DOCKETED

Docket Number:	15-AFC-01
Project Title:	Puente Power Project
TN #:	204219-19
Document Title:	4.12 Traffic and Transportation
Description:	N/A
Filer:	Sabrina Savala
Organization:	NRG Oxnard Energy Center, LLC
Submitter Role:	Applicant
Submission Date:	4/16/2015 10:44:09 AM
Docketed Date:	4/15/2015

4.12 TRAFFIC AND TRANSPORTATION

This section describes traffic and transportation facilities in the vicinity of the Puente Power Project (P3 or project), and evaluates potential impacts of the project on traffic and the surrounding transportation system. The project area discussed in this section refers to all areas of temporary and permanent disturbance associated with the construction and operation of the new plant and ancillary systems, and construction laydown areas. No new offsite linear facilities are required for P3.

The sections below provide an overview of the affected environment; an evaluation of the environmental consequences of the proposed project to traffic and transportation; a cumulative impact analysis; identification of mitigation measures that will avoid and reduce project impacts to less-than-significant levels; and applicable laws, ordinances, regulations, and standards (LORS).

4.12.1 Affected Environment

4.12.1.1 Regional Roadway Facilities

4.12.1.1.1 U.S. Highway 101

U.S. Highway 101 (U.S. 101, also known as the Ventura Freeway) is a 1,540-mile north-south route that starts in Washington State and ends in California. U.S. 101 generally runs east-west through the study area, and provides three travel lanes per direction. In Ventura County, U.S. 101 extends from the Los Angeles County line to the Santa Barbara County line. This highway is heavily used by commuters traveling between Ventura, Los Angeles, and Santa Barbara counties; and the route experiences heavy seasonal recreational traffic bound for vacation destinations along the coast. Regional activity centers such as Oxnard's Esplanade Shopping Center generate a great deal of localized traffic that impacts U.S. 101. Weekend traffic, which has a high recreational component, also results in sporadic traffic congestion for U.S. 101. Locations with especially heavy traffic are the stretches between Camarillo and the Santa Clara River Bridge in Oxnard. In relation to Oxnard, U.S. 101 has junctions with State Route 1 (SR 1), SR 232, and SR 34 (Figure 4.12-1).

4.12.1.2 Local Roadway Facilities

The following local roadway facilities provide primary access and the most direct route to the project site (Figure 4.12-2).

4.12.1.2.1 Harbor Boulevard

Harbor Boulevard is a two-lane north-south arterial directly serving the Mandalay Generating Station (MGS) property, where P3 would be located. Access to MGS intersects with Harbor Boulevard via an unsignalized T-intersection. It is classified as a Secondary Arterial in the City of Oxnard General Plan Circulation Element, and daily circulation is currently 17,090 Average Daily Traffic (ADT) (NDS, 2015) between the MGS site access intersection and Gonzales Road. Harbor Boulevard has a speed limit of 50 miles per hour (mph) from Channel Islands Boulevard to West 5th Street (Sec. 8-2 City of Oxnard Ordinance). From the Santa Clara River south to West 5th Street in Oxnard, Harbor Boulevard is a two-lane road serving primarily recreational and agricultural uses. South of West 5th Street to Channel Islands Boulevard, Harbor Boulevard is a four-lane city street with limited driveway access. Harbor Boulevard is designated as a Class II bike facility. Harbor Boulevard crosses the Edison Canal (0.8 mile north of West 5th Street) via Bridge 550 (County of Ventura, 2015), rated with a capacity for Purple Loading (permitted for five- and seven-axle trucks).

4.12.1.2.2 Gonzales Road

Gonzales Road is an east-west arterial to the north of the P3 site. It is classified as a Local Arterial from Harbor Boulevard to Victoria Avenue; and as a Primary Arterial from Victoria Avenue to Rice Avenue. Gonzales Road is currently designated as a Class II bike facility east of Victoria Avenue, while the segment from Victoria Avenue to Harbor Boulevard is proposed as a Class II facility in the City of Oxnard 2012 Bicycle and Pedestrian Master Plan. From Harbor Boulevard to Victoria Avenue, Gonzales is a two-lane arterial with a posted speed limit of 55 mph, and currently carries 3,550 ADT per day (NDS, 2015). From Victoria Avenue to North C Street, Gonzales Road is a four-lane divided primary arterial serving mostly residential and commercial areas. East of North C Street, Gonzales Road transitions into a six-lane road towards Rice Avenue. Gonzales Road is a designated truck route (City of Oxnard, 2008.)

4.12.1.2.3 Victoria Avenue

Victoria Avenue is a north-south arterial to the east of the project site. It is classified as a Primary Arterial in the City of Oxnard General Plan Circulation Element. North of Gonzales Road towards U.S. 101, Victoria Avenue is a divided four-lane facility with a posted speed limit of 55 mph, and currently carries 43,810 ADT per day (NDS, 2015). Victoria Avenue is a designated truck route (City of Oxnard, 2008.)

4.12.1.2.4 5th Street

An east-west arterial, 5th Street is south of the project site. It is classified as a Local Arterial from Harbor Boulevard to Victoria Avenue, and as a Secondary Arterial from Victoria Avenue to Rice Avenue, with the exception of the segment between Ventura Road and Oxnard Boulevard, which is classified as a Local Arterial. West 5th Street is designated as a Class II bike facility from Victoria Avenue to Ventura Road. The speed limit on West 5th Street from Victoria Avenue to Ventura Road is 45 mph (Sec. 8-2 City of Oxnard Ordinance). It carries 4,360 ADT per day (NDS, 2015); 5th Street is a designated truck route (City of Oxnard, 2008). East of the project site, West 5th Street crosses the Edison Canal (0.35 mile east of Harbor Boulevard) via Bridge 552 (County of Ventura, 2015), rated with a capacity for Purple Loading (permitted for five- and seven-axle trucks).

4.12.1.3 Level of Service

Level of Service (LOS) is an indicator of operating conditions on a roadway or at an intersection, and is defined in categories ranging from "A" to "F." These categories can be viewed much like school grades, with "A" representing the best traffic flow conditions and "F" representing poor conditions. LOS A indicates free-flowing traffic, and LOS F indicates substantial congestion, with stop-and-go traffic and long delays at intersections. In the City of Oxnard 2030 General Plan, the acceptable LOS for intersections incorporated in the Oxnard Traffic Model is grade C or better (City of Oxnard, 2011). However, under the General Plan, Section 4.4 Circulation Element, Infrastructure and Community Services (ICS)-3.3 New Development Level of Service C, "The City may allow an exception of level of service "D" in order to avoid impacting private homes and/or businesses, avoid environmental impacts, or preserve or enhance aesthetic integrity."

Table 4.12-1 provides definitions of LOS for signalized intersections using the Intersection Capacity Utilization (ICU) methodology; and definitions of LOS for unsignalized intersections using Highway Capacity Manual Methodology.

The analysis of signalized intersections used the procedure consistent with the City of Oxnard Policies and General Plan, the ICU methodology. LOS is defined in terms of Volume-to-Capacity (V/C) ratio. This technique uses 1,600 vehicles per hour per lane (VPHPL) and 3,200 VPHPL for dual left-turn lanes as the maximum saturation volume of intersections.

The LOS for roadway segments is based on the capacity of the roadway facility and the ratio of daily vehicles to that capacity. The higher the capacity, the more vehicles the roadway can carry. As the capacity of a given roadway nears its peak, the LOS begins to degrade. The LOS results presented in this study are based on the V/C ratios at daily roadway volume and capacity, based on roadway facility class, as summarized in Table 4.12-2. The City of Oxnard 2030 General Plan does not identity an acceptable LOS for roadway segments. Roadway segment analysis is generally used by the City for high-level planning and forecasting of the City's roadway circulation system. Under the General Plan, Section 4.4 Circulation Element, ICS-3.8, it recommends to "utilize the circulation system diagram (Figure 4-1) in evaluating development proposals, the City's capital improvement program, and other relevant activities."

4.12.1.3.1 Study Intersections

Based on the anticipated project construction and operations vehicle routes, the following study intersections were evaluated (Figure 4.12-3).

- Intersection 1: Victoria Avenue/Gonzales Road
- Intersection 2: Harbor Boulevard/Gonzales Road
- Intersection 3: Harbor Boulevard/MGS Entrance
- Intersection 4: Harbor Boulevard/West 5th Street

4.12.1.3.2 Roadway Segments

In addition to the study intersections listed above, the following roadway segments were also evaluated (Figure 4.12-3).

- Segment 1: Harbor Boulevard – north of Gonzales Road
- Segment 2: Harbor Boulevard – between Gonzales Road and MGS Entrance
- Segment 3: Harbor Boulevard – between MGS Entrance and West 5th Street
- Segment 4: Harbor Boulevard – south of West 5th Street
- Segment 5: Gonzales Road – between Harbor Boulevard and Victoria Avenue
- Segment 6: Victoria Avenue – north of Gonzales Road
- Segment 7: Highway 101 – west of Victoria Avenue
- Segment 8: Highway 101 – east of Victoria Avenue

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

- Existing Conditions – Evaluate traffic conditions (Year 2015) based on existing lane geometries, traffic controls, and traffic volumes.

- Existing Baseline (Year 2015) plus Project Conditions – Evaluate traffic conditions considering Existing Baseline 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.

- Future Baseline (Year 2019) Conditions – Evaluate traffic conditions considering existing traffic plus growth applied to Year 2015 traffic volumes. Year 2019 was evaluated as Future Baseline Conditions because the construction of P3 is anticipated to peak during 2019.

- Future Baseline (Year 2019) plus Project Conditions – Evaluate traffic conditions considering Future Baseline 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.

- Operation Year Baseline (Year 2020) Conditions – Evaluate traffic conditions considering existing traffic plus growth applied to Year 2015 traffic volumes. Year 2020 was evaluated as Operation Year Baseline Conditions because the P3 is anticipated to begin operations in 2020.

- Operation Year Baseline (Year 2020) plus Project Conditions – Evaluate traffic conditions considering Operation Baseline forecasted conditions plus project operations-related traffic.

Peak-hour turning-movement volumes at the study intersections and 24-hour bi-directional traffic volumes along the study roadway segments were collected during the third week of January 2015. Figure 4.12-4 illustrates the existing lane geometries and traffic control at the study intersections. Figure 4.12-5 illustrates the daily average and peak-hour turning movement volumes at the study intersections under existing conditions. The daily average and peak-hour turning-movement volumes are included in Appendix K-1.

Existing LOS analysis at the study intersections and roadway segments was conducted based on the traffic volumes, lane geometries, and traffic control data collected. Tables 4.12-3 and 4.12-4 summarize the existing conditions for the study intersections and roadway segments. Under existing baseline conditions, all of the study intersections operate at acceptable levels (i.e., LOS C or better) during both a.m. and p.m. peak hours, with the exception of the intersection of Harbor Boulevard and the MGS Entrance, which is operating at LOS D and LOS E during the AM and PM peak hours, respectively. Similarly, all study roadways are operating at acceptable levels, with the exception of the following segments:

- Victoria Avenue (North of Gonzales Road) – LOS D
- Highway 101 (West of Victoria Avenue) – LOS D
- Highway 101 (East of Victoria Avenue) – LOS F

The detailed LOS calculations worksheets of the study intersections LOS analysis are attached in Appendix K-2.

4.12.1.4 Other Transportation Elements

4.12.1.4.1 Parking

Staff and manpower parking will be provided on site within the MGS property; no offsite parking would be needed during construction or operations.

4.12.1.4.2 Public Transportation

The City of Oxnard has an extensive public transportation system comprised of fixed bus routes and general public Dial-a-Ride (DAR) services.

Gold Coast Transit provides fixed-route bus and paratransit services in the cities of Ojai, Oxnard, Port Hueneme, and Ventura, and in the unincorporated county areas between the cities. Gold Coast Transit does not operate any routes along Harbor Boulevard or along Gonzales Road or 5th Street east of Victoria Avenue (Gold Coast Transit, 2014).

DAR service is typically provided in a city or urban area, and is characterized by short rides and frequent stops. The Oxnard Harbors and Beaches DAR provides circulation in the beach communities, and serves as a feeder service to Gold Coast Transit and Amtrak (City of Oxnard, 2012).

The Oxnard School District (Grades K through 6) and Oxnard Union High School District (Grades 7 through 12) provide school transportation services to students. The schools nearest to the project site are MacAuliffe School (south of Wooley Road) and Oxnard High School (south of Gonzales Road).

4.12.1.4.3 Bicycle and Pedestrian Circulation

The City of Oxnard has an extensive existing and planned bicycle network, as outlined in the 2012 Oxnard Bicycle and Pedestrian Facilities Master Plan (City of Oxnard, 2012). The city intends to make bicycling and walking integral modes of transportation in Oxnard through a safe, interconnected system of bicycle and pedestrian facilities.

As described earlier, Gonzales Road is currently designated as a Class II bike facility east of Victoria Avenue, while the segment from Victoria Avenue to Harbor Boulevard is proposed as a Class II facility in the City of Oxnard 2012 Bicycle and Pedestrian Master Plan. The segment of Victoria Avenue between Santa Clara River and Gonzales Road is also designated as a Class II bike facility. A long stretch of Harbor Boulevard from Channel Islands Boulevard in Oxnard passing the project site, across the Santa Clara River to Spinnaker Drive in Ventura, is also designated as a Class II bike facility.

Pedestrian travel constitutes a very small portion of total urban travel for the City of Oxnard. Providing sidewalks and paths becomes more relevant as the population increases. Oxnard provides pedestrian facilities in and between residential neighborhoods, along with commercial and industrial areas. During the traffic field survey conducted in January 2015, there were no observed pedestrian activities along the segment of Harbor Boulevard in the vicinity of the project site. One pedestrian was observed at a northbound bus stop on the northeastern quadrant of Victoria Avenue and Gonzales Road.

4.12.1.4.4 Airports

Oxnard Airport is situated on 216 acres of land along West 5th Street, approximately 1.8 miles southeast of the project site. The Airport Comprehensive Land Use Plan for Ventura County identifies a study area for the Oxnard Airport that corresponds with the airport's outer conical surface, as defined by Federal Aviation Regulation Part 77. Generally, this study area extends south to Bard Road, east to Rice Avenue, north past the Santa Clara River, and west beyond the shores of McGrath/Mandalay Beach, Oxnard Shores, and the Channel Islands Beach. The airport is operated by Ventura County and is classified as a non-hub commercial service airport. The airport is home for one full-service fixed-base operator providing services such as aircraft charters, aircraft maintenance, and pilot supplies (County of Ventura, 2014). According to 2013 statistics, the annual operations is 59,671 aircraft takeoffs and landings, and is used as base for 167 aircraft (County of Ventura, 2014).

The airport has a single, 5,950-foot concrete runway oriented in an east-west alignment. The restricted airspace for airports with runways longer than 3,200 feet extends 20,000 feet out from any point on the runways. As shown on Figure 4.12-6, the existing MGS stack for Units 1 and 2 is inside the runway approach obstruction clearance zone for the airport, and must be lighted (Coffman Associates, 2004).

In addition, two other airports operate from neighboring areas. Camarillo Airport is approximately 8 miles east of the P3 site, and Point Mugu Airport is approximately 10 miles southeast of the P3 site.

4.12.1.4.5 Safety

The roads in the immediate vicinity of the P3 site provide adequate sight distances. Based on the field reconnaissance survey along the planned project construction access route and the local circulation system serving the project site (Figure 4.12-2), no horizontal or vertical sight obstructions were observed that would affect project-construction- and operations-related traffic.

4.12.1.4.6 Goods Movement

The majority of freight moved in the City of Oxnard and adjoining jurisdictions, including Port Hueneme, is via rail and commercial vehicles. The primary freight rail provider is Union Pacific Railroad (UPRR), which has a switchyard at the block formed by Highway 1 to the west, 3rd Street to the north, Rose Avenue to the east, and 5th Street to the south. The most direct route from the UPRR switchyard is via 5th Street to Harbor Boulevard, then to the project site, a distance of approximately 5 miles.

The only other freight rail operator is Ventura County Railroad (VCRR), a short-line railroad in Southwest Ventura County, California. VCRR extends over 17 miles and is an integral corridor for movement of goods in the industrial areas of south of Oxnard, Port Hueneme, and U.S. Naval Base Ventura County (Genesee & Wyoming, 2015). This line does not reach the P3 site.

4.12.2 Environmental Consequences

4.12.2.1 Significance Criteria

The following sections evaluate the potential impacts to traffic and transportation associated with construction and operation of the project. Appendix G of the California Environmental Quality Act (CEQA) describes project-related effects that would normally be considered to have a significant effect on the environment. Based on this guidance, project-related impacts are considered significant if the project would do any of the following:

- Additional Vehicular Traffic: Additional traffic generated by the project would adversely affect operating conditions (i.e., LOS) on local and regional roadways;
- Public Transit: Additional traffic generated by the project would impede public transit operations in the vicinity of the project;
- Bicycle and Pedestrian Circulation: Additional traffic generated by the project would obstruct bicycle and pedestrian access to and from the project site or along adjacent bicycle and pedestrian routes;
- Parking Facilities: Additional traffic generated by the project would consume limited parking in the proximity of the project site;
- Goods Movement: Additional traffic generated by the project would hinder goods movement along local and regional roadways;
- Safety: Traffic generated by the project would impose safety concerns, such as a significant increase in accidents;
- Air, Rail, and Waterborne Traffic: Traffic generated by the project would interfere with air, rail, or waterborne traffic,[1] or access to these transportation modes;
- The project would result in inadequate emergency access; or
- The project would result in inadequate parking capacity.

[1] There are no water-based transit services serving the project site or immediate vicinity; therefore, no impacts to waterborne traffic would occur, and such impacts are not further discussed.

In addition, according to the City of Oxnard impact threshold criteria, a significant impact occurs if a project's added traffic increases the ICU V/C ratio by 0.02 or more at an intersection operating at LOS C or worse (LOS D, E, and F) when compared to the baseline (No Project) ICU V/C ratio.

4.12.2.2 Construction Impacts

4.12.2.2.1 Construction Activities and Traffic Forecast

Construction of the project is expected to begin in October 2018 and be completed by March 2020. Decommissioning activities for MGS Units 1 and 2 would occur from March to May 2020, and commercial operation of P3 would begin in June 2020. Weekday traffic during peak hours was evaluated for the local roadway network adjacent to the project during construction. The construction schedule has been estimated on a single-shift, 10-hour-per–day, and 50-hour-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 would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The onsite workforce is expected to reach its maximum peak of 90 individuals during the 8th month (2nd quarter of 2019) of construction.

For analysis purposes, the peak-month construction workforce was conservatively assumed to drive alone using personal or company vehicles. Due to early start, the majority of the 90 workers during the peak construction month would start prior to the 7 to 9 a.m. peak hour, with 10 percent conservatively assumed to arrive during the 7 to 9 a.m. peak hour, and 60 percent leaving during 4 to 6 p.m. peak hours.

Furthermore, it was conservatively assumed that up to five delivery vehicles would serve the site during the peak month, which equates to 15 passenger car equivalent based on one delivery vehicle to three passenger car equivalents. It was assumed that up to two delivery vehicles arrive during the 7 to 9 a.m. peak hour, unload and would leave after the a.m. peak hour. There are no planned deliveries during the 4 to 6 p.m. peak hours with very minor exceptions.

Based on the assumptions and projected construction workforce, it is anticipated that during the peak construction month, the project would generate approximately 210 daily trips (105 inbound and 105 outbound), with 15 trips occurring during the a.m. and nine trips during p.m. peak hour. It should be noted that the construction workers usually arrive early in the morning and depart early in the evening, before the peak hour of the roadway begins. Assuming some of the arrivals and departures of the construction workers during the peak hours provides a conservative and worst-case conditions traffic analysis. It should be noted that the projected traffic would occur only during the peak construction month and would then start to taper towards the pre-construction conditions. Table 4.12-5 summarizes the proposed project's peak-hour and daily trip generation during the peak construction month.

It should be noted that approximately 11,400 cubic yards of excess fill will need to be hauled from the site. Transport of this this fill will require approximately 950 truck trips over a 5-month period, from November 2018 to March 2019, during the site preparation and foundation work. The maximum number of truck trips per day is estimated at 24. The majority of these trips would not occur during the peak hour, and this 5-month period would not overlap with the maximum peak month of construction; therefore these trips would not result in significant traffic impacts.

Most of the heavy equipment and its components would be transported by rail to the existing UPRR switchyard, then trucked to the site. Potential candidates for rail shipment are the combustion turbine and generator, and the generator step-up transformer. Shipments would be offloaded at the UPRR switchyard east of the project site. The UPRR switchyard is generally bounded by Highway 1 to the west, 3rd Street to the north, Rose Avenue to the east, and 5th Street to the south. A heavy haul transport would be used

to move the equipment to their foundations or assembly point. Truck deliveries normally would be made on weekdays between 7:00 a.m. and 5:00 p.m.

There are no offsite linears required for P3; therefore, no roadway closures would be required during construction.

4.12.2.2.2 Trip Distribution

Directional trip distribution and assignment of anticipated construction traffic generated by the project was developed using the most direct route to and from the project site, in consideration of adjacent land uses along the routes, and the vicinity and location of the project. The project trip distribution is illustrated on Figure 4.12-7. The anticipated traffic from the project during construction was assigned to the study intersections based on the trip distribution. Figure 4.12-8 illustrates the project-only peak-hour trips at the study intersections that are projected to occur during the peak construction month.

4.12.2.2.3 Traffic Impacts during Project Construction

Based on project schedule and projections, construction activities at the project site are anticipated to peak in 2019. Recent cases, including Sunnyvale West Neighborhood Assn. v. City of Sunnyvale City Council (2010) 190 Cal. App. 4th 1351 (Sunnyvale) and Madera Oversight Coalition, Inc. v. County of Madera (2011) 199 Cal. App. 4th 48 (Madera), and culminating in Neighbors for Smart Rail v. Exposition Metro Line Construction Authority (2013) 57 Cal. 4th 439 (Expo), have addressed the issue of the appropriate methodology for establishing baseline conditions when evaluating traffic impacts under CEQA. At issue was whether the appropriate baseline conditions are those that exist at the commencement of environmental review (existing conditions baseline), or those that are anticipated to exist at the time of project implementation based on projected growth (future baseline). The Sunnyvale and Madera courts found that exclusive reliance on the commonly used future baseline approach did not comply with CEQA mandates regarding establishment of baseline conditions. In the Expo case, the California Supreme Court held that, depending on the circumstances and upon certain findings by the approving agency, exclusive use of the future baseline approach is acceptable. In the interest of completeness, the traffic analysis for P3 has been done using both an existing conditions baseline and a future baseline.

Based on the aforementioned precedent cases, LOS analyses at the study intersections and roadway segments were conducted based on peak-hour turning movements for intersection and daily traffic volume for roadway segments under both Existing Conditions Baseline (2015) and Future Conditions Baseline (2019) Conditions. For the Future Conditions Baseline (2019) Conditions, a growth factor of 2 percent (City of Oxnard, 2015) per year was applied to existing traffic volumes and cumulative project-added trips at the study intersections and roadway segments. The anticipated peak-hour project trips under a worse-case scenario were added to both Existing Baseline (2015) Conditions and Future Baseline (2019) Conditions. Figure 4.12-9 illustrates the daily average and peak-hour traffic volumes under Existing Baseline (2015) plus Project Conditions. The anticipated daily average and peak-hour turning movements at the study intersections under Future Baseline (2019) Conditions and Future Baseline (2019) plus Project Conditions are illustrated on Figure 4.12-10 and Figure 4.12-11, respectively.

Table 4.12-6 summarizes the results of the LOS analysis at the study intersections under Existing Baseline (2015) Plus Project Conditions, and when compared to Table 4.12-3, Existing Baseline (2015) Conditions; all three signalized study intersections will maintain their current at LOS C or better operating conditions. Only Harbor Boulevard/MGS Entrance, currently already operating at LOS D in the AM peak hour and LOS E in the PM peak hour, will experience a deterioration from LOS D to E during the AM peak hour, and a slight increase in delays during the PM peak hour attributable to short-term construction traffic. The incremental addition and short-term nature of the project-added construction trips does not impact or burden the general public traffic, because Harbor Boulevard is operating uncontrolled; therefore, the worst-case LOS at the private MGS driveway is solely attributed to

the project by itself; the Applicant will accept the consequences of incremental delay and associated wait times to exit, and wait for gaps in traffic to transition to Harbor Boulevard. This occurs only as a short-term inconvenience during the construction period, rather than a long-term project impact.

Table 4.12-7 summarizes the results of the analysis for the roadway segments under Existing Baseline (2015) plus Project Conditions, and when compared to Table 14.12-4, Existing Baseline (2015) Conditions; the addition of project traffic is not anticipated to degrade the LOS to unacceptable levels. Based on the significance thresholds listed above, it is expected that the addition of the traffic during construction of the project will not have any significant impacts at the study roadway segments.

Table 4.12-8 summarizes the results of the LOS analysis at the study intersections under Future Baseline (2019) Conditions, and Table 4.12-10 summarizes the LOS for Future Baseline (2019) plus Project Conditions conducted based on the anticipated peak-hour turning movements.

Under Future Baseline (2019) Conditions, only one of the study intersections is projected to operate at acceptable levels (i.e., LOS C or better), while three of the study intersections are anticipated to operate at LOS D or E during the AM and PM peak hours shown below.

- Victoria Avenue/Gonzales Road (LOS D, AM/PM)
- Harbor Boulevard/MGS Entrance (LOS E, AM/PM)
- Harbor Boulevard/West 5th Street (LOS D, AM)

The addition of the project's construction trips (Future Baseline [2019] plus Project Conditions) does not change the LOS at the study intersections, and does not increase the V/C ratio by 0.02 for the intersections operating at LOS D or worse, with the exception of the following:

- Harbor Boulevard/MGS Entrance (from LOS E to LOS F PM)

Based on the significance thresholds listed above, addition of the construction traffic from the project would not change the Future Baseline (2019) V/C ratios by more than 0.02 at the two signalized study intersections operating at LOS D under the Project Future Baseline (2019) plus Project Conditions or worse.

Although the addition of the construction traffic from the project would change the peak morning LOS at Harbor Boulevard and Gonzales Road from LOS C to LOS D conditions, the increase in V/C ratio is only 0.008 (i.e., less than 0.02). Therefore, this would not be a significant impact based on the City of Oxnard impact threshold criteria.

The construction traffic would change the peak afternoon LOS at the Harbor Boulevard and MGS Entrance from LOS E to LOS F conditions, and increase the approach delay by 23 seconds (i.e., greater than the impact threshold of 0.02) resulting, in a short–term, significant impact per City criteria. Because the intersection is operating as stop-controlled at the MGS exit driveway and Harbor Boulevard is free flowing, the LOS E and F delay conditions are only for the stopped MGS driveway traffic exiting the project site. The incremental addition and short-term nature of the project-added construction trips does not impact or burden the general public traffic since Harbor Boulevard is operating uncontrolled; therefore, the worst-case LOS at the private MGS driveway is solely attributed to the project by itself, and the Applicant will accept the consequences of incremental delay and associated wait time to exit, and wait for gaps in traffic to transition to Harbor Boulevard. This occurs only as a short-term inconvenience during the construction period, rather than a long-term project impact.

Tables 4.12-9 and 4.12-11 summarize the results of the analysis for the roadway segments under Project Construction Baseline (2019) and Future Baseline (2019) plus Project Conditions, respectively. The addition of project traffic is not anticipated to degrade the LOS to unacceptable levels. Based on the

significance thresholds listed above, it is expected that the addition of the traffic during construction of the project will not have any significant impacts at the study roadway segments.

Additionally, based on the results of the intersection and roadway segment analysis, construction traffic from the proposed project will not impede or obstruct existing emergency access.

4.12.2.2.4 Parking Facilities

Adequate onsite parking will be provided, and parking outside of the MGS property will not be required. Therefore, the construction parking during the peak construction months would not have any significant impacts on surrounding parking facilities or roadway segments.

4.12.2.2.5 Public Transportation

During project construction, skilled craft and support staff would generally travel in private vehicles, because craft workers typically carry specialty tools and equipment. Also, because there are no established public transit routes along Harbor Boulevard in the vicinity of the project site, the additional traffic projected to be generated during the peak months of construction is not expected to have any significant impacts on public transportation.

4.12.2.2.6 Bicycle and Pedestrian Circulation

A Class II bicycle route runs along Harbor Boulevard adjacent to and fronting the project site. Based on the infrequently observed bike activities and negligible pedestrian traffic along this segment of Harbor Boulevard, it is anticipated that no significant impacts to pedestrian or bicycle circulation would result from the additional traffic projected to be generated during the peak month of construction.

4.12.2.2.7 Goods Movement

Based on the relatively few vehicles expected during construction; no expected change in operations-related traffic; and the small number of businesses in the immediate vicinity of the project, no significant impacts would be expected to result to goods movement.

4.12.2.2.8 Safety

The roads in the immediate vicinity of the project site are relatively flat and provide adequate sight distances. No vertical or horizontal sight obstructions were observed that would cause unsafe driving conditions. The minimal truck traffic observed in the area does not mandate special consideration, and no significant impacts would be expected to result from either construction or operations traffic.

4.12.2.2.9 Air and Rail Traffic

The project would have no adverse impact on air or rail traffic. The closest airport to the project site is Oxnard Airport, approximately 1.8 miles southeast of the P3 site, with a runway that is 5,960 feet long. The project would have no anticipated effect on air traffic patterns, because the MGS generating units, including the 200-foot-high stack, historically (and currently) operated and coexisted with no conflict to airport operations.

The Federal Aviation Administration (FAA) Regulations Part 77 establishes standards for determining obstructions in navigation space and sets forth requirements for notification of proposed construction. These regulations require notification of any construction over 200 feet in height above ground level. Appendix K-3 includes a copy of the Airport Layout Plan and Approach Surface Profile drawing for Oxnard Airport (Coffman Associates, 2004).

The P3 stack would be 188 feet above ground; therefore, the project would not have any structures tall enough to trigger the filing of Form 7460 (Notice of Proposed Construction or Alteration) with the FAA. However, the P3 site is in the restricted airspace of Oxnard Airport. The restricted airspace for airports with runways longer than 3,200 feet extends 20,000 feet out from any point on the runways. Although the P3 stack is less than 200 feet tall, it would be within 20,000 feet of Oxnard Airport. As shown on Figure 4.12-6, the P3 site is just north of the runway approach obstruction clearance zone. The existing 200-foot-tall MGS stack is in the runway approach obstruction clearance zone for the airport and must be lighted (Coffman Associates, 2004). Therefore, FAA will be notified to determine the appropriate stack lighting for P3. The project will use evaporative cooling for air intake cooling for the gas turbine. This will not create a visible plume, because the resulting moisture in the gas turbine exhaust will be approximately 900 degrees Fahrenheit. Therefore, no visible steam plumes will be created that could impact flight operations. Because the P3 site is north of the runway approach obstruction clearance zone, flight patterns would not be directly over the stack, and flight operations would not be impacted by thermal plumes from P3.

Based on the distance of the Camarillo Airport and Point Mugu Airport from the P3 site, the project would have no impact on these airports.

The project would potentially use rail facilities to transport a limited number of project components via the UPRR switchyard located approximately 5 miles east of the project site. The final leg of the delivery would be by trucks via local roadways; 5th Street provides the most direct route from the UPRR switchyard to Harbor Boulevard, then to the project site. Based on the small number of equipment deliveries via rail and the construction-worker and equipment-delivery vehicle routes, construction activities would not adversely conflict with the current rail traffic.

4.12.2.3 Operations Impacts

4.12.2.3.1 Operations Activities and Traffic Forecast

P3 is projected to begin operations in June 2020. The existing MGS operations staff would support P3 operations; therefore, there will be no increase in staff. During normal operations, P3 would employ a staff of 17, including plant operation technicians, supervisors, administrative personnel, mechanics, engineers, chemists, and electricians in rotating shifts. The facility would be staffed 24 hours per day, 7 days per week.

Additionally, occasional deliveries and maintenance-related trips are anticipated as part of the normal operations of the plant. This would not represent a change from existing MGS operations. Truck trips required to deliver aqueous ammonia during normal plant operations are expected to be slightly more (approximately 15 additional trips per year) than those for current MGS operations. Because there will be no change in staff, and only a very small increase in operation-related trips, the proposed plant operations will not change the LOS of the roads and intersections in the study area. Therefore, no significant traffic impacts during project operations are anticipated. In addition, traffic from project operations will not impede or obstruct existing emergency access.

4.12.2.3.2 Hazardous Materials and Waste Transport

A variety of hazardous reagents and materials would be stored and used at P3 in conjunction with operation and maintenance of the project, as described in Section 4.5. The type and character of such materials would be the same as or comparable to those used in the current operations. Hazardous materials that may be routinely stored in bulk and used in conjunction with the project include, but are not limited to, petroleum products, flammable and/or compressed gases, acids and caustics, aqueous ammonia, water treatment and cleaning chemicals, paints, and some solvents.

Truck trips required to transport hazardous waste materials during normal plant operations are expected to be similar to those for current MGS operations. A licensed hazardous waste transporter would move materials that require offsite disposal to a Class I hazardous waste landfill. Direct access by waste haulers to P3 would be via Harbor Boulevard. Transportation of hazardous waste from the project site would avoid, to the extent feasible, residential streets and the densely populated areas. The recommended project construction route from the P3 site to U.S. 101 provides the most direct and efficient route to transport hazardous waste materials. From the project site, the route would head north on a short segment of Harbor Boulevard, east on Gonzales Road, north on Victoria Avenue to U.S. 101 to reach Class I hazardous waste facilities; see Section 4.14, Waste Management, for additional information.

In case of a hazardous materials spill, the California Highway Patrol (CHP), local fire department, and other local authorities will be contacted immediately by the transporter.

Aqueous ammonia would be used, stored, and delivered to the site during operation as described in detail in Section 4.5, Hazardous Materials Handling. Tanker trucks with a capacity of up to about 8,000 gallons would deliver aqueous ammonia to the facility from suppliers in Central or Southern California. Such deliveries would be made as necessary (approximately 25 trips per year). This represents a slight increase in truck trips relative to current operations. This increase results from the use of a lower concentration of aqueous ammonia solution, which in turn increases the quantity of the solution required for operations.

4.12.3 Cumulative Impacts Analyses

The following cumulative projects were provided by the City of Oxnard and project-added trips were incorporated in the traffic study to evaluate cumulative impacts, and included in the Future Baseline (2019) No Project Conditions.

- Avalon Homes Residential Development;
- Oxnard Shores Residential Development;
- North Shore at Mandalay Bay Development;
- Rancho Victoria Plaza Shopping Center; and
- Teal Club Specific Plan.

The analysis presented for construction-related impacts considers the cumulative impacts of these projects. P3 will not result in operations-related traffic and transportation impacts, and therefore will not contribute to any cumulative impacts during operations.

4.12.4 Mitigation Measures

Although there are no significant impacts that require mitigation, the following are proposed measures to minimize construction-related trips 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:

- Use proper signs and traffic control measures in accordance with requirements of the California Department of Transportation (Caltrans), the County, and the City. All traffic signs, equipment, and control measures shall 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.

- Provide orientation and briefing to employees and contractors on the desired construction route.

TRA-2 Transportation Demand Management

- Encourage worker carpooling to minimize drive-alone worker trips.

TRA-3 Traffic Control Plan, Heavy Hauling Plan, and Parking/Staging Plan

The project owner will prepare and implement a Traffic Control Plan (TCP) for the P3's construction and operations traffic. The TCP will address the movement of workers, vehicles, and materials, including arrival and departure schedules and designated workforce and delivery routes. The project owner will consult with Caltrans, Ventura County, the City of Oxnard, and other applicable local jurisdictions in the preparation and implementation of the TCP. The project owner will submit the proposed TCP to Caltrans and applicable local jurisdictions in sufficient time for review and comment, and to the California Energy Commission Compliance Project Manager (CPM) for review and approval prior to the proposed start of construction and implementation of the plan.

The TCP will include:

- Provisions for redirection of construction traffic with a flag person as necessary to ensure traffic safety and minimize interruptions to non-construction-related traffic flow;

- Placement of necessary signage, lighting, and traffic control devices at the project construction site and laydown areas;

- A heavy-haul plan addressing the transport and delivery of heavy and oversized loads that require permits from the Caltrans, other state or federal agencies, and/or the affected local jurisdictions, including Ventura County and the City of Oxnard;

- Location and details of construction along affected roadways at night, where permitted;

- Temporary closure of travel lanes or disruptions to street segments and intersections during construction activities;

- Traffic diversion plans (in coordination with the City of Oxnard and Ventura County) to ensure access during temporary lane/road closures;

- Access to residential and/or commercial property near construction work and truck traffic routes;

- Assurance of access for emergency vehicles to the project site;

- Advance notification to residents, businesses, emergency providers, and hospitals that would be affected when roads may be partially or completely closed;

- Identification of safety procedures for exiting and entering the site access gate;

- Parking/Staging Plan for all phases of project construction and operation to require all project-related parking to be on site or in designated offsite parking areas.

Verification: At least 60 calendar days prior to the start of construction, the project owner will submit the TCP to the applicable agencies for review and comment, and to the CPM for review and approval. The project owner will also provide the CPM with a copy of the transmittal letter to the agencies requesting review and comment. At least 30 calendar days prior to the start of construction, the project owner will provide copies of any comment letters received from the agencies, along with any changes to the proposed development plan, to the CPM for review and approval.

4.12.5 Laws, Ordinances, Regulations, and Standards

P3 will be constructed and operated in accordance with all LORS applicable to traffic and transportation. Federal, state, and local LORS applicable to traffic and transportation are discussed below and summarized in Table 4.12-12, Applicable Laws, Ordinances, Regulations, and Standards.

4.12.5.1 Federal

The following federal LORS may apply to the project.

4.12.5.1.1 Title 49, Code of Federal Regulations, Parts 171-177

These regulations govern the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles. The administering agencies for these regulations are the CHP and the Department of Transportation, Pipeline and Hazardous Materials Safety Administration. P3 will conform to this law by requiring that shippers of hazardous materials use the required markings on their transportation vehicles.

4.12.5.1.2 Title 14, Code of Federal Regulations, Section 77.13(2)(i)

This regulations requires an Applicant to notify the FAA of construction of structures with a height greater than 200 feet from grade or greater than an imaginary surface extending outward and upward at a slope of 10 to 1 from the nearest point of the nearest runway of an airport with at least one runway more than 3,200 feet in length. The administering agency for the above regulation is the FAA. As discussed above in Section 4.12.1, although the P3 stack would be less than 200 feet tall, it would be within 20,000 feet of Oxnard Airport. Therefore, FAA will be notified to determine the appropriate stack lighting.

4.12.5.2 State

4.12.5.2.1 California Vehicle Code, Section 353

This section defines hazardous materials as any substance, material, or device posing an unreasonable risk to health, safety, or property during transportation, as defined by regulations adopted pursuant to Section 2402.7. The administering agency for the above statute is the CHP. P3 will comply with this code by continuing to classify all hazardous materials in accordance with their classification, and by requiring that shippers of hazardous materials use the required markings on their transportation vehicles.

4.12.5.2.2 California Vehicle Code, Sections 2500-2505.

This section authorizes the CHP to issue licenses for the transportation of hazardous materials, including explosives. The administering agency for the above statutes is the CHP. P3 will comply with these codes by requiring that contractors and employees be properly licensed and endorsed when operating vehicles used to transport hazardous materials.

4.12.5.2.3 California Vehicle Code, Sections 13369, 15275, 15278

These sections address the licensing of drivers and the classification of license required for the operation of particular types of vehicles, including the requirements for a commercial driver's license to operate commercial vehicles and an endorsement issued by the Department of Motor Vehicles (DMV) to drive any commercial vehicle identified in Section 15278. The administering agency for the above statutes is the DMV. P3 will comply with these codes by requiring that contractors and employees be properly licensed and endorsed when operating such vehicles.

4.12.5.2.4 California Vehicle Code, Sections 31303-31309

These sections require that the transportation of hazardous materials be on the state or interstate highway that offers the shortest possible overall transit time. The administering agency for the above statutes is the CHP. P3 will comply with this law by requiring that shippers of hazardous materials use the shortest route possible to and from the project site.

4.12.5.2.5 California Vehicle Code, Sections 31600-31620

These sections regulate the transportation of explosive materials. The administering agency for the above statutes is the CHP. It must be noted that the proposed project will not use explosive materials specifically defined in Section 12000 of the Health and Safety Code. However, the proposed project will comply with this law by requiring that shippers of other potentially explosive materials have the required licenses from the CHP.

4.12.5.2.6 California Vehicle Code, Sections 32000-32053

These sections authorize the CHP to inspect and license motor carriers transporting hazardous materials of the type requiring placards. The administering agency for the above regulation is the CHP. P3 will comply with this law by requiring that motor carriers of hazardous materials be properly licensed by the CHP.

4.12.5.2.7 California Vehicle Code, Sections 32100-32109

These sections require that shippers of inhalation hazards in bulk packaging comply with rigorous equipment standards, inspection requirements, and route restrictions. The administering agency for the above regulation is the CHP. If applicable, P3 will comply with this law by requiring shippers of these types of material to comply with all route restrictions, equipment standards, and inspection requirements.

4.12.5.2.8 California Vehicle Code, Sections 34000-34100

These sections establish special requirements for vehicles having a cargo tank and for hazardous waste transport vehicles and containers, as defined in Section 25167.4 of the Health and Safety Code. The commissioner shall provide for the establishment, operation, and enforcement of random on- and off-highway inspections of cargo tanks and hazardous waste transport vehicles and containers, and ensure that they are designed, constructed, and maintained in accordance with the regulations adopted by the commissioner pursuant to this code, and Chapter 6.5 (commencing with Section 25100) of Division 20 of the Health and Safety Code. The administering agency for the above regulation is the CHP. P3 will comply with this law by requiring that shippers of hazardous materials maintain their hazardous material transport vehicles in a manner that ensures the vehicles will pass CHP inspections.

4.12.5.2.9 California Vehicle Code, Section 34500

This section regulates the safe operation of vehicles, including those vehicles that are used for the transportation of hazardous materials. The administering agency for this regulation is the CHP. P3 will

comply with this law by requiring shippers of hazardous materials to have the necessary permits, inspections, and licenses issued by the CHP for the safe operation of the hazardous materials transport vehicles.

4.12.5.2.10 California Vehicle Code, Sections 35550 and 35780

Section 35550 imposes weight guidelines and restrictions on vehicles traveling on freeways and highways. Section 23780 requires a Single-Trip Transportation Permit to transport oversized or excessive loads over state highways. The permit can be acquired through Caltrans, who is the administering agency for this statute. P3 will comply with these codes by requiring that heavy haulers obtain a Single-Trip Transportation Permit for oversized loads for each vehicle, prior to delivery of any oversized load.

4.12.5.2.11 California Streets and Highways Code, Section 117

Unless otherwise specifically provided in the instrument conveying title, the acquisition by the department of any right of-way over any real property for state highway purposes includes the right of the department to issue, under Chapter 3 (commencing with Section 660), permits for the location in the right-of-way of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures. The administering agency for this statute is Caltrans. P3 does not propose any work in public right-of-ways.

4.12.5.2.12 California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 1480 et seq.

These sections define highways and encroachment and require encroachment permits for projects involving excavation in state highways and county/city streets. This law is generally enforced at the local level. The administering agencies for this regulation are Caltrans and City of Oxnard Public Works Department. The proposed project does not involve excavation in state highways and county/city streets.

4.12.5.2.13 California Health and Safety Code, Section 25160 et seq.

This section addresses the safe transport of hazardous wastes, requires a manifest for hazardous waste shipments, and requires a person who transports hazardous waste in a vehicle to have a valid registration issued by the Department of Toxic Substances Control (DTSC) in his or her possession while transporting the hazardous waste. The administering agency for this regulation is the DTSC. P3 will comply with this law by requiring that shippers of hazardous wastes are properly licensed by the DTSC and hazardous waste transport vehicles are in compliance with DTSC requirements.

4.12.5.2.14 California Department of Transportation Traffic Manual, Section 5-1.1

This section requires a temporary traffic control plan for "continuity of function (movement of traffic, pedestrians, bicyclists, transit operations), and access to property/utilities" any time the normal function of a roadway is suspended. The administering agencies for this regulation are Caltrans and City of Oxnard Public Works Department. The Applicant will file a TCP prior to the start of construction.

4.12.5.3 Local

4.12.5.3.1 Ventura County Transportation Commission Congestion Management Program

The Ventura County Transportation Commission (VCTC) has adopted the minimum LOS standard of "E" for the Congestion Management Program (CMP) road network (VCTC, 2009). The adopted VCTC minimum standard is consistent with state statutes under California Government Code Section 65089(b)(1)(B). The minimum standard adopted by VCTC only applies to the CMP intersections

and freeway segments are not allowed to deteriorate to a condition which is worse than LOS E, or the base year LOS if worse than E, without mitigation being prescribed in an acceptable deficiency plan.

4.12.5.3.2 Oxnard 2030 General Plan Circulation Element – Level of Service

The City of Oxnard's goal is LOS C at designated intersections, unless otherwise reduced by City Council direction.

4.12.5.3.3 Oxnard Municipal Code, Section 19-206

This section requires an encroachment permit to conduct construction activities in a right-of way. P3 does not propose any construction in or adjacent to City rights-of-way.

4.12.5.3.4 Oxnard Municipal Code, Section 19-241

The section requires a special permit to operate or move an overweight vehicle on city streets. P3 will comply with this code by requiring that heavy haulers obtain all necessary permits for oversized loads for each vehicle, prior to delivery of any oversized load.

4.12.6 Involved Agencies and Agency Contacts

The project is in Ventura County, and in the jurisdiction of the City of Oxnard. The relevant agencies and appropriate contacts are provided in Table 4.12-13.

4.12.7 Permits Required and Permit Schedule

The relevant permits required for traffic related construction or operational work activities are identified in Table 4.12-14.

4.12.8 References

Caltrans (California Department of Transportation), 2013. Traffic and Vehicle Systems Data.

City of Oxnard, 2015. Groundwater Recovery Enhancement and Treatment (GREAT) Program, Traffic and Transportation Study.

City of Oxnard, 2009. City of Oxnard 2030 General Plan Draft Program Environmental Impact Report. February.

City of Oxnard, 2011. 2030 General Plan Circulation Element.

City of Oxnard, 2012. City of Oxnard Bicycle and Pedestrian Facilities Master Plan.

City of Oxnard, 2008. Port Hueneme Oxnard Truck Traffic Study June 5, 2008.

Coffman Associates, Inc., 2004. Airport Master Plan for Oxnard Airport, Oxnard California. August.

County of Ventura, 2015. Ventura County Bridge Rating.

County of Ventura, 2014. Oxnard Airport Web Page. Available online at: http://www.ventura.org/department-of-airports/oxnard-airport. Accessed March 7, 2015.

Genesee & Wyoming, Inc., 2015. Ventura County Railroad Web Site. Available online at: http://www.gwrr.com/operations/railroads/north_america/ventura_county_railroad. Accessed March 7, 2015.

Gold Coast Transit, 2014. Gold Coast Transit System Map viewed on Service Area page of website. Available online at: http://www.goldcoasttransit.org/schedules/service-area. Accessed March 7, 2015.

NDS (National Data & Surveying Services), 2015. Intersection and Roadway Counts.

Transportation Research Board, 2000. Highway Capacity Manual, TRB Special Report 209, Washington D.C.

VCTC (Ventura County Transportation Commission), 2009. Congestion Management Program (CMP) Document.

Table 4.12-1
Level of Service Description

Level of Service	Description of Operations	Signalized Intersection Range of V/C Ratios	Unsignalized Intersection Control Delay (s/veh)
A	Describes primarily free-flow conditions at average travel speeds. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delays at intersection are minimal.	0.00 to 0.59	< 10
B	Describes primarily free-flow conditions at average travel speeds. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delays at intersection are minimal.	0.60 to 0.69	> 10 and < 15
C	Represents stable operations; however, ability to change lanes and maneuver may be more restricted than LOS B and longer queues are experienced at intersections	0.70 to 0.79	> 15 and < 25
D	Congestion occurs and a small change in volumes increases delays substantially.	0.80 to 0.89	> 25 and < 35
E	Severe congestion occurs with extensive delays and low travel speeds occur.	0.90 to 0.99	> 35 and < 50
F	Characterizes arterial flow at extremely low speeds and intersection congestion occur with high delays and traffic queuing.	$\geq$ 1.00	> 50

Notes:

s/veh = seconds per vehicle
V/C = Volume-to-Capacity

Source: City of Oxnard, 2009 and Transportation Research Board, 2000

Table 4.12-2
Roadway Facility Capacity

Roadway Class	Capacity (vehicle/lane)
Freeway	22,500
Major (6-Lane)	9,000
Primary (4-Lane)	9,000
Secondary (4-Lane)	8,000
Local Street/Ramps (2-Lane)	8,000

Source: City of Oxnard, 2009

Table 4.12-3
Intersection Level of Service – Existing Conditions

No.	Intersection	Type of Control	Existing Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/ Gonzales Road	Signal	0.760	C	0.776	C
2	Harbor Boulevard/ Gonzales Road	Signal	0.704	C	0.694	B
3	Harbor Boulevard/ MGS Entrance	Stop Sign[1]	35.0	D	35.6	E
4	Harbor Boulevard/West 5th Street	Signal	0.739	C	0.468	A

Notes:

[1] MOE for Unsignalized intersections is Delay in seconds per vehicle.

LOS = Level of Service
MGS = Mandalay Generating Station
MOE = Measure of Effectiveness
V/C = Volume-to-Capacity ratio

Table 4.12-4
Roadway Segment Level of Service – Existing Conditions

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Existing ADT	V/C	LOS
1	Harbor Boulevard[1]	North of Gonzales Road	Secondary Arterial	32,000	18,030	0.563	A
2	Harbor Boulevard[1]	North of MGS Driveway	Secondary Arterial	32,000	17,090	0.534	A
3	Harbor Boulevard[1]	South of MGS Driveway	Secondary Arterial	32,000	17,070	0.533	A
4	Harbor Boulevard[1]	South of West 5th Street	Secondary Arterial	32,000	15,850	0.495	A
5	Gonzales Road[2]	East of Harbor Boulevard	Local Arterial	32,000	3,550	0.111	A
6	Victoria Avenue[3]	North of Gonzales Road	Primary Arterial	54,000	43,810	0.811	D
7	Highway 101[4]	West of Victoria Avenue	Freeway	135,000	119,000	0.881	D
8	Highway 101[4]	East of Victoria Avenue	Freeway	135,000	139,000	1.030	F

Notes:

[1] Classified as 4-Lane Secondary Arterial
[2] Classified as 4-Lane Local Arterial
[3] Classified as 6-Lane Primary Arterial
[4] No assumed widening applied

ADT = Average Daily Traffic
LOS = Level of Service
MGS = Mandalay Generating Station
V/C = Volume-to-Capacity ratio

Table 4.12-5
Peak Project Construction Trip Generation

Vehicle Types	Actual Vehicles	Peak Daily Trips (In/Out)	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Construction Workforce[1]	90	(90/90)	9	0	9	0	54	54
Delivery Vehicles[2]	5	(15/15)	6	0	6	0	0	0
Total	95	210	15	0	15	0	54	54

Notes:

1 Peak month construction workforce was conservatively assumed to drive alone using personal or company vehicles. Due to early start, the majority of the 90 workers during the peak construction month would start prior to the 7 to 9 a.m. peak hour, with 10 percent conservatively assumed to arrive during the 7 to 9 a.m. peak hour and 60 percent leaving during 4 to 6 p.m. peak hours.

2 It was conservatively assumed that up to five delivery vehicles would serve the site during the period which equate to 15 passenger car equivalent based on one delivery vehicle to three passenger car equivalents. It was assumed that up to two delivery vehicles arrive during the 7 to 9 a.m. peak hour and would leave after the peak hour. There are no planned deliveries during the 4 to 6 p.m. peak hours with very minor exceptions.

Table 4.12-6
Intersection Level of Service – Existing Baseline (2015) Plus Project Conditions

No.	Intersection	Type of Control	Existing Baseline (2015) Plus Project Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/ Gonzales Road	Signal	0.760	C	0.790	C
2	Harbor Boulevard/ Gonzales Road	Signal	0.712	C	0.694	B
3	Harbor Boulevard/ MGS Entrance	Stop Sign[1]	35.100	E	45.200	E
4	Harbor Boulevard/West 5th Street	Signal	0.739	C	0.483	A

Notes:

[1] MOE for Unsignalized intersections is Delay in seconds per vehicle.

LOS = Level of Service
MGS = Mandalay Generating Station
MOE = Measure of Effectiveness
V/C = Volume-to-Capacity ratio

Table 4.12-7
Roadway Segment Level of Service – Existing Baseline (2015) Plus Project Conditions

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Existing Baseline (2015) Plus Project ADT	V/C	LOS
1	Harbor Boulevard[1]	North of Gonzales Road	Secondary Arterial	32,000	18,040	0.564	A
2	Harbor Boulevard[1]	North of MGS Driveway	Secondary Arterial	32,000	17,258	0.539	A
3	Harbor Boulevard[1]	South of MGS Driveway	Secondary Arterial	32,000	17,113	0.535	A
4	Harbor Boulevard[1]	South of West 5th Street	Secondary Arterial	32,000	15,860	0.496	A
5	Gonzales Road[2]	East of Harbor Boulevard	Local Arterial	32,000	3,707	0.116	A
6	Victoria Avenue[3]	North of Gonzales Road	Primary Arterial	54,000	43,988	0.815	D
7	Highway 101[4]	West of Victoria Avenue	Freeway	135,000	119,084	0.882	D
8	Highway 101[4]	East of Victoria Avenue	Freeway	135,000	139,094	1.030	F

Notes:

[1] Classified as 4-Lane Secondary Arterial
[2] Classified as 4-Lane Local Arterial
[3] Classified as 6-Lane Primary Arterial
[4] No assumed widening applied

ADT = Average Daily Traffic
LOS = Level of Service
MGS = Mandalay Generating Station
V/C = Volume-to-Capacity ratio

Table 4.12-8
Intersection Level of Service – Future Baseline (2019) No Project Conditions

No.	Intersection	Type of Control	Future Baseline (2019) No Project Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/ Gonzales Road	Signal	0.820	D	0.838	D
2	Harbor Boulevard/ Gonzales Road	Signal	0.770	C	0.784	C
3	Harbor Boulevard/ MGS Entrance	Stop Sign[1]	42.0	E	47.0	E
4	Harbor Boulevard/West 5th Street	Signal	0.808	D	0.549	A

Notes:

[1] MOE for Unsignalized intersections is Delay in seconds per vehicle.

LOS = Level of Service
MGS = Mandalay Generating Station
MOE = Measure of Effectiveness
V/C = Volume-to-Capacity ratio

Table 4.12-9
Roadway Segment Level of Service – Future Baseline (2019) No Project Conditions

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Future Baseline (2019) No Project ADT	V/C	LOS
1	Harbor Boulevard[1]	North of Gonzales Road	Secondary Arterial	32,000	20,332	0.635	B
2	Harbor Boulevard[1]	North of MGS Driveway	Secondary Arterial	32,000	19,317	0.604	B
3	Harbor Boulevard[1]	South of MGS Driveway	Secondary Arterial	32,000	19,296	0.603	B
4	Harbor Boulevard[1]	South of West 5th Street	Secondary Arterial	32,000	17,638	0.551	A
5	Gonzales Road[2]	East of Harbor Boulevard	Local Arterial	32,000	3,834	0.120	A
6	Victoria Avenue[3]	North of Gonzales Road	Primary Arterial	54,000	47,315	0.876	D
7	Highway 101[4]	West of Victoria Avenue	Freeway	135,000	128,520	0.952	E
8	Highway 101[4]	East of Victoria Avenue	Freeway	135,000	150,120	1.112	F

Notes:

[1] Classified as 4-Lane Secondary Arterial
[2] Classified as 4-Lane Local Arterial
[3] Classified as 6-Lane Primary Arterial
[4] No assumed widening applied

ADT = Average Daily Traffic
LOS = Level of Service
MGS = Mandalay Generating Station
V/C = Volume-to-Capacity ratio

Table 4.12-10
Intersection Level of Service – Future Baseline (2019) Plus Project Conditions

No.	Intersection	Type of Control	Future Baseline (2019) Plus Project Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/ Gonzales Road	Signal	0.820	D	0.852	D
2	Harbor Boulevard/ Gonzales Road	Signal	0.778	**D**	0.784	C
3	Harbor Boulevard/ MGS Entrance	Stop Sign[1]	42.1	E	70.40	**F**
4	Harbor Boulevard/West 5th Street	Signal	0.808	D	0.564	A

Notes:

[1] MOE for Unsignalized intersections is Delay in seconds per vehicle
[2] **Bold** values indicate change from Future Baseline condition (Table 4.12-6).

LOS = Level of Service
MGS = Mandalay Generating Station
MOE = Measure of Effectiveness
V/C = Volume-to-Capacity ratio

Table 4.12-11
Roadway Segment Level of Service – Future Baseline (2019) Plus Project Conditions

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Future Baseline (2019) Plus Project ADT	V/C	LOS
1	Harbor Boulevard[1]	North of Gonzales Road	Secondary Arterial	32,000	20,342	0.636	B
2	Harbor Boulevard[1]	North of MGS Driveway	Secondary Arterial	32,000	19,485	0.609	B
3	Harbor Boulevard[1]	South of MGS Driveway	Secondary Arterial	32,000	19,339	0.604	B
4	Harbor Boulevard[1]	South of West 5th Street	Secondary Arterial	32,000	17,648	0.552	A
5	Gonzales Road[2]	East of Harbor Boulevard	Local Arterial	32,000	3,991	0.125	A
6	Victoria Avenue[3]	North of Gonzales Road	Primary Arterial	54,000	47,493	0.879	D
7	Highway 101[4]	West of Victoria Avenue	Freeway	135,000	128,604	0.953	E
8	Highway 101[4]	East of Victoria Avenue	Freeway	135,000	150,214	1.113	F

Notes:

[1] Classified as 4-Lane Secondary Arterial
[2] Classified as 4-Lane Local Arterial
[3] Classified as 6-Lane Primary Arterial
[4] No assumed widening applied

ADT = Average Daily Traffic
LOS = Level of Service
MGS = Mandalay Generating Station
V/C = Volume-to-Capacity ratio

Table 4.12-12
Summary of Laws, Ordinances, Regulations, and Statutes – Traffic and Transportation

LORS	Administering Agency	Applicability	Application for Certification Section
Federal			
Title 49, Code of Federal Regulations, Section 171-177	California Highway Patrol	Governs the transportation of hazardous materials, including the marking of transportation vehicles. P3 will comply with these regulations.	4.12.5.1
Title 14, Code of Federal Regulations, Section 77.13(2)(i)	Federal Aviation Administration (FAA)	Requires Applicant to notify FAA of any construction greater than height limits defined by the FAA. Although the P3 stack will be less than 200 feet tall, because P3 would be located within 20,000 feet of Oxnard Airport the FAA will be notified to determine the appropriate stack lighting.	4.12.5.1
State			
California Vehicle Code, Sections 353 and 2500-2505	California Highway Patrol	Defines materials that must be considered hazardous during transport and requires transporters of hazardous materials be licensed. P3 will comply with these regulations.	4.12.5.2
California Vehicle Code, Sections 13369, 15275, 15278	California Department of Motor Vehicles	Addresses the licensing of drivers and the classification of license required for the operation of particular types of vehicles. In addition, these sections require the possession of certificates of permitting the operation of vehicles transporting hazardous materials. P3 will comply with these regulations.	4.12.5.2

Table 4.12-12
Summary of Laws, Ordinances, Regulations, and Statutes – Traffic and Transportation (Continued)

LORS	Administering Agency	Applicability	Application for Certification Section
California Vehicle Code, Sections 31303-31309	California Highway Patrol	Requires transporters of hazardous materials to use the shortest route possible. P3 will comply with these regulations.	4.12.5.2
California Vehicle Code, Sections 31600-31620	California Highway Patrol	Regulate the transportation of explosive materials. P3 will not use explosive materials specifically defined in Section 12000 of the Health and Safety Code.	4.12.5.2
California Vehicle Code, Section 32000-32053	California Highway Patrol	Authorizes inspection and licensing of motor carriers transporting hazardous materials of the type requiring placards. P3 will comply with these regulations.	4.12.5.2
California Vehicle Code, Sections 32100-32109	California Highway Patrol	Transporters of inhalation hazardous materials or explosive materials must obtain a hazardous materials transportation license. P3 will comply with these regulations.	4.12.5.2
California Vehicle Code, Section 34000-34100	California Highway Patrol	Establish special requirements for the flammable and combustible liquids over public roads and highways. P3 will comply with these regulations.	4.12.5.2
California Vehicle Code, Section 34500	California Highway Patrol	Regulates the safe operation of vehicles, including those that are used for the transportation of hazardous materials. P3 will comply with this regulation.	4.12.5.2
California Vehicle Code, Section 35550	Caltrans	Imposes weight guidelines and restrictions on vehicles traveling on freeways and highways. P3 will comply with this regulation.	4.12.5.2

Table 4.12-12
Summary of Laws, Ordinances, Regulations, and Statutes – Traffic and Transportation (Continued)

LORS	Administering Agency	Applicability	Application for Certification Section
California Vehicle Code, Section 35780	Caltrans	Requires approval for a permit to transport oversized or excessive load over state highways. P3 will comply with this regulation.	4.12.5.2
California Streets and Highways Code, Section 117	Caltrans	Permits for the location in the right-of-way (ROW) of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures. P3 does not propose any work in public ROWs.	4.12.5.2
California Streets and Highways Code, Sections 660, 670, 672, 1450,1460,1470, 1480 et seq.	Caltrans	Defines highways and encroachment. P3 does not propose excavation in state highways and county/city streets.	4.12.5.2
California Health and Safety Code, Section 25160 et seq.	Department of Toxic Substances Control	Addresses the safe transport of hazardous wastes, requires a manifest for hazardous waste shipments, and requires a person who transports hazardous waste in a vehicle to have a valid registration. P3 will comply with this regulation.	4.12.5.2
California Department of Transportation Traffic Manual, Section 5 1.1	Caltrans and City of Oxnard Public Works Department.	This section requires a temporary traffic control plan be provided for "continuity of function (movement of traffic, pedestrians, bicyclists, transit operations), and access to property/utilities" during any time the normal function of a roadway is suspended. The Applicant will file a Traffic Control Plan prior to the start of construction.	4.12.5.2

Table 4.12-12
Summary of Laws, Ordinances, Regulations, and Statutes – Traffic and Transportation (Continued)

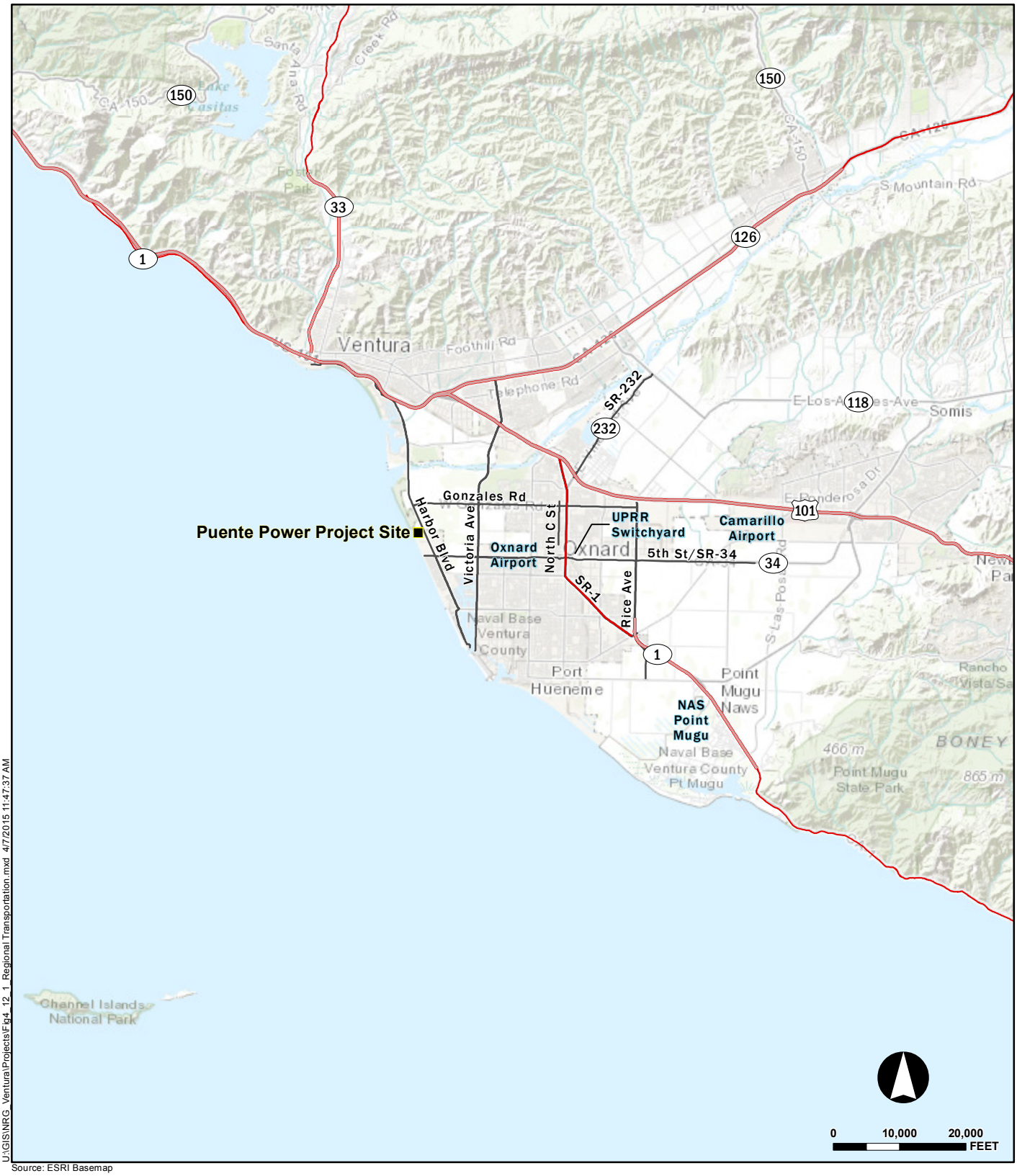
LORS	Administering Agency	Applicability	Application for Certification Section
Local			
Ventura County Congestion Management Program (CMP)	Ventura County Transportation Commission (VCTC)	VCTC has adopted the minimum Level of Service (LOS) standard of "E" for the CMP road network. The adopted VCTC minimum standard is consistent with state statutes under California Government Code Section 65089(b)(1)(B). The minimum standard adopted by VCTC only applies to the CMP; local agency LOS minimum standards may be higher than the CMP minimum.	4.12.5.3
City of Oxnard General Plan, Circulation Element	City of Oxnard	The LOS standard for the City of Oxnard is LOS C where it is environmentally feasible.	4.12.5.3
Oxnard Municipal Code, Section 19-206	City of Oxnard	Requires encroachment permit to conduct construction activities within or adjacent to City roadways. P3 does not propose any construction within or adjacent to City roadways.	4.12.5.3
Oxnard Municipal Code, Section 19-241	City of Oxnard	Requires special permit to operate or move an overweight vehicle on city streets. P3 will comply with this regulation.	4.12.5.3

Table 4.12-13
Involved Agencies and Agency Contacts

Issue	Agency/Address	Contact/Title	Telephone
Local Circulation System	City of Oxnard Public Works Department (805) 835-7872	Jason Samonte, PE City Traffic Engineer	(805) 835-7872
Hazardous Materials Transport	California Highway Patrol, 4656 Valentine Road, Ventura, CA 93003-5740	Division Desk	(805) 549-3261

Table 4.12-14
Permits Required

Responsible Agency	Permit/Approval	Schedule
City of Oxnard	Oxnard Municipal Code Sec. 19-241. Requires special permit to operate or move an overweight vehicle on city streets or highways except pursuant to a special permit issued under the provisions of this division and California Vehicle Code Division 15, Chapter 5, Article 6 will require permits from the City.	Prior to project site access
Caltrans	Oversize, overweight extra-legal loads will require permits from Caltrans.	Prior to project site access



U:\GIS\NRG_Ventura\Projects\Fig4_12_1_Regional Transportation.mxd 4/7/2015 11:47:37 AM

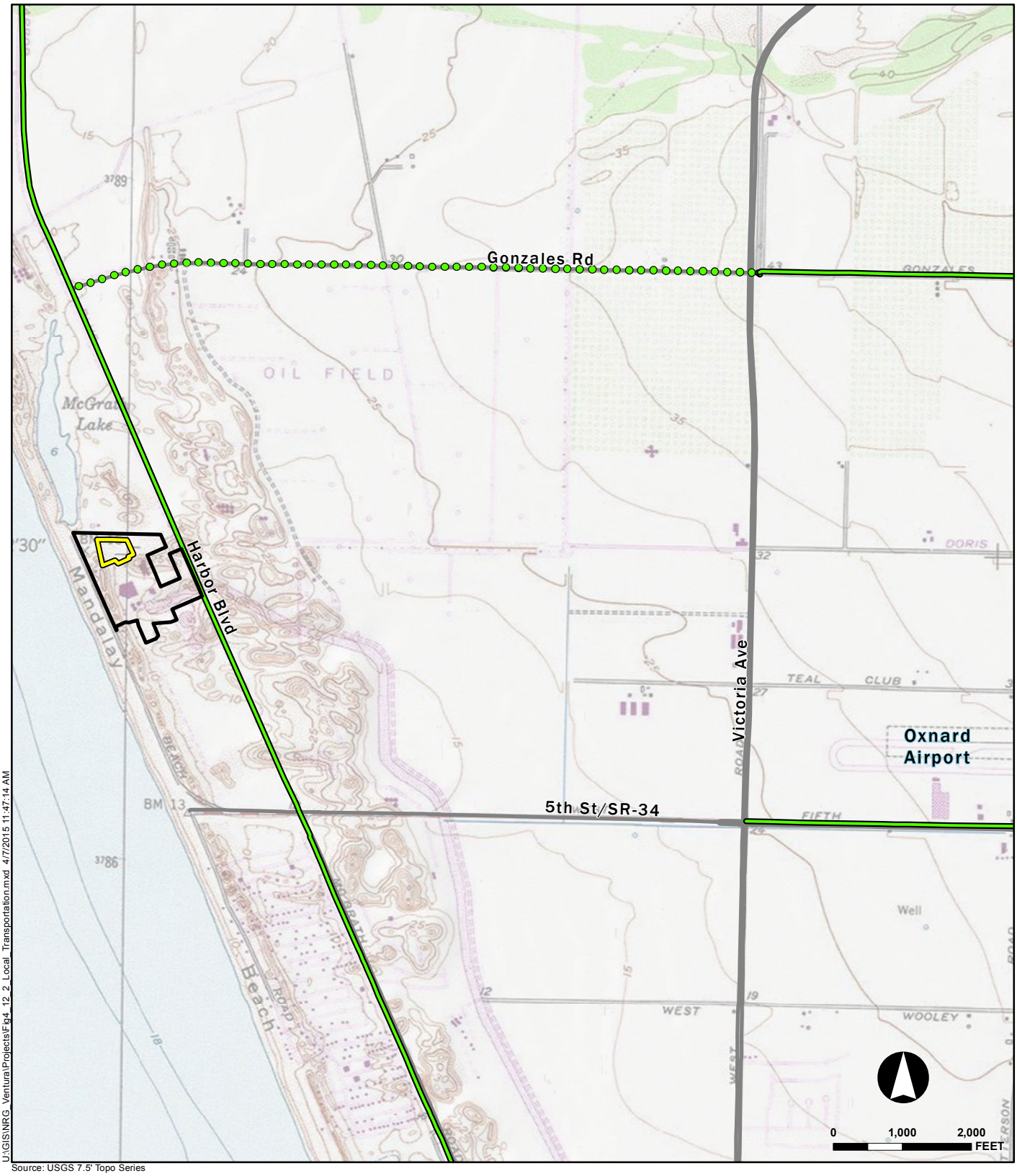
Source: ESRI Basemap

REGIONAL TRANSPORTATION SETTING

■ Puente Power Project Site

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-1



U:\GIS\NRG_Ventura\Projects\Fig4_12_2_Local_Transportation.mxd 4/7/2015 11:47:14 AM

Source: USGS 7.5' Topo Series

Existing Class II Bike Facility

Proposed Class II Bike Facility

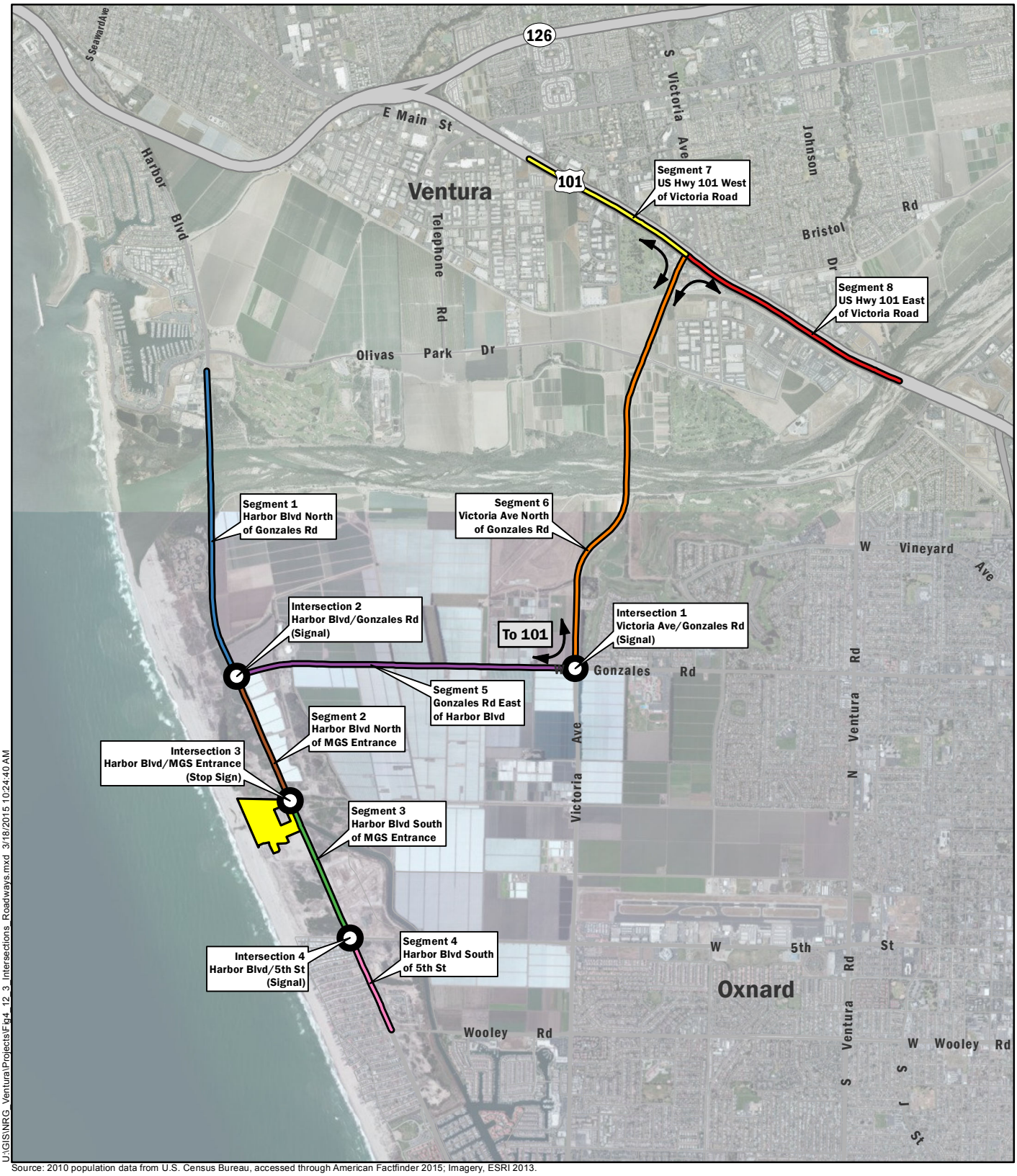
Puente Power Project (P3) Site

Mandalay Generating Station Property

LOCAL TRANSPORTATION SETTING

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-2



U:\GIS\NRG_Ventura\Projects\Fig4_12_3_Intersections_Roadways.mxd 3/18/2015 10:24:40 AM

Source: 2010 population data from U.S. Census Bureau, accessed through American Factfinder 2015; Imagery, ESRI 2013.

Study Intersections

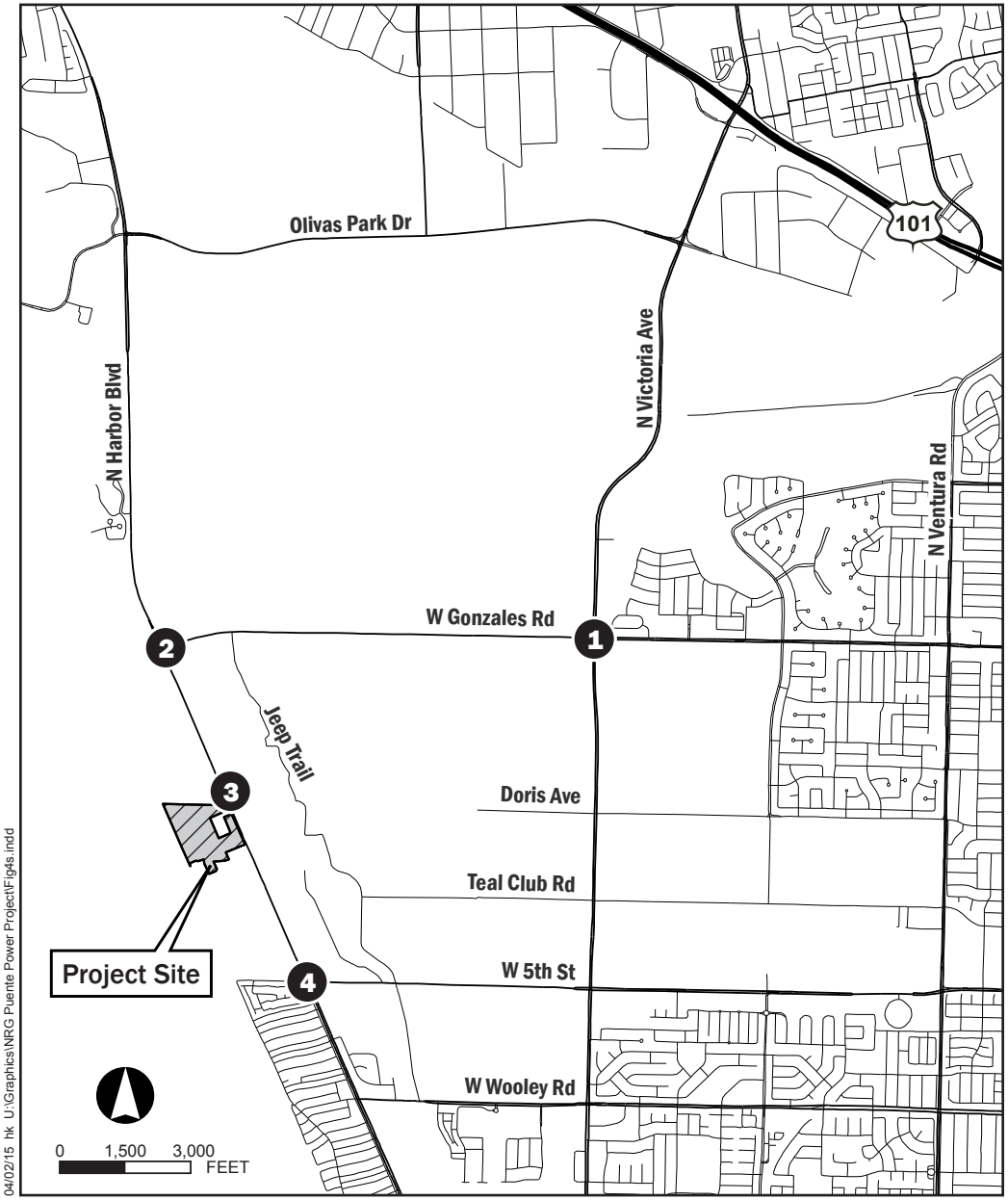
Mandalay Generating Station (MGS) Property

0 2,000 4,000 FEET

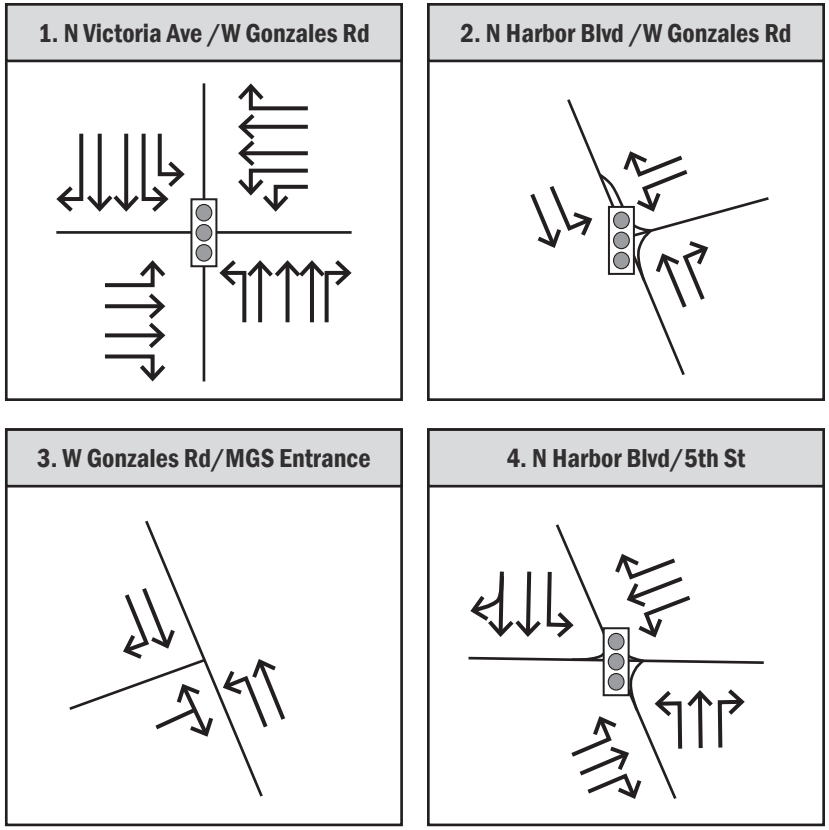
STUDY INTERSECTIONS AND ROADWAY SEGMENTS

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-3



04/02/15 hk U:\Graphics\NRG Puente Power Project\Fig4s.indd



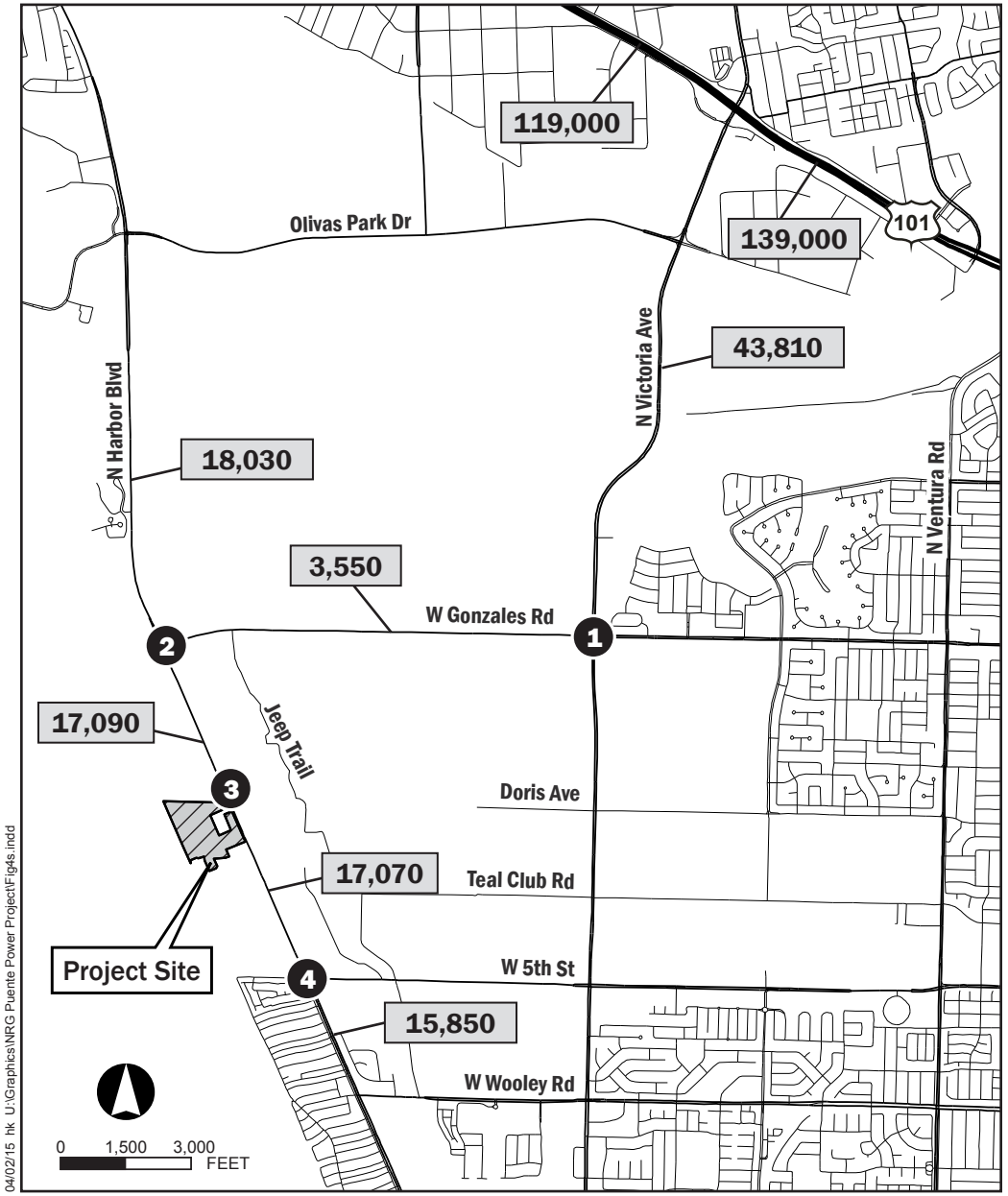
1 Study Area Intersection

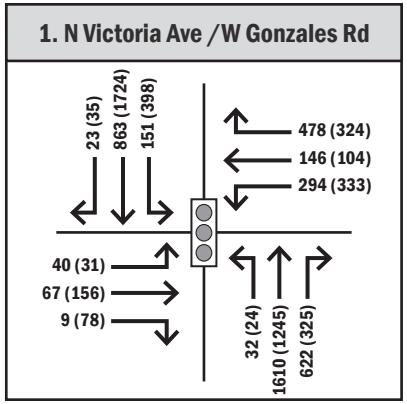
Signalized Intersection

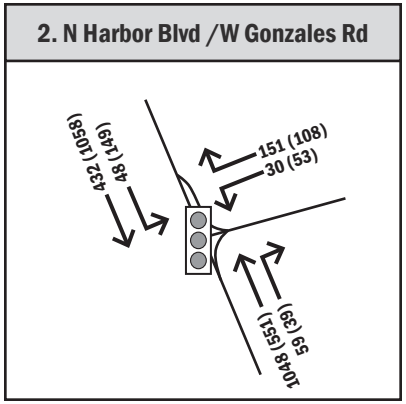
EXISTING CONDITIONS LANE GEOMETRIES

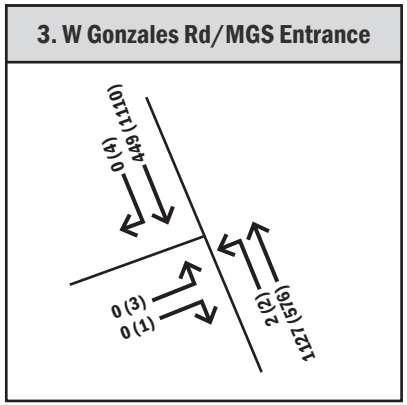
NRG
Puente Power Project
April 2015 Oxnard, California

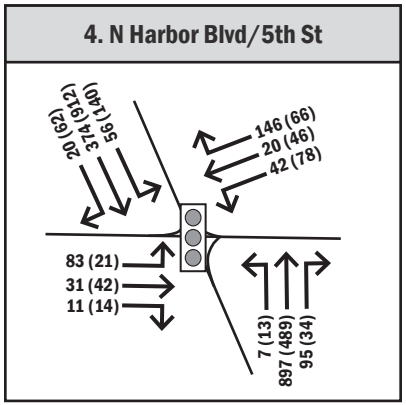
FIGURE 4.12-4











1 Study Area Intersection

84 Daily Average Traffic

13 (0) AM (PM) Peak Hour Volumes

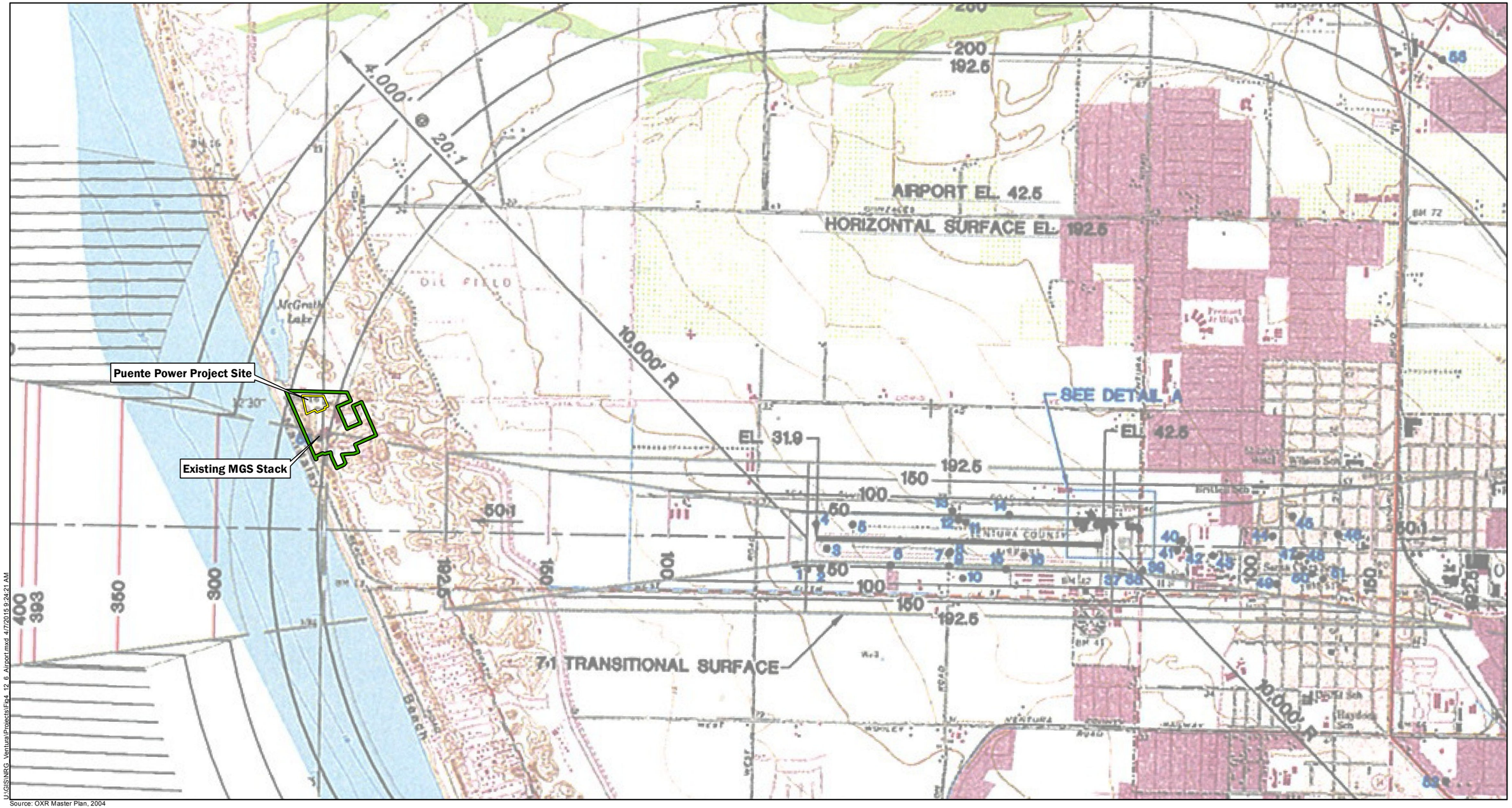
Signalized Intersection

04/02/15 lhk U:\Graphics\NRG Puente Power Project\Fig4s.indd

EXISTING CONDITIONS DAILY AVERAGE AND PEAK HOUR TURNING MOVEMENT VOLUMES

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-5



U:\GIS\NRG_Ventura\Projects\Fig4_12_6_Airport.mxd 4/7/2015 9:24:21 AM

Source: OXR Master Plan, 2004

Puente Power Project (P3) Site

Mandalay Generating Station Property

Note: For additional information, see Appendix K-3

0 1,000 2,000 FEET

PROPOSED PUENTE POWER PROJECT
NEAR OXNARD AIRPORT

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-6

U:\GIS\NRG_Ventura\Projects\Fig4_12_7_Trip_Distribution.mxd 3/18/2015 3:19:47 PM

Source: 2010 population data from U.S. Census Bureau, accessed through American Factfinder 2015; Imagery, ESRI 2013.

Study Intersections

Project Route

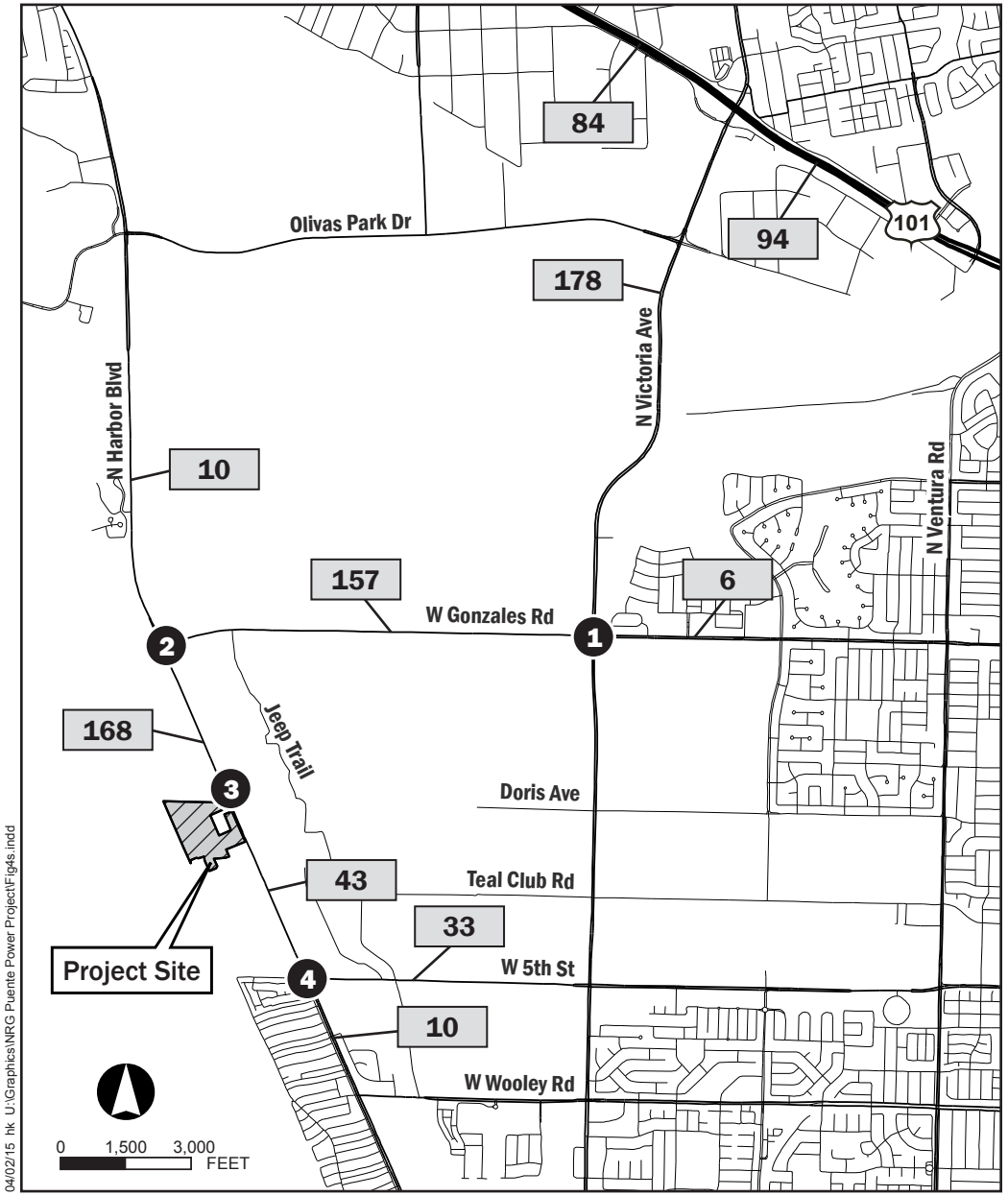
Mandalay Generating Station (MGS) Property

0 2,000 4,000 FEET

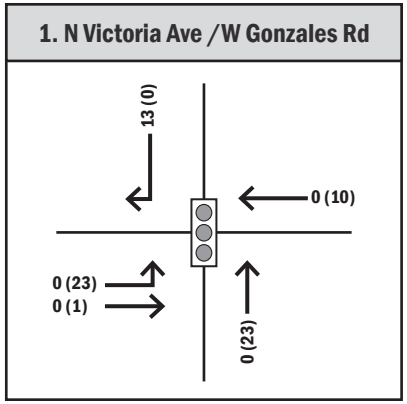
PROJECT TRIP DISTRIBUTION

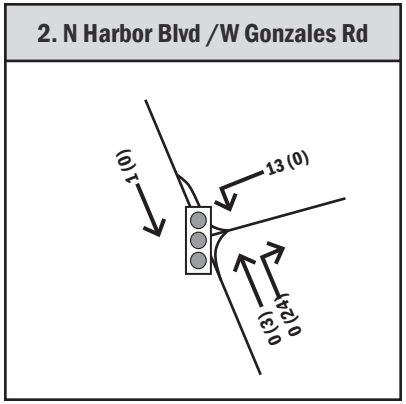
NRG
Puente Power Project
April 2015 Oxnard, California

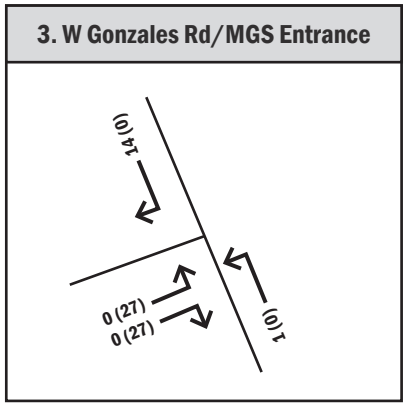
FIGURE 4.12-7

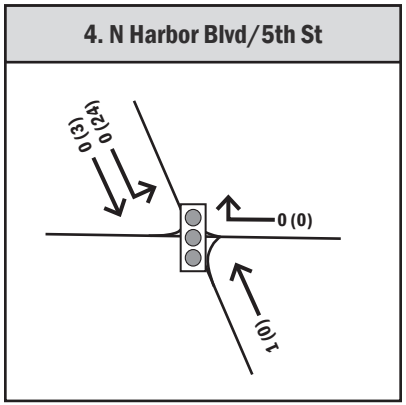


04/02/15 hk U:\Graphics\NRG Puente Power Project\Fig4s.indd









1 Study Area Intersection

84 Daily Average Traffic

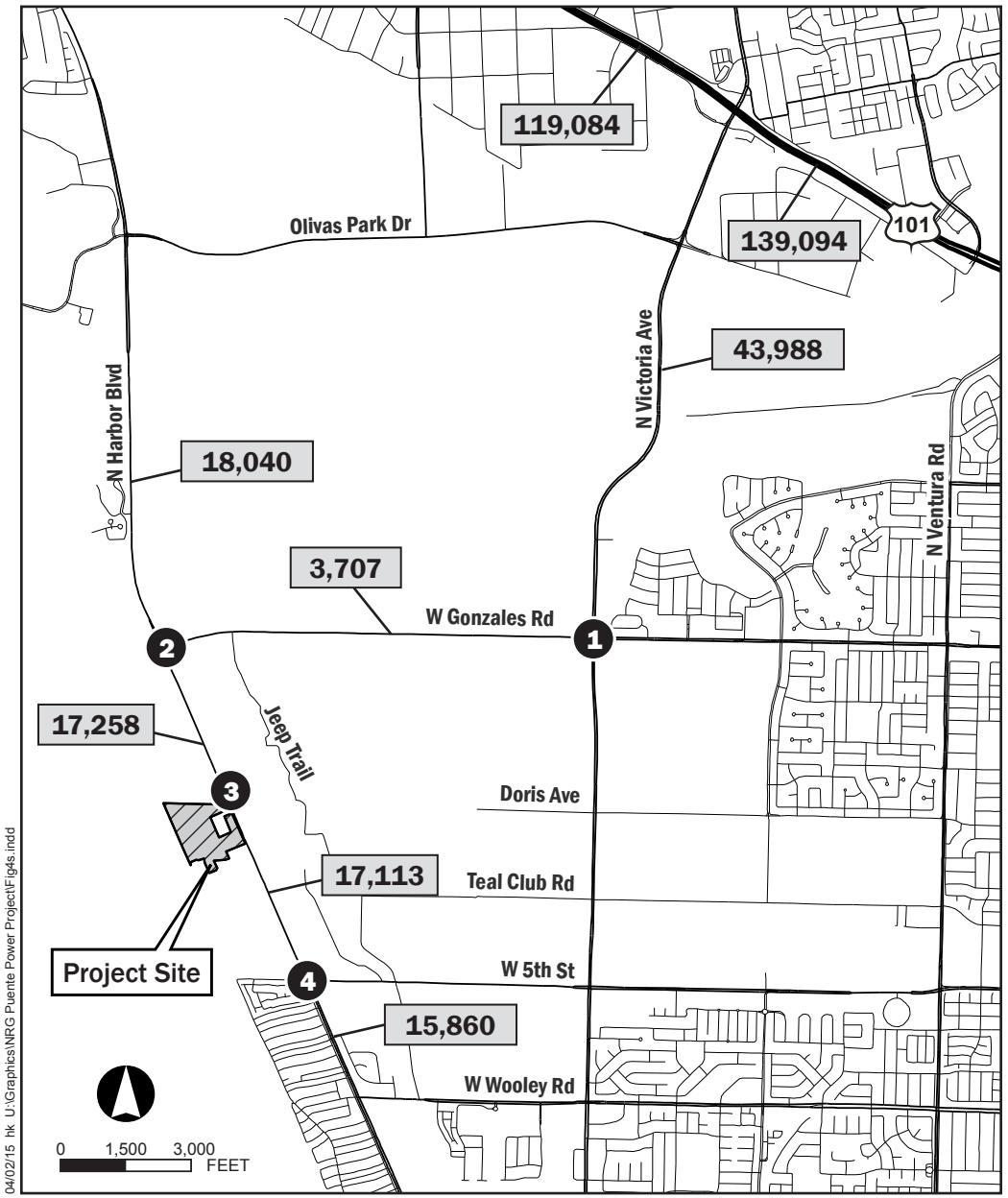
13 (0) AM (PM) Peak Hour Volumes

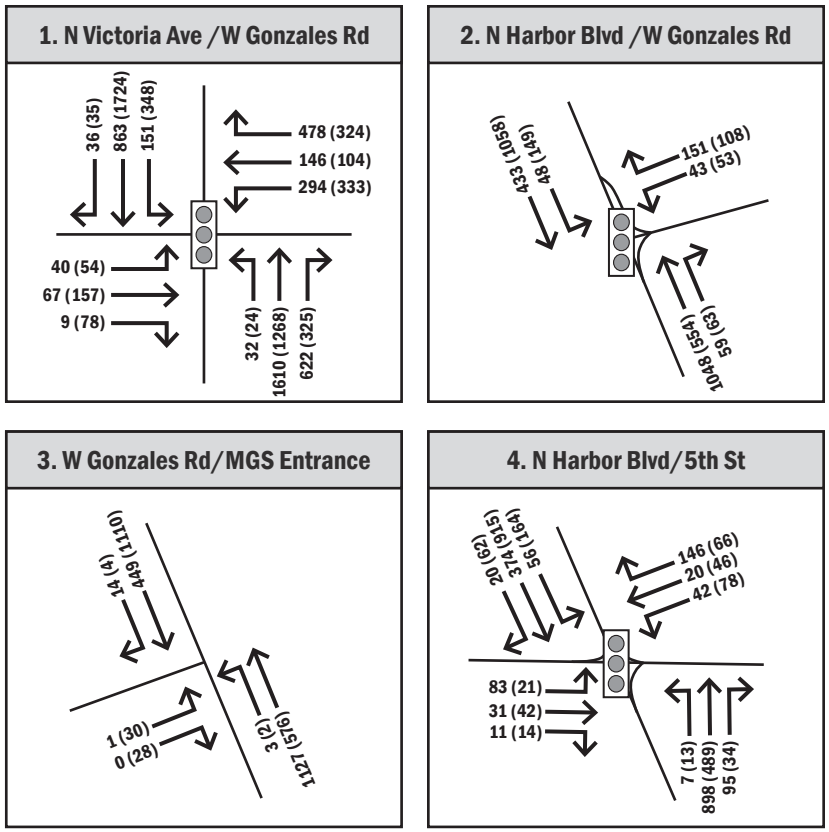
Signalized Intersection

PROJECT CONSTRUCTION ADDED TRIPS

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-8





1 Study Area Intersection

84 Daily Average Traffic

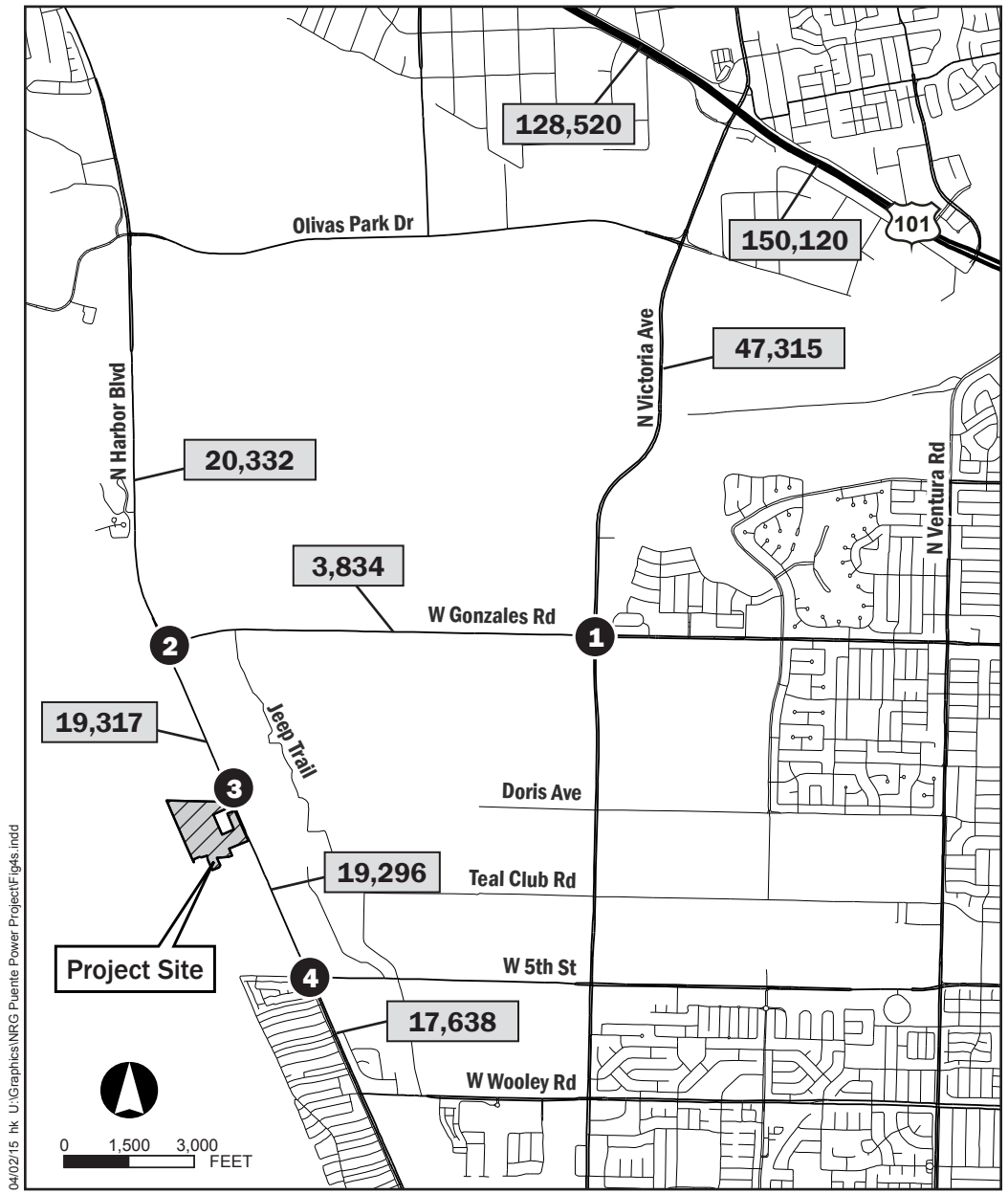
13 (0) AM (PM) Peak Hour Volumes

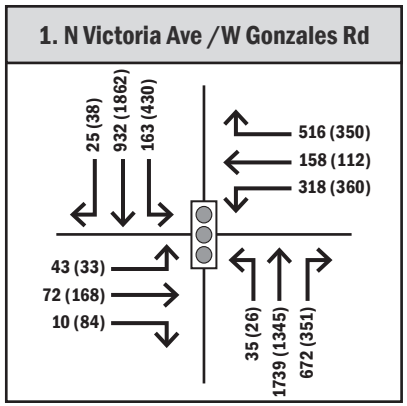
Signalized Intersection

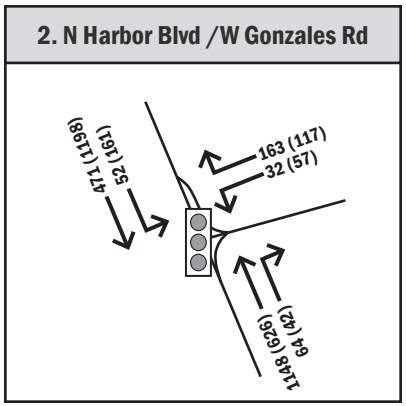
EXISTING BASELINE CONDITIONS PLUS PROJECT CONDITIONS DAILY AVERAGE AND PEAK HOUR TURNING MOVEMENT VOLUMES

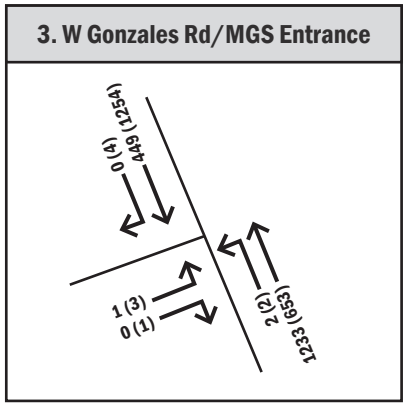
NRG
Puente Power Project
April 2015 Oxnard, California

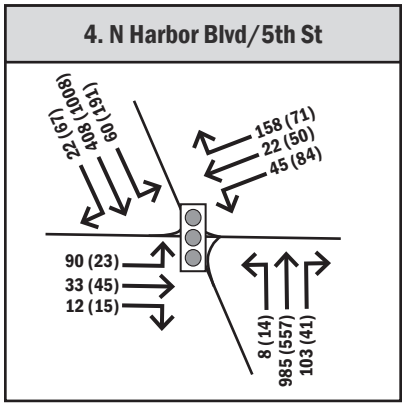
FIGURE 4.12-9











1 Study Area Intersection

84 Daily Average Traffic

13 (0) AM (PM) Peak Hour Volumes

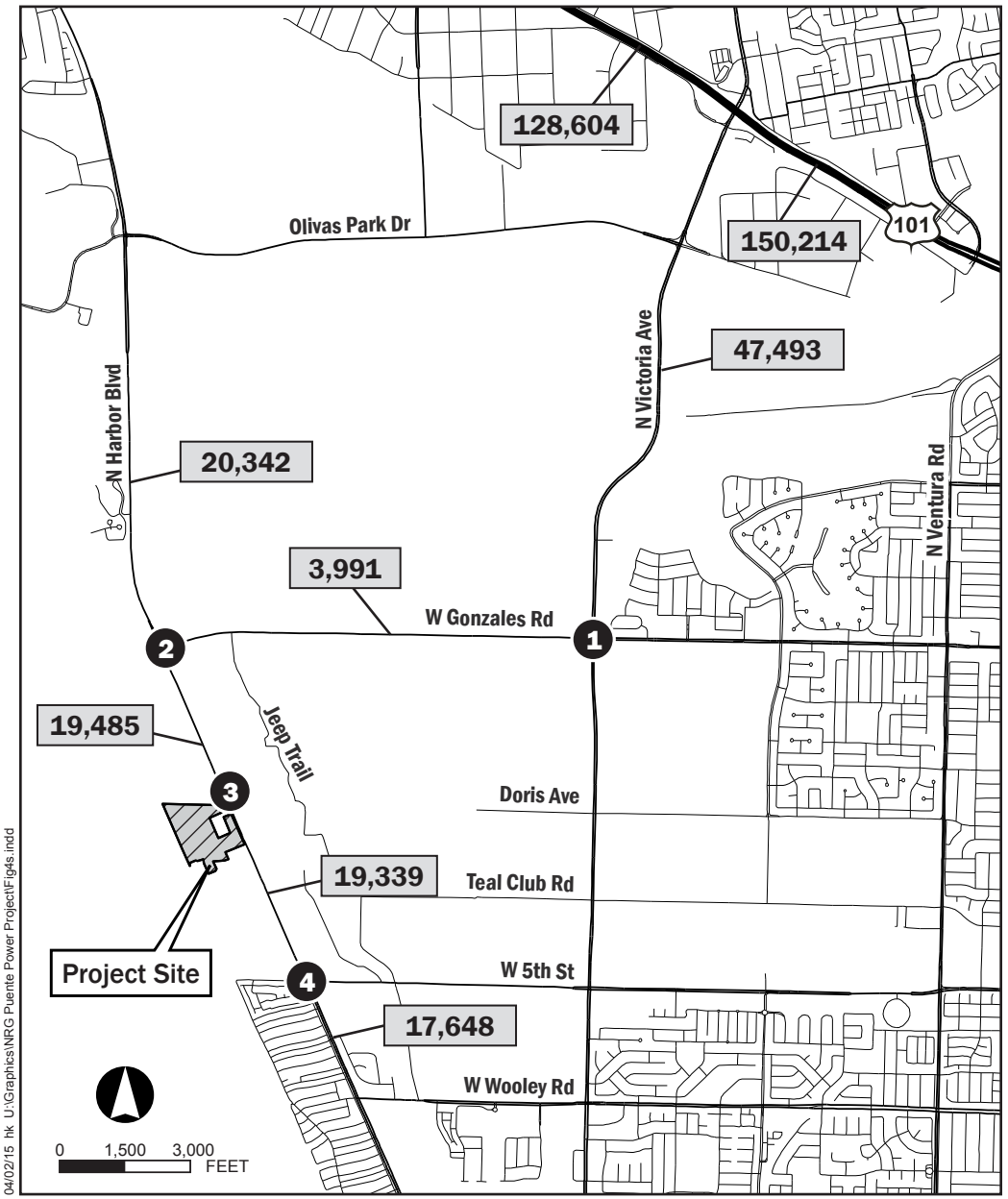
Signalized Intersection

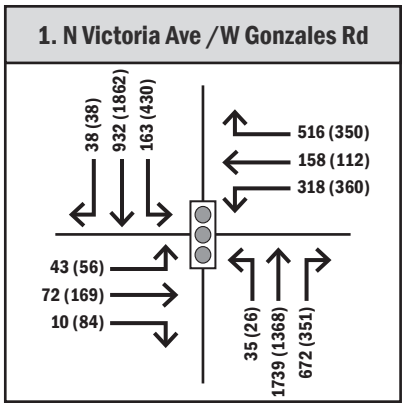
04/02/15 lhk U:\Graphics\NRG Puente Power Project\Fig4s.indd

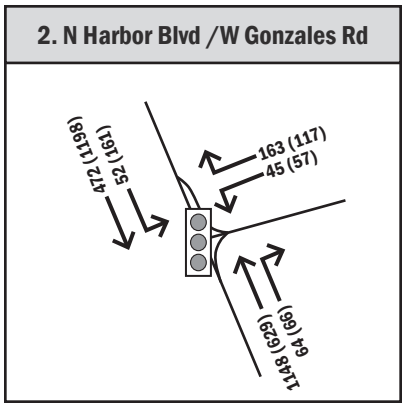
FUTURE BASELINE CONDITIONS DAILY AVERAGE AND PEAK HOUR TURNING MOVEMENT VOLUMES

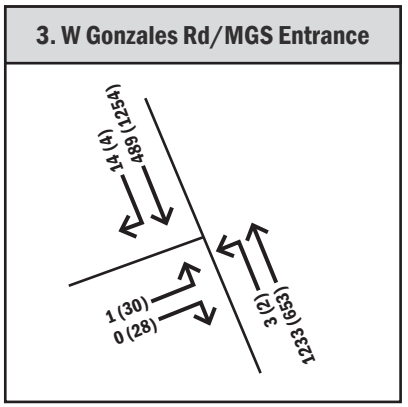
NRG
Puente Power Project
April 2015 Oxnard, California

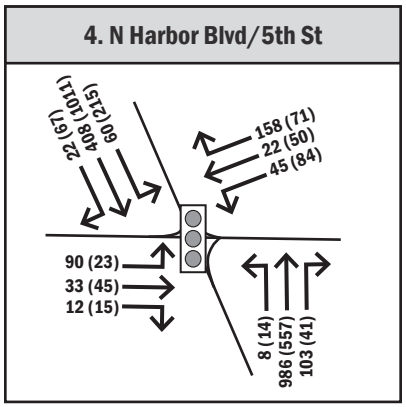
FIGURE 4.12-10











1 Study Area Intersection

84 Daily Average Traffic

13 (0) AM (PM) Peak Hour Volumes

Signalized Intersection

FUTURE BASELINE CONDITIONS PLUS PROJECT CONDITIONS DAILY AVERAGE AND PEAK HOUR TURNING MOVEMENT VOLUMES

NRG
Puente Power Project
April 2015 Oxnard, California

FIGURE 4.12-11