Plan land use designations are shown in Exhibit 3-3.
- *Southern California Association of Governments (SCAG).* SCAG is a regional planning organization that works with local governments in its six member counties—Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura—to develop regional goals and address challenges to meeting those goals. SCAG publishes three documents that clearly state the goals and policies of the region: the Regional Comprehensive Plan (RCP), the Compass Blueprint and 2% Strategy, and the Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). The proposed project will be evaluated with respect to conformity with these regional planning documents. These plans are discussed in greater detail in the paragraphs that follow.

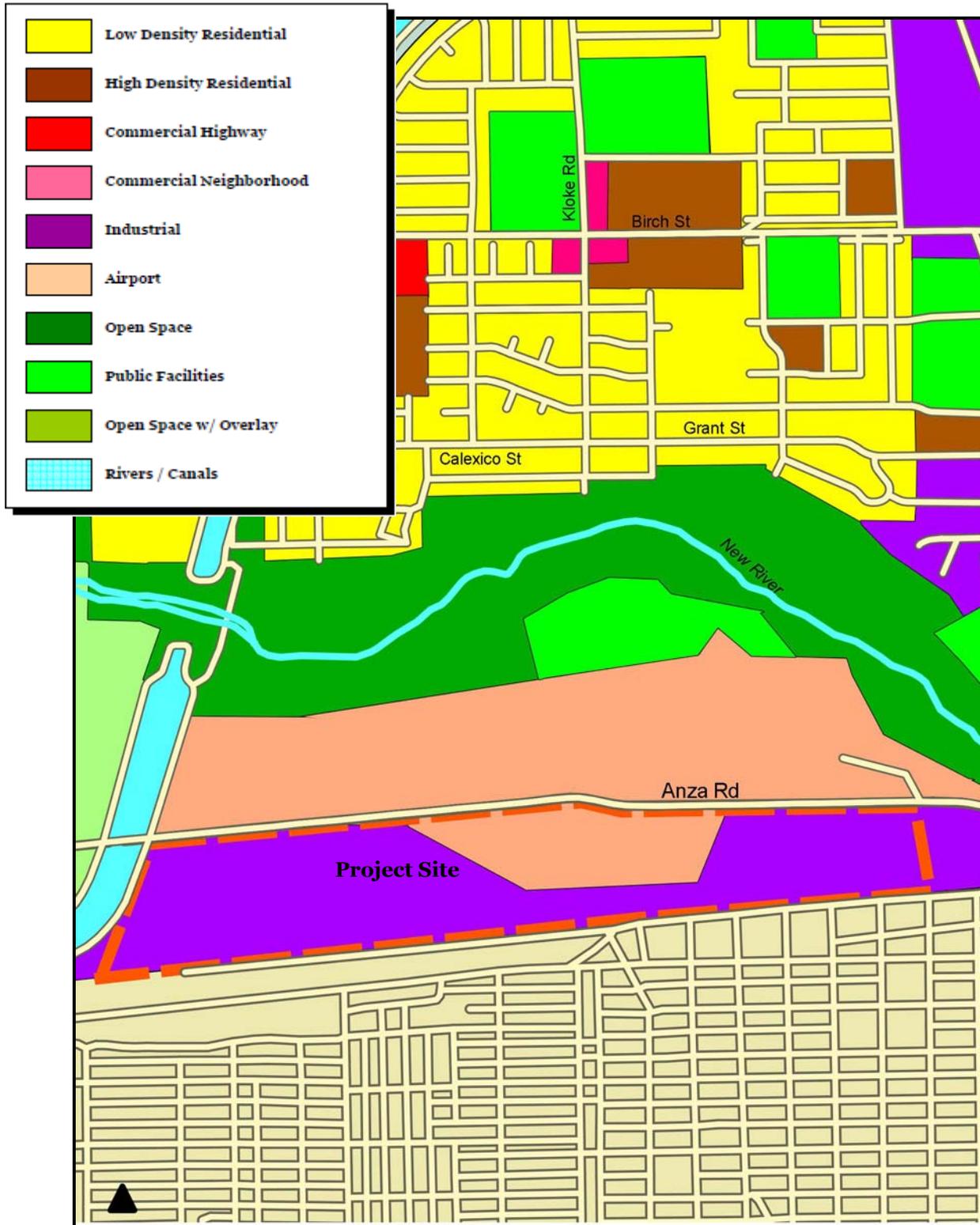


EXHIBIT 3-3 GENERAL PLAN DESIGNATIONS

Source: City of Calexico

- *2012 Regional Comprehensive Plan.* The Southern California Association of Governments (SCAG) has prepared its 2012 Regional Comprehensive Plan (RCP). The RCP is a regional advisory plan that addresses a number of important regional issues including housing, traffic, transportation, water, and air quality. The RCP serves as an advisory document to local cities and other governmental agencies in the Southern California region.⁵⁴ The RCP combines the planning and policy work performed by the SCAG into one all-encompassing document. It serves as a reference to transportation commissions, environmental organizations, local governments, and other key planning stakeholders. The nine areas covered in the RCP include land use and housing; solid and hazardous waste; energy; air quality; open space and habitat; economy and education; water; transportation; security and emergency preparedness; and finance. Guidelines in the RCP that are relevant to the proposed plan are as follows:
 - SCAG shall successfully integrate land and transportation planning and achieve land use and housing sustainability by implementing Compass Blueprint and 2% Strategy:
 - Focusing growth in existing and emerging centers and along major transportation corridors.
 - Creating significant areas of mixed-use development and walkable, “people-scaled” communities.
 - Providing new housing opportunities, with building types and locations that respond to the region’s changing demographics.
 - Targeting growth in housing, employment, and commercial development within walking distance of existing and planned transit stations.
 - Injecting new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.
 - Preserving existing, stable, single-family neighborhoods.
 - Protecting important open space, environmentally sensitive areas and agricultural lands from development.
- *Compass Growth Vision and 2% Strategy.* The Compass Blueprint encourages cities and counties to work collaboratively with SCAG to achieve sustainable development plans. Through public participation and land use and transportation modeling and analysis, the Compass Blueprint has identified strategic growth opportunity areas, representing roughly two percent of the land area in the project site region. The 2% Strategy opportunity areas are comprised primarily of regional centers; city centers; airports, ports, and industrial centers; priority residential in-fill areas; rail

⁵⁴ Southern California Association of Governments <http://www.scag.ca.gov/rcp/index.htm> 2008

transit stops; and bus rapid transit corridors. The Compass Blueprint area that is being focused on for the Imperial Valley is in the City of El Centro, and does not affect the proposed project.

- *2012 Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS)* “Towards a Sustainable Future” is SCAG’s 2012 RTP/SCS for its member counties. The RTP/SCS focuses on improving the balance between land use and current as well as future transportation systems. SCAG develops, maintains, and updates the RTP/SCS on a four-year cycle. The RTP considers SR-111 from I-8 to SR-98 a major mixed-flow highway project. The 2012 RTP/SCS implementation schedule year for this improvement is 2035, which represents the year for which the project would be analyzed for RTP/SCS modeling and regional emissions analysis.
- *Airport Land Use Compatibility Plan, Imperial County Airports.* The project site is located south of the Calexico International Airport (CXL). In 1996, the County of Imperial prepared an Airport Land Use Compatibility Plan (ALUCP) to identify compatibility zones around the airport and suggest appropriate residential densities and criteria for other uses that would reduce conflicts between airport operations and adjacent uses, and to increase safety for those uses in proximity of the airport. The ALUCP is in the process of being updated by the County of Imperial. Air traffic patterns associated with CXL do not currently extend south of the airport. The ALUCP for Imperial County identifies five compatibility zones, which indicate levels of risk and noise exposure associated with the land near the County’s public use airports. The area within *Zone A* would be subject to the greatest safety risks and greatest exposure to aircraft noise, while level D would be subject to fewer safety risks and exposure to aircraft noise. The compatibility zones identified in the ALUCP include:
 - *Zone A* – Runway Protection Zone;
 - *Zone B1* – Approach/Departure Zone and Adjacent to Runway;
 - *Zone B2* – Extended Approach/Departure Zone;
 - *Zone C* – Common Traffic Pattern; and,
 - *Zone D* – Other Airport Environs.⁵⁵

The ALUCP identifies safety compatibility criteria for each compatibility zone. The intent of land use safety compatibility criteria is to minimize the risks associated with an off-airport aircraft accident or emergency landing. Risks both to property in the vicinity of an airport and to people onboard aircraft are considered. The five safety compatibility zones for the Imperial County ALUCP are shown in Exhibit 3-4. The project site would include land that is located within Safety Zone B1 and Safety Zone D as identified in the ALUCP.

⁵⁵ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report.* June 2011.

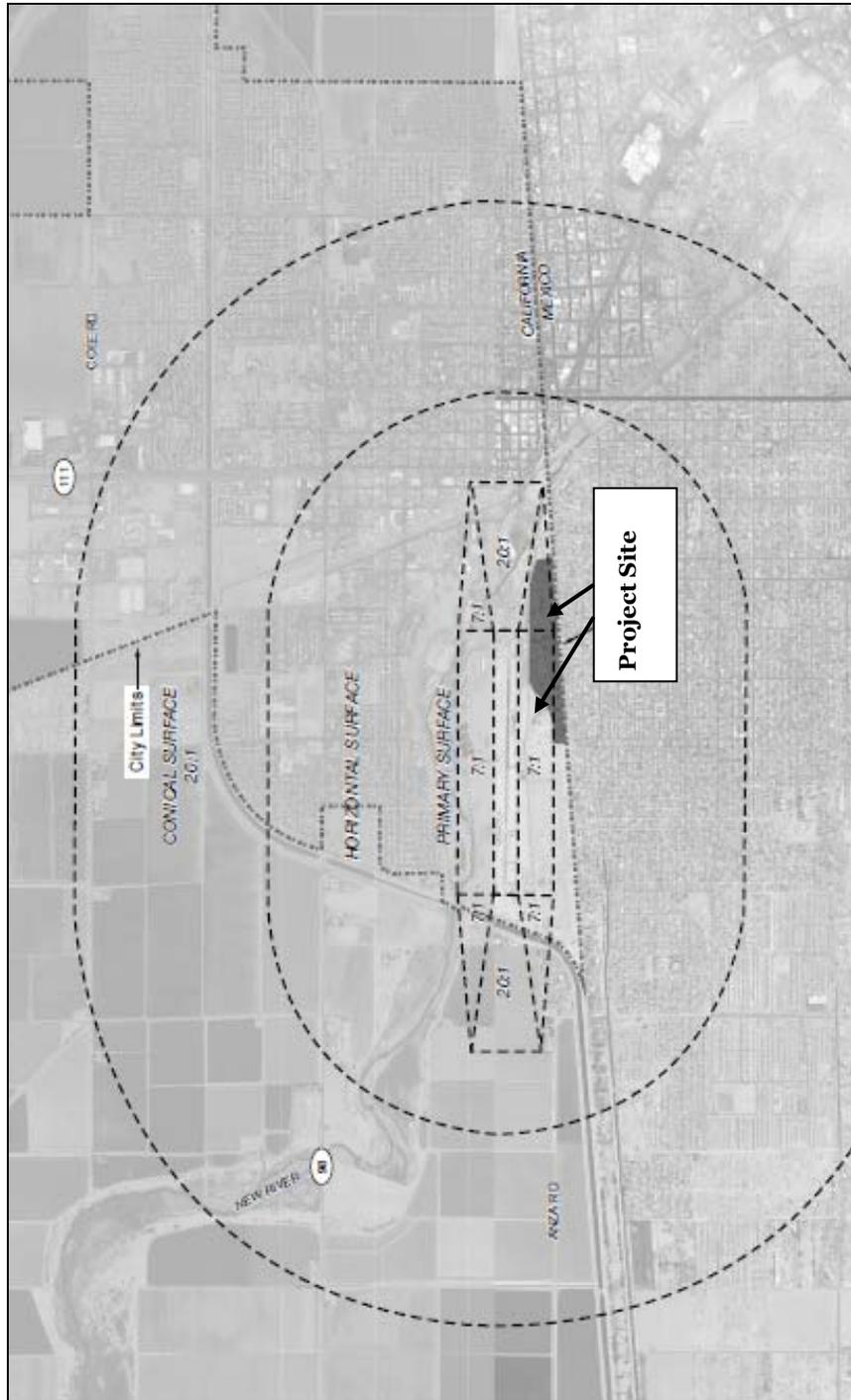


EXHIBIT 3-4
AIRPORT LAND USE ZONES
Source: City of Calexico

- *Airspace Protection.* Airspace protection policies have been developed to prevent intrusions into protected airspace, as shown on an Airport Layout Plan and defined by Federal Aviation Regulation (FAR) Part 77, “Objects Affecting Navigable Airspace.” The following airspace protection policies from Imperial County’s ALUCP address the FAR Part 77 requirements concerning navigable airspace and apply to permanent and temporary structures and appurtenances associated with the proposed project:

- *Height Limits* – The criteria for limiting the height of structures, trees, and other objects in the vicinity of an airport shall be set in accordance with Part 77, Subpart C, of the FARs and with the United States Standard for Terminal Instrument Procedures (TERPs).
- *Navigation Easement Dedication* – The owner of any property proposed for development within Compatibility Zones A and B shall be required to dedicate a navigation easement to the jurisdiction owning the airport.

3.2(a) The navigation easement shall: (1) provide the right of flight in the airspace above the property; (2) allow the generation of noise and other impacts associated with aircraft over flight; (3) restrict the height of structures, trees, and other objects; (4) permit access to the property for the removal or aeronautical marking of objects exceeding the established height limit; and (5) prohibit electrical interference, glare, and other potential hazards to flight from being created on the property.

3.2(b) Within Compatibility Zones A and B, height restrictions of less than 35 feet may be required.

3.3 *FAA Notification* – Proponents of a project which may exceed a FAR Part 77 surface must notify the Federal Aviation Administration as required by FAA Part 77, Subpart B, and by the California State Public Utilities Code Sections 21658 and 21659. Notification to the FAA under FAR Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the regulations.

3.3(a) Local jurisdictions shall inform project proponents of requirements for notification to the FAA.

3.3(b) The requirement for notification to the FAA shall not necessarily trigger review of an individual project by the Airport Land Use Commission if the project is otherwise in conformance with the compatibility criteria established in the *Airport Land Use Compatibility Plan*.

3.2(c) Any project coming before the Airport Land Use Commission for reason of height-limit issues shall include a copy of FAR Part 77 notification to the FAA.

- *Land Uses of Particular Concern.* Land uses of particular concern are ones in which the occupants have reduced effective mobility or are unable to respond to emergency situations. Schools, hospitals, nursing homes, and other uses in which the majority of occupants are children, the elderly, and the handicapped shall be prohibited within Compatibility Zones A, B, and C.
 - *Other Risks* - Any use involving the potential for aboveground explosion or the release of toxic or corrosive materials shall be prohibited in Compatibility Zones A and B.
 - *Open Land* - In the event that an aircraft is forced to land away from an airport, the risks to the people on board can best be minimized by providing as much open land area as possible within the airport vicinity. This concept is based upon the fact that the large majority of aircraft accidents occurring away from an airport runway are controlled emergency landings in which the pilot has reasonable opportunity to select the landing site. To qualify as open land, an area must be:
 1. Free of structures and other major obstacles such as walls, large trees, and overhead wires; and,
 2. Have minimum dimensions of at least 75 feet by 300 feet. Roads and automobile parking lots are acceptable as open land areas if they meet the preceding criteria.

3.8.2.2 EXISTING LAND USE AND DEVELOPMENT

The project site is located on the U.S.-Mexico border in the southwest portion of the city of Calexico. The project site is bounded on the north by the Calexico International Airport, on the south by the U.S.-Mexico border, on the east the Phase 1A and Phase 1B commercial center, and on the west by vacant land and the All-American Canal. Downtown Calexico and the International Port-of-Entry are located approximately one-half mile east of the project site. The approximately 100-acre project is vacant though it has been disturbed as part of on-going weed abatement activities. There are no remaining structures or uses within the project site.⁵⁶

3.8.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, in its capacity as Lead Agency, a project may be deemed to have a significant adverse impact if it results in any of the following:

- The proposed project's potential for conflicting with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

⁵⁶ Blodgett/Baylosis Environmental Planning. Survey (Site visit was conducted on February 28, 2014).

3.8.4 ENVIRONMENTAL IMPACTS

3.8.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CONFLICTING WITH AN APPLICABLE LAND USE PLAN, POLICY, OR REGULATION OF AN AGENCY WITH JURISDICTION OVER THE PROJECT (INCLUDING, BUT NOT LIMITED TO, A GENERAL PLAN, SPECIFIC PLAN, LOCAL COASTAL PROGRAM, OR ZONING ORDINANCE) ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT.

The adopted General Plan Land Use Map designates the project site as *I (Industrial)*. The objectives and policies associated with the Industrial land use designation do not support commercial retail uses, except as a subordinate use to heavy industrial uses, and is limited to 25 percent of the building floor area of a development. The Applicant is requesting a General Plan Amendment (GPA) to change the land use designation from *I (Industrial)* to *CH (Commercial Highway)*. The site is located adjacent to a recently constructed commercial center that is located to the east of the site. Also, the proposed Phase 2 commercial retail center would be located along a four-lane arterial street with controlled ingress and egress, which the General Plan encourages.

The rezoning of the site from Industrial (IND) to Commercial Highway (CH) would result in: 1) a logical extension of the existing CH zoning on the eastern portion of the site; and 2) meet the intent of the CH zone, per the Municipal Code, to locate such commercial centers along major roadways. The commercial retail center would be located along a proposed four-lane arterial with controlled ingress and egress and within close proximity to the International Port-of-Entry and the downtown district. The following policies from the General Plan are relevant to the proposed project:

- *Objective 1:* Land use distribution should be accomplished in a manner that protects the existing urban and rural areas of Calexico while meeting the goals, objectives, and policies of the General Plan; the land use distribution should be such that the integrity of the existing land use is maintained and/or enhanced, and the new land use is distributed to encourage the development of safe, efficient residential and employment uses. *The project is located adjacent to an existing regional center within a 100-acre property that is designated for urban development.*
- *Policy 1.a:* Appropriate densities shall be established for new development projects so that they will be compatible with the existing surrounding development and future expected development. *The project's use and density is compatible with existing and planned uses in the area.*
- *Policy 1.b:* New urban development shall be adjacent to existing urban development. Where questions of adjacency exist, it shall be determined by the City Council upon recommendation of the Planning Commission. *The project is located adjacent to an existing regional center.*
- *Objective 2:* Land use distribution should create a pattern which organizes land uses in order to maximize compatibility with adjacent land uses. *The project is located adjacent to an existing regional center.*

- *Policy 2.a:* Where land uses may result in conflicting activities, traffic, noise levels, visual characters, etc., there shall be adequate buffering and/or setbacks required. *No sensitive land uses are located in the project vicinity.*
- *Objective 11:* Commercial land use that is balanced in regard to size and distribution of goods with the current and future needs of the City should be encouraged. *The proposed project will improve the City's jobs-housing balance by providing new job opportunities.*
- *Objective 15:* Land use should not overburden the City circulation system. *The project is designed to maximize pedestrian and shuttle transit to and from the POE. The project will provide sale tax revenue that will benefit the City's general fund.*
- *Policy 15.a:* No land use should be approved that will increase the traffic on a city roadway above the roadway's existing design capacity at Level of Service "C." *The major traffic corridor that will accommodate project-related traffic is 2nd Street between the proposed project and the POE.*
- *Policy 15.c:* The land use pattern should encourage the use of public transportation by City residents and visitors. *The project is designed to maximize pedestrian and shuttle transit to and from the POE.*

The project would also be consistent with SCAG's growth management (RCP) goals that encourage development that will promote job growth and positive economic impact. The proposed project will introduce new jobs to an area with high unemployment rates and would provide the City with a new source of sales tax revenue. SCAG also encourages projects that are pedestrian/public transportation friendly and do not add to the congestion of city roads.

The proposed project aims to provide a safe and accessible environment to both pedestrians and vehicles through the proposed circulation system as well as the creation of pedestrian pathways and rest areas within the project site. Furthermore, a long-term goal of the Applicant is to work with the City of Calexico to implement a soft-wheeled trolley system, which would bring passengers from downtown Calexico or the International Port of Entry (POE) to the project site. One of the ultimate goals for the soft-wheeled trolley system would be to extend it to the POE, thus cutting down on vehicular trips. The project is consistent with SCAG policy that implements the following:

- The new development shall integrate land and transportation planning. *The new development includes new roadway improvements on 2nd Street.*
- The project shall achieve land use and housing sustainability by implementing Compass Blueprint Strategy. *The proposed commercial center will significantly enhance employment opportunities in the area, thus improving the local jobs-housing balance.*
- The project shall focus growth in existing and emerging centers and along major transportation corridors. *The new project is designed to capitalize on cross-border commerce and will be an expansion to the existing Phase 1 center located to the east of the project site.*

- The project shall create significant areas of mixed-use development and walkable, “people-scaled” development. *The new project is designed to capitalize on cross-border commerce and will be an expansion to the existing Phase 1 center located to the east of the project site.*
- The project shall provide new housing opportunities, with building types and locations that respond to the region’s changing demographics. *The new project is designed to capitalize on cross-border commerce and will be an expansion to the existing Phase 1 center located to the east of the project site. This new development will not involve any housing displacement though it will improve the local jobs/housing balance.*
- The project shall target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations. *The new project is designed to capitalize on cross-border commerce and will be an expansion to the existing Phase 1 center located to the east of the project site.*
- The project will inject new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots. *The project site is vacant and currently underutilized.*
- The project will preserve existing, stable, single-family neighborhoods. *The project will be located within a vacant infill property located away from any existing residential neighborhood.*
- The project will protect important open space. *The project will be located within a vacant infill property located between the Calexico Airport and the US-Mexico Border. No natural open space areas will be impacted by the proposed project’s implementation.*

The proposed project is also consistent with SCAG’s goal of developing under-used areas such as vacant lots with new business districts. Currently, the project site is vacant and the proposed project would convert this vacant, unused land into a productive use (a retail shopping center) which is consistent with this SCAG goal.

Conclusion: Approval of the proposed project would result in the proposed project being consistent with local land use plans, policies, and regulations.

Significance after Mitigation: Since no mitigation measures are required, the proposed project’s impacts would be less than significant.

3.9 NOISE IMPACTS

3.9.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The preliminary environmental analysis undertaken as part of the Initial Study's preparation indicated the EIR should evaluate the following issues:

- The proposed project's potential for exposing persons to or the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- The proposed project's potential for the exposure of people to or generation of excessive ground-borne noise levels;
- The proposed project's potential for the substantial permanent increase in ambient noise levels in the project vicinity above noise levels existing without the project; and,
- The proposed project's potential for the substantial temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project.

3.9.2 ENVIRONMENTAL SETTING

3.9.2.1 CHARACTERISTICS OF NOISE

Sound is mechanical energy transmitted by pressure waves through the air and is characterized by various parameters that include sound frequency, the speed of propagation, and the pressure level or energy content (amplitude). Noise is most often defined as unwanted sound. The decibel (dB) scale, a logarithmic loudness scale, is most often used to quantify sound intensity in a convenient and manageable manner. Since the human ear is not equally sensitive to all frequencies within the entire noise spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity using an *A-weighting* written as dBA. The human ear can detect changes in sound levels greater than 3 dBA under normal ambient conditions. Changes of 1 to 3 dBA are noticeable to some people under quiet conditions while changes of less than 1 dBA are only discernable by few people under controlled, extremely quiet conditions. Typical noise levels associated with various activities are noted in Exhibit 3-5.

Noise may be generated from a point source, such as a piece of construction equipment, or from a line source, such as a road containing moving vehicles. Because the area of the sound wave increases as the sound gets further and further from the source, less energy strikes any given point over the surface area of the wave. This phenomenon is known as "spreading loss." Due to spreading loss, noise attenuates (decreases) with distance. Objects that block the line-of-sight attenuate the noise source if the receptor is located within the shadow of the blockage (such as behind a sound wall).

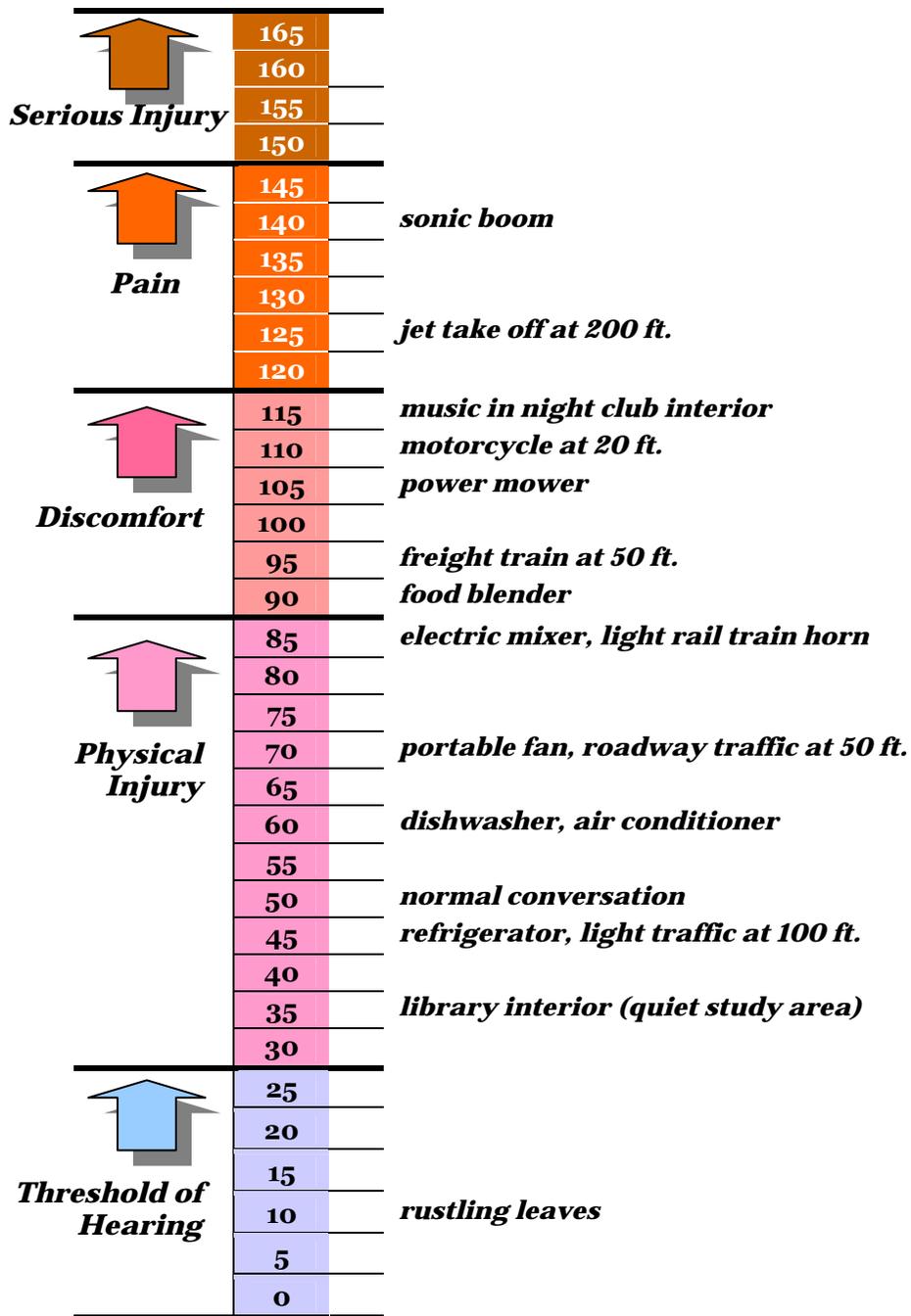


EXHIBIT 3-5 TYPICAL NOISE LEVELS FROM COMMON ACTIVITIES

Source: Blodgett/Baylosis Environmental Planning

Time variation in noise exposure is typically expressed in terms of the average energy over time (called Leq), or alternatively, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L₅₀ noise level represents the noise level that is exceeded 50% of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. Other values that are typically noted during a noise survey include the L_{min} and L_{max} that represent the minimum and maximum noise levels obtained over a given period.

Certain receptors are more sensitive to unwanted noise during the evening and at night. As a result, an artificial dB increment is added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or the day/night average noise level (Ldn). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. to take into account a person's increased sensitivity to noise during these periods. The Ldn descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

3.9.2.2 REGULATORY SETTING

A number of agencies have adopted standards and regulations to protect people in both the working and living environments. Future development and activities within the project site will be subject to a number of noise control standards and regulations, including the following:

- The *Federal Highway Works Administration (FHWA)* has established noise exposure standards for different land uses that apply to the planning and design of Federally funded highway projects.
- The *Noise Control Act of 1972* authorized the Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound requisite to protect public welfare with an adequate margin of safety.
- The *California Motor Vehicle Code* establishes noise standards for those areas not regulated by the Federal government. State standards regulate the noise levels of motor vehicles and motorboats; establish noise impact boundaries around airports; regulate freeway noise affecting classrooms, sound transmission control and occupational noise control; and identify noise insulation standards.
- *California Administrative Code, Title 24, Building Standards, Chapter 2.35*, outlines noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings.
- The *California Occupational Noise Control Standards* contained in the California Code of Regulations, Title 8, Industrial Relations, Chapter 4, indicates permissible noise exposure at a workplace. According to these regulations, employees should not be exposed to noise levels of 90 dBA for more than eight hours in any workday.

- The *City of Calexico Noise Control Requirements* are included in the adopted an ordinance that limits the hours of construction activities to normal weekday working hours. The permissible times for development activity are from 7:00 AM to 7:00 PM, Monday through Friday, and 8:00 AM to 5:00 PM on Saturday. Construction activities are prohibited on Sundays or Federal holidays.

3.9.2.3 EXISTING AMBIENT NOISE ENVIRONMENT

The existing noise environment in the area is dominated by motor vehicle traffic traveling on West 2nd Street and in the residential areas in the City of Mexicali, Mexico. In addition, the Calexico International Airport, located approximately 60 feet north of the project site, contributes to aircraft noises in the project area. Noise monitoring was conducted on February 28, 2014 at 11:00 AM to 12-noon, as a means to establish the existing ambient noise levels. Sound measurements were taken using a *Sper Scientific 840029* sound level meter. The monitoring locations selected included three locations along the project site's frontage with 2nd Avenue: Site #1 was located in the westernmost portion of the site adjacent to the All American Canal; Site #2 was located midway along the site's 2nd Avenue frontage, and Site #3 was located in the eastern end of the site's 2nd Avenue frontage. The noise measurements recorded a total of 100 individual measurements at each measurement location. During the measurement period, traffic on West 2nd Street was minimal. At the present time, West 2nd Street is a two-lane, local street that does not include any substantial through traffic volumes. The existing land uses that are traffic generators along this segment of West 2nd Street include the airport and the neighborhood shopping center located on the north side of the street. Other sources of noise included aircraft noise related to airport operations and the noise from construction equipment with the Phase 1b property. Overall, the existing ambient noise levels were relatively low.

The 24-hour CNEL measurement is 67 dBA. The Imperial County Airport Land Use Compatibility Plan (1996) provides a contour map for noise generated at the Calexico International Airport. The 60 dBA CNEL contour line does not extend beyond the southern airport property boundary (closest boundary to project site).

To further characterize existing noise levels in the project area, noise emitted by peak-hour traffic traveling on streets in the City of Calexico was modeled using the Federal Highway Administration Traffic Noise Prediction Model⁴ and traffic volume data provided in the Calexico Gran Plaza Traffic Impact Analysis and subsequent update. Peak-hour traffic volumes were not provided in the Traffic Impact Analysis. For the purposes of calculating roadway traffic noise levels, peak-hour traffic volumes were assumed to be 10 percent of the average daily traffic volumes. This assumption is based on historical knowledge of calculated traffic rates and is a generally accepted order of magnitude in the traffic engineering community. The majority of the traffic associated with the proposed power centers operation will use two roadway segments to access the property: West 2nd Street and Highway 111. For the other streets, the additional traffic will be minimal and far below the traffic required to generate a perceptible increase in mobile noise. Table 3.7 summarizes the traffic noise modeling results for the existing conditions and future conditions. The results represent the Leq at approximately 50 feet from the center of each roadway. As a practical matter, the Leq during the peak traffic hour is approximately equivalent to the CNEL when the noise environment is predominated by vehicle traffic.

**Table 3-7
 Existing Roadway Noise Levels**

Roadway	Segment	CNEL @ 50' from Centerline
2 nd St.	W/O Cesar Chavez Blvd.	63 dBA
2 nd St.	W/O Hwy. 111	63 dBA
Cesar Chavez Blvd.	N/O 2 nd St These segments include West 2nd Street: west of Cesar Chavez Boulevard; and 2nd Street: Cesar Chavez Boulevard to SR-111. .	61 dBA
Hwy. 111	N/O 2 nd St.	65 dBA
Hwy. 111	S/O 2 nd St.	69 dBA

Existing sources of vibration in the project area could potentially include aircraft using the Calexico International Airport. The airport runway is located approximately 250 feet north of the project site's northerly boundary. Thus, the project site could potentially be subjected to periods of faint vibration as the result of air overpressure. However, there are currently no sources of substantial ground-born vibration. The nearest railroad line, the Southern Pacific Railroad, is located over 1,000 feet east of the project site. At this distance, any ground-born vibration generated by the railroad would not be perceivable. While the project site is located along West 2nd Street, which is frequented by large vehicles such as tractor trailers, rubber tire vehicles with suspension systems that provide vibration isolation rarely create ground-borne vibration problems unless there is a discontinuity or bump in the roadway.

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. For example, residences, schools, hospitals, hotels, libraries, and some passive recreation areas would be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest sensitive receptors are residences and Nosotros Park, which are located approximately 1/2 mile north of the project site (north of the Calexico International Airport and the New River). There are homes located to the south of the project site within the City of Mexicali. The existing border wall is a sufficient height to affectively attenuate sound that would emanate from the proposed project. Finally, two houses are located 1 mile west of the project site on Anza Street (2nd Avenue).

3.9.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project may be deemed to have a significant impact on the environment if it results in any of the following:

- The proposed project's potential for exposing persons to or the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- The proposed project's potential for exposing people to, or generation of, excessive ground-borne noise levels;
- The proposed project's potential for a substantial permanent increase in ambient noise levels in the vicinity of the project above levels existing without the project;
- The proposed project's potential for a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and,
- The proposed project's potential for locating of a project within two miles of a public airport or public use airport where the project may expose people residing or working in the project area to excessive noise levels.

3.9.4 ENVIRONMENTAL IMPACTS

3.9.4.1 IMPACT ANALYSIS: THE EXPOSURE OF PERSONS TO OR THE GENERATION OF NOISE LEVELS IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

Future noise levels related to construction within and adjacent to the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction activities could involve excavation, grading, demolition, drilling, trenching, earth movement, vehicle travel to and from the project site, and possibly pile driving. Construction-related material haul trips would raise ambient noise levels along haul routes depending on the number of haul trips made and types of vehicles used.

Exhibit 3-6 indicates the typical noise levels produced by various types of construction equipment. Construction of the project could generate significant amounts of noise, corresponding to the particular phase of building construction and the noise generating equipment, including the driving of piles, used during construction. However, the closest sensitive receptors are residences and Nosotros Park located ½ mile from where construction noise levels would reach, approximately 58 dBA assuming 7.5 dBA₁₂ attenuation (due to distance alone) per doubling of distance. The existing Phase 1 center would be impacted by construction noise in the exterior parking and circulation areas. The interior areas are insulated for climate control which would also effectively attenuate construction noise. Policy 1 of the City of Calexico General Plan Noise Element establishes a 65 dBA CNEL as the acceptable outdoor noise exposure level for all private areas such as backyards. Therefore, construction noise impacts are expected to be less than significant.

Construction activities associated with the project would be temporary in nature and related noise impacts would be short term. Also, since construction activities would not substantially increase ambient noise levels at noise-sensitive locations, construction noise would not result in significant impacts to sensitive receptors.

			70	80	90	100
Equipment Powered by Internal Combustion Engines	Earth Moving Equipment	Compactors (Rollers)		70-80		
		Front Loaders		70-80	80-90	
		Backhoes		70-80	80-90	90-100
		Tractors			80-90	90-100
		Scrapers, Graders			80-90	
		Pavers			80-90	
		Trucks			80-90	90-100
	Materials Handling Equipment	Concrete Mixers		70-80	80-90	
		Concrete Pumps			80-90	
		Cranes (Movable)		70-80	80-90	
		Cranes (Derrick)		70-80	80-90	
	Stationary Equipment	Pumps	70-80			
		Generators		70-80		
		Compressors			80-90	
	Impact Equipment	Pneumatic Wrenches			80-90	
Jack Hammers				80-90	90-100	
Pile Drivers				90-100	100-110	
Other Equipment	Vibrators	70-80	70-80			
	Saws		70-80			

EXHIBIT 3-6 TYPICAL CONSTRUCTION NOISE LEVELS

Source: Blodgett/Baylosis Environmental Planning

Conclusion: The proposed project would have a less than significant impact with respect to construction noise because it would not result in substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Mitigation: None required.

Significance after Mitigation: Since no mitigation measures are required, the proposed project's impacts would be less than significant.

3.9.4.2 IMPACT ANALYSIS: THE EXPOSURE OF PEOPLE TO, OR GENERATION OF, EXCESSIVE GROUND-BORNE NOISE LEVELS.

The use of heavy equipment during construction generates vibration levels of up to 0.644 PPV or 104 RMS (Impact Pile Driver) at a distance of 25 feet. The nearest sensitive receptor in Calexico is located approximately 1/2 mile from the project site. There are homes located to the south of the project site within the City of Mexicali. The potential vibration levels at the sensitive receptor locations would not exceed the potential building damage threshold of 0.2 PPV or the annoyance threshold of 80 RMS. Other sensitive receptors in the project vicinity would be exposed to vibration at incrementally lower levels. As a result, the impact associated with ground-borne vibration generated by construction would be less than significant.

Conclusion: The proposed project would have a less than significant impact with respect to construction noise because it would not result in substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Mitigation: No mitigation is required.

Significance after Mitigation: Since no mitigation measures are required, the proposed project's impacts would be less than significant.

3.9.4.3 IMPACT ANALYSIS: A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT ABOVE LEVELS EXISTING WITHOUT THE PROJECT.

The proposed project will generate additional vehicle traffic to the local roadway network. These additional vehicle trips will contribute to an increase in roadway noise in the project vicinity. In addition, the proposed project will generate noise from stationary sources such as roof mounted air-conditioning units and truck delivery activities. Using the Federal Highway Administration's Highway Traffic Noise Prediction Model, traffic noise levels were modeled for the five roadway segments where traffic volumes would potentially be great enough to result in a perceptible increase in noise levels. It should be noted that it typically requires a *doubling* of traffic volumes to result in an increase in the ambient noise levels of between 3.0 to 5.0 dBA. The 3.0 to 5.0 dBA figures are considered to be the limit where changes in the noise levels may be perceived by persons with normal hearing. The results of the modeling are shown in Table 3-8.

As shown, in Table 3-8, the noise levels for the study segments would not increase to a level that would be perceptible to persons with average hearing (3.0 to 5.0 dBA). According to Calexico General Plan Policy 7.8.1.1, which establishes maximum acceptable noise limits for different land uses, the acceptable noise limit in the vicinity of the project site is 70 dBA. The future projected traffic noise levels identified in Table 3-8 would not exceed 70 dBA along the roadways where significant project-generated noise increases would occur. Therefore, the project's traffic increases would result in less than significant impacts related to noise.

**Table 3-8
 Existing and Future Roadway Noise Levels**

Condition	Roadway	Segment	Noise Levels – 50 Feet From Roadway
Existing Condition	2 nd St.	W/O Cesar Chavez Blvd.	63 dBA
	2 nd St.	W/O Hwy. 111	63 dBA
	Cesar Chavez Blvd.	N/O 2 nd St.	61 dBA
	Hwy. 111	N/O 2 nd St.	65 dBA
	Hwy. 111	S/O 2 nd St.	69 dBA
Future Condition (Post Project)	2 nd St.	W/O Cesar Chavez Blvd.	65 dBA
	2 nd St.	W/O Hwy. 111	64 dBA
	Cesar Chavez Blvd.	N/O 2 nd St.	62 dBA
	Hwy. 111	N/O 2 nd St.	66 dBA
	Hwy. 111	S/O 2 nd St.	69 dBA
Net Change (Future -Existing)	2 nd St.	W/O Cesar Chavez Blvd.	2 dBA
	2 nd St.	W/O Hwy. 111	1 dBA
	Cesar Chavez Blvd.	N/O 2 nd St.	1 dBA
	Hwy. 111	N/O 2 nd St.	1 dBA
	Hwy. 111	S/O 2 nd St.	0 dBA

The only proposed stationary source activities that could create significant noise increases would be roof mounted air-conditioning units. As discussed above, the land uses adjacent to the project site comprise mainly of under developed parcels zoned for industrial uses. The proposed air conditioning, which generates significantly lower sound levels than project construction activities, is not expected to adversely affect existing adjacent land uses.

Conclusion: The proposed project would have a less than significant impact with respect to long-term operational noise. The noise levels for the study segments would not increase to a level that would be perceptible to persons with average hearing (3.0 to 5.0 dBA). No mitigation is required.

Significance after Mitigation: Since the proposed project's impacts would be less than significant, no mitigation measures were required.

3.9.4.4 IMPACT ANALYSIS: A SUBSTANTIAL TEMPORARY OR PERIODIC INCREASE IN AMBIENT NOISE LEVELS IN THE PROJECT VICINITY ABOVE LEVELS EXISTING WITHOUT THE PROJECT.

Based on noise measurements collected from the site's frontage along 2nd Avenue, the existing Leq noise levels in the project area range from 45.1 dBA to 64.4 dBA. The 24-hour CNEL measurement, recorded along West 2nd Street, is 67 dBA. The location of the 24-hour measurement is presumably the area on-site where the highest sound levels occur due to its proximity to West 2nd Street and the Calexico International Airport. From a land use standpoint, the only applicable local regulation is Policy 1d of the General Plan Noise Element, which establishes a 70 dBA CNEL threshold for commercial development. In addition, pursuant to Sections 8.46.031 and 8.46.032 of the Municipal Code, the operation of the proposed commercial center would be required to maintain acceptable noise levels (70 CNEL) within the project site. Therefore, individuals on the project site would not be exposed to noise levels in excess of local standards. Also, as previously discussed in Impacts 3.9-1 and 3.9-3, project operations would not expose sensitive individuals to significant noise increases in the project vicinity.

Conclusion: The proposed project would have a less than significant impact with respect to construction noise because it would not result in substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Mitigation: No mitigation is required.

Significance after Mitigation: Since no mitigation measures are required, the proposed project's impacts would be less than significant.

3.9.4.5 IMPACT ANALYSIS: THE LOCATING OF A PROJECT WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE AIRPORT WHERE THE PROJECT MAY EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS.

The noise contour map for CXL's ALUCP shows the 60 dBA CNEL noise contour line not extending beyond the southern airport property boundary along West 2nd Street. Per the City's General Plan, 60dBA CNEL is below the acceptable threshold for a commercial land use. Therefore, the project would not expose people working in the project area to excessive noise levels emitted by the airport.

Conclusion: The proposed project would have a less than significant impact with respect to construction noise because it would not result in substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Mitigation: No mitigation is required.

Significance after Mitigation: Since no mitigation measures are required, the proposed project's impacts would be less than significant.

3.10 PUBLIC SERVICES IMPACTS

3.10.1 SCOPE OF ANALYSIS

This section discusses the potential impacts to public services, including the proposed project's effect on existing fire protection and police protection within the City of Calexico and the vicinity of the project site. The City determined that the analysis should focus on the following issue areas:

- The proposed project's potential for resulting in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which would cause a significant environmental impact in order to maintain acceptable service ratios, response times, or other performance objectives relative to fire protection services.
- The proposed project's potential for resulting in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which would cause a significant environmental impact in order to maintain acceptable service ratios, response times, or other performance objectives relative to police protection services.

3.10.2 ENVIRONMENTAL SETTING

3.10.2.1 REGULATORY SETTING

There are a number of existing regulations applicable to any new development that will be effective in further reducing potential public service impacts. These regulations that will serve as standard conditions with respect to public services are identified below:

- *The City of Calexico General Plan.* The City of Calexico General Plan contains goals, objectives, and policies that are intended to guide land use and development decisions in the future. The stated goal of the City of Calexico General Plan Public Services and Facilities Element is “to provide a full range of the necessary public facilities and services that are convenient to users, economical, and reinforce a quality City identity.”
- *The City of Calexico Municipal Code.* Chapter 3.32 of the City of Calexico Code of Ordinance covers development impact fees. There are eight individual development fees, four of which fall under the category of public services: police services, fire protection, corporate facilities, and library facilities. Section 3.32.060 outlines the timing of the payment of development fees. Project applicants are to pay fees prior to the issuance of any building permit or discretionary land use permit. Section 3.32.080 states that the City will set up funds with the money collected for the individual development fee areas so fees meant for police services will go into the police services fund, and fees meant for fire services will go into the fire services fund. Section 3.32.090 covers accountability measures and states that the City should annually review the cost of needed public improvements and recommend any adjustments to the fees or other actions that may be necessary. Section 3.32.100 covers any fee adjustments and outlines the process a project applicant can undergo to try to reduce individual development impact fees.

3.10.2.2 EXISTING CONDITIONS

Fire Department Services

The City of Calexico Fire Department is responsible for providing fire protection and emergency medical services within the City's corporate boundaries. The fire department strives to maintain a standard service ratio of 1.5 firefighters per 1,000 residents, and two administrative support staff per 27,000 residents. In 2012, the Calexico Fire Department was at full staffing levels for the first time following the promotion of five firefighters and the hiring of two new firefighters. The Calexico Fire Department is a member of the Imperial Valley Firefighters Strike Force, which is responsible for responding to fire emergencies throughout California. The department is also a member of the Imperial Valley Hazardous Materials Response Team and is available to respond to hazardous materials emergencies throughout Imperial County.⁵⁷

There are two fire stations located within city limits, which employ a total of 33 professional firefighters including one Fire Chief, one Fire Marshal, one administrative assistant, and one secretary. The average response time is currently five plus minutes, depending on traffic. Both fire stations are responsible for fire suppression, rescue, emergency medical response, fire prevention, and education. In addition, the fire department provides Fire and Advanced Life Support (ALS) ambulance services and responds to emergency medical services using a combination of first responder paramedic engines and truck companies, which operate from the two fire stations. The fire stations locations are:

- *Fire Station No. 1 (Main Station) 430 E. 5th Street* is located in the central part of the City, approximately 1.2 miles from the project site. This station houses five fire fighters on duty at all times. This station houses one 1994 Emergency One engine with a 75-foot ladder, one reserve engine, and two ALS ambulances with a minimum staff of three for the engine company and two for the ambulance.
- *Fire Station No. 2 (Substation) 900 Grant Street* is located in the western portion of the City, approximately 0.7 mile from the project site. Fire Station No. 2 houses one triple combination fire engine and a triple combination reserve engine with a minimum staff of three assigned at the station at all times.

Law Enforcement Services

Law enforcement services in Calexico are provided by the Calexico Police Department. The City has one main station and three substations. The main station is located at 420 E. 5th Street and is 1.2 miles from the project site. The three police substations are located at 1095 Camellia Street, 100 Paulin Avenue, and at Nosotros Park. The three substations have very limited police support, as two are located in trailers and the third is located downtown and is currently used by the Parking Facilities Division.⁵⁸

⁵⁷ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

⁵⁸ Ibid.

The Calexico Police Department has a total of 49 sworn officers, for a staffing ratio of approximately 1.3 officers per 1,000 residents as of April 2007. The target ratio of the police department is two officers per 1,000 residents. The police department is equipped with 24 marked patrol cars, two motorcycle units, 12 unmarked cars, two Cushman motorcycles (three-wheeled motorcycles for traffic control), one mule (four-wheeled vehicle used for traffic control), and four police bicycles. There are four teams, all with 12 hour shifts, and staffed with five officers, one supervisor, and six marked patrol cars per shift.

3.10.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally be deemed to have a significant adverse impact, if it results in any of the following:

- The proposed project's potential for resulting in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which would cause a significant environmental impact in order to maintain acceptable service ratios, response times, or other performance objectives relative to fire protection services.
- The proposed project's potential for resulting in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which would cause a significant environmental impact in order to maintain acceptable service ratios, response times, or other performance objectives relative to police protection services.

3.10.4 ENVIRONMENTAL IMPACTS

3.10.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN A SUBSTANTIAL ADVERSE PHYSICAL IMPACT ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, THE CONSTRUCTION OF WHICH WOULD CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS, RESPONSE TIMES, OR OTHER PERFORMANCE OBJECTIVES RELATIVE TO FIRE PROTECTION SERVICES.

The proposed project will not include residential development that would cause direct population growth though the project would create a significant number of new jobs, largely in retail and construction. Neither retail nor construction jobs generally stimulate relocation to an area. Furthermore, the unemployment rate in Calexico is high. Therefore, as a result of the type of employment opportunities that would be created as well as the high unemployment rate in Calexico, it is anticipated that new jobs would be filled by workers from the area. Therefore, the proposed project would not induce direct or indirect growth in the City of Calexico. There would be no increase in population resulting from the proposed project, and since the City of Calexico determines the size of the fire protection force in relation to population, there would be no increase in demand for fire personnel.

However, the project includes development on previously undeveloped land and could result in a potentially significant incremental increase in need for fire protection services.⁵⁹ In compliance with City ordinances, the project developer would be required to pay an impact fee for fire protection to the City to account for the project's fair share. Thus, any costs to the City from needed expansions or additions to the City's fire protection service brought about by the proposed project would be mitigated by this fee.

Conclusion: In the absence of mitigation, the proposed project would have a significant potential impact on fire protection services. In compliance with City ordinances, the project developer would be required to pay an impact fee for fire protection to the City to account for the project's fair share. Thus, any costs to the City from needed expansions or additions to the City's fire protection service brought about by the proposed project would be mitigated by this fee.

Mitigation Measures: The following mitigation would be required to further reduce public service impacts related to the Fire Department to levels that are less than significant:

Public Services Mitigation Measure 1. Pursuant to Calexico Ordinance No. 1036, the project Applicant shall pay fire protection impact fees and other pertinent fees in the amount required by the City of Calexico for commercial development, prior to the issuance of any building permits for the project.

Significance after Mitigation: The proposed project's impacts would be less than significant with payment of the required impact fee to the City.

3.10.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN A SUBSTANTIAL ADVERSE PHYSICAL IMPACT ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, THE CONSTRUCTION OF WHICH WOULD CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS, RESPONSE TIMES, OR OTHER PERFORMANCE OBJECTIVES RELATIVE TO POLICE PROTECTION SERVICES.

The proposed project will not cause direct or indirect population growth. The City has policy guidelines for the expansion of the police force that aim to enforce certain police per townspeople ratios. Because the population would not increase with the proposed project's implementation, the City would not be forced to expand police protection to serve a growing population. The project includes commercial development on previously undeveloped land and could result in an increase in need for police protection services, which would result in a potential significant impact.

Conclusion: The proposed project would have a significant potential impact on police services. In compliance with City ordinances, the project developer would be required to pay an impact fee for law enforcement services to the City to account for the project's fair share. The police impact fee is \$2,205 per acre of commercially developed land. This impact fee mitigates and necessary expansions to public personnel, stations, vehicles, or equipment.

⁵⁹ City of Calexico. *Calexico Gran Plaza Final Environmental Impact Report*. June 2011.

Mitigation Measures: The following mitigation would be required to further reduce law enforcement services to levels that are less than significant:

Public Services Mitigation Measure 2. Pursuant to Calexico Ordinance No. 1036, the project Applicant shall pay law enforcement fees and other pertinent impact fees applicable to new commercial development, as required by the City of Calexico, prior to the issuance of any building permits for the project.

Significance after Mitigation: The proposed project's impacts on law enforcement services would be less than significant with payment of the required impact fee to the City.

3.11 TRANSPORTATION AND CIRCULATION IMPACTS

3.11.1 SCOPE OF ANALYSIS

The City of Calexico, in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The preliminary environmental analysis undertaken as part of the Initial Study's preparation indicated the EIR should evaluate the following traffic and circulation issues:

- The proposed project's potential for resulting in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- The proposed project's potential for exceeding, conflicting with an applicable congestions management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by a county congestion management agency for designated roads or highways.
- The proposed project's potential for resulting in a change in air traffic patterns, including either an increase in traffic levels or a change in the location that results in substantial safety risks.
- The proposed project's potential for substantially increasing hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and,
- The proposed project's potential for conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.11.2 ENVIRONMENTAL SETTING

3.11.2.1 EXISTING REGULATORY SETTING

There are a number of existing regulations applicable to any new development that will be effective in further reducing potential traffic and circulation impacts. These regulations that will serve as standard conditions with respect to population and housing are identified below:

- *The City of Calexico General Plan.* The City of Calexico General Plan includes a Circulation Element that indicates the location and extent of future roadway and intersection improvements. The General Plan also establishes standards that govern a roadway's operation and design.
- *The Regional Transportation Improvement Program (RTIP).* The RTIP defines congestion relief projects and programs and is updated every two years. The RTIP must include all federally funded

projects and CMP projects that will need Federal or State funds. The RTIP must also be consistent with the Regional Transportation Plan.

3.11.2.1 EXISTING CIRCULATION SYSTEM

The key roadways in the project study area are described below. Exhibit 3-7 illustrates the existing geometric conditions and traffic control types.

- *Dogwood Road* is a north-south roadway located along the western edge of the City's Sphere of Influence. It connects from SR-98 north to Brawley. Dogwood Road is currently a two-lane undivided road in the vicinity of Calexico.
- *Kloke Road* is a two-lane undivided roadway that connects Jasper Road with Grant Street. This road is a north-south roadway on the western side of the City.
- *Cesar Chavez Boulevard* is a four-lane undivided roadway that parallels the Union Pacific Railroad tracks. This roadway runs northwest from 2nd Street to SR-98. The terminus of Cesar Chavez Boulevard at 2nd Street is proposed to be converted into a point of entry between Calexico and Mexicali. Due to this location, Cesar Chavez Boulevard is proposed to serve as a primary or an additional entrance roadway to/from Mexico through the proposed Calexico West Border Station. The City is currently widening Cesar Chavez Boulevard from the existing four-travel lanes to six travel lanes.
- *Scaroni Road/Imperial Avenue West* is a north-south two-lane undivided collector. This roadway connects SR-86 to SR-98 and runs parallel to SR-111. Scaroni Road becomes Imperial Avenue West on south of Camacho Road.
- *State Route 111/Imperial Avenue* is a north-south four-lane divided highway. It serves as a primary north-south arterial in the City of Calexico. SR-111 is a main access point for the U.S./Mexico border.
- *McCabe Road* is an east-west three or four-lane undivided roadway on west of SR-111. On east of SR-111, this roadway is a two-lane undivided roadway.
- *State Route 86/Heber Road* is classified as a State Highway and is an east-west facility within the project area. Currently, SR-86 is a two-lane undivided roadway.⁶⁰

⁶⁰ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

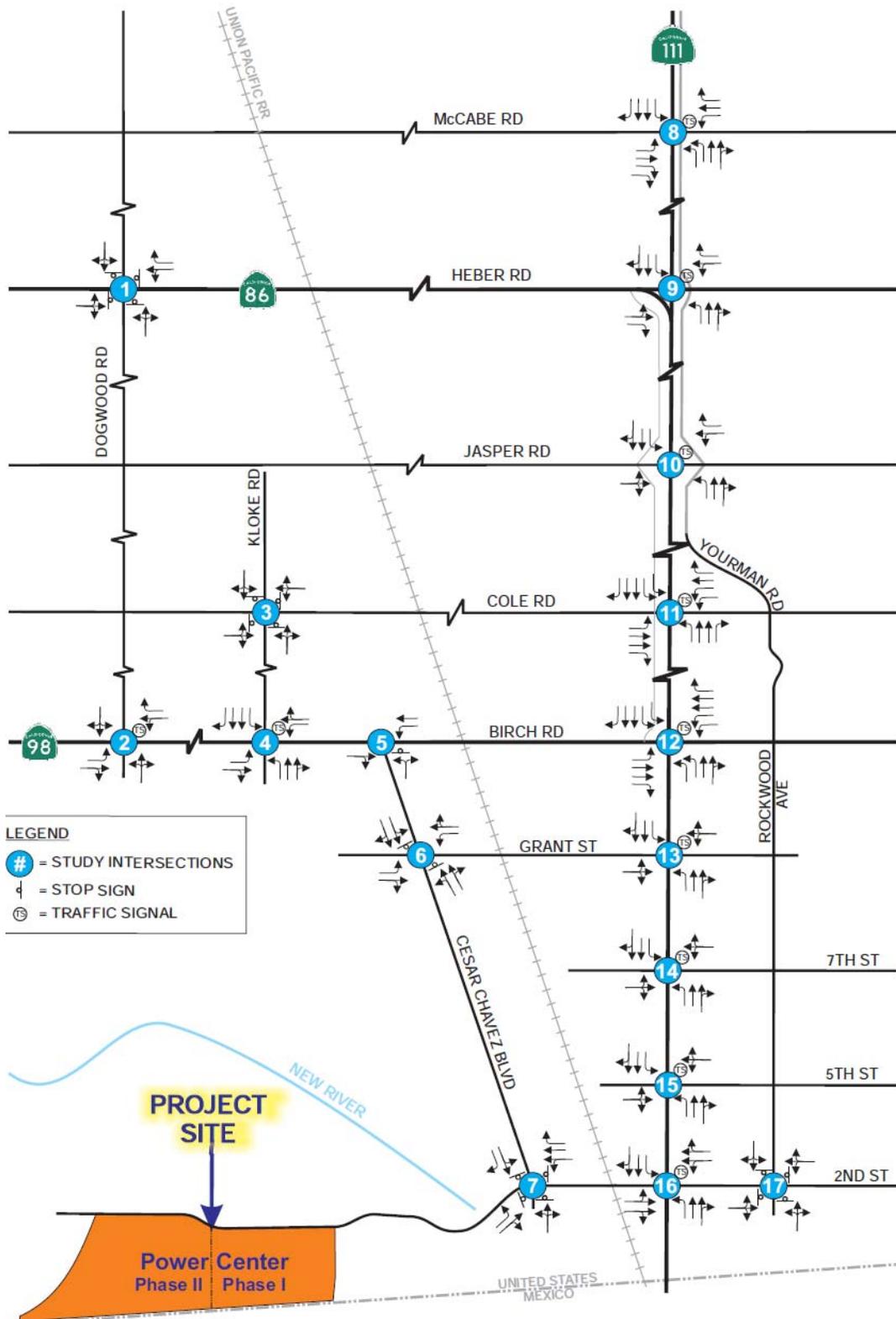


EXHIBIT 3-7
EXISTING ROADWAY GEOMETRICS
 Source: Infrastructure Engineers

- *Jasper Road* is an east-west roadway that forms the northern City limit of Calexico. Jasper Road is currently a two-lane undivided roadway.
- *State Route 98/Birch Street* is an east-west roadway. West of Ollie Avenue SR-98 is a two-lane undivided roadway. East of Ollie Avenue this roadway becomes a four-lane divided roadway.
- *Cole Road* is a two-lane undivided roadway from west of the City limits to Enterprise Boulevard. East of Enterprise Boulevard it transitions into a four-lane divided roadway in vicinity of the study area.
- *2nd Street* is an east-west cross town roadway located on the southern edge of the City. West of Cesar Chavez Boulevard 2nd Street is a two-lane undivided secondary roadway. Between Cesar Chavez Boulevard and SR-111 this street becomes a four-lane undivided major roadway. East of SR-111 this road transitions into a two-lane undivided secondary roadway.

Infrastructure Engineers (IE) commissioned 24-hour average daily traffic (ADT) counts for study area segments and AM/PM peak hour turn movement counts for study area intersections in May 2013 while local schools were in session. The peak hour counts were conducted between the hours of 7:00 – 9:00 AM and 4:00 – 6:00 PM. Table 3-9 is a summary of existing average daily traffic volumes (ADTs) and Exhibit 3-8 depicts the existing AM and PM peak hour traffic volumes.

**Table 3-9
Existing ADT Volumes**

	Street Segment	Existing Geometry	Capacity	ADT
2 nd Street	West of Cesar Chavez Boulevard	2U Secondary	17,500	2,178
	Cesar Chavez Boulevard to SR-111	4U Major	25,000	7,386
	SR-111 to Bowker Road	3U Secondary	21,250	2,637
Cesar Chavez Boulevard	SR-98 to Grant Street	4U Major	25,000	4,693
	Grant Street to 2 nd Street	4U Major	25,000	6,230
West Imperial Avenue	SR-98 to Camacho Road	2U Collector	16,200	4,690
Scaroni Road	Camacho Road to Cole Road	2U Collector	16,200	1,297
SR-98	Dogwood Road to Kloke Road	2U Secondary	17,500	8,584
	Kloke Road to SR-111	4D Primary	37,500	13,709
	SR-111 to Andrade Avenue	4D Primary	37,500	19,668
	Andrade Avenue to Bowker Road	2U Secondary	17,500	8,898
	Bowker Road to Barbara Worth Road	2U Secondary	17,500	11,248
	Barbara Worth Road to SR-7	3U Secondary	21,250	11,016

**Table 3-9
 Existing ADT Volumes (continued)**

Street Segment	Existing Geometry	Capacity	ADT	
Jasper Road	Dogwood Road to Scaroni Road	2U Secondary	17,500	725
	Scaroni Road to SR-111	2U Secondary	17,500	1,345
	SR-111 to Yourman Road	2U Secondary	17,500	3,958
	Yourman Road to Bowker Road	2U Secondary	17,500	405
Cole Road	Kloke Road to SR-111	4D Primary	37,500	7,945
	Rockwood Avenue to Bowker Road	4D Primary	37,500	6,213
SR-111	Jasper Road to Cole Road	4D Highway	56,300	31,431
	Cole Road to SR-98	4D Highway	56,300	30,459
	SR-98 to Grant Street/8 th Street	4D Primary	37,500	35,900

Source: Infrastructure Engineers

For the purpose of this traffic study, the proposed project was analyzed in two phases. The traffic analysis assesses the key intersections and street segments in the project area. The study area intersections and segments were analyzed for the following scenarios to determine the potential impacts to the street network:

- Existing Baseline (derived from 2013 traffic counts);
- 2014 Ambient + Phase 2A;
- 2015 Ambient + Phases 2A and 2B;
- 2015 Ambient + Cumulative Projects + Phases 2A and 2B;
- 2015 Ambient + Cumulative Projects + Phases 2A and 2B + Mitigation;
- 2035 Ambient + Cumulative Projects;
- 2035 Ambient + Cumulative Projects + Phases 2A and 2B (Near Term Mitigated);and,
- 2035 Ambient + Cumulative Projects + Phases 2A and 2B (Mitigated) + Long Term Mitigation.⁶¹

⁶¹ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

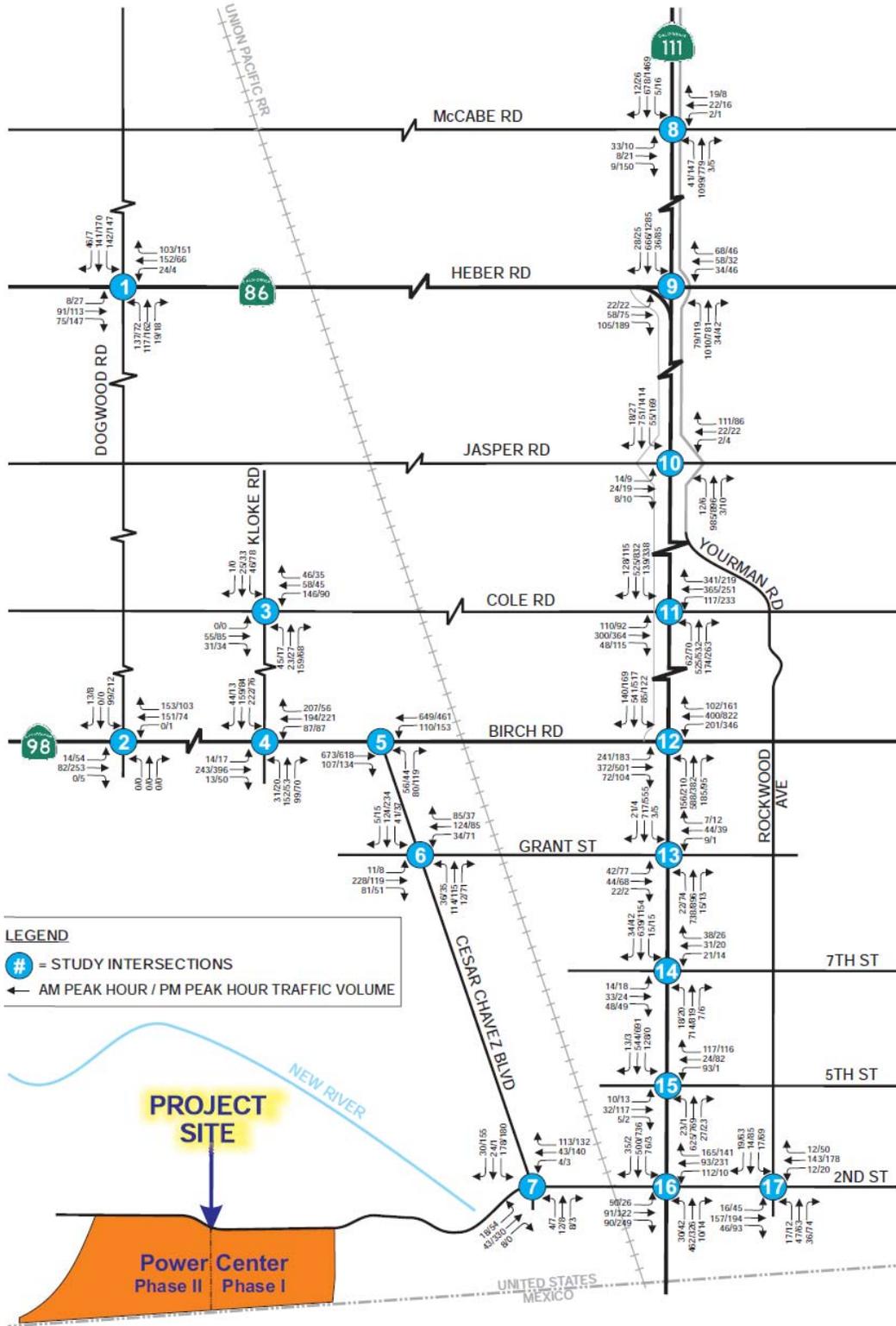


EXHIBIT 3-8
EXISTING TRAFFIC VOLUMES
 Source: Infrastructure Engineers

Based on the anticipated distribution of the project traffic and recommendations made by the City of Calexico staff, the specific study area includes the following intersections and street segments:

- Dogwood Road / SR-86 (Heber Road), (Unsignalized Intersection);
- Kloke Road / Cole Road, (Unsignalized Intersection);
- Cesar Chavez Boulevard / SR-98 (Birch Street), (Unsignalized Intersection);
- Cesar Chavez Boulevard / 2nd Street, (Unsignalized Intersection);
- Rockwood Street / 2nd Street, (Unsignalized Intersection);
- Dogwood Road / SR-98 (Birch Street), (Signalized Intersection);
- Kloke Road / SR-98 (Birch Street), (Signalized Intersection);
- Cesar Chavez Boulevard / Grant Street, (Signalized Intersection);
- SR-111 / McCabe Road, (Signalized Intersection);
- SR-111 / SR-86 (Heber Road), (Signalized Intersection);
- SR-111 / Jasper Road, (Signalized Intersection);
- SR-111 / Cole Street, (Signalized Intersection);
- SR-111 / SR-98 (Birch Street), (Signalized Intersection);
- SR-111 / Grant Street (8th Street), (Signalized Intersection);
- SR-111 / 7th Street, (Signalized Intersection);
- SR-111 / 5th Street, (Signalized Intersection); and,
- SR-111 / 2nd Street, (Signalized Intersection).

Street segments analyzed include the following:

- Second Street, west of Cesar Chavez Boulevard;
- Second Street, between SR-111 to Bowker Road;
- Cesar Chavez Boulevard, between SR-98 to Grant Street;
- Cesar Chavez Boulevard, between, Grant Street to 2nd Street;
- West Imperial Avenue, between SR-98 to Camacho Road;
- Scaroni Road, between Camacho Road to Cole Road;
- State Route 98, between Dogwood to Kloke Road;
- State Route 98, between Kloke Road to SR-111;
- State Route 98, between SR-111 to Andrade Avenue;
- State Route 98, between Andrade Avenue to Bowker Road;
- State Route 98, between Bowker Road to Barbara Worth Road;
- State Route 98, between Barbara Worth Road to SR-7;
- Jasper Road, between Dogwood Road to Scaroni Road;
- Jasper Road, between Scaroni Road to SR-111;
- Jasper Road, between SR-111 to Yourman Road;
- Jasper Road, between Yourman Road to Bowker Road;
- Cole Road, between Kloke Road to SR-111;
- Cole Road, between Rockwood Avenue to Bowker Road;
- State Route 111, between Jasper Road to Cole Road;
- State Route 111, between Cole Road to SR-98; and,

- State Route 111, between SR-98 to Grant Street/8th Street.

Level of service (LOS) is the term used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

The City of Calexico General Plan accepts LOS C on roadway segments and at intersections. It should be noted that the City of Calexico will accept LOS D at roadway segments if the intersections along the segment operate at LOS D or better during the peak hour. The County of Imperial accepts LOS C at roadway segments and intersections. Signalized intersections were analyzed for the weekday AM and PM peak hour weekday conditions.⁶² Average vehicle delay was determined using the methodology found in Chapter 16 of the 2000 Highway Capacity Manual (HCM), using the Traffix (version 7.9) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection level of service. Table 3-10 summarizes the delay thresholds for signalized intersections.

**Table 3-10
 Level of Service Thresholds for Signalized Intersections**

Average Control Delay Per Vehicle (seconds/vehicle)			Level of Service (LOS)
0.0	≤	10.0	A
10.1	to	20.0	B
20.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

Source: Infrastructure Engineers

Unsignalized intersections were also analyzed for the weekday AM and PM peak hour conditions. The vehicle delay and levels of service were determined based upon the procedures found in Chapter 17 of the 2000 Highway Capacity Manual (HCM), using the Traffix (version 7.9) computer software. The left-turn minor street delay or minor street approach was reported for the unsignalized intersections. Table 3-11 summarizes the delay thresholds for unsignalized intersections.⁶³

⁶² The Traffic Engineer coordinated the analysis to correspond to City staff input and for consistency with the traffic analysis conducted for the Phase 1 development. This earlier traffic study evaluated weekday traffic impacts.

⁶³ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

**Table 3-11
 Level of Service Thresholds for Unsignalized Intersections**

Average Control Delay Per Vehicle (seconds/vehicle)			Level of Service (LOS)
0.0	≤	10.0	A
10.1	to	15.0	B
15.1	to	25.0	C
25.1	to	35.0	D
35.1	to	50.0	E
	≥	50.1	F

Source: Infrastructure Engineers

Caltrans requires that State-owned intersections be analyzed using Intersecting Lane Vehicles (ILV) methodology as described in the Department Highway Design Manual. The ILV methodology is based on the concept that the capacity of intersecting lanes of traffic is 1,500 vehicles per hour. For the typical local street interchange there is usually a critical intersection impact is considered significant using the ILV methodology if the project traffic issues the intersection to operate “over capacity.” Table 3-12 summarizes the delay thresholds for ILV capacities.⁶⁴

**Table 3-12
 Intersection Lane Vehicle Capacities**

UNDER (ILV/hr < 1200)	NEAR (ILV/hr 1200 - 1500)	OVER (ILV > 1500)
Denotes stable flow with slight but acceptable delay. Occasional signal loading may develop. Free mid-block operations.	Denotes unstable flow with considerable delay. Some vehicles to pass through the intersection. Continuous backup occurs at some approaches.	Denotes stop and go operation with severe delay and heavy congestion. ^a Traffic volume is limited by maximum discharge rates of each phase. Continuous backup is varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

^a The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr and the excess will be delayed in a queue.

Street segment analysis is based upon the comparison of average daily traffic volumes with the City of Calexico Classification Level of Service and ADT Table 3-13. This table is shown on the following page and provides level of service estimates based on traffic volumes and roadway characteristics.

⁶⁴ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

**Table 3-13
 City of Calexico Standard Street Classification**

Roadway Classification	Roadway Width (feet)	Cross-Section	Right-of-Way (feet)	Maximum Capacity^a
8-Lane Freeway	-	8F	-	< 140,000
6-Lane Freeway	-	6F	-	< 105,000
6-Lane Expressway	-	6E	-	< 90,000
Highway	-	4D	80 - 148	< 56,300
Highway 111	160	6D	200	< 60,000
Primary	80	4D	100 - 126	< 37,500
Major	60	4U	80 - 126	< 25,000
Secondary	50	2U	70 - 75	< 17,500
2-Lane Divided	50	2D	70 - 75	< 17,500
Collector	40	2U	60	< 16,200
Local	40	2U	60	< 12,500

^a These roadway capacities are approximate figures only, and are used at the General Plan level. They are affected by such factors as intersections (numbers and configuration), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, level of truck and bus traffic, and level of pedestrian and bicycle traffic. Average daily traffic (ADT) is used in this model application as a long range planning tool to assist in determining roadway highway classification (number of thru lanes) needed to meet traffic demand.

NOTE: Since the City of Calexico does not provide capacities for Levels of Service A through D, Infrastructure Engineers based these levels of service volume to capacity ratios found in the City of Calexico General Plan Circulation Element Table C-A Level of Service Standards. Appendix B contains the Level of service Standards Table C-A.

SOURCE: Table C-D: Maximum Capacity by Roadway Classification, City of Calexico General Plan Circulation Element, February 2007.

The City of Calexico’s goal is that intersections and roadway segments operate at LOS C or better. In general, a location operating at LOS C or better under existing conditions that degrades to a LOS D or worse due to project traffic is considered a significant direct impact. The only exception is that an LOS D operating segment is not considered significant if the intersections along the segment operate at LOS D or better during peak periods.

A cumulative impact is calculated when an intersection or segment level of service is already operating below City standards and the project increases the delay by more than 2 seconds or the volume to capacity (v/c) ratio by more than 0.02. Also, if project and cumulative project traffic together cause an intersection or segment to operate below City standards and project traffic only increases the intersection delay by more than 2 seconds or the roadway segment v/c ratio by more than 0.02, a cumulative impact would be calculated. Under the long-term scenarios, significant impacts are considered cumulative and LOS D is considered acceptable.⁶⁵

⁶⁵ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

Table 3-14 shows that under existing conditions. All of the study intersections are calculated to currently operate at LOS C or better under the City’s jurisdiction and at LOS D or better under Caltrans’ jurisdiction except the following:

- Cesar Chavez Boulevard / SR-98 – LOS F/E during the AM/PM peak hours, respectively. The City is currently widening Cesar Chavez Boulevard from four-travel lanes to six travel lanes.

**Table 3-14
 Existing Intersection Operations**

Intersection	Control Type	Peak Hour	2013 Existing	
			V/C/Delay	LOS
1. Dogwood Rd and SR-86 (Heber Rd)	Stop/Signal	AM	0.540	B
		PM	0.555	B
2. Dogwood Rd and SR-98	Signal	AM	0.204	B
		PM	0.337	C
3. Kloke Rd and Cole Rd	Stop	AM	0.343	A
		PM	0.225	A
4. Kloke Rd and SR-98	Signal	AM	0.502	C
		PM	0.431	C
5. Cesar Chavez Blvd and SR-98	Stop/Signal	AM	(61.6)	F
		PM	(38.7)	E
6. Cesar Chavez Blvd and Grant St	Stop/Signal	AM	(19.20)	C
		PM	(21.20)	C
7. Cesar Chavez Blvd and 2 nd Street	Stop/Signal	AM	0.321	A
		PM	0.558	B
8. SR-111 and McCabe Rd	Signal	AM	0.392	A
		PM	0.582	B
9. SR-111 and SR-86 (Heber Rd)	Signal	AM	0.460	B
		PM	0.669	C
10. SR-111 and Jasper Rd	Signal	AM	0.436	B
		PM	0.538	B
11. SR-111 and Cole Rd	Signal	AM	0.573	C
		PM	0.563	C
12. SR-111 and SR-98	Signal	AM	0.618	D
		PM	0.671	D
13. SR-111 and Grant St	Signal	AM	0.399	B
		PM	0.468	B
14. SR-111 and 7 th St	Signal	AM	0.341	B
		PM	0.515	A
15. SR-111 and 5 th St	Signal	AM	0.524	C
		PM	0.430	B
16. SR-111 and 2 nd St	Signal	AM	0.406	C
		PM	0.508	C

Source: Infrastructure Engineers

ILV analysis was conducted for the study intersections under current (existing) conditions. As shown in Table 3-15, all study intersections are calculated to currently operate at under capacity for both the AM and PM peak hours. Appendix C of the traffic study contains level of service and ILV analysis worksheets of 2013 Existing Operations.

**Table 3-15
 Existing Intersection Operations (ILV Analysis)**

Intersection	Control Type	Peak Hour	2013 Existing	
			V/C/Delay	LOS
2. Dogwood Rd and SR-98	Signal	AM	277	Under
		PM	479	Under
4. Kloke Rd and SR-98	Signal	AM	763	Under
		PM	671	Under
8. SR-111 and McCabe Rd	Signal	AM	611	Under
		PM	835	Under
9. SR-111 and SR-86 (Heber Rd)	Signal	AM	650	Under
		PM	895	Under
10. SR-111 and Jasper Rd	Signal	AM	585	Under
		PM	760	Under
11. SR-111 and Cole Rd	Signal	AM	808	Under
		PM	829	Under
12. SR-111 and SR-98	Signal	AM	871	Under
		PM	958	Under
13. SR-111 and Grant St	Signal	AM	499	Under
		PM	607	Under
14. SR-111 and 7 th St	Signal	AM	471	Under
		PM	709	Under
15. SR-111 and 5 th St	Signal	AM	688	Under
		PM	595	Under
16. SR-111 and 2 nd St	Signal	AM	497	Under
		PM	610	Under

Source: Infrastructure Engineers

Table 3-16 shows that under existing conditions all of the study area street segments are calculated to currently operate at LOS C or better on a daily basis with the following exceptions:

- SR-111 between SR-98 and Grant Street – LOS E.⁶⁶

⁶⁶ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

**Table 3-16
Existing Street Segment Operations**

Street Segment		Existing Geometry	Capacity	ADT	LOS	V/C
2 nd Street	West of Cesar Chavez Boulevard	2U Secondary	17,500	2,178	A	0.12
	Cesar Chavez Boulevard to SR-111	4U Major	25,000	7,386	A	0.30
	SR-111 to Bowker Road	3U Secondary	21,250	2,637	A	0.12
Cesar Chavez Boulevard	SR-98 to Grant Street	4U Major	25,000	4,693	A	0.19
	Grant Street to 2 nd Street	4U Major	25,000	6,230	A	0.25
W. Imperial Avenue	SR-98 to Camacho Road	2U Collector	16,200	4,690	A	0.29
Scaroni Road	Camacho Road to Cole Road	2U Collector	16,200	1,297	A	0.08
SR-98	Dogwood Road to Kloke Road	2U Secondary	17,500	8,584	A	0.49
	Kloke Road to SR-111	4D Primary	37,500	13,709	A	0.37
	SR-111 to Andrade Avenue	4D Primary	37,500	19,668	A	0.52
	Andrade Avenue to Bowker Road	2U Secondary	17,500	8,898	A	0.51
	Bowker Road to Barbara Worth Road	2U Secondary	17,500	11,248	A	0.64
	Barbara Worth Road to SR-7	3U Secondary	21,250	11,016	A	0.52
Jasper Road	Dogwood Road to Scaroni Road	2U Secondary	17,500	725	A	0.04
	Scaroni Road to SR-111	2U Secondary	17,500	1,345	A	0.08
	SR-111 to Yourman Road	2U Secondary	17,500	3,958	A	0.23
	Yourman Road to Bowker Road	2U Secondary	17,500	405	A	0.02
Cole Road	Kloke Road to SR-111	4D Primary	37,500	7,945	A	0.21
	Rockwood Avenue to Bowker Road	4D Primary	37,500	6,213	A	0.17
SR-111	Jasper Road to Cole Road	4D Highway	56,300	31,431	A	0.56
	Cole Road to SR-98	4D Highway	56,300	30,459	A	0.54
	SR-98 to Grant Street/8 th Street	4D Primary	37,500	35,900	E	0.96

Source: Infrastructure Engineers

3.11.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally be deemed to have a significant adverse impact, if it results in any of the following:

- The proposed project’s potential for conflicting 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.
- The proposed project’s potential for exceeding, conflicting with an applicable congestions management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by a county congestion management agency for designated roads or highways.
- The proposed project’s potential for resulting in a change in air traffic patterns, including either an increase in traffic levels or a change in the location that results in substantial safety risks.
- The proposed project’s potential for substantially increasing hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- The proposed project’s potential for conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.11.4 ENVIRONMENTAL IMPACTS

3.11.6.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR CONFLICTING 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.

Trip generation rates derived from the San Diego Association of Governments (SANDAG) trip generation rates (Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002) were used for the project land uses. The analysis assumed that a portion of commercial/retail trips are not new to the street system, but are *internally captured* from trips already on the street system. These trips are termed “Pass-by” and “diverted link” trips and are assumed to be already on the roadways for another purpose. For example, patrons traveling from work to home may stop at the center to make purchases. Based on SANDAG data, about 55% of trips for this type of retail development are considered pass-by/diverted link

trips. The primary trips are calculated by subtracting the pass-by/diverted link trips from the total project trips.

**Table 3-17
 SANDAG Trip Generation Rates**

Phase	Land Use	Size	Units	Daily Rate	AM Peak Hour				PM Peak Hour			
					Split	In	Out	Total	Split	In	Out	Total
Phase 2A	Fast Food Drive-Thru - Pad A	7.20	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Fast Food Drive-Thru - Pad B	8.00	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Fast Food Drive-Thru - Pad C	5.70	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Power Center **	385.90	ksf	40.00	70:30	2.1%	0.9%	3%	50:50	4.5%	4.5%	9%
Phase 2B	Fast Food Drive-Thru - Pad D	3.50	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Fast Food Drive-Thru - Pad E	5.70	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Fast Food Drive-Thru - Pad F	5.50	ksf	650.00	50:50	3.5%	3.5%	7%	50:50	3.5%	3.5%	7%
	Gas Station with Food Mart and Fully Automated Carwash	18.00	vfs*	155.00	50:50	4.0%	4.0%	8%	50:50	4.5%	4.5%	9%
	Power Center	639.80	ksf	40.00	70:30	2.1%	0.9%	3%	50:50	4.5%	4.5%	9%

Source: City of San Diego. *San Diego Municipal Code, Land Development Code. Trip Generation Manual.* Revised May 2003.

Based on the total trip generation calculations, the Phases 2A and 2B of Calexico Power Center are calculated to generate approximately 22,224 ADT with 1,106 total trips during the AM peak hour (627 inbound/479 outbound) and 1,852 total trips during the PM peak hour (926 inbound/926 outbound). Phase 2A is calculated to generate approximately 10,065 ADT with 520 trips during the AM peak hour (288 inbound / 232 outbound) and 800 trips during the PM peak hour (400 inbound / 400 outbound). Phase 2B is calculated to generate 12,159 ADT with 586 trips during the AM peak hour (339 inbound / 247 outbound) and 1,052 trips during the PM peak hour (526 inbound/526 outbound). The project trip generation rates are presented in Table 3-17, and generated trip ends for each project phase and the overall total is summarized in Table 3-18.

**Table 3-18
Generated Trip Ends**

Phase	Land Use	Size	Units	Daily	AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
Phase 2A	Fast Food Drive-Thru - Pad A	7.20	ksf	4,680	164	164	328	164	164	328	
	Fast Food Drive-Thru - Pad B	8.00	ksf	5,200	182	182	364	182	182	364	
	Fast Food Drive-Thru - Pad C	5.70	ksf	3,705	130	130	260	130	130	260	
	Sub-Total (Fast Food)				13,585	476	476	952	476	476	952
	Less Diverted Trips	37%		5,027	176	176	352	176	176	352	
	Less Pass-By Trips	12%		1,630	57	57	114	57	57	114	
	Less Internal Capture	11%		1,494	52	52	104	52	52	104	
Phase 2A (cont.)	Less Adjusted Fast Food Trips			8,151	285	285	570	285	285	570	
	Net Total (Fast Food)			5,434	191	191	382	191	191	382	
	Power Center **	385.90	ksf	15,436	324	139	463	695	695	1,390	
	Less Diverted Trips	40%		6,175	129	56	185	278	278	556	
	Less Pass-By Trips	15%		2,315	49	21	70	104	104	208	
	Less Internal Capture	15%		2,315	49	21	70	104	104	208	
	Less Adjusted Commercial Trips			10,805	227	98	325	486	486	972	
	Net Total (Power Center)			4,631	97	41	138	209	209	418	
	TOTAL Trip Ends - Phase 2A			10,065	288	232	520	400	400	800	
Phase 2B	Fast Food Drive-Thru - Pad 1	3.50	ksf	2,275	80	80	160	80	80	160	
	Fast Food Drive-Thru - Pad 2	5.70	ksf	3,705	130	130	260	130	130	260	
	Fast Food Drive-Thru - Pad 3	5.50	ksf	3,575	125	125	250	125	125	250	
	Sub-Total (Fast Food)				9,555	335	335	670	335	335	670
	Less Diverted Trips	37%		3,535	124	124	248	124	124	248	
	Less Pass-By Trips	12%		1,147	40	40	80	40	40	80	
	Less Internal Capture	11%		1,051	37	37	74	37	37	74	
	Less Adjusted Fast Food Trips				5,733	201	201	402	201	201	402
	Net Total (Fast Food)				3,822	134	134	268	134	134	268
	Gas Station with Food Mart and Fully Automated Carwash	18.00	vfs*	2,790	112	112	224	126	126	252	
	Less Diverted Trips	51%		1,823	57	57	114	64	64	128	
	Less Pass-By Trips	0%		0	0	0	0	0	0	0	
	Less Internal Capture	11%		307	12	12	24	14	14	28	
	Less Adjusted Fast Food Trips				2,130	69	69	138	78	78	156
	Net Total (Gas Station)				660	43	43	86	48	48	96
Power Center	639.80	ksf	25,592	538	231	769	1,151	1,151	2,302		
Less Diverted Trips	40%		10,237	215	92	307	461	461	922		
Less Pass-By Trips	15%		3,839	81	35	115	173	173	346		

**Table 3-18
 Generated Trip Ends (Continued)**

Phase	Land Use			Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Phase 2B	Less Internal Capture	15%		3,839	81	35	115	173	173	346
	Less Adjusted Commercial Trips			17,915	377	162	537	807	807	1,614
	Net Total (Power Center)			7,677	161	69	232	344	344	688
	TOTAL Trip Ends - Phase 2B			12,159	339	247	586	526	526	1,052
TOTAL Trip Ends - Phases 2A and 2B				22,224	627	479	1,106	926	926	1,852

Source: City of San Diego. *San Diego Municipal Code, Land Development Code. Trip Generation Manual.* Revised May 2003 Urban Land

The project traffic was distributed and assigned to the street system based on the project’s proximity to the U.S./Mexico border crossing and State highways and arterials, the location of commercial and employment opportunities, and the location of residential areas. Based on the anticipated amount of clientele that would come from the City of Mexicali and the experience with the Imperial Valley Mall, 60% of the trips are assumed to be departing to and arriving from the City of Mexicali. This percentage has been confirmed by the City staff as well as from survey information obtained from the operators of the Phase 1 center.

Past border crossing studies have documented that approximately 40 percent of crossings from Mexico to the U.S. are pedestrians and the remaining 60 percent are by vehicle. One such study titled “*Calexico Port of Entry to Immediately Process I-94 Permits for Mexican Holiday Travelers*” cited 23,000 to 27,000 vehicles and 18,000 pedestrians daily. The following Table 3-19 summarizes the report’s findings.

**Table 3-19
 Calexico Port of Entry**

Entries	Vehicles	Vehicle Percentage	Pedestrians	Pedestrian Percentage
41,000	23,000	56.1%	18,000	43.9%
45,000	27,000	60.0%	18,000	40.0%
Averages				
43,000	25,000	58.1%	18,000	41.9%

Additional assumptions relative to support the findings of pedestrian traffic from Mexico are listed below.

- Due to Power Center being located close to the POE, the great majority of the daily patronage will be coming from Mexico. The business operators estimate that approximately 60% of the potential patrons will be traveling to the Power Center from Mexicali.
- Normally driving into the US through the POE takes significantly more time compared to pedestrian crossings. Therefore, the time savings will prompt shoppers to walk across the border instead of driving. As a result, the proposed project's patronage coming from Mexico will be comprised mostly of pedestrians due to the convenience and close proximity to the border.
- High fuel prices and the easy access option of walking to Power Center will prompt shoppers to walk across the border and to use shuttle buses or continue walking to the Power Center.
- The Power Center intends to provide shuttle service connections with the downtown area near the POE to Power Center which will further promote pedestrian travel to the Power Center.

As indicated previously, the projected trip generation for Phases 2A and 2B of Calexico Power Center are estimated to be 22,224 ADT with 1,106 total trips during the AM peak hour and 1,852 total trips during the PM peak hour. These figures are likely to be overestimates given the above characteristics related to cross-border traffic and the number of patrons that will be walking or using shuttles to travel to the Power Center. For this reason, the traffic volumes and trip assignments will represent the maximum case conditions.⁶⁷

Exhibit 3-9 depicts the regional trip distribution, Exhibit 3-10 illustrates the project traffic volume assignment for Phase 2A of Power Center, and Exhibit 3-11 shows the project traffic volume assignment for Phase 2A and Phase 2B of the Power Center. Exhibit 3-12 provides the 2014 Ambient + Phase I traffic volumes, and Exhibit 3-13 presents the 2015 Ambient + Phases 2A and 2B traffic volumes.

There are other planned projects in the areas in the project vicinity, which will add traffic to the roadways surrounding the project site. Based on the review of other potential projects within the area, and research at the City of Calexico, County of Imperial, and Caltrans, it was determined that sixteen future cumulative development projects will potentially add traffic to the study area. The list of these cumulative projects is identified in Table 2-1 while the project trip generation is detailed in the Traffic Study (refer to Table 11 included in the Traffic Study).⁶⁸

⁶⁷ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

⁶⁸ Ibid.

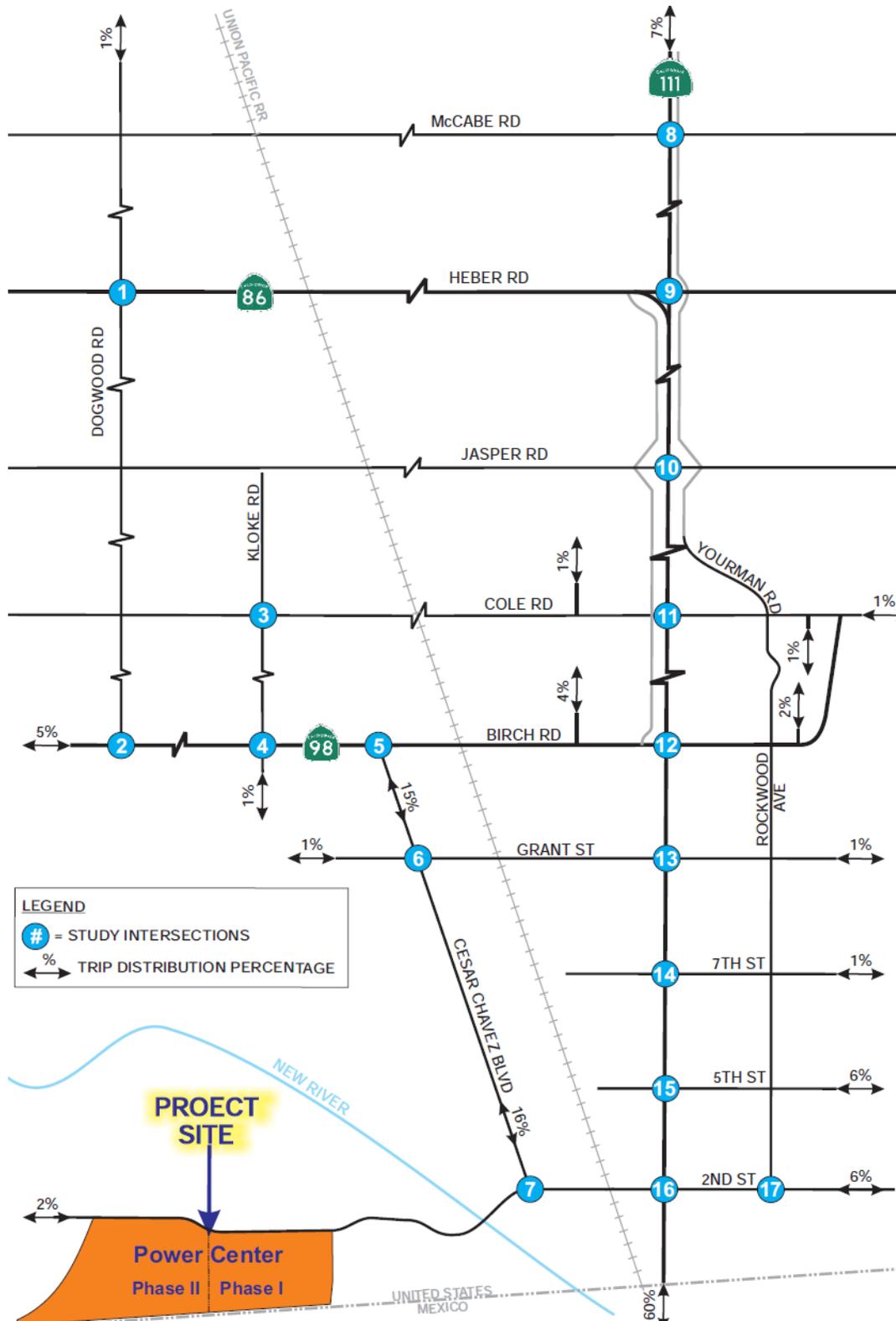


EXHIBIT 3-9
PROJECT TRAFFIC TRIP DISTRIBUTION
 Source: Infrastructure Engineers

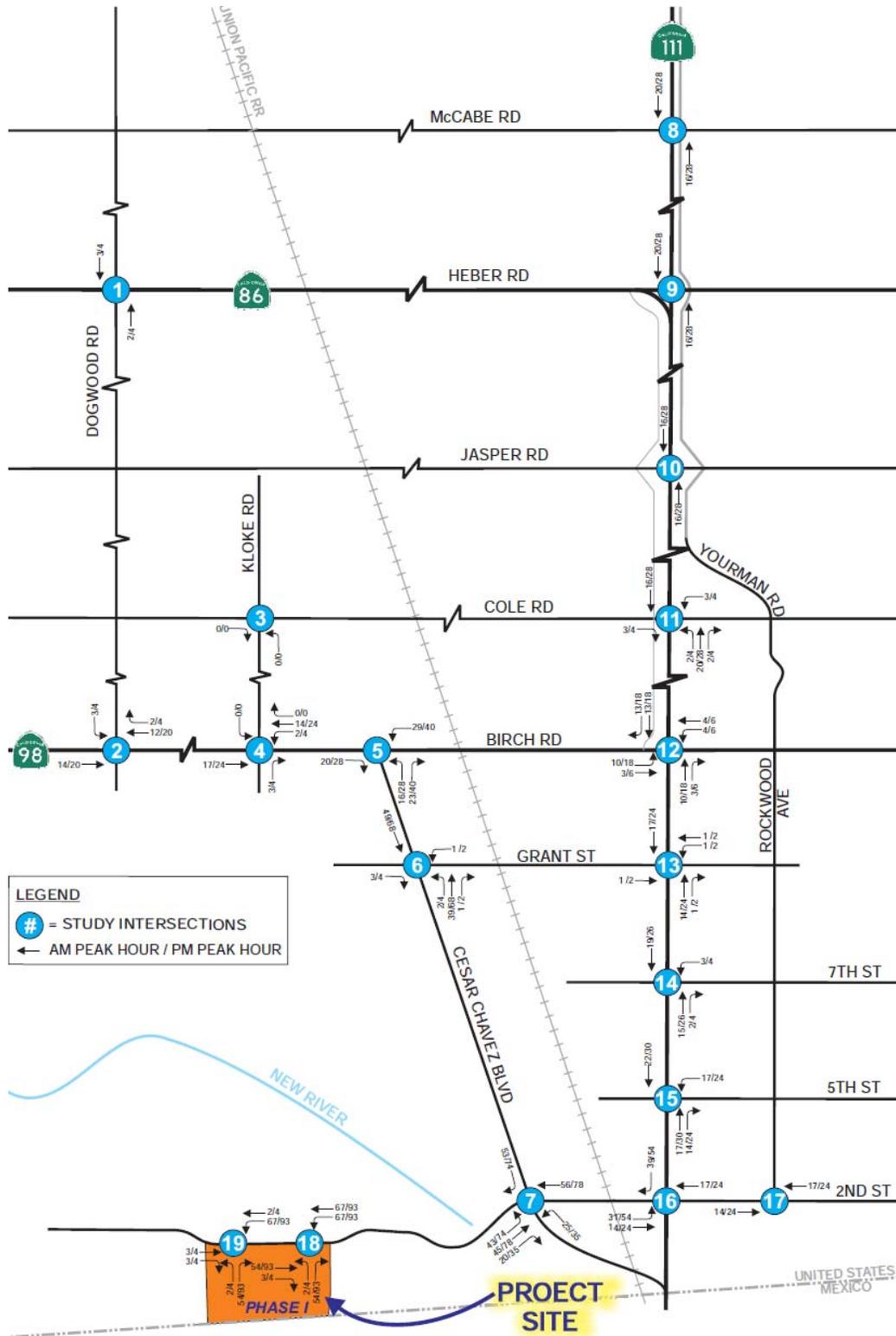


EXHIBIT 3-10
PROJECT TRAFFIC TRIP ASSIGNMENT FOR PHASE 2A
 Source: Infrastructure Engineers

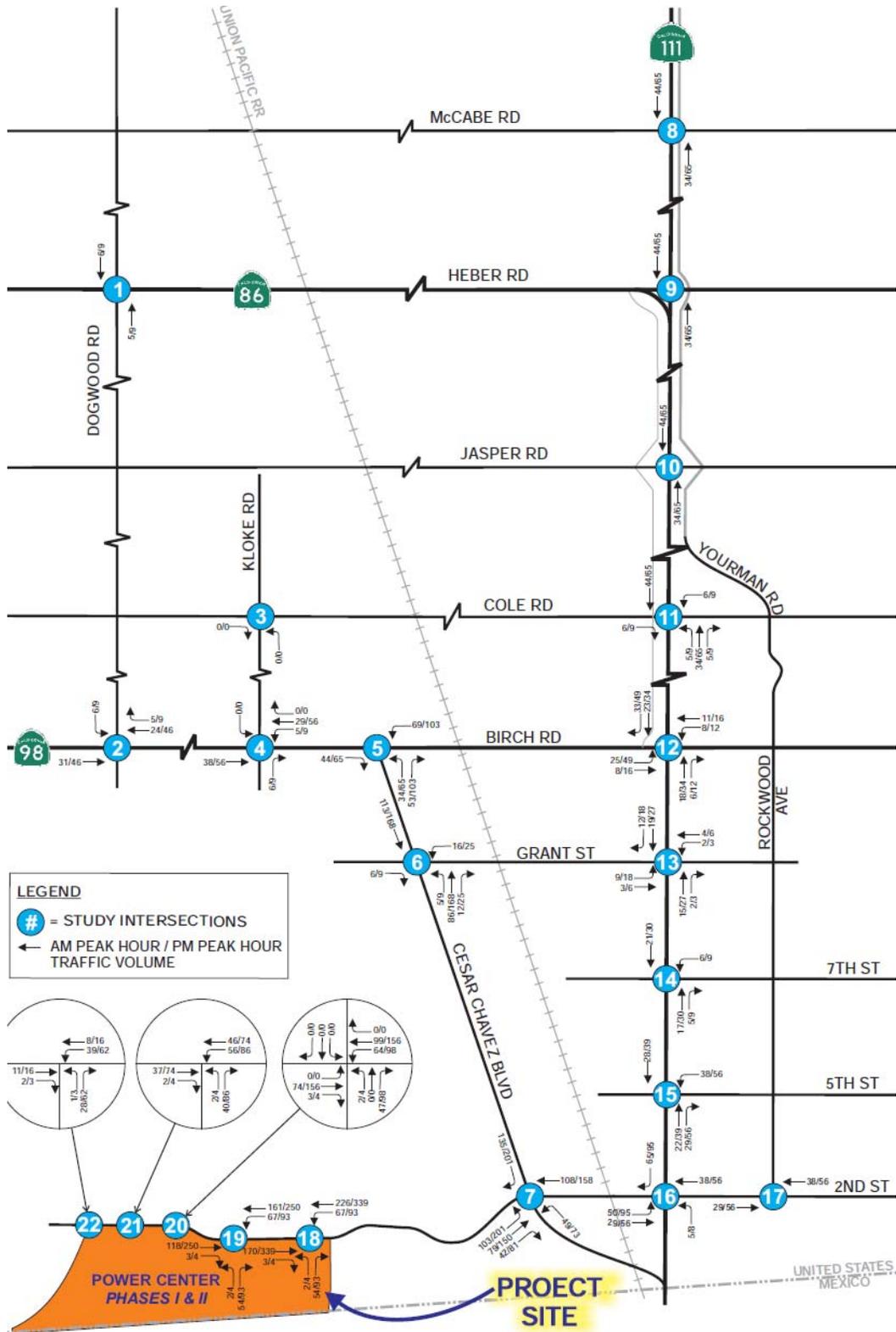


EXHIBIT 3-11
PROJECT TRAFFIC TRIP ASSIGNMENT FOR PHASES 2A AND 2B
 Source: Infrastructure Engineers

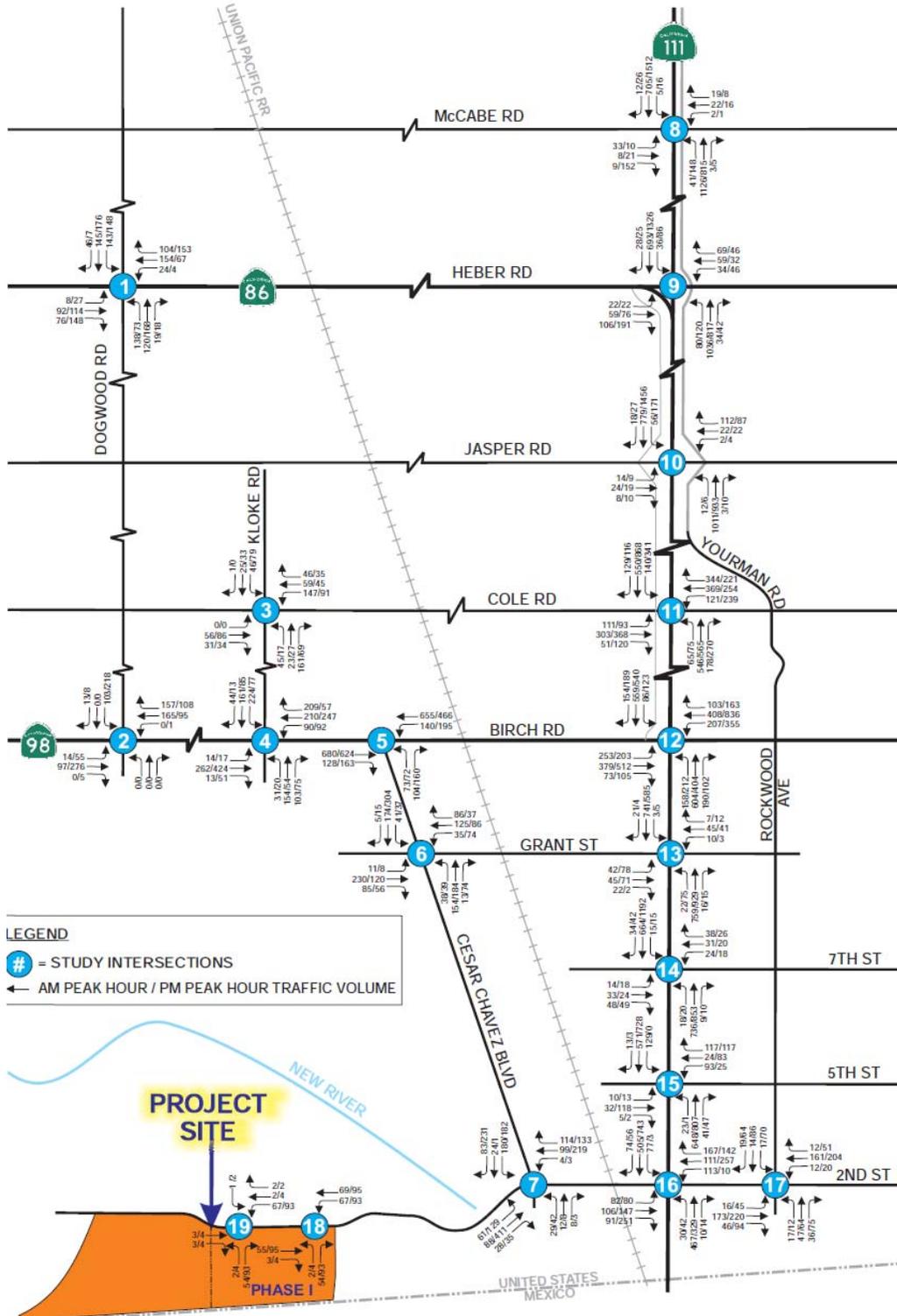


EXHIBIT 3-12
2014 BACKGROUND TRAFFIC PLUS PHASE 2A TRAFFIC
 Source: Infrastructure Engineers

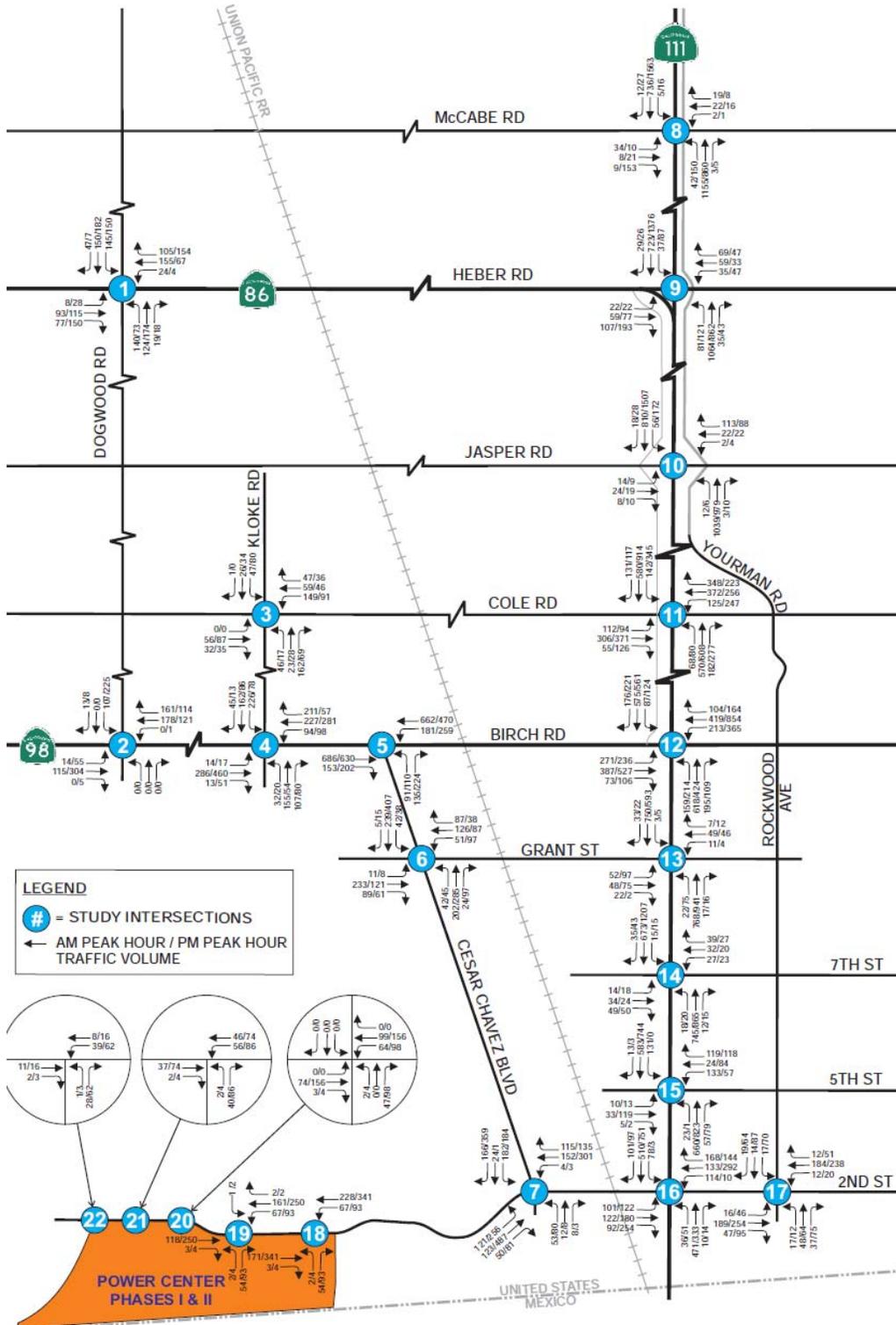


EXHIBIT 3-13
2014 BACKGROUND TRAFFIC PLUS PHASES 2A AND 2B TRAFFIC
 Source: Infrastructure Engineers

Significance after Mitigation: Table 3-20 presents the calculated significant impacts for the proposed project based on the established Significance Criteria along with recommendations for mitigation measures at the impact locations and fair share percentage of mitigation measures.

**Table 3-20
 Summary of Direct Projected Related Impacts, Mitigation Measures, and Fair Share Percentages**

Future Term	#	Intersection/ Segment	Impact Type	Mitigation Measures ⁽¹⁾	Mitigated LOS		Fair Share (%)
					AM	PM	
Near-Term	7	Cesar Chavez Blvd and	Direct	Widen EB and WB with third through lane each with signal modification; and Add SB right-turn signal overlap	C	C	100% Direct
		2nd St					
		Cole Rd					
		SR-98					

Note:

⁽¹⁾: Power Center Related Mitigation Measures Only

⁽²⁾: LOS D is acceptable under the Caltrans jurisdiction or as of long-term impacts.

⁽³⁾: In order to mitigate the significant impact, SR-111 would need to be widened to six lane highway standards. However, right-of-way is not available for due to existing structures. Therefore, it is not considered feasible to mitigate the impact on SR-111.

⁽⁴⁾: Mitigations to improve ILV.

3.11.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR EXCEEDING, CONFLICTING WITH AN APPLICABLE CONGESTIONS MANAGEMENT PROGRAM, INCLUDING, BUT NOT LIMITED TO, LEVEL OF SERVICE STANDARDS AND TRAVEL DEMAND MEASURES, OR OTHER STANDARDS ESTABLISHED BY A COUNTY CONGESTION MANAGEMENT AGENCY FOR DESIGNATED ROADS OR HIGHWAYS.

The analysis identified in the previous section (Section 3.11.4.1) considered the proposed project’s environmental impacts on this issue.

Conclusion: The proposed project has the potential to result in significant impacts at three intersections located along Cesar Chavez Boulevard (refer to Table 3-20) in the absence of mitigation. This determination does not take into account the widening of this roadway from the existing four travel lanes to six travel lanes which will further reduce the potential impacts to levels that are less than significant.

Mitigation Measure: The mitigation measures identified in Section 3.11.4.1 (Table 3-20) will mitigate potential traffic and circulation impacts. No additional mitigation will be required.

Significance after Mitigation: The impacts will be less than significant with the implementation of the mitigation measures identified herein in Section 3.11.4.1.

3.11.4.3 IMPACT ANALYSIS:

The proposed project is a regional commercial center that is designed to “capture” potential patronage from Mexicali. The majority of the patrons will walk, use shuttle service, or use personal vehicles to travel to and from the site. As a result, the impacts to the adjacent Calexico Airport will be minimal. Some increase in air travel may result from management traveling to and from the center once it is operational. However, this patronage is anticipated to be very limited and the impacts will be less than significant.

Conclusion: The proposed project will not result in a change in air traffic patterns or otherwise result in an increase in air traffic levels. Very limited additional air traffic is anticipated. As a result, the impacts are anticipated to be less than significant.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project’s impacts would be less than significant.

3.11.4.4 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR SUBSTANTIALLY INCREASING HAZARDS DUE TO A DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT).

Access to the Calexico Power Center project site will be via five driveways (referred to as Access #1 through Access #5) located along 2nd Street. Access #1 is the most eastern driveway and Access #5 is the westernmost driveway. Among them, Accesses #2 and #3 will be aligned with proposed accesses of the future expansion of Calexico International Airport located on north side of 2nd Street. All the accesses are forecast to operate LOS C or better during both the AM and PM peak hours under all of the scenarios.⁶⁹

- *Access #1 (Phase 2A).* This driveway will be signalized and provide the following lane geometry: *Northbound*, provide one right-turn lane and one left-turn lane; *Eastbound*, provide two through lanes and one through and right-turn shared lane; and, *Westbound*, provide three through lanes and one (1) left-turn pocket lane.
- *Access #2 (Phase 2A).* This driveway will be unsignalized and will provide the following lane geometry: *Northbound*, provide one right-turn lane and one through and left-turn shared lane; *Southbound*, assumed to provide one or two lanes from the Calexico International Airport; *Eastbound*, provide two (2) through lanes and one (1) through and right-turn shared lane; and, *Westbound*, provide three through lanes and one left-turn pocket lane.
- *Access #3 (Phase 2B).* This driveway will be signalized and provide the following lane geometry: *Northbound*, provide one right-turn lane and one through and left-turn shared lane; *Southbound*, assumed to provide one lane for all turning movements from the Calexico International Airport;

⁶⁹ Infrastructure Engineers. *Traffic Impact Analysis – Calexico Power Center, City of Calexico California*. March 18, 2014.

Eastbound, provide two through lanes and one through and right-turn shared lane; and, *Westbound*, provide three through lanes and one left-turn pocket lane.

- *Access #4 (Phase 2B)*. This driveway will be unsignalized and will provide the following lane geometry: *Northbound*, provide one right-turn lane and one left-turn lane; *Eastbound*, provide two through lanes and one through and right-turn shared lane; and, *Westbound*, provide two through lanes and one left-turn pocket lane.

- *Access #5 (Phase 2B)*. This driveway will be unsignalized and will provide the following lane geometry: *Northbound*, provide one right-turn lane and one left-turn lane; *Eastbound*, provide two through lanes and one through and right-turn shared lane; and, *Westbound*, provide one through lane and one left-turn pocket lane.

Table 3-21 indicates the projected level of service as the five driveway locations.

**Table 3-21
Level of Service of Access**

Intersection #	Control Type	Peak Hour	2014 Ambient + Phase I		2015 Ambient + Phases I and II		2015 Ambient + Cumulative + Phases I and II		2015 Ambient + Cumulative + Phases I and II + Mitigation		2035 Ambient + Cumulative + Phases I and II (Near Term Mitigated)		2035 Ambient + Cumulative + Phases I and II (Mitigated) + Mitigation	
			LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)
#18 Access #1 and 2nd St	Signal	AM	A	(8.7)	A	(8.9)	A	(8.9)	A	(8.9)	A	(8.9)	A	(8.9)
		PM	A	(8.9)	A	(9.6)	A	(9.6)	A	(9.6)	A	(9.6)	A	(9.6)
#19 Access #2 and 2nd St ⁽¹⁾	Stop	AM	B	0.083	C	0.107	C	0.107	C	0.107	C	0.107	C	0.107
		PM	B	0.128	C	0.178	C	0.179	C	0.179	C	0.179	C	0.179
#20 Access #3 and 2nd St	Signal	AM	-	-	A	(8.9)	A	(9.0)	A	(9.0)	A	(9.0)	A	(9.0)
		PM	-	-	A	(9.8)	C	(15.5)	C	(15.5)	C	# 15.5)	C	(15.5)
#21 Access #4 and 2nd St	Stop	AM	-	-	C	0.070	C	0.072	C	0.072	C	0.072	C	0.072
		PM	-	-	C	0.129	C	0.131	C	0.131	C	0.131	C	0.131
#22 Access #5 and 2nd St	Stop	AM	-	-	A	(8.5)	A	(8.5)	A	(8.5)	A	(8.5)	A	(8.5)
		PM	-	-	A	(8.6)	A	(8.6)	A	(8.6)	A	(8.6)	A	(8.6)

Note: ⁽¹⁾: Since the number of southbound lanes are not confirmed yet, the southbound one (1) lane was applied.

Conclusion: The proposed project’s design and the project design features related to the project access will not result in any significant adverse impacts.

Mitigation Measure: The mitigation measures identified in Section 3.11.4.1 will mitigate potential traffic and circulation impacts. No additional mitigation will be required.

Significance after Mitigation: The impacts will be less than significant with the implementation of the mitigation measures identified herein in Section 3.11.4.1 and the project design features related to site access..

3.11.4.5 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CONFLICTING WITH ADOPTED POLICIES, PLANS, OR PROGRAMS REGARDING PUBLIC TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES, OR OTHERWISE DECREASE THE PERFORMANCE OR SAFETY OF SUCH FACILITIES.

The proposed project will be designed to facilitate the use of public transit and pedestrian travel to and from the proposed project. Shuttle service will also operate between the center and the POE. According to estimates related to the operation of the Phase 1 center, between 40% and 60% of the patronage either walks or use transit to reach the Phase 1 center. As a result, the proposed project will not conflict with any local plans of policies related to the use of public transit or other alternative forms of transit.

Conclusion: The proposed project will not conflict with any local plans of policies related to the use of public transit or other alternative forms of transit.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.12 UTILITIES IMPACTS

3.12.1 SCOPE OF ANALYSIS

The City of Calexico in its capacity as Lead Agency in the review of the proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this EIR's preparation. The preliminary environmental analysis indicated the EIR should evaluate the following:

- The proposed project's potential for exceeding wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- The proposed project's potential for requiring the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts;
- The proposed project's potential for requiring the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- The proposed project's potential for resulting in an overcapacity of the storm drain system, causing area flooding;
- The proposed project's potential for resulting in a determination by the wastewater treatment provider that serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- The proposed project's potential for utilizing a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

3.12.2 ENVIRONMENTAL SETTING

3.12.2.1 REGULATORY SETTING

There are a number of existing regulations that will be applicable to any new development and these policies and regulations will be effective in further reducing potential land use impacts. These regulations are considered to be standard conditions in that they are required regardless of whether an impact requires mitigation. Those regulations that will serve as standard conditions with respect to land use and planning impacts are listed on the following page:

- *California Administrative Code*. The California Administrative Code (CAC) establishes efficiency standards for reducing water usage in new water fixtures. Title 24 of the CAC, Section 25352 addresses pipe insulation requirements. Title 20 of the CAC, Section 1604 provides efficiency standards for water fixtures including lavatory faucets, showerheads, and sink faucets.

- *California Urban Water Management Planning Act.* Section 10610 of the California Water Code establishes the Urban Water Management Planning Act. The Act states that every urban water service provider that serves 3,000 or more customers or that supplies over 3,000 acre feet (af) of water annually should prepare an Urban Water Management Plan (UWMP) every five years. The goal of a UWMP is to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The City of Calexico is an urban water service provider and prepared its last UWMP in 2010.
- *State Legislation - SB 610 (Costa) and SB 221 (Kuehl).* To further support and augment the Urban Water Management Planning Act, the State legislature enacted Senate Bill (SB) 610 (Costa) and SB 221 (Kuehl). SB 610 amended the California Water Code, requiring that a water service provider prepare a Water Supply Assessment to determine whether a project's water demand has been accounted for in the most recent Urban Water Management Plan (UWMP). If the project's water demand has not been accounted for in the UWMP, the WSA must discuss whether the water service provider's total water supplies would be adequate to meet the projected water demand during normal, single dry, and multiple dry water years during a 20-year period. Additionally, under SB 610, the WSA must be incorporated within an environmental document prepared for the project pursuant to CEQA. Under SB 610, a project that is subject to a WSA includes a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space, or a project that would increase the number of the public water system's existing service connections by 10 percent. SB 221 amended the Subdivision Map Act to require an applicant of a new subdivision project to obtain written verification from the water service provider that sufficient water supplies are, or will be, available to serve the project. In accordance with the requirements of SB 610 and SB 221, a WSA was prepared by for the proposed project. A copy of the WSA is included in the Appendix.
- *California Integrated Waste Management Board.* The California Integrated Waste Management Board (CIWMB) requires the City of Calexico to comply with the California Integrated Waste Management Act of 1989. This act requires each California city and county to divert 50 percent of its solid waste through source reduction, recycling, and composting. This ordinance requires recycling collection and loading areas in all development projects. The requirements now call for a waste diversion rate of 75% by the year 2020.
- *City of Calexico Service Area Plan (May 2006).* The City of Calexico has established design criteria that must be met to ensure that adequate potable water supply and fire flow needs are provided. The design criteria are based on three scenarios, peak hour demand, maximum daily demand plus fire flow, and tank refill, with the most stringent of the scenarios governing the design. These design criteria include the following: 200 gallons per person per day average daily consumption; flow velocity shall be limited to 20 feet per second; 20 pounds per square inch pressure shall be maintained system-wide during all conditions; maximum daily demand is 1.5 times average daily demand; peak hourly demand is 1.8 times maximum daily demand; storage required is based on maximum day demand plus a 2,500 gallons per minute fire; flow for four-hour duration; treatment

plant capacity shall meet the demands of the maximum daily flow; and fire flow minimums (2,500 gallons per minute commercial).

- *City of Calexico General Plan.* The City of Calexico General Plan also includes goals and policies related to utilities and service systems for areas within the City of Calexico and its designated Sphere of Influence. The following City of Calexico General Plan policies for utilities and service systems are relevant to the proposed project:
 - Policy 1A: Establish funding mechanisms to fund the construction or expansion of public services and facilities necessitated by new development. The City should adopt appropriate ordinance(s) that implement impact fees and/or extractions on developers to fund construction of public facilities caused by new development. The ordinance should delineate methods for fee calculation to allow developers to know in advance their expected fees.
 - Policy 3B: All improvements to existing water systems that are necessitated by a new development shall be financed entirely by the developer either by fee or actual compensation.
 - Policy 4B: Development on the outlying areas of the City shall occur in an orderly and contiguous manner in order to preserve the urban/rural edge.
 - Policy 2F: All improvements to the existing sewer system necessitated by the approval of a new development project shall be financed entirely by the proponent either by fee or actual construction.
 - Policy 11C: Continue to administer existing recycling programs and enact new ones as necessary to achieve current 50 percent solid waste diversion goals as set forth by the California Integrated Waste Management Bureau (CIWMB).

3.12.2.2 EXISTING UTILITIES

This section describes the existing utilities that serve the project area. This section considers water delivery service, sources of water supply, wastewater infrastructure, and storm water infrastructure.

- *Water Supplies and Service.* The City of Calexico Water Department provides water service to the project site. The City's water comes from the Colorado River and is distributed by the Imperial Irrigation District (IID) via the All American Canal (AAC) near the Southern Pacific Railroad. Raw water is pumped through a pipeline to the City's 25 million gallon reservoir. The City has a total of three raw water pumps that transfer water from the canal to the City's raw water reservoir. The water is then pumped from the reservoir through a pipeline to the City of Calexico's Water Treatment Plant (Calexico WTP) located at 545 Pierce Avenue, which is located one mile from the diversion point. The majority of the water that is imported from the Colorado River is used for agriculture irrigation (98 percent), while the remaining two percent of IID's allotment goes to municipalities such as Calexico. According to the City of Calexico Water Department, IID delivered 3,097 million gallons of water to the City of Calexico in the year of 2005, while in the

year of 2010, 4,750 million gallons of water are expected to be supplied. Calexico's WTP has a capacity of 12 mgd, which is capable of providing adequate service for the entire city. The City's raw water supply is stored in a single 25 mgd open water reservoir. The finished water is stored in above-grade steel tanks on the treatment site. The City's total storage capacity is 33 million gallons or approximately five days of storage at the current average daily flow (adf). Calexico's WTP has one finished water pump station that maintains water pressure for the City. The current peak flow rate is 17,500 gallons per minute (gpm) or 24 mgd. The current system is operating in one pressure zone, which is sustained by pumping only. Due to the City's level topography, there are no reservoirs that can provide a hydraulic gradient to sustain minimum pressures required by users. Therefore, this system is considered a closed system.

- *Groundwater Supply.* Groundwater in the City of Calexico is of poor quality. With a high fluoride concentration and with total dissolved solids (TDS) ranging from a few hundred to more than 10,000 milligrams per liter, Calexico's groundwater is not suitable for domestic use. The City's groundwater also has a boron concentration that exceeds the recommended levels for agricultural uses. Thus, Calexico's groundwater cannot be used for either domestic or irrigation uses.

- *Potable Water Supply.* The City of Calexico depends on the Colorado River for its surface water. IID imports raw water from the Colorado River and delivers it, untreated, to the Calexico Water Department. IID diverts the water into the All-American Canal (AAC), an 82-mile gravity flow canal, at the Imperial Dam, 20 miles north of Yuma, Arizona. In 2005, IID diverted 3,100,000 acre-feet (af) of water from the Colorado River to the Imperial Valley, including 3,097 million gallons to the City of Calexico. The City of Calexico Water Department is responsible for delivering potable water to the residents and businesses in the city. Potable water is treated surface water, which, as noted above, is supplied by the Colorado River to the City of Calexico using a variety of canals and pipelines owned and operated by IID. Once the water is treated, it is transferred to and stored in one of three above-ground tanks, which have a combined capacity of eight million gallons. In addition, a new six million gallon above-ground storage tank near Cole Road and State Route 98 (SR-98) is planned.

- *Stormwater.* Drainage in the project area is provided by a combination of piping into the New River and through IID main and lateral drains into the Salton Sea. The preferred way to accommodate urban stormwater runoff in the area involves conveying the runoff into an IID drainage canal that will eventually drain into the Salton Sea. Since these drainage canals are not designed to handle urban runoff, water detention basins are used to limit flow into the IID system. When necessary, stormwater is diverted into the detention basins and systematically released into the IID canals over an extended period of time allowing the drainage canals to move the water toward the Salton Sea.

- *Wastewater.* The City of Calexico operates its own system of wastewater collection and treatment. The sewer collection system consists of pipes ranging from 6 to 30 inches in diameter throughout Calexico. The City maintains 100 miles of sewer lines and 15 lift stations. There are two plants with a total treatment capacity of 4.2 MGD, currently treating 2.7 MGD. Plant No. 1

was constructed in 1967 and employs an activated sludge treatment with 2.5 MGD capacity with two primary clarifiers, three aerator basins, two digestors, and three final clarifiers. Plant No. 1 was upgraded in 1974, 1991, and 1995. Plant No. 2 was constructed in 1991 and utilizes aerated lagoons with a treatment capacity of 1.8 MG. Effluent flows through a set of four lagoons, each with a 3 MG volume. This plant was last upgraded in 1994. Plant #1 and Plant #2 final effluents are combined and pass through the U.V. System (Ultra Violet System) for disinfection and then discharged into the New River.

- *Solid Waste.* Allied Waste provides solid waste collection and disposal services for the City of Calexico. The solid waste is deposited in a 42-acre Allied Imperial Landfill located in the City of Imperial, which is considered a Class III landfill (non-hazardous waste). The annual permitted intake capacity of this landfill is 1,700,090 tons and estimates predict that this landfill has adequate capacity to accommodate the City's solid waste demand for the next ten years. The landfill also has recycling collection and loading facilities in compliance with CalRecycle requirements. The City will also be subject to a 75 diversion rate by the year 2020 through source reduction, recycling, and composting.

3.12.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally have a significant adverse impact if it results in any of the following:

- The proposed project exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- The proposed project requires the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts;
- The proposed project requires requiring the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- The proposed project exceeds the capacity of the storm drain system, causing area flooding;
- The proposed project results in a determination by the wastewater treatment provider that serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- The proposed project utilizes a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

3.12.4 ENVIRONMENTAL IMPACTS

3.12.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR EXCEEDING WASTEWATER TREATMENT REQUIREMENTS OF THE APPLICABLE REGIONAL WATER QUALITY CONTROL BOARD.

The City’s WWTP has an average daily flow (adf) capacity of approximately 4.3 mgd, with a peak daily flow capacity of 5.5 mgd, and currently treats approximately 2.7 mgd. Future growth within the City of Calexico is anticipated to increase the demand for wastewater treatment to a point that exceeds the capacity of the City’s WWTP. However, future expansion of the WWTP is currently in the design phase, and funding opportunities are being assessed by the City. The proposed expansion is expected to increase peak daily flow capacity to 6.5 mgd with an ultimate build out capacity of approximately 14.5 mgd. The upgrade will be finished prior to the completion of the proposed project.

The proposed project will replace vacant and abandoned parcels with an retail center, and therefore, generation of wastewater at the project site would increase with project implementation. The proposed project is expected to generate approximately 85,552 gallons per-day of wastewater on a daily basis (refer to Table 3-22).

**Table 3-22
 Projected Effluent (Sewage) Generation**

Phase	Generation Rates	State Standards
Phase 2A (277,000 sq. ft.)	0.08 gals per day/sq. ft.	22,160 gals/day
Phase 2B (792,400 sq. ft.)	0.08 gals per day/sq. ft.	63,392 gals/day
Total		85,552 gals/day

Source: Bloodgett Baylois Environmental Planning 2014

As mandated by Calexico Ordinance No.1036, and by Mitigation Measure 1 below, the project Applicant would be required to pay development fees to cover their portion of the cumulative cost of the expansion of the WWTP. With the payment of development fees to offset the additional demand imposed by the proposed project, the project would not exceed the wastewater treatment requirements of the applicable Colorado River Regional Water Quality Board (CRRWQB). Furthermore, the City’s WWTP has an average daily flow capacity of 4.3 mgd and currently treats approximately 2.7 mgd. As a result, there will be adequate capacity to treat the additional wastewater generated by the proposed project. Impacts from the proposed project would be less than significant with implementation of the aforementioned mitigation.

Conclusion: There is a remaining treatment capacity at the current WWTP facilities and these facilities are capable of accommodating the additional effluent generation. In addition, a new, planned WWTP expansion will further accommodate future demand. The payment of required development fees associated with water and wastewater treatment expansion will provide adequate mitigation. As a result, this impact would be mitigated to a less than significant level.

Mitigation Measure: The following mitigation measures will be required to address potentially significant impacts related to unities.

Utility Mitigation Measure 1. Pursuant to Calexico Ordinance No. 1036, the project Applicant shall pay sewer impact fees in the amount of \$9,291 per commercial acre, as required by the City of Calexico and IID, prior to the issuance of any building permits for the project.

Significance after Mitigation: The impacts will be less than significant with the implementation of the aforementioned mitigation measure.

3.12.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECT’S POTENTIAL FOR REQUIRING THE CONSTRUCTION OF NEW WATER OR WASTEWATER TREATMENT FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

The proposed project would involve the construction of new 12- to 16-inch water lines and 6- to 8-inch sewer lines on the project site. The new water lines would connect to existing connections at the intersections of West 5th Street and River Road, and the new sewer lines would connect to existing sewer lines located east of the airport. In order to maintain water pressure, up to two new pumping stations would be constructed due to the relatively flat topography of the project site. The new pumping stations will be constructed by the project Applicant during construction of the proposed project.

The 100-acre project site is currently vacant and does not involve any uses or activities that consume water. The implementation of the proposed project would result in an increase in the demand for water, as compared to existing conditions. The proposed project is expected to consume approximately 106,940 gallons per-day of water on a daily basis (refer to Table 3-23).

**Table 3-23
 Projected Water Consumption**

Phase	Consumption Rates	State Standards
Phase 2A (277,000 sq. ft.)	0.10 gals per day/sq. ft.	27,700 gals/day
Phase 2B (792,400 sq. ft.)	0.10 gals per day/sq. ft.	79,240 gals/day
Total		106,940 gals/day

Source: Bloodgett Baylosis Environmental Planning 2014

The City of Calexico’s WTP currently has the capacity of 16 mgd, and is sufficient to serve all areas within the City’s corporate boundaries. However, in order to help serve all of the future new development anticipated for the eastern area of the City, the City recently purchased ten acres of land near SR-98 and Cole Road and developed a new six million gallon water storage tank on the site. In addition, according to the City is in the second phase of a three-phase process to improve its water service system. Phases I , II, and III of the improvements propose increases in the water treatment capacity of the WTP from 12 mgd to

16 mgd and 20 mgd, respectively. The phases would occur in five-year increments from year 2006. The City is currently assessing the financing needed to begin Phase III, which is expected to be bid in approximately 6 months and will take 3 years to complete.

As mandated by Calexico Ordinance No. 1036, and by Mitigation Measure 2 below, the project Applicant would be required to pay development impact fees for water facilities. The proposed project would also be required to comply with SB 221 and SB 610 as a condition of approval. Currently, the project site contains limited on-site sewage infrastructure. However, there is an existing new 36-inch sewer line north of the project site that will also serve the Calexico International Airport, to which the project proposes to connect prior to the Center's opening.

A Water Supply Assessment (WSA) was prepared for Gran Plaza, LP as the project sponsor/applicant, and the City, as the lead agency under CEQA, by Development Design and Engineering, Inc., the consultant for the proposed project. A copy of the WSA is included in this EIR as Appendix _____. The WSA has determined that the City's water supply is sufficient in meeting the needs of the proposed project and the new future uses. The City's water availability was been assessed for a 22-year projection (2015-2037), which is concurrent with the proposed project's construction and operational life. The project Applicant seeks to solely utilize City water to serve the project along with any other private drinking water providers. Imperial Irrigation District's (IID's) adoption of the revised Equitable Distribution Plan dated October 28, 2013 enables water supply within the Imperial Unit to be consistent and reliable.⁷⁰

The project site lies within the service area of the IID, which is referred to as the Imperial Unit, specifically within the City of Calexico municipal boundary. The IID is a raw water wholesaler that sells untreated Colorado River water to the City, a municipal user, who treats and retails potable water to users like the proposed project within its municipal boundary. The City developed plans, like the 2010 Urban Water Management Plan (UWMP) and others, in order to manage issues relating to present and future water supplies, demands and capacities, in order to adequately service existing and future potable water customers.⁷¹

This WSA has determined that the City has a combination of existing adequate Water Treatment Plant (WTP) capacity, and plans and policies in place for expansion of City water facilities that will allow for the construction and operation of the proposed project for 22 years along with the ability to service existing and planned future users for 22 years. The 100+ acres that would be graded and built on as GPP2 are estimated to use 106,940 gallons per day (.107 MGD) at build-out during operation. The 100+acre project site is currently vacant and does not involve any uses or activities that consume water. The applicant proposes to use .53 MGD for construction (22-month estimated construction window). The result is an increase of .107 MGD from the baseline of 0 MGD under pre-project conditions. Construction is estimated to require .53 MGD, being an increase of .53 MGD for 22 months from the 0 MGD pre-project baseline. It is anticipated that the applicant will procure construction water from the City of Calexico. IID offers temporary industrial water service for construction, which the applicant may use as an alternative means

⁷⁰ Development Design Engineering. *Gran Plaza Phase 2, SB 610 - Water Supply Assessment*. February 11, 2015.

⁷¹ Ibid.

of supplying water needed for the proposed project's construction period. Multiple applications may be filed with IID.⁷²

The project proposes the construction of 6- to 8-inch sewer pipelines that would be located along the reconfigured 2nd Street once constructed. These pipelines will effectively accommodate the sewage generation of the proposed project. The east end of this new pipeline will bend northerly to connect to the existing 18-inch sewer pipe currently serving the airport. The west end of the new pipeline will extend along the proposed 2nd Street to the west end of the project site, where a stub will be provided at the end of the proposed sewer pipe to provide for future connections. In addition, two lateral sewer lines will be extended from proposed pipeline in 2nd Street to serve the proposed buildings.

In the City of Calexico, all wastewater flows to the City's WWTP located north of the Calexico International Airport and south of the AAC. As mentioned above, the City's WWTP has an additional capacity of approximately 4.3 mgd, with a peak daily flow capacity of 5.5 mgd, and currently treats approximately 2.7 mgd. The City is currently assessing the financing needed to begin Phase III of expanding the WWTP to an increased capacity of 6.5 mgd, with an ultimate build-out capacity of 14.51 mgd. The proposed project will be completed within 24 months and is expected to benefit from the newly upgraded WWTP.

The operation of the proposed project is anticipated to result in an increase in the generation of wastewater at the site, as compared to existing conditions. As mandated by Calexico Ordinance No. 1036, and by Mitigation Measure 1 above, the project Applicant would be required to pay development fees to cover the cumulative expansion of the WWTP. With the payment of development fees to offset the additional demand imposed by the proposed project, coupled with both the completion of the proposed WWTP expansion and current underutilization of available WWTP capacity, impacts from the proposed project would be less than significant related to wastewater treatment facilities and infrastructure.

Conclusion: The proposed project will have a significant impact on water and wastewater facilities in the absence of mitigation. However, there is a remaining treatment capacity at the current WWTP facilities and these facilities are capable of accommodating the additional effluent generation. In addition, a new WWTP expansion is planned, which will accommodate future demand. The payment of development fees to offset the additional demand imposed by the proposed project and the completion of the WWTP upgrade will result in impacts from the proposed project being less than significant related to water and wastewater treatment facilities and infrastructure.

Mitigation Measure: The following mitigation measures will be required to address potentially significant impacts related to utilities.

Utility Mitigation Measure 2. Pursuant to Calexico Ordinance No. 1036, the project Applicant shall pay water facilities impact fees in the amount of \$11,943 per commercial acre, as required by the City of Calexico, prior to the issuance of any building permits for the project.

⁷² Development Design Engineering. *Gran Plaza Phase 2, SB 610 - Water Supply Assessment.* February 11, 2015.

Significance after Mitigation: The impacts will be less than significant with the implementation of the aforementioned mitigation measure.

3.12.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR REQUIRING THE CONSTRUCTION OF NEW STORM WATER DRAINAGE FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

As discussed in Section 3.5 (Hydrology and Water Quality) previously, the implementation of the proposed project would result in an increase in the amount of impervious surface area compared to existing conditions. The proposed project would be required to incorporate a stormwater drainage system throughout the project site in order to adequately handle storm water runoff and maintain water quality.

Storm water for the project is proposed to be conveyed to the New River by means of a system of collection basins and underground storm drain pipes. The system would be designed to handle a 25-year storm event per the City's development regulations. The area between the southern most buildings and the U.S.-Mexico border will be graded to have high and low points with catch basins to collect the water. The water collected on the eastern portion of this area will be piped underground to the east and then to the north to a storm sewer line in 2nd Street and eventually to a proposed outfall structure at the New River located just north of the 2nd Street bridge. The water collected on the western portion of the area will then be piped northerly to a storm drain line in 2nd Street, and eventually to the proposed outfall structure in the New River.

The drainage system in the parking areas would include catch basins that would gradually release detained water to an underground storm drain system that connects to a storm drain in 2nd Street and ultimately conveyed to the proposed outfall structure in the New River. The planned storm drain system will provide drainage improvements with suitable capacity to capture flows from the project site. In addition, the public storm drain portion of the project will be sized to accept future storm water that falls in the 2nd Street right-of-way bound by the New River on the east and the All American Canal on the west.

Conclusion: The impacts from the construction of the proposed storm water drainage system would be less than significant.

Mitigation Measure: No mitigation is required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.12.4.4 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN AN OVERCAPACITY OF THE STORM DRAIN SYSTEM, CAUSING AREA FLOODING.

As discussed more fully in Section 3.5 (Hydrology and Water Quality) above, implementation of the proposed project would result in a substantial increase in the impervious surface area at the project site when compared to existing conditions. The proposed project would be required to incorporate a

stormwater drainage system throughout the project site in order to adequately handle storm water runoff and maintain water quality.

Storm water for the project is proposed to be conveyed to the New River by means of a system of collection basins and underground storm drain pipes. The system would be designed to handle a 25-year storm event per the City's development regulations. The following is a general description of the proposed on-site drainage system. The area located between the southern most buildings and the U.S.-Mexico border will be graded to have high and low points with catch basins to collect the water. The water collected on the eastern portion of this area will be piped underground to the east and then to the north to a storm sewer line in 2nd Street and eventually to a proposed outfall structure at the New River located just north of the 2nd Street bridge.

The water collected on the western portion of the area will be piped north to a storm drain line in 2nd Street, and eventually to the proposed outfall structure in the New River. The drainage system in the parking areas would include catch basins that would gradually release detained water to an underground storm drain system that connects to a storm drain in 2nd Street and ultimately conveyed to the proposed outfall structure in the New River. The planned storm drain system will provide drainage improvements with suitable capacity to capture flows from the project site. In addition, the public storm drain portion of the project will be sized to accept future storm water that falls in the 2nd Street right-of-way bound by the New River on the east and the All American Canal on the west.

Conclusion: The impacts from flooding due to exceeding the capacity of the storm drain system will be avoided with the construction of the proposed storm water drainage system.

Mitigation Measure: No mitigation is required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.12.4.5 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR RESULTING IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER THAT SERVES OR MAY SERVE THE PROJECT, THAT IT HAS INADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED DEMAND IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS

Refer to the previous analysis provided in Sections 3.11.4.1 and 3.11.4.2.

Conclusion: The City has adequate capacity to serve the project's projected demand and is in the process of expanding wastewater treatment capacity within the City. In addition, Utilities Mitigation Measure 1 requires the project Applicant to pay wastewater facilities impact fees in the amount of \$9,291 per commercial acre. Therefore, the proposed project will have a less than significant impact on wastewater capacity with mitigation.

Mitigation Measure: No additional mitigation beyond Utilities Mitigation Measure 1 is required.

Significance after Mitigation: With the mitigation measures required, the proposed project's impacts would be less than significant.

3.12.4.6 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR UTILIZING A LANDFILL WITH INSUFFICIENT PERMITTED CAPACITY TO ACCOMMODATE THE PROJECT'S SOLID WASTE DISPOSAL NEEDS.

The proposed project is anticipated to generate 66,813 pounds (33.41 tons) of solid waste on a daily basis. This estimate assumes a waste generation rate of 62.5 pounds of solid waste generated for every 1,000 square feet of floor area. This waste will be disposed of at the Allied Imperial Land Fill located at 104 East Roberson Road in the City of Imperial. This landfill is currently permitted to receive a maximum of 1,135 tons of solid waste per day. At the present time, it is receiving between 500 and 600 tons per day, which is well under the maximum permitted capacity.

The project site is currently vacated and undeveloped. As a result, no waste is currently being generated. The proposed project, once operational, will be required to comply with the City of Calexico's waste aversion and recycling requirements. The proposed project will not result in a significant adverse impact related to an exceedance of the capacity of the local landfill.

Conclusion: Approval of the proposed project will not result in any significant adverse impacts since the remaining landfill capacity can accommodate the projected demand.

Mitigation Measure: No mitigation is required.

Significance after Mitigation: Since no mitigation measures were required, the proposed project's impacts would be less than significant.

3.13 URBAN DECAY IMPACTS

3.13.1 SCOPE OF ANALYSIS

The State CEQA Guidelines define the parameters under which the consideration of socioeconomic impacts is included in an environmental evaluation. State CEQA Guidelines Section 15131 states that “economic or social information may be included in an EIR or may be presented in whatever form the agency desires.” Further, Section 15131(a) of the Guidelines states that “economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes [emphasis added]. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.” State CEQA Guidelines Section 15131(b) also provides that “economic or social effects of a project may be used to determine the significance of physical changes caused by the project.”

For this project, the focus of the analysis is how the new retail center could, through its economic effects, result in secondary environmental impacts. The term commonly used to describe the physical effects that can occur when new retail uses result in the closure of existing businesses and the attendant physical deterioration of the areas in which such businesses are located is urban decay. In recent years, the California courts have refined the definition of urban decay as “the physical manifestation of a project’s potential socioeconomic impacts and have specifically identified the need to address the potential for urban decay in environmental documents for larger retail projects.” There are two pertinent questions to be asked with regard to the effects of the proposed project in terms of this economic impact and urban decay analysis:

- Would the proposed new retail use result in sales losses that are sufficiently large at existing retail establishments to force some to close?; and,
- Would the affected closed stores stay idle long enough to create physical changes that could be defined as urban decay?

The potential environmental impacts of shifts in retail sales from existing retail establishments to the proposed project may be deemed to be significant if the project is anticipated to result in economic or social changes that would cause substantial and adverse physical changes; or would cause urban decay. Unless these criteria are met, impacts such as potential store closures and the potential shift of retail jobs would not be deemed to be significant. While the City may determine that the effects of the proposed project on existing projects need to be taken into consideration in evaluating the merits of the proposed project, this EIR does not identify a significant impact unless the aforementioned criteria are met.

3.13.2 ENVIRONMENTAL SETTING

3.13.2.1 REGULATORY SETTING

There are a number of existing regulations that will be applicable to any new development and these policies and regulations will be effective in further reducing potential land use impacts. These regulations are considered to be standard conditions in that they are required regardless of whether an impact requires mitigation. Those regulations that will serve as standard conditions with respect to land use and planning impacts are listed on the following page:

- *California Environmental Quality Act (CEQA)*. Generally, the economic and social effects of a proposed project are not treated as significant effects on the environment under CEQA (*CEQA Guidelines* Section 15131 (a)). Where economic or social effects of a proposed project will directly or indirectly lead to an adverse physical change in the environment, then CEQA requires disclosure of the resulting physical impacts (*CEQA Guidelines* Section 15064(e)). Economic or social changes need not be analyzed in any detail greater than necessary to ascertain what physical changes may occur as a result of economic or social changes (*CEQA Guidelines* Section 15131 (a)). The development of new commercial retail in an existing retail market has the potential to result in the closure of competing business, which, in turn, may result in vacant storefronts that if left unmanaged and unattended could result in blight conditions. In the context of CEQA, blight or urban decay is considered an indirect physical impact. The potential impact of vacancy leading to urban decay would be a physical change that needs to be considered.

3.13.2.2 EXISTING CONDITIONS

Calexico is the second largest city and employment center in Imperial County. The City's most recent population figures from the U. S. Census reported 39,389 persons. The median per capita income in Calexico was \$13,137 in 2013, which is less than half the median per capita income for all Californian residents (\$29,527). SCAG estimates regional growth for the Imperial County area for the purposes of planning and public policy development. The most recent growth projections available for Imperial County and the Cities of Calexico and El Centro are from SCAG's 2012 Regional Transportation Plan (RTP). SCAG projects that the City of Calexico's population is expected to increase to a 2020 population of 50,800 and a 2035 population of 62,800. The main retail areas within Calexico are identified and discussed below and on the following pages:

- *The California Mayoreo Shopping Center*. This shopping center is the closest shopping center to the project and is located at 363 West 2nd Street, approximately 0.1 mile from the project site. The shopping center is currently in poor condition. One of the anchor retail spaces (approximately 41,600 square feet) is vacant as are several of the small retail stores. The vacant anchor space was formerly used as a Vons Supermarket. The California Mayoreo grocery is a discount neighborhood grocery store with limited stock and selection. The complex also has adjoining office spaces that have several vacancies. Other businesses within the shopping center

include a laundromat, low price apparel and household goods stores, a beauty salon and a tax preparation service.

- *Downtown Calexico.* The City's central business district is located approximately 1/2 mile from the project site. The downtown retail area is predominantly located along East 2nd Street between Imperial Avenue and Mary Avenue. The five block area has a very high density of retail stores. There are also additional retail stores located along 1st Avenue and the connecting Rockwood and Heffernan Avenues. Heffernan Avenue was formerly the location of the border crossing until it was redesigned and relocated to Imperial Avenue in the mid 1970s. There are also a few retail stores located along 3rd Street. There are two grocery stores operating on 2nd Street. Numerous chain retailers and larger apparel stores also currently operate in Downtown Calexico. The retail businesses within Downtown Calexico rely on Mexicali residents that cross the border on foot for their primary customer base. Many Mexicali residents cross the border for day excursions to Downtown Calexico. Most of these pedestrian visitors have lower incomes and, consequently, their retail demand is better served by the sub-discount price retailers. However, some pedestrian visitors use the Wal-Mart-provided shuttle or other bus service to shop at locations outside of the downtown area.
- *Downtown Vacancies.* The majority of the buildings within the downtown retail area are relatively old (typically fifty years or older) and have not been significantly upgraded or redeveloped. Despite the often outmoded and/or poor condition of many of the stores, rental rates for many properties nonetheless remained relatively high, supported by the relatively high sales volumes that the sub-discount price retailers have been able to obtain from sales to pedestrian visitors from Mexicali. At the time of the April 2010 earthquake, the retail area was fully occupied. As a result of the recent earthquake, many Downtown Calexico retail stores have very recently been demolished or become vacant. Numerous vacant lots have been cleared and many retailers have moved out of buildings, which will require repair before they can be reoccupied.
- *Imperial Avenue (California State Route 111) Commercial Corridor.* Highway 111 is a north-south four-lane street, which connects El Centro and Brawley with Calexico and the border crossing. As the major thoroughfare, the route experiences high volumes of vehicular traffic particularly on Saturdays. Imperial Avenue is the other main retail area for Calexico. Most of the businesses on the eastside of the Imperial Avenue closer to the border are small and independent businesses such as restaurants, retailers, and service businesses aimed primarily to serve visitors from Mexicali. The west side has some similar service and restaurant businesses, but also has numerous auto-related repair and part sales businesses. Generally, most of the businesses are in relatively poor to average physical condition.
- *Birch Street Commercial Corridor.* Birch Street, in northern Calexico, marks the beginning of the section of Imperial Avenue where larger and newer retail stores are located. This area is located approximately 1.5 miles from the project site. In spring 2009, Forever 21 opened its largest store in the nation in the location of the former Mervyns (1407 Imperial Avenue), located next to the Food 4 Less discount grocery store. Toyland and Baby World are both located nearby (121 Hacienda

Drive), a few blocks north of the Birch Street intersection. Further north, approximately 2.4 miles from the project site, the Calexico Wal-Mart Superstore and the neighboring Toys'R'Us (2451 Rockwood Avenue) are primary retail destinations. The approximately 219,000-square-foot Wal-Mart Superstore was completed in 2005, replacing the former 118,000 square foot store that was built in 1993 just north along Imperial Avenue (656 Yourman Street). The nearby Big Lots store closed in late 2009.

3.13.3 THRESHOLDS OF SIGNIFICANCE

According to the City of Calexico, acting as Lead Agency, a project will normally have a significant adverse impact if it results in any of the following:

- The proposed project's potential for creating multiple long-term store vacancies or result in the abandonment of multiple buildings within the retail market served by the proposed project, which results in the physical deterioration of properties or structures that impairs the proper utilization of the properties or structures, or the health, safety, and welfare of the surrounding community.

3.13.4 ENVIRONMENTAL IMPACTS

3.13.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR CREATING MULTIPLE LONG-TERM STORE VACANCIES OR RESULT IN THE ABANDONMENT OF MULTIPLE BUILDINGS WITHIN THE RETAIL MARKET SERVED BY THE PROPOSED PROJECT, WHICH RESULTS IN THE PHYSICAL DETERIORATION OF PROPERTIES OR STRUCTURES THAT IMPAIRS THE PROPER UTILIZATION OF THE PROPERTIES OR STRUCTURES, OR THE HEALTH, SAFETY, AND WELFARE OF THE SURROUNDING COMMUNITY.

The Urban Decay Assessment's methodology, key analyses and findings are described below and in the subsequent impact analysis section. A key task for the urban decay assessment is to project the proposed Gran Plaza's future revenues and determine likely origin of these sales. The size and origin of the project's future retail sales is essential for understanding the extent that the new retail development would have significant "sales shift" impacts to local businesses.

The magnitude of any such economic impacts to other commercial centers will depend on the extent that the project would sell similar goods and compete for the same customers that currently shop at downtown. Currently, many Mexicali residents drive north to El Centro to shop at "big box" retailers such as Wal-Mart and Target, and, as a result, considerable sales are likely "leaking" out of the Calexico's economy due to the lack of suitable retailers in the City to capture these sales. If the proposed Gran Plaza stores will predominantly sell goods to attract these customers and other shoppers that otherwise would not shop in Calexico, their sales will have a negligible impact on the existing downtown businesses. Another important task for the urban decay assessment is to clarify for the public the key criteria and necessary components for CEQA findings of significant urban decay impacts.

Urban decay impacts are only attributable to a project if it has caused business closures which result in long term property vacancies that thereby result in increased blight conditions. Successful re-tenanting of any vacated business properties or adequately maintained vacant properties will preclude any urban decay findings for the project. The urban decay assessment clearly explains and discusses the issues in the context of the proposed Gran Plaza development to ensure that EIR reviewers and the public properly understand the key relevant issues for determining urban decay impacts in accordance with *CEQA Guidelines*.

Downtown Calexico is likely the area most vulnerable to store-closures and the potential for urban decay within the market area. The large-scale retailers along Imperial Avenue in Calexico and N. Imperial Avenue in El Centro are less likely to face diverted sales as a result of the opening of the Gran Plaza project. The largest anchor-type retail spaces would be approximately 60,000 square feet in size and a few other medium size stores are envisioned (approximately 42,000 square feet in size) for the Phase 1 and Phase 2 developments. The majority of retailers would be located in smaller 5,000 to 30,000 square foot stores. The project is more likely to divert business from the Imperial Valley Mall than the “big box” stores in Northern Calexico and El Centro. The El Centro trade area is distant for the project’s traffic trade area.

The storefronts within the Imperial Valley Mall could face diverted sales as a result of the development of the Gran Plaza project. It is likely that the proposed project would attract some of the same stores as are in the Imperial Valley Mall. It is also possible that some stores would move from the Imperial Valley Mall to the Gran Plaza project. In August 2010, only two of 66 storefronts were vacant at the Imperial Valley Mall, and one was visibly undergoing renovation to open as a new storefront. The mall would likely be able to re-tenant any vacancies.

As the majority of shoppers at the Imperial Valley Mall are from Mexico, it is also likely that the Gran Plaza project would be complimentary to the Imperial Valley Mall. Mexican shoppers who cross the border at Calexico would have another retail shopping center to visit while in the U.S. The traffic study for the proposed project assumed a high pass-by trip rate, as is recommended for shopping centers along border regions. A pass-by trip is one in which the vehicle is “already on the road.” For example, it would be considered a pass-by trip to the Gran Plaza project if the intended destination is the Imperial Valley Mall, but the traveler decides to stop at Gran Plaza on the way. SANDAG determined the pass-by trip rate for border shopping centers is high, as many Mexican visitors, who are crossing the border to shop, visit multiple shopping centers during their stay in the U.S. Thus, the Calexico Gran Plaza project would not necessarily divert sales from the Imperial Valley Mall.

The area most likely to be significantly affected is Downtown Calexico. It is the closest to the project site and has the potential to lose both customers and retailers to the Gran Plaza project. Currently, the downtown area is overwhelmingly discount and sub-discount stores. The Chamber suggested that service industries, restaurants, or educational uses could move downtown. Imperial Valley College, the SDSU extension campus, and the Mission School, a K-12 Seventh-Day Adventist school, are all within walking distance of downtown. The Chamber does not believe they are well-served by the downtown core at the moment, but that the students at the three schools drive elsewhere for their shopping and services needs

(Carrillo-Rivera, 2010). There are no tenant spaces in the downtown area that is suitable for the development envisioned in the proposed project (large parcels and lack of attendant parking).

As the Downtown Calexico retail area is located within an Enterprise Zone and Redevelopment Zone, should businesses close or relocate to the Gran Plaza site, new tenants may be expected to re-tenant any vacated retail properties. Prior to the April 4 earthquake, the Downtown Calexico retail district was at full occupancy (Rodriguez, 2010). This is likely a result of the strong tax incentives to locating in Downtown Calexico, coupled with the constant flow of pedestrian border crossers who patronize the discount and sub-discount stores. Even if a retail property remains vacant for an extended time period, the BID designation would enable the City to take possession of the property if it is not properly adequately maintained (California Tax Data, 2010).

While it is possible that some stores within Downtown Calexico could close as a result of the new competition from the proposed Gran Plaza project, the historically high occupancy rates and a strong tax incentive structure imply that any vacancies would be filled within a reasonable timeframe. Were this not to happen, the BID designation implies storefronts can be seized by the City if not properly maintained. Based on these findings, ESA determines that the introduction of the Gran Plaza project is not likely to cause urban decay within Downtown Calexico.

Conclusion: Although it is likely some stores in the market area would close because of sales diverted to the proposed project, vacancies of smaller stores are generally filled in a timely fashion, and programs are in place to ensure buildings do not deteriorate.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: The impacts will be less than significant.

3.14 ENERGY USE IMPACTS

3.12.1 SCOPE OF ANALYSIS

This section addresses the proposed project's impacts on energy usage. In accordance with Appendix F of the *CEQA Guidelines*, the section identifies the regional energy supplies and consumption patterns, the additional energy consumption that would result from implementation of the proposed project, the effects on local and regional energy supplies, and compliance with energy conservation standards. The CEQA Guidelines §15126.4(A)(1)(C) states: "Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant." Examples of energy conservation measures are included in Appendix F of the CEQA Guidelines. The term "energy conservation" recognizes that the goal of conserving energy implies the wise and efficient use of energy. The analysis will include the following:

- The proposed project's potential for including wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance, and/or removal.
- The proposed project's potential for requiring additional energy facilities, the provision of which may have a significant effect on the environment.
- The proposed project's potential for being inconsistent with existing energy standards.
- The proposed project's potential for preempting future energy development or future energy conservation.

3.14.2 ENVIRONMENTAL SETTING

3.14.2.1 REGULATORY SETTING

Federal, State, and local agencies regulate energy consumption through various means and programs. At the Federal level, the U.S. Department of Transportation, U.S. Department of Energy, and the U.S. Environmental Protection Agency. These three Federal agencies have with substantial influence over energy policies and programs. On the State level, the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) are the two State agencies with authority over different aspects of energy. The regulations that govern energy consumption and/or conservation are identified below and on the following page.

- *California Energy Action Plan*. The California Energy Action Plan prepared jointly by the CEC, the now defunct Consumer Power and Conservation Financing Authority, and CPUC in 2003 (Plan I) and 2005 (Plan II) was updated in 2008 to accommodate the changes imposed by Assembly Bill 32, the California Global Warming Solutions Act of 2006. The original policy was enacted in response to a perceived energy crisis in the State and it established a State-wide focus on energy efficiency and conservation. The 2008 update incorporated a strong focus on reducing greenhouse gas emissions by improving energy efficiency and expanding production of energy using renewable resources. As a result, the CEC established an Efficiency and Renewables Division that sets energy

efficiency standards and directs public outreach efforts. The division administers standards programs and regulations pertaining to appliance efficiency, building efficiency, and nonresidential energy performance ratings.

- *California Building Code, Title 24.* The State of California regulates energy consumption in the construction sector under Title 24 of the California Code of Regulations. The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The Plan applies to non-residential buildings. In 2002, Senate Bill 1078 established rules for implementing a Renewable Portfolio Standard (RPS) for California that set goals of obtaining 20 percent of the State's electricity from renewable resources by 2010 and 33 percent by 2020. The *Guidelines* of the Renewable Energy Program specify funding resources for achieving the goals and define the procedures for being certified as RPS provider.
- *California Public Utilities Commission.* In 2006, the CPUC created the *California Solar Initiative* to provide cash incentives to foster investment in distributed solar energy systems. In 2009, Assembly Bill 920 (Chapter 376) expanded the eligibility of projects for *Solar Initiative* incentives. It also required utilities to purchase excess solar generation, which, in conjunction with RPS, established regulations to encourage renewable energy installations. In 2008, the CEC adopted Assembly Bill (AB) 118 to regulate and incentivize alternative and renewable fuel and vehicle technologies. In 2009, the CEC oversaw the enactment of several new energy regulations. AB 45 streamlined the permitting process for small wind-power installations. AB 758 opened a proceeding to develop a comprehensive energy efficiency program.
- *Imperial County General Plan.* According to the Imperial County General Plan Conservation and Open-Space Element, average energy consumption is higher than the statewide average due primarily to heavy air conditioning needs (Imperial County, 2010). Thus, electricity is the primary form of energy consumed in the county, and IID provides almost all of the county's electricity needs, which total over 1,000 MW (IID 2010). Hydroelectric power provides three percent and eight percent of the total demand in the summer and winter, respectively. Other renewable resources supplied to IID by California-based entity include geothermal, solar, and biomass.
- *Imperial Irrigation District.* The IID has adopted the RPS standard goals for renewable energy production. Significant opportunities for geothermal energy exist, but have yet to be capitalized. In May 2010, San Diego Gas & Electric (SDG&E) signed a power purchase agreement for electricity produced at the proposed 125 MW Centinela Solar Energy project located in Imperial County. The IID has a power purchase agreement with Greenhunter Mesquite, LLP, for 18 MW of electricity based on combustion of biomass (primarily woodchips, but also some animal waste). The Imperial County Board of Supervisors approved a \$30 million bond to help finance renovation of the 20 MW Mesquite Lake biomass energy plant in El Centro. The renovation is expected to be complete and the plant will be running by June 2011. The IID has a small Power Purchase Agreement with a 25-kW manure digester system at the Bullfrog Dairy. The IID is also implementing energy efficiency programs to reduce peak demand by 50 MW in 5 years. Large commercial customers

will be eligible for a program that will pay users to reduce peak load through demand-side efficiency measures (i.e., targeted peak-time reductions or self-generation).

- *City of Calexico General Plan.* The City of Calexico General Plan promotes a development strategy that “protects the resources that future generations will need to prosper.” Objective 5 of the Public Facilities/Services Element of the General Plan specifically promotes energy conservation and stipulates that the City will assess energy use and develop conservation plans for public buildings and facilities. Issues of energy efficiency in private facilities are supported by local utility companies.
- *Local Electrical Provider.* The IID supplies electricity to the region and offers commercial customers several incentives and tools for reducing energy consumption (IID, 2006; IID, 2007). For calculating energy savings, IID offers online tools for energy use self audits. Rebates are offered for replacing equipment with energy efficient alternatives (IID, 2010b). Energy efficient new-construction projects that save at least ten percent over the current CEC Building Efficiency Standards (Title 24, Part 6 of the California Code of Regulations) may be eligible for financial rewards on energy efficient building designs (IID, 2010c). In 2010, projects that integrated efficient design considerations early into the design process were eligible for up to \$150,000 per year for the building owners and \$30,000 per year for the design team (IID, 2010c). Projects that failed to incorporate efficiency considerations during the design phase were still eligible for up to \$50,000 per year for utilizing efficient lighting, HVAC, and processing systems (IID, 2010c). In addition, approved solar photovoltaic installations could also claim rebates of \$2.60 per watt for up to 300 kW of solar installation (IID, 2006). This rebate would be offered in addition to Federal tax credits. IID also incentivizes installation of energy efficient water pump systems at a rate of \$0.09/kWh on annual electricity savings due to the retrofit/replacement of existing pumps (IID, 2006).
- *Southern California Gas Company (SCG).* The SCG provides incentives for energy efficient construction and commercial businesses. In addition to custom energy use analysis and recommendations for energy saving measures, the SCG offers rebates on equipment that use natural gas efficiently and on self-generation and energy storage equipment, including fuel cells and wind turbines. Food service industry rebates exist for ovens, steamers, and fryers. Large commercial incentives include rebates on insulation for pipes and tanks, boilers and water heaters, steam traps, and heat recovery equipment. The SCG also offers no-interest loans on qualified equipment and holds free seminars on energy-efficient business practices.

3.14.2.2 EXISTING CONDITIONS

Power plants in California meet approximately 73 percent of the in-state electricity demand; power from the Pacific Northwest provides another eight percent and power plants in the southwestern U.S. provide another 18 percent. California’s electricity supply is identified by the types of fuel and renewable energy technologies used to generate it. Electricity generation plants in California use the following fuel types: coal (18 percent), natural gas (46 percent), nuclear (14 percent), large hydro (11 percent), and renewable

(11 percent). The Renewable Portfolios Standard of 2002 has driven investor-owned utility companies to provide more of their energy from renewable resources. As of 2009, the three largest investor-owned utilities in California—PG&E, Southern California Edison, and San Diego Gas & Electric, supplied 14 percent, 17 percent, and 11 percent of their retail electricity sales with renewable power. The IID is the primary electricity provider for Calexico and Imperial County. The IID obtains its electricity from coal, nuclear, diesel, and natural gas power plants in the Imperial Valley as well as outside of the service area. Energy is delivered through high voltage overhead and underground electricity transmission lines.

3.14.3 THRESHOLDS OF SIGNIFICANCE

Appendix F of the *CEQA Guidelines* provides information on addressing energy conservation in an EIR. Based on that, a significant energy impact would occur if any of the following occur:

- The proposed project's potential for including wasteful, inefficient and unnecessary consumption of energy during project construction, operation, maintenance, and/or removal.
- The proposed project's potential for requiring additional energy facilities, the provision of which may have a significant effect on the environment.
- The proposed project's potential for being inconsistent with existing energy standards.
- The proposed project's potential for preempting future energy development or future energy conservation.

3.14.4 ENVIRONMENTAL IMPACTS

3.14.4.1 IMPACT ANALYSIS: THE PROPOSED PROJECT'S POTENTIAL FOR INCLUDING WASTEFUL, INEFFICIENT, AND UNNECESSARY CONSUMPTION OF ENERGY DURING PROJECT CONSTRUCTION, OPERATION, MAINTENANCE, AND/OR REMOVAL.

Construction energy expenditures would include both direct and indirect uses of energy. Combustion of the refined petroleum products needed to the operate construction equipment would be a part of the direct energy use. The energy consumed through mining and extraction of raw materials, manufacturing, and transportation to make the steel and all other materials used in project construction would be a part of the indirect energy use. Indirect energy typically represents about three-quarters of total construction energy, while direct energy represents about one-quarter of total construction energy. Though construction energy would be directly consumed only during the construction period, it would represent irreversible consumption of finite natural energy resources. Energy consumed by construction power equipment would be relatively minimal.

Construction-related energy consumption would be a one-time impact and would not be an ongoing drain on finite natural resources. It would require additional energy facilities, the provision of which may have a significant effect on the environment. Construction energy consumption would primarily be in the form of fuel, and would not have a significant effect on the local utility company's energy resources.

Conclusion: Energy consumption by construction activities, therefore, would not be a significant impact.

Mitigation Measure: While mitigation is not required, some elements of the *Air Quality Mitigation: Measure No. 2* (refer herein to Section 3.2.4.2) would also serve to reduce energy use during construction. In addition, the following mitigation measure shall be required:

Energy Mitigation Measure No 1. At least 75 percent of recyclable building materials and construction waste (i.e., soil, vegetation, metal, wood, and cardboard) should be recycled to reduce the secondary energy consumption associated with the extraction of primary resources. If available locally and economical, diesel-powered construction vehicles should utilize bio-diesel as an alternative fuel.

Significance after Mitigation: The impacts will be less than significant with adherence to the mitigation.

3.14.4.2 IMPACT ANALYSIS: THE PROPOSED PROJECTS POTENTIAL FOR REQUIRING ADDITIONAL ENERGY FACILITIES, THE PROVISION OF WHICH MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

The project would also result in an increase in energy consumption, primarily electricity and natural gas due to operation of project buildings. Electricity and/or natural gas energy would be used for space heating, cooling and ventilation equipment; water heaters; cooking and refrigeration units; interior and exterior lighting of the buildings, parking lot lighting, office and cash register equipment; and other miscellaneous fixtures.

Retail stores have diverse loads, long operating hours, and high occupancy in the evenings. Planning for energy-efficient retail buildings starts in the design stages and should involve careful consideration for lighting, refrigeration, cooking, and space-conditioning systems and how they integrate together. The potential energy consumption rates for the new development are as follows:

- *Daily Electrical Consumption.* A total of 105,182 kWh per day assuming 35 kWh per year per square foot of floor area.
- *Daily Natural Gas Consumption.* A total of 8,497 cubic feet per day assuming 2.8 cubic feet per month per square foot of floor area.

Conclusion: The project-related energy use required for the commercial and retail stores would not be considered wasteful, inefficient or unnecessary, and would not consume substantial amounts of finite natural resources. In addition, the project would be required to conform to energy conservation requirements of Title 24, Part 6, of the California Code of Regulations on Building Energy Efficiency Standards.

Mitigation Measure: While mitigation is not required to reduce operational impacts below significance, the proposed project will incorporate the design features related to utility and water conservation.

Significance after Mitigation: No mitigation will be required and the impacts will be less than significant.

3.14.4.3 IMPACT ANALYSIS: THE PROPOSED PROJECTS POTENTIAL FOR BEING INCONSISTENT WITH EXISTING ENERGY STANDARDS.

The project-related energy use required for the commercial and retail stores would not be considered wasteful, inefficient, or unnecessary, and would not consume substantial amounts of finite natural resources. In addition, the project would be required to conform to energy conservation requirements of Title 24, Part 6, of the California Code of Regulations on Building Energy Efficiency Standards.

Conclusion: The proposed project will be required to comply with all pertinent energy conservation requirements.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: No mitigation will be required and the impacts will be less than significant.

3.14.4.4 IMPACT ANALYSIS: The proposed projects potential for preempting future energy development or future energy conservation.

The project-related energy use required for the commercial and retail stores would not be considered wasteful, inefficient, or unnecessary, and would not consume substantial amounts of finite natural resources. In addition, the project would be required to conform to energy conservation requirements of Title 24, Part 6, of the California Code of Regulations on Building Energy Efficiency Standards.

Conclusion: The proposed project will be required to comply with all pertinent energy conservation requirements.

Mitigation Measure: No mitigation measures are required.

Significance after Mitigation: The impacts will be less than significant.