

Appendix D
**Energy Consumption
Worksheets**

Construction Fuel Consumption

On-Site Diesel ¹	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2025 County Fuel	Percent
Demolition	11	1,063		
Grading	15	1,497		
Building Construction	132	12,925		
Paving	4	409		
Architectural Coating	7	643		
Total	169	16,538	532,570,627	0.0031%

Off-Site Diesel ¹	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2025 County Fuel	Percent
Demolition	23	2,206		
Grading/Foundation	21	2,099		
Building Construction	80	7,857		
Paving	0	0		
Architectural Coating	0	0		
Total	124	12,162	532,570,627	0.0023%

Off-Site Gasoline ²	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2025 County Fuel	Percent
Demolition	2	172		
Grading/Foundation	1	143		
Building Construction	84	9,511		
Paving	1	115		
Architectural Coating	3	329		
Total	90	10,270	3,536,229,368	0.0003%

Total Diesel Fuel		28,700	532,570,627	0.0054%
Total Gasoline Fuel		10,270	3,536,229,368	0.0003%
Total Construction Fuel	383	38,970		

Construction Phase ³	Demolition			Grading			Building Construction		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
2025	10.85276307	22.51980732	1.513145218	15.2891808	21.43173464	1.253312201	123.9186205	75.40824726	78.50806684
2026							8.04538936	4.81532566	4.996212088
Total	11	23	2	15	21	1	132	80	84

Construction Phase ³	Paving			Architectural Coating			On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)			
2025	4.177184392	0	1.008763479						
2026				6.56974453	0	2.891141395			
Total	4	0	1	7	0	3	0	0	0

Notes:

¹ Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

² Fuel used for worker trips assumed to be gasoline.

³ MTCO₂e rates from CalEEMod (3.0 Construction Details).

⁴ For CO₂e emissions, The Climate Registry, 2022 Default Emission Factors, see Table 2.1 (U.S. Default Factors for Calculating CO₂ Emissions from Combustion of Transport Fuels);

Climate Registry Conversion Ratios:

- Gasoline: 8.78 kg CO₂ per gallon / 1,000 kg per metric ton

- Diesel: 10.21 kg CO₂ per gallon / 1,000 kg per metric ton

Construction Water Energy

Daily Soil Disturbance ¹	2	acres	
Days of Soil Disturbance ²	41	days	
Water Concentration ³	3,020	gallons/acre	
Water Energy Intensity ⁴	11,110	kWh/MG	
Total Construction Water	0.19	million gallons	
Construction Water Energy	2,063	kWh	6.94E-07
	0.0021	GWh	

Notes:

¹ Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Detail) and maximum SCAQMD LST values for soil-disturbing equipment.

² Number of days of construction (site prep and grading phases) with soil-disturbing equipment per CalEEMod (3.0 Construction Detail).

³ Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.

⁴ Water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343.

Operational Fuel

Vehicle Type	Percent ¹
Passenger Cars	0.94
Light/Medium Trucks	0.05
Heavy Trucks/Other	0.01
Total Trucks	
Total	

Annual VMT ²	MPG ³	Annual Fuel (Gallons)	Fuel Type	Los Angeles Gallons (2026) ⁴	Los Angeles Percent	
986,262	21.6	45,660	Gas	3,446,400,365	0.00132%	
2,977	17.2	173	Diesel	535,038,344	0.0000%	
531	6.1	87	Diesel	535,038,344	0.0000%	0.00005%
60,602		260				
		45,920		3,981,438,709		

Total VMT

1,046,864

Fleet Mix -

Land Use	LDA	LDT1	LDT2	MCY	MDV	LHD1	LHD2	MHD	OBUS	UBUS	SBUS	MH	HHD
Refrigerated Warehouse	0.499324948	0.04306912	0.236176893	0.021704325	0.141835183	0.026537105	0.006727839	0.010916517	0.000854919	0.000621874	0.000647065	0.002819688	0.00876454
General Office Building	0.499324948	0.04306912	0.236176893	0.021704325	0.141835183	0.026537105	0.006727839	0.010916517	0.000854919	0.000621874	0.000647065	0.002819688	0.00876454

Notes:

¹ Percent of vehicle trip distribution based on fleet mix from CalEEMod (4.4 Fleet Mix).

² Total annual operational VMT based on mitigated annual VMT from CalEEMod (4.2 Trip Summary Information).

³ Average fuel economy derived from Department of Transportation.

⁴ Total annual county fuel per EMFAC 2017 model of projected operational fuel usage.

Operational Water Energy

Mitigated Indoor	39.0	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	0	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	508,658	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Refrigerated Warehouse	38.8	0.1	38.8	0.1
General Office Building	0.20	-	0.20	-
Total Operational Water	39	0	39	0

Notes:

¹ Indoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, distribution, and wastewater.

² Outdoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, and distribution.

³ Operational water use values per CalEEMod (7.2 Water by Land Use).

Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	Los Angeles County Annual Energy (2022) ²	Percentage Increase	
Electricity (kWh/yr)	2,854,944	68,484,956,280	0.0042%	
Water Electricity (kWh/yr)	508,658	68,484,956,280	0.0007%	
Total Electriciry (kWh/yr)	3,303,894	68,484,956,280	0.0048%	3.303894047

Land Use	Electricity ¹ (kWh/yr)	
	Unmitigated	Mitigated
Refrigerated Warehouse	2,822,690	2,822,690
Parking Lot	14,424	14,424
General Office Building	17,831	17,831
Total Energy	2,854,944	2,854,944

Notes:

¹ Electricity use per CalEEMod (5.3 Energy by Land Use).

² County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov.