July 21, 2022

Mr. Eric Turner
Director, Environmental Services
VCS Environmental, Inc.
30900 Rancho Viejo Road, Suite 100
San Juan Capistrano, CA 92675

SUBJECT: Energy Calculation Memorandum for TM 38202 Project

Dear Mr. Turner;

Birdseye Planning Group (BPG) is pleased to submit this memorandum quantifying energy demand associated with the proposed Tentative Tract Map (TTM) 38202, in the City of San Jacinto, California. The information contained herein will assist with the preparation of an Initial Study and Mitigated Negative Declaration (MND) that identifies project-specific impacts associated with developing the proposed project.

Project Description

The proposed Project would develop an approximately 33.8-acre vacant site with up to 181 single-family residential homes and associated infrastructure. The Project requires subdividing five (5) existing parcels (APNs 436-280-011, 436-280-012, 436-280-013, 436-280-014,436-280-025 and 436-280-025). Lot sizes would vary within an approximate range of 5,000 to 8,000 square feet. The project proposes to modify development standards and reduce the minimum RL lot size below 7,200 square feet and density above 2.1 units per acre as allowable under a Planned Development Permit (PDP), Site Plan, and Design Review.

Access to the new development would be provided from Lyon Avenue/Appaloosa Drive and Marilyn Drive/Estrella Street. Internal vehicular and pedestrian circulation would be accessible on new streets and sidewalks that would be publicly maintained in the future. Parking would be accommodated in two-car garages, two-car driveways, and on public streets.

Offsite improvements include connecting the proposed internal circulation system to the intersections of Lyon Avenue/Appaloosa Drive and Marilyn Drive/Estrella Street; connecting to existing utility systems within Lyon Avenue; frontage improvements along Lyon Avenue including a Class I multi-

use path (per City of San Jacinto Trails Master Plan), sidewalk and street lights; and constructing a portion of the San Jacinto Valley Master Drainage Plan storm drain system Line G-3 from Marilyn Drive/Estrella Street along the northeast edge of the development to a future connection point (note: continuation of Line G-3 to be constructed by others) at the Monte Vista Middle School property to the north.

Project construction stages would include site preparation, import of fill soils, grading, building construction (and construction of offsite facilities), underground utility construction, export of lot spoils and street paving. Project construction is anticipated to begin in the first quarter of 2023 and end late in the first quarter of 2025.

Energy Demand

The following tables show estimated gasoline demand for construction workers (Table 1) and construction equipment (Table 2). All fuel calculations are based on the total Carbon Dioxide Equivalent (CO2e) value calculated for each construction phase and vehicle miles traveled (VMT) using the California Emission Estimator Model (CalEEMod) version 2020.4.0. Data are reported in annual metric tons of CO2e for the duration of each construction phase. Metric tons are converted to kilogram CO2e and then divided by a conversion factor used by the U.S. Environmental Protection Agency to estimate gallons of gasoline (8.87) and diesel fuel (10.18) consumed based on carbon emissions.

Table 1 shows the gasoline demand for construction workers and vendors by project phase. Table 2 shows the diesel fuel demand for equipment operation. For the purpose of determining fuel demand, it was assumed that all worker and vendor vehicles would be gasoline fueled an all haul trucks and construction equipment would diesel fueled.

Table 1
Construction Worker Gasoline Demand

	CO2E MT	Kg CO2e	Gallons
Demolition – 2023	2	2,000	225
Site Preparation – 2023	3	3,000	338
Grading - 2023	6	6,000	676
Building Construction - 2023	41	41,000	4,622
Building Construction – 2024	112	112,000	12,626
Building Construction - 2025	60	60,000	6,764
Architectural Coating - 2025	3	3,000	338
Paving - 2025	2	2,000	225
Total	229	229,000	25,814

Table 2
Construction Equipment Diesel Demand

2021	CO2E MT	Kg CO2e	Gallons
Demolition – 2023	51	51,000	5,010
Site Preparation – 2023	306	306,000	30,058
Grading - 2023	430	430,000	42,239
Building Construction - 2023	110	110,000	10,805
Building Construction – 2024	306	306,000	30,059
Building Construction - 2025	168	168,000	16,503
Architectural Coating - 2025	8	8,000	786
Paving - 2025	35	35,000	3,438
Total	1,138	1,414,000	138,898

During operation, the project would generate demand for 1,441,600 kilotwatt hours (kWh) of electricity and 5,119,400 British Thermal Units (BTU) of natural gas annually. The annual gasoline demand would be approximately 210,259 gallons.

Please let me know if you have questions. You can reach me via e-mail at 760-712-2199 or via e-mail ryan@birdseyeplanninggroup.com.

Regards,

Ryan Birdseye
Principal