MEMORANDUM

To: John Nsofor, Kimley-Horn and Associates

From: Alex Pohlman, Kimley-Horn and Associates

Date: August 27, 2025

Subject: Hume SoCal Camp Expansion Project – Energy Assessment

1.0 Purpose

The purpose of this technical memorandum is to evaluate potential energy consumption impacts of the Hume SoCal Camp Expansion Project (Project). The purpose of this Energy Technical Memorandum is to evaluate the potential construction and operational energy consumption associated with the Project and determine the level of impact the Project would have on the environment.

2.0 Project Location and Setting

The Project site is approximately 251 acres located in an unincorporated mountain region of San Bernardino County, along Green Valley Lake Road and approximately 0.4 miles northwest of State Route 18 (SR-18); refer to **Exhibit 1: Regional Location Map**. Surrounding the Project site is the Green Valley Lake Community to the north, the Running Springs to the southwest, and the City of Big Bear to the east, as shown in **Exhibit 2: Local Vicinity Map**.

A portion of the Project site is currently developed with improvements related to the existing Hume SoCal campground facilities. The remaining surrounding areas are vacant and contain forest land. The Project land use designation is Rural Living (RL) per the San Bernardino County General Plan (Countywide Plan). The RL land use area primarily allows for the development of residential development. Typical uses within RL land use areas also include public and quasi-public facilities such as parks, religious facilities and schools. The Project area is also located within the Hilltop Community Plan which allows for larger-scale master planned developments which can include a combination of residential, commercial, and/ or manufacturing activities that maximizes the utilization of natural and human-generated resources in rural areas.

3.0 Project Description

The Project involves the expansion of campground uses for the existing Southern California Hume Lake Christian Camp (Hume SoCal) campground to accommodate up to an additional 3,000 occupants. This would be accomplished with existing campground structures as well as the development of additional campground and recreational facilities and uses within a 251-acre area of the Green Valley

Lake community, refer to **Exhibit 3: Conceptual Site Plan**. New campground structures proposed for the Project would be developed in five phases.

Each phase of the Project would include the development of expanded infrastructure, additional amenities, support structures, and buildings necessary to accommodate expanded camper capacity as well as paved parking areas and paved access roadways.

Phase 1 of the Project would involve the development of facilities to be used as a Junior High Camp. Proposed residential structures within the Phase 1 area include an expanded welcome center, private administration and guest speaker residences, staff housing, and student dormitories. Phase 1 also includes the development of a gymnasium, bus parking, a snack shop, a chapel, converting an existing chapel to a small meeting space, an expansion to the existing dining hall, a maintenance building, an amphitheater, and restrooms. Outdoor recreation facilities include grass quads. Existing and proposed facilities within Phase 1 would accommodate up to 784 occupants.

Phase 2 of the Project would involve the development of facilities to be used as a High School Camp. Proposed residential structures within the Phase 2 area include staff housing buildings and student dormitories. Phase 2 also includes the development of a large dining hall, gymnasium, a chapel, amphitheater, and restrooms. Outdoor recreation facilities include grass quads, a swimming pool, and a recreation pond. Existing and proposed facilities within Phase 2 would accommodate up to 1,000 occupants.

Phase 3 of the Project proposes the development of an Adult Lodge. Phase 3 would include the development of one adult lodge with included access road. Existing and proposed facilities within Phase 3 would accommodate up to 140 occupants.

Phase 4 of the Project would include the development of an Elementary Age Camp and associated facilities. Proposed residential structures within Phase 4 include student yurt tents. Phase 4 also includes the development of restroom facilities with showers and an amphitheater. Outdoor recreation facilities include grass quads, a dining canopy, a swimming pool, and a recreation pond. Existing and proposed facilities within Phase 4 would accommodate up to 500 occupants.

Phase 5 of the Project proposes the creation of a tent-based youth camp, Wildwood Camp. Residential structures proposed for this phase consist of yurt tents. Phase 5 also includes the development of restroom facilities with showers and an amphitheater. Outdoor recreation facilities include grass quads, a dining canopy, a swimming pool, and a recreation pond. Existing and proposed facilities within Phase 5 would accommodate up to 130 occupants.

Project Phasing and Construction

Although the Project is anticipated to be constructed in five phases, to analyze a worst-case scenario, construction modeling assumed all five phases of the Project would be constructed simultaneously and completed within two years, beginning in June 2025 and finishing in June 2027.

4.0 Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. CEQA Guidelines Section 15126.2(b) treats "wasteful, inefficient, or unnecessary" energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This technical memorandum has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

Environmental Setting

Energy consumption is analyzed in this technical memorandum due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources during both construction and long-term operational phases.

Electricity Service

Southern California Edison (SCE) provides electrical services to the Project area through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources; including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the

fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services

Southern California Gas Company (SoCalGas) provides natural gas services to the Project area. Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California's natural gas-fired electric generation decreased by 1 percent between 2021 and 2022, accounting for 47.46 percent of in-state generation.[1]

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,387.9 trillion BTUs in 2021 (the most recent year for which this specific data is available).[2] Of California's total energy usage, the breakdown by sector is 37.7 percent transportation, 23.1 percent industrial, 18.9 percent commercial, and 19.9 percent residential.[3] Electricity and natural gas in California are generally consumed by stationary users such as residences, commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2022, taxable gasoline sales (including aviation gasoline) in California accounted for 13,919,678,835 gallons of gasoline.[4]

The electricity consumption attributable to the County from 2012 to 2022 is shown in **Table 1: Electricity Consumption in San Bernardino County 2012-2022**. As indicated in **Table 1**, in general electricity consumption in the County increased steadily, except in 2019 when electricity decreased slightly when compared with 2018.

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1 California Energy Commission, *2022 Total System Electric Generation*, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation, accessed December 2023.

2 U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2021,* https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed December 2023.

3 U.S. Energy Information Administration, *California State Profile and Energy Estimates*, *California Energy Consumption by End-Use Sector, 2020*, https://www.eia.gov/state/?sid=CA#tabs-2, accessed May 2023.

4 California Department of Tax and Fee Administration, *Motor Vehicle Fuel 10 Year Reports*, https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed May 2023.

Table 1: Electricity Consumption in San Bernardino County 2012-2022	
Year	**Electricity Consumption (in millions of kilowatt hours)**
2012	14,308
2013	14,315
2014	14,680
2015	14,685
2016	14,902
2017	15,237
2018	15,326
2019	15,259
2020	15,910
2021	16,169
2022	16,630
Source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed December 2023.	

The natural gas consumption attributable to the County from 2012 to 2022 is shown in **Table 2: Natural Gas Consumption in San Bernardino County 2012-2022**. Natural gas consumption in the County fluctuated with increases and decreases occurring annually.

Table 2: Natural Gas Consumption in San Bernardino County 2012-2022	
Year	**Natural Gas Consumption (in millions of therms)**
2012	489
2013	511
2014	469
2015	485
2016	494
2017	493
2018	500
2019	547
2020	527
2021	561
2022	562
Source: California Energy Commission, *Natural Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed December 2023.	

Automotive fuel consumption in the County from 2012 to 2022 is shown in **Table 3: Automotive Fuel Consumption in San Bernardino County 2012-2022**. As shown in **Table 3**, on-road automotive fuel consumption in the County increased each year until 2020 when vehicle traffic decreased due to the COVID-19 quarantine. Following 2020, automotive fuel consumption continued to increase each year.

Heavy-duty vehicle diesel fuel consumption increased annually until 2018 when diesel fuel consumption decreased. Following 2018, diesel fuel consumption continued to increase each year.

Table 3: Automotive Fuel Consumption in San Bernardino County 2012-2022

Year	On-Road Automotive Fuel Consumption (gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons)
2012	823,998,577	221,468,396
2013	824,054,602	231,100,540
2014	834,846,492	233,757,358
2015	863,626,512	236,687,334
2016	888,752,451	251,535,041
2017	896,771,954	263,723,118
2018	897,385,756	259,783,109
2019	898,685,412	261,139,639
2020	767,569,916	265,477,739
2021	874,282,902	272,787,528
2022	873,015,917	276,240,473

Source: California Air Resources Board, EMFAC2021.

5.0 Regulatory Setting

The following is a description of Federal, State, and local environmental laws and policies related to energy consumption that are relevant to the proposed Project.

5.1 State of California

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2016 Standards improved upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential buildings are 28 percent more energy efficient and nonresidential buildings are 5 percent more energy efficient than under the 2013 Standards. Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent

(nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards use about 53 percent less energy than those built to meet the 2016 standards.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards in three major areas:

- New electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores.

- The promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity.

- The expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020. The CEC has approved the 2022 California Green Building Standards Code it will take effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[5]

[5] California Energy Commission. 2022. *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. Assembly Bill 1109, adopted in 2007, also serves as a framework for lighting efficiency. This bill requires the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

5.2 County of San Bernardino

San Bernardino County Regional Greenhouse Gas Reduction Plan

In response to statewide GHG reduction initiatives, the San Bernardino Associated Governments (formerly SANBAG, now known as SBCOG), cooperated to compile an inventory of GHG emissions and an evaluation of reduction measures to be adopted by the cities partnering within SBCOG. Reduction measures in the GHG Reduction Plan (GHGRP) are targeting GHG goals for the year 2030. The policies listed in the GHGRP range from broadly supporting energy efficiency and sustainability to policies closely tied to specific GHG reduction measures.

6.0 CEQA Thresholds and Methodology

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This memorandum will focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation; and/or

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips associated with the Project as well as the fuel necessary for Project construction. The analysis of the Project's electricity and natural gas use is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use for occupancy. The results of CalEEMod are included in the Project's Air Quality Assessment, prepared by Kimley-Horn (2024). Modeling related to Project energy use was based primarily on the default settings in CalEEMod. The amount of operational fuel use was estimated using CalEEMod outputs for the Project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in San Bernardino County. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

7.0 Impacts and Mitigation Measures

Threshold 7.1 Would the project result in wasteful, inefficient, or unnecessary consumption of energy resources?

Construction-Related Energy

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during the demolition, site preparation, grading/infrastructure improvements, paving, and building construction phases. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would be required to comply with **MM AQ-1** in the Air Quality Assessment which would require all off-road equipment 50 horsepower or greater to meet California Air Resources Board (CARB) Tier 4 Final standards as well as the latest Environmental Protection Agency and CARB standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners also have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. Total energy demand from construction is shown in **Table 4, Project Energy Consumption - Construction**.

Table 4: Project Energy Consumption - Construction			
Project Source	**Annual Construction Energy**	**San Bernardino County Annual Energy**	**Percentage Increase Countywide**
Electricity Use		**GWh**	
Water Use[1]	0.0042	16,181	0.00003%
Diesel Use		**Gallons**	
On-Road Construction Trips[2]	47,728	280,907,070	0.0108%
Off-Road Construction Equipment[3]	30,204		0.0170%
Construction Diesel Total	77,932		0.0278%
Gasoline		**Gallons**	
On-Road Construction Trips	15,101	846,846,001	0.0018%

1. Energy consumption from water associated with water treatment and transportation during construction is based on acres disturbed per day and estimated water use per acre.
2. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 in San Bernardino County.
3. Construction fuel use was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in **Table 4**, the annual diesel fuel consumption during construction of the Project would be 77,932 gallons and gasoline consumption would be 15,101 gallons, which would constitute a nominal percentage (0.0278 percent and 0.0018 percent, respectively) of fuel use in the County. As such, Project construction would have a minimal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. A less than significant impact would occur in this regard.

Operational Energy

Transportation Energy Demand.

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. **Table 5: Project Energy Consumption - Operations** provides an estimate of the daily fuel consumed by vehicles traveling to and from the Project site. As indicated in **Table 5**, Project operations are estimated to consume approximately 1,460 gallons of diesel fuel and 59,983 gallons of gasoline fuel per year, which would constitute approximately 0.0005 percent and 0.0072 percent, respectively, of Countywide automotive fuel consumption. The Project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Building Energy Demand.

Operations of the Project would result in an increase of approximately 3.95 GWh of electricity per year and approximately 93,743 therms of natural gas per year. The Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide efficiency standards related to various building features, including appliances; water, space heating, and cooling equipment; building insulation and roofing; and lighting.

Table 5: Project Energy Consumption - Operations

Energy Type	Project Annual Energy Consumption	San Bernardino County Annual Energy Consumption[1]	Percentage Increase Countywide
Operational Electricity and Natural Gas			
Electricity			
Project Consumption	3.95 GWh/yr	16,630 GWh/yr	0.0238%
Natural Gas			
Project Consumption	93,743 therms	562,123,065 therms	0.0167%
Automotive Fuel Consumption[3]			
Diesel			
Project	1,460 gallons	281,399,849 gallons	0.0005%
Gasoline			
Project	59,983 gallons	828,612,797 gallons	0.0072%

Notes:
1. The Project increases in electricity and natural gas consumption are compared with the total consumption in San Bernardino County in 2022.
2. Countywide fuel consumption is from the California Air Resources Board EMFAC2021 model.

As indicated in **Table 5**, operational energy consumption would represent approximately 0.0238 percent of electricity consumption over the current Countywide usage. The Project would adhere to all federal, state, and local requirements for energy efficiency, including the Title 24 standards. As such, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

As shown in **Table 5**, the increase in electricity and automotive fuel consumption constitutes a minimal percentage (less than one percent) of existing consumption. For the reasons described above, the Project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand. Thus, the Project would not cause a wasteful, inefficient, and unnecessary consumption of energy during Project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation. A less than significant impact would occur.

Threshold 7.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. The Project would comply with Title 24, Part 6 per state regulations. In accordance with Title 24 Part 6, the Project would have: (a) sensor based lighting controls— for fixtures located near windows, the lighting would be adjusted by taking advantage of available natural light; and, (b) efficient process equipment—improved technology offers significant savings through more efficient processing equipment.

Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the Project under the California Green Building Standards Code. As discussed above, the Project would result in an increased demand for electricity, natural gas, and petroleum. In accordance with Title 24 Part 11 mandatory compliance, the Applicant would have (a) 50 percent of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring and particle boards; and (d) a 20% reduction in indoor water use. Compliance with all of these mandatory measures would decrease the consumption of electricity, natural gas, and petroleum.

The San Bernardino County GHGRP establishes a series of energy efficiency related goals intended to reduce greenhouse gas (GHG) emissions based on the AB 32 Scoping Plan. Those applicable to the Project are Renewables Portfolio Standard for Building Energy Use, Assembly Bill 1109 Energy Efficiency Standards for Lighting, Electricity Energy Efficiency, and Commercial Energy Efficiency Requirements.

Because the Project would comply with Parts 6 and 11 of Title 24 and with the San Bernardino GHGRP measures, no conflict with existing energy standards and regulations would occur. Therefore, impacts associated with renewable energy or energy efficiency plans would be considered less than significant.

8.0 References

California Air Resources Board, EMFAC2021.

California Energy Commission, *2019 Building Energy Efficiency Standards*, https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

California Energy Commission, *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.

California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/.

California Energy Commission, *Natural Gas Consumption by County*, http://www.ecdms.energy.ca.gov/.

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California Public Utilities Commission, *Energy Efficiency Strategic Plan*, 2011.

Southern California Edison, *The Clean Power and Electrification Pathway*, https://newsroom.edison.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/166/files/20187/g17-pathway-to-2030-white-paper.pdf.

U.S. Energy Information Administration, *California State Profile and Energy Estimates*, *California Energy Consumption by End-Use Sector, 2021*, https://www.eia.gov/state/?sid=CA#tabs-2.

Appendix A

Energy Data

Construction Fuel Consumption

On-Site Diesel[1] (off-road construction Equipment)	$MTCO_2e$	Gallons of Fuel[4]	County Fuel in 2024 (Start of Construction)	Percent
Demolition	101	9,951		
Site Preparation/Grading	356	35,025		
Building Construction	591	58,227		
Paving	373	36,739		
Architectural Coating	33	3,242		
Total	1,453	143,183	280,907,070	0.0510%
Average Annual Fuel Consumption		47,728	280,907,070	0.0170%

Off-Site Diesel[1] (on-road construction trips)				
Demolition	0	0		
Site Preparation/Grading	650	64,039		
Building Construction	270	26,571		
Paving	0	0		
Architectural Coating	0	0		
Total	920	90,611	280,907,070	0.0323%
Average Annual Fuel Consumption		30,204	280,907,070	0.0108%

Off-Site Gasoline[2]				
Demolition	6	667		
Site Preparation/Grading	15	1,683		
Building Construction	275	31,226		
Paving	48	5,460		
Architectural Coating	55	6,266		
Total	399	45,302	846,846,001	0.0053%
Average Annual Fuel Consumption		15,101	846,846,001	0.0018%

Total Diesel Fuel		233,794	280,907,070	0.0832%
Total Gasoline Fuel		45,302	846,846,001	0.0053%
Total Construction Fuel	2,772	279,096		

Years of Construction Activity **3**

Construction Phase[3]	Demolition			Site Preparation			Grading/Infrastructure Improvements		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2025	101	0	6	157	0	7	132	650	5
2026									
2027	0	0	0	0	0	0	67	0	3
Total	**101**	**0**	**6**	**157**	**0**	**7**	**199**	**650**	**8**

Construction Phase[3]	Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2025	166	77	79	105	0	14	9	0	16
2026	284	130	132	179	0	23	16	0	27
2027	141	63	64	89	0	11	8	0	13
Total	**591**	**270**	**275**	**373**	**0**	**48**	**33**	**0**	**55**

Notes:

[1] Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

[2] Fuel used for worker trips assumed to be gasoline.

[3] $MTCO_2e$ rates from CalEEMod (3.0 Construction Emissions Details).

[4] For CO2e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

Construction Water Energy

Daily Soil Disturbance[1]	4.0	acres
Days of Soil Disturbance[2]	65	days
Water Concentration[3]	3,020	gallons/acre
Water Energy Intensity[4]	5,306	kWh/MG
Total Construction Water	0.79	million gallons
Construction Water Energy	4,166	kWh
	0.0042	GWh
San Bernardino County Annual Electricity	16,181	GWh
Percentage Increase	0.00003%	

Notes:

[1] Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Emissions Detail) and maximum SCAQMD LST values for soil-disturbing equipment.

[2] Number of days of construction with soil-disturbing equipment per CalEEMod (5.1 Construction Schedule).

[3] Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.

[4] Water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32.

Operational Fuel

Vehicle Type	Percent	Annual VMT[1]	MPG[2]	Annual Fuel (Gallons)	Fuel Type	SB County Gallons[3]	RS Percent
Passenger Cars	0.98	1,295,625	21.6	59,983	Gas	828,612,797	0.0072%
Light/Medium Trucks	0.02	25,104	17.2	1,460	Diesel	281,399,849	0.0005%
Heavy Trucks/Other	0.00	0	6.1	0	Diesel	281,399,849	0.0000%
Trucks Total		25,104		1,460		281,399,849	0.0005%
Total		1,320,729					

Land Use[5]	LDA	LDT1	LDT2	MCY	MDV	LHD1	LHD2	MHD	OBUS	UBUS	SBUS	MH	HHD
Campground - cars	55.5180	3.8364	21.2035	2.0803	15.2799	0.0000	0.0000	1.7919	0.0000	0.0000	0.2900	0.0000	0.0000
Campground - trucks	55.6991	3.8364	21.2035	2.0803	15.2799	0.0000	0.0000	1.7919	0.0000	0.0000	0.1089	0.0000	0.0000

Notes:

[1] Total annual operational VMT based on annual VMT from CalEEMod (5.9 Operational Mobile Sources).

[2] Average fuel economy derived from Department of Transportation.

[3] Total annual county fuel per EMFAC 2021 model of projected operational fuel usage.

Operational Water Energy

Unmitigated Indoor	17.1	million gallons
Indoor Energy Intensity Factor[1]	6,807	kWh/MG
Unmitigated Outdoor	0	million gallons
Outdoor Energy Intensity Factor[2]	5,306	kWh/MG
Operational Water Energy	116,082	kWh
Operational Water Energy	0.1161	GWh
San Bernardino County Annual Electricity	16,181	GWh
Percentage Increase	0.0007%	

Land Use[3]	**gal/year**	
	Indoor	**Outdoor**
Hotel	1,217,605	0
Health Club	554,467	0
Place of Worship	145,869	0
General Office	3,899,478	0
Restaurant	10,703,813	0
Swimming Pool	35841	0
Arena	496247	0
Total Operational Water (MG/year)	**17**	**0**

Elecricity/Natural Gas Energy

	Project Annual Energy	San Bernardino County Annual Energy	Percentage Increase
Electricity (kWh/yr)	3,949,982	16,629,614,195	0.0238%
Electricity (GWh/yr)	3.9500	16,630	0.0238%
Natural Gas (kBTU/yr)	9,374,321	56,212,306,500	0.0167%
Natural Gas (therms/yr)	93,743	562,123,065	0.0167%

Land Use	**Electricity (kWh/yr)**	**Natural Gas (kBTU/yr)**
Hotel	2,185,629	4,091,242
Health Club	89,416	402,057
Place of Worship	44,465	199,935
General Office Buildings	382,894	602,034
Restaurant	1,236,591	4,029,648
Swimming Pool	0	0
Arena	10,987	49,405
Total Energy	**3,949,982**	**9,374,321**