

Construction Fuel Consumption

On-Site Diesel ¹ (off-road construction Equipment)	MTCO ₂ e	Gallons of Fuel ⁴	Alameda County Fuel Consumption in 2027 (Start of Construction)	Percent
Demolition	69	6,759		
Site Preparation/Grading	447	44,039		
Building Construction	331	32,611		
Paving	42	4,138		
Architectural Coating	4	394		
Total	893	87,941	132,497,214	0.0664%

on-site diesel = equipment working onsite
off-site diesel = hauling

these 2 numbers are the same

Off-Site Diesel ¹ (on-road construction trips)	MTCO ₂ e	Gallons of Fuel ⁴	Alameda County Fuel Consumption in 2027 (Start of Construction)	Percent
Demolition	238	23,494		
Site Preparation/Grading	733	72,217		
Building Construction	118	11,626		
Paving	0	0		
Architectural Coating	0	0		
Total	1,089	107,336	132,497,214	0.0810%

Numbers to write in the Energy Study- "table: energy consumption during construction"
Numbers to write from the county info (EMFAC gas & diesel consumption for the county)

these 2 numbers are the same

Off-Site Gasoline ²	MTCO ₂ e	Gallons of Fuel ⁴	Alameda County Fuel Consumption in 2027 (Start of Construction)	Percent
Demolition	2	227		
Site Preparation/Grading	11	1,249		
Building Construction	90	10,216		
Paving	3	341		
Architectural Coating	6	681		
Total	112	12,713	490,480,761	0.0026%

Total Diesel Fuel		195,277	132,497,214	0.1474%
Total Gasoline Fuel		12,713	490,480,761	0.0026%
Total Construction Fuel	2,094	207,990		

Construction Phase ³	Demolition			Site Preparation			Grading/Infrastructure Improvements		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2027	69	238	2	54	6	2	393	727	9
0	0	0	0	0	0	0	0	0	0
Total	69	238	2	54	6	2	393	727	9

Construction Phase ³	Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2028	331	118	90	42	0	3	3	0	4
2029	0	0	0	0	0	0	1	0	2
Total	331	118	90	42	0	3	4	0	6

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 Emissions Details).

⁴ For CO₂e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

Construction Water Energy

Daily Soil Disturbance ¹	126.0	acres
Days of Soil Disturbance ²	64	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	4,934	kWh/MG
Total Construction Water	24.35	million gallons
Construction Water Energy	120,159	kWh
	0.1202	GWh
Alameda County Annual Electricity	10,395	GWh
Percentage Increase	0.00116%	

Notes:

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

² Number of days of construction with soil-disturbing equipment per CalEEMod (5.1 Construction Schedule).

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

⁴ Water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32.

Operational Fuel

UNMITIGATED							RS Percent
Vehicle Type	Percent	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	Alameda County Fuel Consumption in 2029 (Start of Operations) Gallons ³	
Passenger Cars	1.00	4,158,577	21.6	192,527	Gas	476,936,945	0.0404%
Light/Medium Trucks	0.40	37,368	17.2	2,173	Diesel	128,873,141	0.0017%
Heavy Trucks/Other Trucks Total	0.60	56,051	6.1	9,189	Diesel	128,873,141	0.0071%
		93,419		11,361		128,873,141	0.0088%
Total		4,251,996					
MITIGATED							RS Percent
Vehicle Type	Percent	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	Alameda County Fuel Consumption in 2029 (Start of Operations) Gallons ³	
Passenger Cars	1.00	4,158,577	21.6	192,527	Gas	476,936,945	0.0404%
Light/Medium Trucks	0.40	37,368	17.2	2,173	Diesel	128,873,141	0.0017%
Heavy Trucks/Other Trucks Total	0.60	56,051	6.1	9,189	Diesel	128,873,141	0.0071%
		93,419		11,361		128,873,141	0.0088%
Total		4,251,996					

Land Use ⁵	LDA	LDT1	LDT2	MCY	MDV	LHD1	LHD2	OBUS	UBUS	SBUS	MH	HHD
Unrefrigerated Warehouse - No Rail	0.0000	0.0000	17.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	60.0000
Parking Lot	51.6580	3.8288	23.0957	2.2360	12.8072	2.4768	0.6112	0.0768	0.0891	0.0466	0.2007	1.4216

Notes:

¹ Total annual operational VMT based on annual VMT from CalEEMod (5.9 Operational Mobile Sources).

² Average fuel economy derived from Department of Transportation.

³ Total annual county fuel per EMFAC 2021 model of projected operational fuel usage.

Operational Water Energy

UNMITIGATED		
Unmitigated Indoor	71.9	million gallons
Indoor Energy Intensity Factor ¹	6,476	kWh/MG
Unmitigated Outdoor	1	million gallons
Outdoor Energy Intensity Factor ²	4,934	kWh/MG
Operational Water Energy	469,717	kWh
Operational Water Energy	0.4697	GWh
Alameda County Annual Electricity	10,395	GWh
Percentage Increase	0.0045%	
MITIGATED		
Mitigated Indoor	0.0	million gallons
Indoor Energy Intensity Factor ¹	6,476	kWh/MG
Mitigated Outdoor	0	million gallons
Outdoor Energy Intensity Factor ²	4,934	kWh/MG
Operational Water Energy	0	kWh
Operational Water Energy	0.0000	GWh
Alameda County Annual Electricity	10,395	GWh
Percentage Increase	0.0000%	

Land Use ³	Unmitigated (gal/year)		Mitigated (gal/year)	
	Indoor	Outdoor	Indoor	Outdoor
Unrefrigerated Warehouse	71,853,306	890,817	0	0
Parking Lot	0	0	0	0
Total Operational Water (MG/year)	72	1	0	0

Notes:

¹ Indoor water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, distribution, and wastewater.

² Outdoor water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, and distribution.

³ Operational water use values per CalEEMod (5.12 Operational Water and Wastewater Consumption).

Electricity/Natural Gas Energy

UNMITIGATED			
	Unmitigated Project Annual Energy	Alameda County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	3,420,281	10,395,384,395	0.0329%
Electricity (GWh/yr)	3.4203	10,395	0.0329%
Natural Gas (kBTU/yr)	0	37,730,978,800	0.0000%
Natural Gas (therms/yr)	0	377,309,788	0.0000%
MITIGATED			
	Mitigated Project Annual Energy	Alameda County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	0	10,395,384,395	0.0000%
Electricity (GWh/yr)	0.0000	10,395	0.0000%
Natural Gas (kBTU/yr)	0	37,730,978,800	0.0000%
Natural Gas (therms/yr)	0	377,309,788	0.0000%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBTU/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Unrefrigerated Warehouse	3,123,866	0	0	0
Parking Lot	296,415	0	0	0
Total Energy	3,420,281	0	0	0

Notes:

¹ Electricity use per CalEEMod (5.11 Operational Energy Consumption).

² Natural Gas use per CalEEMod (5.11 Operational Energy Consumption).

³ County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov.