SECTION 5.15
ELECTRICITY AND NATURAL GAS

5.15 ELECTRICITY AND NATURAL GAS

This section addresses the potential impacts of the proposed project with regard to electricity and natural gas consumption. The analysis identifies the utilities that provide electricity and natural gas services to the project site, describes the existing consumption of electricity and natural gas at the site, indicates the nature and location of related infrastructure in the local area, and estimates the electricity and natural gas demands of the proposed project at buildout.

It should be noted that the analysis evaluates the potential electricity impacts associated with Development Scenarios E and F, since these two development scenarios would result in the highest demand of electricity of all six development scenarios. These scenarios are described in detail in Section 3.0, Project Description and the calculation of electrical demand for each scenario is detailed in Appendix I, Public Service and Utility Calculations.

It should be noted that the analysis evaluates the potential natural gas impacts associated with Development Scenarios B and D, since these two development scenarios would result in the highest demand of natural gas of all six development scenarios. These scenarios are described in detail in Section 3.0, Project Description and the calculation of natural gas demand for each scenario is detailed in Appendix I, Public Service and Utility Calculations.

5.15.1 ENVIRONMENTAL SETTING

ELECTRICITY

The project sites are currently developed with surface parking lots and an auto service center (Firestone Tires). The project sites are located within the Downtown Center District of San Fernando and are served by existing infrastructure in the area.

Electrical Supply

The project sites are located within the service territory of Southern California Edison (SCE), which provides electrical service to the City. A variety of sources provide electricity to SCE, including natural gas, nuclear, renewables and hydroelectric plants throughout the western states. SCE maintains a vast network of transmission and distribution infrastructure throughout the area to provide electrical power and service to its customers. High voltage electrical lines are typically utilized to transmit power from generation plants. This power subsequently passes through a substation, from which it is distributed to individual consumers via lower voltage lines.

Electrical Demand

The current electricity demand from the existing parking lots is limited to nighttime security lighting. The estimated demand for electricity by the parking lots is approximately 32,844 kilowatt hours (kWh) or 32.844 megawatt hours (mWh) per year. The Firestone Tire Service Center (7,000 square feet) consumes approximately 94,850 kWh per year[1].

Regulatory Framework

The California Public Utilities Commission (CPUC) regulates investor-owned electric power and natural gas utility companies in the State of California. Assembly Bill 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., Southern California Edison) was decoupled.

All new construction in the State of California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the *California Administrative Code*. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings.

The utilization of alternative energy applications in development projects (including the proposed project), while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar water heating systems or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources (i.e., electricity and natural gas). Incentives, primarily in the form of state and federal tax credits, as well as reduced energy bills, provide a favorable basis for individual builders, property owners and occupants to install such alternative energy systems.

NATURAL GAS

Natural Gas Supply

The Southern California Gas Company (SCGC) provides natural gas service to the project sites. In the project vicinity, SCGC operates both two and three-inch medium pressure gas mains along Truman Street immediately northeast of the project area, and a two-inch medium pressure gas main along Pico Street, immediately southwest of the project area. According to the California Energy Commission (CEC), SCGC is expected to provide up to 890.4 billion cubic feet (c.f.) of natural gas to its customers by 2010.

[1] 7,000 square feet x 13.55 kilowatt hours per square foot.

SGCG provides engineering guidelines that address general safety and design consideration in order to protect transmission line facilities. These guidelines include:

- Protect Gas Company facilities in place at all times while working in their proximity;
- Facilities of 2 inches or more may only be exposed for a maximum unsupported span of 20 feet;
- Wall footings need to be a minimum of 5 feet away from any gas main;
- Trees may be planted a minimum of 10 feet away from any gas main; and
- Gas pipes must be accessible to Gas Company personnel 24 hours a day 7 days a week.

Natural Gas Demand

The existing surface parking lots do not currently require natural gas service. The estimated demand for natural gas by the Firestone Tire Service Center is approximately 20,300 c.f. per month.[2]

Regulatory Framework

The California Public Utilities Commission (CPUC) regulates natural gas utility service for approximately 10.5 million customers that receive natural gas from Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SCGC), San Diego Gas & Electric Company (SDG&E), Southwest Gas, and several smaller natural gas utilities. Most of California's natural gas customers are residential and small commercial customers (referred to as "core" customers) who accounted for approximately 40 percent of the natural gas delivered by California utilities in 2003. Large consumers like electric generators and industrial customers (referred to as "non-core" customers) accounted for approximately 60 percent of the natural gas delivered by California utilities in 2003. The CPUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

PG&E and SCGC own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and two independently owned storage utilities – Lodi Gas Storage and Wild Goose Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently.

[2] Based upon a consumption factor of 2.9 cubic feet/square foot/month from the South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993.

2005 TITLE 24, PART 6 CALIFORNIA'S ENERGY EFFICIENCY STANDARDS FOR RESIDENTIAL AND NON RESIDENTIAL BUILDINGS

The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. New standards were adopted by the Commission in 2005 as mandated by Assembly Bill 970 to reduce California's electricity demand. The new standards went into effect on October 1, 2005. The standards emphasize energy efficiency measures that save energy at peak periods and seasons, improve the quality of installation of energy efficiency measures, incorporate recent publicly funded building science research, and collaborate with California utilities to incorporate results of appropriate market incentives programs for specific technologies.

5.15.2 SIGNIFICANCE THRESHOLD CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of San Fernando in its environmental review process, which is contained in Appendix A of the EIR. The Initial Study includes questions relating to electricity and natural gas. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Result in a need for new systems, or substantial alterations in power or natural gas facilities.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.15.3 IMPACTS AND MITIGATION MEASURES

ELECTRICITY

◆ **DEVELOPMENT OF THE PROPOSED PROJECT COULD INCREASE THE DEMAND FOR ELECTRICAL SERVICE BEYOND EXISTING CONDITIONS AND COULD REQUIRE EXPANSION OF THE EXISTING ELECTRICAL SYSTEM.**

Level of Significance Before Analysis and Mitigation: Potentially Significant Impact.

Impact Analysis: Implementation of the proposed project would result in an increase in demand for electrical power and service to the project area. As indicated in *Table 5-15-1, Proposed Project Electricity Consumption*, the proposed project could consume approximately 3,356,550.5 kWh/year or 3,356.6 mWh/year of electricity. The net increase would be 3,228,856.5 kWh/year or 3,228.9 mWh/year. The anticipated service demands created by implementation of the project are within the service parameters of SCE's current transmission and service infrastructure. No mitigation measures for electrical consumption are required; therefore impacts would be less than significant.

TABLE 5.15-1
Proposed Project Electricity Consumption

Land Use	Building Area (sf)	Dwelling Units (du)	Usage Factor[1] (per year)	Electricity Consumption (kWh/year)
Proposed Project				
Residential	--	261	5,626.5 kWh/du	1,468,516.5
Retail/Restaurant	59,948 50% Retail 50% Restaurant	--	13.55 kWh/sf 47.45 kWh/sf	406,147.7 1,422,266.3
Commercial	4,440		13.55 kWh/sf	59,620
Total		--	--	3,356,550.5
Existing Uses				
Firestone Tire Center				-94,850
Parking Lot Lighting				-32,844
Total				127,694
Net Total				3,228,856.5

sf = square feet; du = dwelling unit(s); MWh = megawatt-hour; KWh = kilowatt-hour.

[1] Usage factors are from South Coast Air Quality Management District *CEQA Air Quality Handbook*, April 1993.

Service Infrastructure

The proximity of existing SCE facilities to proposed project structures may create the need for some of the transmission and/or service infrastructure to be relocated prior to site excavation and project construction.

Parking Lot 3 (Gangi Development). Development of parking lot 3 as proposed would not impact existing SCE facilities, nor would it require any new or modified facilities to accommodate projected electricity demands. SCE indicates that it would serve the project area from Kalisher Street transmission infrastructure with a current 16 kilovolts (kV) capacity. Impacts would be less than significant.

Parking Lot 4 (Miraflores Mixed-Use Development). SCE would provide electricity to the project site via existing transmission infrastructure from San Fernando Mission Boulevard with a 16 kV capacity. No new facilities are anticipated; however, the proposed project may impact existing circuits within the alley adjacent and south of the site. These existing circuits currently serve the Firestone Tire facility and run the length of the project site. The project applicant would be required to coordinate with SCE planning staff and the City of San Fernando to ensure the proposed project would not impact existing circuits, reducing impacts to a less than significant level.

Parking Lot 5 (Marbella Mixed-Use Development). Electricity service would be provided to the proposed project through existing SCE transmission infrastructure from San Fernando Mission Boulevard, with a 16 kV capacity. No additional service or transmission infrastructure is required to meet anticipated project service demands. The proposed project may impact existing circuits within the alley adjacent and south of the site. Additionally, a SCE service pedestal is currently present on the site along the southwest boundary. The project applicant would be required to coordinate with SCE planning staff and the City of San Fernando to ensure that the proposed project would not impact existing circuits and to coordinate relocation of the service pedestal, reducing impacts to a less than significant level.

Parking Lot 7 (Commercial Development). Electricity service would be provided to the proposed project through existing transmission infrastructure from San Fernando Mission Boulevard with a current 16 kV capacity. Development of the proposed project would not have any impact on existing SCE facilities, nor would it require any new or modified facilities to accommodate project power demands. Impacts would be less than significant.

Parking Lots 8 and 10 (Plaza Del Sol Development). The proposed project would receive electricity service through existing SCE transmission infrastructure from Celis Street with a 4 kV capacity. SCE has indicated that no additional facilities are anticipated to meet project service demands. However, a SCE meter pedestal and pull box are currently located on the site. Development of the proposed project may require the relocation of the meter pedestal and pull box. The project applicant would be required to coordinate with SCE planning staff and the City of San Fernando regarding potential relocation of the service pedestal and pull box, reducing impacts to a less than significant level.

Mitigation requiring coordination with SCE to ensure conflicts are reduced and that service interruptions would be minimized would reduce potential electricity impacts to a less than significant level.

Mitigation Measures: The following mitigation measures are applicable to Parking Lot 4 (Miraflores Mixed-Use Development), Parking Lot 5 (Marbella Mixed-Use Development), and Parking Lots 8 and 10 (Plaza del Sol Development).

EN-1 Prior to issuance of building permits, the project applicant shall coordinate with City of San Fernando and SCE planning staff regarding potential facility relocation within the project area to ensure potential service interruptions are minimized.

EN-2 Prior to issuance of building permits, the project applicant shall pay the necessary costs required to relocate existing SCE infrastructure and facilities.

Level of Significance After Analysis and Mitigation: Less Than Significant Impact.

NATURAL GAS

- **DEVELOPMENT OF THE PROPOSED PROJECT COULD INCREASE THE DEMAND FOR NATURAL GAS SERVICE BEYOND EXISTING CONDITIONS AND COULD REQUIRE EXPANSION OF THE EXISTING NATURAL GAS SYSTEM.**

Level of Significance Before Analysis and Mitigation: Less Than Significant Impact.

Impact Analysis: Implementation of the proposed project would result in an increase in demand for natural gas service to the project area. As indicated in *Table 5.15-2, Proposed Project Natural Gas Consumption*, the proposed project could consume approximately 1,252,437.6 cubic feet per month of natural gas, which is significantly greater than current natural gas demand (14,000 cubic feet per month) for the project site.

TABLE 5.15-2
Proposed Project Natural Gas Consumption

Land Use	Building Area (sf)	Dwelling Units (du)	Usage Factor[1] (per month)	Natural Gas Consumption (cf/month)
Proposed Project				
Residential	--	272	4,011.5 cf/du	1,091,128
Retail/Restaurant	43,948	--	2.9 cf/sq. ft.	127,449.2
Commercial	11,676		2.9 cf/sq. ft.	33,860.4
Total	--	--	--	1,252,437.6
Existing Uses				
Firestone Tire Center				-20,300
Net Total				1,232,137.6

sf = square feet; du = dwelling unit(s); cf = cubic feet.

[1] Usage factors are from South Coast Air Quality Management District *CEQA Air Quality Handbook*, April 1993.

The Northern Region Technical Services Department of the SCGC indicates that there are no known or suspected infrastructure or service limitations that would impact anticipated service demand from the proposed project. Taking into account the projected service needs of the proposed project, adequate supply and gas transmission line facilities exist to service the project and region. Therefore, impacts are considered less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Analysis and Mitigation: Less Than Significant Impact.

5.15.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO ELECTRICAL AND/OR NATURAL GAS SERVICES AND FACILITIES WITHIN THE CITY OF SAN FERNANDO.**

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis:

ELECTRICITY

Electrical loads of the proposed project and related cumulative projects would increase the demand for electricity service beyond existing conditions. All electrical lines and other system improvements would be installed, in whole or in part, at the expense of development project applicants, and would serve to avoid adverse impacts to the electricity distribution system.

Although the proposed project and related cumulative projects would create additional demands on electricity supplies and distribution infrastructure, these demands are within the parameters of projected load growth and the service capabilities of SCE. Thus, cumulative impacts would be less than significant.

NATURAL GAS

Implementation of the proposed project and cumulative projects would result in increased natural gas demand. SCGC has indicated that it has sufficient capacity and the necessary infrastructure to serve the proposed project. Therefore, the proposed project would not result in cumulatively considerable impacts on natural gas service. Although development of the proposed project and related cumulative projects would result in additional demand for natural gas, that demand would be within existing capacity. Where necessary, natural gas distribution pipelines would be installed or upsized to serve development associated with related cumulative projects at the expense of the project applicants. Thus, cumulative impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Analysis and Mitigation: Less Than Significant Impact.

5.15.5 SIGNIFICANT UNAVOIDABLE IMPACTS

All impacts related to electricity and natural gas supply and facilities resulting from implementation of the proposed project are either at less than significant levels or can be reduced to less than significant levels with the imposition of mitigation measures. As such, no significant unavoidable impacts would result from development of the San Fernando Parking Lots Project.

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