## OPERATIONAL TRAFFIC FUEL

| Existing Annual VMT: | | | 937,214 | | | |
|---|---|---|---|---|---|---|
| | | | | | Fuel | |
| Fleet Mix | auto | 91% | 852,865 | gas (mpg) | 23.68 | 36,016.25 |
| | other | 9% | 84,349 | diesel (mpg) | 9.43 | 8,944.78 |
| | | | | | | **44,961.03** |

| Project Annual VMT: | | | 2,464,063 | | | |
|---|---|---|---|---|---|---|
| | | | | | Fuel | |
| Fleet Mix | auto | 91% | 2,242,297 | gas (mpg) | 23.69 | 94,651.64 |
| | other | 9% | 221,766 | diesel (mpg) | 9.43 | 23,517.04 |
| | | | | | | **118,168.68** |

| Net Project Annual VMT: | | | 1,526,849 | | | |
|---|---|---|---|---|---|---|
| | | | | | Fuel | |
| Fleet Mix | auto | 91% | 1,389,433 | gas (mpg) | 23.68 | 58,675.36 |
| | other | 9% | 137,416 | diesel (mpg) | 9.43 | 14,572.26 |
| | | | | | | **73,247.62** |

## CONSTRUCTION TRAFFIC FUEL

| Worker Fuel (Gasoline, on-road) | | | | | | |
|---|---|---|---|---|---|---|
| **phase** | **trips** | **length (miles)** | **Days** | **total Miles** | **MPG** | **Gallons** |
| Demolition | 18 | 11.6 | 45 | 9,396 | 23.68 | 396.79 |
| Grading | 23 | 11.6 | 64 | 17,075 | 23.68 | 721.08 |
| Building Construction | 62 | 11.6 | 391 | 281,207 | 23.68 | 11,875.30 |
| Architectural Coating | 12 | 11.6 | 97 | 13,502 | 23.68 | 570.20 |
| | | | | | | **13,563.38** |

| Vender Fuel (Diesel, on-road) | | | | | | |
|---|---|---|---|---|---|---|
| **phase** | **trips** | **length (miles)** | **days** | **total Miles** | **MPG** | **Gallons** |
| Demolition | 0 | 6.9 | 45 | 0 | 9.43 | 0.00 |
| Grading | 0 | 6.9 | 64 | 0 | 9.43 | 0.00 |
| Building Construction | 24 | 6.9 | 391 | 64,750 | 9.43 | 6,866.34 |
| Architectural Coating | 0 | 6.9 | 97 | 0 | 9.43 | 0.00 |
| | | | | | | **6,866.34** |

| Haul Fuel (Diesel, on-road) | | | | | | |
|---|---|---|---|---|---|---|
| **phase** | **trips** | **length (miles)** | **days** | **total Miles** | **MPG** | **Gallons** |
| Demolition | 143 | 25 | 45 | 160,875 | 9.43 | 17,059.92 |
| Grading | 1300 | 25 | 64 | 2,080,000 | 9.43 | 220,572.64 |
| Building Construction | 0 | 20 | 391 | 0 | 9.43 | 0.00 |
| Architectural Coating | 0 | 20 | 97 | 0 | 9.43 | 0.00 |
| | | | | | | **237,632.56** |

*Diesel MPG Source: EMFAC2017 (VMT/Fuel Consumption)*
*Gasoline MPG Source: EMFAC2017 (VMT/Fuel Consumption)*

| | |
|---|---|
| **Total On-Road Gas** | **13,563.38** |
| **Total On-Road Diesl** | **244,498.90** |

| Construction Equipment (Diesel, off-road) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Phase** | **Equipment** | **Units** | **Hours** | **HP** | **Load Factor** | **Ave. Daily Load Factor** | **Days** | **HP Hours** |
| Demolition | Concrete/Industrial Saws | 1 | 4 | 81 | 0.73 | 0.6 | 45 | 6,386.04 |
| | Crushing/Proc. Equipment | 1 | 6 | 85 | 0.75 | 0.6 | 45 | 10,327.50 |
| | Dumpers/Tenders | 1 | 5 | 16 | 0.38 | 0.6 | 45 | 820.80 |
| | Rubber Tired Dozers | 1 | 6 | 247 | 0.4 | 0.6 | 45 | 16,005.60 |
| | Rubber Tired Loaders | 1 | 6 | 203 | 0.36 | 0.6 | 45 | 11,838.96 |
| | Signal Boards | 1 | 6 | 6 | 0.82 | 0.6 | 45 | 797.04 |
| | Skd Steer Loaders | 1 | 5 | 65 | 0.37 | 0.6 | 45 | 3,246.75 |
| | Tractors/Loaders/Backhoes | 3 | 8 | 97 | 0.37 | 0.6 | 45 | 7,752.24 |
| Grading | Bore/Drill Rigs | 1 | 6 | 221 | 0.5 | 0.6 | 64 | 25,459.20 |
| | Dumpers/Tenders | 1 | 5 | 16 | 0.38 | 0.6 | 64 | 1,167.36 |
| | Excavators | 1 | 6 | 158 | 0.38 | 0.6 | 64 | 13,833.22 |
| | Graders | 1 | 6 | 187 | 0.47 | 0.6 | 64 | 20,249.86 |
| | Rollers | 1 | 6 | 80 | 0.38 | 0.6 | 64 | 7,004.16 |
| | Rubber Tired Dozers | 1 | 6 | 247 | 0.4 | 0.6 | 64 | 22,763.52 |
| | Rubber Tired Loaders | 1 | 8 | 84 | 0.74 | 0.6 | 64 | 19,095.55 |
| | Signal Boards | 1 | 8 | 6 | 0.82 | 0.6 | 64 | 1,511.42 |
| | Skid Steer | 1 | 4 | 65 | 0.37 | 0.6 | 64 | 3,694.08 |
| | Tractors/Loaders/Backhoes | 1 | 4 | 65 | 0.37 | 0.6 | 64 | 3,694.08 |
| Building Construction | Cement and Mortar Mixers | 1 | 6 | 9 | 0.56 | 0.6 | 391 | 7,094.30 |
| | Concrete/Industrial Saws | 2 | 4 | 81 | 0.73 | 0.6 | 391 | 55,487.59 |
| | Cranes | 1 | 6 | 231 | 0.29 | 0.6 | 391 | 94,295.12 |
| | Forklifts | 1 | 5 | 89 | 0.2 | 0.6 | 391 | 20,879.40 |
| | Generator Sets | 2 | 6 | 84 | 0.74 | 0.6 | 391 | 87,496.42 |
| | Pavers | 1 | 4 | 130 | 0.42 | 0.6 | 391 | 51,236.64 |
| | Rough Terrain Forklifts | 1 | 5 | 100 | 0.4 | 0.6 | 391 | 46,920.00 |
| | Signal Boards | 1 | 8 | 6 | 0.82 | 0.6 | 391 | 9,233.86 |
| | Tractors/Loaders/Backhoes | 1 | 6 | 91 | 0.37 | 0.6 | 391 | 47,393.89 |
| | Welders | 1 | 6 | 46 | 0.45 | 0.6 | 391 | 29,137.32 |
| Architectural Coating | Air Compressor | 1 | 6 | 78 | 0.48 | 0.6 | 97 | 13,074.05 |
| | | | | | | | **Total** | **637,895.97** |
| | | | | | | | **Fuel Usage** | **31,894.80** |

276,393.70 Total Diesel
289,957.07 Total Gas+Diesel

HP = hoursepower. Gallons of diesel fuel per HP-hour - 0.05.

Equipment assumptions are provided in the CalEEMod output files for the Project 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.

**Water Usage for fugitive dust control during construction**
Water application rate = 3,020 gallons/acre/day
Each gallon of delivered potable water in Southern California is associated with 0.009727 kWhr of electricity).

Grading 64 days x .0.99 acres x 3,020 gallons = 63.36 gallons x 0.009727 = 0.62 **kWhr**

0.61630272 63.36 0.61630272