Appendix D

Energy Calculations

2143 Violet Street Project

Draft EIR Technical Appendix for Energy

- Energy Calculations Summary
- Construction Equipment Fuel Usage
- Construction Vehicle Fuel Usage
- Construction Water Usage
- Operational Energy Summary
- Peak Electricity Demand

2143 Violet Street Project

| Project With Project Features | | | | | | | | | |
|-----------------------------------|------------------------|--|--|--|--|--|--|--|--|
| Electricty | | | | | | | | | |
| Water Consumption | 17,523 kWh | | | | | | | | |
| Temporary Power (lighting, tools) | 47,174 kWh | | | | | | | | |
| Total: | 64,697 kWh | | | | | | | | |
| Gasoline | | | | | | | | | |
| On Road | 147,727 Gallons | | | | | | | | |
| Off Road | 0 | | | | | | | | |
| Total: | 147,727 Gallons | | | | | | | | |
| Diesel | | | | | | | | | |
| On Road | 230,972 Gallons | | | | | | | | |
| Off Road | 120,196 Gallons | | | | | | | | |
| Total: | 351,168 Gallons | | | | | | | | |
| Total Mobile | 498,894 | | | | | | | | |

Summary of Energy Use During Operations

| | Baseline (Buildout) | Project Without Pro | ject Features | Project With Project Features | Percent Reduction |
|------------------------|---------------------|---------------------|---------------|-------------------------------|-------------------|
| Electricity | | | | | |
| Electricity (building) | 56 | 66,477 | 5,644,008 | 5,167,159 kWh/year | -8% |
| Electricity (water) | 6 | 54,966 | 1,036,242 | 828,994 kWh/year | -20% |
| Ele | ctricity Total 63 | 31,443 | 6,680,250 | 5,996,153 kWh/year | -10% |
| Natural Gas | 26 | 55,165 | 9,294,200 | 9,294,200 cu ft/year | 0% |
| Mobile | | | | | |
| Gasoline | 5 | 50,858 | 882,986 | 681,701 Gallons/year | -23% |
| Diesel | | 9,277 | 161,063 | 124,347 Gallons/year | -23% |
| N | obile Total 6 | 50,135 | 1,044,049 | 806,049 Gallons/year | -23% |

Calculation of Diesel Usage During Cosnstruciton (Offroad Equipment):

| hase Name | Off Road Equipment Type | Units | Hours | HP | Load Factor | Avg. Daily Factor | Number of Days | Diesel Fuel Usage |
|-------------------|---------------------------|-------|-------|-----|--------------------|-----------------------|-------------------------|-------------------|
| emolition | Air Compressors | 1 | 8 | 78 | 0.48 | 0.6 | 22 | 198 |
| emolition | Concrete/Industrial Saws | 1 | 8 | 81 | 0.73 | 0.6 | 22 | 312 |
| emolition | Excavators | 0 | 8 | 158 | 0.38 | 0.6 | 22 | 0 |
| emolition | Rubber Tired Dozers | 1 | 8 | 247 | 0.4 | 0.6 | 22 | 522 |
| molition | Rubber Tired Loaders | 1 | 8 | 203 | 0.36 | 0.6 | 22 | 386 |
| molition | Tractors/Loaders/Backhoes | 2 | 8 | 97 | 0.37 | 0.6 | 22 | 379 |
| ding | Bore/Drill Rigs | 2 | 8 | 221 | 0.5 | 0.6 | 257 | 13,631 |
| ding | Excavators | 2 | 8 | 158 | 0.38 | 0.6 | 257 | 7,407 |
| ding | Forklifts | 1 | 8 | 89 | 0.2 | 0.6 | 257 | 1,098 |
| ding | Graders | 0 | 8 | 187 | 0.41 | 0.6 | 257 | 0 |
| ding | Rubber Tired Dozers | 2 | 8 | 247 | 0.4 | 0.6 | 257 | 12,188 |
| ading | Rubber Tired Loaders | 2 | 8 | 203 | 0.36 | 0.6 | 257 | 9,015 |
| ading | Tractors/Loaders/Backhoes | 2 | 8 | 97 | 0.37 | 0.6 | 257 | 4,427 |
| ding | Welders | 3 | 8 | 46 | 0.45 | 0.6 | 257 | 3,830 |
| tt Foundation | Pumps | 6 | 8 | 84 | 0.74 | 0.6 | 4 | 358 |
| t Foundation | Rubber Tired Dozers | 0 | 8 | 247 | 0.4 | 0.6 | 4 | 0 |
| Foundation | Tractors/Loaders/Backhoes | 0 | 8 | 97 | 0.37 | 0.6 | 4 | 0 |
| ndation | Concrete/Industrial Saws | 1 | 8 | 81 | 0.73 | 0.6 | 186 | 2,640 |
| dation | Forklifts | 2 | 8 | 89 | 0.2 | 0.6 | 186 | 1,589 |
| dation | Generator Sets | 1 | 8 | 84 | 0.74 | 0.6 | 186 | 2,775 |
| dation | Pumps | 2 | 8 | 84 | 0.74 | 0.6 | 186 | 5,550 |
| dation | Rubber Tired Dozers | 0 | 8 | 247 | 0.4 | 0.6 | 186 | 0 |
| dation | Tractors/Loaders/Backhoes | 0 | 8 | 97 | 0.37 | 0.6 | 186 | 0 |
| ing Construction | Aerial Lifts | 2 | 8 | 63 | 0.31 | 0.6 | 468 | 4,387 |
| - | Concrete/Industrial Saws | 2 | 8 | | 0.73 | 0.6 | 468 | 13,283 |
| ing Construction | | 0 | 7 | 231 | 0.29 | 0.6 | 468 | 0 |
| ding Construction | | 2 | 8 | 89 | 0.2 | 0.6 | 468 | 3,999 |
| ling Construction | | 2 | | | 0.74 | 0.6 | 468 | 13,964 |
| ding Construction | | 2 | 8 | 84 | 0.74 | 0.6 | 468 | 13,964 |
| - | Tractors/Loaders/Backhoes | 0 | 7 | 97 | 0.37 | 0.6 | 468 | 0 |
| ding Construction | Welders | 1 | 8 | 46 | 0.45 | 0.6 | 468 | 2,325 |
| itectural Coating | Aerial Lifts | 1 | 8 | 63 | 0.31 | 0.6 | 92 | 431 |
| _ | Air Compressors | 1 | 8 | 78 | 0.48 | 0.6 | 92 | 827 |
| ng | Cement and Mortar Mixers | 1 | 8 | 9 | 0.56 | 0.6 | 30 | 36 |
| ıg | Pavers | 1 | 8 | 130 | 0.42 | 0.6 | 30 | 393 |
| ng | Paving Equipment | 0 | 8 | 132 | 0.36 | 0.6 | 30 | 0 |
| ng | Plate Compactors | 1 | 8 | 8 | 0.43 | 0.6 | 30 | 25 |
| ng | Rollers | 0 | 6 | 80 | 0.38 | 0.6 | 30 | 0 |
| ing | Tractors/Loaders/Backhoes | 1 | 8 | 97 | 0.37 | 0.6 | 30 | 258 |
| _ - | , , | | | | Total Diesel U | sage for Construction | on (Offroad Equipment): | |

gallons of diesel fuel per horsepower-hour=

0.05

Notes: Equipment assumptions are provide in the CalEEMod output files and fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

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Construction Electricity Usage

Construction Electricity Usage

Caterpillar 40-C4.4 Generator^a

| Peak Power Rating - Prime (kW) | 36 |
|---|--------|
| Typical Load | 70% |
| Average Output (kW) | 25.2 |
| Hours per Day | 4 |
| Average Daily Output (kWh) | 100.8 |
| Building Construction Phase Duration (days) | 468 |
| Total Construction (kWh) | 47,174 |
| Total Construction (MWh) | 47.2 |

^ahttps://www.albancat.com/content/uploads/2014/06/40-C4.4-Spec-Sheet.pdf

EMFAC2014 Emissions Inventory

Region Type: Air Basin Region: South Coast

Calendar Year: 2021

Season: Annual Vehicle Classification: EMFAC2011 Categories

| Region | Veh_Class | Fuel | Speed | Population | VMT | Trips | Fuel_Gas | Fuel_DSL | Miles per Gallon |
|---|-----------|------|------------|------------|-------------|-------------|--------------------|--------------------|------------------|
| | | | (miles/hr) | (vehicles) | (miles/day) | (trips/day) | (1000 gallons/day) | (1000 gallons/day) | |
| South Coast | LDA | GAS | Aggregate | 5983324.08 | 203406334.5 | 37758497.7 | 8962.552247 | 0 | 22.7 |
| South Coast | LDT1 | GAS | Aggregate | 704120.722 | 23959701.08 | 4257214.069 | 1219.237627 | 0 | 19.7 |
| South Coast | LDT2 | GAS | Aggregate | 1998564.65 | 72973317.94 | 12574607.68 | 4353.005354 | 0 | 16.8 |
| Construction Worker Trip (Composite LDA/LDT1/LDT2): | | | | | | | | | 20.5 |
| South Coast | T7 | DSL | Aggregate | 87795.947 | 13172387.8 | 0 | 0 | 2357.794852 | 5.6 |

Notes: Consistent with CalEEMod, a construction worker trip is assumed to be a composite of 50% LDA , 25% for LDT1, and 25% for LDT2. Used EMFAC 2011 Categories for construction as EMFAC2011 has specific categories for vehicle class T7.

Calculation of Gasoline and Diesel Usage During Phase 1 Construction (Onroad Vehicles)

| Phase Name | Daily Woker Trips | Daily Vendor Trips | Days | Total Worker Trips | Total Vendor Trips | Total Haul Trips | Trip Leng | Trip Length (miles) | | Total Length (miles) | | | Avg. Daily Factor | Gallons | of Fuel |
|-----------------------|-------------------|--------------------|------|--------------------|--------------------|------------------|-----------|---------------------|------|----------------------|----------|--------|---------------------|-----------|----------|
| | | | | | | | Worker | Vendor | Haul | Worker | Vendor | Haul | (worker and vendor) | Gasoline | Diesel |
| Demolition | 16 | 20 | 22 | 352 | 440 | 440 | 14.7 | 6.9 | 18 | 5174.4 | 3036 | 7920 | 0.6 | 151.8 | 1,743.7 |
| Grading | 18 | 20 | 257 | 4626 | 5140 | 38550 | 14.7 | 6.9 | 18 | 68002.2 | 35466 | 693900 | 0.6 | 1,995.0 | 128,013. |
| Matt Foundation | 150 | 312 | 4 | 600 | 1248 | 0 | 14.7 | 6.9 | 20 | 8820 | 8611.2 | 0 | 0.6 | 258.8 | 924. |
| Foundation | 500 | 40 | 186 | 93000 | 7440 | 0 | 14.7 | 6.9 | 20 | 1367100 | 51336 | 0 | 0.6 | 40,107.8 | 5,513. |
| Building Construction | 500 | 272 | 468 | 234000 | 127296 | 0 | 14.7 | 6.9 | 20 | 3439800 | 878342.4 | 0 | 0.6 | 100,916.4 | 94,331.5 |
| Architectural Coating | 92 | . 0 | 92 | 8464 | 0 | 0 | 14.7 | 6.9 | 20 | 124420.8 | 0 | 0 | 0.6 | 3,650.2 | 0.0 |
| | | | | | | | | | | | | | Total: | 147,726.9 | 230,971. |

| Worker Miles per gallon= | 20.45 gasoline |
|--|--|
| Vedor/Haul miles per gallon= | 5.59 diesel |
| | |
| Notes: Consistent with CalEEMad worker veh | icles are assumed to be gasoline and 50% LDA 25% LDT1, and 25% LDT2. Vendor and haultrins are assumed to be 100% diesel Heavy Duty Trucks (T7) |

Water Usage for Control of Fugitive Dust during Construction:

| Phase | Days | Average Daily Acreage Distrub | ed Gal | lons Per Year | Electricity (kWhr) |
|-----------------------|------|-------------------------------|--------|---------------|--------------------|
| Demolition | 22 | 0.55 | | 36,542 | 355 |
| Grading | 257 | 2.20 | | 1,707,508 | 16,609 |
| Matt Foundation | 4 | 0.10 | | 1,208 | 12 |
| Foundation | 186 | 0.10 | | 56,172 | 546 |
| Building Construction | 468 | 0 | | 0 | 0 |
| Architectural Coating | 92 | 0 | | 0 | 0 |
| | | | Total: | 1,801,430 | 17,523 |

Water application rate= 3020 gal/acre/day kWhr equivalent= 0.01 kWhr

Notes: 1) Gallons per year of water usage for dust control is calculated based on a minimum control efficiency of 66% (three times daily) with an application rate of 3,020 gal/acre/day (Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition)) and average of 26 construction days per month.

2) CalEEMod Default: Each gallon of delivered potable water in Southern California is associated with 0.009727 kWhr of electricity).

EMFAC2014 Emissions Inventory
Region Type: Air Basin
Region: South Coast
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories

| Region | CalYr | Season | Veh_Class | Fuel | MdYr | Speed | Population | VMT | Trips | Fuel_Gas | Fuel_DSL | | |
|-------------|-------|----------|-----------|------|------------|------------|-------------|----------------|-------------|--------------------|--------------------|-------|------------------|
| | | | | | | (miles/hr) | (vehicles) | (miles/day) | (trips/day) | (1000 gallons/day) | (1000 gallons/day) | | |
| South Coast | 2024 | 1 Annual | LDA | GAS | Aggregated | Aggregated | 6047838.24 | 205180457.1 | 38152875 | 9081.79546 | 0 | | |
| South Coast | 2024 | 1 Annual | LDA | DSL | Aggregated | Aggregated | 20753.911 | 645479.2953 | 128418.12 | 0 | 20.68003278 | | |
| South Coast | 2024 | 1 Annual | LDT1 | GAS | Aggregated | Aggregated | 721465.367 | 24572663.48 | 4356928.7 | 1255.799325 | 0 | | |
| South Coast | 2024 | 1 Annual | LDT1 | DSL | Aggregated | Aggregated | 1044.80136 | 35325.43116 | 6118.7556 | 0 | 1.151448919 | | |
| South Coast | 2024 | 1 Annual | LDT2 | GAS | Aggregated | Aggregated | 2054813.99 | 74892077.02 | 12916143 | 4486.21291 | . 0 | | |
| South Coast | 2024 | 1 Annual | LDT2 | DSL | Aggregated | Aggregated | 981.950256 | 33912.83607 | 6062.8044 | 0 | 1.096166507 | | |
| South Coast | 2024 | 1 Annual | LHD1 | GAS | Aggregated | Aggregated | 319112.741 | 13692283.58 | 4754304.1 | 1031.956764 | 0 | | |
| South Coast | 2024 | 1 Annual | LHD1 | DSL | Aggregated | Aggregated | 102933.107 | 4241263.66 | 1294769 | 0 | 220.2081488 | | |
| South Coast | 2024 | 1 Annual | LHD2 | GAS | Aggregated | Aggregated | 33204.5146 | 1439248.604 | 494697.75 | 108.7400601 | . 0 | | |
| South Coast | 2024 | 1 Annual | LHD2 | DSL | Aggregated | Aggregated | 34031.7564 | 1390277.197 | 428076.67 | 0 | 72.24049074 | | |
| South Coast | 2024 | Annual | MCY | GAS | Aggregated | Aggregated | 239510.254 | 1732357.174 | 478972.61 | 43.72806069 | 0 | | |
| South Coast | 2024 | 1 Annual | MDV | GAS | Aggregated | Aggregated | 1720734.2 | 58002703.04 | 10572673 | 4432.212602 | . 0 | | |
| South Coast | 2024 | 1 Annual | MDV | DSL | Aggregated | Aggregated | 1737.61359 | 59914.91183 | 10698.302 | 0 | 1.923999287 | | |
| South Coast | 2024 | 1 Annual | MH | GAS | Aggregated | Aggregated | 73188.1999 | 836065.6997 | 7321.7474 | 58.83062548 | 0 | | |
| South Coast | 2024 | 1 Annual | MH | DSL | Aggregated | Aggregated | 12871.5913 | 141311.9208 | 1287.1592 | 0 | 15.85382158 | | |
| South Coast | 2024 | Annual | OBUS | GAS | Aggregated | Aggregated | 7457.54544 | 278860.7329 | 340573.12 | 22.32908306 | 0 | | |
| South Coast | 2024 | 1 Annual | OBUS | DSL | Aggregated | Aggregated | 6518.78601 | 538220.6236 | 0 | 0 | 77.98998155 | | |
| South Coast | 2024 | 1 Annual | SBUS | GAS | Aggregated | Aggregated | 1703.23619 | 61185.99517 | 6812.9445 | 5.52995754 | 0 | | |
| South Coast | 2024 | 1 Annual | SBUS | DSL | Aggregated | Aggregated | 4775.56137 | 169371.1107 | 0 | 0 | 23.48988825 | | |
| South Coast | 2024 | Annual | T6 | GAS | Aggregated | Aggregated | 26353.9534 | 1256614.595 | 527289.88 | 95.24435145 | 0 | | |
| South Coast | 2024 | Annual | T6 | DSL | Aggregated | Aggregated | 90458.8826 | 5497771.961 | 0 | 0 | 611.9051505 | | |
| South Coast | 2024 | Annual | T7 | GAS | Aggregated | Aggregated | 1801.53355 | 233422.7305 | 36045.084 | 18.45610548 | 0 | | |
| South Coast | 2024 | Annual | T7 | DSL | Aggregated | Aggregated | 91869.3327 | 14146702.72 | 0 | 0 | 2520.987951 | | |
| South Coast | 2024 | Annual | UBUS | GAS | Aggregated | Aggregated | 1979.12366 | 212477.2607 | 7916.4946 | 19.31509867 | 0 | | |
| South Coast | 2024 | 1 Annual | UBUS | DSL | Aggregated | Aggregated | 7676.08277 | 822794.7858 | 30704.331 | 0 | 201.0309179 | | |
| | | | | | | | | | | | | MPG | Gallons Per Mile |
| | | | | | | | Totals | 394,930,788.72 | | 20,660.15 | 3,768.56 | 16.2 | 0.06 |
| | | | | | | | Total (GAS) | 382,390,417.03 | 0.93 | | | 18.5 | 0.05 |
| | | | | | | | Total (DSL) | 27,722,346.45 | 0.07 | | | 7.356 | 0.14 |

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Land Use Details

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|-------|-------------|-------------|--------------------|------------|
| General Office Building | 6.98 | 1000sqft | 0.16 | 6,983.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 2.11 | 1000sqft | 0.05 | 2,109.00 | 0 |
| Apartments Low Rise | 10.00 | Dwelling Ur | 0.63 | 28,699.00 | 24 |
| Strip Mall | 25.74 | 1000sqft | 0.59 | 25,739.00 | 0 |
| Parking Lot | 43 | Spaces | 0.39 | 15,000.00 | 0 |

Trip Summary Information

| Land Uses | Aver | age Daily Trip | Rate | Annual VMT | |
|----------------------------------|----------------|----------------|--------|------------|--|
| | Weekday | Saturday | Sunday | | |
| Apartments Low Rise | 73.2 | 79.5 | 67.4 | 117,327 | |
| General Office Building | 68.0 | 15.2 | 6.5 | 77,972 | |
| Strip Mall | 971.7 | 921.8 | 447.9 | 793,233 | |
| Unrefrigerated Warehouse-No Rail | 10.47 | 10.47 | 10.47 | 21,018 | |
| Parking Lot | 0 | 0 | 0 | 0 | |
| | Total 1,287.23 | 1,174.43 | 597.44 | 1,009,550 | |

Gasoline and Diesel Usage

| D, | .:1 | Ы | _ | + | v | eai |
|----|-----|---|---|---|---|-----|
| | | | | | | |

| | | anaoat rear |
|-----------------|----------|-------------|
| | Gasoline | Diesel |
| Miles/Gallor | 18.5 | 7.4 |
| % Fleet Mix | y 93.2% | 6.8% |
| Total (Gallons) | : 50,858 | 9,277 |

Existing (Baseline) Year

| 0 1 | |
|----------|--------|
| Gasoline | Diesel |
| 18.6 | 7.4 |
| 92.9% | 6.5% |
| 50,308 | 8,916 |

Energy by Land Use - Natural Gas

| Land Uses | | kBTU/yr | cu ft/year |
|----------------------------------|---------|---------|------------|
| Apartments Low Rise | 14 | 2516.0 | 135,730 |
| General Office Building | 86 | 868.5 | 82,732 |
| Strip Mall | 46845.0 | | 44,614 |
| Unrefrigerated Warehouse-No Rail | 2193.4 | | 2,089 |
| Parking Lot | 0.0 | | 0 |
| | | | |
| | Total | 278,423 | 265,165 |

Energy by Land Use - Electricity

| Land Uses | | kWH/yr |
|----------------------------------|-------|---------|
| General Office Building | | 106,421 |
| Strip Mall | | 410,794 |
| Unrefrigerated Warehouse-No Rail | | 13,140 |
| Apartment Low Rise | | 36,122 |
| | Total | 566,477 |

Water Detail

| | | | | Electricity |
|----------------------------------|-------|------------|------------|-------------|
| | | Indoor Use | Outdoor | Use |
| Land Uses | | (Mgal) | Use (Mgal) | (kWh/yr) |
| Apartments Low Rise | | 0.652 | 0.411 | 11,235 |
| General Office Building | | 1.241 | 0.760 | 21,180 |
| Strip Mall | | 1.907 | 1.169 | 32,551 |
| Unrefrigerated Warehouse-No Rail | | 0.488 | 0.000 | 5,421 |
| Parking Lot | | 0.000 | 0.000 | 0 |
| | Total | 3.80 | 2.34 | 64,966 |

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

2143 Violet - Project Without Project Features and MXD Los Angeles-South Coast County, Annual

Land Use Details

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|----------------|-------------|--------------------|------------|
| General Office Building | 187.37 | 1000sqft | 4.30 | 187,374.00 | 0 |
| User Defined Commercial | 1.00 | User Defined U | r 0.00 | 0.00 | 0 |
| Enclosed Parking with Elevator | 828.00 | Space | 0.00 | 331,200.00 | 843 |
| General Office Building | 187.37 | 1000sqft | 4.3 | 187,374.00 | 0 |

Trip Summary Information

| Land Uses | | , | Annual VMT | | |
|-------------------------------------|-------|---------|------------|--------|------------|
| | V | Veekday | Saturday | Sunday | |
| Enclosed Parking with Elevator | | 0.0 | 0.0 | 0.0 | 0 |
| General Office Building | | 0.0 | 0.0 | 0.0 | 0 |
| High Turnover (Sit Down Restaurant) | | 0.0 | 0.0 | 0.0 | 0 |
| User Defined Commercial | | 6929.0 | 6929.0 | 6929.0 | 17,527,647 |
| | | | | | |
| | Total | 6,929 | 6,929 | 6,929 | 17,527,647 |

Gasoline and Diesel Usage

| | | Gasoline | Diesel |
|----|----------------|----------|---------|
| | Miles/Gallon | 18.5 | 7.4 |
| | % Fleet Mix | 93.2% | 6.8% |
| To | tal (Gallons): | 882.986 | 161.063 |

Energy by Land Use - Natural Gas

| Land Uses | | kBTU/yr | cu ft/year |
|-------------------------------------|-----------|-----------|------------|
| Apartments High Rise | 3 | 3046090.0 | 2,901,038 |
| Enclosed Parking with Elevator | (| 0.0 | 0 |
| General Office Building | 1 | 1762810.0 | 1,678,867 |
| High Turnover (Sit Down Restaurant) | 4950010.0 | | 4,714,295 |
| | Total | 9,758,910 | 9,294,200 |

Energy by Land Use - Electricity

| Land Uses | | kWH/yr |
|-------------------------------------|-------|-----------|
| Apartments High Rise | | 1,368,440 |
| Enclosed Parking with Elevator | | 980,683 |
| General Office Building | | 2,347,800 |
| High Turnover (Sit Down Restaurant) | | 947,085 |
| | Total | 5,644,008 |

Water Detail (Unmitigated)

| | | Indoor Use | Outdoor Use | Electricity Use |
|-------------------------------------|-------|------------|-------------|-----------------|
| Land Uses | | (Mgal) | (Mgal) | (kWh/yr) |
| Apartments High Rise | | 22.608 | 14.253 | 389,843 |
| Enclosed Parking with Elevator | | 0.000 | 0.000 | 0 |
| General Office Building | | 33.302 | 20.411 | 568,555 |
| High Turnover (Sit Down Restaurant) | | 6.635 | 0.424 | 77,844 |
| 1 | Total | 62.55 | 35.09 | 1,036,242 |

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

2143 Violet - Project With Project Features Los Angeles-South Coast County, Annual

Land Use Details

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|--------------------------------|--------|----------------|-------------|--------------------|------------|
| General Office Building | 187.37 | 1000sqft | 4.30 | 187,374.00 | 0 |
| User Defined Commercial | 1.00 | User Defined L | 0.00 | 0.00 | 0 |
| Enclosed Parking with Elevator | 828.00 | Space | 0.00 | 331,200.00 | 843 |
| General Office Building | 187.37 | 1000sqft | 4.3 | 187374 | 0 |
| Apartments High Rise | 347.00 | Dwelling Unit | 0.00 | 325,385.00 | 843 |

Trip Summary Information

| Land Uses | Average Daily Trip Rate | | | Mitigated | |
|-------------------------------------|-------------------------|----------|----------|-----------|-----------------|
| | V | Veekday | Saturday | Sunday | |
| Apartments High Rise | 0.0 | | 0.0 | 0.0 | 0 |
| Enclosed Parking with Elevator | 0.0 | | 0.0 | 0.0 | 0 |
| General Office Building | 0.0 | | 0.0 | 0.0 | 0 |
| High Turnover (Sit Down Restaurant) | 0.0 | | 0.0 | 0.0 | 0 |
| User Defined Commercial | 531 | 16.0 | 5316.0 | 5316.0 | 13,532,064 |
| | Total | 5,316.00 | 5,316.0 | 0 5,31 | 6.00 13,532,064 |

Mitigated Gasoline and Diesel Usage

| | Gasoline | Diesel |
|------------------|----------|---------|
| Miles/Gallon | 18.5 | 7.4 |
| % Fleet Mix | 93.2% | 6.8% |
| Total (Gallons): | 681,701 | 124,347 |

Energy by Land Use - Natural Gas (Mitigated)

| Land Uses | | kBTU/yr | cu ft/year |
|-------------------------------------|-------|-----------|------------|
| Apartments High Rise | | 3046090.0 | 2,901,038 |
| Enclosed Parking with Elevator | | 0.0 | 0 |
| General Office Building | | 1762810.0 | 1,678,867 |
| High Turnover (Sit Down Restaurant) | | 4950010.0 | 4,714,295 |
| | Total | 9,758,910 | 9,294,200 |

Energy by Land Use - Electricity (Mitigated)

| | Total | 5,167,159 |
|-------------------------------------|-------|-----------|
| High Turnover (Sit Down Restaurant) | | 904,080 |
| General Office Building | | 2,171,200 |
| Enclosed Parking with Elevator | | 787,759 |
| Apartments High Rise | | 1,304,120 |
| Land Uses | | kWH/yr |

Water Detail (Unmitigated)

| | Ir | ndoor Use | Outdoor Use | Electricity Use |
|-------------------------------------|-------|-----------|-------------|-----------------|
| Land Uses | | (Mgal) | (Mgal) | (kWh/yr) |
| Apartments High Rise | | 18.087 | 11.403 | 311,875 |
| Enclosed Parking with Elevator | | 0.000 | 0.000 | 0 |
| General Office Building | | 26.642 | 16.329 | 454,844 |
| High Turnover (Sit Down Restaurant) | | 5.308 | 0.339 | 62,275 |
| User Defined Commercial | | 0.000 | 0.000 | 0 |
| 1 | Гotal | 50.04 | 28.07 | 828,994 |

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr o electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

Peak Electricity Demand Calculations

Electrical Load Factor Equation

$$f_{Load} = rac{ ext{Average load}}{ ext{Maximum load in given time period}}$$

Load Factor (%)¹ 52%

Project Electricity Demand (Operational)

| Troject Electricity Bernana (Operational) | | | | |
|---|--------|--|--|--|
| Annual Demand | | | | |
| Building (MWh) | 5,167 | | | |
| Water (MWh) | 829 | | | |
| Total (MWh) | 5,996 | | | |
| Average Daily Demand | | | | |
| Building (kWh) | 14,157 | | | |
| Water (kWh) | 2,271 | | | |
| Total (kWh) | 16,428 | | | |
| Average Load | | | | |
| Building (kW) | 590 | | | |
| Water (kW) | 95 | | | |
| Total (kW) | 684 | | | |
| | | | | |

Peak Load Calculation

| Peak Load (kW) | 1,229 |
|----------------------------|--------|
| Systemwide Peak Load (MWh) | 5,854 |
| Percent of Peak | 0.021% |

¹2017 Report: System Efficiency of California's Electric Grid. California Public Utilities Commission. 2017. Page 11, Figure 6. Visual estimate.

EMFAC Emission inventories for County

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County
Region: Los Angeles
Calendar Year: 2024

Season: Annual

| Vehicle Classif | fication: EMFAC2011 C | Categories | Fuel_Gasoline | Fuel_DSL |
|-----------------|-----------------------|---|--------------------|--------------------|
| Region | CalYr VehClass | MdlYr Speed Fuel | (1000 gallons/day) | (1000 gallons/day) |
| Los Angeles | 2024 LDA | Aggregatec Aggregatec GAS | 9081.80 | 0.00 |
| Los Angeles | 2024 LDA | Aggregatec Aggregatec DSL | 0.00 | 20.68 |
| Los Angeles | 2024 LDT1 | Aggregatec Aggregatec GAS | 1255.80 | 0.00 |
| Los Angeles | 2024 LDT1 | Aggregatec Aggregatec DSL | 0.00 | 1.15 |
| Los Angeles | 2024 LDT2 | Aggregatec Aggregatec GAS | 4486.21 | 0.00 |
| Los Angeles | 2024 LDT2 | Aggregatec Aggregatec DSL | 0.00 | 1.10 |
| Los Angeles | 2024 LHD1 | Aggregatec Aggregatec GAS | 1031.96 | 0.00 |
| Los Angeles | 2024 LHD1 | Aggregatec Aggregatec DSL | 0.00 | 220.21 |
| Los Angeles | 2024 LHD2 | Aggregatec Aggregatec GAS | 108.74 | 0.00 |
| Los Angeles | 2024 LHD2 | Aggregatec Aggregatec DSL | 0.00 | 72.24 |
| Los Angeles | 2024 MCY | Aggregatec Aggregatec GAS | 43.73 | 0.00 |
| Los Angeles | 2024 MDV | Aggregatec Aggregatec GAS | 4432.21 | 0.00 |
| Los Angeles | 2024 MDV | Aggregatec Aggregatec DSL | 0.00 | 1.92 |
| Los Angeles | 2024 MH | Aggregatec Aggregatec GAS | 58.83 | 0.00 |
| Los Angeles | 2024 MH | Aggregatec Aggregatec DSL | 0.00 | 15.85 |
| Los Angeles | 2024 OBUS | Aggregatec Aggregatec GAS | 22.33 | 0.00 |
| Los Angeles | 2024 OBUS | Aggregatec Aggregatec DSL | 0.00 | 77.99 |
| Los Angeles | 2024 SBUS | Aggregatec Aggregatec GAS | 5.53 | 0.00 |
| Los Angeles | 2024 SBUS | Aggregatec Aggregatec DSL | 0.00 | 23.49 |
| Los Angeles | 2024 T6 | Aggregatec Aggregatec GAS | 95.24 | 0.00 |
| Los Angeles | 2024 T6 | Aggregatec Aggregatec DSL | 0.00 | 611.91 |
| Los Angeles | 2024 T7 | Aggregatec Aggregatec GAS | 18.46 | 0.00 |
| Los Angeles | 2024 T7 | Aggregatec Aggregatec DSL | 0.00 | 2520.99 |
| Los Angeles | 2024 UBUS | Aggregatec Aggregatec GAS | 19.32 | 0.00 |
| Los Angeles | 2024 UBUS | Aggregatec Aggregatec DSL | 0.00 | 201.03 |
| | | | 7,540,954,897 | 1,375,523,669 |
| | | Fuel Head for Project Construction | | |
| | | Fuel Usage for Project Construction Percentage of County for Construction | 147,727 0.0020% | • |
| | | , | | |
| | | Net Fuel Usage for Project Operation | 681,701 | • |
| | | Percentage of County for Operation | 0.0090% | 0.0090% |