

Palo Alto Castilleja School Project - Operational Mobile Source Emissions

Passenger Vehicle Trips - Off-Site Light Duty Vehicles (LDA, LDT1, LDT2)

	Units	ROG (VOC)	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂	CO ₂ e	VMT
Trips per Day	trips	279	279	279	279	279	279	279	-	Daily 2,145
Trips per Year	trips	50,220	50,220	50,220	50,220	50,220	50,220	50,220	-	Annual 386,100
Distance Traveled	miles/trip	7.7	7.7	7.7	7.7	7.7	7.7	7.7	-	
Emission Factor	g/mi	0.01	0.36	0.95	0.00	0.07	0.13	333.85	-	
Daily Emissions	lb/day	0.04	1.71	4.49	0.02	0.33	0.63	1578.72	1662.39	
Annual Emissions	lb/year	8.05	308.29	807.63	3.12	59.62	113.63	284169.94	299230.95	
	tons/year	0.00	0.00	0.00	0.00	0.00	0.00	142.08	149.62	
	metric tons/year	0.00	0.00	0.00	0.00	0.00	0.00	128.90	135.73	

Daily Emissions

Total Mobile Emissions					
ROG (VOC)	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
0.04	1.71	44.65	0.02	0.33	0.63

Annual Emissions

CO ₂	CO ₂ e
128.90	135.73

Trip Estimates

Passenger Vehicle Trips - Off-Site Light Duty Vehicles (LDA, LDT1, LDT2)

Total VMT of 386,100; 279 new daily trips = 2,145 daily vehicle miles travelled; annual total is daily * 180 days of class

Daily Trips Annual Trips Distance Traveled

279 50,220 7.69

CO₂-to-CO₂ Equivalent Factors

Source	Units	CO ₂	CH ₄	N ₂ O	CO ₂ /CO ₂ e
Global Warming Potential		1	25	298	
Diesel Trucks	1 g/mi	1,454.29	0.0051	0.0048	1.001
Passenger Vehicles	2 g/mi				1.053

1. California Climate Action Registry. 2009. *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, Tables C.3 and C.4.
2. US EPA, Office of Transportation and Air Quality. 2018. *Greenhouse Gas Emissions from a Typical Passenger Vehicle*