THE JEFF HOTEL PROJECT, CULVER CITY, CA

Energy Technical Report

Prepared for
Sandstone Properties, Inc.
14724 Ventura Boulevard, Penthouse Suite
Los Angeles, CA 91403

November 2020

ESA

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
AB	Assembly Bill
BPMP	Bicycle & Pedestrian Master Plan
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CALGreen Code	California Green Building Standards Code
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Culver City
CO_2	Carbon Dioxide
CPUC	California Public Utilities Commission
EMFAC	On-road vehicle emissions factor model
GHG	Greenhouse gas
GWh	Gigawatt-hour
hp	Horsepower
HVAC	Heating, Ventilating and Air Conditioning
kW	Kilowatt
kWh	Kilowatt-hour
NO_X	Nitrogen oxide
OFFROAD	Off-road vehicle emissions model
PDF	Project design feature
RPS	Renewables Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCE	Southern California Edison
USEPA	United States Environmental Protection Agency
VMT	Vehicle miles travelled

EXECUTIVE SUMMARY

Sandstone Properties, Inc. proposes to develop a five-story, 175-room boutique hotel at 11469 Jefferson Boulevard in Culver City, California (Project). In accordance with the requirements under the California Environmental Quality Act (CEQA), this Energy Technical Report provides a summary of the Project's anticipated energy needs, impacts, and conservation measures to determine the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The report includes relevant information and analyses that address the energy implications of the Project, the calculation procedures used in the analysis, and any assumptions or limitations.

The Project would comprise a total building area of approximately 111,000 gross square feet within a 0.78 acre (33,800 square feet) parcel (Project Site). Parking would be provided in a two-floor, subterranean parking garage. Development of the Project would require the demolition of the existing low-rise commercial buildings and surface parking lot. The following emission sources, associated with the Project, have been evaluated:

- *Construction* – Activities associated with construction of the Project would result in energy demand as a result of the use of heavy-duty construction equipment, on-road trucks, and construction workers commuting to and from the Project Site.

- *Operation* – Activities from the operation of the Project would require energy in the form of electricity and natural gas for building heating, cooling, cooking, lighting, water demand and wastewater treatment, consumer electronics, and other energy needs; transportation-fuels, primarily gasoline, for vehicles traveling to and from the Project.

Energy consumption associated with the Project would be consistent with applicable portions of Culver City's Green Building Program. In addition, the Project would be consistent with the applicable Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations (CCR), Title 24, Part 6) intended to reduce energy consumption in the State. In addition, the Project would be consistent with the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards (CALGreen) Code that establishes mandatory measures for new residential and non-residential buildings, which include requirements for energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. Furthermore, the Project would be designed to meet criteria for the Leadership in Energy and Environmental Design (LEED) Silver certification level or equivalent and would implement green building measures that would reduce the Project's direct and indirect energy consumption. Thus the Project's energy consumption would be consistent with regulatory schemes intended to reduce energy consumption and energy impacts would be less than significant.

SECTION 1
Introduction

1.1 Existing Conditions

The approximately 0.78-acre Project Site is located at the northwest corner of Jefferson Boulevard and Slauson Avenue in Culver City. The Project Cite is bounded by Jefferson Boulevard to the south, Slauson Avenue to the west, Berryman Avenue to the north and Sepulveda Boulevard to the east. A two-lane service alley runs along the northwest side of the Project Site and the service alley serves as the western boundary of the Project Site. The Project Site is shown in **Figure 1**, *Regional Location.* Nearby uses surrounding the Project Site include residential uses to the north and west across the service alley, adjacent commercial uses to the east, and commercial uses to the south across Jefferson Boulevard and Slauson Avenue. **Figure 2**, *Aerial Photograph with Surrounding Land Uses*, shows the site and surrounding land uses. The Project Site is 33,800 square feet in size and is currently developed with low-level commercial buildings totaling 13,301 square feet and a surface parking lot totaling 20,516 square feet, all of which would be demolished and removed to support development of the Project.

The Project Site is well served by a network of regional transportation facilities. Various public transit stops operated by the Los Angeles County Metropolitan Transportation Authority (Metro) and Culver City Bus are located in close proximity to the Project Site, including the Culver City Transit Center Bus Station that is located approximately 900 feet southeast of the Project Site. The Metro Expo Line Culver City light rail station is approximately two and three quarter miles north of the Project Site. State Route 90 is approximately 350 feet west of the Project at its closest point; Interstate 405 is approximately 450 feet southwest of the Project Site at its closest point; The Pacific Coast Highway (State Route 1) is approximately two and one quarter miles to the southwest of the Project Site; Interstate 10 is approximately two and three quarter miles to the north; and Interstate 105 is approximately four miles to the south.

1.2 Project Description

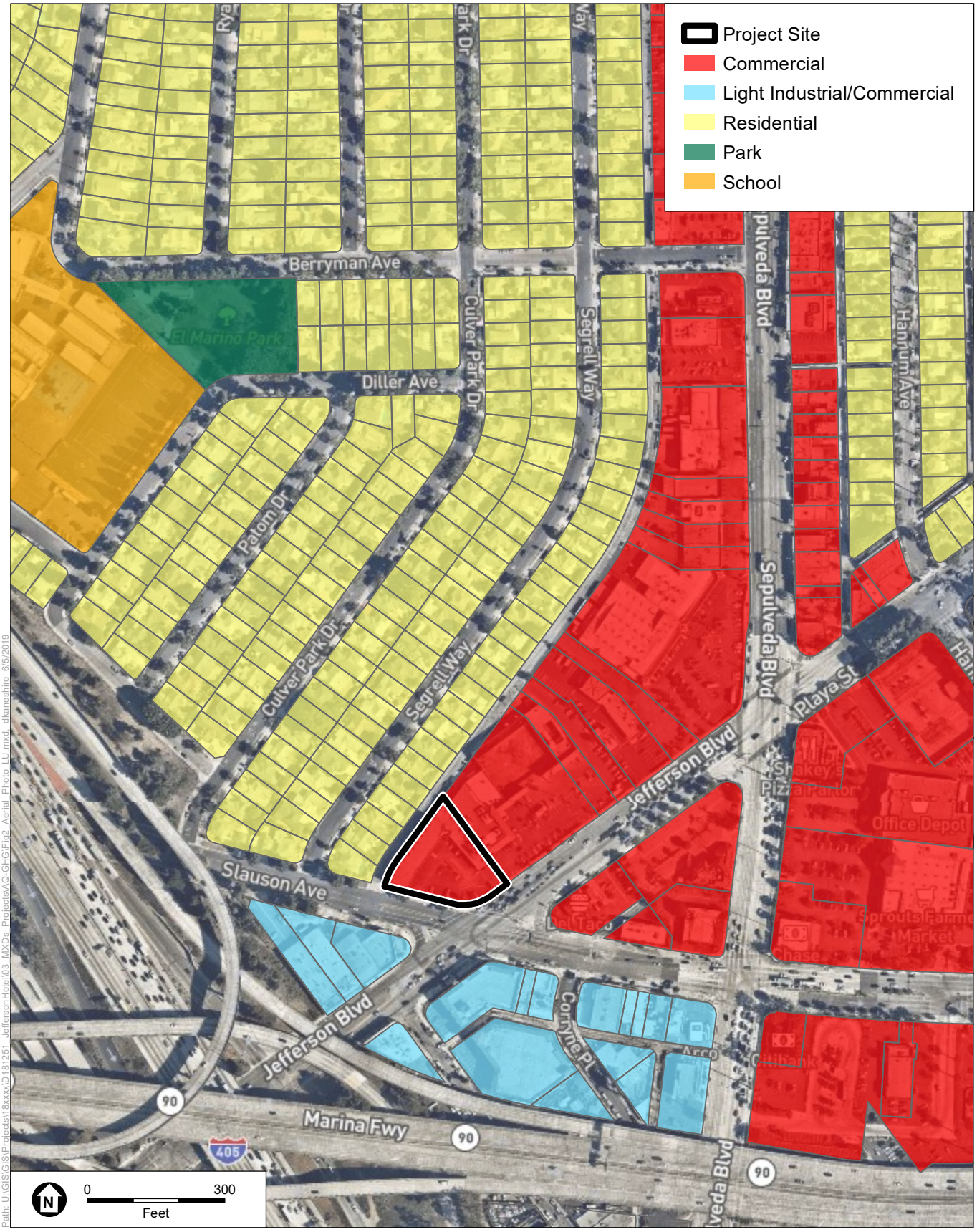
Sandstone Properties, Inc. proposes to develop a five-story, 175-room boutique hotel at 11469 Jefferson Boulevard in Culver City, California (Project). The Project would comprise a total building area of approximately 111,000 gross square feet within a 0.78 acre (33,800 square feet) parcel (Project Site). Development of the Project would require the demolition of the existing low-level commercial buildings totaling 13,301 square feet and a surface parking lot totaling 20,516 square feet.

SOURCE: ESRI

The Jeff Hotel

Figure 1
Regional Location

ESA



Path: U:\GIS\GIS\Projects\18xxxx\D181251_JeffersonHotel\03_MXDs_Projects\AQ-GHG\Fig2_Aerial_Photo_LU.mxd dkaneshiro 6/5/2019

SOURCE: Open Street Map, 2019

The Jeff Hotel

Figure 2
Aerial Photograph with Surrounding Land Uses

ESA

The Project would be designed to accommodate the 175 guest rooms and ground level amenities around a central open-to-the-sky atrium (oculus), podium level courtyard (Level 2), and additional rooftop amenities. Level 1 would include restaurant/commercial uses, service/administrative/housekeeping/kitchen uses, a meeting room, a lobby, a lounge, and oculus. Level 2 would include guestrooms, housekeeping, meeting rooms, a courtyard, and rear terrace. Level 3 would include guestrooms, housekeeping, a fitness room, and a courtyard. Level 4 would include guestrooms and housekeeping. Level 5 would include guestrooms, housekeeping, and a pool deck. Rooftop amenities would include a rooftop bar and open space/lounge areas. Parking would be provided in a two-floor, subterranean parking garage.

1.3 Project Land Use Characteristics

The Project would represent an urban infill development, since it would be undertaken on a currently developed property, and would be located near existing public transit stops, which would result in reduced vehicle trips and VMT compared to model default assumptions. Conservatively, the Project traffic study[1] did not include transit credit from public transit stops and used default trips rates in the Institute of Transportation Engineers, *Trip Generation, 10th Edition*. These trip rates were used in the operational emissions modeling.

1.4 Project Design Features

The Project will incorporate Project Design Features (PDFs) that will reduce energy consumption and target sustainable site development, water savings, energy efficiency, green-oriented materials selection, and improved indoor environmental quality. PDFs are part of the Project design, and are not mitigation measures. The PDFs that will be included in the Project design include the following:

> **PDF-AIR-1: Construction Features:** Construction equipment operating at the Project Site shall be subject to a number of requirements. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. Construction measures would include, but are not limited to the following:
>
> - The Project shall require all off-road diesel construction equipment greater than 50 horsepower (hp) that will be used an aggregate of 40 or more hours to meet the U.S. Environmental Protection Agency Tier 4 Final off-road emission standards. A copy of each unit's certified tier specification or model year specification and California Air Resources Board or South Coast Air Quality Management District operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. This construction feature would allow for a reduction in diesel particulate matter and NO_X emissions during construction activities.
>
> **PDF-AIR-2: Design Elements:** In accordance with CALGreen Building Standards, the project shall incorporate the following mandatory energy and emission saving features:

[1] Crain & Associates, Jefferson Hotel Project Traffic Study, 2020.

- The Project shall recycle and/or salvage at least 65 percent of non–hazardous construction and demolition debris.

- The Project shall include easily accessible recycling areas dedicated to the collection and storage of non-hazardous materials such as paper, corrugated cardboard, glass, plastics, metals, and landscaping debris (trimmings).

- The Project shall include efficient heating, ventilation, and air conditioning (HVAC) systems.

- The Project shall install low-flow water fixtures that are consistent with U.S. Environmental Protection Agency WaterSense specifications.

PDF-AIR-3: Voluntary Design Elements: The project shall incorporate many operational energy and emission saving features including the following:

- The Project design would meet criteria for the LEED Silver or equivalent certification level.

- The Project shall install a solar photovoltaic power system equivalent to at least 1 percent of the Project's electricity demand and at least 1 kilowatt (kW) of solar photovoltaics per 10,000 square feet of new development.

1.5 Existing Energy Usage

Existing Electricity Sales

Southern California Edison (SCE) is the utility provider for the City of Culver (City). SCE provides electricity to approximately 15 million people, 180 incorporated cities, 15 counties, 5,000 large businesses, and 280,000 small businesses throughout its 50,000-square-mile service area.[2] In 2017, SCE's total electricity sales in the SCE service area was estimated to be 85,602 gigawatt-hours (GWh).

SCE produces and purchases their energy from a mix of conventional and renewable generating sources. **Table 1**, *Electric Power Mix Delivered to Retail Customers in 2017*, shows the electric power mix that was delivered to retail customers for SCE compared to the statewide 2017 power mix. Total electricity sales/usage for SCE is shown in Table 1 compared to the statewide electricity sales/usage for the same year.

[2] California Energy Commission (CEC), 2017a Power Content Label, Southern California Edison – Default. Available at: https://www.sce.com/wps/wcm/connect/6ee40264-673a-45ee-b79a-5a6350ed4a50/2017PCL.pdf?MOD=AJPERES. Accessed March 2019.

TABLE 1
ELECTRIC POWER MIX DELIVERED TO RETAIL CUSTOMERS IN 2017

Energy Resource	2017 SCE	2017 CA Power Mix (for comparison)
Electricity Total Sales/Usage (million kilowatt-hours)	**85,879**	**292,039**
Eligible Renewable	**32%** [a]	**29%** [a]
Biomass & bio-waste	0%	2%
Geothermal	8%	4%
Small hydroelectric	1%	3%
Solar	13%	10%
Wind	10%	9%
Coal	**0%**	**4%**
Large Hydroelectric	**8%**	**15%**
Natural Gas	**20%**	**34%**
Nuclear	**6%**	**9%**
Other	**0%**	**0%**
Unspecified sources of power [b]	**34%**	**9%**
Total	**100%**	**100%**

NOTES:

[a] Percentages are estimated annually by the CEC based on the electricity sold to California consumers during the previous year.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

SOURCES:
California Energy Commission, Total System Electric Generation, 2017 Total System Electric Generation in Gigawatt Hours. Available at: http://energy.ca.gov/almanac/electricity_data/total_system_power.html. Accessed September 2018.

California Energy Commission, 2017 Power Content Label, Southern California Edison – Default. Available at: https://www.sce.com/wps/wcm/connect/6ee40264-673a-45ee-b79a-5a6350ed4a50/2017PCL.pdf?MOD=AJPERES. Accessed September 2018.

Edison International, Energy for What's Ahead: Edison International and Southern California Edison 2017 Annual Report. Available at https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2017-financial-statistical-report.pdf. Accessed September 2018.

SCE is required to commit to the use of renewable energy sources for compliance with the Renewables Portfolio Standard. SCE is required to meet the requirement to procure at least 33 percent of its energy portfolio from renewable sources by 2020 through the procurement of energy from eligible renewable resources, to be implemented as fiscal constraints, renewable energy pricing, system integration limits, and transmission constraints permit. Senate Bill (SB) 350 (Chapter 547, Statues of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by

December 31, 2045.[3] Eligible renewable resources are defined in the Renewable Portfolio Standard to include biodiesel; biomass; hydroelectric and small hydro (30 Mega Watts [MW] or less); aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic (PV); solar thermal electric; wind; and other renewables that may be defined later. As shown in Table 1, SCE provided approximately 32 percent of its 2017 electric supply from renewable power.

In February 2019 for residential customers and May 2019 for non-residential customers, Clean Power Alliance became the new electricity supplier for Culver City. With this change, Clean Power Alliance purchases the renewable energy resources for electricity and SCE delivers it to Culver City customers. The Clean Power Alliance is a Joint Powers Authority made up of public agencies across Los Angeles and Ventura counties working together to bring clean, renewable power to Southern California. With the switch in energy providers, electricity customers in Culver City are automatically defaulted to have 100% renewable energy serving their electricity needs. Alternatively, customers can opt to have their electricity power consisting of 50% renewable content or 36%, or opt out of the Clean Power Alliance to remain with SCE as their provider.[4]

Existing Natural Gas Supply

Natural gas is used for cooking, space heating, water heating, electricity generation, and as an alternative transportation fuel. Southern California Gas Company (SoCalGas) is responsible for providing natural gas supply to the City and is regulated by the California Public Utilities Commission and other state agencies. The annual natural gas sale to customers in 2017 is shown in **Table 2**, *Natural Gas Delivered to Retail Customers in 2017*. Total natural gas sales/usage for SoCalGas is compared to the statewide natural gas sales/usage from the corresponding year in Table 2.

TABLE 2
NATURAL GAS DELIVERED TO RETAIL CUSTOMERS IN 2017

Energy Resource	2017 SoCalGas[a]	2017 California (for comparison)[b]
Natural Gas Total Sales/Usage (million cubic feet)	913,960	2,048,294

NOTES:

[a] Annual amount calculated based on total throughput per day for 365 days. 2018 California Gas Report, California Gas and Electric Utilities,p. 101 Available at: https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf. Accessed February 2019.

[b] United States Energy Information Administration, Natural Gas Consumption by End Use. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm. Accessed February 2019

3 California Legislative Information, SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180 SB100. Accessed February 2019.

4 For the purposes of evaluating electricity in this Technical Report, the analysis conservatively assumes Project would not switch electricity providers from SCE to the Clean Power Alliance (i.e., does not take any credit for any additional renewable electricity associated with the Clean Power Alliance plans).

Existing Transportation Energy

According to the California Energy Commission, transportation accounts for nearly 37 percent of California's total energy consumption. The annual transportation fuel consumption of diesel and gasoline in 2017 in California is shown in **Table 3**, *Transportation Fuel Consumption in 2017*. Total transportation fuel consumption of diesel and gasoline for Los Angeles County is shown in Table 3 and compared to statewide values. The estimated Los Angeles County and Statewide transportation fuel consumption is based on retail sale data from the California Energy Commission.

TABLE 3
TRANSPORTATION FUEL CONSUMPTION IN 2017

Energy Resource	Los Angeles County	California (for comparison)
Diesel (million gallons)	590	3,798
Gasoline (million gallons)	3,659	15,584

SOURCE: California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017. Available at: https://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed February 2019. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales.

Existing Project Site

As previously stated, the Project Site is located in Culver City that is served by SCE and SoCalGas, and is currently developed with low-level commercial buildings totaling 13,301 square feet and a surface parking lot totaling 20,516 square feet, all of which would be demolished and removed to support development of the Project.

Energy demand from the existing uses is incorporated into this analysis to determine the Project's net (Project minus existing) energy consumption. Current annual electricity demand for the Project Site's existing uses to be removed is approximately 207,435 kilowatt-hours (kWh) and its natural gas demand is approximately 21,814 kilo-British Thermal Units (kBtu) or approximately 21,035 cubic feet (cf). Based on the estimated trips generated by the existing uses, its diesel fuel demand is approximately 4,343, and its gasoline demand is approximately 25,484 gallons.

SECTION 2
Regulatory Framework

2.1 State

Title 24, Building Standards Code and CAL Green Code

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

The CBSC adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the CALGreen Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code establishes mandatory measures for new residential and non-residential buildings, which include requirements for energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was in 2016 and again in 2019 to include new mandatory measures for residential as well as nonresidential uses. The new measures took effect on January 1, 2017 for the 2016 revisions and on January 1, 2020 for the 2019 revisions. buildings constructed under the Project would be required to comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance.[5]

Renewables Portfolio Standards

First established in 2002 under SB 1078, California's Renewables Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent by 2030.

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that the California Air Resources Board (CARB) should plan for 100 percent eligible renewable energy resources and zero-carbon

5 California Building Standards Commission, CALGreen (Part 11 of Title 24), http://www.bsc.ca.gov/Home/CALGreen.aspx. Accessed July 2017.

resources by December 31, 2045. The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.[6]

California Air Resources Board

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, Assembly Bill (AB) 1493 (commonly referred to as the Pavley regulations), enacted on July 22, 2002, requires CARB to set greenhouse gas (GHG) emission standards for new passenger vehicles, light duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009-2016 and Phase II established standards for model years 2017-2025.[7,8] Implementation of the regulation generally requires improved corporate average fuel economy (CAFE) standards for vehicles and reduced fuel consumption per mile traveled.

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations.[9] The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is

6 California Public Utilities Commission (CPUC), RPS Program Overview, 2018, http://www.cpuc.ca.gov/RPS_Overview/. Accessed December 26, 2018.

7 California Air Resources Board (CARB), Clean Car Standards - Pavley, Assembly Bill 1493, http://www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed January 11, 2017. Accessed January 7, 2019.

8 U.S. EPA, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, 2012, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF. Accessed January 7, 2019.

9 CARB, Clean Car Standards – Pavley, Assembly Bill 1493.

primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce nitrogen oxide (NO_X), respirable particulate matter (PM10), and fine particulate matter (PM2.5) emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.[10]

Sustainable Communities Strategy

Adopted by the State on September 30, 2008, the Sustainable Communities and Climate Protection Act of 2008, or SB 375, establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions by reducing per capita vehicle miles traveled, which would also result in a per capita reduction in vehicle fuel demand. Under SB 375, each region's reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities must then be consistent with the SCS. However, SB 375 expressly provides that the SCS does not regulate local land use decisions, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or the SCS. The Southern California Association of Governments (SCAG) 2020-2045 RTP/SCS is the currently adopted RTP/SCS for the Project region.

2.2 Local

Culver City participates in an environmental recognition program, California Green Communities. The program helps cities develop strategies to reduce carbon emissions and increase energy

[10] Cummins, Inc., Cummins Tier-4-Final Field Test Showed 10% Lower Fuel Consumption, March 5, 2014, https://cumminsengines.com/cummins-tier-4-final-field-test-program. Accessed January 7, 2019.

efficiency in their community. In addition, the City has adopted green building ordinances to reduce GHG emissions and energy consumption for new development. The City has adopted a Photovoltaic Requirement which requires 1 kW of photovoltaic power installed per 10,000 square feet of new development.[11]

In 2009, the City adopted the Green Building program which for new construction totaling more than 50,000 square feet, the Green Building Program requires these developments to achieve Leadership in Energy and Environmental Design (LEED) certification.[12] An example of the City's Green Building Program requirements would be all lighting has to be either fluorescent, LED or other type of high-efficiency lighting. As well, specific feature for parking garages requires all new lighting to be motion sensor controlled and the minimum base level lighting would use high efficiency lighting.

The General Plan Land Use designation of the Project Site is General Commercial. Adjacent designations to the north and west are Residential Single Family, to the east primarily General Commercial, and to the south primarily General Industrial. The Project is therefore consistent with the long-standing zoning designation of the site as determined in the City's Land Use Element.[13] The City has also adopted its first comprehensive plan for bicycling and walking.

The Circulation Element provides an overview of regulatory policies, transportation agencies, and local conditions; presents a vision for mobility in the Culver City area; presents a Street System Classification; discusses the Culver CityBus system; presents Bikeway Classifications; and provides goals, objectives, and policies to improve the local and regional transportation system. The Bicycle & Pedestrian Master Plan (adopted November 8, 2010), including existing and proposed bicycle and pedestrian facilities, is discussed below. The City has also adopted the concept of Complete Streets, which emphasizes a balanced transportation system that considers all users of the road (cyclists, pedestrians, transit riders, and vehicles) while planning development and transportation projects.[14] The goal of this concept is to transform the City into a place with an extensive bicycle and pedestrian network that allows travelers of all levels and abilities to feel comfortable walking and biking to their destinations.[15]

The Culver City Bicycle & Pedestrian Master Plan (BPMP) is a comprehensive plan for bicycling and walking in Culver City that considers all users of the road (cyclists, pedestrians, transit riders, and vehicles) while planning development and transportation projects. The BPMP provides an inventory and evaluation of the City's existing bicycle and pedestrian facilities, identifies opportunities and constraints associated with these facilities, and provides recommendations for the future development of bicycle and pedestrian facilities.[16] The BPMP also includes a stated goal

11 Culver City Municipal Code 2017. Solar Photovoltaic Systems, Chapter 15.02.1005. Accessed July 2017.

12 Culver City Municipal Code 2017. Green Building Program and Requirements, Chapter 15.02.1100. Accessed March 2019.

13 City of Culver City General Plan, Land Use Element, adopted 1996, amended through 2004, page LU-22.

14 Alta Planning + Design, Culver City Bicycle & Pedestrian Master Plan, adopted by City Council, November 8, 2010, page 8.

15 Alta Planning + Design, Culver City Bicycle & Pedestrian Master Plan, adopted by City Council, November 8, 2010, page 136.

16 Alta Planning + Design, Culver City Bicycle & Pedestrian Master Plan, adopted by City Council, November 8, 2010, pages 1 and 2.

of transforming the City into a place with an extensive bicycle and pedestrian network for travelers of all levels and abilities, and in so doing encourage more people to forgo car trips in favor of alternative forms of transportation. The BPMP identifies specific objectives, policies, and actions directed towards the City in order to achieve this goal.

As presented in the BPMP, the closest existing bicycle facility to the Project Site is the Ballona Creek Class I Bike Path/Multi-Use Path, with access off of Inglewood Boulevard.[17] As updated on the City's website, other bicycle facilities near the Project Site include Class II[18] Bike Lanes on Sawtelle Boulevard from approximately Sepulveda Boulevard to the City boundary near Ballona Creek.[19] As identified in the BPMP, in the vicinity of the Project Site, Segrell Way, Berryman Avenue, Hayter Avenue, Slauson Avenue, and Port Road are all designated as Bicycle Friendly Streets.[20] As also shown in the BPMP, a proposed pedestrian corridor is identified along Sepulveda Boulevard from Venice to Jefferson.[21]

As previously discussed in Section 1.1, *Existing Energy Usage*, in February 2019 for residential customers and May 2019 for non-residential customers, Clean Power Alliance became the new electricity supplier for Culver City. With this change, Clean Power Alliance purchases the renewable energy resources for electricity and SCE delivers it to Culver City customers. With the switch in energy providers, electricity customers in Culver City are automatically defaulted to have 100% renewable energy serving their electricity needs. Alternatively, customers can opt to have their electricity power consisting of 50% renewable content or 36%, or opt out of the Clean Power Alliance to remain with SCE as their provider. For the purposes of evaluating electricity in this Technical Report, the analysis conservatively assumes Project would not switch electricity providers from SCE to the Clean Power Alliance (i.e., does not take any credit for 36%, 50%, or 100% renewable electricity, depending on the selected Clean Power Alliance plan). In other words, the analysis does not take additional credit for renewable energy beyond the expected SCE renewable energy percentage for year 2022 based on the required renewables by year 2024 under the State's Renewables Portfolio Standard (SB 100).

17 Culver City Bicycle & Pedestrian Master Plan, op. cit., Table 3-1, Figure 3-1, and Map 3-1. A Class I Bike Path provides completely separated right-of-way for exclusive use by bicycles and pedestrians with cross-flow minimized.

18 A Class II Bike Lane provides a striped lane (minimum width of 5 feet) for one-way bike travel on a street or highway.

19 Biking in Culver City, http://www.culvercity.org/enjoy/getting-around/biking-in-culver-city. Accessed March 2019.

20 Culver City Bicycle & Pedestrian Master Plan, op. cit., Map 5-1. A Bicycle Friendly Street designation is for predominately residential streets with relatively low traffic volumes and includes Class III Bike Route signage or Shared Roadway Bicycle Marking (sharrows), and may include custom signage and traffic calming features.

21 Culver City Bicycle & Pedestrian Master Plan, op. cit., Map 5-2.

SECTION 3
Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist question in Appendix G of the *State CEQA Guidelines*. Accordingly, a significant impact to energy would occur if the Project would:

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

SECTION 4
Methodology

The analysis of the Project's construction and operation Energy usage has been conducted as follows. Additional details are provided in Appendix A of this report.

4.1 Construction

Construction of the Project would result in energy demand as a result of the use of heavy-duty construction equipment, on-road trucks, and workers commuting to and from the Project Site. Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, heavy-duty construction equipment would be primarily diesel-fueled. The assumption that diesel fuel would be used for all equipment represents the most conservative scenario for maximum potential energy use during construction. Energy demand from heavy-duty construction equipment is estimated based on the equipment analyzed in the California Emissions Estimator Model (CalEEMod), consistent with the air quality analysis in the Project's Air Quality Technical Report (ESA 2020) and Greenhouse Gas Emissions Technical Report (ESA 2020), and fuel consumption data from the CARB OFFROAD2017 model.

4.2 Operations

Operation of the Project would require energy in the form of electricity and natural gas for building heating, cooling, cooking, lighting, water demand and wastewater treatment, consumer electronics, and other energy needs; transportation-fuels, primarily gasoline, for vehicles traveling to and from the Project.

Building energy use factors, water demand factors, vehicle trips from all vehicle types to and from the Project Site (including waste collection vehicles), and vehicle trip lengths from CalEEMod are used to estimate building energy use and vehicle miles traveled (VMT). The energy usage takes into account building energy standards pursuant to the Title 24 Building Standards Code, CALGreen Code, and City's Green Building Standards. The assessment also includes a discussion of the Project Design Features which would reduce energy and water usage, as well as encourage recycling and waste diversion, above and beyond State regulatory requirements. Physical and operational Project characteristics for which sufficient data are available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis, and include but are not limited to the measures discussed in Project Design Feature PDF-AQ-2, Green Building Features.

Energy for transportation from residents, employees, and visitors to the Project Site were estimated

based on the predicted number of trips to and from the Project Site determined in the Traffic Study[22] and the estimated VMT from CalEEMod. The estimated fuel economy for vehicles is based on fuel consumption factors from the CARB EMission FACtors model (EMFAC) model. As discussed above, EMFAC is incorporated into CalEEMod, which is a state-approved emissions model used for the Project's air quality and GHG emissions assessment. Therefore, this energy assessment is consistent with the modeling approach used for other environmental analyses conducted for this Project (refer to the Project's Air Quality Technical Report and Greenhouse Gas Technical Report, ESA 2020) and consistent with general CEQA standards.

22 Crain & Associates, Jefferson Hotel Project Traffic Study, 2020.

SECTION 5
Environmental Impacts

Threshold a): Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Impact Statement a): Construction of the Project would use energy efficient procedures, newer equipment and a construction waste management plan. Operation of the Project would include measures that would improve energy efficiency beyond regulatory requirements. The Project location in a transit-rich area would has the potential to minimize vehicle trips and VMT. As the Project would achieve greater than required energy efficiency, it would not result in the wasteful, inefficient, or unnecessary consumption of energy resources.

5.1 Construction Energy Use

Estimated Energy Consumption

Construction of the Project would result in energy consumption from the use of heavy-duty construction equipment, on-road trucks, and workers commuting to and from the Project Site. Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, heavy-duty construction equipment would be primarily diesel-fueled. The assumption that diesel fuel would be used for all equipment represents the most conservative scenario for maximum potential energy use during construction. Energy demand from heavy-duty construction equipment is estimated based on the equipment analyzed in CalEEMod, consistent with the Project's air quality and GHG emissions assessment, and fuel consumption data from the CARB OFFROAD2017 model and CARB on-road vehicle emissions model, EMFAC2017. The total diesel fuel was for heavy-duty construction equipment is shown in **Table 4**, *Project Construction Fuel Usage*.

It is estimated that a maximum of approximately 10,679 one-way truck trips would be required to haul the material to off-site reuse and disposal facilities over the approximately 26-month construction period. The Project is estimated to generate approximately 14,222 one-way vendor truck trips for the delivery of building materials and supplies to the Project Site over the construction period. Based on the CARB on-road vehicle emissions model, EMFAC2017, heavy-duty haul trucks and vendor trucks operating in the South Coast Air Basin would have an estimated average fuel economy of approximately 6.4 and 8.3 miles per gallon, respectively (in order to provide a conservative assessment, this is modeled as calendar year 2020 fleet average trucks).

TABLE 4
PROJECT CONSTRUCTION FUEL USAGE

Source	Total Gallons of Diesel Fuel	Total Gallons of Gasoline Fuel
Construction:		
Heavy-Duty Construction Equipment	56,360	—
Haul Trucks	33,578	—
Vendor Trucks	13,025	—
Worker Trips	—	19,419
Total	**102,962**	**19,419**

SOURCE: ESA 2019

While intended to reduce construction criteria pollutant emissions, compliance with the above anti-idling and emissions regulations would also result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. PDF-AIR-1 would require trucks and other vehicles to have their engines off while in loading and unloading queues, which would further reduce emissions and fuel consumption. According to the CARB staff report that was prepared at the time the anti-idling air toxics control measure was being proposed for adoption in late 2004/early 2005, the regulation was estimated to reduce non-essential idling and associated emissions of diesel particulate matter and NO_X emissions by 64 and 78 percent respectively in analysis year 2009.[23]

These reductions in emissions are directly attributable to overall reduced idling times and fuel combustion as a result of compliance with the regulation. Project compliance with CARB regulations would result in energy savings of approximately 2,369 gallons of diesel fuel, assuming a fuel reduction equivalent to the percent reduction of PM or NO_X as estimated by CARB for 2009 (the lesser value, i.e., 64 percent, is used as a conservative assumption). The Project's compliance with regulatory measures would result in estimated annual fuel savings of approximately 1,093 gallons of diesel per year of construction. The estimated reductions represent a 2009 project scenario, whereas the Project at hand would occur in 2020. Heavy-duty engines continue to become more efficient and reduction amounts may lessen in the future due to this. Although the energy savings cannot be accurately quantified for 2020, the Project would still reduce consumption of diesel fuel under the anti-idling measure.

Based on the proposed development program and engineering estimates that form the basis of the Project's construction-related impact analyses, a maximum of approximately 10,769 one-way truck trips would be required to haul the demolition and excavation material from the Project Site to off-site reuse and disposal facilities over the approximately 26-month construction period. A maximum of approximately 14,222 one-way vendor truck trips would be required to deliver building materials and supplies to the site over the approximately 26-month construction period.

23 California Air Resources Board, Proposed Regulation Order: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, Appendix A, 2004. Available at https://www.arb.ca.gov/regact/idling/isorappf.pdf Accessed July 2017.

Based on the CARB on-road vehicle emissions model, EMFAC2017, haul trucks would have an estimated fuel economy of approximately 6.4 miles per gallon averaged over the 26 month construction period, while vendor trucks would have an estimated fuel economy of approximately 8.3 miles per gallon averaged over the 26 month construction period.[24] Based on the information described above, construction of the Project would use a total of approximately 46,602 gallons of diesel fuel for haul truck and vendor delivery trips. On an annual average basis, haul trucks and vendor delivery trips associated with Project construction would use approximately 21,509 gallons of diesel fuel per year during the 26-month construction period.

The number of construction workers that would be required would vary based on the phase of construction and activity taking place. The transportation fuel required by construction workers to travel to and from the Project Site would depend on the total number of worker trips estimated for the duration of construction activity. According to the EMFAC2017 model, passenger vehicles operating in the South Coast Air Basin would have an average fuel economy of approximately 26.4 miles per gallon based on calendar year 2020 fuel data for light-duty automobiles and light-duty trucks. Assuming construction worker automobiles have an average fuel economy consistent with the EMFAC2017 model and given the total vehicle miles traveled for construction workers, based on engineering estimates provided in CalEEMod used for the air quality and GHG emissions assessment, workers would travel a total of approximately 513,324 miles. Based on the information described above, the total gasoline fuel was estimated for workers and is also shown in Table 4.

For comparison purposes, the Project's construction energy demand from transportation fuel is compared to the Los Angeles County transportation fuel sales. As shown in **Table 5**, *Comparison of Project Construction and County Fuel Usage*, the Project would represent a very small fraction of the County's total fuel consumption. Furthermore, construction of the Project would result in short-term and temporary energy demand lasting approximately 26 months. As such, the Project would not increase the need for new energy infrastructure.

TABLE 5
COMPARISON OF PROJECT CONSTRUCTION AND COUNTY FUEL USAGE

Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Los Angeles County (in 2017) [a]	590,196,078	3,659,000,000
Annual Project Construction	47,692	8,995
Percent of County	0.008%	0.0002%

[a] California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017. Available at: https://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed February 2019. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales.

SOURCE: ESA 2019

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment (e.g., hand tools or

[24] In order to provide a conservative assessment, 2020 was used as the analysis year (first year of construction).

other electric equipment) would generally not result in a substantial increase in on-site electricity use. Electricity use during construction would be variable depending on lighting needs and the use of electric-powered equipment and would be temporary for the duration of construction activities. It is expected that construction electricity use would generally be considered as temporary and negligible over the long-term.

Conclusion Regarding Construction-Related Energy Consumption

Construction of the Project would require the consumption of energy for necessary on-site activities and to transport materials, soil, and debris to and from the Project Site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, compliance with the previously discussed anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. The Project would also implement a construction waste management plan to achieve a high level of waste diversion. Idling restrictions and implementation of a construction waste management plan would result in less fuel combustion and energy consumption. The Project would also utilize newer construction equipment that provide opportunities for future energy efficiency by using electric or alternatively-fueled equipment as available and feasible. Therefore, construction of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not increase the need for new energy infrastructure. Construction energy impacts would be less than significant.

5.2 Operational Energy Use

Operational energy consumption would occur as a result of building energy needs and the use of transportation fuels (e.g., diesel and gasoline) from vehicles traveling to and from the Site. This analysis estimates the maximum operational energy consumption to evaluate the Project's associated impacts on energy resources.

Daily operation of the Project would consume energy in the form of electricity and natural gas. Additionally, energy would be consumed for the conveyance and treatment of water, wastewater, and the disposal of solid waste off-site. Building energy use factors and water demand factors from CalEEMod, consistent with the Project analyses conducted for air quality and GHG emissions, are used to estimate building energy use. The Project's estimated net operational electricity demand, including from water demand, is provided in **Table 6**, *Project Operational Electricity Usage*. The Project would install solar electric PV systems, as required by the City's Green Building Code Solar Ordinance. As previously discussed, the Project would consume electricity produced renewable sources and would have no impact on SCE's electricity generation.

TABLE 6
PROJECT OPERATIONAL ELECTRICITY USAGE

Source	Electricity Per Year (million kWh)
SCE Electricity Sales (2017) [a]	85,879
Project Operations:	
Building Electricity [b]	1.10
Water Electricity [c]	0.06
Existing Operations:	0.21
Project Net Total	0.96
Percent of SCE	0.001%

NOTES:
[a] Refer to Table 1.
[b] Electricity is calculated in the Project's Greenhouse Gas Technical Report (ESA 2020) using CalEEMod (includes water-related electricity for conveyance and treatment).
[c] Electricity for water supply, treatment, distribution, and wastewater treatment.

SOURCE: ESA 2020

The Project's estimated net operational natural gas demand is provided in **Table 7**, *Project Operational Natural Gas Usage*. As operation of the Project would incorporate measures that would improve energy efficiency beyond regulatory requirements, the Project would clearly reduce the wasteful, inefficient, and unnecessary consumption of energy and would not increase the need for new energy infrastructure. Operational energy impacts would be less than significant.

TABLE 7
PROJECT OPERATIONAL NATURAL GAS USAGE

Source	Natural Gas Per Year (million cubic foot (cf))
SoCalGas Natural Gas Sales (2017) [a]	913,960
Project Operations: [b]	2.82
Existing Operations	0.02
Net Project Operations	2.8
Percent of SoCalGas	0.0003%

NOTES:
[a] Refer to Table 2.

SOURCE: ESA 2020

Operational Transportation Energy Consumption

Operation of the Project would result in transportation energy use. Transportation fuels, primarily gasoline and diesel, would be provided by local or regional suppliers and vendors. The Project's

estimated operational transportation fuel demand is provided in **Table 8**, *Project Operational Fuel Usage*.

TABLE 8
PROJECT OPERATIONAL FUEL USAGE

Source	Gallons of Diesel Fuel Per Year	Gallons of Gasoline Fuel Per Year
Los Angeles County (2017) [a]	590,196,078	3,659,000,000
Project Operations [b]	23,963	132,174
Existing Operations	4,343	25,484
Net Project Operations	19,620	106,690
Percent of County	0.003%	0.003%

NOTES:
[a] Refer to Table 3.
[b] Project operational fuel calculations is based on an existing and operational trip rates from the Project's Traffic Study.

SOURCE: ESA 2020

With respect to operational transportation-related fuel usage, the Project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. By locating commercial uses at an infill location in close proximity to existing off-site commercial, residential, and retail destinations and in close proximity to many public transit routes. As discussed in the Project's Air Quality Technical Report (ESA 2020) and the Greenhous Gas Emissions Technical Report (ESA 2020), the Project Site is located in the Sunkist Park Neighborhood in the central portion of the City and is within one-half-mile of existing public transit stops, as well as being within a reasonable walking distance from the Westfield Culver City shopping mall. The Project would create a pedestrian-friendly environment with direct access to the Westfield Culver City shopping mall and clear linkages to regional and local transportation systems. The Project would promote alternate modes of transit as it is within walking distance of several bus stops, including the Culver City Transit Center Bus Station that is located approximately 900 southeast of the Project Site that is served by the Culver City bus routes 3,4 and 6 and the Metro bus routes 108, 110 and 217. In addition, the Project would be consistent with the 2020-2045 RTP/SCS strategies to promote active transportation and supports improvements in local bike networks as the Project promotes the use of bicycles as it is located close to many Culver City bike paths.

Given that the Project Site are located in a transit-rich area such that vehicle trips and VMT would be minimized, the Project would be consistent with and support the goals and benefits of the SCAG 2020-2045 RTP/SCS, which seeks improved access and mobility by placing destinations closer together, thereby decreasing the time and cost of traveling between them and has "strategies to prioritize areas for new development, like near destinations and mobility options."[25] According to SCAG, expanding transportation choices "may shift trips to less environmentally damaging modes, minimize negative environmental impacts associated with current vehicle use, increase system

[25] SCAG, 2020-2045 RTP/SCS, page 47.

efficiency, improve safety, and reduce auto-related collisions and fatalities.[26] As discussed above, the Project Site is an infill location close to jobs, housing, shopping and restaurant uses, and in close proximity to existing public transit stops, which would result in reduced VMT, as compared to a project of similar size and land uses at a location without close and walkable access to off-site destinations and public transit stops. The Project would support alternative transportation and reducing VMT growth by locating at an infill location close to existing transit (including the extensive bus services). The high scores for walkability of the Project Site and number of destinations available for non-motorized trips surrounding the Project Site shows that the existing infrastructure and built environment is sufficiently developed such that projects located in the area would be expected to achieve substantial and credible reductions in trip distances and overall VMT.[27] The density of housing, restaurants, shopping, and recreation amenities in the Sunkist Park Neighborhood, combined with the plentiful bike lanes, pedestrian paths and public transportation options in the District, supports the expectation that that projects located in the area would have a substantially greater level of transportation efficiency when compared to the Citywide and statewide averages. The Project would therefore be consistent with the SCAG 2020-2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better "placemaking," provide more transportation choices, and reduce vehicular demand and associated emissions (refer to the Project's Greenhouse Gas Emissions Technical Report for additional details regarding the Project's consistency with the SCAG 2020-2045 RTP/SCS). As such, the Project would be consistent with regional plans to reduce VMT and would not cause wasteful, inefficient, or unnecessary use of energy.

Conclusion Regarding Operation and Maintenance Energy Consumption

Operation of the Project would result in energy demand from building energy usage and transportation-related energy associated with vehicles traveling to and from the Project Site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of building energy or transportation fuels and would not increase the need for new energy infrastructure. The Project Site are located in a transit-rich area such that vehicle trips and VMT would be minimized and the Project would be consistent with and support the goals and benefits of the SCAG 2020-2045 RTP/SCS, which seeks improved access and mobility. Furthermore, the Project would incorporate green building measures consistent with and exceeding energy efficiency standards in City policy and CALGreen. The Project would also provide opportunities for improved energy efficiency consistent with regulatory standards by installing solar electric PV systems. As the Project would achieve greater than required energy efficiency, it would not result in the wasteful, inefficient, and unnecessary consumption of building energy or transportation energy usage. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not increase the need for new energy infrastructure or preempt opportunities for future energy conservation. Therefore, operational energy impacts would be less than significant.

26 SCAG, 2020-2045 RTP/SCS, page 41.

27 WalkScore for 11469 Jefferson Boulevard, Available: https://www.walkscore.com/score/11469-jefferson-blvd-culver-city-ca-90230. Accessed March 2019.

Threshold b): Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Statement b): The Project would include a number of sustainable energy efficiency features to support the use of renewable energy and energy efficiency goals. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

As discussed above, the Project would incorporate green building design features such as solar electric PV systems consistent with the energy efficiency standards in the City's Green Building Code and CALGreen Code. The Project promotes the use of bicycles as it is located close to many Culver City bike paths and would CALGreen Code required number of bicycle parking spaces, which have the potential to reduce fuel consumption, as well as criteria pollutant and GHG emissions. The Project would also provide showers and clothes lockers for employees which has the potential to reduce secondary trips. The Project Site is also within a relatively short distance of existing transit stops. The Project would be designed to meet criteria for the LEED Certification level which would meet or exceed the current Title 24 Energy standards. The Project would incorporate Project Design Features (refer to PDF-AIR-2 and PDF-AIR-3 above) that provide opportunities for improved energy efficiency that would exceed the regulatory standards. Overall the Project's features would support and promote the use of renewable energy and energy efficiency, therefore, the Project impacts would be less than significant.

5.3 Cumulative Impacts

Cumulative development inclusive of the Projects would also contribute to impacts on the demand for energy consumption from the SCE and SoCalGas, as well as regional fuel consumption due to increased vehicle miles traveled. Cumulative impacts to electricity, natural gas, and transportation energy are discussed below.

Electricity

The geographic context for the cumulative analysis of electricity is SCE's service area. Growth within this service area is anticipated to increase the demand for electricity and the need for infrastructure, such as new or expanded facilities.

Buildout of the Project, the 71 cumulative projects,[28] and additional growth forecasted to occur in the City would increase electricity consumption during Project construction and operation, and cumulatively increase the need for energy supplies. The CEC forecasts that SCE's peak demand in the Project buildout year of 2022, would be approximately 24,816 MW.[29] Under peak conditions, the Project would consume a net increase of 958 MWh on an annual basis which is equivalent to a

28 Number of cumulative Projects based on list provided in the Project's Traffic Study. Crain & Associates, Jefferson Hotel Project Traffic Study, 2020.

29 California Energy Commission. The California Energy Demand 2018-2030 Revised Forecast, 2018. Available: http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-03/TN222287_20180120T141708_The_California_Energy_Demand_20182030_Revised_Forecast.pdf. Accessed March 2019.

peak of 109 to 219 kW (assuming 8,760 hours or 4,380 hours per year of active electricity demand). In comparison to the SCE power grid base peak load of 24,816 MW for 2022, the Project would represent approximately 0.0004 to 0.0009 percent of the SCE base peak load conditions.

Future development would result in the irreversible use of electricity resources that could limit future energy availability. However, the utility provider for the Project and cumulative projects have determined that the use of such resources would be minor compared to existing supply and infrastructure within the SCE service area and would be consistent with growth expectations. Furthermore, like the Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including Culver City Green Building Program, CALGreen Code and State energy standards under Title 24, and incorporate mitigation measures, as necessary. As discussed above and based on evidence from the CEC, the Project would not have a cumulatively considerable impact on existing energy resources either individually or incrementally when considered with the anticipated growth in the service areas. Accordingly, the impacts related to electricity consumption would not be cumulatively considerable, and thus would be less than significant.

Natural Gas

The geographic context for the cumulative analysis of natural gas is the SoCalGas service area. Growth within these geography is anticipated to increase the demand for natural gas and the need for infrastructure, such as new or expanded facilities.

Buildout of the Project, the 71 cumulative projects[30] in the SoCalGas service area is expected to increase natural gas consumption and the need for natural gas supplies. According to the 2017 California Gas Report, SoCalGas is forecasted to require 953,454 million kBTU in the year 2022, the Project's build out year.[31] The Project is estimated to increase natural gas demand by 2.90 million kBTU per year, accounting for approximately 0.0003 percent of SoCalGas' projected natural gas demand for the year 2022.

Although future development projects would result in irreversible use of natural gas resources which could limit future availability, the use of such resources would be on a relatively small scale and would be consistent with regional and local growth expectations for SoCalGas' service area. Further, like the Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including the Culver City Green Building Program, CALGreen and State energy standards in Title 24, and incorporate mitigation measures, as necessary. Therefore, the Project would not have a cumulatively considerable impact related to natural gas consumption and impacts would not be cumulatively considerable.

30 Number of cumulative Projects based on list provided in the Project's Traffic Study. Crain & Associates, Jefferson Hotel Project Traffic Study, 2020.

31 California Gas and Electric Utilities, 2018 California Gas Report, 2018. Available: https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf. Accessed March 2019.

Transportation Energy

Buildout of the Project, the 71 cumulative projects[32] in the region would be expected to increase overall VMT; however, the effect on transportation fuel demand would be minimized by future improvements to vehicle fuel economy pursuant to federal and state regulations. By 2025, vehicles will be required to achieve 54.5 mpg (based on U.S. Environmental Protection Agency [USEPA] measurements), which is a 54 percent increase from the 35.5 mpg standard in the 2012-2016 standards. As discussed previously, the Project would support statewide efforts to improve transportation energy efficiency and would co-locate commercial uses within walking distance of several bus stops, including the Culver City Transit Center Bus Station that is located approximately 900 southeast of the Project Site that is served by the Culver City bus routes 3,4 and 6 and the Metro bus routes 108, 110 and 217. Siting land use development projects at infill sites is consistent with the State's overall goals to reduce VMT pursuant to SB 375, and as outline in the SCAG 2020-2045 RTP/SCS for the region, which seeks to implement "strategies to prioritize areas for new development, like near destinations and mobility options."[33] Related projects that would also be consistent with these goals and would also contribute to transportation energy efficiency. Furthermore, according to the USEIA's International Energy Outlook 2016, the global supply of crude oil, other liquid hydrocarbons, and biofuels is expected to be adequate to meet the world's demand for liquid fuels through 2040.[34] Therefore, as the Project would incorporate land use characteristics consistent with state goals for reducing VMT, the Project would not have a cumulatively considerable impact related to transportation energy, and impacts would be less than significant.

32 Number of cumulative Projects based on list provided in the Project's Traffic Study. Crain & Associates, Jefferson Hotel Project Traffic Study, 2020.

33 SCAG, 2020-2045 RTP/SCS, page 47.

34 United States Energy Information Administration. 2016. International Energy Outlook 2016. Available at: https://www.eia.gov/outlooks/ieo/pdf/0484(2016).pdf. Accessed March 2019.

SECTION 6
Summary of Results

Energy demand associated with the Project have been evaluated to determine the level of impact from construction activities and future operations of the Project. The Project would be consistent with the requirements of the City's Green Building Program which would increase building energy efficiency and reduce energy consumption, leading to reductions in energy demand. The Project would also be consistent with applicable SCAG RTP/SCS policies intended to meet the region's GHG reduction targets as assigned by CARB that would also reduce the amount of VMT and transportation energy of the Project. Thus the Project's anticipated energy demand during construction and operations are consistent with regulatory schemes intended to reduce energy consumption.

Construction of the Project would result in energy demand as a result of the use of heavy-duty construction equipment, on-road trucks, and construction workers commuting to and from the Project Site. During operations, the Project would require energy in the form of electricity and natural gas for building heating, cooling, cooking, lighting, water demand and wastewater treatment, consumer electronics, and other energy needs; transportation-fuels, primarily gasoline, for vehicles traveling to and from the Project.

The Project would be consistent with applicable energy consumption reduction and energy efficiency strategies recommended by the State. In addition, the Project would support and be consistent with relevant and applicable energy consumption reduction strategies in SCAG's 2020-2045 RTP/SCS, including providing commuters the CALGreen Code required number of bicycle parking spaces to encourage alternative modes of transportation and reducing single occupancy vehicle transit, thus reducing VMT and transportation energy demand. The Project Site is also within a relatively short distance of existing transit stops. The Project would be designed to meet criteria for the LEED Silver or equivalent certification level which would meet or exceed the current Title 24 Energy standards.

In summary, construction and operation of the proposed Project would result in energy demand that would not result in a significant impact on the existing energy infrastructure. The Project would be consistent with local, regional, and State's plans and programs adopted for the purpose of increase building energy efficiency and reduce energy consumption. Accordingly, the Project would not result in a cumulatively considerable impact to the existing energy infrastructure.

Appendix A

The Jeff Hotel Project Energy Calculation Worksheets

ESA

A-1 Project Construction Energy Calculations

11469 Jefferson Hotel
Construction Energy Analysis

Fuel Consumption Summary

Category	Value
Diesel fuel for heavy-duty construction equipment	56,360
Diesel fuel for Haul Trucks	33,578
Diesel fuel for Vendor Trucks	13,025
Gasoline fuel for workers	19,419
Total Diesel Consumption	102,962
Total Gasoline Consumption	19,419
Construction Phase Duration (years)	2.2
Annual Average Gallons Diesel	**47,692**
Annual Average Gallons Gasoline	**8,995**

Source	Diesel	Gas
Off-Road Equipment	56,360	-
Haul/Vendor	46,602	-
Worker	-	19,419
Total Project Fuel Consumption	**102,962**	**19,419**
Annual Average Gallons Diesel	**47,692**	
Annual Average Gallons Gasoline		**8,995**

	Los Angeles County Fuel Consumption		State Fuel Consumption	
	Diesel	**Gas**	**Diesel**	**Gas**
	590,196,078	3,659,000,000	3,798,039,216	15,584,000,000
Annual Project % of Consumption	0.008%	0.0002%	0.0013%	0.0001%

1. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017
https://www.energy.ca.gov/almanac/transportation_data/gasoline/2010-2017_A15_Results.xlsx
Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales.

2. SCE, 2017 Financial and Statistical Report
https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2017-financial-statistical-report.pdf. Accessed January 2019.

11469 Jefferson Hotel
Construction Energy Analysis

Off-Road Equipment

Equipment ≤ 100 HP

Parameter	Value
pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.41
diesel fuel density (lb/gal):[1]	7.11
diesel gallons/hp-hr (gal/hp-hr):	0.06
Total hp-hr :	590,575
Total diesel consumption (gal):	33,895

Equipment > 100 HP

Parameter	Value
pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.37
diesel fuel density (lb/gal):[1]	7.11
diesel gallons/hp-hr (gal/hp-hr):	0.05
Total hp-hr:	435,148
Total diesel gallons:	22,465

Total diesel gallons (off-road equipment): **56,360**

1. 2017 Off-road Diesel Emission Factors, cells B30 and B31

Phase	Equipment	# of Equipment	Hours/ Day	HP	Load Factor	Days	Total hp-hr
Demolition	Concrete/Industrial Saws	1	8	81	0.73	53	25,071
Demolition	Rubber Tired Dozers	1	8	247	0.40	53	41,891
Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	53	30,435
Excavation	Concrete/Industrial Saws	1	8	81	0.73	75	35,478
Excavation	Excavators	1	8	158	0.38	75	36,024
Excavation	Rubber Tired Dozers	1	8	247	0.40	75	59,280
Excavation	Tractors/Loaders/Backhoes	2	8	97	0.37	75	43,068
Foundations	Cranes	1	8	231	0.29	79	42,338
Foundations	Forklifts	2	8	89	0.20	79	22,499
Foundations	Tractors/Loaders/Backhoes	2	8	97	0.37	79	45,365
Continuous Concrete Pour	Pumps	3	8	84	0.74	6	8,951
Building Construction	Cranes	1	8	231	0.29	468	250,811
Building Construction	Forklifts	2	8	89	0.20	468	133,286
Building Construction	Tractors/Loaders/Backhoes	1	8	97	0.37	468	134,372
Building Construction	Welders	1	8	46	0.45	468	77,501
Paving	Cement and Mortar Mixers	4	8	9	0.56	11	1,774
Paving	Forklifts	1	8	89	0.20	11	1,566
Paving	Pavers	1	8	130	0.42	11	4,805
Paving	Pumps	1	8	84	0.74	11	5,470
Paving	Rollers	1	8	80	0.38	11	2,675
Architectural Coating	Air Compressors	1	8	78	0.48	77	23,063

Total ≤ 100	590,575
Total >100	435,148

11469 Jefferson Hotel
Construction Energy Analysis

On-Road Haul Trucks (HHDT)

Parameter	Value
EMFAC2017 Diesel Fuel Consumption Factor (gal/mile):[1]	0.16
Total Haul Truck VMT (miles):	213,580
Total VMT diesel gallons (on-road haul trucks):	**33,145**
HHDT Idling Fuel Consumption Factor (gal/min):[2]	0.015
Total Haul Truck Idle-Minutes per Year (minutes):	80,093
Total Idling diesel gallons (on-road haul trucks)[3]:	**432**
Total diesel gallons (on-road haul trucks):	**33,578**

Without ATCM	Gallons Saved
1201	769

1. California Air Resources Board, EMFAC2017 (Los Angeles County; Annual; CY 2020; Aggregate MY; Aggregate Speed, HHDT, DSL)
2. 1. Idle Fuel Consumption for Selected Gasoline and Diesel Vehicles, US Department of Energy. Accessed February 2019. https://www.energy.gov/eere/vehicles/fact-861-february-23-2015-idle-fuel-consumption-selected-gasoline-and-diesel-vehicles
3. Incorporates estimated fuel savings from Anit-Idling Regulation (64 percent based on estimated CARB emissions reductions)
   Source: California Air Resources Board (CARB), 2004. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, Appendix F, July 2004, https://www.arb.ca.gov/regact/idling/isorappf.pdf.

Phase	Total One-Way Trips	Miles/Trip	VMT	Idle Minutes
Demolition	519	20	10,380	3,893
Shoring/Excavation	8,768	20	175,360	65,760
Foundations/Footings	0	20	0	0
Continuous Concrete Pour	1,392	20	27,840	10,440
Building Construction	0	20	0	0
Paving	0	20	0	0
Architectural Coatings	0	20	0	0
		Total Haul Truck VMT:	213,580	
			Total Idle Minutes:	80,093

11469 Jefferson Hotel
Construction Energy Analysis

On-Road Vendor Trucks (HHDT/MHDT)

Parameter	Value
EMFAC2017 Diesel Fuel Consumption Factor (gal/mile):[1]	0.1269
Total Haul Truck VMT (miles):	98,132
Total VMT diesel gallons (on-road vendor trucks):	**12,449**
HHDT Idling Fuel Consumption Factor (gal/min):[2]	0.0150
Total Vendor Truck Idle-minutes (min):	106,665
Total Idling diesel gallons (on-road vendor trucks):	**576**
Total diesel gallons (on-road vendor trucks):	**13,025**

1. California Air Resources Board, EMFAC2017 (Los Angeles County; Annual; CY 2020; Aggregate MY; Aggregate Speed, HHDT/MHDT, DSL)
2. 1. Idle Fuel Consumption for Selected Gasoline and Diesel Vehicles, US Department of Energy. Accessed February 2019. https://www.energy.gov/eere/vehicles/fact-861-february-23-2015-idle-fuel-consumption-selected-gasoline-and-diesel-vehicles
3. Source: California Air Resources Board (CARB), 2004. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, Appendix F, July 2004, https://www.arb.ca.gov/regact/idling/idling.htm, accessed November 2016.

Phase	Days	Trips/Day	Miles/Trip	VMT	Idle Minutes
Demolition	53	0	6.9	0	0
Shoring/Excavation	75	0	6.9	0	0
Foundations/Footings	79	26	6.9	14,173	15,405
Continuous Concrete Pour	6	0	6.9	0	0
Building Construction	468	26	6.9	83,959	91,260
Paving	11	0	6.9	0	0
Architectural Coatings	77	0	6.9	0	0

Total Vendor Truck VMT: 98,132

Total Idle-Minutes 106,665

11469 Jefferson Hotel
Construction Energy Analysis

On-Road Workers (LDA, LDT1, LDT2)

Parameter	Value
EMFAC2017 Gasoline Fuel Consumption Factor (gal/mile):[1]	0.038
Total Worker VMT (miles):	513,324
Total VMT gasoline gallons (workers):	**19,419**

1. California Air Resources Board, EMFAC2017 (Los Angeles County; LDA, LDT1, LDT2; CY 2020; Aggregate MY; Aggregate Speed,GAS)

Phase	Days	One-Way Trips/Day	Miles/Trip	VMT
Demolition	53	10	14.7	7,791
Shoring/Excavation	75	14	14.7	15,435
Foundations/Footings	79	14	14.7	16,258
Continuous Concrete Pour	6	8	14.7	706
Building Construction	468	66	14.7	454,054
Paving	11	20	14.7	3,234
Architectural Coatings	77	14	14.7	15,847
			Worker VMT	513,324

Haul (HHDT) Fuel Consumption Factor

Year	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	Fuel Economomy (mi/gal)
2020	12807959.19	1987.65	0.16	6.4

EMFAC 2017 Webdatabase

Vendor (HHDT/MHDT) Fuel Consumption Factor

Year/Vehicle Category	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	Fuel Economomy (mi/gal)	MHDT/HHDT Mix[1]	Weighted Fuel Consumption Factor (gal/mi)
2020						
HHDT	12807959.19	1987.65	0.16	6.4	50%	0.127
MHDT	7555230.17	744.36	0.10	10.1	50%	

EMFAC 2017 Webdatabase

1. CalEEMod User's Guide, Appendix A, p.16

Vendor (HHDT/MHDT) Fuel Consumption Factor

Year/Vehicle Category	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	Fuel Economomy (mi/gal)	MHDT/HHDT Mix[1]	Weighted Fuel Consumption Factor (gal/mi)
2021						
HHDT	13098099.52	1995.21	0.15	6.6	50%	0.124
MHDT	7755175.55	747.91	0.10	10.4	50%	

EMFAC 2017 Webdatabase

1. CalEEMod User's Guide, Appendix A, p.16

Worker (LDA, LDT1, LDT2) Fuel Consumption Factor

Year/Vehicle Category	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	CalEEMod Worker Fleet Distribution
2020				
LDA	250946804.6	8559.81	0.034	50%
LDT1	26159714.71	1038.01	0.040	25%
LDT2	83699648.08	3634.20	0.043	25%

Year	Weighted Fuel Consumption Factor (gal/mi)	Weighted Fuel Economy (mi/gal)
2020	0.038	26.4

EMFAC 2017 Webdatabase

Worker (LDA, LDT1, LDT2) Fuel Consumption Factor

Year/Vehicle Category	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	CalEEMod Worker Fleet Distribution
2021				
LDA	251960829.1	8387.38	0.033	50%
LDT1	26787165.5	1037.93	0.039	25%
LDT2	84313978.67	3539.72	0.042	25%

Year	Weighted Fuel Consumption Factor (gal/mi)	Weighted Fuel Economy (mi/gal)
2021	0.037	27.2

EMFAC 2017 Webdatabase

Worker (LDA, LDT1, LDT2) Fuel Consumption Factor

Year/Vehicle Category	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	CalEEMod Worker Fleet Distribution
2022				
LDA	252244145.8	8178.14	0.032	50%
LDT1	27300895.56	1031.45	0.038	25%
LDT2	84740129.27	3436.16	0.041	25%

Year	Weighted Fuel Consumption Factor (gal/mi)	Weighted Fuel Economy (mi/gal)
2022	0.036	27.9

EMFAC 2017 Webdatabase

A-2 Existing Site Operational Energy Calculations

11469 Jefferson Hotel

Existing Electricty and Natural Gas Consumption

Electricity	kWh/yr	GWh/yr
Parking Lot	7,181	0.007
Strip Mall	179,564	0.180
Total	**186,745**	**0.187**
Total (including water, see below)	**207,435**	**0.207**
Existing Energy Consumption	**207,435**	**0.207**

Water	Mgal/yr
Parking Lot	-
Strip Mall	1.589
Total	**1.589**
Electricity Intensity Factors[1]	**kWh/Mgal**
Electricity Factor - Supply	9,727
Electricity Factor - Treat	111
Electricity Factor - Distribute	1,272
Electricity Factor - Wastewater Treatment	1,911

Electricity from Water Demand	kWh/yr	GWh/yr
Total	**20,690**	**0.02**

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Natural Gas	kBtu/yr	cubic foot (cf)[2]	Per day Usage
Parking Lot	0	0	
Strip Mall	21,814	21,035	
Existing Total	**21,814**	**21,035**	57.63

1. California Air Resources Board, CalEEMod, Version 2016.3.2.
2. Conversion factor of 1,037 Btu per cubic foot based on United States Energy Information Administration data https://www.eia.gov/tools/faqs/faq.php?id=45&t=8

11469 Jefferson Hotel
Existing Operational Energy Analysis

Existing Fuel Usage

Annual VMT (All): 636,569 miles/year (from CalEEMod)

Fuel Type:[1]	**GAS**	**DSL**
Percent:	93%	6%
Miles per Gallon Fuel:	23.27	9.09
Annual VMT by Fuel Type (miles):	593,124	39,490
Existing Annual Fuel Usage (gallons):	**25,484**	**4,343**

Notes:

1. California Air Resources Board, EMFAC2017 (Los Angeles County; Annual; 2018, Aggregate Fleet).

Fuel Factors (All Vehicle Categories)

Fuel Type	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	Fleet Distribution	Fuel Economy (mi/gal)
DSL	28404027.42	3123.728943	0.110	6%	9.09
ELEC	2844769.99	0	0.000	0.6%	
GAS	426614027.4	18329.49096	0.043	93%	23.27
NG	731778.4297	216.1770456	0.295	0.2%	3.39

EMFAC2017 Webdatabase

A-3 Project Operational Energy Calculations

11469 Jefferson Hotel
Electricty and Natural Gas Consumption

Electricity	kWh/yr	GWh/yr
Enclosed Parking with Elevator	187,282	0.187
Hotel	913,875	0.914
Total	**1,101,157**	**1.101**
Total (including water, see below)	**1,165,382**	**1.165**
Existing Energy Consumption	**207,435**	**0.207**
Net Project Energy Consumption	**957,947**	**0.958**

Electricity	GWh/yr
SCE 2017 Electricity Sales[1]	85,879
Project Annual	1.165
Existing Annual	0.207
Net Project Annual	0.958
Percent Net Project of SCE	0.001%

Water	Mgal/yr
Enclosed Parking with Elevator	-
Hotel	4.932
Total	**4.932**

Electricity Intensity Factors[4]	kWh/Mgal
Electricity Factor - Supply	9,727
Electricity Factor - Treat	111
Electricity Factor - Distribute	1,272
Electricity Factor - Wastewater Treatment	1,911

Electricity from Water Demand	kWh/yr	GWh/yr
Total	**64,225**	**0.064**

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.
Base water demand is based on rates provided in City of Los Angeles Department of Public Works,
Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, 2012.

Natural Gas	kBtu/yr	cubic foot (cf)[3]	Per day Usage
Enclosed Parking with Elevator	0	-	
Hotel	2,925,560	2,821,176	
Project Total	**2,925,560**	**2,821,176**	7,729
Existing Total	**21,814**	**21,035**	
Project Net Total	**2,903,746**	**2,800,141**	**7,729**

Natural Gas	million cubic foot (cf)
SoCalGas 2017 Sales[2]	913,960
Project Annual	2.821
Existing Annual	0.021
Net Project Annual	2.800
Percent Net Project of SoCalGas	0.0003%

1. Southern California Edison, 2017 Financial and Statistical Report, p.3
   2017 Financial and Statistical Report
2. California Gas and Electric Utilities, 2018 California Gas Report, p. 101, 2018.
   https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf
3. Conversion factor of 1,037 Btu per cubic foot based on United States Energy Information Administration data
   https://www.eia.gov/tools/faqs/faq.php?id=45&t=8
4. California Air Resources Board, CalEEMod, Version 2016.3.2.

11469 Jefferson Hotel
Operational Energy Analysis

Project Fuel Usage

Annual VMT (All): 3,490,968 miles/year (from CalEEMod)

Fuel Type:[1]	**GAS**	**DSL**
Percent:	98%	7%
Miles per Gallon Fuel:	25.97	10.19
Annual VMT by Fuel Type (miles):	3,432,722	244,250
Project Annual Fuel Usage (gallons):	**132,174**	**23,963**

	Los Angeles County Fuel Consumption [2]		**State Fuel Consumption** [2]	
	Gasoline	Diesel	Gasoline	Diesel
	3,659,000,000	590,196,078	15,584,000,000	3,798,039,216
Project Annual:	132,174	23,963	132,174	23,963
Existing Annual:	25,484	4,343	25,484	4,343
Net Project Annual:	106,690	19,620	106,690	19,620
Percent Net Project of Los Angeles County:	0.003%	0.003%	0.0007%	0.0005%

Notes:

1. California Air Resources Board, EMFAC2014 (Los Angeles County; Annual; 2022, Aggregate Fleet).
2. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017.
   Available at: http://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.
   Accessed March 2019. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales

Fuel Factors (All Vehicle Categories)

Fuel Type	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Consumption Factor (gal/mi)	Fleet Distribution	Fuel Economy (mi/gal)
DSL	32970821.18	3234.71	0.098	7%	10.19
ELEC	6527260.047	0.00	0.000	1.5%	
GAS	431741633.7	16623.79	0.039	98.3%	25.97
NG	798459.2845	242.03	0.303	0.2%	3.30

EMFAC2017 Webdatabase