TABLE OF CONTENTS

Page

7.10 TRAFFIC AND TRANSPORTATION 7.10-1
7.10.1 AFFECTED ENVIRONMENT 7.10-1
7.10.1.1 Regional Roadway Facilities 7.10-1
7.10.1.2 Local Roadway Facilities 7.10-1
7.10.1.3 Level of Service 7.10-2
7.10.1.4 Other Transportation Elements 7.10-4
7.10.2 ENVIRONMENTAL CONSEQUENCES 7.10-5
7.10.2.1 Thresholds of Significance 7.10-5
7.10.2.2 Construction Impacts 7.10-6
7.10.2.3 Operation Impacts 7.10-10
7.10.3 CUMULATIVE IMPACTS 7.10-12
7.10.4 MITIGATION MEASURES 7.10-12
7.10.5 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS 7.10-13
7.10.6 INVOLVED AGENCIES AND AGENCY CONTACTS 7.10-13
7.10.7 PERMITS REQUIRED AND PERMIT SCHEDULE 7.10-13
7.10.8 REFERENCES 7.10-14

TABLES

Table 7.10-1 Level of Service Description
Table 7.10-2 Signalized Intersection Level of Service
Table 7.10-3 Level of Service Criteria for Unsignalized Intersections
Table 7.10-4 Level of Service Thresholds for Two-Lane Roadway Segments (Class I)
Table 7.10-5 Level of Service Criteria for Multi-Lane Highways
Table 7.10-6 Peak-Hour Intersection Levels of Service – Existing Conditions
Table 7.10-7 Peak-Hour Roadway Segment Levels of Service – Existing Conditions
Table 7.10-8 Projected Average Daily Traffic Volumes
Table 7.10-9 Projected Construction Workforce and Deliveries
Table 7.10-10 Trip Generation During Peak Construction Month
Table 7.10-11 Peak-Hour Intersection Levels of Service – Near-Term Conditions
Table 7.10-12 Roadway Segment Levels of Service – Near-Term Conditions
Table 7.10-13 Trip Generation During Plant Operation
Table 7.10-14 Potential Improvement Projects at the Vicinity of the WPGS Project
Table 7.10-15 Peak-Hour Intersection Levels of Service – Projected Future Conditions (2035)
Table 7.10-16 Roadway Segment Levels of Service – Projected Future Conditions (2035)
Table 7.10-17 Applicable Traffic and Transportation Laws, Ordinances, Regulations, and Standards
Table 7.10-18 Involved Agencies and Agency Contacts

FIGURES

Figure 7.10-1 Regional Vicinity
Figure 7.10-2 Project Location Map
Figure 7.10-3 Existing Conditions Lane Geometrics
Figure 7.10-4 Existing Conditions Daily Average and Peak-Hour Turning Movement Volumes
Figure 7.10-5 Trip Distribution
Figure 7.10-6 Near-Term Conditions Project Only Trips
Figure 7.10-7 Near-Term Conditions Peak Hour Turning Movement Volumes
Figure 7.10-8 Near-Term Plus Project Conditions Peak Hour Turning Movement Volumes
Figure 7.10-9 Future Conditions Lane Geometries
Figure 7.10-10 Future Conditions Peak Hour Turning Movement Volumes

Figure 7.10-11 Future Conditions Project Only Trips
Figure 7.10-12 Future Conditions Plus Project Conditions Peak Hour Turning Movement Volumes

APPENDICES

Appendix P1 Existing Traffic Volumes
Appendix P2 Existing Conditions - Level of Service Analysis
Appendix P3 Accident Data
Appendix P4 Near-Term Conditions - Level of Service Analysis
Appendix P5 Near-Term plus Project Conditions - Level of Service Analysis
Appendix P6 Projected Future Conditions (2035) - Level of Service Analysis
Appendix P7 Project Future Conditions plus Project Operations (2035) - Level of Service Analysis

7.10 TRAFFIC AND TRANSPORTATION

This section assesses transportation impacts associated with the construction and operation of the proposed Willow Pass Generating Station (WPGS). The analysis primarily examines impacts on roadway level of service (LOS) expected during both construction and operation of the plant. Additional transportation factors examined in this section include parking, pedestrian and bicyclist impacts, safety, goods movement, and potential impacts to air, rail, and waterborne transportation networks. This section also identifies and reviews applicable laws, regulations, standards, and ordinances relevant to traffic and transportation activities.

Information sources include traffic counts conducted by URS Corporation, data provided by the California Department of Transportation (Caltrans), field observations, and conversations with Contra Costa County and the City of Pittsburg staff. URS Corporation performed project area explorations during November 2007 to document roadway characteristics, identify physical constraints, and assess general traffic conditions in the immediate vicinity of the project.

7.10.1 Affected Environment

7.10.1.1 Regional Roadway Facilities

The project is located within the City of Pittsburg, within Contra Costa County, California. It comprises a 26-acre site in the northeastern portion of the Pittsburg Power Plant (PPP). The project is located approximately 2 miles west of the centre of the City of Pittsburg, and just over 1 mile north of State Route (SR) 4. The study limits for the project extends between Bailey Road on the west, SR 4 on the south and Railroad Avenue on the east. Figure 7.10-1 illustrates the vicinity of the project.

The WPGS site lies near prime transportation corridors that connect northeastern Contra Costa County with major destinations within the state. SR 4 runs in an east-west direction and allows access to Interstate (I) 680, I-80 and I-5. SR 160 runs north from SR 4 towards Sacramento. Figure 7.10-2 shows the location of the project.

SR 4 provides road access from the San Francisco Bay Area. SR 4 is the primary interregional roadway serving the community of Pittsburg. It also serves as a major recreational and commuter route between the Bay Area, Central Valley, and Sierra foothills. Roadway widening from four to eight lanes (four lanes in each direction) with one lane in each direction designated as a high-occupancy vehicle (HOV) lane has recently been completed on this facility in the project vicinity. The speed limit along SR 4 varies between 45 and 65 miles per hour (mph) as the road transitions between urban and rural settings. Near the WPGS, the average daily volumes at Bailey Road are approximately 130,600 vehicles, and over 117,000 vehicles at Railroad Avenue (see Figure 7.10-3 for locations), on the sections of SR 4 near the project site (Caltrans, 2006).

7.10.1.2 Local Roadway Facilities

Willow Pass Road provides direct access to the WPGS site from SR 4. Willow Pass Road is an east-west arterial in the project vicinity. East of Bailey Road, Willow Pass Road becomes a two-lane roadway. South of Evora Road, Willow Pass Road becomes known as San Marco Boulevard. From the PPP site entrance continuing east, Willow Pass Road becomes known as West 10th Street. Between Bailey Road and Railroad Avenue (Figure 7.10-3), Willow Pass Road has posted speed limits between 25 and 35 mph. Land uses along Willow Pass Road consist of vacant land, service commercial, industrial and residential (see Figure 7.4-2, Existing Land Uses). Traffic counts taken within the project's vicinity on Willow Pass Road west of Beacon Street indicate that approximately 7,400 vehicles per day transverse Willow Pass Road, with an almost even split between westbound and eastbound traffic.

7.10.1.3 Level of Service

Level of service (LOS) is a qualitative indication of the level of delay and congestion experienced by motorists using an intersection. Levels of service are designated by the letters A through F, with A being the best condition and F being the worst (high delay and congestion). Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption, and lost travel time. Table 7.10-1 summarizes the levels of service criteria.

Signalized study intersections were evaluated based on the analysis method outlined in the *Technical Procedures Update* prepared by Contra Costa Transportation Authority (CCTA, 2006). The CCTA planning level analysis uses traffic volumes, lane geometry and signal phasing to estimate the volume-to-capacity ratio at a signalized intersection. For unsignalized intersections, the method from Chapter 17 of the Transportation Research Board's *Highway Capacity Manual 2000* (HCM) was used. The levels of service at unsignalized intersections is based on the average delay for stopped controlled movements. Tables 7.10-2 and 7.10-3 summarize the LOS criteria for signalized and unsignalized intersections, respectively.

Roadway segments with two lanes were evaluated using appropriate methodologies contained in Chapter 20 of the 2000 Highway Capacity Manual (2000 HCM). Two-lane highways where motorists expect to travel at high speeds are classified as Class I highways. On Class I highways, efficient mobility is paramount. These methodologies report LOS based on both percentage of time-spent-following and average travel speed for a Class I facility. Two-lane highways that function as access routes to Class I facilities, serve as scenic or recreational routes that are not primary arterials or pass through rugged terrain are generally assigned to Class II. They often serve short trips and mobility on them is less critical. All study roadway segments were determined to be Class I facilities. Table 7.10-4 summarizes the LOS thresholds for two-lane roadway segments.

For multi-lane roadway segments, LOS is based on the typical speed-flow and density-flow relationships as defined in the 2000 HCM. Multi-lane roadway segments have posted speed limits of 45 to 55 mph. They usually have four to six lanes; and may have a median or a two-way left-turn lane. They are typically located in suburban communities, leading into central cities, or along high-volume rural corridors connecting two cities or two significant land uses that generate a substantial number of daily trips. Table 7.10-5 summarizes the LOS thresholds for multi-lane roadway segments.

An existing LOS analysis based on the existing traffic volumes, lane geometries, and traffic controls was conducted for the following ten study intersections and six roadway segments (see Figure 7.10-4 for locations).

Study Intersections

1. Bailey Road/SR 4 Eastbound Ramps (signalized)
2. Bailey Road/SR 4 Westbound Ramps (signalized)
3. Bailey Road/Willow Pass Road (signalized)
4. Loftus Road/Willow Pass Road (signalized)
5. Willow Pass Road/North Parkside Drive Westbound Ramps (unsignalized)
6. Willow Pass Road/North Parkside Drive Eastbound Ramps (unsignalized)
7. Railroad Avenue/SR 4 Westbound Ramps (signalized)
8. Railroad Avenue/SR 4 Eastbound Ramps (signalized)
9. Railroad Avenue/10th Street (signalized)
10. Montezuma Street/Herb White Way/10th Street (unsignalized)

Roadway Segments

1. Bailey Road, between SR 4 Westbound Ramps and Willow Pass Road
2. Willow Pass Road, between Bailey Road and Loftus Road
3. Willow Pass Road, between Loftus and North Parkside Drive Ramps
4. Willow Pass Road, between North Parkside Drive Ramps and West 10th Street
5. North Parkside Drive, between Willow Pass Road and Railroad Avenue
6. Railroad Avenue, between North Parkside Drive and SR 4 Westbound Ramps

LOS analysis at the study intersections and roadway segments was conducted for the following conditions:

- Existing Conditions – Traffic conditions were evaluated based on existing lane geometries, traffic controls and traffic volumes.

- Near-Term Conditions – Traffic conditions were evaluated considering existing traffic plus growth applied to Year 2009 traffic volumes based on the CCTA Travel Demand Model. Year 2009 was evaluated as Near-Term Conditions, because the construction of the project is projected to begin during 2009.

- Near-Term plus Project Conditions – Traffic conditions were evaluated considering Near-Term forecasted conditions plus project construction-related traffic. Construction-related traffic was considered to analyze worst-case conditions, because the construction workforce is projected to generate maximum trips.

- Projected Future Conditions (2035) – Future conditions (Year 2035) were forecasted, based on CCTA Travel Demand Model, taking into account future developments in addition to planned roadway improvements.

- Projected Future Conditions plus Project Operations (2035) – Future forecasted conditions (Year 2035) plus project-related traffic during operations were evaluated.

Peak-hour turning movement volumes at the study intersections and 24-hour bi-directional traffic volumes along the study roadway segments were collected during November 2007. Figure 7.10-3 illustrates the existing lane geometries and traffic control at the study intersections. Figure 7.10-4 illustrates the peak-hour turning movement volumes at the study intersections and 24-hour traffic volumes under existing conditions. The peak-hour turning movements and 24-hour bi-directional traffic volumes are included in Appendix P.

LOS analysis at the study intersections and roadway segments were conducted based on the traffic volumes, lane geometries, and traffic control data collected. Tables 7.10-6 and 7.10-7 summarize the results of the analysis. Under Existing Conditions, all of the study intersections operate at acceptable levels (i.e., LOS $\geq$ D).

Under Existing Conditions, four of the six study roadway segments operate at unacceptable levels during both peak hours. The roadway segments of Bailey Road between the SR 4 Westbound Ramps and Willow Pass Road, and Railroad Avenue between North Parkside Drive and SR 4 Westbound Ramps are the exceptions, operating at LOS A. The roadway segments that are operating at unacceptable levels could be restored to operate at acceptable levels by widening the roadway segments to provide two lanes in both directions.

The projected average daily traffic volumes along the roadway segments under existing conditions (and all other analyzed scenarios) are summarized in Table 7.10-8.

Detailed calculations for the study intersections and roadway segments are provided in Appendix P.

7.10.1.4 Other Transportation Elements

Parking

Parking for the existing PPP operation is currently provided on the site adjacent to the existing administration building. The existing administration building and parking lot are both located within the WPGS site boundary, and both will be demolished as part of the project. A new administration building and parking lot will be provided at the south portion of the WPGS site. The new parking lot will have a total of 50 new spaces and will be used for parking for both existing PPP operations and the new WPGS facility.

Public Transportation

Eastern Contra Costa Transit Authority (Tri Delta Transit) provides over 2,500,000 trips each year for a population of nearly 250,000 residents in the 225 square miles of eastern Contra Costa County, according to information provided by Tri-Delta Transit. Tri Delta Transit operates 15 local bus routes Monday through Friday, 3 local bus routes on weekends and holidays, commuter routes to Livermore, Dublin, and Martinez, door-to-door bus service for senior citizens and people with disabilities, and numerous shuttle services for community events.

Tri Delta Transit functions as the principal transit service provider for the eastern Contra Costa County communities of Bay Point: Pittsburg, Antioch, Brentwood, and Oakley. Service remains limited, with Express Route 300 running every 30 minutes during peak periods, and Route 387, which runs every 60 minutes. Weekend service is provided by Routes 392 and 393. Although Route 380 runs along Bailey Road through Willow Pass Road and down Loftus Road, it does not reach the project site. For better convenience, Route 387 travels up Bailey Road onto Willow Pass Road leading to the project site entrance. Route 387 also extends down to Railroad Avenue.

BART has a Pittsburg/Bay Point station that directly connects these communities with the rest of the Bay Area, including Contra Costa County communities such as Concord, Walnut Creek, and Lafayette, as well as downtown Oakland, San Francisco, and Daly City.

Bicycle and Pedestrian Circulation

Lanes and signing for bicyclists are provided on Willow Pass Road between Marys Avenue and Loftus Road in both directions. The posted speed limit on Willow Pass Road varies between 25 to 35 mph as surrounding land use varies from residential to industrial. All of the intersections analyzed for Existing Conditions included pedestrian crosswalks.

Airports

Oakland International Airport, located along Interstate-880 approximately 50 miles from the project site, operates as the nearest major international airport. San Francisco International Airport, one of the nation's busiest airports, is located approximately 70 miles from the project site and is accessible via U.S. Highway 101. San Jose Mineta International Airport is located farther south, also accessible via U.S. Highway 101 or I-280. Regional airports accessible from Pittsburg include Byron, Sacramento, Stockton, and Buchanan fields. The airports closest to the project are Byron and Buchanan. Buchanan airport is a general use airport approximately 12 miles southwest of the project. Byron airport is a full-service general aviation airport approximately 26 miles southeast of the project (see Figure 7.10-1).

Safety

No roadway construction is currently occurring along Willow Pass Road/West 10th Street in the immediate vicinity of the project. Based on the field observations, sight distances are adequate at the study intersections under Existing Conditions. Willow Pass Road/West 10th Street, including the access road to the project, provides adequate sight distances.

Within the vicinity of the WPGS site, over a period of 10 years (1997 – 2007), there have been a total of 239 recorded collisions at the study intersections. Out of the 239 collisions in the immediate vicinity of the project site, 33 occurred at the intersection of Railroad Avenue and 10th Street, 25 occurred at the intersection of Willow Pass Road and North Parkside Drive and the remaining collisions occurred at the remaining study intersections. Accident data provided by the California Highway Patrol are attached in Appendix P.

Goods Movement

Construction materials such as concrete, pipe, wire and cable, fuels, reinforcing steel, and small tools and comsumables will be delivered to the WPGS site by trucks. The steam turbines will also be delivered by truck. Some heavy equipment will be transported by rail to the existing spur at the PPP site. The rail spur west of the plant access road on the PPP site will be reconditioned, as required, for a portion of its length up to the 11.2-acre construction laydown area located southwest of the WPGS and within the PPP site and Pacific Gas and Electric Company (PG&E) switchyard property (see Figure 2.2-2). Equipment that may be potentially delivered by rail includes the combustion turbines, generators, GSU transformers, and HRSG modules. Shipments will be off-loaded in the laydown area. A heavy haul transport will be used to move such equipment to its foundations or assembly point.

7.10.2 Environmental Consequences

This section discusses potential transportation-related impacts from the construction and operation of the project. A Year 2009 (i.e., Near-Term) traffic analysis was conducted to evaluate the impacts of traffic generated by construction workers from the project, and a Year 2035 (i.e., Projected Future) traffic analysis was conducted to evaluate the impacts of traffic generated by employees at the project.

Essentially all of the project elements will be constructed within the PPP site and PG&E switchyard property, excluding two 5-mile-long water pipelines connecting the WPGS to the Delta Diablo Sanitation District Wastewater Treatment Plant (DDSD WTP). Three miles of the five-mile-long route currently contains an unused fuel oil pipeline owned by Mirant Delta, LLC which historically was used to convey oil between the Contra Costa Power Plant and the PPP. The existing pipeline is 10.75 inches in diameter, is now out of service, and will be replaced by the new water pipelines. The water pipeline alignment runs through the PPP site, crosses under Willow Pass Road/West 10th Street and Burlington Northern Santa Fe Railroad (BNSF), then turns east and runs adjacent to the Union Pacific Railroad. The alignment crosses beneath railroad tracks in several locations (consistent with the location of the existing unused fuel oil pipeline). The east section of the water pipeline alignment crosses under Pittsburg-Antioch Highway, runs along the north side of the Highway, and continues north on Arcy Lane to the DDSD WTP (see Figure 7.10-2). The DDSD WTP is located at 2500 Pittsburg-Antioch Highway in Antioch, California.

7.10.2.1 Thresholds of Significance

Significance criteria were developed based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, which identifies potentially significant project impacts. A significant traffic-related project impact would occur if the project significantly changed the operating conditions on the surrounding roadway network. Roadway section LOS analysis was conducted to assess operational

performance of the roads during construction and operation of the project. The applicable significance threshold for levels of service is degradation from acceptable levels to unacceptable levels.

Significant issues to be addressed include:

- Additional Vehicular Traffic: would the additional traffic generated by the project adversely affect operating conditions (i.e., LOS) on local and regional roadways?
- Public Transit: would the additional traffic generated by the project impede public transit operations in the vicinity of the project?
- Bicycle and Pedestrian Circulation: would the additional traffic generated by the project obstruct bicycle and pedestrian access to and from the project site or along adjacent bicycle and pedestrian routes?
- Parking Facilities: would the additional traffic generated by the project consume limited parking in the proximity of the project site?
- Goods Movement: would the additional traffic generated by the project hinder goods movement along local and regional roadways?
- Safety: would the traffic generated by the project impose any safety concerns, such as a significant increase in accidents?
- Air, Rail, and Waterborne Traffic: would the traffic generated by the project interfere with air, rail, or waterborne traffic, or access to these transportation modes?

Based on the adopted policies of CCTA, a significant impact would occur if the addition of project-related traffic would:

- Cause:
  - The operations of a signalized study intersection to decline from an acceptable level (LOS D) to an unacceptable level (LOS E or higher);
  - Deterioration in already unacceptable operations at a signalized intersection by a change in v/c ratio of more than 0.01 or a change in average delay of more than 5 seconds; or
  - Substantially increase hazards or congestion due to a design feature (e.g., sharp curves) or incompatible uses.
- Result in inadequate emergency access; or
- Result in inadequate parking capacity.

7.10.2.2 Construction Impacts

Construction Activities and Traffic Forecast

Mobilization of the WPGS project is expected to ensue after receipt of certification. Demolition and construction are estimated to begin in October 2009 and take up to 34 months. Construction traffic (trucks and passenger vehicles) will use the PPP site entrance off West 10th Street. The traffic route to

this entrance will be from east or the west on State Route 4, exiting either to the north on Railroad Avenue and turning on West 10th Street to the PPP site entrance; or Bailey Road and then turning on to Parkside Drive to Range Road, turning north and continuing on Willow Pass Road to the PPP site entrance.

Weekday traffic operations during peak hours were evaluated for the local roadway network adjacent to the project during construction. Onsite construction of the project is expected to take place over a period of 34 months, as summarized in Table 7.10-9. The schedule has been estimated on a single-shift, 10-hours-per-day and 50-hours-per-week basis. However, occasional use of a second shift may be necessary to make up schedule delays or to complete critical construction activities. During the startup and testing phase of the project, some activities may continue 24 hours per day, 7 days a week.

The onsite workforce will consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The peak construction traffic is expected during Month 21 (June 2011) of construction when both the construction workforce and delivery truck traffic are projected to be high, as shown on Table 7.10-9.

Based on the projected construction workforce, additional traffic from the project was projected. For the worst-case analysis, it is assumed that 90 percent of the total construction workforce and 100 percent of the delivery trucks will arrive and depart from the project site during the a.m. and p.m. peak hours. Table 7.10-10 summarizes the proposed trip generation from the project in the peak construction month. Based on experience with similar projects, it is estimated that part of the workforce will carpool, and the average vehicle occupancy will be 1.5 persons per vehicle. During the peak month, the estimated number of construction staff arriving and departing during the peak hours per day based on these assumptions is projected to be 351 (390 × 90 percent). The projected number of trips by construction staff is projected to be 234 (351 ÷ 1.5) during the peak hours. The greatest number of truck trips expected during construction of the project in the peak construction month is approximately 19 daily truck trips. To analyze the worst case, it was assumed that all of the truck deliveries will normally be made on weekdays between 7:00 a.m. and 5:00 p.m. Peak construction traffic during the peak month (Month 21) was used for level of service analysis, to analyze a worst-case scenario for construction traffic.

Based on the assumptions and projected construction workforce, the project is projected to generate approximately 506 daily trips, with 253 trips occurring during the a.m. and p.m. peak hours during the peak construction month. It should be noted that the construction workers usually arrive early in the morning and depart early in the evening before the peak local traffic hour begins. Assuming the arrival and departure of the construction workers during the peak hour results in a conservative traffic analysis. It should be noted that the projected traffic will occur only during the peak construction month and will then start to reduce.

New water supply and waste water lines will be constructed for the project. Construction of these pipelines would require trenching within or along (and sometimes underneath) Willow Pass Road/West 10th Street, the active BNSF and Union Pacific Railroads rights of way, and Pittsburg-Antioch Highway, which could potentially require alternating, temporary, partial closure of the roadways during trenching work. It is not anticipated that closure of the entire roadways will be required or that any disruption to railroad activities will occur. Mirant will coordinate with BNSF and Union Pacific Railroads to ensure railroad operations are not affected. If any temporary, partial roadway closures are required during construction, the closures would be scheduled in accordance with Contra Costa County, City of Pittsburg, and City of Antioch requirements.

Some heavy equipment will be transported by rail to the existing spur at the site. A portion of the rail spur west of the plant access road will be reconditioned. Equipment likely to be delivered to the site by rail include the combustion turbines and generators, GSU transformers, and HRSG modules. Shipments

will be off-loaded at the laydown area. A heavy haul transport will be used to move the equipment to its foundations or assembly point.

Trip Distribution

Directional trip distribution and assignment of projected traffic generated by the project was estimated using existing traffic counts, assessment of existing and projected traffic flows and travel patterns, the vicinity and location of the project, and the Regional Travel Demand Model maintained by CCTA. The trip distribution is illustrated on Figure 7.10-5. The projected traffic from the project during construction was assigned to the study intersections based on the trip distribution. Figure 7.10-6 illustrates the project-only peak-hour trips at the study intersections that are projected to occur during the peak construction month of the project.

Traffic Impacts During Project Construction

It is assumed that construction of the project will start in late 2009. Level of Service analyses at the study intersections and roadway segments were based on peak-hour turning movements under Near-Term Conditions by applying a growth factor of 2 percent per year to existing traffic volumes at the study intersections and roadway segments. Figure 7.10-7 illustrates the daily average and peak-hour turning movements at the study intersections under Near-Term Conditions. The projected peak-hour project trips from the project under the worst-case scenario as described above were added to the Near-Term Conditions to project peak-hour traffic volumes under Near-Term plus Project Conditions. The projected daily average and peak-hour turning movements at the study intersections under Near-Term plus Project Conditions are illustrated on Figure 7.10-8.

LOS analysis under Near-Term and Near-Term plus Project Conditions was conducted based on the projected peak-hour turning movements. Table 7.10-11 summarizes the results of the analysis at the study intersections. Under Near-Term and Near-Term plus Project Conditions, all of the study intersections are projected to operate at acceptable levels (i.e., LOS D or better). While the addition of traffic from the project construction will temporarily decrease the LOS of several of the study intersections, the LOS for all of the intersections will remain above acceptable levels. Therefore, the addition of construction traffic from the project is not projected to have any significant impacts and no additional improvements will be required.

Table 7.10-12 summarizes the results of the analysis for the roadway segments. Similar to Existing Conditions, four of the six study roadway segments under Near-Term and Near-Term Plus Project Conditions are projected to operate at unacceptable levels during both peak hours. The roadway segments of Bailey Road between SR 4 Westbound Ramps and Willow Pass Road, and Railroad Avenue, between North Parkside Drive and SR 4 Westbound. Ramps are projected to continue to operate above acceptable levels. As shown on Table 7.10-12, the addition of the projected construction traffic from the project during the peak month of construction is not expected to have any significant impacts along the study roadway segments and no additional improvements will be required.

The projected average daily traffic volumes along the roadway segments under Near-Term Conditions (and all other analyzed scenarios) are summarized in Table 7.10-8. Detailed calculations for the study intersections and roadway segments are attached in Appendix P.

Based on the significance thresholds provided in Section 7.10.2.1, it is projected that the addition of traffic during construction of the project would not have significant impacts at the study intersections or roadway segments. The addition of the traffic is projected not to degrade the LOS to unacceptable levels.

Parking Facilities

The current parking lot will be demolished as part of the project. A new parking lot will be provided on the WPGS site. The new parking lot will have a total of 50 new spaces and will be used for existing PPP operations and the new WPGS facility. During construction, adequate parking will also be available in the construction laydown and parking areas within the PPP site and PG&E switchyard property. Therefore, the projected traffic during the peak construction month would not have significant impacts related to parking or roadway segments.

Public Transportation

As mentioned earlier, Tri Delta Transit's Route 387 travels up Bailey Road onto Willow Pass Road to the project site. Route 387 also extends down to Railroad Avenue. The addition of the traffic projected to be generated during the peak month of construction is not expected to have significant impacts on public transportation.

Bicycle and Pedestrian Circulation

A bicycle route runs along Willow Pass Road between Marys Avenue and Loftus Road in both directions. No bicycle facilities are present in the immediate vicinity of the WPGS project. Pedestrian facilities or designated routes are present under Existing Conditions along Willow Pass Road near the vicinity of the project; however, no significant impacts to pedestrian or bicycle circulation would result from the addition of the traffic projected to be generated during the peak project construction month.

Goods Movement

The relatively few vehicles expected during construction and after the permanent addition of 20 employees, and the small number of businesses located within the immediate vicinity of the project suggests that no significant impacts would result to goods movement.

Safety

The roads within the immediate vicinity of the WPGS site provide adequate sight distances. Truck traffic within the area does not mandate special consideration, and no significant impacts on safety issues are expected to result from either construction traffic or the permanent additional of 20 employees.

Air, Rail, and Waterborne Traffic

The project would have no adverse impact on air, rail, or waterborne traffic.

The airports closest to the site are the regional Buchanan and Byron airports, which are 12 miles and 26 miles from the site, respectively. Due to the considerable distance away from the site, the project would have no effect on air traffic patterns.

In the vicinity of the study area, the BNSF track will be used to deliver heavy equipment. The portion of the rail spur on the PPP site leading to the 11.2-acre construction laydown yard will be reconditioned (see Figure 7.10-2). In addition, although the offsite water pipelines will cross under both the Union Pacific and BNSF Railroad tracks, jack and bore pipeline installation method will be used at these locations to ensure that railroad operations are not affected. Based on anticipated construction worker routes and delivery routes, as well as pipeline installation method for the offsite linear, construction activities would not have an adverse impact on the current rail traffic.

The project would not affect any waterborne traffic on Suisun Bay, since no construction activities will take place in or adjacent to the water.

7.10.2.3 Operation Impacts

Operations Activities and Traffic Forecast

To assess potential traffic impacts from project operations, Projected Future Conditions (i.e., year 2035) were estimated based on CCTA Travel Demand Model forecasts and taking into account future developments in the study area and planned roadway improvements. Future developments are based on the assumption that all vacant lands throughout Contra Costa County and the City of Pittsburg will be developed according to their specific plan and general plan designations.

After the Projected Future Conditions were estimated, Projected Future Condition Plus Project Operations was estimated.

The project is expected to begin operations in 2012. Plant operations will require approximately 20 permanent workers: 12 full-time personnel working 5 days per week, 8 hours per day, and 8 personnel working on a rotating shift. The worst-case scenario for transportation of these workers to and from the WPGS site assumed that there would be no carpooling and all of the workers would arrive and leave during peak hours. It is projected that these workers would generate approximately 40 daily trips, with 20 occurring during the a.m. peak hour and 20 occurring during the p.m. peak hour. The plant is scheduled to operate 7 days a week, 365 days a year, and therefore, traffic trips projected to be generated from workers would be consistent throughout the year. Plant operations would also generate approximately 10 delivery truck trips a day. The delivery truck trips are projected to generate approximately 20 daily trips. The projected trip generation during operation of the plant is summarized in Table 7.10-13.

Signal Warrant Analysis

In addition to level of service analysis, signal warrant analysis using the Manual of Uniform Traffic Control Devices (MUTCD) Peak Hour Warrant (Warrant 3) was conducted at all unsignalized intersections to assess Projected Future (2035) and Projected Future Plus Project Operations (2035). Signal warrant analysis under Near-Term Plus Project Conditions was not conducted because the construction traffic would be temporary.

Intersections projected to meet the MUTCD peak-hour signal warrant under projected Future Conditions were analyzed as signalized intersections as described below. It was also assumed that with the installation of traffic signals, the intersection approaches would be widened to provide an exclusive left-turn lane and a shared through/right-turn lane. Level of service analysis at the study intersections was conducted based on the projected peak-hour turning movements and the assumptions made above.

Under Existing Conditions, no intersections warrant the installation of a traffic signal. Under the Future Conditions, the intersection of Montezuma Street/Herb White Way/10th Street is projected to warrant installation of a traffic signal. Therefore, under Future Conditions (2035) and Future Plus Project Conditions (2035) analysis, the intersection mentioned above is assumed to be signalized with lane geometries shown on Figure 7.10-9.

Traffic Conditions and Impacts During Operations

Based on the minimal operational added trips, the WPGS plant operations would not substantially change the LOS of intersections or roadway segments in the study area. However, even without the project, two of the ten study intersections and two of the six roadway segments are projected to operate at unacceptable conditions (i.e., LOS F) under projected year 2035 conditions.

LOS analysis at the study intersections and roadway segments was conducted under Future Conditions (2035) to evaluate future traffic conditions and to determine whether a significant future traffic impact exists. The peak-hour turning movements were projected by applying a growth factor of 2 percent per year to project Year 2035 Conditions. Figure 7.10-10 illustrates daily average and peak-hour turning movements at the study intersections under Future Conditions (2035). The results of the analysis for Projected Future Conditions (2035) are summarized in Table 7.10-15. Under Future Conditions, two intersections are projected to operate at unacceptable levels during the peak hours. The intersections of Railroad Avenue/SR 4 Westbound Ramps and Railroad Avenue/SR 4 Eastbound Ramps are projected to operate at unacceptable levels even without the addition of the traffic from the project. Improvements would be required to restore the projected LOS of these intersections to acceptable levels. The addition of the traffic from the project is projected not to have significant impacts at the study intersections.

The roadway segments along Willow Pass Road between Bailey Avenue and North Parkside Drive Ramps were analyzed as multi-lane roadways because Contra Costa County has plans to widen Willow Pass Road to provide two lanes in each direction. The roadway segments of Willow Pass Road between North Parkside Drive Ramps and West 10th Street and North Parkside Drive between Willow Pass Road and Railroad Avenue were analyzed as a two-lane road, similar to Existing Conditions. Table 7.10-16 summarizes the results of the analysis. Under Projected Future Conditions (2035), four of the six roadway segments are projected to operate at acceptable levels. The roadway segments of Willow Pass Road between North Parkside Drive Ramps and West 10th Street and North Parkside Drive between Willow Pass Road and Railroad Avenue are projected to operate at unacceptable levels similar to Existing Conditions. This would be a significant future impact (even without the traffic from the project) to study roadway segments and improvements would be required to restore this roadway segment.

The projected average daily traffic volumes along the roadway segments under Future Conditions (and all other analyzed scenarios) are summarized in Table 7.10-8.

LOS analysis at the study intersections and roadway segments were conducted under Future Conditions Plus Project Operations (2035) to evaluate future project operational traffic and to determine whether the project's contribution to future traffic impacts is cumulatively considerable. Traffic from the project was distributed based on the trip distribution at the study intersections and roadway segments and added to the projected traffic volumes under Future Conditions. Figure 7.10-11 illustrates the project-only peak-hour trips at the study intersections during project operations. Figure 7.10-12 illustrates daily average and peak-hour turning movements at the study intersections under Future Plus Project Operations Conditions. Tables 7.10-15 and 7.10-16 summarize the results of the Future Conditions (2035) and Future (2035) Plus Project Operations Conditions analysis for study intersections and roadway segments. Under Future (2035) Plus Project Operations Conditions, two study intersections and four roadway segments are projected to operate at unacceptable levels similar to Future (2035) Conditions. The addition of project traffic is not projected to have a significant impact on intersections or roadway segments and is not considered cumulatively considerable. The addition of project traffic is projected not to have significant impacts at the study intersections or roadway segments, since the intersections and roadway segments projected to operate at unacceptable levels would do so under Future (2035) Conditions even without the traffic from the project. Therefore, the project's operational impacts would be less than significant and would not require any additional improvements.

Detailed calculations for the LOS analysis at the study intersections and roadway segments are attached in Appendix P in Volume II of this AFC.

Hazardous Materials and Waste Transport

Construction of the proposed facility and the necessary demolition of certain existing facilities will generate hazardous wastes consisting primarily of batteries, mercury (e.g., fluorescent lights), asbestos-containing materials, and various liquid wastes (e.g., cleaning solutions, solvents, paint, and antifreeze).

Operation of the WPGS would also generate additional waste that include lubricants, water treatment chemicals, and waste oil.

Truck trips required to transport hazardous waste materials during plant operations are included in the calculation of truck trips in the above sections. As a worst-case scenario, all demolition associated truck trips are assumed to go to a Class I landfill. A licensed hazardous waste transporter would move materials that require offsite disposal to a Class I hazardous waste landfill. The waste haulers will access the WPGS via the existing entrance to the PPP site off West 10th Street. The most likely routes for removal of hazardous waste from the WPGS site would with trucks be exiting the main plant gate onto West 10th Street, turning south onto Railroad Avenue and then joining either the eastbound or westbound lanes of SR 4. Upon reaching SR 4, hazardous waste haulers can head east to Stockton to reach I-5. Alternatively, haulers could continue through Stockton SR 99, which parallels I-5 but runs slightly east through the Central Valley communities of Merced and Fresno. I-5 and SR 99 reach the three California Class I hazardous waste facilities (see Section 7.13, Waste Management, for additional information).

The major highway that would be used to carry hazardous wastes from the WPGS to the appropriate landfills, I-5, contains adequate capacity to accommodate these vehicle trips. In case of a hazardous materials spill, the California Highway Patrol and local fire department and other local authorities shall be contacted immediately by the transporter.

Aqueous ammonia will be used, stored, and delivered to the site during operation as described in detail in Section 7.12, Hazardous Materials Handling. Tanker trucks with a capacity of up to about 8,000 gallons will deliver aqueous ammonia to the facility from suppliers in Northern or Central California. Such deliveries will be made as necessary (approximately once a week during peak operation).

7.10.3 Cumulative Impacts

According to the Contra Costa Transportation Authority, several potential projects are near the proposed WPGS site. The potential improvements projects identified near the proposed WPGS site are shown in Table 7.10-14. Many are bike lanes and bike path improvements, and most are still in the planning phase and not fully funded. Further, it is projected that the construction of the capital improvement projects will not occur during the same time the proposed project is under construction (October 2009 through July 2012). Therefore, no significant cumulative impacts to traffic are expected during construction of the WPGS.

Two intersections and two road segments in the study area are already operating at unacceptable levels and require improvements. Although a significant future cumulative traffic impact is projected for study area intersections and roadways, the traffic generated during WPGS operations is not expected to be cumulatively considerable, and therefore, project operations would have a less-than-significant cumulative impact to traffic (see above Section 7.10.2.3 for further discussion).

7.10.4 Mitigation Measures

The addition of the traffic projected to be generated from the project during construction or operation of the project is projected not to have any significant impacts at the study intersections or roadway segments. No additional improvements other than those required under "No-Project" Conditions will be required due to the addition of the traffic from the project. Based on the significance threshold documented earlier, the addition of the traffic from the project is projected not to have any significant impacts at the study intersections or roadway segments.

The following mitigation measures are proposed to minimize construction-related trip-making and resultant increases of traffic to the surrounding roadway circulation system.

TRA-1 Traffic Control Measures

A standard traffic and monitoring control plan designed to minimize impacts to traffic flow will be developed and implemented consistent with the size and scope of the project construction activity.

Proposed measures include but are not limited to the following:

- Schedule traffic lane or road closures during off-peak hours whenever possible (e.g., during construction of pipeline in the vicinity of Willow Pass Road/West 10th Street and Pittsburg-Antioch Highway).
- Use proper signs and traffic control measures in accordance with Caltrans, County, and City requirements. All traffic signs, equipment, and control measures will conform to the provisions specified in the California Manual of Uniform Traffic Control Devices. Specific jurisdictional requirements will be identified during the plan review and approval process.
- Employ cut and cover techniques during the excavation/trenching operations for utilities to minimize roadway delays.
- Limit vehicular traffic to designated access roads, construction laydown and worker parking areas, and the project construction site.
- Provide orientation and briefing to employees and contractors on the desired construction route.
- Encourage worker carpooling to minimize drive-alone worker trips.

7.10.5 Laws, Ordinances, Regulations, and Standards

The project will be constructed and operated in accordance with all laws, ordinances, regulations, and standards (LORS) applicable to traffic and transportation. These LORS are summarized in Table 7.10-17.

The Contra Costa County Transportation Authority serves as the principal transportation agency for Contra Costa County. In order to ensure a uniform standard for analyzing traffic impacts, CCTA has prepared Technical Procedures that detail the appropriate analytical tools and methodology for conducting traffic studies. Local jurisdictions within Contra Costa County follow the CCTA Technical Procedures and guidelines for analyzing traffic impacts.

7.10.6 Involved Agencies and Agency Contacts

This project lies in proximity to roads operated by both the City of Pittsburg and Contra Costa County. The relevant agencies and appropriate contacts are provided in Table 7.10-18.

7.10.7 Permits Required and Permit Schedule

It is anticipated that no road closures along existing roadways will be required for the project. In addition, the total number of trips projected to be generated during construction and operation will not be significant. Therefore, no special permits will be required with respect to the traffic and transportation for the project. Should a temporary road closure be necessary, the required permits will be obtained.

7.10.8 References

California Highway Patrol, 2008. Email exchange. May 2008.

Caltrans (California Department of Transportation), 1999 and 2006. *Traffic and Vehicle Systems Data Unit*. District 4. Internet address: http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/

CCTA (Contra Costa Transportation Authority), *2006 Update Technical Procedures Update.*

CFR *(Code of Federal Regulations*), 2007. *49, Transportation, Parts 100 to 185*. Office of the Federal Register, National Archives and Records Administration. Revised, October 1, 2007. Internet address: http://www.access.gpo.gov/nara/cfr/waisidx_07/49cfrv2_07.html.

Transportation Research Board, 2004. *Highway Capacity Manual 2000.* National Research Council, Washington, D.C. Updated 2004.

Tri Delta Transit, 2008. Internet address: http:// trideltatransit.com/. Schedule and Map Information.

❖❖❖

Table 7.10-1
Level of Service Description

Level of Service	Type of Flow	Delay
A	Stable Flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.
B	Stable Flow	Slight delay. If signalized, an occasional approach phase is fully utilized.
C	Stable Flow	Acceptable delay. If signalized, a few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle.
D	Approaching Unstable Flow	Tolerable delay. Delays may be substantial during short periods, but excessive back ups do not occur.
E	Unstable Flow	Intolerable delay. Delay may be great—up to several signal cycles.
F	Forced Flow	Excessive delay.

Table 7.10-2
Signalized Intersection Level of Service

LOS	Sum of Critical Volume-to-Capacity Ratio
A	< 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	> 1.00

Source: Contra Costa Transportation Authority, Technical Procedures.

Table 7.10-3
Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds)
A	0 – 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 – 50
F	> 50

Source: Transportation Research Board, 2004. *Highway Capacity Manual 2000*.

Table 7.10-4
Level of Service Thresholds for Two-Lane Roadway Segments (Class I)

Level of Service	Percent Time Spent Following (%)	Average Travel Speed (mph)
A	≤ 35.0	≤ 55.0
B	> 35.0 – 50.0	> 50.0 – 55.0
C	> 50.0 – 65.0	> 45.0 – 50.0
D	> 65.0 – 80.0	> 40.0 – 45.0
E	> 80.0	≤ 40.0

Source: Chapter 20, *Highway Capacity Manual* 2000, Transportation Research Board, 2004.

Table 7.10-5
Level of Service Criteria for Multi-Lane Highways

Free-Flow Speed (mph)	Criteria	Level of Service				
		A	B	C	D	E
60	Maximum Density	11	18	26	35	40
	Average Speed	60.0	60.0	59.4	56.7	55.0
	Maximum V/C	0.30	0.49	0.70	0.90	1.00
	Maximum Service Flow Rate	660	1,080	1,550	1,980	2,200
55	Maximum Density	11	18	26	35	41
	Average Speed	55.0	55.0	54.9	52.9	51.2
	Maximum V/C	0.29	0.47	0.68	0.88	1.00
	Maximum Service Flow Rate	600	990	1,430	1,850	2,100
50	Maximum Density	11	18	26	35	43
	Average Speed	50.0	50.0	50.0	48.9	47.5
	Maximum V/C	0.28	0.45	0.65	0.86	1.00
	Maximum Service Flow Rate	550	900	1,300	1,710	2,000
45	Maximum Density	11	18	26	35	45
	Average Speed	45.0	45.0	45.0	44.4	42.2
	Maximum V/C	0.26	0.62	0.62	0.82	1.00
	Maximum Service Flow Rate	490	810	1,170	1,550	1,900

Source: Chapter 21, Transportation Research Board, 2004. *Highway Capacity Manual 2000.*

Note: LOS F is characterized by highly unstable and variable traffic flow.

Table 7.10-6
Peak-Hour Intersection Levels of Service – Existing Conditions

No.	Intersection	Type of Control	Existing Conditions			
			A.M. Peak		P.M. Peak	
			*	LOS	*	LOS
1	Bailey Road/SR 4 WB Ramps	Signal	0.44	A	0.29	A
2	Bailey Road/SR 4 EB Ramps	Signal	0.41	A	0.38	A
3	Bailey Road/Willow Pass Road	Signal	0.17	A	0.33	A
4	Loftus Road/Willow Pass Road	Signal	0.25	A	0.35	A
5	Willow Pass Road/North Parkside Drive WB Ramps	Yield Sign	11.3	B	13.0	B
6	Willow Pass Road/North Parkside Drive EB Ramps	Stop Sign	10.1	B	12.7	B
7	Railroad Avenue/SR 4 WB Ramps	Signal	0.56	A	0.59	A
8	Railroad Avenue/SR 4 EB Ramps	Signal	0.53	A	0.61	B
9	Railroad Avenue/10th Street	Signal	0.30	A	0.35	A
10	Montezuma Street/Herb White Way/10th Street	Stop Sign	14.2	B	25.2	D

Notes:
* = Volume-to-capacity ratio at signalized intersections and average delay in seconds at unsignalized intersections.
LOS is based on volume-to-capacity for signalized intersections and average delay for unsignalized intersections.
Numbers in parentheses illustrate conditions assuming improvements are implemented.

EB = eastbound
WB = westbound

Table 7.10-7
Peak-Hour Roadway Segment Levels of Service – Existing Conditions

ID	Roadway	Segment	Roadway Classification	No. of Lanes	Existing Conditions			
					A.M. Peak		P.M. Peak	
					*	LOS	*	LOS
1	Bailey Road	SR 4 WB Ramp & Willow Pass Road	Class I Highway	4	6.9/5.2	A/A	9.3/5.8	A/A
2	Willow Pass Road	Bailey Road & Loftus Road	Class I Highway	2(4)	76.1/35.2 (4.6/9.7)	E(A/A)	78.3/34.5 (10.4/5.3)	E(A/A)
3	Willow Pass Road	Loftus Road & North Parkside Drive Ramps	Class I Highway	2(4)	83.8/34.2 (6.0/13.0)	E(A/B)	80.0/35.8 (10.9/5.7)	E(A/A)
4	Willow Pass Road	North Parkside Drive Ramps & West 10th Street	Class I Highway	2(4)	68.7/39.0 (2.8/5.8)	E(A/A)	64.0/39.8 (4.3/2.8)	E(A/A)
5	North Parkside Drive	Willow Pass Road & Railroad Avenue	Class I Highway	2(4)	66.6/38.7 (3.0/5.2)	E(A/A)	66.6/38.9 (6.0/2.2)	E(A/A)
6	Railroad Avenue	North Parkside Drive & SR 4 WB Ramps	Class I Highway	4	10.0/7.7	A/A	10.2/10.7	A/A

Notes:

* = Percent Time-Spent Following (PTSF) (in seconds) /Average Travel Speed (ATS) (in mph), for a two-lane highway and Density (in pc/mi/ln) for Direction 1/Direction 2, for a multi-lane highway
Numbers in parentheses illustrate conditions assuming improvements are implemented.

NB = northbound
SB = southbound

Table 7.10-8
Projected Average Daily Traffic Volumes

No.	Roadway	Segment	Average Daily Traffic Volumes				
			Existing Conditions	Near-Term Conditions	Near-Term Plus Project Conditions	Future Projected Conditions	Future Projected Conditions Plus Project Operations
1	Bailey Road	SR 4 NB Ramp & Willow Pass Road	11,550	12,050	13,050	20,150	20,250
2	Willow Pass Road	Bailey Road & Loftus Road	12,600	13,100	14,250	21,900	22,050
3	Willow Pass Road	Loftus Road & North Parkside Drive Ramps	14,800	15,400	16,550	25,750	25,900
4	Willow Pass Road	North Parkside Drive Ramps & West 10th Street	7,400	7,650	8,800	12,850	13,000
5	North Parkside Drive	Willow Pass Road & Railroad Avenue	7,900	8,200	8,200	13,750	13,750
6	Railroad Avenue	North Parkside Drive & SR 4 SB Ramps	18,100	18,850	20,200	31,500	31,700

Table 7.10-9
Projected Construction Workforce and Deliveries

Month	Projected Construction Workers	Heavy Vehicle Trips (Daily Average)
1	27	3
2	59	5
3	80	6
4	104	7
5	113	4
6	88	6
7	109	5
8	99	7
9	122	8
10	136	9
11	141	10
12	154	7
13	129	7
14	141	9
15	157	11
16	187	13
17	217	16
18	279	19
19	353	19
20	355	21
21	390	19
22	361	20
23	374	16
24	318	14
25	277	12
26	245	12
27	240	8
28	177	6
29	145	5
30	115	5
31	89	3
32	67	2
33	57	2
34	37	0

Table 7.10-10
Trip Generation During Peak Construction Month

Use	Size	Units	Daily Trips		A.M. Peak Hour					P.M. Peak Hour				
			Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Construction Workforce	390	employees	1.2	468	0.6	95:05	222	12	234	0.6	05:95	12	222	234
Delivery Vehicles	19	trucks	2	38	1	95:05	18	1	19	1	05:95	1	18	19
Net Total				**506**			**240**	**13**	**253**			**13**	**240**	**253**

Note: Peak hour trip generation rates are derived based on the assumptions made as documented in this section.

Table 7.10-11
Peak-Hour Intersection Levels of Service – Near-Term Conditions

No.	Intersection	Type of Control	Near-Term Conditions				Near-Term Plus Project Conditions			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			*	LOS	*	LOS	*	LOS	*	LOS
1	Bailey Road/SR 4 WB Ramps	Signal	0.45	A	0.30	A	0.45	A	0.33	A
2	Bailey Road/SR 4 EB Ramps	Signal	0.42	A	0.40	A	0.42	A	0.40	A
3	Bailey Road/Willow Pass Road	Signal	0.18	A	0.35	A	0.18	A	0.40	A
4	Loftus Road/Willow Pass Road	Signal	0.26	A	0.36	A	0.26	A	0.37	A
5	Willow Pass Road/North Parkside Drive WB Ramps	Yield Sign	11.4	B	13.0	B	11.5	B	13.1	B
6	Willow Pass Road/North Parkside Drive EB Ramps	Stop Sign	9.7	A	12.2	B	10.6	B	12.3	B
7	Railroad Avenue/SR 4 WB Ramps	Signal	0.59	A	0.62	B	0.65	B	0.62	B
8	Railroad Avenue/SR 4 EB Ramps	Signal	0.55	A	0.64	B	0.56	A	0.69	B
9	Railroad Avenue/10th Street	Signal	0.31	A	0.37	A	0.39	A	0.37	A
10	Montezuma Street/Herb White Way/10th Street	Stop Sign	13.2	B	25.3	D	15.8	C	34.3	D

Notes:
* = Volume-to-capacity ratio at signalized intersections and average delay in seconds at unsignalized intersections.
LOS is based on volume-to-capacity for signalized intersections and average delay for unsignalized intersections.
EB = eastbound WB=westbound

Table 7.10-12
Roadway Segment Level of Service – Near-Term Conditions

ID	Roadway	Segment	Roadway Classification	No. of lanes	Near-Term Conditions				Near-Term plus Project Conditions			
					A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
					*	LOS	*	LOS	*	LOS	*	LOS
1	Bailey Road	SR 4 WB Ramp & Willow Pass Road	Class I Highway	4	7.1/5.7	A/A	10.3/6.2	A/A	8.3/5.8	A/A	10.4/7.4	A/A
2	Willow Pass Road	Bailey Road & Loftus Road	Class I Highway	2(4)	78.0/34.5 (4.7/10.3)	E(A/A)	81.0/33.4 (11.3/5.6)	E(B/A)	80.0/33.8 (6.0/10.4)	E(A/A)	82.9/32.6 (11.4/6.9)	E(B/A)
3	Willow Pass Road	Loftus Road & North Parkside Drive Ramps	Class I Highway	2(4)	84.6/33.8 (5.5/14.1)	E(A/B)	82.3/34.8 (11.8/6.1)	E(B/A)	85.8/32.9 (6.8/14.2)	E(A/B)	84.0/34.0 (11.9/7.4)	E(B/A)
4	Willow Pass Road	North Parkside Drive Ramps & West 10th Street	Class I Highway	2(4)	68.3/39.1 (2.2/6.2)	E(A/A)	65.0/39.5 (4.8/2.9)	E(A/A)	70.7/38.4 (3.4/6.3)	E(A/A)	69.1/38.8 (4.9/4.1)	E(A/A)
5	North Parkside Drive	Willow Pass Road & Railroad Avenue	Class I Highway	2(4)	67.4/38.6 (2.8/5.6)	E(A/A)	69.2/38.4 (6.5/2.3)	E(A/A)	67.4/38.6 (2.8/5.6)	E(A/A)	69.2/38.4 (6.5/2.3)	E(A/A)
6	Railroad Avenue	North Parkside Drive & SR 4 WB Ramps	Class I Highway	4	9.5/8.3	A/A	10.5/11.5	A/B	10.8/8.3	A/A	10.6/12.8	A/B

Notes:
* = Percent Time-Spent Following (PTSF) (in sec) /Average Travel Speed (ATS) (in mph), for a two-lane highway and Density (in pc/mi/ln) for Direction 1/Direction 2, for a multi-lane highway.
Numbers in parentheses illustrate conditions assuming improvements are implemented.

Table 7.10-13
Trip Generation During Plant Operation

Use	Size	Units	Daily Trips		A.M. Peak Hour					P.M. Peak Hour				
			Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Workforce	20	employees	2	40	1.0	95:05	19	1	20	1.0	05:95	1	19	20
Delivery Vehicles	10	trucks	2	20	1.0	95:05	9	1	10	1.0	05:95	1	9	10
Net Total				**60**			**28**	**2**	**30**			**2**	**28**	**30**

Note: Peak Hour trip generation rate are derived based on the assumptions made as documented in this section.

Table 7.10-14
Potential Improvement Projects in the Vicinity of the WPGS Project

Project Name	Roadway Facility	Project Limits
Willow Pass Road Widening and Bridge Reconstruction	Willow Pass Road	Loftus Road to Range Road/North Parkside
Willow Pass Road Widening/Gap Closure	Willow Pass Road	Bailey Road to the Pittsburg City
Willow Pass Road Class III Bicycle Facility and Pedestrian Gap	Willow Pass Road	From West Tenth Street to the UPRR
North Parkside Drive Class III Bicycle Facility	North Parkside Drive	From Railroad Avenue to Range Road/West
Canal Road West Bike Lanes	Canal Road West	Alves Lane to Bailey Road
Canal Road East Bike Lanes	Canal Road East	Bailey Road to Schooner Way
Loftus Road Bike Route, Canal Road to Willow Pass Road	Loftus Road	Canal Road to Willow Pass Road
Willow Pass Road Bike Lanes, Mountain View Avenue to Pittsburg	Willow Pass Road	Mountain View Avenue to Pittsburg City

Table 7.10-15
Peak-Hour Intersection Levels of Service – Future Conditions (2035)

No.	Intersection	Type of Control	Future Conditions				Future Plus Project Conditions			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			*	LOS	*	LOS	*	LOS	*	LOS
1	Bailey Road/SR 4 WB Ramps	Signal	0.76	C	0.50	A	0.76	C	0.50	A
2	Bailey Road/SR 4 EB Ramps	Signal	0.71	C	0.71	C	0.71	C	0.71	C
3	Bailey Road/Willow Pass Road	Signal	0.30	A	0.58	A	0.30	A	0.59	A
4	Loftus Road/Willow Pass Road	Signal	0.43	A	0.61	B	0.43	A	0.61	B
5	Willow Pass Road/North Parkside Drive WB Ramps	Yield Sign	16.3	C	26.8	D	16.3	C	26.9	D
6	Willow Pass Road/North Parkside Drive EB Ramps	Stop Sign	11.2	B	27.4	D	11.4	B	27.4	D
7	Railroad Avenue/SR 4 WB Ramps	Signal	0.98	E	>1.00	F	0.99	E	>1.00	F
8	Railroad Avenue/SR 4 EB Ramps	Signal	0.92	E	>1.04	F	0.93	E	>1.00	F
9	Railroad Avenue/10th Street	Signal	0.52	A	0.62	B	0.53	A	0.62	B
10	Montezuma Street/Herb White Way/10th Street	Signal	0.50	A	0.57	A	0.51	A	0.58	A

Notes:
* = Volume-to-capacity ratio at signalized intersections and average delay in seconds at unsignalized intersections.
LOS is based on volume-to-capacity for signalized intersections and average delay for unsignalized intersections.
EB = eastbound WB = westbound

Table 7.10-16
Roadway Segment Levels of Service – Projected Future Conditions (2035)

ID	Roadway	Segment	Roadway Classification	No. of Lanes	Projected Future Conditions				Projected Future Conditions plus Project Operations			
					AM Peak		PM Peak		AM Peak		PM Peak	
					*	LOS	*	LOS	*	LOS	*	LOS
1	Bailey Road	SR 4 WB Ramp & Willow Pass Road	Class I Highway	4	11.9/9.5	B/A	17.2/10.4	B/A	12.0/9.5	B/A	17.3/10.5	B/A
2	Willow Pass Road	Bailey Road & Loftus Road	Class I Highway	4	7.8/17.2	A/B	19.0/9.4	C/A	8.0/17.2	A/B	19.0/9.6	C/A
3	Willow Pass Road	Loftus Road & North Parkside Drive Ramps	Class I Highway	4	9.2/23.6	A/C	19.7/10.2	C/A	9.4/23.6	A/C	19.7/10.3	C/A
4	Willow Pass Road	North Parkside Drive Ramps & West 10th Street	Class I Highway	2(4)	80.6/35.8 (3.7/10.4)	E(A/A)	77.9/36.5 (8.1/4.9)	E(A/A)	80.7/35.7 (3.8/10.4)	E(A/A)	78.2/36.5 (8.1/4.9)	E(A/A)
5	North Parkside Drive	Willow Pass Road & Railroad Avenue	Class I Highway	2(4)	80.2/35.2 (4.7/9.4)	E(A/A)	81.6/34.8 (10.8/3.9)	E(A/A)	80.2/35.2 (4.7/9.4)	E(A/A)	81.6/34.8 (10.8/3.9)	E(A/A)
6	Railroad Avenue	North Parkside Drive & SR 4 WB Ramps	Class I Highway	4	15.8/13.8	B/B	17.6/19.2	B/C	16.0/13.9	B/B	17.6/19.3	B/C

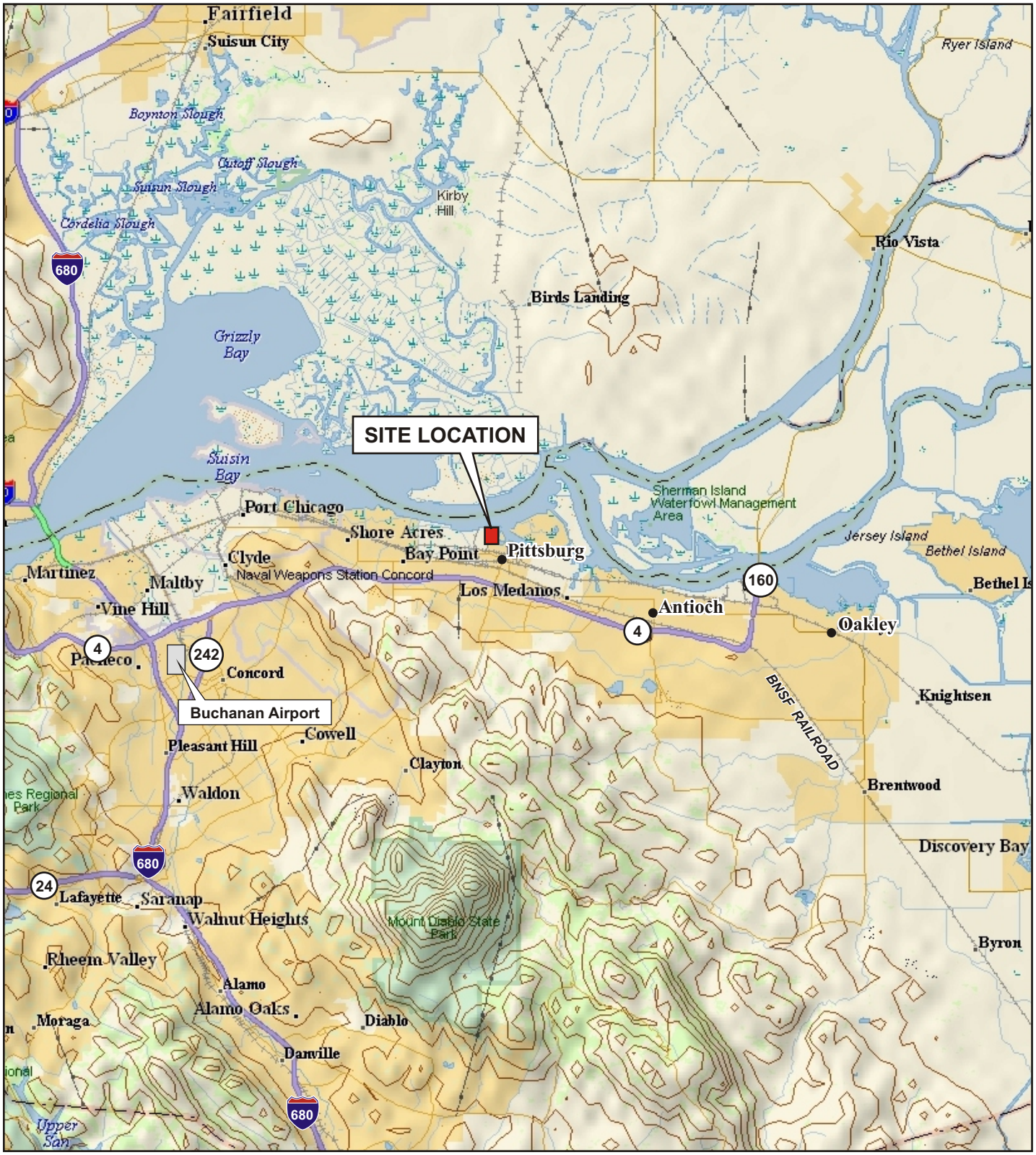
Notes:
* = Percent Time-Spent Following (PTSF) (in sec) /Average Travel Speed (ATS) (in mph), for a two-lane highway and Density (in pc/mi/ln) for Direction 1/Direction 2, for a multi-lane highway.
Numbers in parentheses illustrate conditions assuming improvements implemented.
SB = southbound WB=westbound

Table 7.10-17
Applicable Traffic and Transportation Laws, Ordinances, Regulations, and Standards

LORS	Applicability	Administering Agency	AFC Section
Federal			
Hazardous Materials Regulation	Transporting Hazardous Materials	Federal Motor Carrier Safety Administration	Section 7.10.2.4
State			
Caltrans Standard Plans	Traffic Control/Lane Closures	Caltrans	Section 7.10.5
Local			
Regulations for Working in City of Pittsburg, City of Antioch, and Contra Costa County Streets	Traffic Control	City of Pittsburg, City of Antioch, and Contra Costa County Department of Public Works	Section 7.10.5
Regulations for Excavating and Restoring Streets in City of Pittsburg, City of Antioch, and Contra Costa County	Pavement Excavation/Restoration	City of Pittsburg, City of Antioch, and Contra Costa County Department of Public Works	Section 7.10.5

Table 7.10-18
Involved Agencies and Agency Contacts

Issue	Agency/Address	Contact/Title	Telephone
Local Roadway Improvements	City of Pittsburg, Department of Public Works 65 Civic Avenue Pittsburg, CA 94565	Paul Reinders Public Works	(925) 252-4822
Local Circulation Plans and Policies	Contra Costa Transportation Authority 1340 Treat Boulevard, Suite 150 Walnut Creek, CA 94596	Martin Engleman, Planning	(925) 256-4729
Hazard Materials Transport	California Highway Patrol P.O. Box 942902 Sacramento, CA 94298-2902	Rachel Guiterrez, Licensing Technician	(916) 327-5039
		Joel Arbuckle, Motor Carrier Specialist II	(916) 327-5039
Safety and Hazardous Materials Regulations	Federal Motor Carrier Safety Administration 201 Mission St., Suite 2100 San Francisco, CA 94104	Bob Brown	(415) 744-3088
Permits	California Department of Transportation, Transportation Permits P.O. Box 942874 (MS 41) Sacramento, CA 94274-0001	Dee Garcia, Permit Engineer	(916) 322-4954



Source:
Topo USA, 2004; www.delorme.com

N

0 4 Miles

1:250,000

REGIONAL VICINITY

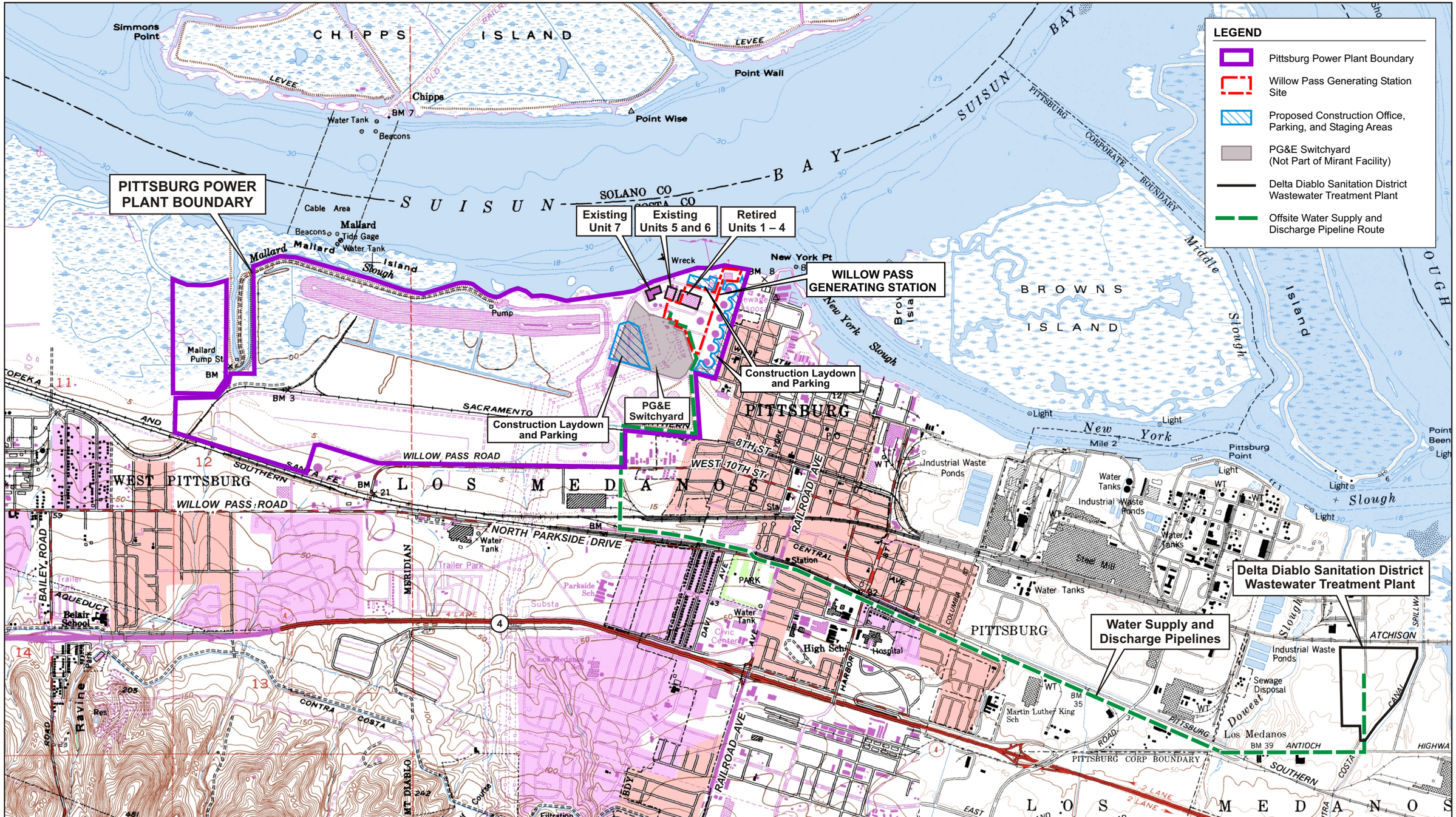
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-1

6/25/08 vsa/hk ..T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-1_reg vicinity.cdr



PROJECT LOCATION MAP

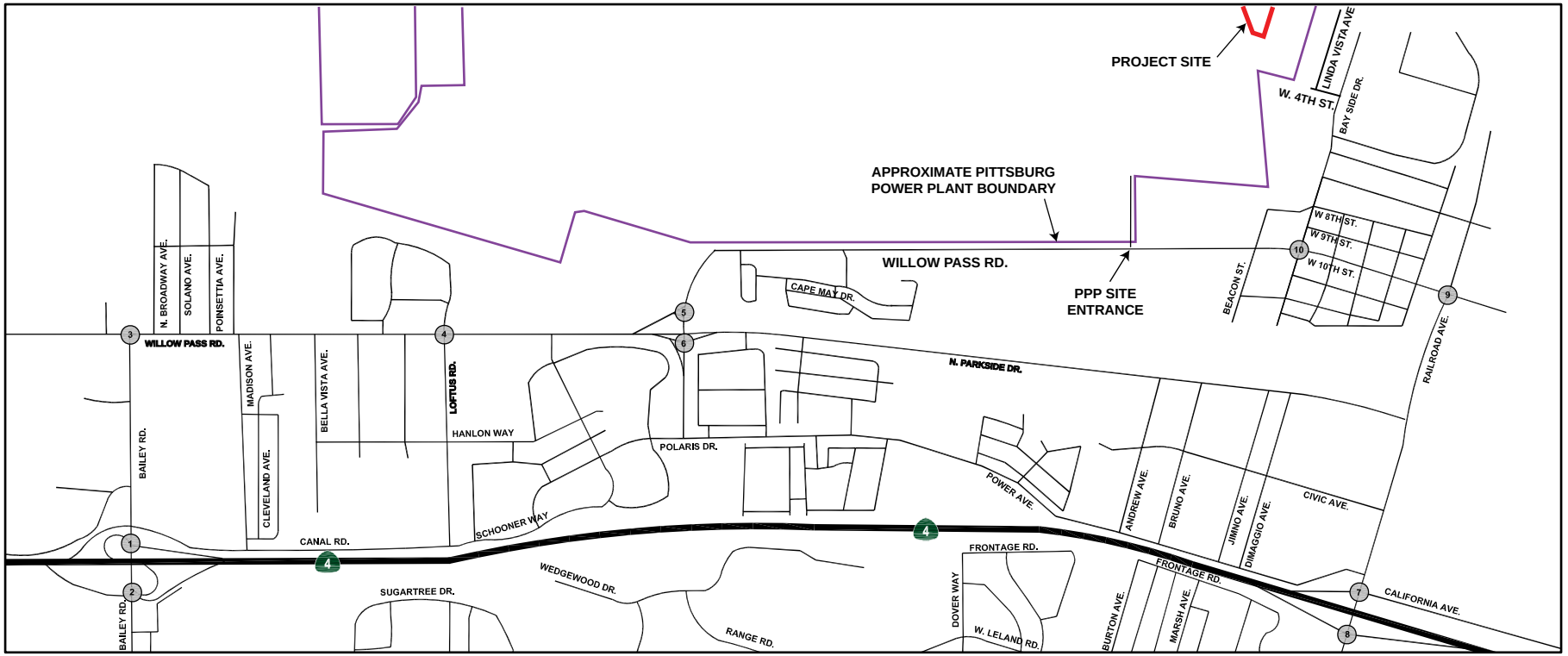
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

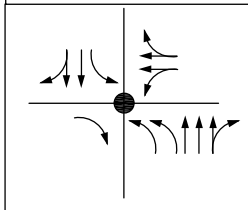
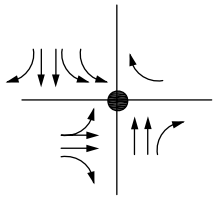
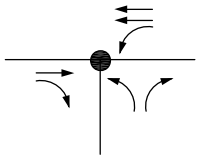
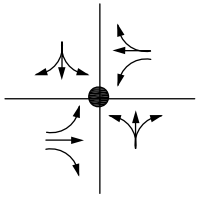
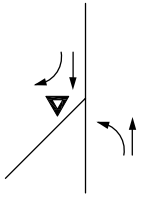
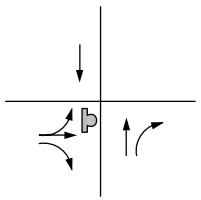
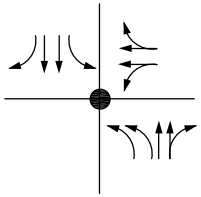
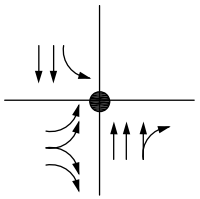
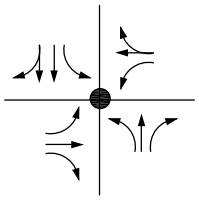
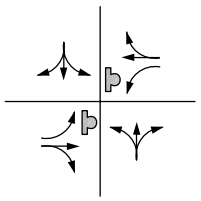
June 2008
28067343

URS

FIGURE 7.10-2

6/25/08 vsa/hk ..T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-2_proj loc.cdr



1. Bailey Road/SR 4 WB Ramps	2. Bailey Road/SR 4 EB Ramps	3. Bailey Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksideDrive WB Ramps
				
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
				

LEGEND

- Study Intersection
- Signalized Intersection
- Stop Sign
- Yield Sign

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-3_existing lane geo_6-23.ai

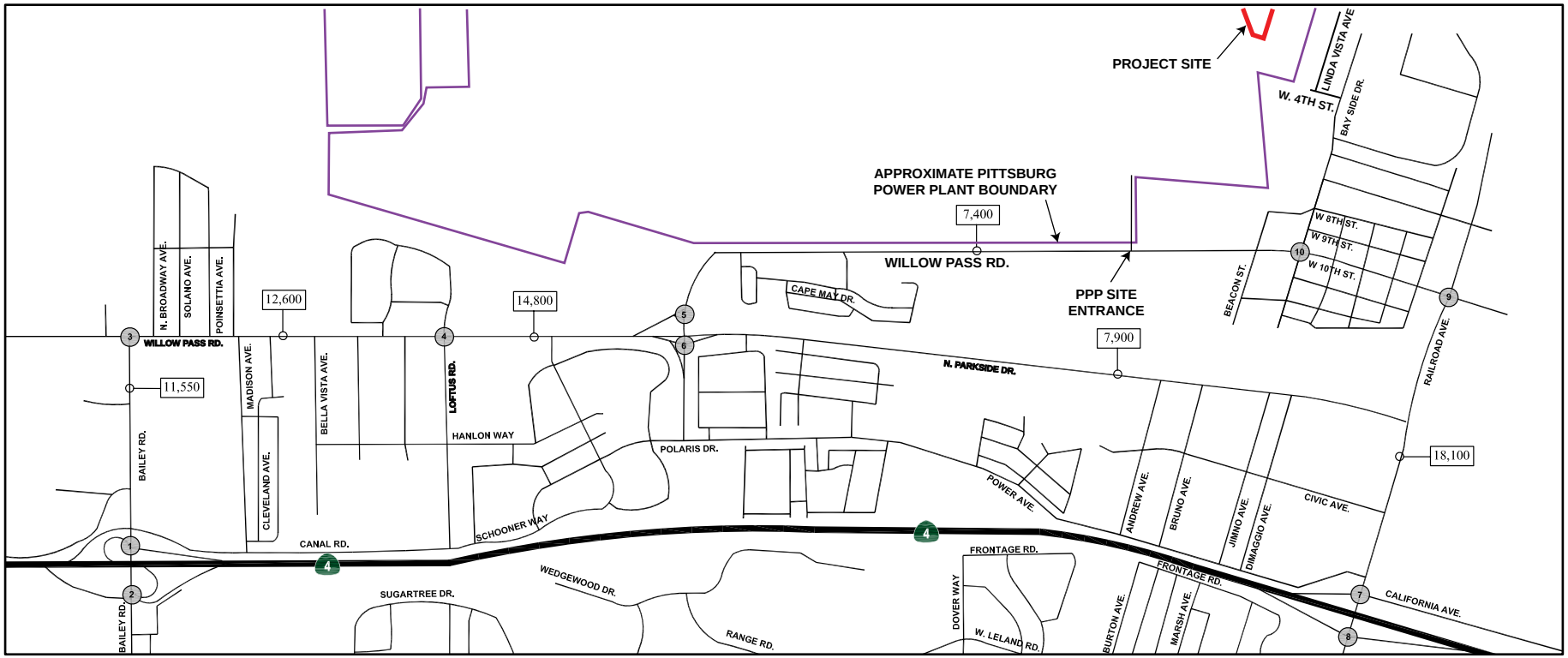
EXISTING CONDITIONS LANE GEOMETRICS

Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-3



1. Bailey Road/SR 4 WB Ramps	2. Bailey Road/SR 4 EB Ramps	3. Bailey Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksideDrive WB Ramps
122(124) 392(327) 127(37) → 119(33) ← 259(112) ← 171(91)	233(134) 553(451) 201(107) → 190(616)	330(128) ← 73(86)	8(33) 8(12) 43(20) → 5(10) ← 319(191) ← 11(23)	324(165) 39(77)
225(245) ← 341(236) 523(562) 169(323)	94(135) 115(204) 168(490) ← 640(531) 224(114)	78(342) → 55(76) 127(148) 38(216)	0(5) 98(475) 10(23) → 8(8) 9(0) 10(6)	39(15) 184(406)
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
35(42) 4(0) →	301(244) 824(719) 105(111) → 312(285) ← 214(158) ← 87(100)	647(673) 249(74) →	24(30) 158(140) 36(58) → 37(46) ← 199(203) ← 42(38)	85(68) 36(6) 24(43) → 21(38) ← 300(226) ← 9(35)
155(299) 0(2) 15(35) → 29(107) 8(22)	374(293) 772(898) 116(273)	271(545) 3(110) 423(1033) → 953(900) 245(125)	10(47) 144(317) 190(156) → 154(130) 136(171) 59(80)	49(101) 155(412) 6(15) → 9(5) 1(6) 19(30)

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

LEGEND

- (X) Study Intersection
- XX(XX) AM(PM) Peak Hour Volumes
- X,XXX Daily Average Traffic

N

Not to Scale

EXISTING CONDITIONS DAILY AVERAGE AND PEAK HOUR TURNING MOVEMENT VOLUMES

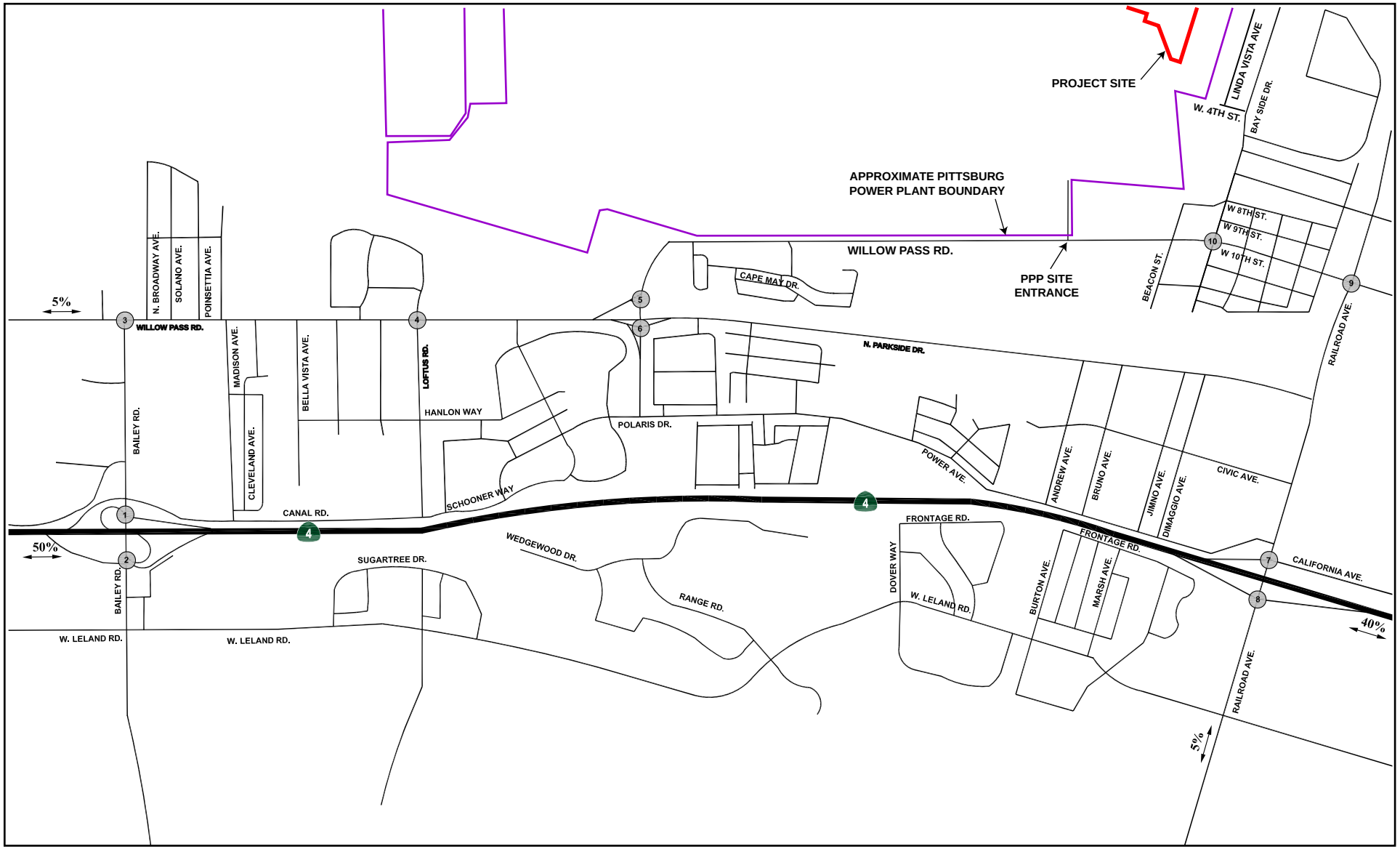
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-4

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-4_existing peak vol_6-23.ai



LEGEND

- (X) Study Intersection
- X % Trip Distribution Percent

Note:
Streets shown for purposes of analysis only; not all streets are shown.

N

Not to Scale

TRIP DISTRIBUTION

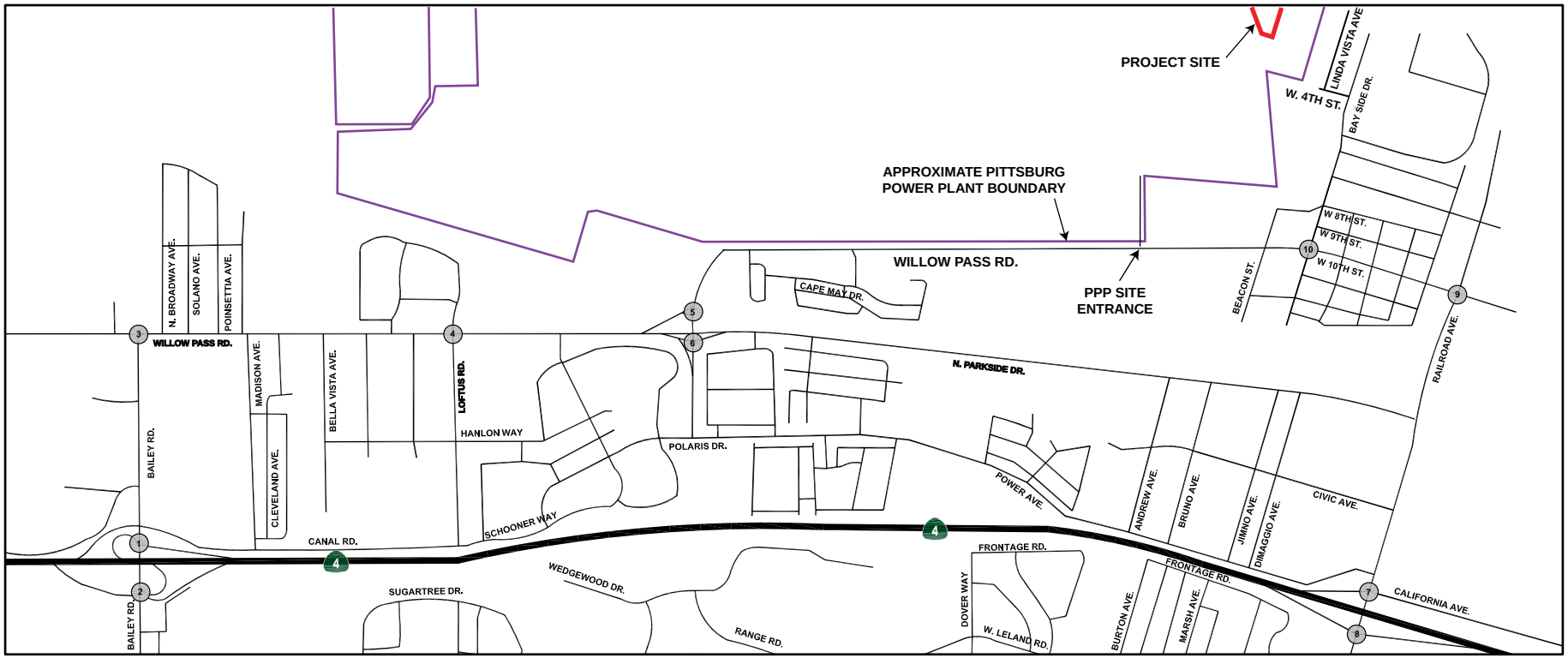
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-5

6/23/08 hk\vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-5_trip distrib_6-23.ai



1. Balley Road/SR 4 WB Ramps	2. Balley Road/SR 4 EB Ramps	3. Balley Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksIdeDrIve WB Ramps
5(96) ↓ 96(5) ↑		← 1(12) ← 5(96) 12(1) → 96(5) ↑	← 6(108) 108(6) →	6(108) ↓ 108(6) ↑
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
108(6) →	1(24) 6(108) ↓ 96(5) ↖ 36(2) ↑	1(12) 5(96) ↓ 24(1) → 12(1) ↑	7(132) ↘ 132(7) ↑	← 132(7) 7(132) →

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

LEGEND

(X) Study Intersection

XX(XX) AM(PM) Peak Hour Volumes

N

Not to Scale

NEAR-TERM PROJECT ONLY TRIPS

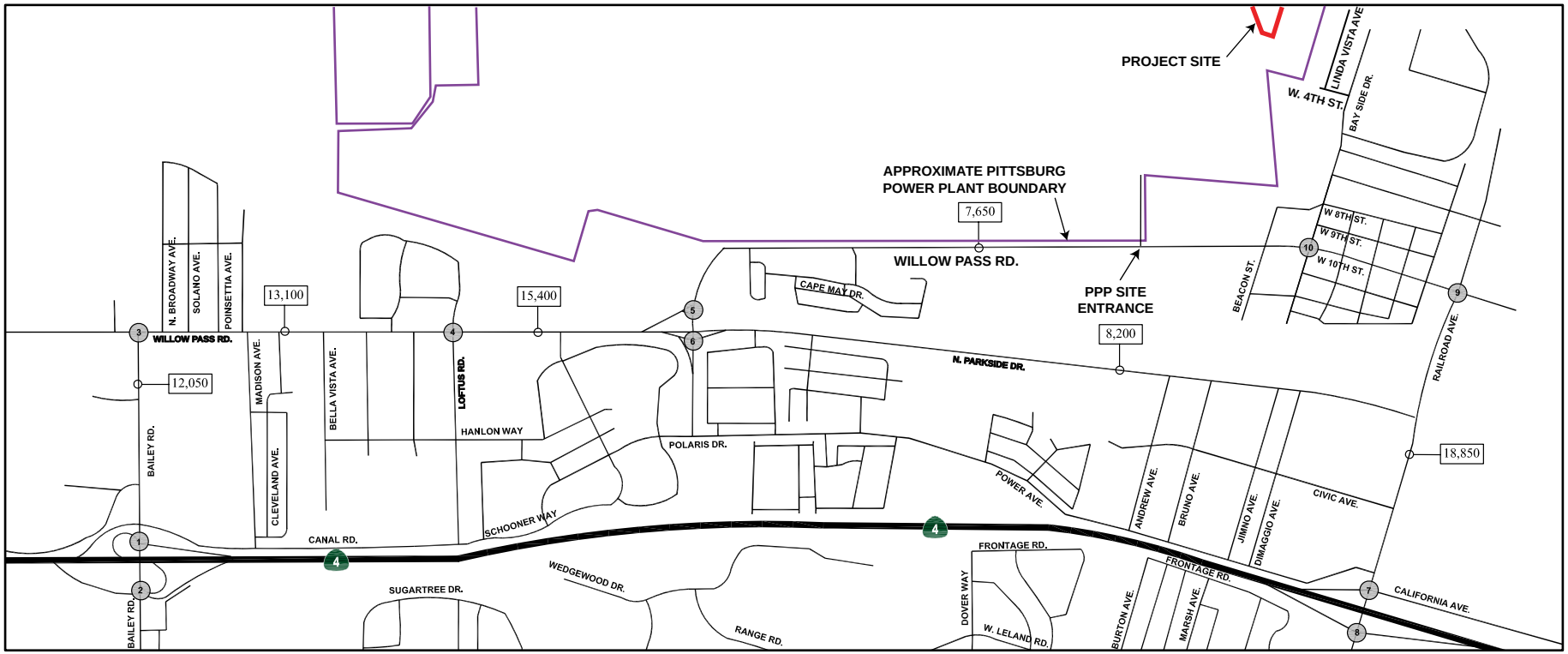
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-6

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-6_near-term proj only_6-23.ai



1. Balley Road/SR 4 WB Ramps	2. Balley Road/SR 4 EB Ramps	3. Balley Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksIdeDrIve WB Ramps
127(129) 408(340) 132(36) → 124(34) ← 269(117) ← 178(95) ↑ ↑ ↑ 234(255) → 355(246) 544(585) 176(336)	242(139) 575(469) 209(111) → 198(641) ← 98(140) 120(212) 175(510) → ↑ ↑ 666(552) 233(119)	← 343(133) ← 76(89) 81(356) → 57(79) → ↑ ↑ 132(154) 40(225)	8(34) 8(12) 45(21) → 5(10) ← 332(199) ← 11(24) 0(5) → 102(494) → 10(24) → ↑ ↑ ↑ 8(8) 9(0) 10(6)	337(172) 41(80) ↓ ↓ ↑ 41(16) 191(422)
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
36(44) 4(0) ↓ ↓ 161(311) → 0(2) → 16(36) → ↑ ↑ 30(111) 8(23)	313(254) 657(748) 109(115) → 325(297) ← 223(164) ← 91(104) ↑ ↑ ↑ 389(305) 803(934) 121(284)	673(700) 259(77) ↓ ↓ 282(567) → 3(114) → 440(1075) → ↑ ↑ 992(936) 255(130)	25(31) 164(146) 37(60) → 38(48) ← 207(211) ← 44(40) 10(49) → 150(330) → 198(162) → ↑ ↑ ↑ 160(135) 144(179) 61(83)	68(71) 3(6) 25(45) → 22(40) ← 312(235) ← 9(36) 51(105) → 161(429) → 6(16) → ↑ ↑ ↑ 9(5) 11(6) 20(31)

LEGEND

- (X) Study Intersection
- XX(XX) AM(PM) Peak Hour Volumes
- X,XXX Daily Average Traffic

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

NEAR-TERM CONDITIONS PEAK-HOUR TURNING MOVEMENT VOLUMES

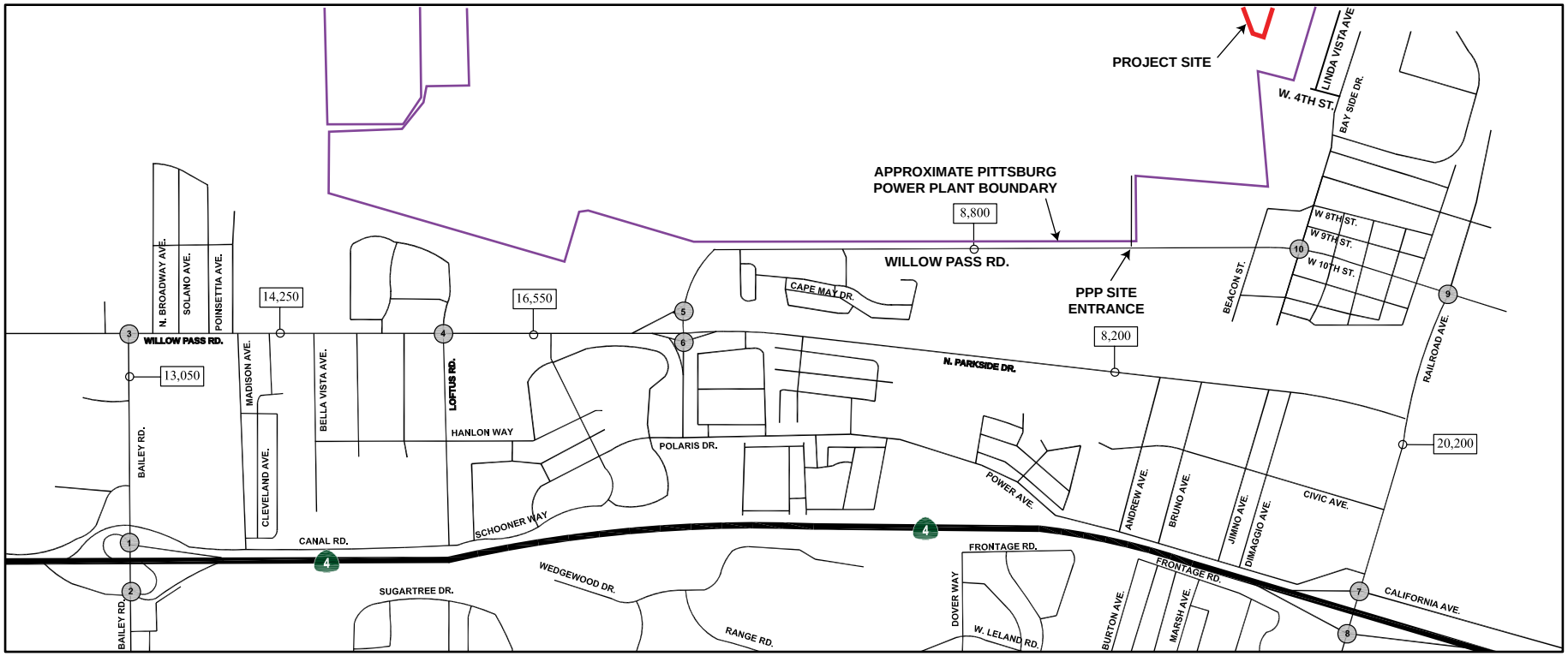
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-7

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-7_near-term peak hr_6-23.ai



1. Bailey Road/SR 4 WB Ramps	2. Bailey Road/SR 4 EB Ramps	3. Bailey Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksIdeDrive WB Ramps
132(225) 408(340) 132(38) → 124(34) ← 269(117) ← 178(95) ↑ 355(246) 640(590) 176(336) ↑ 234(255) →	242(139) 575(469) 209(111) → 198(641) ↓ 98(140) 120(212) 175(510) → ↑ 666(552) 233(119)	← 344(145) ← 81(186) 93(356) → 57(79) → ↑ 132(154) 136(230)	8(34) 8(12) 45(21) → 5(10) ← 338(307) ← 11(24) 0(5) → 210(500) → 10(24) → ↑ 8(8) 9(0) 10(6)	343(280) 41(60) → ↑ 41(16) 300(428)
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
36(44) 4(0) → 269(317) → 0(2) → 16(36) → ↑ 30(111) 8(23)	314(278) 863(656) 109(115) → 421(302) ← 223(164) ← 91(104) ↑ 389(305) 839(936) 121(284)	674(712) 284(173) → ↑ 306(568) → 3(114) → 440(1075) → 1004(937) 255(130)	25(31) 164(146) 37(60) → 38(48) ← 207(211) ← 44(40) 10(49) → 150(330) → 205(294) → ↑ 292(142) 141(178) 61(83)	88(71) 3(6) 22(45) → 22(40) ← 444(242) ← 9(36) 51(105) → 168(561) → 6(16) → ↑ 9(5) 1(6) 20(31)

LEGEND

- (X) Study Intersection
- XX(XX) AM(PM) Peak Hour Volumes
- X,XXX Daily Average Traffic

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

NEAR-TERM PLUS PROJECT CONDITIONS PEAK-HOUR TURNING MOVEMENT VOLUMES

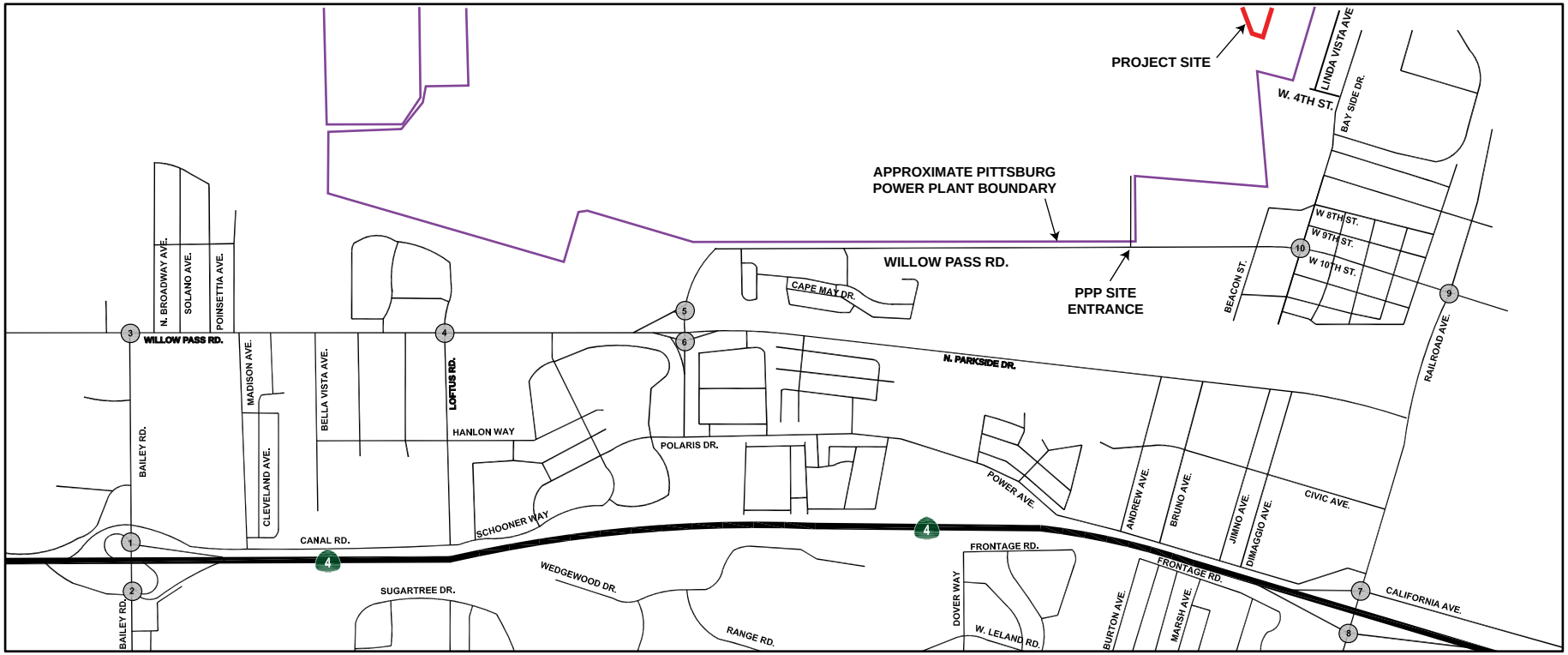
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

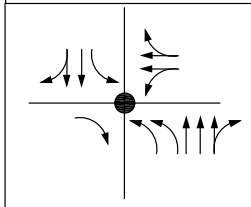
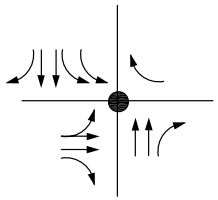
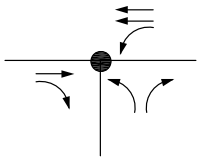
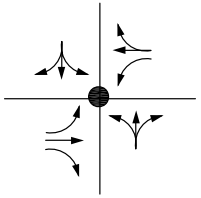
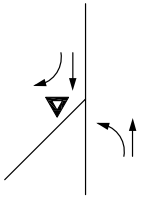
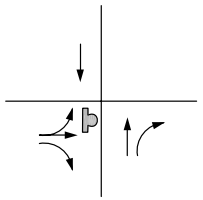
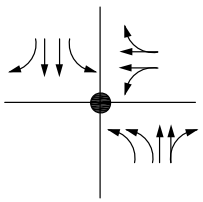
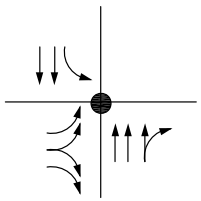
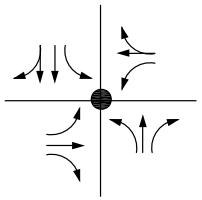
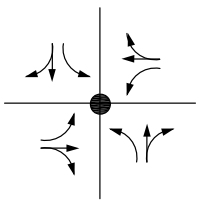
June 2008
28067343

URS

FIGURE 7.10-8

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-8_near-term plus peak hr_6-23.ai



1. Bailey Road/SR 4 WB Ramps	2. Bailey Road/SR 4 EB Ramps	3. Bailey Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksideDrive WB Ramps
				
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
				

LEGEND

- (X) Study Intersection
- Signalized Intersection
- Stop Sign
- Yield Sign

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

6/15/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-9_future lane geo_6-23.ai

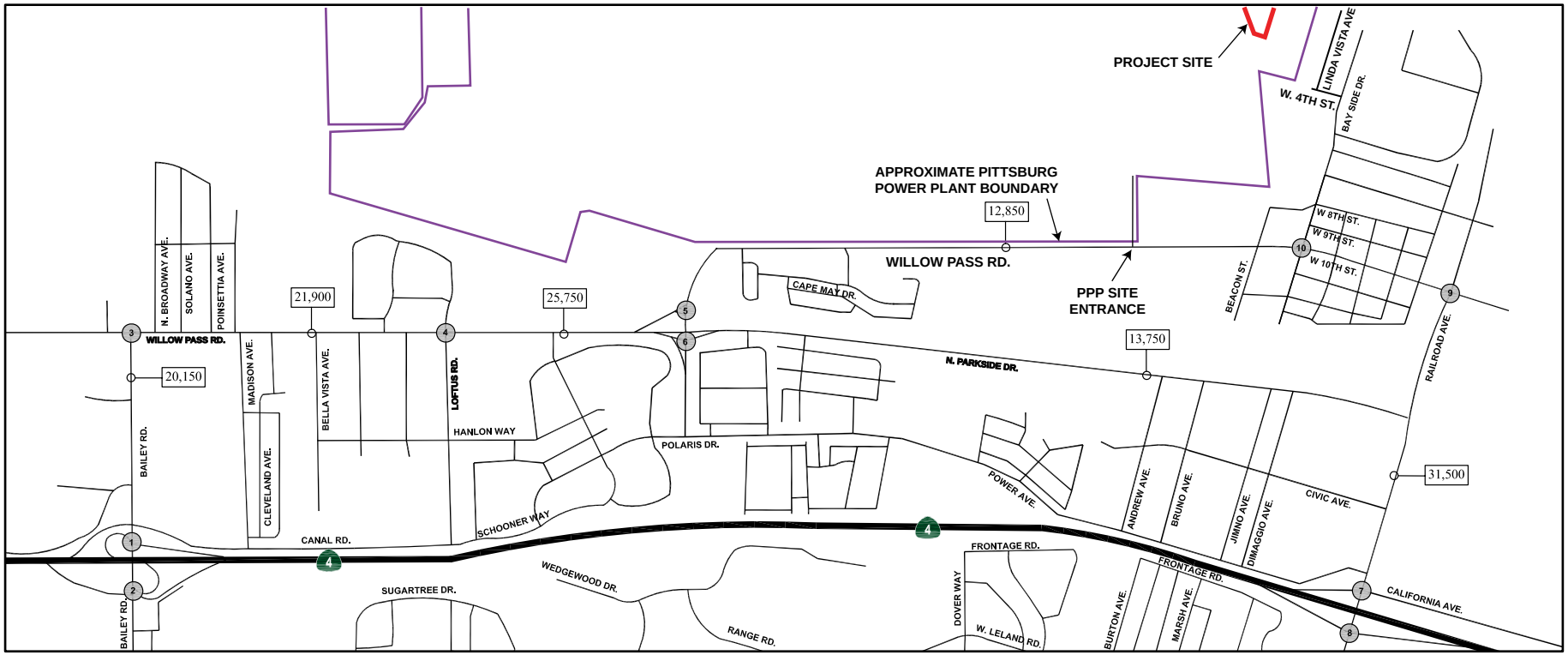
FUTURE CONDITIONS LANE GEOMETRICS

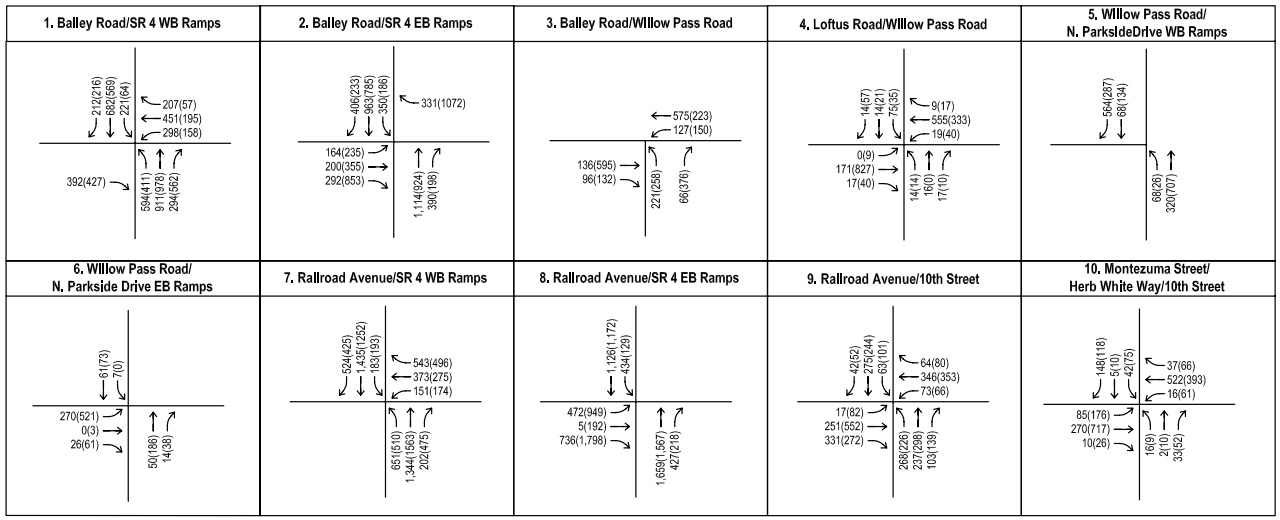
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-9





LEGEND

- (X) Study Intersection
- XX(XX) AM(PM) Peak Hour Volumes
- X,XXX Daily Average Traffic

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

FUTURE CONDITIONS PEAK-HOUR TURNING MOVEMENT VOLUMES

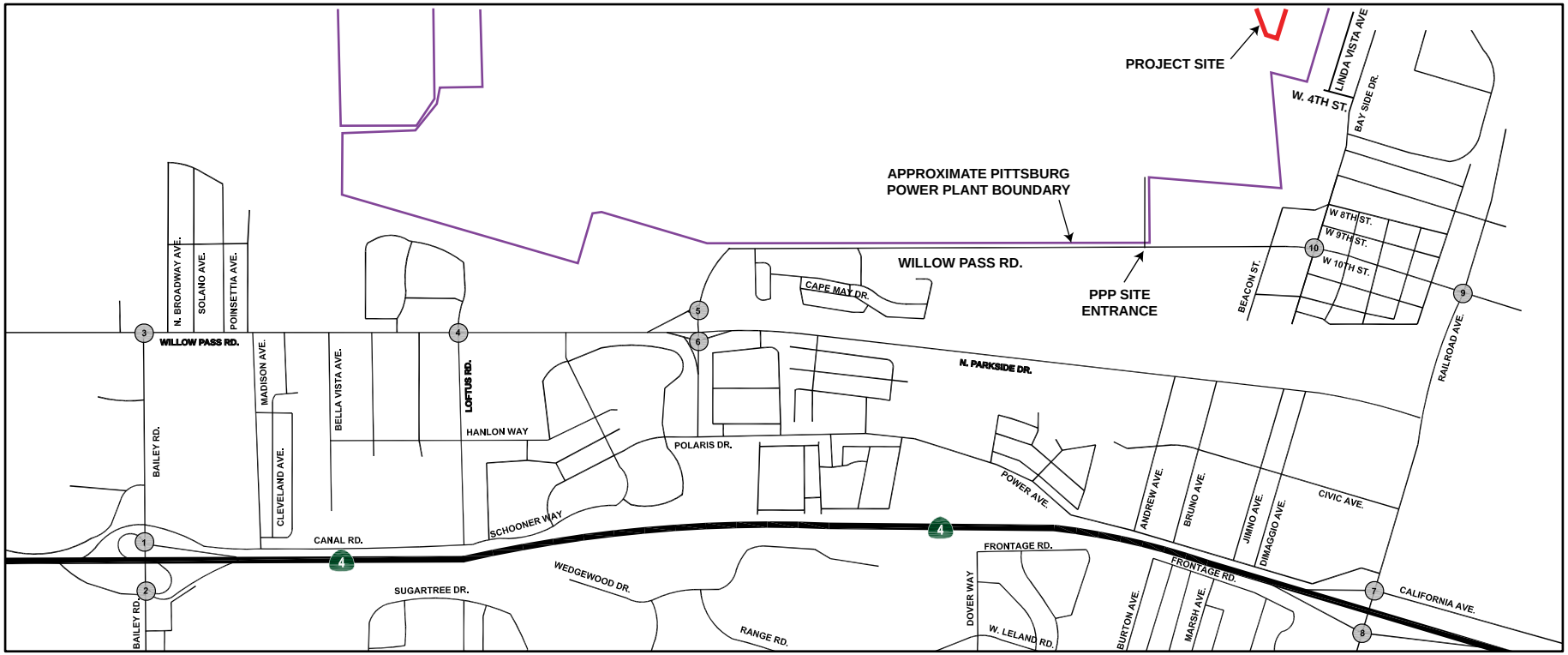
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-10

6/15/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-10_future cond peak_6-23.ai



1. Balley Road/SR 4 WB Ramps	2. Balley Road/SR 4 EB Ramps	3. Balley Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksIdeDrIve WB Ramps
1(11) ↙ ↑ 11(1)		← 0(1) ↙ 1(11) 1(0) → ↑ 11(1)	← 1(13) 13(1) →	1(13) ↙ ↑ 13(1)
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
13(1) →	0(3) 1(13) ↓ ↖ 11(1) ↑ 4(0)	0(1) 1(11) ↓ 3(0) → ↑ 1(0)	1(15) → ↘ 15(1)	← 15(1) 1(15) →

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

LEGEND

(X) Study Intersection

XX(XX) AM(PM) Peak Hour Volumes

N

Not to Scale

FUTURE CONDITIONS PLUS PROJECT ONLY TRIPS

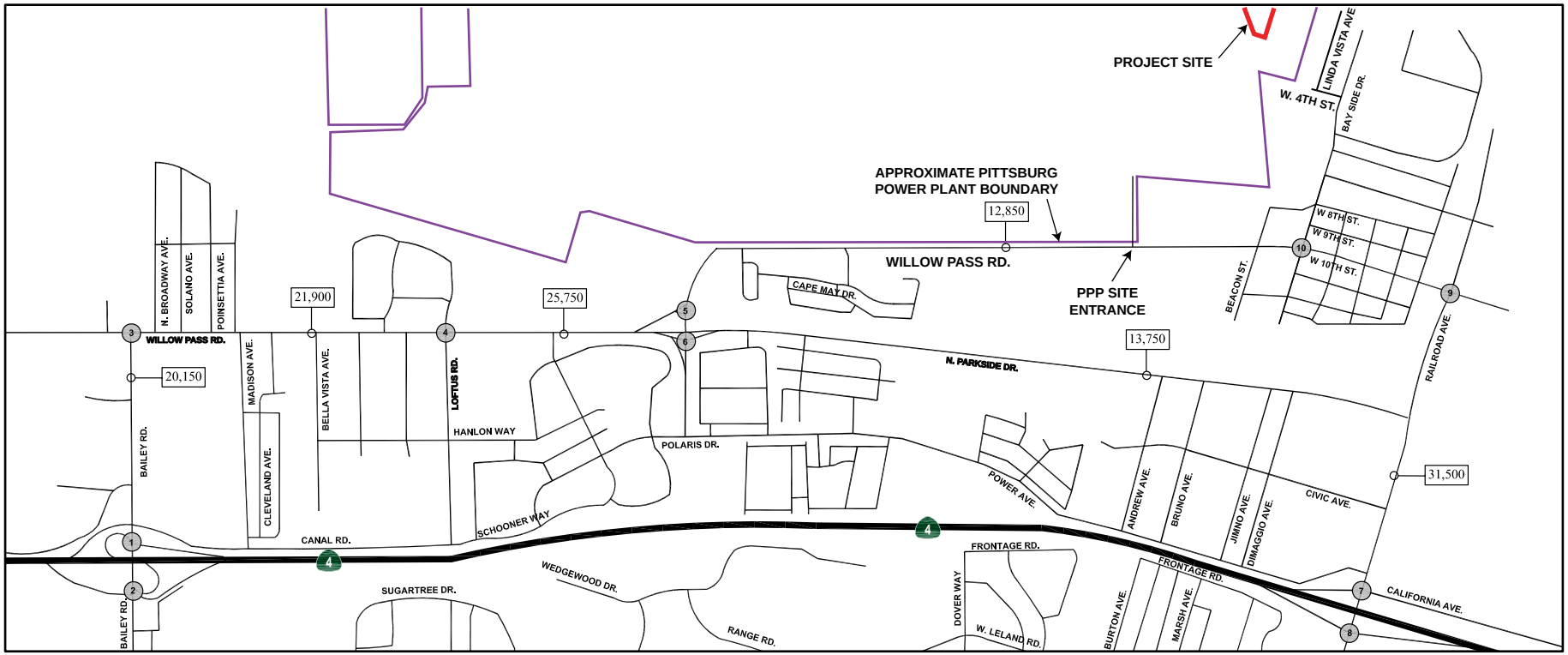
Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-11

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-11_future cond plus_6-23.ai



1. Bailey Road/SR 4 WB Ramps	2. Bailey Road/SR 4 EB Ramps	3. Bailey Road/Willow Pass Road	4. Loftus Road/Willow Pass Road	5. Willow Pass Road/ N. ParksideDrive WB Ramps
212(216) 682(569) 22(64) 207(57) 451(195) 298(158) 392(427) 594(411) 911(976) 294(562)	406(233) 963(785) 350(186) 331(1072) 164(235) 200(355) 292(853) 1,114(924) 390(198)	575(223) 127(150) 136(595) 96(132) 221(258) 66(376)	14(57) 14(21) 75(35) 9(17) 555(333) 19(40) 0(9) 171(827) 17(40) 14(14) 16(0) 17(10)	564(267) 68(134) 68(26) 320(707)
6. Willow Pass Road/ N. Parkside Drive EB Ramps	**7. Railroad Avenue/SR 4 WB Ramps**	**8. Railroad Avenue/SR 4 EB Ramps**	**9. Railroad Avenue/10th Street**	**10. Montezuma Street/ Herb White Way/10th Street**
61(173) 7(0) 270(521) 0(3) 26(61) 50(186) 14(38)	524(425) 1,435(1252) 183(193) 543(496) 373(275) 151(174) 651(510) 1,344(1563) 202(475)	1,126(1,172) 434(129) 472(949) 5(192) 736(1,798) 1,659(1,567) 427(218)	42(52) 273(244) 63(101) 64(80) 346(353) 73(66) 17(82) 251(552) 331(272) 268(226) 237(298) 103(139)	148(118) 5(10) 42(75) 37(66) 522(393) 16(61) 85(176) 270(717) 10(26) 16(9) 2(10) 33(62)

LEGEND

- (X) Study Intersection
- XX(XX) AM(PM) Peak Hour Volumes
- X,XXX Daily Average Traffic

N

Not to Scale

Note:
Streets shown for purposes of analysis only;
not all streets are shown.

FUTURE PLUS PROJECT CONDITIONS PEAK-HOUR TURNING MOVEMENT VOLUMES

Willow Pass Generating Station
Mirant Willow Pass, LLC
Pittsburg, California

June 2008
28067343

URS

FIGURE 7.10-12

6/23/08 hk/vsa ..\T:\Mirant Pittsburg-Willow Pass\Graphics\7.10 Traffic\7.10-12_future plus peak_6-23.ai