

## **Appendix D**

**Table 1 – Total Construction-Related Fuel Consumption**

**Sun Lakes Boulevard Extension Project**

| Fuel                                         | Consumption |         |
|----------------------------------------------|-------------|---------|
| Diesel                                       |             |         |
| On-Road Construction Trips <sup>1</sup>      | 45,273      | Gallons |
| Off-Road Construction Equipment <sup>2</sup> | 205,997     | Gallons |
| Diesel Total                                 | 251,270     | Gallons |
| Gasoline                                     |             |         |
| On-Road Construction Trips <sup>1</sup>      | 8,985       | Gallons |
| Off-Road Construction Equipment <sup>3</sup> | -           | Gallons |
| Gasoline Total                               | 8,985       | Gallons |

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2023 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for Riverside County. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

**Table 2 – On-Road Construction Trip Estimates****Sun Lakes Boulevard Extension Project**

| Trip Type             | Trips   | Trip length | Vehicle Miles Traveled (VMT) | Fuel Efficiency | Annual Fuel Usage <sup>1</sup> |          |
|-----------------------|---------|-------------|------------------------------|-----------------|--------------------------------|----------|
|                       | (trips) | (miles)     | (miles)                      | (mpg)           | (Fuel)                         | (gallon) |
| Worker <sup>2,3</sup> | 18,305  | 14.7        | 269,084                      | 29.3            | Gasoline                       | 8,985    |
| Vendor <sup>4</sup>   | 2,092   | 6.9         | 14,435                       | 9.6             | Diesel                         | 1,577    |
| Hauling <sup>5</sup>  | 16,457  | 20          | 329,140                      | 7.5             | Diesel                         | 43,695   |

## Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output (See Air Quality/GHG Memo) for construction and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for 2023 in Riverside County.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.

**Table 3 – Annual Energy Consumption from Operation**

**Sun Lakes Boulevard Extension Project**

| Fuel Type                  | Energy Consumption | Units    |
|----------------------------|--------------------|----------|
| <b>Electricity</b>         |                    |          |
| Street Lights <sup>1</sup> | 154,053            | kWh/year |
| <b>Total Electricity</b>   | <b>154,053</b>     | kWh/year |

Notes:

1. Street light electricity use from CalEEMod output (See Air Quality/GHG Memo).