

# **Appendix E**

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## Energy Worksheets

### Construction Transportation Energy Worksheet

Emission Source	Emissions (MTCO <sub>2</sub> ) <sup>1</sup>	
	Diesel-Powered	Gasoline-Powered
<b>Demolition (2023)</b>		
Off-Road	38.1	--
Vendor	0.00	--
Hauling	130	--
Worker	--	1.85
<b>Grading (2023)</b>		
Off-Road	42.4	--
Vendor	0.00	--
Hauling	20.3	--
Worker	--	2.03
<b>Building Construction (2023)</b>		
Off-Road	92.0	--
Vendor	25.0	--
Hauling	0.00	--
Worker	--	26.2
<b>Building Construction (2024)</b>		
Off-Road	46.8	--
Vendor	12.6	--
Hauling	0.00	--
Worker	--	13.1
<b>Paving (2024)</b>		
Off-Road	17.6	--
Vendor	0.00	--
Hauling	0.00	--
Worker	--	2.90
<b>Architectural Coating (2024)</b>		
Off-Road	2.31	--
Vendor	0.00	--
Hauling	0.00	--
Worker	--	2.32
<i>Total Emissions in MTCO<sub>2</sub></i>		427.11
<i>Total Emissions in pounds CO<sub>2</sub></i> <sup>2</sup>		941,778
<b>Total Fuel Consumption</b> <sup>3</sup>		<b>42,537 gallons</b>
		<b>5,445 gallons</b>
<p>MTCO<sub>2</sub> = metric tons of carbon dioxide</p> <p>1 MTCO<sub>2</sub> emissions for each phase of construction taken from the CalEEMod output sheets prepared for the Project.</p> <p>2 1 MT of CO<sub>2</sub> = 2,205 pounds of CO<sub>2</sub>.</p> <p>3 Diesel fuel has a CO<sub>2</sub> factor of 22.14 pounds of CO<sub>2</sub> per 1 gallon of diesel fuel. Gasoline has a CO<sub>2</sub> factor of 19.6 pounds of CO<sub>2</sub> per 1 gallon of gasoline. Source: U.S. Energy Information Administration, Environment Carbon Dioxide Emissions Coefficients, Release date: February 2, 2016.</p>		

**Operational Transportation Energy Worksheet**

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: County

Region: Ventura

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Fuel Consumption	MPG
Ventura	2024	HHDT	Aggregate	Aggregate	Diesel	108387979.1	17937.68788	6.04247213
Ventura	2024	LDA	Aggregate	Aggregate	Diesel	11603139.92	273.2029148	42.4707765
Ventura	2024	LDT1	Aggregate	Aggregate	Diesel	84488.0778	3.509781815	24.0721738
Ventura	2024	LDT2	Aggregate	Aggregate	Diesel	7495068.697	235.804937	31.7850372
Ventura	2024	LHDT1	Aggregate	Aggregate	Diesel	101641588.5	4889.944144	20.7858384
Ventura	2024	LHDT2	Aggregate	Aggregate	Diesel	41747084.22	2406.092394	17.350574
Ventura	2024	MDV	Aggregate	Aggregate	Diesel	18610012.86	784.9688819	23.7079626
Ventura	2024	MH	Aggregate	Aggregate	Diesel	3641169.074	354.0010491	10.2857579
Ventura	2024	MHDT	Aggregate	Aggregate	Diesel	79669809.98	8818.356517	9.03454173
Ventura	2024	OBUS	Aggregate	Aggregate	Diesel	2188969.613	261.8385465	8.35999757
Ventura	2024	SBUS	Aggregate	Aggregate	Diesel	2848322.392	372.956806	7.63713745
Ventura	2024	UBUS	Aggregate	Aggregate	Diesel	2133022.195	340.5991166	6.26255939
						<b>Total:</b>	<b>36,678,963</b>	
Ventura	2024	HHDT	Aggregate	Aggregate	Gasoline	21594.06077	5.294266109	4.07876377
Ventura	2024	LDA	Aggregate	Aggregate	Gasoline	3311067133	109519.9686	30.2325428
Ventura	2024	LDT1	Aggregate	Aggregate	Gasoline	291841734.3	11708.69623	24.9252119
Ventura	2024	LDT2	Aggregate	Aggregate	Gasoline	1556771364	63773.86016	24.4108066
Ventura	2024	LHDT1	Aggregate	Aggregate	Gasoline	119588511.7	8793.376467	13.5998399
Ventura	2024	LHDT2	Aggregate	Aggregate	Gasoline	19144678.8	1598.211618	11.9788134
Ventura	2024	MCY	Aggregate	Aggregate	Gasoline	30324513.96	737.6542052	41.1093894
Ventura	2024	MDV	Aggregate	Aggregate	Gasoline	1004509540	50912.54535	19.7300986
Ventura	2024	MH	Aggregate	Aggregate	Gasoline	8973727.099	1813.477865	4.94835215
Ventura	2024	MHDT	Aggregate	Aggregate	Gasoline	11022043.42	2081.556067	5.29509802
Ventura	2024	OBUS	Aggregate	Aggregate	Gasoline	3100552.54	602.4627281	5.14646367
Ventura	2024	SBUS	Aggregate	Aggregate	Gasoline	1675927.061	187.5141498	8.93760318
Ventura	2024	UBUS	Aggregate	Aggregate	Gasoline	1046902.306	210.4589036	4.97437879
						<b>Total:</b>	<b>251,945,077</b>	
Ventura	2024	HHDT	Aggregate	Aggregate	Electricity	317473.7897		0
Ventura	2024	LDA	Aggregate	Aggregate	Electricity	208562933.6		0
Ventura	2024	LDT1	Aggregate	Aggregate	Electricity	725066.9977		0
Ventura	2024	LDT2	Aggregate	Aggregate	Electricity	7953349.134		0
Ventura	2024	LHDT1	Aggregate	Aggregate	Electricity	751658.1198		0
Ventura	2024	LHDT2	Aggregate	Aggregate	Electricity	184333.1652		0
Ventura	2024	MDV	Aggregate	Aggregate	Electricity	8654462.947		0
Ventura	2024	MHDT	Aggregate	Aggregate	Electricity	279782.229		0
Ventura	2024	OBUS	Aggregate	Aggregate	Electricity	10616.47637		0
Ventura	2024	SBUS	Aggregate	Aggregate	Electricity	10397.27245		0
Ventura	2024	UBUS	Aggregate	Aggregate	Electricity	4855.331859		0
Ventura	2024	HHDT	Aggregate	Aggregate	Natural Gas	3187046.658	514.4234879	
Ventura	2024	OBUS	Aggregate	Aggregate	Natural Gas	22572.17431	2.40335676	
Ventura	2024	SBUS	Aggregate	Aggregate	Natural Gas	86909.88336	20.62157589	
Ventura	2024	UBUS	Aggregate	Aggregate	Natural Gas	4126621.003	925.3583935	
Ventura	2024	LDA	Aggregate	Aggregate	Plug-in Hybri	107797752.4	1732.3637	
Ventura	2024	LDT1	Aggregate	Aggregate	Plug-in Hybri	500831.2321	7.291506104	
Ventura	2024	LDT2	Aggregate	Aggregate	Plug-in Hybri	14112040.22	215.2561206	
Ventura	2024	MDV	Aggregate	Aggregate	Plug-in Hybri	8669265.676	138.4131038	

Total VMT	Diesel VMT	Gasoline VMT	Average Diesel MPG*	Average Gasoline MPG*
7,105,096,846	380,050,655	6,359,088,223	14	26
Percent of Total	5.35	89.50		

\* weighted by percentage of VMT for each vehicle category