

Energy Consumption Calculations

**Proposed Project
Total Construction-Related and Operational Gasoline Usage**

Table 1. Construction Year One			
Action	Carbon Dioxide Equivalents (CO₂e) in Metric Tons¹	Conversion of Metric Tons to Kilograms²	Construction Equipment Emission Factor²
Project Construction	472	472,000	10.15
Total Gallons Consumed During Construction Year One:			46,502

Table 2. Construction Year Two			
Action	Carbon Dioxide Equivalents (CO₂e) in Metric Tons¹	Conversion of Metric Tons to Kilograms²	Construction Equipment Emission Factor²
Project Construction	069	69,000	10.15
Total Gallons Consumed During Construction Year Two:			6,798

Notes:
 Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.
¹Per CalEEMod Output Files found in Appendix A
²Per Climate Registry Equation 13e

Sources:
¹ECORP Consulting. 2022.
²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>

Table 3. Average Miles per Gallon in Sacramento County in 2021 ³

Area	Sub-Area	Cal. Year	Season	Veh_tech	EMFAC 2021 Category	Total Onroad Vehicle Gallons Consumed in Butte County in 2021	Total Onroad Vehicle Miles Traveled in Butte County in 2021	Total Passenger Vehicle Miles per Gallon in Butte County in 2021
Sub-Areas	Sacramento County	2022	Annual	All Vehicles	On-Road	624,823,025	12,791,218,949	20.5

Sources:
³California Air Resource Board. 2021. EMFAC2021 Mobile Emissions Model.

Table 4. Total Gallons During Project Operations

Project Onroad Vehicle Daily Trips ⁴	Estimated Miles per Trip ⁵	Project Onroad Vehicle Daily Miles Traveled	Project Onroad Vehicle Daily Fuel Consumption	Project Onroad Vehicle Annual Fuel Consumption
4,542	5.395	24,504.09	1,196.97	436,894

Sources:
⁴Kimley Horn 2020
⁵CalEEMod 20.4.0