

## 8.10 Traffic and Transportation

### 8.10.1 Introduction

This subsection assesses transportation impacts associated with the construction of the proposed project. The analysis primarily quantifies impacts on roadways expected during demolition, construction and operation of the proposed project. The main impacts are the addition of approximately 246 daily vehicles (including construction workers and trucks) and lane/road closures due to gas pipeline construction. Additional transportation factors examined in this subsection include pedestrian and bicyclist impacts, safety, goods movement, and any potential impacts to air, rail, and waterborne transportation networks.

Descriptions of existing transportation facilities in proximity of the proposed project and an analysis of the proposed project's potential impacts on the existing transportation network are provided. The roadway analysis examines the worst-case scenario during construction activities (which would occur for a 2-month duration) to the local study area roadways. The operation of the proposed project would include relatively few permanent employees (less than 15 employees, or 30 daily trips). Once these 30 trips are distributed on the street network, traffic impacts would be immeasurable due to the relatively low volume of traffic generated.

Information sources include the General Plan of the County of Riverside, the General Plan of the City of Riverside, the General Plan of the City of Grand Terrace, the Outdoor Adventures Center (OAC) Final Environmental Impact Report, the California Department of Transportation (Caltrans), and field observations. This subsection also discusses applicable laws, ordinances, regulations, and standards (LORS) relevant to the potential transportation impacts caused by the proposed project.

### 8.10.2 Laws, Ordinances, Regulations, and Standards

LORS related to traffic and transportation are summarized in the following subsections.

#### 8.10.2.1 Federal

- Title 49, Code of Federal Regulations (CFR), Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

### 8.10.2.2 State

State laws that apply to this project include the following sections of the California Vehicle Code (CVC), unless specified otherwise:

- California Street and Highways Code (S&HC), Sections 660, 670, 1450, 1460 et seq., 1470, and 1480, regulates right-of-way encroachment and granting of permits for encroachments on state and county roads.
- Sections 13369, 15275, and 15278 address the licensing of drivers and classifications of licenses required to operate particular types of vehicles. In addition, certificates permitting the operation of vehicles transporting hazardous materials are addressed.
- Sections 25160 et seq. address the safe transport of hazardous materials.
- Sections 2500-2505 authorize the issuance of licenses by the Commissioner of the California Highway Patrol (CHP) to transport hazardous materials, including explosives.
- Sections 31303-31309 regulate the highway transportation of hazardous materials, routes used, and restrictions. CVC Section 31303 requires hazardous materials to be transported on state or interstate highways that offer the shortest overall transit time possible.
- Sections 31600-31620 regulate the transportation of explosive materials.
- Sections 32000-32053 regulate the licensing of carriers of hazardous materials and include noticing requirements.
- Sections 32100-32109 establish special requirements for the transportation of substances presenting inhalation hazards and poisonous gases. CVC Section 32105 requires shippers of inhalation or explosive materials to contact the CHP and apply for a Hazardous Material Transportation License. Upon receiving this license, the shipper will obtain a handbook specifying approved routes.
- Sections 34000-34121 establish special requirements for transporting flammable and combustible liquids over public roads and highways.
- Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11 regulate the safe operation of vehicles, including those used to transport hazardous materials.
- S&HC, Sections 117 and 660-72, and CVC, Sections 35780 et seq., require permits to transport oversized loads on county roads. California S&HC Sections 117 and 660 to 711 requires permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways
- California State Planning Law, Government Code Section 65302, requires each city and county to adopt a General Plan, consisting of seven mandatory elements, to guide its physical development. Section 65302(b) requires that a circulation element be one of the mandatory elements.

- All construction in the public right-of-way will need to comply with the Manual of Traffic Controls for Construction and Maintenance of Work Zones (Caltrans, 1996).
- Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in the CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this project.

General Provisions:

- The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
- The maximum wheel load is the lesser of the following: (a) the load limit established by the tire manufacturer, or (b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.

Vehicles with Trailers or Semi-trailers:

- The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.

### 8.10.2.3 Local

The transportation elements of local plans that are applicable to the project are policies of the City of Grand Terrace, County of San Bernardino, County of Riverside, and City of Riverside.

#### 8.10.2.3.1 City of Grand Terrace Objectives

1. Plan, provide, and maintain an integrated vehicular circulation system to accommodate projected local and regional needs.
2. Develop a vehicular circulation system consistent with accepted standards of transportation engineering safety, with sensitivity to adjoining land uses.
3. Establish, develop, and promote systems and amenities for alternative travel modes including bicycle, pedestrians and transit.
4. Take proactive measures to ensure that the City's residential neighborhoods are not adversely affected by excessive traffic and are more livable and pedestrian friendly.
5. The City will ensure that the Master Plan of Streets and Highways Circulation System is completed by utilization of a variety of means to fund the construction of these improvements which are described below. In addition, the City will pursue alternative means to fund ongoing maintenance and safety enhancement of the circulation infrastructure.

### **8.10.2.3.2 County of San Bernardino Policies**

The General Plan for the County of San Bernardino, transportation and circulation element sets forth policies that are applicable to the project. Specific, relevant policies set forth in the General Plan are as follows:

CI 4.3 Strive to achieve Level of Service “C” on all County roadways. Through the review of new development proposals, ensure that traffic impacts, including cumulative impacts, are properly addressed and mitigated to maintain Level of Service “C” on the County’s circulation system.

CI 5.2 Protect and increase the designed roadway capacity of all vehicular thoroughfares and highways.

CI 6.1 Require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Install bicycle lanes and sidewalks on existing and future roadways, where appropriate and as funding is available

CI 8.6 Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

### **8.10.2.3.3 County of Riverside Policies**

County of Riverside, transportation and circulation element sets forth policies that are applicable to the project. They are as follows:

As the County continues to grow, transportation demand management and systems management will be necessary to preserve and increase available roadway “capacity.” Level of Service (LOS) standards are used to assess the performance of a street or highway system and the capacity of a roadway.

An important goal when planning the transportation system is to maintain acceptable levels of service along the federal and state highways and the local roadway network. To accomplish this, the Caltrans, Riverside County Transportation Commission, the County, and local agencies adopt minimum levels of service to determine future infrastructure needs. Riverside County must provide and maintain a highway system with adequate capacity and acceptable levels of service to accommodate projected travel demands associated with the build out of the Land Use Element. This can be accomplished by establishing minimum service levels for the designated street and conventional state highway system. Strategies that result in improvements to the transportation system, coupled with local job creation, will allow County residents to have access to a wide range of job opportunities within reasonable commute times.

Specific policies set forth in the County of Riverside General Plan are as follows:

C 2.1 Maintain the following countywide target Levels of Service:

LOS “C” along all County maintained roads and conventional state highways. As an exception, LOS “D” may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways,

Arterials, Urban Arterials, Expressways, conventional state highways or freeway ramp intersections.

LOS “E” may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

- C 2.2 Apply level of service standards to new development via a program establishing traffic study guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development.
- C 2.3 Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) Shall identify project related traffic impacts and determine the “significance” of such impacts in compliance with CEQA.
- C 2.4 The direct project related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service standards.
- C 2.5 The cumulative and indirect traffic impacts of development may be mitigated through the payment of various impact mitigation fees such as County Development Impact Fees, Road and Bridge Benefit District Fees, and Transportation Uniform Mitigation Fees to the extent that these programs provide funding for the improvement of facilities impacted by development.
- C 2.6 Accelerate the construction of transportation infrastructure in the Highway 79 Policy Area. The County shall require that all new development projects demonstrate adequate transportation infrastructure capacity to accommodate the added traffic growth. The County shall coordinate with cities adjacent to the policy area to accelerate the usable revenue flow of existing funding programs, thus assuring that transportation infrastructure is in place when needed.
- C 2.7 Establish a program to reduce overall trip generation in the Highway 79 Policy Area by creating a trip cap on residential development within this policy area which would result in a net reduction in overall trip generation of 70,000 vehicle trip per day from that which would be anticipated from the General Plan Land Use designations as currently recommended. The policy would generally require all new residential developments proposals within the Highway 79 Policy Area to reduce trip generation proportionally, and require that residential projects demonstrate adequate transportation infrastructure capacity to accommodate the added growth.

#### **8.10.2.3.4 City of Riverside Policies**

Policy CCM-2.1: Complete the Master Plan of Roadways shown on Master Plan of Roadways.

Policy CCM-2.2: Balance the need for free traffic flow with economic realities and environmental and aesthetic considerations, such that streets are designed to handle normal traffic flows with tolerances to allow for potential short-term delays at peak-flow hours.

Policy CCM-2.3: Maintain LOS D or better on Arterial Streets wherever possible. At key locations, such as City Arterials that are used by regional freeway bypass

traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case basis.

Policy CCM-2.4: Minimize the occurrence of streets operating at LOS F.

Policy CCM-2.5: Review and update street standards as necessary to current capacity and safety practices.

Policy CCM-2.6: Consider all alternatives for increasing street capacity before widening is recommended for streets within existing neighborhoods.

Policy CCM-2.7: Limit driveway and local street access on Arterial Streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

Policy CCM-2.8: Design street improvements considering the effect on aesthetic character and livability of residential neighborhoods, along with traffic engineering criteria.

Policy CCM-2.9: Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise and air quality wherever any of these factors are applicable.

Policy CCM-2.10: Emphasize the landscaping of parkways and boulevards.

Policy CCM-2.11: Consider the use of special design traffic control devices which reflect the historic or aesthetic character of the neighborhoods in which they are located.

Policy CCM-2.12: Consider connecting Local Streets at strategic locations to accommodate residential neighborhood traffic movement, provided such connections do not encourage diversion of regional trips, do not impact sensitive environments, or do not disrupt the character of residential neighborhoods.

Policy CCM-2.13: Support the establishment of additional east-west connections southerly of Van Buren Boulevard between Barton Road and Washington Street.

Policy CCM-2.14: Ensure that intersection improvements on Victoria Avenue are limited to areas where Level of Service is below the City standard of D. Allow only the minimum necessary improvements in recognition of Victoria Avenue's historic character.

#### **8.10.2.4 Compliance with Laws, Ordinances, Regulations, and Standards**

All applicable LORS and administering agencies are summarized subsequently. Table 8.10-1 describes how the project will comply with all LORS pertaining to traffic and transportation impacts.

**TABLE 8.10-1**  
Laws, Ordinances, Regulations, and Standards Applicable to Traffic and Transportation

| Authority  | Administering Agency                           | Requirements  | Compliance   |
|--|--|---|--|
| 49 CFR, Section 171-177 and 350-300 Chapter II, Subchapter C and Chapter III, Subchapter B       | U.S. Department of Transportation and Caltrans | Requires proper handling and storage of hazardous materials during transportation.  | Project and transportation will comply with all standards for the transportation of hazardous materials.   |
| CVC §31300 et seq.   | Caltrans                                       | Requires transporters to meet proper storage and handling standards for transporting hazardous materials on public roads.   | Transporters will comply with standards for transportation of hazardous materials on state highways during construction and operations. The project will conform to CVC §31303 by requiring that shippers of hazardous materials use the shortest route possible to and from the site. |
| CVC §§31600 – 31620  | Caltrans                                       | Regulates the transportation of explosive materials.  | The project will conform to CVC 31600 - 31620.   |
| CVC §§32000 – 32053  | Caltrans                                       | Regulates the licensing of carriers of hazardous materials and includes noticing requirements.  | The project will conform to CVC 32000 - 32053.   |
| CVC §§32100 - 32109 and 32105.   | Caltrans                                       | Establishes special requirements for the transportation of substances presenting inhalation hazards and poisonous gases. Requires that shippers of inhalation or explosive materials contact the CHP and apply for a Hazardous Material Transportation License. | The project will conform by requiring shippers of inhalation or explosive materials to contact the CHP and obtain a Hazardous Materials Transportation License.  |
| CVC §§34000 –34121.  | Caltrans                                       | Establishes special requirements for the transportation of flammable and combustible liquids over public roads and highways.  | The project will conform to CVC §§34000 - 34121.   |
| CVC §§34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5 and 34510-11. | Caltrans                                       | Regulates the safe operation of vehicles, including those used to transport hazardous materials.  | The project will conform to these sections in the CVC.   |
| CVC §§35550-35559  | Caltrans                                       | Regulates weight and load limitations.  | The project will conform to these sections in the CVC.   |
| CVC §§25160 et seq.  | Caltrans                                       | Addresses the safe transport of hazardous materials.  | The project will conform to these sections in CVC.   |

**TABLE 8.10-1**  
Laws, Ordinances, Regulations, and Standards Applicable to Traffic and Transportation

| Authority  | Administering Agency  | Requirements   | Compliance  |
|--|---|--|---|
| CVC §§2500-2505.   | Caltrans  | Authorizes the issuance of licenses by the Commissioner of the CHP for the transportation of hazardous materials including explosives.   | The project will conform to these sections in the CVC.                                  |
| CVC §§13369, 15275, and 15278.                               | Caltrans  | Addresses the licensing of drivers and classifications of licenses required for the operation of particular types of vehicles. In addition, certificates permitting the operation of vehicles transporting hazardous materials are required. | The project will conform to these sections in the CVC.                                  |
| S&HC §§117, 660-711  | Caltrans  | Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery.  | Encroachment permits will be obtained by transporters, as required.                     |
| CVC §35780; S&HC §660-711; 21 CCR 1411.1-11411.6             | Caltrans  | Requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.  | Transportation permits will be obtained by transporters for all overloads, as required. |
| S&HC §§660, 670, 1450, 1460 <i>et seq.</i> , 1470, and 1480  | Caltrans  | Regulates right-of-way encroachment and the granting of permits for encroachments on state and county roads.   | The project will conform to these sections in the CVC.                                  |
| California State Planning Law, Government Code Section 65302 | Caltrans  | Project must conform to the General Plan.  | Project will comply with General Plan.  |
| CCR<br>CFR   | California Code of Regulations<br>Code of Federal Regulations | CVC<br>S&HC  | California Vehicle Code<br>California Streets and Highways Code                         |

## 8.10.3 Affected Environment

### 8.10.3.1 Project Description

The AES Highgrove Project will be a nominal 300-megawatt (MW) peaking facility consisting of three natural-gas-fired turbines and associated equipment. The Highgrove project will connect to Southern California Edison's (SCE) electrical transmission system via the adjacent 115-kV Highgrove Substation. The Highgrove Project will be located on approximately 9.8 acres of land. The site is located in an industrially zoned area of the City of Grand Terrace, San Bernardino County, California.

The project will also include approximately 7 miles of new 12-inch-diameter natural gas pipeline. The gas pipeline alignment is located primarily in Riverside County and will be constructed within surface streets within the jurisdiction of City of Grand Terrace and the City of Riverside. Figure 8.10-1 shows the location of the generating facility site and water supply line.

#### 8.10.3.1.1 Project Site Access

The site is located on 12700 Taylor Street, on the northwest corner of the intersection of Taylor Street and Main Street. Primary access to the site will be provided via an existing entrance from Taylor Street, which was used to access the existing Highgrove Generating Station.

Figure 8.10-2 illustrates the regional location of the Highgrove project site and its relative transportation and transit facilities. The surrounding land uses of the plant site are primarily lumber yards and storage facilities. The proposed facility would result in additional traffic that includes both passenger vehicles related to construction workers and permanent employees, and delivery vehicles transporting commercial equipment, as well as potential impacts related to street closures associated with pipeline installation.

#### 8.10.3.1.2 Gas Pipeline

The Applicant considered several alternative gas pipeline routes. This analysis focuses solely on the preferred gas pipeline route. Figure 8.10-3 illustrates the proposed and alternative gas pipeline routes.

The proposed approximately 7-mile-long, 12-inch natural gas line from the Highgrove Project to Southern California Gas Company's (SoCalGas) Line 2001 would exit the west side of the power plant and follow the Riverside Canal southwest to Main Street. It would turn west on Main Street to Iowa Street and head south on Iowa Street to Martin Luther King Boulevard. It would turn east on Martin Luther King Boulevard to Canyon Crest Drive. On Canyon Crest Drive, the line would head south and end at Via Vista Drive where it would connect into Line 2001.

### 8.10.3.2 Existing Transportation Facilities

The proposed project lies near primary transportation corridors that traverse the southern part of San Bernardino County and northern part of Riverside County. While the proposed project is in San Bernardino County, most of the affected transportation facilities are in Riverside County. Major freeways in proximity to the proposed Highgrove project site include Interstate 215 (I-215), State Route 91 (SR 91), and SR 60.

### **8.10.3.2.1 Interstate 215**

I-215 is an alternate route to I-15 between Temecula and San Bernardino. It is a generally north-south freeway facility. It merges with Interstate 15 in Temecula to the south of the project and in San Bernardino to the north. It goes through Murrieta, Sun City, Perris, Moreno Valley, Highgrove, Grand Terrace, San Bernardino and Highland. I-215 is comprised of four to six lanes of mixed flow traffic in the area near the proposed project. According to traffic counts conducted by Caltrans in 2003, I-215 carries an average of 150,500 vehicles per day in the vicinity of the project site (post mile 45.01).

### **8.10.3.2.2 State Route 91**

SR 91 is a major east-west freeway connecting Los Angeles, Orange and Riverside counties. SR 91 is comprised of four to six lanes of mixed flow traffic in the area near the proposed project. According to traffic counts conducted by Caltrans in 2003, SR 91 carries an average of 160,000 vehicles per day in the vicinity of the project site (post mile 21.66). Access to and from SR 91 in the vicinity of the project site is via I-215.

### **8.10.3.2.3 State Route 60**

SR 60 is a major east-west freeway connecting Los Angeles and Riverside County. SR 60 is comprised of six to eight lanes of mixed flow traffic in the area near the proposed project. According to traffic counts conducted by Caltrans in 2003, SR 60 carries an average of 128,000 vehicles per day in the vicinity of the project site (post mile 12.21). Access to and from SR 60 in the vicinity of the project site is via I-215.

### ***Local Roadway Facilities***

Riverside has an extensive street grid system that connects the proposed project to neighboring communities, and the major freeways described above.

Roadways within the study area that provide access to the plant site and gas pipeline include: Main Street, Taylor Street, Iowa Avenue, Center Street, Chicago Avenue, Marlborough Avenue, Martin Luther King Boulevard, Canyon Crest Drive, and Alessandro Boulevard. These roadways are briefly described below, while Figure 8.10-3 shows the arrangement of the local roadway network in the vicinity of the project site.

#### ***Alessandro Boulevard***

Alessandro Boulevard is a four-lane roadway with raised median and turn bays in the center. It has bike lanes on both sides of the road. The speed limit within the project area is 55 miles per hour (mph). Adjacent land use is residential.

#### ***Canyon Crest Drive***

Canyon Crest Drive is a two- to four-lane north-south roadway. The speed limit varies from 25 mph to 45 mph. It has a striped median or raised median with turn bays along the roadway. Adjacent land use is mostly residential. It has signalized intersections with Blaine, Linden, Martin Luther King Junior Boulevard, El Cerrito, Central, Country Club, Via Vista, and Alessandro Boulevard.

#### ***Center Street***

Center Street is the border between Riverside and San Bernardino counties. It is a four-lane east-west roadway with a signalized intersection at Iowa Avenue in the project vicinity. It has a striped median and sidewalks. Abutting land use is mostly residential, with some commercial land use near the intersection of Prospect Avenue. It has a railroad crossing

within the project limit. Speed limit on Iowa Avenue is 40 mph. Daily traffic volumes on Center Street are approximately 5,000 vehicles per day.

### ***Chicago Avenue***

Chicago Avenue is a four-lane north-south roadway with a 45 mph speed limit. It has a raised or striped median on different segments of the street. It has sidewalk, parking, and bike lane on different segments along the road. It has signalized intersections at Blaine, Spruce, Alessandro, Ransom, Country Club, Central, Martin Luther King Boulevard, and University Avenue.

### ***Iowa Avenue***

Iowa Avenue is a major north-south roadway in the project vicinity, starting in the City of Grand Terrace and continuing south into the City of Riverside. Most of Iowa Avenue has five lanes with a center turn lane. It has sidewalks and bike lanes on different segments of the road. It has signalized intersections at Columbia, Palmyrita Avenue, Center Street, Marlborough Avenue, Spruce Street, Blaine, Linden, and Martin Luther King Boulevard in the project vicinity. The abutting land use is mix of office, industrial, and residential. The speed limit on Iowa is 45 to 50 mph. Daily traffic volumes on Iowa Avenue range from 15,000 to 19,000 vehicles per day.

### ***Main Street***

Main Street is a two-lane east-west roadway with parking on both sides of the streets. The abutting land use is industrial. There are two rail crossings on Main Street in the project vicinity. Existing (2001) traffic volumes on Main Street range from 1600 to 3100 vehicles per day (City of Grand Terrace, Traffic Flow Map).

### ***Marlborough Avenue***

Marlborough Avenue is a east-west two-lane facility with signalized intersections at Iowa and Chicago avenues. Adjacent land use is mostly industrial or office complex. It has head-in parking on the segment between Iowa and Chicago for the adjacent Hunter Park. East of the railroad crossing, Marlborough Avenue is a narrow segment (approximately 20 feet wide) with no shoulder and no parking.

### ***Martin Luther King Boulevard***

Martin Luther King Boulevard is a four-lane east-west roadway. It has raised median and bike lane on both sides of the road. It has signalized intersections at Canyon Crest, Iowa, and Chicago. Abutting land use is open fields, parking lots and agricultural.

### ***Taylor Street***

Taylor Street is a two-lane north-south roadway that is the primary access to the plant site. It currently ends at Pico Street, just north of Main Street, in the City of Grand Terrace. It has a striped median. Abutting land use is industrial.

## **8.10.3.3 Pedestrian/Bicycle Facilities**

Riverside County's bikeway system is included as part of the County's circulation system. Planned bicycle routes are shown on the Bikeways and Trails Plan. Riverside County uses three types of bike path classifications:

- Class I - Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized.

- Class II - Provides a striped lane for one-way bike travel on a street or highway.
- Class III - On-road, signed bicycle routes with no separate lanes.

Pedestrian facilities include sidewalks, walkways, bridges, crosswalks, signals, illumination, and benches, among other items. Pedestrian facilities provide a vital link between many other modes of travel and can make up a considerable portion of short-range trips made in the community. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities also provide a vital link for commuters who use other transportation facilities such as rail, bus, and park-n-rides. Without adequate pedestrian facilities, many commuters may be forced to utilize an automobile because of difficult or unsafe conditions that exist at their origin or destination. Pedestrian facilities within the immediate vicinity of schools and recreational facilities are important components of the non-motorized transportation system. Such facilities, typically in the form of sidewalks, are provided where they are appropriate and enhance the safety of those who choose to walk to and from their destination.

#### **8.10.3.4 Public Transportation**

Due to the interrelationship of urban and rural activities (employment, housing and services), and the low average density of existing land uses, the private automobile is the dominant mode of travel in the project vicinity. The public transit system alternatives for Riverside County include: fixed route public transit systems, common bus carriers, AMTRAK (intercity rail service), Metrolink (commuter rail service), and other local agency transit and paratransit services. Concentrated growth and increased job creation will require a regional and local linkage system between communities in the County. The public transportation system can facilitate those linkages, and help to shape future growth patterns.

##### **8.10.3.4.1 Inter and Intra-County/Subregional Systems**

The Riverside Transit Agency (RTA) operates fixed bus routes providing public transit service throughout a 2,500-square-mile area of western Riverside County. RTA's fixed routes have been designed to establish transportation connections between all cities and unincorporated communities in western Riverside County. RTA currently operates full-size buses, mini-buses, vans, and trolleys. The system carries approximately 6.4 million passengers annually, which is approximately 18,000 passengers per day. RTA also provides service to San Bernardino and Orange counties.

Sun Line Transit Agency (Sun Line) also provides public transit services in the project vicinity. The service area covers 928 square miles. Sun Line operates fixed routes, serving over 3 million passengers annually. All of Sun Line's buses are equipped with front-mounted bicycle racks; and overall, the system carries over 6,000 bicycles per month. Sun Line also operates the Sun Dial System, which provides curb-to-curb demand responsive (dial-a-ride) service for members of the community requiring such assistance.

##### **8.10.3.4.2 Paratransit Service**

The County supports reliable, efficient, and effective paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped. Paratransit services are transportation services such as car pooling, van pooling, taxi service, and dial-a-ride programs.

#### **8.10.3.4.3 Fixed Route Transit Service**

The County supports fixed-route, scheduled bus services that have convenient access to major population, economic, institutional, recreation, community, and activity centers. Fixed route transit services include urban and suburban rail, and bus systems. These services operate on regular schedules along a designated route, and can be used as additional transportation alternatives within the County. The closest public transit service route to the plant site is on Michigan Avenue. RTA Route 25 goes through Michigan Avenue and Center Street. Omnitrans Route 200 goes through Michigan Avenue. However, there are several RTA routes along the gas pipeline alignment. RTA operates public service buses on Center Street, Iowa Avenue, Chicago Avenue, Blaine, University Avenue, Martin Luther King Boulevard, Canyon Crest Drive, and Alessandro Boulevard.

#### **8.10.3.5 Rail Traffic**

The freight rail system within the County is vital to the economy of the county. This system provides movement for goods within and outside of the County's jurisdiction. Riverside County will continue to support operation of passenger and freight rail systems that offer efficient, safe, convenient, and economical transport of County residents and commodities. The proposed California high-speed rail system will directly serve residents and businesses in Riverside County, enabling the County to compete in the global economy.

##### **8.10.3.5.1 AMTRAK**

The closest AMTRAK station to the project is in the Downtown of the City of Riverside. This station provides connecting AMTRAK service to points west including Los Angeles, and to points east including Tucson, Arizona; and El Paso, Texas. AMTRAK provides bus connections to and from other Riverside County areas to the San Bernardino AMTRAK station on a daily basis.

##### **8.10.3.5.2 Metrolink**

Metrolink's Riverside Line provides commuter rail train service between Riverside and Los Angeles. Metrolink currently has multiple stations located in Riverside County including: Pedley Station, Riverside-Downtown Station, Riverside-La Sierra Station, and West Corona Station. Long-term plans call for an extension of the Riverside Transit Corridor, in accordance with performance standards, along the San Jacinto branch line to the City of Hemet. Riverside Downtown Station is closest Metrolink Station to the project site.

##### **8.10.3.5.3 Freight Rail**

The Union Pacific and the Burlington Northern Santa Fe Railroads provide freight service in Riverside County, connecting the County with major markets within California and other destinations north and east. Both agencies have rail tracks just east and west of the project site.

#### **8.10.3.6 Air Traffic**

The provision of general aviation facilities and services that meet the needs of the residents of Riverside County is an important component of the County's transportation system. To meet these needs, the County must facilitate coordination of County airport plans with aviation planning conducted by the State, the County Economic Development Agency, and local agencies related to transportation, land use, and financing. Airports used by County residents and businesses are tied into the regional air transportation system.

### **8.10.3.6.1 Aviation Facilities**

There are two regional aviation facilities that are close to the Highgrove project site: Palm Springs International Airport, Ontario International Airport (San Bernardino County). Palm Springs International Airport is located in Riverside County, but Ontario International airport is closer to the facility (approximately 20 miles to the west). In addition to the regional air passenger airport facilities, the March Inland Port/Air Reserve Base is located in Riverside County along I-215 near Perris. This airport provides regional air cargo service and also continues to function as the Air Reserve Base in Riverside County. There are three other local airports close to the project site. Those are Hemet-Ryan airport, Riverside Municipal Airport and French Valley airport.

### **8.10.3.6.2 Air Cargo**

Air cargo is the fastest growing method of transporting goods in and out of the southern California region, and is expected to continue to increase at a faster rate than passenger air service. Trucking, rail, and air cargo operations in this area make it one of the larger multi-modal freight management and distribution complexes in the nation. Land development is occurring in support of these functions, extending into the Mira Loma and Norco areas of Riverside County. The March Air Reserve Base is currently a joint use status land use. The Air Reserve Base will gradually reduce the military use of this facility and begin to increase the amount of goods and cargo that can be accommodated at this site. As the amount of goods transported into this area via the March Air Reserve Base increases, so does the potential to establish viable land uses that can make use of this facility. This area can be used to accommodate the increased growth in goods movement, with the potential to become a passenger airport.

### **8.10.3.7 Transportation Improvements**

#### **8.10.3.7.1 Local Comprehensive Transportation Plans**

The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document prepared by the Southern California Association of Governments (SCAG), in coordination with federal, state, and other regional, sub-regional, and local agencies in southern California.

The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances. The RTP is prepared every 3 years and reflects the current future horizon based on a 20-year projection of needs.

The RTP's primary use is as a regional long-range plan for federally funded transportation projects. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions within the region.

Each agency responsible for transportation, such as local cities, counties, and Caltrans, has different transportation implementation responsibilities under the RTP. The RTP relies on the plans and policies governing circulation and transportation in each county to identify the region's future multi-modal transportation system.

According to the RTP and the general plans of the cities and county, there are no planned transportation improvements on the surface streets adjacent to the proposed gas line route.

### 8.10.3.7.2 Other Future Plans and Projects

A Specific Plan for the development of the OAC (a commercial development) was approved in 2004 for the land just north and northwest of the proposed project. Construction is expected to start in January, 2007. Grading, streets, and utilities will all be installed as part of the initial phase, which will take approximately one year to complete. Actual building construction will occur over approximately 2 years.

As part of that project, Taylor Street, Commerce Way, and Van Buren will all be extended from their current termini. Taylor Street will be extended to Commerce Way (to the north), and built to its ultimate cross-section width (84 feet) as a secondary highway. The Environmental Impact Report for the OAC Specific Plan also lists a series of intersection improvements required to provide acceptable operations in the opening year and 2030. A total of 13 intersections were identified, and specific widening projects (added lanes and reconstructed interchanges) were listed. However, the improvements will be phased as future traffic impact study reports are submitted with development plans.

The specific improvements listed for the intersections nearest to the proposed project are as follows:

- Iowa Avenue/Main Street: A new traffic signal would be installed at the intersection before the OAC is opened. Future (2030) improvements are to add northbound through lanes, a southbound left-turn and through lane, and a westbound free right-turn lane.
- Taylor Street/Main Street: A new traffic signal would be installed at the intersection before the OAC is opened. Future (2030) improvements are to add a southbound free right-turn lane and an eastbound left-turn lane.
- Northbound and southbound I-215/Iowa Avenue ramp terminal intersections: Reconstructed interchanges are needed for opening year (2006) conditions. Also, the Environmental Impact Report indicates that the City of Grand Terrace is proposing new ramps for northbound I-215 at the terminus of De Barry Street. The existing southbound ramps at Barton Road would also be used for the OAC.

There are also plans to build a new high school on the site of existing lumberyards, just east of the Highgrove project site on the other side of the Taylor Street. Roadway infrastructure improvements associated with the projects will affect roadways in the project area. Both projects also have the potential to add traffic to local streets.

## 8.10.4 Environmental Analysis

This subsection discusses potential environmental impacts of the proposed project. Potential traffic impacts during construction of the plant as well as plant operations after construction have been analyzed.

Project area reconnaissance was performed by CH2M HILL in May 2005 to examine the proposed project area, document roadway characteristics, identify physical constraints, and assess general traffic conditions.

### **8.10.4.1 Significance Criteria**

Significance criteria were developed based on guidance from Appendix G of the CEQA Guidelines. The guidelines identify significant impacts to be caused by a project if it results in an increase in traffic that is substantial relative to the amount of existing traffic, the capacity of the surrounding roadway network and the criteria used by the City of Grand Terrace, County of Riverside, and the City of Riverside.

#### **8.10.4.1.1 City of Grand Terrace Significance Criteria**

The maximum acceptable LOS for City's Master Plan of Streets and Highways is LOS C. However, intersections at freeway ramps may have LOS D in peak travel hours. LOS is defined using daily traffic volumes. For four-lane arterials, the volume differences between LOS grades are approximately 4,000 vehicles per day (for divided highways) and 2500 vehicles per day (for undivided). For two-lane arterials, the differences are approximately 1,250 vehicles per day. In other words, the addition of 1,250 vehicles per day on a two-lane arterial would degrade LOS one level.

#### **8.10.4.1.2 County of Riverside Significance Criteria**

The following are the significance criteria related to transportation used by the Riverside County Planning Department for the determination of impacts associated with a proposed project:

C 2.1 Maintain the following countywide target Levels of Service:

LOS "C" along all county-maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterials, Urban Arterials, Expressways, and conventional state highways or freeway ramp intersections.

LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

C 2.2 Apply level of service standards to new development via a program establishing traffic study guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development.

C 2.3 Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) shall identify project-related traffic impacts and determine the "significance" of such impacts in compliance with CEQA.

C 2.4 The direct project-related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service standards.

#### **8.10.4.1.3 City of Riverside Significance Criteria**

The Riverside City's guidance is that it will "strive to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as City arterial roadways which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS E may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS E standard include portions of Arlington Avenue/ Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and

selected freeway interchanges. A higher standard, such as LOS C or better, may be adopted for Local and Collector streets in residential areas. The City recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns. Arterials will be designed with sufficient capacity to accommodate anticipated traffic based on intensity of existing and planned land uses while discouraging additional non-local cut-through traffic on City streets.”

#### **8.10.4.1.4 Summary**

Based on the significance criteria noted above, a degradation of LOS may be considered a significant impact, particularly for operations at LOS D or worse. However, since only limited traffic data are available (in most cases, daily volumes), a more appropriate criterion for this project is the addition of a significant volume of traffic. Using the City of Grand Terrace’s LOS standards, a degradation of one LOS level on an arterial would require adding 1,250 to 4,000 vehicles per day, or 125 to 400 vehicles in the peak hour. For a 6-lane freeway, the criterion is 12,000 vehicles per day or 1,200 vehicles in the peak hour (both directions). Therefore, additional volume was used as the significance criterion for traffic, following the CEQA guidance to consider an increase in traffic that is substantial relative to existing levels.

Other construction-related impacts may be considered significant if they reduce access or safety for vehicles, pedestrians, bicyclists, or transit riders. In these cases, significance is evaluated using judgment and standards of the profession for construction.

#### **8.10.4.2 Summary of Construction Phase Impacts**

##### **8.10.4.2.1 Impacts from Plant Construction**

Daily weekday traffic operations were evaluated during construction for the local roadway network adjacent to the project site. The peak hour analysis examined the worst-case scenario of the impact of 147 daily employees during construction of the project.

##### ***Trip Generation***

Demolition of the old plant and construction of the proposed plant is anticipated to begin in mid-2007 and last approximately 14 months. A peak workforce of approximately 147 workers per day over a 2-month period during months 7 and 8 of construction is expected.

Construction would generally be scheduled to occur between 6:30 a.m. and 5:00 p.m., 5 days a week, although additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. Based on the regular schedule, most worker trips to the plant site would occur during the a.m. (inbound to site) and p.m. (outbound from site) peak commute hours. The delivery of construction materials and the hauling of materials from the Highgrove project site would also occur during the day, but not during the peak hours. During the peak construction period, using an average vehicle occupancy factor of 1.3 persons per vehicle for commuting, construction workers would generate an estimated 226 daily trips, 113 a.m. peak hour trips, and 113 p.m. peak hour trips. During this period, approximately 20 truck trips would occur, with no truck trips occurring during the a.m. and p.m. peak commute periods.

##### ***Trip Distribution***

Trip distribution percentages for the construction employees are based on assumptions of regional demographics of construction workers, and recent surveys of the project site (i.e., drive-by windshield surveys). The construction worker trip distribution has been

determined to be: 25 percent within the City of Grand Terrace, Loma Linda and Highgrove area (local trips); 25 percent from north in San Bernardino County (Rialto, Colton, San Bernardino cities); and the remaining 50 percent from southern and western parts of Riverside County.

To arrive at the project site, construction worker trips from San Bernardino County would use southbound I-215 and exit on Iowa Avenue and proceed to Taylor Street. Trips from southern points of Riverside County would use SR 60/I-215 or SR 91, and exit on Center Street/Highgrove. Trips from within the City would use Main Street to reach the plant location.

### ***Traffic Assignment***

Based on the assumptions described above, the maximum additional traffic on most of the freeway segments (e.g., SR 60, I-215, or SR 91) would be approximately 28 vehicle trips in the peak hour. Up to 56 trips may be added to SR 91 during the peak hour. This represents no more than one to two percent of the total traffic, which would not have a significant impact on LOS. Using the significance criteria previously described, the number of additional trips in the peak hour (28 to 56) is well below the threshold value of 1,200 vehicles in the peak hour (or 600 vehicles in one direction).

On the arterials, the greatest additional volume of traffic would be on Main and Taylor streets. Up to 113 trips will be added to the peak hour. Since both of these streets have very low traffic volumes (Main Street is operating at LOS A per City of Grand Terrace standards), the impacts are less than significant.

One other potential impact is a conflict with school traffic. Construction would generally be scheduled to occur between 6:30 a.m. and 3:30 p.m. so workers traveling for their shifts would be driving before and after these times. Arrival for work will not present conflicts with most school trips, but the end of the afternoon shift could occur during some school traffic. The closest existing school is Highgrove Elementary School (at Center Street and Garfield Avenue), about 3,000 feet southeast of the Highgrove project site. Also a new high school is planned across Taylor Street from the plant site. The high school is planned to begin construction during the summer of 2006, and to start sessions in the fall of 2008. If construction of the power plant is not completed before school sessions begin, work shifts will be scheduled to avoid conflict with afternoon school traffic.

### ***Summary***

Project construction would result in short-term increases in vehicle trips by construction vehicular activities and construction workers. Because the volumes of traffic are low, this impact will be less than significant, with the possible exception of afternoon high school traffic.

#### **8.10.4.2.2 Construction Impacts from Pipeline Construction**

The horizontal alignment for the gas pipeline has been designed with traffic impacts in mind. Where possible, the line will be installed in locations where the traffic impacts of construction will be minimized. On arterials, the critical impact locations are often signalized intersections, main thoroughfare, and associated on- and off-ramps, related to lane closures at these areas, which may have the greatest impact on capacity.

Trenching for gas pipeline construction will necessitate temporary lane closures and would reduce the number of lanes for an estimated 150 to 300 feet at a time. It is expected that the

contractor will use temporary trench paving, and repaving may occur over longer stretches (i.e., several days of trenching may occur before repaving is completed on a particular section).

The work area will be delineated with lane closure devices approved by Caltrans traffic standards or other approved traffic control standard per governing agency request, such as *Manual of Uniform Traffic Control Devices (MUTCD)* and *Work Area Traffic Control Handbook (WATCH)*.

However, these considerations will need to be balanced with other issues, including existing utilities, construction cost and time, and gas pipeline installation requirements. Therefore, there is the potential for traffic impacts for constructing some elements of the gas pipeline. More details on the specifics of the impacts cannot be determined until the horizontal alignment of the pipeline is identified. However, the general impacts from the pipeline construction are summarized below:

Project construction within existing streets would reduce the number of, or the available width of, travel lanes on roads, resulting in temporary disruption of traffic flows and increases in traffic congestion. These impacts are potentially significant. With the implementation of proposed mitigation measures, these impacts will be mitigated to less-than-significant levels.

Project construction within or across streets would affect emergency access, and access to local land uses. These impacts are anticipated to be less-than-significant, and would be further reduced with the implementation of the proposed mitigation measures.

Also, note that work crews associated with pipeline construction, and materials deliveries to the pipeline sites would result in a small number of trips throughout the study area network. The construction crew for the gas pipeline facilities would be staged in appropriate areas adjacent to pipeline construction activities. The impacts of this relatively small number of trips are less than significant.

#### **8.10.4.3 Parking Facilities**

Construction of the proposed project would not impact on-street parking. An approximately 7.5-acre area inside the project site will be used as a lay down area (staging, and construction worker parking lot) to meet the construction worker parking demand. The gas pipeline would reduce some available parking adjacent to their construction location. However it will not be significant since it will be temporary.

When completed, the project would contain adequate onsite parking to accommodate the permanent 15 employees. Street parking spaces would not be eliminated as part of the proposed project. Therefore, no significant impacts to parking are anticipated.

#### **8.10.4.4 Public Transportation**

There are no bus stops or any other public transit stations close to the Highgrove project site. There will be no impacts to public transit from the plant construction. However the public transit routes along the gas pipeline will be impacted by the construction. The impacts may include closing down bus stops temporarily. The minimal number of employees that might use public transport during construction and during operation would not cause any significant impact to the local public transportation system.

Project construction could temporarily disrupt bus service along the pipe line route. These impacts are anticipated to be less-than-significant, and would be further reduced with the implementation of the proposed mitigation measures.

#### **8.10.4.5 Goods Movement**

Construction and operation of the proposed project would not impact adjacent freight rail lines, and air or shipping routes. Therefore, the project would not have a significant impact on goods movement.

#### **8.10.4.6 Safety**

The roadways in the vicinity of the proposed Highgrove project site would continue to provide adequate sight distances. Truck traffic within the area would continue to use designated truck routes to access the proposed project site. In addition, the project site is located in an industrial zone.

Project construction within roadways and railroad rights-of-way would temporarily increase the potential for accidents. These impacts are anticipated to be less-than-significant, and would be further reduced with the implementation of the proposed mitigation measures.

Impacts to vehicle, pedestrian, and bicycle safety as a result of construction and operation of the project would be less-than-significant.

#### **8.10.4.7 Air, Rail, and Waterborne Traffic**

The proposed project would have no impacts on air, rail, or waterborne traffic.

#### **8.10.4.8 Hazardous Materials Transport**

Construction of the proposed project would generate hazardous wastes consisting primarily of batteries, asbestos containing materials, and various liquid wastes (e.g., cleaning solutions, solvents, paint and antifreeze). Contaminated soils could also be generated in the pre-construction or site preparation phase and would be transported as hazardous materials or hazardous waste (see Subsection 8.13). Transport route arrangements would be required with Caltrans officials for permitting and escort, as applicable. Generally, only small quantities of hazardous materials will be used during the construction period, as described in Subsection 8.12, Hazardous Materials Handling. They may include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. Because of the small quantities of hazardous materials involved, shipments will likely be consolidated. Multiple truck deliveries of hazardous materials during construction are unlikely. During construction, a minimal number of truck trips per month will be required to haul waste for disposal. Because the transport of hazardous wastes will be conducted in accordance with the relevant transportation regulations, no significant impact is expected.

Operation of the project would result in the generation of additional wastes including lubricants, water treatment chemicals, herbicides and pesticides, and sludge. In addition, operation of the project will require transportation of aqueous ammonia, a regulated substance. Aqueous ammonia will be delivered to the plant by truck transport using designated truck routes. Small quantities of sulfuric acid and various other hazardous materials will also be used in project operations, as described in Subsection 8.12. According to Division 13, Section 31303 of

the CVC, the transportation of regulated substances and hazardous materials will be on the state or interstate highways that offer the shortest overall transit time possible.

Aqueous ammonia is considered a potential inhalation hazard. Division 14.3, Section 32105 of the CVC specifies that unless there is not an alternative route, every driver of a vehicle transporting inhalation hazards shall avoid, by prearrangement of routes, driving into or through heavily populated areas, congested thoroughfares, or places where crowds are assembled.

The truck loading area will be located within the project site. The use of 19 percent aqueous ammonia will require approximately 14 deliveries of ammonia per year, or 28 truck trips per year. This would conservatively equate to a maximum of 4 deliveries per month during peak periods, or 8 truck trips per peak month (inbound and outbound). These occasional truck trips would generally occur at night or during weekends to avoid school hours. If the plant uses lower concentrations of aqueous ammonia, more frequent delivery would be required.

Table 8.10-2 summarizes expected truck trips for the project, including delivery of hazardous materials and removal of wastes. There will be a maximum of ten truck trips per day, with an average of two or less truck trips per day to the project site. For further information on the management of hazardous materials and waste products, see Subsections 8.12 and 8.13, respectively.

**TABLE 8.10-2**  
Estimated Truck Traffic at the Facility During Operation

| <b>Delivery Type</b>      | <b>Number and Occurrence of Trucks</b> |
|---------------------------|--|
| Aqueous ammonia           | 4 per month during peak use            |
| Sulfuric acid             | 2 per month                            |
| Cleaning chemicals        | 1 per month                            |
| Trash pickup              | 1 per week                             |
| Lubricating oil           | 4 per year                             |
| Lubricating oil filters   | 4 per year                             |
| Laboratory analysis waste | 4 per year                             |
| Oily rags                 | 4 per year                             |
| Oil absorbents            | 4 per year                             |
| Water treatment chemicals | Up to 4 per week                       |

Additionally, transporters of inhalation hazardous or explosive materials must contact the CHP and apply for a Hazardous Material Transportation License. Upon receiving this license, the shipper will obtain a handbook that will specify the routes approved to ship inhalation hazardous or explosive materials. The exact route of the inhalation or explosive material shipment will not be determined until the shipper contacts the CHP and applies for a license. Transportation impacts related to hazardous materials associated with power plant operations will not be significant since deliveries of hazardous materials will be limited. Delivery of these materials will occur over prearranged routes and will be in compliance with all LORS governing the safe transportation of hazardous materials.

Standards for the transport of hazardous materials are contained in the Code of Federal Regulations, Title 49 and enforced by the U.S. Department of Transportation. Additionally, the State of California has promulgated rules for hazardous waste transport that can be found in the California Code of Regulations, Title 26. Additional regulations for the transportation of hazardous materials are outlined in the California Vehicle Code (Sections 2500-505, 12804-804.5, 31300, 3400, and 34500-501). The two state agencies with primary responsibility for enforcing federal and state regulations governing the transportation of hazardous wastes are the CHP and Caltrans. Transport of hazardous materials to and from the project site will comply with all applicable requirements.

For those materials that require offsite removal, a licensed hazardous waste transporter would move these substances to one of three Class I hazardous waste landfills in proximity to the project site. The hazardous material carrying trucks should use the shortest possible route between freeway and the plant site and avoid residential area as much as possible. With that objective, the trucks carrying hazardous material should get on I-215 using the shortest route and then use SR 91, SR 60, I-215 based on its destination. The directions for traveling between the project site and I-215 are given below. All deliveries of hazardous materials will use these routes.

**From northbound I-215 to project site:** Take the Center Street/Highgrove exit. Then turn off into East La Cadena Drive, turn right on West Main Street. Turn left on Taylor Street to reach the project site.

**From southbound I-215 to project site:** Take the Iowa Avenue exit, turn right, cross I-215 and head south on S. Iowa Avenue. Turn left on West Main Street. Turn left on Taylor Street to reach the project site.

**From project site to northbound I-215:** Start on Taylor Street, turn right on West Main Street, Turn right on Iowa Avenue, keep on the right lane to continue on to the on ramp to northbound I-215

**From project site to southbound I-215:** Start on Taylor Street, turn right on West Main Street, Turn right on Iowa Avenue, keep on the center lane, turn left on the frontage road at the southbound ramp intersection, continue on southbound frontage road to southbound ramp and on to southbound I-215.

The major highways and interstates that would be used to carry hazardous wastes from the project site to the appropriate landfills contain adequate capacity to accommodate these vehicle trips. Hauling would be carried out in accordance with local, state, and federal regulations that include the Resource Conservation and Recovery Act (42 U.S. Code 6901 et seq.), the California Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), and the Department of Public Health of the counties of San Bernardino and Riverside.

In addition, the federal government prescribes regulations for transporting hazardous materials. These regulations are described in the Code of Federal Regulations, Title 49, Part 171. These laws and ordinances place requirements on various aspects of hazardous waste hauling, from materials handling to vehicle signs, to ensure public safety. Transporting and handling of chemicals and wastes are discussed in Subsection 8.12, Hazardous Materials Handling, including the transport of ammonia.

#### 8.10.4.10 Operational Impacts

When completed, the operational phase of the proposed project would generate approximately 15 additional employees, or 30 daily trips. In addition, during operation the plant will average two truck trips per hour. Every hour the concentrated brine wastewater will be trucked to the Santa Ana Regional Interceptor brine line for disposal then return to the plant to switch tanks. The permanent addition of 15 employees for plant operations and two truck trips per hour would result in a less-than-significant impact, as their traffic volumes would be immeasurable in terms of roadway capacity.

#### 8.10.5 Cumulative Impacts

The construction of the proposed Grand Terrace Educational Facility (i.e., high school) will likely occur in the same approximate time frame as the proposed project. Cumulative transportation impacts may result from trips by construction workers for both projects on the same roadways at the same time.

Construction of the proposed high school would generate various levels of truck and automobile traffic throughout the duration of the construction phase, which is expected to take approximately 28 months. The construction-related traffic includes construction workers traveling to and from the site as well as trucks hauling construction materials to the site and demolition/excavation material away from the site. The construction activities would generate approximately 20 truck trips per day to deliver construction material and approximately 10 truck trips per day to remove demolition material from the site. The truck trips would be spread out throughout the workday and would generally occur during non-peak traffic periods. Even coupled with the truck trips for the proposed project, this level of construction-related traffic would not result in a significant cumulative traffic impact on the study area roadway network.

The construction activities for the Grand Terrace Educational Facility would also generate an estimated 40 to 50 workers' trips per day. Table 8.10-3 summarizes the total daily workforce related vehicle trips from both construction projects.

**TABLE 8.10-3**  
Total Daily Workforce-Related Vehicle Trip Generation During Construction

| Type of Construction               | Workers' Trips | Truck Trips | Total Trips |
|------------------------------------|----------------|-------------|-------------|
| Highgrove Project                  | 226            | 20          | 246         |
| Grand Terrace Educational Facility | 50             | 30          | 80          |
| <b>Total</b>                       | <b>276</b>     | <b>50</b>   | <b>326</b>  |

With the two projects a total of 163 trips will be added to the area roadway network during the a.m. and p.m. peak hours. For the freeways (SR 91 and I-215), the number of additional trips in the peak hour is below the threshold value of 1,200 vehicles per hour in the peak hour (or 600 vehicles in one direction). For the surface streets, up to 128 trips will be added to the peak hour. The construction worker trips for the proposed high school construction are expected to occur on several intersections that will also be used by the construction workforce of the proposed project:

- I-215 Southbound Ramps at Iowa Avenue

- I-215 Northbound Ramps at Iowa Avenue
- Iowa Avenue at Main Street
- Iowa Avenue at Center Street
- Taylor Street at Main Street

Since most of these streets have very low traffic volumes (Main Street is operating at LOS A per City of Grand Terrace standards), the cumulative impacts are less than significant.

Cumulative impacts associated with the OAC are much more significant during the operation of the OAC. The Specific Plan for the proposed OAC has an estimated daily traffic volume of 29,879 trips, including 1,454 during the morning peak hour and 2,154 during the evening peak hour. OAC daily traffic volumes are projected to be 3,800 vehicles/day on Iowa Avenue (south of Main Street), 7,800 vehicles/day on Taylor Street (between Iowa Avenue and Main Street) and 8,100 vehicles/day on Taylor Street (north of Main Street).

Operations at Taylor Street/Main Street are not predicted to change significantly with the proposed OAC. However, operations at Iowa Avenue/Main Street are expected to degrade from LOS E to LOS F in the a.m. peak. In the p.m. peak, the intersection will remain at LOS F, but the additional traffic from the OAC will increase the delay substantially. However, improvements are proposed (as part of the OAC mitigation measures) at both intersections. Specifically, new traffic signals will improve operations. The new signals were only analyzed for 2030 (with other improvements), but both intersections are projected to operate at LOS C or better.

Since there are specific improvements at these intersections that will be constructed before the OAC opens, the relatively low traffic volumes associated with the proposed project (163 daily trips) will not be significant. Specifically, new traffic signals will improve operations, so that the construction trips associated with the proposed projects will result in cumulative impacts that are less than significant.

### **8.10.6 Mitigation Measures**

To minimize construction-related impacts, the construction contractor will prepare a construction traffic control plan and construction management plan, also known as a Traffic Management Plan (TMP). The TMP will address timing of heavy equipment and building material deliveries, potential street and/or lane closures associated with pipeline installation, signing, lighting, traffic control device placement, and establishing work hours outside of peak traffic periods. Details on the specific mitigation measures described in this subsection will be documented fully in the TMP.

#### **8.10.6.1 Construction Impacts from Power Plant**

As noted in Subsection 8.10.4.2, construction of proposed project would add a moderate amount of traffic to state routes and local roadways during the peak construction period. However, because existing roadway capacity is adequate, these project-related traffic increases will not result in significant impacts. In order to avoid potential impacts of construction traffic that may coincide with afternoon school traffic, the project will develop a construction traffic control plan in coordination with the school officials. That construction traffic control plan will be specifically tailored to address the specific impacts associated with each stage of construction of the power plant and the actual occupancy date of the school.

### **8.10.6.2 Construction Impacts from Gas Pipeline Construction**

This subsection outlines some general strategies and requirements for minimizing the traffic and roadway impacts of gas pipeline construction. In general, Riverside County and the affected cities require an encroachment permit and the permit application specifies some requirements for traffic control. Some of the information in this document reflects on those guidelines, but the City/County will have the final word on requirements for traffic control with the permit submittal.

To minimize construction-related impacts, the following measures will be implemented (and documented in the TMP):

#### **8.10.6.2.1 Traffic Control Standards**

All temporary signing, lighting, and traffic control devices during construction should conform to the applicable standards. These include the MUTCD, the WATCH handbook, and the California Joint Utility Traffic Control Committee published Work Area Protection and Traffic Control Manual.

#### **8.10.6.2.2 Construction Work Hours**

In general, Riverside County and the affected cities allow construction work on a case-by-case basis. During periods where construction is not allowed, trenches must be plated over to permit use of all travel lanes. Work hours and allowable noise limits will be described in the encroachment permit, as issued by the Encroachment Permit Section of the County of Riverside or affected city.

The specific hours for construction will be determined on a case-by-case basis, in consultation with the County. Any variations in the working hours will be determined with consideration given to impacts to residents and the general public kept to a minimum. Consideration of impacts and justification for those requests will be provided prior to request.

#### **8.10.6.2.3 Traffic Control Standards**

All temporary signing, lighting, and traffic control devices during construction should conform to applicable standards (primarily the California Supplement of the MUTCD).

#### **8.10.6.2.4 Lane Closures**

The number of travel lanes during all hours of the day (peak, off-peak, and overnight) should be sufficient to meet expected traffic volumes at the construction site. The minimum width of a traffic lane that needs to be maintained is 12 feet (3.6 meters) in each direction. If a required lane closure results in a single (bi-directional) lane of traffic during construction, the remaining lane should be at least 12 feet (3.6 meters) wide. Specific requirements for temporary lane widths and approval for narrower lanes should be obtained during preparation of the Traffic Control Plan.

One traffic lane will remain open at all times on all affected roadways. Full closures of major roadways are not planned. When traffic in both directions must use a single lane, two flagmen will be stationed at both ends of the construction zone to safely direct traffic.

Vehicle access would be restored at the end of each work day through the use of steel trench plates or trench backfilling.

**8.10.6.2.5 Driveway Access**

The contractor shall develop construction plans defining in detail how driveway access restrictions will be minimized. Any blockages of individual driveways must be described in the traffic control plans. Based on the estimated work pace of up to 300 feet per day, project construction would occur for about one day in front of an individual property on affected roads. Operations must be coordinated with all business and property owners along city streets and state highways, within the limits of contract work, for temporary driveway closures at least ten days prior to performing work that will block access points. The contractor shall provide alternate access to properties, at the property/business owner's approval. In areas where a residence or business has two access points, one access would be open to traffic at all times. In cases where the inconvenience is not minor, such as with an active business that is dependent on one driveway, the work could be scheduled during nighttime hours. Temporary closure of driveways shall only take place during nighttime between 10:00 p.m. and 6:00 a.m.

**8.10.6.2.6 Emergency Access**

Emergency response service providers shall be notified at least one month in advance of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness in addition to being provided a copy of detour plans filed with the city or county. Emergency response service providers include police and fire departments and ambulance companies. In no circumstance should the only access to a developed area be cut off for any period of time. Alternate routes must be available, or provisions must be made for temporary emergency providers to be stationed inside the cut-off area. The Traffic Control Plan shall include details regarding emergency service coordination and procedures, and copies shall be provided to all relevant service providers.

**8.10.6.2.7 Parking**

Along streets where parking will be temporarily lost, the contractor will be required to post notices of closures prior to construction. Signs should indicate that parking will be removed during construction, and specify the duration of the construction period. Permits for parking restrictions must be obtained from the County (Encroachment Permit Section, 951-955-6785). For the day of disruption, residents and business employees typically would park on the other side of the street and walk around the construction area to their homes and workplaces.

**8.10.6.2.8 Public Transit**

Along streets where bus stops will need to be temporarily closed, the contractor will need to post notices of closure per the city or county's requirement. The public transit service agency may post notice of bus stop closure at their websites.

**8.10.6.2.9 Surface Restoration**

In general, any construction activities impacting existing surfaces or roadway components (roadway pavements, signing and striping, traffic signals and detectors, driveways, islands, curbs and gutters, sidewalks, medians, and landscaping) shall be mitigated by restoring the facility to its original condition (before construction). While there is no restriction on the length of a section to be repaved, the contractor must provide sufficient capacity for traffic.

Pavement restoration shall meet or exceed the county/city's standard specifications (or Caltrans' standard specifications, with the county/city's specifications taking precedence).

The project Standard Details will outline specifics on pavement restoration. Contract documents will provide details on paving, curb and gutter, signing and striping, detectors, sidewalks, medians and landscaping, and other surface elements.

#### **8.10.6.2.10 General Construction and Traffic Control Requirements**

The following general construction and traffic control requirements will allow the required traffic movements to occur with minimum interruption. For the majority of the alignment, at least one through lane of traffic in the direction adjacent to construction is required. Full road closures, where required during construction, will require detour routing.

**Minimum Lane Width** for all traffic lanes shall be 12 feet (3.6 meters). In addition to a 12-foot (3.6-meter) minimum width, a 2-foot (0.6-meter) buffer shall be maintained between the edge of traveled lane and any traffic control devices including, but are not limited to, concrete barriers, delineators, construction barrels, cones and curb and gutter. Specific requirements for temporary lane widths along roadways where 12-foot wide traffic lanes cannot be achieved will be obtained from the local agencies.

**Temporary Concrete Barrier** with proper end treatment shall be provided whenever a lateral safety clearance of 10 feet or less between edge of traveled lane and edge of trench is not obtainable.

**Reduction of the Speed Limit** by 10 mph from the posted speed limit shall be in place during all hours that traffic control is in place.

**Flaggers** shall be included when only one lane is available for two-way traffic. Two flagmen will be stationed at both ends of the construction zone to safely direct traffic.

**Sidewalk Closure** will be accomplished by following typical signing requirements.

#### **8.10.6.3 Operations and Maintenance Phase**

The operations- and maintenance-related traffic associated with the project is considered to be minimal. State routes and local roadways have adequate capacity to accommodate operations-related traffic. Consequently, no operations-related mitigation measures are required.

### **8.10.7 Involved Agencies and Agency Contacts**

The relevant agencies and appropriate contacts are shown in Table 8.10-4.

**TABLE 8.10-4**  
Agency Contacts

| <b>Agency</b>                                     | <b>Contact/Title</b>  | <b>Telephone</b> |
|---|---|------------------|
| City of Grand Terrace,<br>Planning Department     | Michelle Boustedt<br>22795 Barton Road<br>Grand Terrace, CA 92313 | (909) 430-2247   |
| City of Riverside<br>Planning Department          | Transportation Planner<br>3900 Main Street<br>Riverside, CA 92522 | (951) 826-5371   |
| County of Riverside<br>Traffic Operations Section | J. R. Morgan<br>2950 Washington Street<br>Riverside, CA 92504     | (951) 955-6815   |

### 8.10.8 Permits and Permitting Schedule

The short duration of the construction, in conjunction with the minute permanent addition of 24 trips, impose a relatively insignificant addition to existing traffic levels. The relevant permits required for work performed within city/county streets in project vicinity are identified in Table 8.10-5.

**TABLE 8.10-5**  
Required Permits

| Responsible Agency                               | Permit/Approval     | Schedule  |
|--|---------------------|-----------|
| County of Riverside, Encroachment Permit Section | Encroachment Permit | 4 weeks   |
| City of Grand Terrace  Public Works Department   | Encroachment Permit | 2-3 weeks |
| City of Riverside Public Works Department        | Encroachment Permit | 72 hours  |

### 8.10.9 References

California Department of Transportation (Caltrans). 1996. Traffic Manual, Chapter 5, Manual of Traffic Controls for Construction and Maintenance Work Zones.

California Department of Transportation (Caltrans). 1998. Traffic and Vehicle Systems Data Unit, (website: <http://www.dot.ca.gov/lhq/traffops/saferesr/trafdata/index.htm>).

California Department of Transportation (Caltrans). 2002. Standard Plans. June.

California Resources Agency. 1999. CEQA: The California Environmental Quality Act - Statutes and Guidelines. Amended March 29, 1999.

Colton Joint Unified School District. 2005. Draft Grand Terrace Educational Facility Environmental Impact Report. September.

Grand Terrace, City of. 1998. Planning Department. General Plan, Transportation Element. Adopted June.

Riverside, City of. Department of Public Works. 2005. Regulations for Construction Permits/Street Opening Permits.

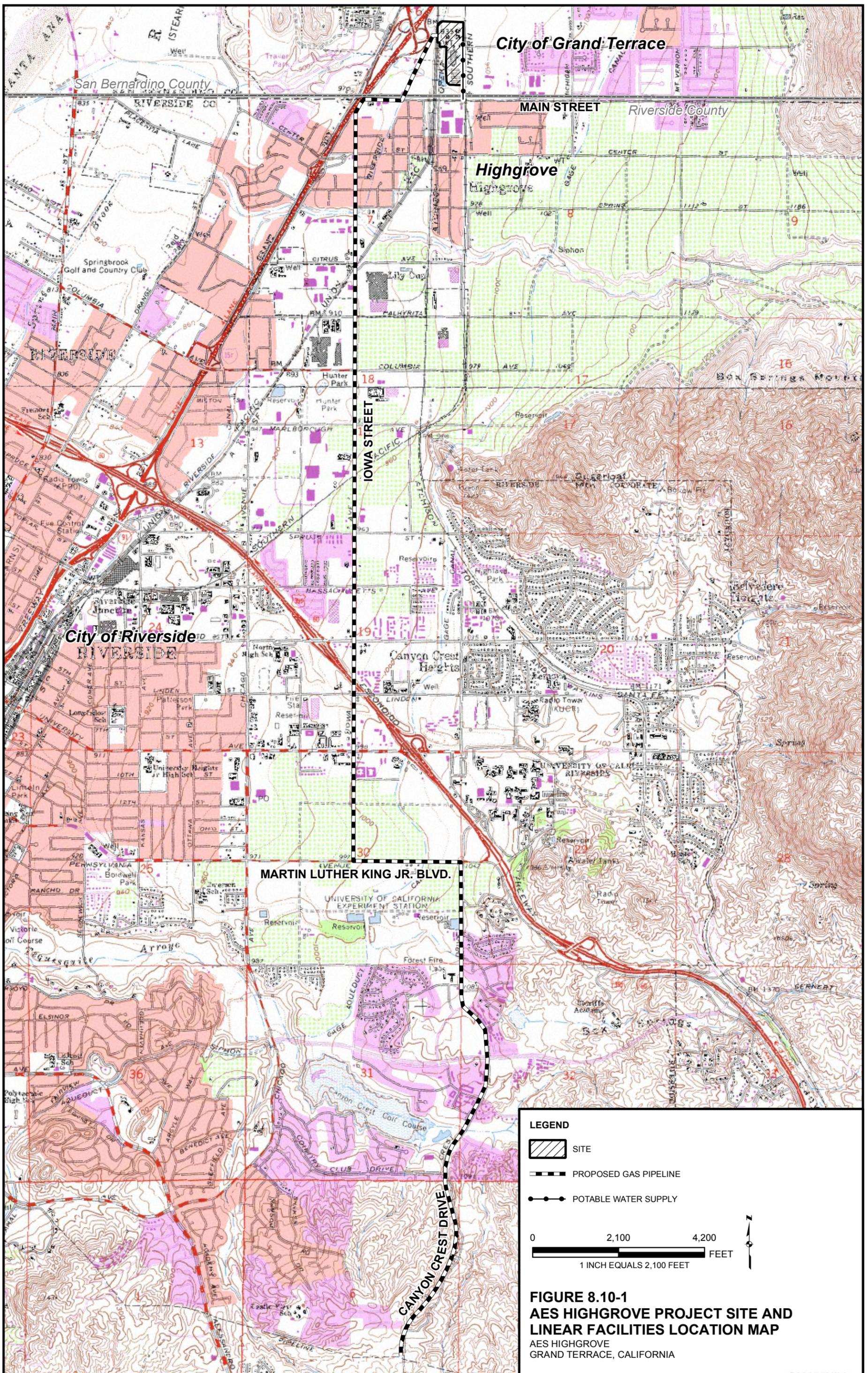
Riverside, City of. Planning Department. 2005. General Plan, Transportation Element.

Riverside County Encroachment Permit Section. 2005. Road Closure Requirements and Procedures.

Riverside County Planning Department. 2002. General Plan, Transportation Element.

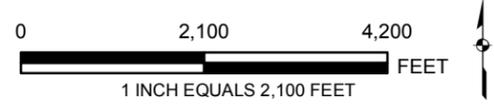
Lilburn Corporation. 2004. Outdoor Adventures Center Specific Plan. Final Environment Impact Report. May 6.

Transportation Research Board. 2000. Highway Capacity Manual, Special Report 209.

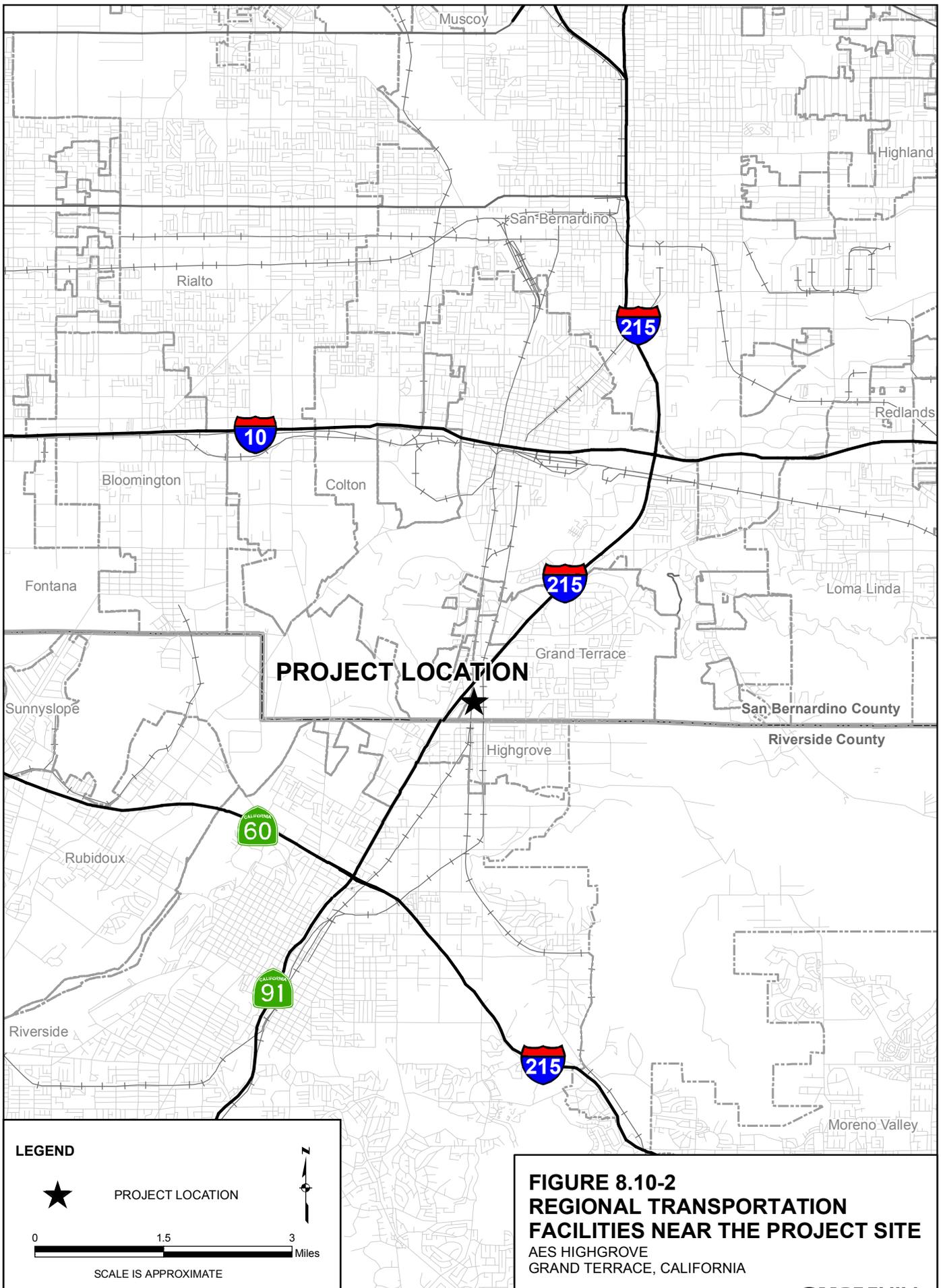


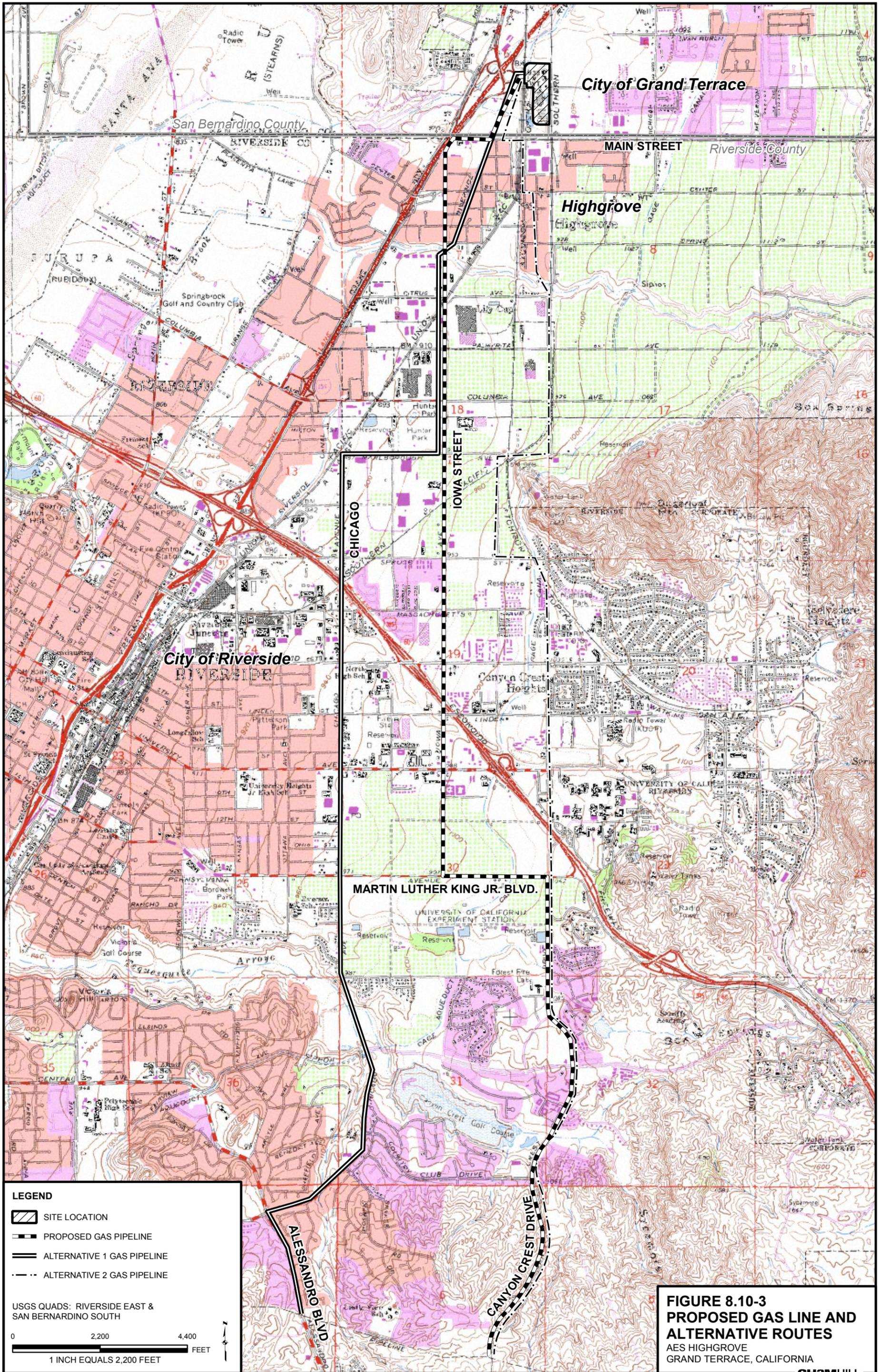
**LEGEND**

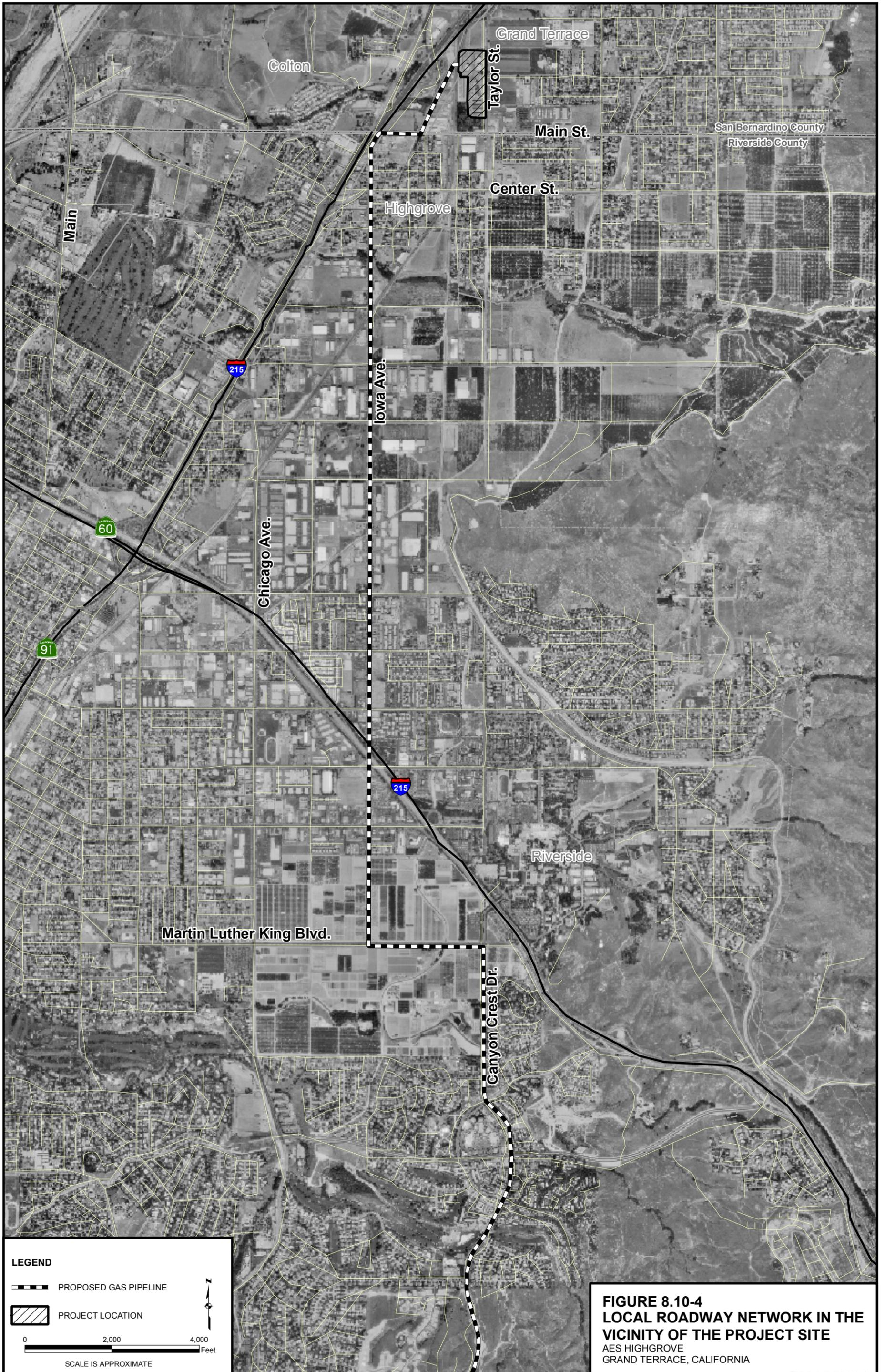
-  SITE
-  PROPOSED GAS PIPELINE
-  POTABLE WATER SUPPLY



**FIGURE 8.10-1**  
**AES HIGHGROVE PROJECT SITE AND**  
**LINEAR FACILITIES LOCATION MAP**  
 AES HIGHGROVE  
 GRAND TERRACE, CALIFORNIA







**FIGURE 8.10-4**  
**LOCAL ROADWAY NETWORK IN THE**  
**VICINITY OF THE PROJECT SITE**  
 AES HIGHGROVE  
 GRAND TERRACE, CALIFORNIA