

Executive Summary

1.1 Introduction

This Application for Certification (AFC) for the Vernon Power Plant (VPP) project has been prepared by the City of Vernon (City or Vernon) in accordance with the California Energy Commission's (CEC) Power Plant Site Certification Regulations (August 2000). This Executive Summary provides an overview of the Project in accordance with Appendix B, Section (a) of the regulations.

This AFC has been prepared in accordance with CEC guidelines and provides:

- A detailed description of the proposed Project
- An assessment of the Project's likely impact on the existing environment
- Measures proposed by the City to mitigate potential Project impacts to ensure that environmental issues are properly and responsibly addressed
- A discussion of compliance with applicable laws, ordinances, regulations, and standards (LORS)

1.2 Request for 6-month Expedited Process

The City of Vernon is an industrial city and has been receiving numerous inquiries from various industrial groups for setting-up new industrial operation in the city. These industries will need a reliable source of power. The City presently depends upon the wholesale power market to supply a substantial portion of its electric capacity and energy needs. In addition, the City's power requirements are expected to increase significantly in the coming years from industrial expansion. The City hereby requests an **EXPEDITED APPLICATION** under the **6-MONTH "FAST TRACK" PERMITTING PROCESS** pursuant to California Public Resources Code (the Code) Section 25550 et seq., and Title 20, California Code of Regulations (the Regulations), Sections 2021 to 2031. The City intends that this AFC comply with all the requirements of the above-referenced codes and regulations for the 6-month expedited application, as well as the requirements of Title 20, Section 1704 et seq. of the Regulations (the 12-Month Regulations) and Appendix B. The reason for this request for expedited application is explained below.

The City has an obligation to serve its end-use electric utility customers, which it does through a combination of owned generation and wholesale power supply arrangements, including ancillary services. The City's loads are represented primarily by industrial and commercial accounts, which depend on reliable and low-cost energy to be competitive with their products and services. Many local jobs depend on the longevity of the businesses located in Vernon.

The City is part of the California Independent Systems Operator (CAISO) control area. During the last 5 years, the City has been exposed to substantial uncertainty with respect to CAISO providing a reliable energy supply. Many aspects of the CAISO energy market are associated with Federal Energy Regulatory Commission (FERC) related proceedings. Through CAISO, the City currently depends on third party suppliers for about 25 to 30 percent of its energy needs. Due to the past price volatility of the wholesale power market, the City has had to increase its rates by more than 50 percent since July 2000.

Furthermore, all the large power plants in the Southern California Edison (SCE) service area in the Los Angeles basin are owned by entities that may not have the same interest as a load-serving entity may have. The Project will allow the City to self-supply much of its ancillary services and energy needs. It is anticipated that approximately 15 to 25 percent of power from the proposed VPP will be used to serve City consumers, as growth requires, with the remaining power being transmitted via the Los Angeles Department of Water and Power (LADWP) tie-in to support the energy needs of southern California.

The City needs this new combined-cycle thermal power plant for its electric system as soon as possible. The CEC's 6-Month Expedited Application provides the only economical and reliable path for the City to achieve its objectives and discharge its responsibilities.

1.3 Project Overview

The City of Vernon proposes to develop a natural-gas-fired generating facility in the south-central portion of the City (see Figure 1.1-1, figures are located at the end of the section) in Los Angeles County (County), California. The proposed VPP will be a high-efficiency, combined-cycle facility that will be integrated into the City's plans to meet its growing native load, and provide other ancillary services and benefits to Vernon, Los Angeles County, and southern California.

The VPP will be located on a 5.8-acre parcel at 5001 Soto Street, in the City of Vernon, Los Angeles County, California on land between Seville Avenue and Soto Street and south of East 50th Street. The site is immediately south of the City of Vernon Light & Power existing power plant (Light and Power, Station A), located at 2715 East 50th Street, in Vernon (see Figure 1.1-2). The City of Vernon's existing power plant includes the Johnson & Heinze Diesel Plant, the H. Gonzales Generating Station, and the recently commissioned Malburg Generating Station (MGS).

VPP will consist of the following components:

- A nominal 610-megawatt (MW) (at 65 degrees Fahrenheit [°F] with duct burners and evaporative cooling)/630 MW (gross output) combined-cycle generating facility configured using two natural-gas-fired combustion turbine generators (CTGs) and one steam turbine generator (STG)
- A 230-kilovolt (kV) Gas Insulated Substation (GIS)
- Approximately 4,500 feet of new 230-kV transmission line connecting to existing transmission lines owned by LADWP
- Approximately one mile of new 20-inch-diameter natural gas pipeline

- Approximately one mile of new sanitary sewer line (two alternative routes are being considered)
- VPP will use recycled water, which is available in Boyle Avenue and will be brought to the site via a 2,000-foot pipeline down 50th Street
- VPP will use City-supplied potable water from water mains in Seville Avenue and Soto Street

Figure 1.1-3 shows the proposed routes for the sewer line (two alternative routes), gas line, recycled water line, proposed transmission line to LADWP, and an alternative transmission line route that could connect the project to the Laguna Bell substation owned by SCE. Figure 1.1-4 shows the Project location. An additional 8.9 acres would be available for equipment laydown and construction parking at several offsite locations within 0.5 mile from the plant site. A schematic arrangement of the site plan and site layout are presented in Figures 1.1-2 and 1.1-5, respectively.

The generating facility will consist of two CTGs equipped with ultra dry low oxides of nitrogen (ULN) combustors; two heat recovery steam generators (HRSGs) with duct burners; one condensing STG; a deaerating surface condenser; a 10-cell mechanical-draft cooling tower; and associated support equipment providing a total nominal generating capacity of 610 MW (at average annual ambient conditions of 65°F and 60 percent relative humidity, [RH]). The combustion turbines will be Siemens SGT6-5000F (formally Siemens Westinghouse 501F) units. The project will include an electric auxiliary boiler, but will not include a standby generator or black start capability.

The proposed transmission line option would be to connect VPP to the power grid by looping the western circuit of the LADWP Velasco to Century 230-kV line into the plant switchyard on a double-circuit pole structure. The 230-kV transmission line would exit the plant switchyard and head north on Soto Street and east on Leonis Boulevard to the LADWP right-of-way. The total distance is about 4,500 feet.

Natural gas will be delivered to the site via a 20-inch-diameter pipeline. This approximately 1-mile-long pipeline will extend from the old H. Gonzales City Gate Meter Yard on the southwest corner of Downey Road and 50th Street, then head west along 50th Street to the plant site. The natural gas will flow through a flow-metering station at the City Gate Meter Yard, which connects to Southern California Gas' (SoCalGas) Line 765. At the plant site, the natural gas will flow through gas scrubber/filtering equipment, booster compressors.

Recycled water for the VPP's process and cooling water, and equipment wash water, will be supplied by the Central Basin Municipal Water District (CBMWD). The recycled water will be delivered via an existing recycled water pipeline along Boyle Avenue. The 2,000-foot-long line will travel from the plant site east along 50th Street to Boyle Avenue. The recycled water supply will be pumped to a recycled water storage tank. The project proposes to use potable water from the City of Vernon for all potable, plant service, and fire protection needs. The project will also use potable water as an emergency water supply, should the recycled water supply be disrupted for longer than 8 hours. Potable water will be provided via city mains adjacent to the plant in Soto Street and Seville Avenue (Figure 1.1-3).

1.3.1 Project Objectives

The City's project objectives are described in more detail in this AFC. Some of Vernon's basic Project objectives include the following:

- To safely construct and operate a nominal 610-MW, natural-gas-fired, combined-cycle generating facility within the City of Vernon.
- To provide additional reliable and local generation to meet Vernon's growing load and help meet demands in southern California.
- To reposition the City's generation asset portfolio to 100 percent local generation.
- To assist the State of California (State) in developing increased local generation projects, thus reducing dependence on imported power in southern California.
- To contribute to the diversification of the County's economic base by providing increased employment opportunities and a reliable power supply.

1.3.2 Project Site Selection

The City's approach to project site selection focused on identifying potential project sites that satisfy its basic project objective and have a low potential for environmental impacts. The City also gave consideration to sites located within both the City limits and near existing infrastructure. The proposed Project site is consistent with these site selection criteria and was based, in part, on the following key selection criteria:

- Ability to gain site control
- Availability of sufficient land area
- Proximity to existing transmission lines
- Proximity to recycled water supply
- Proximity to a SoCalGas main gas pipeline
- Adjacent to a rail line to facilitate rail delivery of heavy equipment
- Consistency with the City General Plans and zoning ordinances, height restrictions, and existing land uses
- The ability, with implementation of reasonable mitigation measures, to have a less-than-significant impact on the environment
- Location in an area appropriate for industrial development
- Location within the City limits

1.4 Facility Location

The proposed VPP site was purchased by the City in 2004. A food manufacturing facility occupied the site prior to its purchase. A simulation of the site prior to construction (i.e., once the site has been cleared and rough graded) is presented as Figure 1.1-6.

An artist's rendering of the plant and transmission lines after construction is presented as Figure 1.1-7.

The project is located between Seville Avenue and Soto Street on the south side of East 50th Street in the City of Vernon, Los Angeles County, California (Figure 1.1-4). The site address is 5001 Soto Street, Vernon, California 90058. The project site is in Township 2 South, Range 13 West, San Antonio Spanish Land Grant, in Los Angeles County. It is comprised of the following APN number: 6308-002-901. The Project site will occupy approximately 5.8 acres. An additional 8.9 acres is available for equipment laydown and construction parking at various offsite locations within 0.5 mile from the plant site (Figure 1.1-8).

The VPP site is located approximately 5 miles south of downtown Los Angeles. Four major transportation corridors, Interstate highways 110, 10, 5, and 710, serve Vernon. Interstate 110 is oriented north-south approximately 3.4 miles from the western boundary of the City of Vernon. Interstate 110 intersects Interstate 10 approximately 2.6 miles northwest of Vernon. Interstate 10, and Highway 60, are oriented east-west, and are situated approximately 0.6 mile north of Vernon. Interstate 5 is situated approximately 0.6 mile north of Vernon. Interstate 710 is a north-south route located east of the City of Vernon.

There is considerable industrial and commercial development along Interstate highways 110, 10, 5, and 710. Several railroad lines and spurs are located throughout the area. The predominant uses in the project vicinity are industrial and commercial.

Parcel numbers and the names of the landowners within 1,000 feet of the plant site and within 500 feet of the linear corridors (including the alternative sewer and transmission line corridors) are included in Appendix 1A.

1.5 Project Schedule

Actual construction would take place over approximately 20 to 24 months, from fourth quarter 2006 to the third quarter 2008. Plant testing and commercial operation are planned to commence in the third quarter 2008.

1.6 Project Ownership

The power plant and sewer line will be owned by the City of Vernon. The transmission lines, owned by LADWP, will loop in and out of the gas insulated substation. The connection to the potable water and recycled water lines will be owned by the City of Vernon. SoCalGas owns the gas transmission line (Line 765), which will provide natural gas transportation delivery to a city gate meter. The city gate meter and its line extension and the tap to Line 765 will be installed, owned, and operated by SoCalGas. The extension beyond the city gate meter to the VPP site will be constructed and owned by the City.

The initial capital cost of the project is estimated to be \$350 million to \$390 million. The estimated value of materials and supplies that will be purchased locally (within Los Angeles County) during construction is between \$5 million and \$10 million.

1.7 Project Alternatives

The CEC conducts its review of alternatives to satisfy the Warren-Alquist Act and the California Environmental Quality Act (CEQA). Appendix B(f)(1) of the CEC Guidelines requires a discussion of the range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project. To enable this review, the criteria and objectives that led to the selection of the site and design features of the proposed VPP Project are provided, along with a detailed discussion of the range of alternatives considered (see Section 9.0).

A “No Project” alternative was considered and rejected as inconsistent with the City’s objectives, which include the need to develop additional reliable in-City generation sources. In addition, the “No Project” alternative could result in greater fuel consumption and air pollution in the state because generation from older, less-efficient plants with higher air emissions would not be replaced by generation from cleaner, more-efficient plants, such as VPP.

Other possible alternative sites in the general vicinity of the proposed site were reviewed and found to be no more acceptable than the proposed site. Alternative routes for the natural gas line, recycled water line, and potable water lines were not developed because of the shortness of their length and directness of the route. In addition, access to potable water is available in Seville Avenue and Soto Street, adjacent to the project site.

Two interconnection designs were considered: 1) connecting to the LADWP’s existing 230-kV Velasco to Century lines that run down a transmission line corridor between and parallel to Alcoa Avenue and S. Downey Road; and 2) connecting to SCE’s transmission system at its Laguna Bell Substation in the City of Commerce. In considering the connection to SCE’s system, three alternatives were studied (see Section 5.0, Transmission System Engineering). Each alternative is free of any significant impacts, but the Los Angeles River route has small comparative advantages, and was therefore analyzed in the AFC as the Alternative Transmission Line route (see Figure 1.1-3).

Several alternative generating technologies were reviewed in a process that led to the selection of a modern, proven, combustion turbine combined-cycle arrangement for VPP using natural gas for fuel. The alternative technologies included conventional oil- and natural-gas-fired plants, simple-cycle combustion turbines, biomass-fired plants, waste-to-energy plants, solar plants, wind-generation plants, and others. None of these technologies are feasible alternatives to the combined-cycle technology selected for VPP. A complete discussion of project alternatives is presented in Section 9.0 and Subsection 5.3 (for transmission alternatives).

1.8 Environmental Considerations

Sixteen areas of possible environmental impact from the proposed project were investigated. Detailed descriptions and analyses of these areas are presented in Subsections 8.1 through 8.16 of this AFC. With the implementation of reasonable and

feasible mitigation measures, there will be no significant environmental effects. The potential effects of these areas are summarized briefly in this section.

1.8.1 Air Quality

The site is located in an area designated as nonattainment for state and federal ozone, carbon monoxide (CO), and fine particulate matter (PM₁₀) ambient air quality standards. Although the area is currently designated as nonattainment for CO, the South Coast Air Quality Management District has initiated a request to have the U.S. Environmental Protection Agency redesignate the Basin as CO Attainment.

An assessment of the impact to air quality was performed using detailed air dispersion modeling. The air impacts from the Project will be mitigated by the advanced nature of the combustion turbine emission control technology. Emission reduction credits (ERCs) will be obtained to offset increases in emissions of volatile organic compounds, oxides of nitrogen (offset through use of Reclaim Trading Credits), CO, sulfur oxides, and PM₁₀. The use of advanced combustion control technology, post-combustion pollution control systems, and offsetting the increase in emissions will result in the Project having no significant adverse impacts on air quality.

1.8.2 Biological Resources

The Project site is located in an industrial area of Los Angeles County. The concrete-lined channel of the Los Angeles River lies less than 0.75 mile to the north of the proposed site. Man-made structures within the project impact area and adjacent communities include roadways, levees, residential areas, and various infrastructure support features. Compared to vegetated habitats, these developed areas support a low diversity of wildlife.

Preliminary surveys, habitat evaluations, and aerial photographs suggest that the site is not located in a sensitive area. The majority of land use within the one-mile radius of the power plant is used for industrial purposes and has been completely developed. The highly developed nature of the habitat within the project vicinity would not support special-status species except for occasional foraging or other transient uses by migratory species. Based on a review of the California Natural Diversity Data Base (CNDDDB), there are no special-status species within a one-mile radius of the power plant site, or within 1,000 feet on either side of the natural gas, sewer, and recycled water pipeline routes, or the transmission line. In addition, based on a review of the area surrounding the power plant, there is no native habitat that would support special-status species within this one-mile radius. No special-status species were observed during the biological survey.

1.8.3 Cultural Resources

A survey of the proposed power plant location and appurtenant linear facilities was conducted. The surveyed area is located in a heavily commercial and industrial area. The power plant location was previously covered by asphalt, buildings and parking areas. The linear natural gas supply, sewer, recycled water, and 230-kV transmission line routes are contained entirely within existing disturbed city streets, asphalted parking areas, or previously disturbed areas. No undisturbed ground or natural vegetation was visible within the power plant site, laydown, and parking areas. The area with some visibility was

primarily along the existing 66-kV transmission line corridor along the east side of the Los Angeles River route.

Given the amount of previous ground disturbance in the area for buildings, utilities, and other infrastructure, it seems likely any resources in the area would have been disturbed or destroyed. The archaeological sensitivity of the power plant location and linear facility routes are considered low.

The VPP study area for historic architectural resources will include inventory and evaluation of all resources 45 years old or older immediately adjacent to the VPP site. The resources will be evaluated for individual significance, as well as for potential to contribute to a possible historic district. The linear facilities will be subject to a windshield survey, streetscape photographs, and discussion of sensitivity for historic architectural resources without inventory individual resources.

1.8.4 Land Use

The Project site is located in the City of Vernon, in Los Angeles County, California. Land uses to the north, south, west, and east of the VPP site are industrial; however, there are several schools, day-care facilities, convalescent centers, and hospitals in the vicinity of the Project site. In addition, there is one dwelling unit located approximately 750 feet to the northeast.

The City of Vernon General Plan is the planning document applicable to this site and all linears. The City General Plan land use designation for the project site is General Industrial. A power plant cited in this location would be consistent with this land use designation. The proposed power plant would also be consistent with the City Zoning Ordinance land use designation and the General Plan policies for the City of Vernon.

The proposed electric transmission line route from the switchyard to the LADWP existing transmission lines is designated and zoned for industrial use. For the alternative transmission line corridor, various segments are zoned for industrial and commercial uses. The areas covered by the natural gas, water, recycled water, and sewer lines are all designated in the General Plan and Zoning Ordinance as industrial use.

The proposed power plant would be installed in an existing industrial area and is compatible with adjacent land uses. The transmission line would be installed within an industrial area in the City of Vernon, and most of the alternative route would be along corridor segments with existing power lines, so the new transmission line would be compatible with adjacent land uses. It is anticipated that the proposed project would not contribute to a significant impact on land use in the project vicinity. Therefore, the proposed project would not result in a significant cumulative land use impact.

1.8.5 Noise

Construction will occur during a 20- to 24-month period. General construction noise levels projected at 1,500 feet from the plant site are estimated to be between 48 and 59 decibels, A-weighted (dBA). These results are conservative since the only attenuating mechanism considered was divergence of the sound waves in open air. Shielding effects of intervening structures were not included in the calculations. The construction noise may be audible at

the nearest residences but is not anticipated to exceed current exposure levels, and the noisiest construction activities (such as pile driving or steam blows) will be confined to the daytime hours.

Ambient noise measurements were conducted to determine the L_{90} (the noise level that is exceeded during 90 percent of the measurement period) nighttime noise level at the nearest residence (i.e., sensitive receptor). Noise modeling was used to determine the contribution to the nighttime ambient levels the plant would make during operation. Noise from the plant operations is predicted not to exceed 62 dBA at R2, the closest residential receptor (see Figure 8.5-1). The measured 4-hour minimum L_{90} noise level at R2 is 58 dBA. The future L_{90} noise level with the contribution from VPP would be 63 dBA. This is consistent with the CEC's 5 dBA over background significance criteria and complies with the City LORS of 70 dBA Community Noise Equivalent Level (CNEL).

1.8.6 Public Health

Potential impacts associated with emissions of chemical substances of potential concern into the air from the proposed facility are addressed in a health risk assessment. Health risks potentially associated with the estimated concentrations of chemical substances in ambient air were characterized in terms of excess lifetime cancer risks (for substances listed by the California Office of Environmental Health and Hazard Assessment [OEHHA] as cancer causing) or comparison with reference exposure levels for non-cancer health effects (for substances listed by OEHHA as non-cancer causing).

The maximum exposed individual resident (MEIR) excess lifetime cancer risk was estimated to be 0.0867 in one million, and the maximum exposed individual worker (MEIW) excess lifetime cancer risk was estimated to be 0.341 in one million. Excess lifetime cancer risks less than 10 in one million are unlikely to represent public health impacts that require additional controls of facility emissions.

To assess the potential combined public health impacts from the VPP and the Malburg Generating Station (MGS), the MEIR, MEIW, and hazard index from both projects were added together¹ to identify the maximum public health impacts. Assessing the combined operation of the MGS and VPP projects using the highest impacts from both facilities results in a conservative assessment as it is unlikely that the MEIRs and MEIWs occur at the same locations. The resulting assessment indicated a maximum combined acute MEIR of 0.46, a chronic MEIR and MEIW of 0.047, a combined acute MEIW of 0.49, a total occupational excess lifetime cancer risk of 1.3 in one million, and a total residential lifetime cancer risk of 0.7 in one million. The total excess lifetime cancer risk is below the significance threshold of 10 in a million; therefore, the combined operation of VPP and MGS is not expected to have significant public health impacts.

1.8.7 Worker Health and Safety

During the construction of the Project, workers will be exposed to construction hazards, and during plant operation, operators will be exposed to plant operation safety hazards. To evaluate these hazards and control measures, a hazard analysis was performed. The analysis

¹ Public health data for Malburg Generating Station were taken from the MGS Final Staff Assessment, Public Health Table 2, page 4.7-13. MGS Final Staff Assessment, September 2002 (01-AFC-25).

identifies the hazards anticipated during construction and operation, and indicates which safety programs should be developed and implemented to mitigate and appropriately manage those hazards. Programs are overall plans that set forth the method or methods that will be followed to achieve particular health and safety objectives. For example, the Fire Protection and Prevention Program will describe procedures to protect against and prevent fires. Each program or plan will contain training requirements that are translated into detailed training courses. Upon completion of construction and commencement of operations at VPP, the construction health and safety program will transition into an operations-oriented program reflecting safety hazards and the controls necessary during operation. As a consequence of the development and implementation of these plans and programs, workplace accidents would be minimized in both severity and frequency so that there would not be a significant impact to worker health and safety from the construction and operation of VPP.

1.8.8 Socioeconomics

Total construction personnel requirements for both the plant and linear facilities will be an average of 273 workers per month for 24 months, with a peak total work force of 520 during month 15. This translates into 546 person-years or 6,553 person-months. The peak construction workforce for the plant is estimated to be 470 workers in months 15 and 16, and the peak construction work force for the linear facilities will reach 59 during month 14. The construction payroll is estimated at \$85.2 million. The estimated indirect and induced employment within Los Angeles County would be 157 and 224 jobs, respectively. Indirect and induced income impacts are estimated at \$5,915,480 and \$9,172,500, respectively. The total local sales tax expected to be generated during construction is \$412,500 to \$825,500 (i.e., 8.25 percent of local sales). During construction, there would be no impacts to population, housing, schools, or public services and utilities.

The VPP will be operated by 21 full-time employees. Estimated indirect and induced employment within Los Angeles County would be 31 and 20 permanent jobs, respectively. VPP will bring \$1.47 million in operational payroll to the region. During operations, additional sales tax revenues of approximately \$660,000 will be obtained by the City of Vernon and Los Angeles County. During operation, there would be no impacts to population, housing, schools, or public services and utilities. Therefore, VPP would have a benefit to the local economy.

Potential Environmental Justice impacts were also analyzed in accordance with Executive Order (EO) 12898 (see Appendix 8.8A). As reported in the series of environmental analyses prepared for this Project, and further confirmed through discussions with the environmental professionals who prepared those sections, no significant adverse impacts are expected as a result of this project after proposed mitigation measures are implemented. Consequently, none of the impacts of this project can be described as high and adverse in the context of EO 12898. As there are no high and adverse impacts expected as a result of this project, this analysis concludes that no high and adverse human health or environmental effects of this project are expected to fall disproportionately on minority or low-income populations. The VPP project can, therefore, be considered to be consistent with the policy established in EO 12898.

1.8.9 Agriculture and Soils

Based on review of aerial photographs, field surveys, and documentation from MGS, there are no active commercial agricultural uses within the proposed VPP site; however, there are limited agricultural uses within the LADWP and SCE transmission line corridors. There are no important farmlands mapped within a mile of the proposed project area. The proposed sewer, gas, recycled water, and electrical corridors will follow existing roadway or railroad rights-of-way through urban areas; and the existing potable water supply pipelines will be connected adjacent to the VPP site.

The soils found in the VPP site, laydown area, and along the linear features are nearly level (or very slightly sloped). Construction activities can potentially impact soil resources by increasing soil erosion and soil compaction. However, best management practices will be used to minimize erosion at the site during construction. Therefore, the project will not cause adverse impacts to agricultural production or soil loss.

1.8.10 Traffic and Transportation

During the peak construction period, the Project is expected to generate approximately 452 daily construction worker round trips. To analyze the worst-case scenario, a focused assessment of the impacts on the surrounding roadways – an Intersection Capacity Utilization (ICU) analysis – was conducted for the 15 intersections that would be most directly affected by project construction traffic. In general, the addition of the forecasted peak project traffic (904 daily vehicles) is not anticipated to result in a significant change to operations of the roadway throughout the day. Therefore, the construction of the VPP is not expected to have significant impacts on roadway intersections in most cases.

Soto Street between Leonis Boulevard and Bandini Boulevard, and Downy Road between Vernon Avenue and Bandini Boulevard are the exception, since these segments are already operating at unacceptable levels of service. Because these roadways are over capacity, anything that adds a significant number of trips may be considered an impact. The project's contribution to these segments would be less than one percent of daily trips. Additionally, VPP construction work hours will begin and end prior to peak traffic hours when roadways generally carry lower traffic volumes. In general, the findings are that the construction of the VPP will not result in intersections ICUs that are significantly greater than those for the existing typical morning and afternoon peak hours for the street system. Therefore, the construction of the VPP is not expected to have significant impacts on roadway intersections in most cases.

1.8.11 Visual Resources

The landscape surrounding the Project is comprised almost exclusively of major industrial facilities. The site itself is flat and open, and contains no features considered to be scenic resources. Several of the industrial facilities throughout the area are tall rectangular buildings that generally block views toward the plant site. The VPP features would include two HRSGs that are 100 feet long, 24 feet wide, 65 feet high to the top of the casing, and 105 feet high to the top of the highest relief valves and vent silencers. The HRSG stacks would be 180 feet tall and 20 feet in diameter. The 10-cell cooling tower structure would be 270 feet long, 100 feet wide, 46 feet high to the top of the deck, and 56 feet high to the top of the fan shrouds. The exteriors of all major project equipment will have a neutral gray color

similar to the color used on the adjacent Malburg Generating Station. This color treatment will optimize the project's visual integration with the surrounding environment.

There are few residences in the City and most of them are owned by the City for use by employees. In the view toward the site that was evaluated, the effect of the VPP on the overall character of the view would be extremely limited. In general, the extent to which they would be visible, the elements of the VPP would be consistent with the existing components of the view. They would have very little effect on the character of the view, and would not alter the view's existing low level of visual quality. The lighting associated with the project would be limited, and would not pose a hazard or adversely affect day or nighttime views toward the site. The project is in general conformance with all LORS related to visual resources in the City plans and zoning ordinance provisions that pertain to this area.

1.8.12 Hazardous Materials Handling

Hazardous materials to be used during construction and operation were evaluated for hazard characteristics. Hazardous materials to be used during construction of the project (and its associated linear facilities) will include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. The quantities of hazardous materials that will be onsite during construction will be small, relative to the quantities used during operation. Several hazardous materials, including one regulated substance, will be stored at the generating site during operation. Only aqueous ammonia will be stored in amounts above the threshold quantity during the operations phase, and a Risk Management Plan will be prepared consistent with the California's Accidental Release Prevention Program requirements. Sufficient monitoring will be performed during the construction and operation phases to ensure that the proposed mitigation measures are satisfied and that they are effective in mitigating any potential environmental effects.

An offsite consequence analysis was performed to assess the impact to humans if a spill or rupture of the aqueous ammonia storage tank were to occur. Based on this conservative modeling analysis, the worst-case accident is not expected to result in an offsite ammonia concentration greater than 75 parts per million. Since the general public will not be exposed to ammonia concentrations above these levels during a worst-case release scenario, their onsite storage will not pose a significant risk to the public.

1.8.13 Waste Management

During construction, the primary waste generated will be solid nonhazardous waste. However, some nonhazardous liquid waste and hazardous waste (solid and liquid) will also be generated. Most of the hazardous wastes will be generated at the plant site, but a minimal quantity of hazardous waste will be generated during construction of the project linears. The types of waste and their estimated quantities are described in the Waste Management subsection. The primary waste generated during the operation phase will be nonhazardous wastewater. Other nonhazardous solid waste will also be generated, as well as varying quantities of liquid and solid hazardous waste. Handling and mitigation of these wastes is also described in the Waste Management subsection.

The handling and management of waste generated by the project will follow the hierarchical approach of source reduction, recycling, treatment, and disposal. The first priority will be to reduce the quantity of waste generated through pollution prevention methods (e.g., high-efficiency cleaning methods). The next level of waste management will involve the reuse or recycling of wastes (e.g., used oil recycling). For wastes that cannot be recycled, treatment will be used, if possible, to make the waste nonhazardous (e.g., neutralization). Finally, offsite disposal will be used to dispose of residual wastes that cannot be reused, recycled, or treated.

1.8.14 Water Resources

The Project will use recycled water for the majority of its water needs. It is estimated that 4,048 acre feet of recycled water per year will be required. Use of recycled water conserves higher quality groundwater for potable water and other critical uses. The use of a zero-liquid discharge system was analyzed. However, use of such technology is unnecessary for the VPP project because wastewater discharges will be relatively clean compared to effluent standards, and such discharges are considered assets by the wastewater service provider (Sanitation Districts of Los Angeles County) because of their ability to dilute other wastewater streams.

Potable water will be supplied to the site by the City of Vernon. It will be used for domestic purposes and as an emergency water supply for the Project. Cooling tower blowdown and wastewater from miscellaneous plant uses will be collected and discharged to the City of Vernon sanitary sewer facilities, which tie into the Sanitation Districts of Los Angeles County facilities via a regional trunk sewer line.

Proposed mitigation measures are prescribed by stormwater and erosion control management programs mandated under the National Pollutant Discharge Elimination System (NPDES). These programs have been in place for a number of years and the prescribed measures have proven effective. Under the General NPDES Permit for Construction, for example, various specific measures are prescribed, and a program of monitoring is required. Compliance with these programs should ensure that all residual impacts associated with the proposed project are mitigated to a level of less than significant.

1.8.15 Geologic Hazards and Resources

Numerous active and potentially active faults considered capable of generating earthquakes have caused and will continue to cause seismic shaking at the site. Over 30 faults have been documented within a 62-mile (100-kilometer) radius of the site. Ground shaking presents the most significant geologic hazard to the proposed power plant and linear facilities. Liquefaction may also impact linear facilities as a result of ground shaking. The VPP generating facility and linear facilities will need to be designed and constructed to withstand strong earthquake shaking as specified in the 2001 California Building Code for Seismic Zone 4 – in accordance with City of Vernon and Los Angeles County requirements. Proposed mitigation measures will be implemented in the design of the facilities to reduce risk associated with these hazards.

1.8.16 Paleontological Resources

Paleontological resources (fossils) are the remains or traces of prehistoric animals and plants. The literature review, archival searches, and field survey conducted for this inventory documented only one previously recorded fossil site as occurring within 3 miles of the project site at depths of up to 37 feet. In addition, a number of previously recorded fossil sites have been documented in this portion of the Los Angeles Basin in proximity to the Los Angeles River, but more than 3 miles from the VPP. The occurrence of fossil sites near the project site and within similar geologic environments as the project site suggests a potential for additional scientifically important fossil remains to be encountered by earthmoving activities during project construction. It is in the vicinity of the Los Angeles River where the potential of encountering fine-grained fluvial facies of high paleontologic potential is likely, *when* these activities extend to a depth sufficient to encounter undisturbed sediment. Within 20 feet of the surface there is no more than a low potential for these activities to encounter paleontologic remains, and the scientific value of these remains would likely be negligible due to the disturbed nature of the sediment. Therefore, excavations within 20 feet of the surface would affect sediment that has been previously disturbed and, therefore, is of low paleontologic sensitivity.

Mitigation measures proposed by the City to reduce or mitigate potential project-related adverse impacts to significant paleontological resources are described in the Paleontological Resources subsection. No impact to paleontological resources would occur as a consequence of operation, so no mitigation is proposed for the operational phase of the project.

1.9 Key Benefits

1.9.1 Environmental

VPP will employ advanced, high-efficiency combustion turbine technology and selective catalytic reduction to minimize emissions from the facility. It should be noted that an oxidation catalyst system will be operational to reduce carbon monoxide emissions whenever the combustion turbines would be in operation. Using natural gas for fuel, VPP will be among the cleanest facilities of comparable size in the nation. Project emissions will be as much as 85 percent lower than those for existing older generating facilities. VPP will also obtain emission offsets to more than compensate for its air emissions.

VPP will also minimize freshwater use. Recycled water from the CBMWD will be used for plant cooling and process water needs.

1.9.2 Employment

The Project will provide for a peak of approximately 520 construction jobs, with an average of almost 273 construction jobs, over the 20- to 24-month construction period. In addition, it will provide approximately 21 full-time, living-wage jobs throughout the life of the plant.

1.9.3 Energy Efficiency

VPP will be an efficient, environmentally responsible source of economic and reliable energy to serve the growing energy demands of the City of Vernon. VPP will help ensure

reliable, clean, low-cost electricity in the future to maintain the City's industrial base and also supply power to southern California.

1.10 Persons Who Prepared the AFC

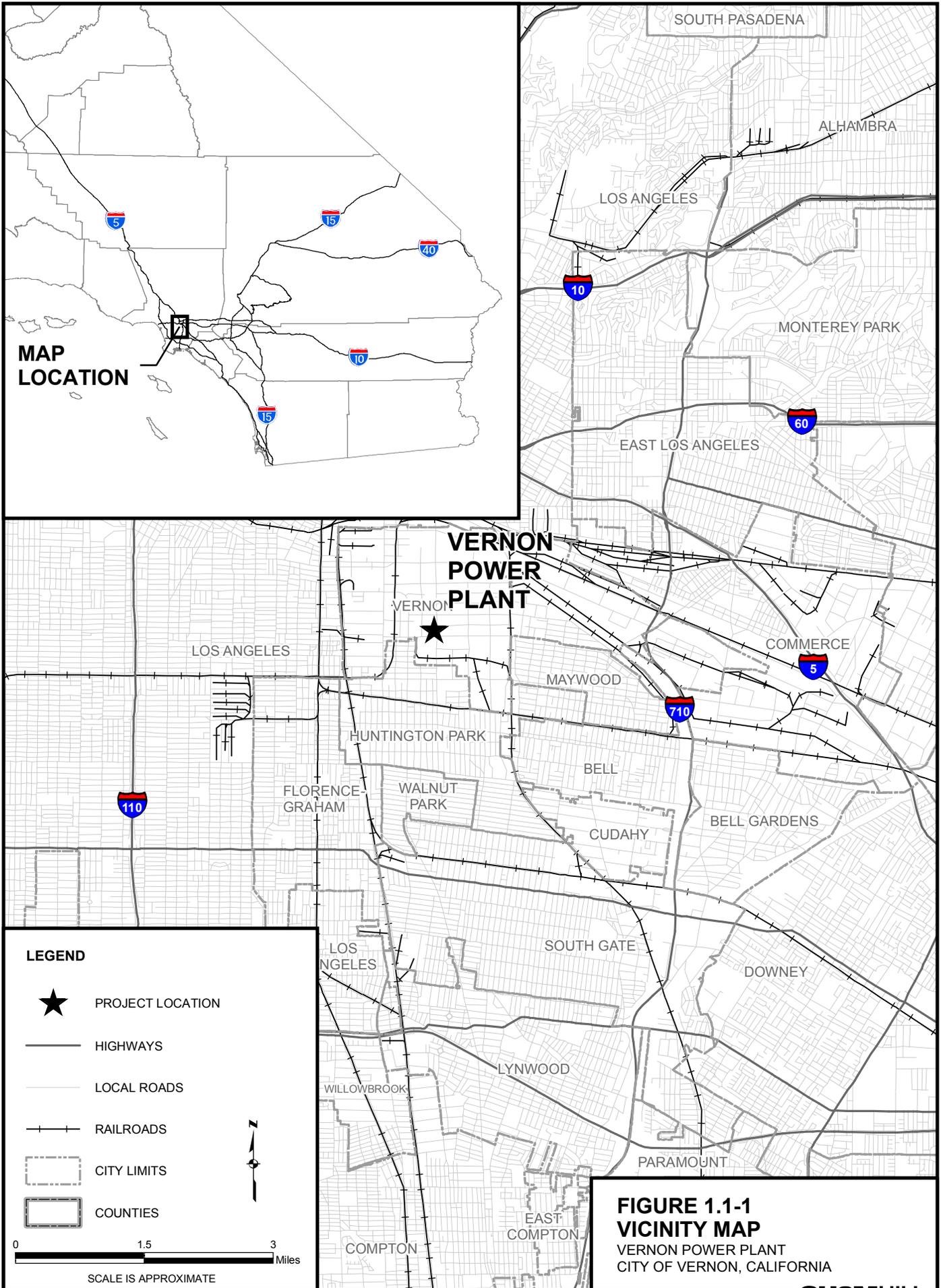
Persons with primary responsibility for the preparation of each section of this AFC are listed in Appendix 1B.

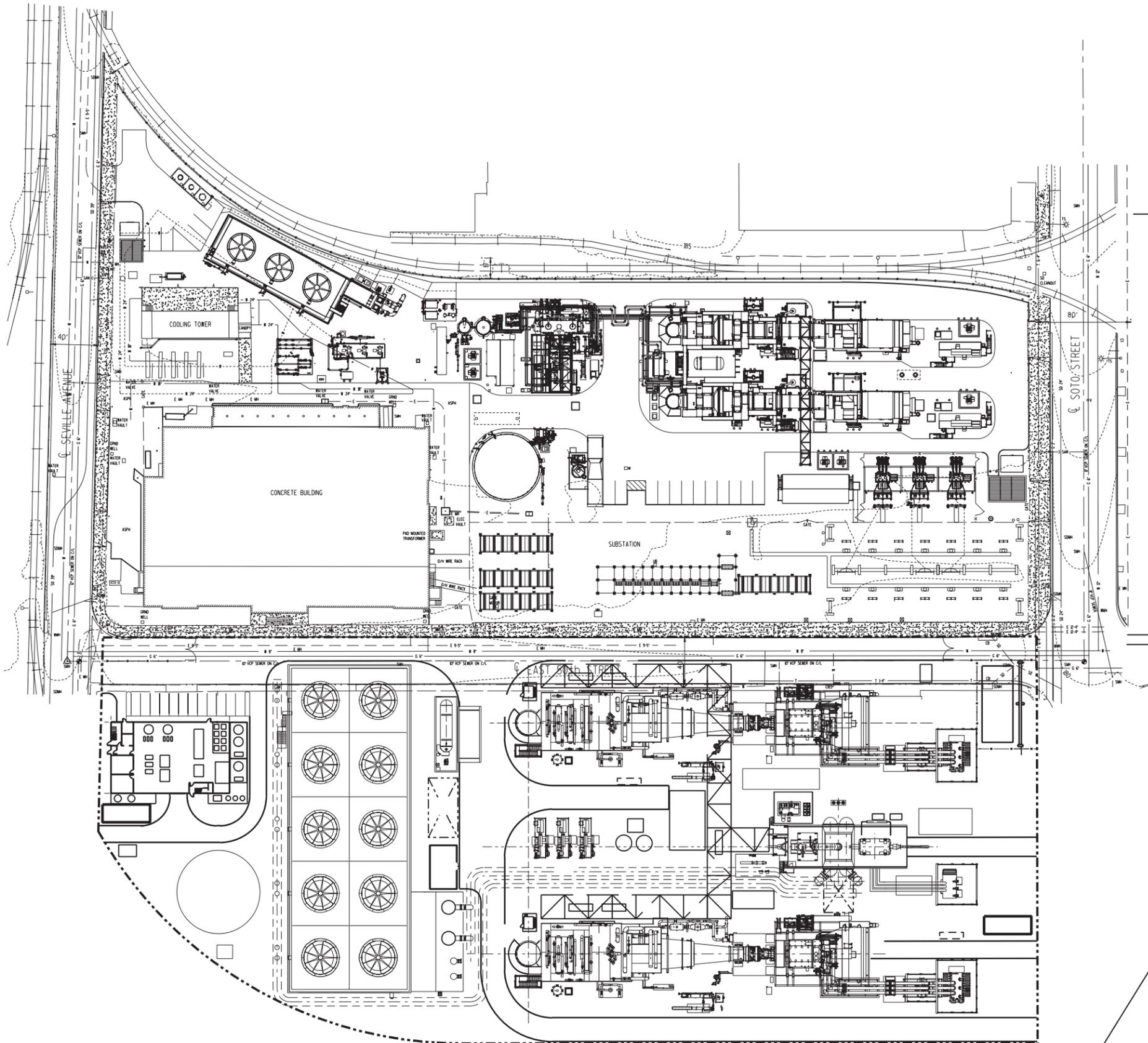
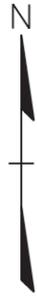
1.11 Laws, Ordinances, Regulations, and Standards

Each section addresses the relevant LORS and addresses compliance with them. For convenience, a summary LORS table is provided in Appendix 1C.

1.12 Permitting Requirements

Each section provides a list of applicable federal, state, and local permits that would be required by each jurisdiction for the project. For convenience, a table summarizing those permits is provided in Appendix 1D, and an agency contact list for each section is provided in Appendix 1E.





LIGHT AND POWER STATION A

VERNON POWER PLANT

GRAPHIC SCALE

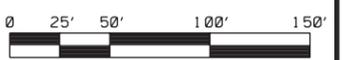


FIGURE 1.1-2
STATION A AND VERNON POWER PLANT
VERNON POWER PLANT
CITY OF VERNON, CALIFORNIA



PROJECT LOCATION

LEGEND

-  VERNON POWER PLANT
-  LAGUNA BELL SUBSTATION
-  PROPOSED NATURAL GAS LINE
-  PROPOSED TRANSMISSION LINE
-  ALTERNATIVE TRANSMISSION LINE
-  RECYCLED WATER LINE
-  ALTERNATIVE A SEWER LINE
-  ALTERNATIVE B SEWER LINE

0 1,500 3,000
Feet
SCALE IS APPROXIMATE



FIGURE 1.1-3
VPP SITE AND LINEAR
FACILITIES LOCATION MAP
VERNON POWER PLANT
CITY OF VERNON, CALIFORNIA



- LEGEND**
-  VERNON POWER PLANT
 -  LAGUNA BELL SUBSTATION
 -  PROPOSED NATURAL GAS LINE
 -  PROPOSED TRANSMISSION LINE
 -  ALTERNATIVE TRANSMISSION LINE
 -  RECYCLED WATER LINE
 -  ALTERNATIVE A SEWER LINE
 -  ALTERNATIVE B SEWER LINE



**FIGURE 1.1-4
PROJECT LOCATION**
VERNON POWER PLANT
CITY OF VERNON, CALIFORNIA

LEGEND

- 1 COMBUSTION TURBINE ENCLOSURE
- 2 TURBINE AIR INLET FILTER
- 3 FUEL GAS PREHEATER
- 4 HEAT RECOVERY STEAM GENERATOR
- 5 HRSG STACK
- 6 CONTINUOUS EMISSIONS MONITORING ENCLOSURE
- 7 ROTOR AIR COOLER
- 8 MV SWITCHGEAR
- 9 GENERATOR STEP UP TRANSFORMER
- 10 AUXILIARY TRANSFORMER
- 11 GENERATOR CIRCUIT BREAKER
- 12 ISOPHASE BUS DUCT
- 13 BOILER FEED WATER PUMPS
- 14 HRSG BLOWDOWN TANK AND WASTE SUMP
- 15 STEAM TURBINE WITH ENCLOSURE
- 16 STEAM SURFACE CONDENSER
- 17 LUBE OIL SKID
- 18 COOLING TOWER
- 19 COOLING TOWER POWER DISTRIBUTION CENTER
- 20 CIRCULATING WATER PUMPS
- 21 STEAM TURBINE POWER DISTRIBUTION CENTER (PDC)
- 22 BALANCE OF PLANT POWER DISTRIBUTION CENTER (PDC)
- 23 NOT USED
- 24 ADMIN/WATER TREATMENT BUILDING
- 25 ROADS
- 26 GIS BUILDING
- 27 AMMONIA UNLOADING/STORAGE AREA (20000 GAL.)
- 28 CONDENSATE STORAGE TANK
- 29 CONDENSATE MAKE-UP PUMPS
- 30 RECLAIMED WATER STORAGE TANK
- 31 GAS COMPRESSOR
- 32 CONDENSATE PUMPS
- 33 CTG FUEL GAS FILTER SEPARATOR
- 34 HRSG DUCT BURNER
- 35 AMMONIA DILUTION SKID
- 36 PIPE RACK
- 37 RECLAIMED WATER FORWARDING PUMPS
- 38 CONDENSATE POLISHER AREA
- 39 CTG LUBE OIL SKID
- 40 GLAND STEAM CONDENSER
- 41 VACUUM PUMPS
- 42 SAMPLING AND ANALYSIS ENCLOSURE
- 43 ELECTRIC AUXILIARY BOILER
- 44 FIRE PROTECTION PUMP HOUSE ENCLOSURE
- 45 OIL WATER SEPARATOR
- 46 CONTROL BUILDING/UPS/BATTERY ROOM
- 47 AUX. COOLING WATER PUMPS
- 48 TRANSMISSION LINE DEAD END STRUCTURE
- 49 STORM WATER DETENTION VAULT

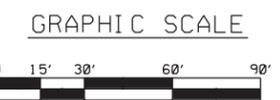
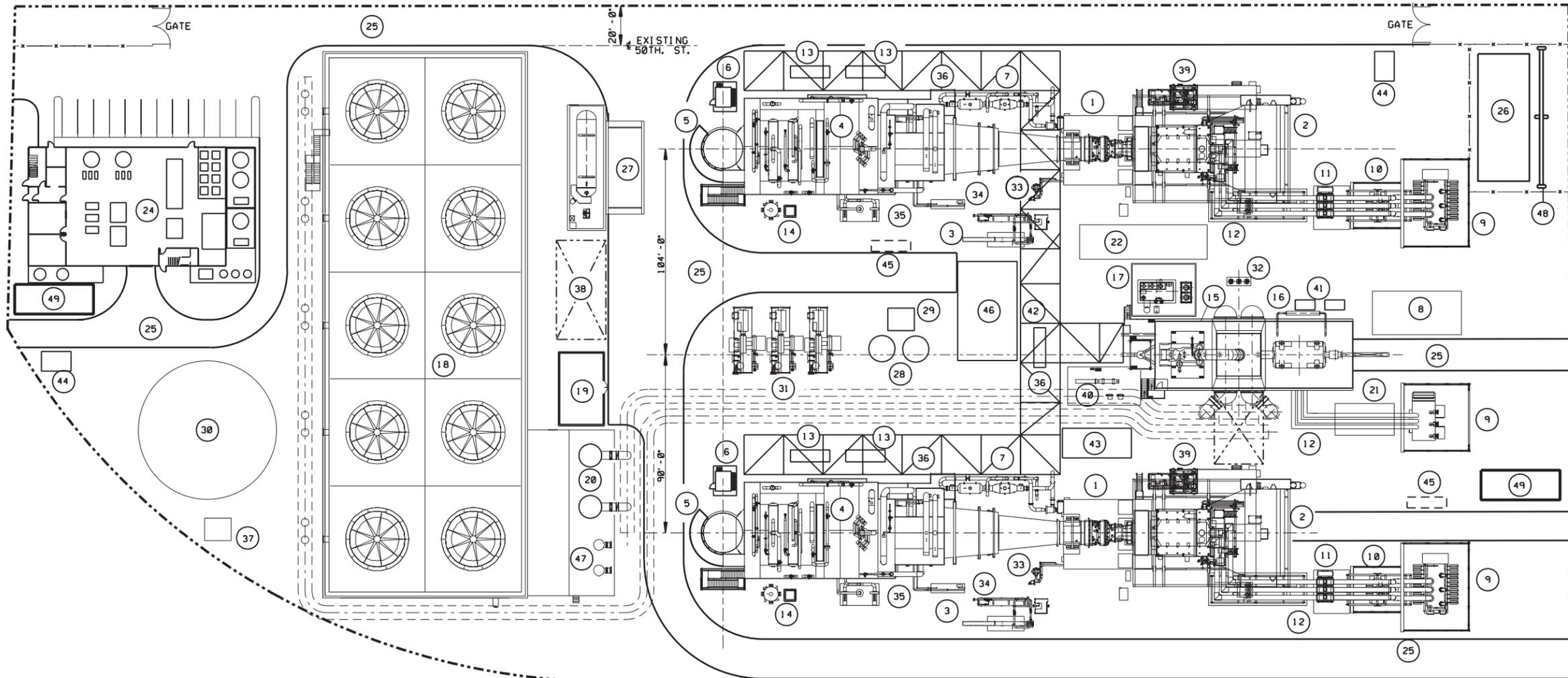
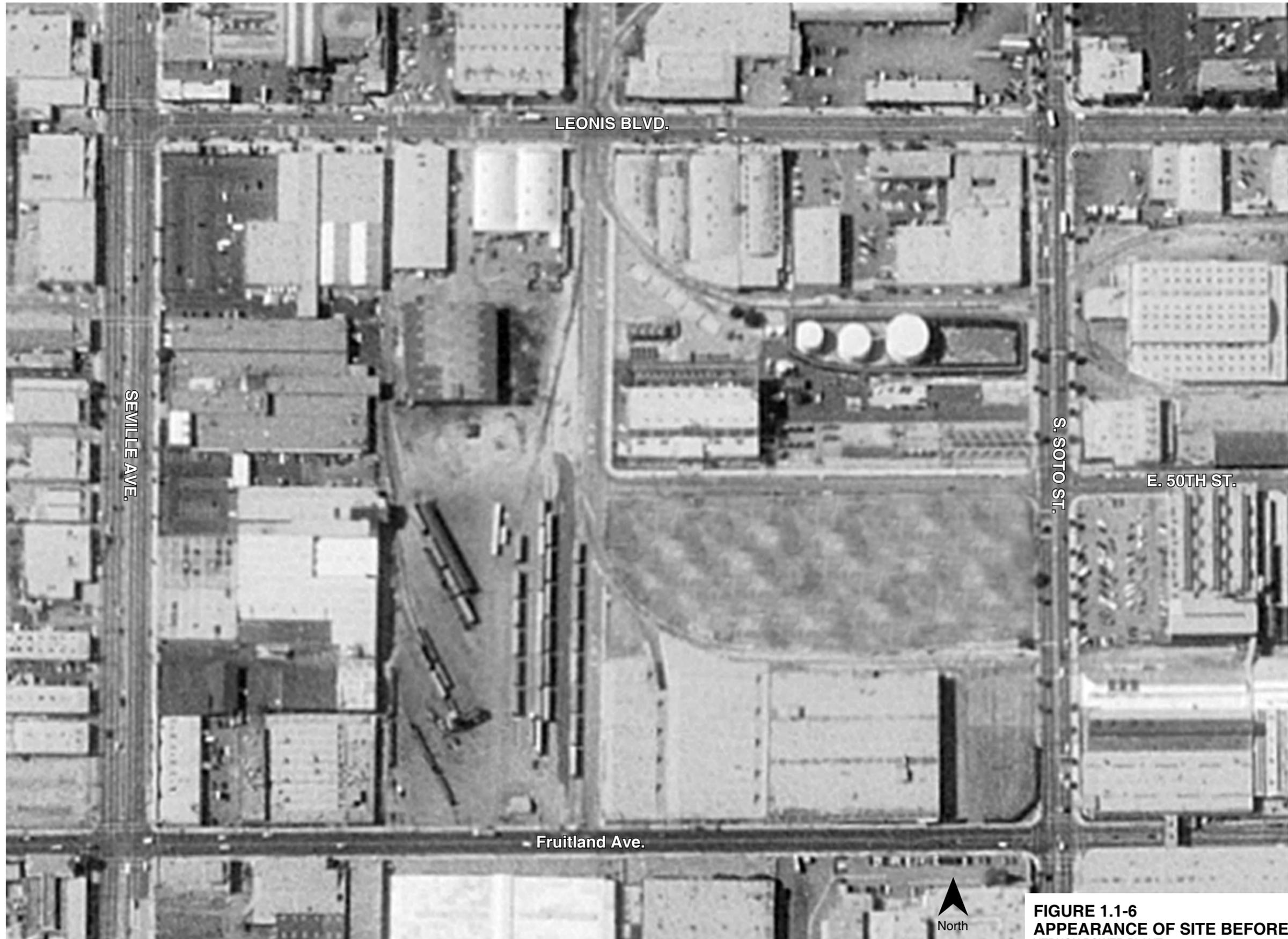


FIGURE 1.1-5
SITE LAYOUT
 VERNON POWER PLANT
 CITY OF VERNON, CALIFORNIA
CH2MHILL



LEONIS BLVD.

SEVILLE AVE.

S. SOTO ST.

E. 50TH ST.

Fruitland Ave.



FIGURE 1.1-6
APPEARANCE OF SITE BEFORE CONSTRUCTION
VERNON POWER PLANT
CITY OF VERNON, CALIFORNIA

**REPLACE
WITH FIGURE
1.1-7**

**REPLACE
WITH FIGURE
1.1-7**

