Appendix EN-1

Energy Consumption Estimates

Original Project

Natural Gas

	NaturalGa s Use
Land Use	kBTU/yr
Apartments Mid Rise	2.08E+07
Apartments Mid Rise	974810
City Park	0
Convenience Market (24 Hour)	17344
Discount Club	1.05E+06
Elementary School	3.43E+06
Fast Food Restaurant with Drive Thru	6.88E+06
Gasoline/Service Station	107430
Gasoline/Service Station	232765
General Office Building	3.91E+06
Hardware/Paint Store	175066
High School	3.82E+06
Home Improvement Superstore	874788
Hospital	2.93E+07
Library	0
Office Park	0
Parking Lot	0
Pharmacy/Drugst ore with Drive Thru	175066
Single Family Housing	4.58E+07
Single Family Housing	5.51E+07
Strip Mall	1.02E+06
Strip Mall	1.35E+06
Strip Mall	612460
Supermarket	1.64E+06
Unenclosed Parking with Elevator	0
User Defined Industrial	0
Total	177,268,689

Electricity

	Electricity Use
Land Use	kWh/yr
Apartments Mid Rise	425646
Apartments Mid Rise	9.10E+06
City Park	0
Convenience Market (24 Hour)	37024
Discount Club	2.24E+06
Elementary School	1.65E+06
Fast Food Restaurant with Drive Thru	1.61E+06
Gasoline/Service Station	45540
Gasoline/Service Station	98670
General Office Building	4.31E+06
Hardware/Paint Store	373711
High School	1.83E+06
Home Improvement Superstore	1.87E+06
Hospital	8.81E+06
Library	0
Office Park	0
Parking Lot	0
Parking Lot	119525
Parking Lot	135380
Parking Lot	158200
Parking Lot	162820
Parking Lot	213430
Parking Lot	2730
Parking Lot	27440
Parking Lot	32935
Parking Lot	47880
Parking Lot	53970
Parking Lot	5495
Parking Lot	60690
Parking Lot	83545
Parking Lot	95130
Pharmacy/Drugst ore with Drive Thru	373711
Single Family Housing	1.50E+07
Single Family Housing	1.80E+07
Strip Mall	1.31E+06
Strip Mall	2.18E+06
Strip Mall	2.87E+06
Supermarket	2.61E+06
Unenclosed Parking with Elevator	0
Unenclosed Parking with Elevator	336396
User Defined Industrial	0
Total	76,260,928.00

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	122,716,810	42,503,106
Commercial + Office Zones	47,303,379	28,745,256
Public/Quasi Public Zones	7,248,500	3,477,000
Parking Lots/Parking Garages	0	1,535,566
Total	177,268,689	76,260,928

	NaturalGa s Use	Electricity Use
	kBTU/yr	MWh/yr
Residential Designations	122,717	42,503
Commercial + Office Zones	47,303	28,745
Public/Quasi Public Zones	7,249	3,477
Parking Lots/Parking Garages	-	1,536
Total	177,269	76,261

Original Project with Mitigation Measures

Natural Gas

	NaturalGa s Use
Land Use	kBTU/yr
Apartments Mid Rise	865363
Apartments Mid Rise	1.85E+07
City Park	0
Convenience Market (24 Hour)	15117
Discount Club	915048
Elementary School	2.92E+06
Fast Food Restaurant with Drive Thru	6.52E+06
Gasoline/Service Station	209200
Gasoline/Service Station	96553.7
General Office Building	3.33E+06
Hardware/Paint Store	152587
High School	3.25E+06
Home Improvement Superstore	762462
Hospital	2.54E+07
Library	0
Office Park	0
Parking Lot	0
Pharmacy/Drugst ore with Drive Thru	152587
Single Family Housing	3.94E+07
Single Family Housing	4.75E+07
Strip Mall	1.17E+06
Strip Mall	533818
Strip Mall	890956
Supermarket	1.48E+06
Unenclosed Parking with Elevator	0
User Defined Industrial	0
Total	154,036,562

Electricity

	Electricity Use
Land Use	kWh/yr
Apartments Mid Rise	425,646
Apartments Mid Rise	9,096,060
City Park	-
Convenience Market (24 Hour)	37,024
Discount Club	2,241,110
Elementary School	1,647,000
Fast Food Restaurant with Drive Thru	1,614,180
Gasoline/Service Station	45,540
Gasoline/Service Station	98,670
General Office Building	4,308,900
Hardware/Paint Store	373,711
High School	1,830,000
Home Improvement Superstore	1,867,400
Hospital	8,811,020
Library	-
Office Park	-
Parking Lot	-
Parking Lot	119,525
Parking Lot	135,380
Parking Lot	158,200
Parking Lot	162,820
Parking Lot	213,430
Parking Lot	2,730
Parking Lot	59166.8
Parking Lot	60894.7
Parking Lot	79822.8
Pharmacy/Drugst ore with Drive Thru	133664
Single Family Housing	5.53E+06
Single Family Housing	6.66E+06
Strip Mall	1.03E+06
Strip Mall	467616
Strip Mall	780464
Supermarket	954939
Unenclosed Parking with Elevator	0
Unenclosed Parking with Elevator	125812
User Defined Industrial	0
Total	49,059,955

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	106,254,163	21,703,006
Commercial + Office Zones	41,608,819	22,762,168
Public/Quasi Public Zones	6,173,580	3,477,000
Parking Lots/Parking Garages	0	1,117,781
Total	154,036,562	49,059,955

	NaturalGa s Use	Electricity Use	
	kBTU/yr	kWh/yr	
Residential Designations	106,254.16	21,703.01	
Commercial + Office Zones	41,608.82	22,762.17	
Public/Quasi Public Zones	6,173.58	3,477.00	
Parking Lots/Parking Garages	-	1,117.78	
Total	154,036.56	49,059.96	(0.36)

Alternative 2

Natural Gas

	NaturalGa s Use
Land Use	kBTU/yr
Apartments Mid Rise	2.00E+07
Apartments Mid Rise	974810
City Park	0
Convenience Market (24 Hour)	17886
Discount Club	1.06E+06
Elementary School	3.43E+06
Fast Food Restaurant with Drive Thru	6.93E+06
Gasoline/Service Station	107430
Gasoline/Service Station	232765
General Office Building	1.00E+07
Hardware/Paint Store	176150
High School	3.82E+06
Home Improvement Superstore	880750
Library	0
Parking Lot	0
Pharmacy/Drugst ore with Drive Thru	176150
Single Family Housing	9.15E+07
Strip Mall	1.36E+06
Strip Mall	616796
Strip Mall	939828
Supermarket	1.65E+06
User Defined Industrial	0
Total	143,847,335

Electricity

	Electricity Use
Land Use	kWh/yr
Apartments Mid Rise	425646
Apartments Mid Rise	8.73E+06
City Park	0
Convenience Market (24 Hour)	38181
Discount Club	2.26E+06
Elementary School	1.65E+06
Fast Food	1.63E+06
Gasoline/Service	45540
Gasoline/Service	98670
General Office	1.11E+07
Hardware/Paint	376025
High School	1.83E+06
Home Improvement	1.88E+06
Library	0
Parking Lot	0
Parking Lot	120120
Parking Lot	136605
Parking Lot	145600
Parking Lot	163905
Parking Lot	213430
Parking Lot	214655
Parking Lot	2590
Parking Lot	2730
Parking Lot	27300
Parking Lot	32795
Parking Lot	47880
Parking Lot	54880
Parking Lot	5495
Parking Lot	95585
Pharmacy/Drugst ore with Drive Thru	376025
Single Family Housing	2.99E+07
Strip Mall	1.32E+06
Strip Mall	2.01E+06
Strip Mall	2.90E+06
Supermarket	2.63E+06
User Defined Industrial	0
Total	70,396,757

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	112,413,210	39,042,386
Commercial + Office Zones	24,185,625	26,613,801
Public/Quasi Public Zones	7,248,500	3,477,000
Parking Lots/Parking Garages	0	1,263,570
Total	143,847,335	70,396,757

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	112,413	39,042
Commercial + Office Zones	24,186	26,614
Public/Quasi Public Zones	7,249	3,477
Parking Lots/Parking Garages	-	1,264
Total	143,847	70,397

Alternative 2 with Mitigation Measures

Natural Gas

	NaturalGa s Use
Land Use	kBTU/yr
Apartments Mid Rise	871718
Apartments Mid Rise	1.79E+07
City Park	0
Convenience Market (24 Hour)	15722.7
Discount Club	929070
Elementary School	2.95E+06
Fast Food Restaurant with Drive Thru	6.59E+06
Gasoline/Service Station	210568
Gasoline/Service Station	97185.2
General Office Building	8.65E+06
Hardware/Paint Store	154845
High School	3.28E+06
Home Improvement Superstore	774225
Library	0
Parking Lot	0
Pharmacy/Drugst ore with Drive Thru	154845
Single Family Housing	7.95E+07
Strip Mall	1.19E+06
Strip Mall	542196
Strip Mall	826157
Supermarket	1.50E+06
User Defined Industrial	0
Total	126,108,882

Electricity

	Electricity Use
Land Use	kWh/yr
Apartments Mid Rise	157932
Apartments Mid Rise	3.24E+06
City Park	0
Convenience Market (24 Hour)	13802.1
Discount Club	815578
Elementary School	595531
Fast Food Restaurant with Drive Thru	594372
Gasoline/Service Station	16605.5
Gasoline/Service Station	35978.6
General Office Building	3.96E+06
Hardware/Paint Store	135930
High School	661701
Home Improvement Superstore	679649
Library	0
Parking Lot	0
Parking Lot	1029.21
Parking Lot	10292.1
Parking Lot	12363.7
Parking Lot	18050.8
Parking Lot	20689.8
Parking Lot	2071.61
Parking Lot	36035.5
Parking Lot	45285.2
Parking Lot	51500.1
Parking Lot	54891.2
Parking Lot	61792.2
Parking Lot	80463.1
Parking Lot	80924.9
Parking Lot	976.43
Pharmacy/Drugst ore with Drive Thru	135930
Single Family Housing	1.11E+07
Strip Mall	1.05E+06
Strip Mall	475963
Strip Mall	725237
Supermarket	969818
User Defined Industrial	0
Total	25,875,033

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	98,233,118	14,532,132
Commercial + Office Zones	21,639,774	9,609,303
Public/Quasi Public Zones	6,235,990	1,257,232
Parking Lots/Parking Garages	0	476,366
Total	126,108,882	25,875,033

	NaturalGa s Use	Electricity Use
	kBTU/yr	kWh/yr
Residential Designations	98,233	14,532
Commercial + Office Zones	21,640	9,609
Public/Quasi Public Zones	6,236	1,257
Parking Lots/Parking Garages	-	476
Total	126,109	25,875

Energy Calculations Summary (Original Project)

Operational Fuel Use Summary

Vehicle Class	Diesel (Gallons)	Gasoline Gallons	Natural Gas (DEG)	Electricity (MWh)
Passenger	17,325	2,584,696	-	-
Truck	661,025	505,025	15,413	
Bus	19,365	54,010	48,586	
Total	**697,715**	**3,143,731**	**64,000**	**-**

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2017.
3. Annual VMT obtained from EMFAC Sacramento County output file.

Vehicle Type	Diesel (gal/year)	Gasoline (gal/year)	Natural Gas (DEG/year)	Electricity (MWh/year)
Passenger Vehicles	17,325	2,584,696	-	N/A
Trucks	661,025	505,025	15,413	N/A
Buses	19,365	54,010	48,586	N/A
Total	**697,715**	**3,143,731**	**64,000**	**N/A**
Total	**624,456**	**2,813,641**	**57,280**	**6,307**
	-10%	**-10%**	**-10%**	**#VALUE!**

Notes: gal/year = gallons per year, DEG/year = diesel equivalent gallons per year, MWh/year = megawatt hours per year, N/A = not applicable

Source: Calculations by Ascent Environmental in 2019

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
1	547,986	5,097,465	2,192,103	2,740,088
TOTAL	547,986	5,097,465	2,192,103	2,740,088

Total Gasoline	5,097,465	gallons
Total Diesel	2,740,088	gallons

Phase 3 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	125	14,820
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	125	7,178
Grading	Excavators	2	8.00	158	0.38	322	15,466
Grading	Rubber Tired Dozers	1	8.00	247	0.40	322	12,725
Grading	Scrapers	2	8.00	367	0.48	322	45,379
Grading	Grader	1	8.00	187	0.41	322	9,875
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	322	9,245
Building Construction	Cranes	1	7.00	231	0.29	3224	75,592
Building Construction	Forklifts	3	8.00	89	0.20	3224	68,865
Building Construction	Generator Sets	1	8.00	84	0.74	3224	80,162
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	3224	121,495
Building Construction	Welders	1	8.00	46	0.45	3224	26,695
Paving	Pavers	2	8.00	130	0.42	229	10,003
Paving	Paving Equipment	2	8.00	132	0.36	229	8,706
Paving	Rollers	2	8.00	80	0.38	229	5,569
Architectural Coating	Air Compressors	1	6.00	78	0.48	3224	36,212
						TOTAL	547,986

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

	Diesel	Gasoline On-road (gallons)	Gasoline
Site Preparation	21,998		706
Grading	92,691		2,022
Building Construction	2,564,910		4,244,378
Paving	24,278		849,280
Architectural Coating	36,212		1,079
Total	2,740,088	-	5,097,465
Annual	195,721		364,105

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	125	2250	0	0	10.00	6.50	20.00	22500	0	-	706	0
Architectural Coating	839	0	0	3224	2,704,936	0	0	10.00	6.50	20.00	27,049,360.00	0.00	-	849,280	0
Building Construction	4,193	1,018	0	3224	13,518,232	3,282,032	0	10.00	6.50	20.00	135,182,320.00	21,333,208.00	-	4,244,378	2,192,103
Grading	20	0	0	322	6,440	0	0	10.00	6.50	20.00	64,400.00	0.00	-	2,022	0
Paving	15	0	0	229	3,435	0	0	10.00	6.50	20.00	34,350.00	0.00	-	1,079	0
													TOTAL	5,097,465	2,192,103

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
SACRAMENTO	2032	LDA	Aggregated	Aggregated	GAS	777,204	24,598,561	3,615,040	596.1	0.00	41.27	31.85	9.73
SACRAMENTO	2032	LDT1	Aggregated	Aggregated	GAS	252,032	7,697,955	1,158,594	219.5	0.00	35.07		
SACRAMENTO	2032	LDT2	Aggregated	Aggregated	GAS	13,901	436,235	207,100	44.5	0.00	9.79		
SACRAMENTO	2032	T7 tractor construction	Aggregated	Aggregated	DSL	1,124	135,551	14,278	0.00	13.93	9.73		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/d	Fuel (gal/day)	mi/gal	CO2_RUNEX (tons/da	CO2 (lb/day)	% of vehicle class	VMT by project vehicle cl	Gallons of fuel
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	9165.966703	300064.331	43173.70701	4.616796805	4616.796805	64.99405187	51.80251146	103,605	0.7%	835,857.6	12,861
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	38.03557668	615.1503412	137.3927489	0.023682153	23.68215294	25.97527103	0.265724278	531	0.0%	1,713.6	66
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2367.713174	76467.56923	11137.26911	1.57907521	1579.07521	48.42553966	17.71792546	35,436	0.2%	213,007.6	4,399
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1124.24932	135550.6769	14277.96636	13.9285652	13928.5652	9.731847823	151.342581	302,685	0.3%	377,589.2	38,799
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	777204.2827	24598561.32	3615039.809	596.0729678	596072.9678	41.26770152	5480.073378	10,960,147	54.2%	68,521,620.2	1,660,418
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	252032.144	7697954.798	1158593.661	219.5071626	219507.1626	35.06926474	2014.240107	4,028,480	17.0%	21,443,381.5	611,458
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	13900.71044	436235.1319	207099.8735	44.53976755	44539.76755	9.794283982	416.4475213	832,895	1.0%	1,215,174.2	124,070
Total								45415211.09							100%		

Gasoline Sum	3,153,742
Diesel Sum	695,510

Project VMT (mi/yr) 126,508,368 From CalEEMod output

	Gas (gal)	Diesel (gal)	Natural Gas (DEG)	Electricity (kWh)
Passenger	2,584,696	17,325		#REF!
Truck	505,025	661,025	15,413	
Bus	54,010	19,365	48,586	
Total	3,143,731	697,715	64,000	#REF!

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2005
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trip/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

| Region | Calendar Year | Vehicle Category | Model Year | Speed | Fuel | Population | VMT | Trips | RUN_EXH | RUN_CRA | RUN_PM | RUN_ROG | RUN_DIURN | RUN_HTSK | RUN_NOX | RUN_CO | RUN_SOX | RUN_PM10 | RUN_PM25 | RUN_NH3 | RUN_CO2 | RUN_CH4 | RUN_N2O | RUN_HC | TOG_RESTL | TOG_DIURN | TOG_HTSK | TOG_RUNLS | TOG_RESTL | TOG_DIURN | TOG_HTSK | TOG_RUNLS | CO_RUNEX | CO_RESTL | CO_PXEX | CO_CRANK | CO_TOTEX | NOx_RUNEX | NOx_RESTL | NOx_PXEX | NOx_CRANK | NOx_TOTEX | CH4_RUNEX | CH4_RESTL | CH4_PXEX | CH4_CRANK | CH4_TOTEX | CO2_RUNEX | CO2_RESTL | CO2_PXEX | CO2_CRANK | CO2_TOTEX | CH4_RUNEX | CH4_RESTL | CH4_PXEX | CH4_CRANK | CH4_TOTEX | PM2_5_RUNEX | PM2_5_RESTL | PM2_5_PXEX | PM2_5_CRANK | PM2_5_TOTEX | PM2_5_TIRWR | PM2_5_PMBW | PM2_5_TOTAL | PM2_5_DIESEL | PM2_5_SOIL | SOx_RUNEX | SOx_RESTL | SOx_PXEX | SOx_CRANK | SOx_TOTEX | N2O_RUNEX | N2O_RESTL | N2O_PXEX | N2O_CRANK | N2O_TOTEX | Fuel Consumption |
|---|---|---

Energy Calculations Summary

Operational Fuel Use Summary

Vehicle Class	Diesel (Gallons)	Gasoline Gallons	Natural Gas (DEG)	Electricity (MWh)
Passenger	17,325	2,584,696	-	-
Truck	661,025	505,025	15,413	
Bus	19,365	54,010	48,586	
Total	**697,715**	**3,143,731**	**64,000**	**-**

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2017.
3. Annual VMT obtained from EMFAC Sacramento County output file.

Vehicle Type	Diesel (gal/year)	Gasoline (gal/year)	Natural Gas (DEG/year)	Electricity (MWh/year)
Passenger Vehicles	17,325	2,584,696	-	N/A
Trucks	661,025	505,025	15,413	N/A
Buses	19,365	54,010	48,586	N/A
Total	**697,715**	**3,143,731**	**64,000**	**N/A**
Total	**624,456**	**2,813,641**	**57,280**	**6,307**
	-10%	**-10%**	**-11%**	**#VALUE!**

Notes: gal/year = gallons per year, DEG/year = diesel equivalent gallons per year, MWh/year = megawatt hours per year, N/A = not applicable

Source: Calculations by Ascent Environmental in 2019

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
1	547,986	5,507,428	2,159,802	**2,707,788**
TOTAL	**547,986**	**5,507,428**	**2,159,802**	**2,707,788**

Total Gasoline	**5,507,428**	**gallons**
Total Diesel	**2,707,788**	**gallons**

Phase 3 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	125	14,820
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	125	7,178
Grading	Excavators	2	8.00	158	0.38	322	15,466
Grading	Rubber Tired Dozers	1	8.00	247	0.40	322	12,725
Grading	Scrapers	2	8.00	367	0.48	322	45,379
Grading	Grader	1	8.00	187	0.41	322	9,875
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	322	9,245
Building Construction	Cranes	1	7.00	231	0.29	3224	75,592
Building Construction	Forklifts	3	8.00	89	0.20	3224	68,865
Building Construction	Generator Sets	1	8.00	84	0.74	3224	80,162
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	3224	121,495
Building Construction	Welders	1	8.00	46	0.45	3224	26,695
Paving	Pavers	2	8.00	130	0.42	229	10,003
Paving	Paving Equipment	2	8.00	132	0.36	229	8,706
Paving	Rollers	2	8.00	80	0.38	229	5,569
Architectural Coating	Air Compressors	1	6.00	78	0.48	3224	36,212
						TOTAL	547,986

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

	Diesel	Gasoline On-road (gallons)	Gasoline
Site Preparation	21,998		706
Grading	92,691		2,022
Building Construction	2,532,610		4,586,519
Paving	24,278		917,101
Architectural Coating	36,212		1,079
Total	2,707,788	-	5,507,428
Annual	193,413		393,388

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	125	2250	0	0	10.00	6.50	20.00	22500	0	-	706	0
Architectural Coating	906	0	0	3224	2,920,944	0	0	10.00	6.50	20.00	29,209,440.00	0.00	-	917,101	0
Building Construction	4,531	1,003	0	3224	14,607,944	3,233,672	0	10.00	6.50	20.00	146,079,440.00	21,018,868.00	-	4,586,519	2,159,802
Grading	20	0	0	322	6,440	0	0	10.00	6.50	20.00	64,400.00	0.00	-	2,022	0
Paving	15	0	0	229	3,435	0	0	10.00	6.50	20.00	34,350.00	0.00	-	1,079	0
													TOTAL	5,507,428	2,159,802

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
SACRAMENTO	2032	LDA	Aggregated	Aggregated	GAS	777,204	24,598,561	3,615,040	596.1	0.00	41.27	31.85	9.73
SACRAMENTO	2032	LDT1	Aggregated	Aggregated	GAS	252,032	7,697,955	1,158,594	219.5	0.00	35.07		
SACRAMENTO	2032	LDT2	Aggregated	Aggregated	GAS	13,901	436,235	207,100	44.5	0.00	9.79		
SACRAMENTO	2032	T7 tractor construction	Aggregated	Aggregated	DSL	1,124	135,551	14,278	0.00	13.93	9.73		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/d	Fuel (gal/day)	mi/gal	CO2_RUNEX (tons/da	CO2 (lb/day)	% of vehicle class	VMT by project vehicle cl	Gallons of fuel
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	9165.966703	300064.331	43173.70701	4.616796805	4616.796805	64.99405187	51.80251146	103,605	0.7%	835,857.6	12,861
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	38.03557668	615.1503412	137.3927489	0.023682153	23.68215294	25.97527103	0.265724278	531	0.0%	1,713.6	66
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2367.713174	76467.56923	11137.26911	1.57907521	1579.07521	48.42553966	17.71792546	35,436	0.2%	213,007.6	4,399
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1124.24932	135550.6769	14277.96636	13.9285652	13928.5652	9.731847823	151.342581	302,685	0.3%	377,589.2	38,799
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	777204.2827	24598561.32	3615039.809	596.0729678	596072.9678	41.26770152	5480.073378	10,960,147	54.2%	68,521,620.2	1,660,418
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	252032.144	7697954.798	1158593.661	219.5071626	219507.1626	35.06926474	2014.240107	4,028,480	17.0%	21,443,381.5	611,458
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	13900.71044	436235.1319	207099.8735	44.53976755	44539.76755	9.794283982	416.4475213	832,895	1.0%	1,215,174.2	124,070
Total								45415211.09							100%		

Gasoline Sum	3,153,742
Diesel Sum	695,510

Project VMT (mi/yr) 126,508,368 From CalEEMod output

	Gas (gal)	Diesel (gal)	Natural Gas (DEG)	Electricity (kWh)
Passenger	2,584,696	17,325		#REF!
Truck	505,025	661,025	15,413	
Bus	54,010	19,365	48,586	
Total	3,143,731	697,715	64,000	#REF!

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2005
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trip/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

| Region | Calendar Year | Vehicle Category | Model Year | Speed | Fuel | Population | VMT | Trips | RUN_EXH | RUN_CRA | RUN_PM | RUN_ROG | RUN_DIURN | RUN_HTSK | RUN_NOX | RUN_CO | RUN_SOX | RUN_PM10 | RUN_PM25 | RUN_NH3 | RUN_CO2 | RUN_CH4 | RUN_N2O | RUN_HC | TOG_RESTL | TOG_DIURN | TOG_HTSK | TOG_RUNLS | TOG_RESTL | TOG_DIURN | TOG_HTSK | TOG_RUNLS | CO_RUNEX | CO_RESTL | CO_PXEX | CO_CRANK | CO_TOTEX | NOx_RUNEX | NOx_RESTL | NOx_PXEX | NOx_CRANK | NOx_TOTEX | CH4_RUNEX | CH4_RESTL | CH4_PXEX | CH4_CRANK | CH4_TOTEX | CO2_RUNEX | CO2_RESTL | CO2_PXEX | CO2_CRANK | CO2_TOTEX | CH4_RUNEX | CH4_RESTL | CH4_PXEX | CH4_CRANK | CH4_TOTEX | PM2_5_RUNEX | PM2_5_RESTL | PM2_5_PXEX | PM2_5_CRANK | PM2_5_TOTEX | PM2_5_TIRWR | PM2_5_PMBW | PM2_5_TOTAL | PM2_5_DIESEL | PM2_5_SOIL | SOx_RUNEX | SOx_RESTL | SOx_PXEX | SOx_CRANK | SOx_TOTEX | N2O_RUNEX | N2O_RESTL | N2O_PXEX | N2O_CRANK | N2O_TOTEX | Fuel Consumption |
|---|---|---

Energy Calculations Summary

Operational Fuel Use Summary

Vehicle Class	Diesel (Gallons)	Gasoline Gallons	Natural Gas (DEG)	Electricity (MWh)
Passenger	15,506	2,313,304	-	6,307
Truck	591,618	451,998	13,795	
Bus	17,332	48,339	43,485	
Total	**624,456**	**2,813,641**	**57,280**	**6,307**

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2017.
3. Annual VMT obtained from EMFAC Sacramento County output file.

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
1	547,986	5,097,465	2,192,103	2,740,088
TOTAL	547,986	5,097,465	2,192,103	2,740,088

Total Gasoline	5,097,465	gallons
Total Diesel	2,740,088	gallons

Phase 3 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	125	14,820
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	125	7,178
Grading	Excavators	2	8.00	158	0.38	322	15,466
Grading	Rubber Tired Dozers	1	8.00	247	0.40	322	12,725
Grading	Scrapers	2	8.00	367	0.48	322	45,379
Grading	Grader	1	8.00	187	0.41	322	9,875
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	322	9,245
Building Construction	Cranes	1	7.00	231	0.29	3224	75,592
Building Construction	Forklifts	3	8.00	89	0.20	3224	68,865
Building Construction	Generator Sets	1	8.00	84	0.74	3224	80,162
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	3224	121,495
Building Construction	Welders	1	8.00	46	0.45	3224	26,695
Paving	Pavers	2	8.00	130	0.42	229	10,003
Paving	Paving Equipment	2	8.00	132	0.36	229	8,706
Paving	Rollers	2	8.00	80	0.38	229	5,569
Architectural Coating	Air Compressors	1	6.00	78	0.48	3224	36,212
						TOTAL	547,986

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

	Diesel	Gasoline On-road (gallons)	Gasoline
Site Preparation	21,998		706
Grading	92,691		2,022
Building Construction	2,564,910		4,244,378
Paving	24,278		1,079
Architectural Coating	36,212		849,280
Total	2,740,088	-	5,097,465
Annual	182,673		339,831

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	125	2250	0	0	10.00	6.50	20.00	22500	0	-	706	0
Architectural Coating	839	0	0	3224	2,704,936	0	0	10.00	6.50	20.00	27,049,360.00	0.00	-	849,280	0
Building Construction	4,193	1,018	0	3224	13,518,232	3,282,032	0	10.00	6.50	20.00	135,182,320.00	21,333,208.00	-	4,244,378	2,192,103
Grading	20	0	0	322	6,440	0	0	10.00	6.50	20.00	64,400.00	0.00	-	2,022	0
Paving	15	0	0	229	3,435	0	0	10.00	6.50	20.00	34,350.00	0.00	-	1,079	0
													TOTAL	5,097,465	2,192,103

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
SACRAMENTO	2032	LDA	Aggregated	Aggregated	GAS	777,204	24,598,561	3,615,040	596.1	0.00	41.27	31.85	9.73
SACRAMENTO	2032	LDT1	Aggregated	Aggregated	GAS	252,032	7,697,955	1,158,594	219.5	0.00	35.07		
SACRAMENTO	2032	LDT2	Aggregated	Aggregated	GAS	13,901	436,235	207,100	44.5	0.00	9.79		
SACRAMENTO	2032	T7 tractor construction	Aggregated	Aggregated	DSL	1,124	135,551	14,278	0.00	13.93	9.73		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Home	Alternative 2 Project-Related VMT	113,259,971	miles (100% of Total):	LD and MD DUs Pre-Wired	3,540
Charging	Total Alternative 2 Dwelling Units	5,690	DU total):	HD Dus Pre-Wired (10% of	205
Stations --	Annual VMT per DU	19,905	mi/yr	Total DU Pre-Wired	3,745
Project-	Percent of Pre-Wired DU with EV	15%			
Related VMT	Total EV miles	11,181,685	% Pre-Wired with EV * Number of Pre-Wired		
Alternative 2 Project-Related Mobile Only		13.5	tpy		
Alternative 2 Project-Related Mobile Only		71.4	tpy		
Alternative 2 Project-Related Mobile Only		35,957	metric tons per year		
ROG Emissions Saved		**1.33**	tpy … ROG *(EV miles / Project miles)		
NOX Emissions Saved		**7.05**	tpy … NOX *(EV miles / Project miles)		
CO2e Emissions Saved		3,550	MT/yr … CO2e *(EV miles / Project miles)		
Required electricity for charging (MWh/yr)		3,522	EV miles * kWh/100 miles		
Emissions from charging electricity (MT/yr)		379			
Net CO2e Emissions Saved		**3,171**	MT/yr		

1	Number of Charging Stations	480	From calcualted number of electrically
2	Connections per Charging Station	2	2 Connections at each charging station
3	Average Charging Hours per Connection per Day	3	Note 1
4	Average Total Hours Charging per year for all Connections	1,051,200	Item 1 * Item 2 * Item 3 * 365
5	Typical Average Charging Rate (kWh/hr)	6	Note 2
6	Total kWh charged per year	6,307,200	Item 4 * Item 5
7	Total MWh charged per year	6,307	Item 6 / 1000
8			**Public Charging Stations**
9	Average Efficiency of EV LDV (kWh/100 mi)	31.5	Note 3
10	Average Efficiency of EV LDV (miles per kWh)	3.2	100 mi / Item 9
11	Number of Equivalent Miles Charged per year (gasoline miles avoided)	20,022,857	Item 6 * Item 10
12			
13	SMUD CO2 intensity in 2030 (lbs/MWh)	236.9	Note 4
14			
15	ROG Running Only emission factor for gasoline vehicles in 2035 (g/mi)	0.01476	Note 5
16			
17	NOx running emission factor for gasoline vehicles in 2035 (g/mi)	0.02840	Note 5
18			
19	CO2 running emission factor for gasoline vehicles in 2035 (g/mi)	234.61	Note 5
20			
21			
22	**Annual ROG Emissions Saved through Charging (tons per year)**	0.33	Item 11 * Item 15 converted to tons
23	**Annual NOx Emissions Saved through Charging (tons per year)**	0.63	Item 11 * Item 17 converted to tons
24			
25	Annual CO2 Emissions Saved through Charging (tons per year)	5178	Item 11 * Item 19 converted to tons
26	Annual CO2 Emissions Saved through Charging (metric tons per year)	4701	Convert Item 23 to metric tons
27	Annual CO2 Emissions from Electricity required to charge (metric tons per year)	678	Item 7 * Item 13 converted to metric tons
28	**Net Annual CO2 Emissions Saved (metric tons peryear)**	**4022**	Item 26 minus Item 27

Home	Alternative 2 Project-Related VMT	90,802,301	miles (100% of Total):	LD and MD DUs Pre-Wired	3,540
Charging	Total	5,690	DU	HD Dus Pre-Wired (10% of	205
Stations --	Annual VMT per	15,958	mi/yr	Total DU Pre-Wired	3,745
Cumulative	Percent of Pre-Wired DU with EV	15%			
VMT	Total EV miles	8,964,533	% Pre-Wired with EV * Number of Pre-Wired		
Alternative 2 Project-Related Mobile Only		11.5	tpy		
Alternative 2 Project-Related Mobile Only		61.1	tpy		
Alternative 2 Project-Related Mobile Only		28,405	metric tons per year		
ROG Emissions Saved		**1.14**	tpy … ROG *(EV miles / Project miles)		
NOX Emissions Saved		**6.03**	tpy … NOX *(EV miles / Project miles)		
CO2e Emissions Saved		2,804	MT/yr … CO2e *(EV miles / Project miles)		
Required electricity for charging (MWh/yr)		2,824	EV miles * kWh/100 miles		
Emissions from charging electricity (MT/yr)		304	MT/yr		
Net CO2e Emissions Saved		**2,501**	MT/yr		

Note 1: Drive Clean California states that it takes 4 to 6 hours to fully charge an EV. But one would not typically allow the vehicle to be empty before charging, thus assumed 3 hrs/charge.

Note 2: Drive Clean California states that EVs have battery capacities of 24 to 36 kWh and fully charge in 4 to 6 hours, so 6 kWh/hr.

Note 3: Average effeciency of 24 model year 2019 electric vehicles, per USDOE. Used only model year 2019 because vehicles will be more efficient in 2035 than in the past.

Note 4: From SMUD for calendar year 2030, per Memo dated January 11, 2019 from Mr. Todd Smith, Sacramento County PER.

Note 5: From EMFAC 2017 for gasoline engines, all models and model years; calendar year 2035.

References:

Drive Clean California = https://www.driveclean.ca.gov/pev/Plug-in_Electric_Vehicles/Find_the_Right_PEV.php

USDOE = https://fueleconomy.gov/feg/PowerSearch.do?action=noform&path=1&year1=1984&year2=2019&vtype=Electric CAPCOA = Quantifying Greenhouse Gase Mitigation Measures, August 2010 (SDT-1, page 187, footnote 45).

EMFAC2017 = EMFAC2017 Web Database for Calendar year 2035, Sacramento County Emissions

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/d	Fuel (gal/day)	mi/gal	CO2_RUNEX (tons/da	CO2 (lb/day)	% of vehicle class	VMT by project vehicle c	Gallons of fuel
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	9165.966703	300064.331	43173.70701	4.616796805	4616.796805	64.99405187	51.80251146	103,605	0.7%	748,093	11,510
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	38.03557668	615.1503412	137.3927489	0.023682153	23.68215294	25.97527103	0.265724278	531	0.0%	1,534	59
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2367.713174	76467.56923	11137.26911	1.57907521	1579.07521	48.42553966	17.71792546	35,436	0.2%	190,642	3,937
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1124.24932	135550.6769	14277.96636	13.9285652	13928.5652	9.731847823	151.342581	302,685	0.3%	337,943	34,725
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	777204.2827	24598561.32	3615039.809	596.0729678	596072.9678	41.26770152	5480.073378	10,960,147	54.2%	61,326,898	1,486,075
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	252032.144	7697954.798	1158593.661	219.5071626	219507.1626	35.06926474	2014.240107	4,028,480	17.0%	19,191,841	547,255
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	13900.71044	436235.1319	207099.8735	44.53976755	44539.76755	9.794283982	416.4475213	832,895	1.0%	1,087,582	111,043
Total								45415211.09							100%		

Gasoline Sum	2,822,602
Diesel Sum	622,482

Project VMT (mi/yr) 113,225,078 From CalEEMod output

	Gas (gal)	Diesel (gal)	Natural Gas (DEG)	Electricity (kWh)
Passenger	2,313,304	15,506		#REF!
Truck	451,998	591,618	13,795	
Bus	48,339	17,332	43,485	
Total	2,813,641	624,456	57,280	#REF!

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/d	Fuel (gal/day)	mi/gal	CO2_RUNEX (tons/da	CO2 (lb/day)	% of vehicle class	VMT by project vehicle c	Gallons of fuel
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	9165.966703	300064.331	43173.70701	4.616796805	4616.796805	64.99405187	51.80251146	103,605	0.7%	748,093	11,510
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	38.03557668	615.1503412	137.3927489	0.023682153	23.68215294	25.97527103	0.265724278	531	0.0%	1,534	59
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2367.713174	76467.56923	11137.26911	1.57907521	1579.07521	48.42553966	17.71792546	35,436	0.2%	190,642	3,937
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1124.24932	135550.6769	14277.96636	13.9285652	13928.5652	9.731847823	151.342581	302,685	0.3%	337,943	34,725
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	777204.2827	24598561.32	3615039.809	596.0729678	596072.9678	41.26770152	5480.073378	10,960,147	54.2%	61,326,898	1,486,075
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	252032.144	7697954.798	1158593.661	219.5071626	219507.1626	35.06926474	2014.240107	4,028,480	17.0%	19,191,841	547,255
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	13900.71044	436235.1319	207099.8735	44.53976755	44539.76755	9.794283982	416.4475213	832,895	1.0%	1,087,582	111,043
Total								45415211.09							100%		

Gasoline Sum	2,822,602
Diesel Sum	622,482

Project VMT (mi/yr) 113,225,078 From CalEEMod output

	Gas (gal)	Diesel (gal)	Natural Gas (DEG)	Electricity (kWh)
Passenger	2,299,425	15,413		#REF!
Truck	449,286	591,618	13,795	
Bus	48,339	17,332	43,485	
Total	2,797,049	624,363	57,280	#REF!

P. 64 of the AQMP/GHG Report
Enhanced Transit Program. The VMT reduction resulting from the program is 0.6 percent
that reduces mobile CO2 emissions by the same amount.

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trip/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_PREE	ROG_DIURN	ROG_HTSK	ROG_RUNLS	ROG_RESTL	TOG_RUNEX	TOG_PREE	TOG_DIURN	TOG_HTSK	TOG_RUNLS	TOG_RESTL	PM_TOTL	PM_PRIMEX	PM_PRIMBR	PM_PRIMTW	PM2_5_TOTL	PM2_5_PRIMEX	PM2_5_PRIMBR	PM2_5_PRIMTW	NOx_TOTL	NOx_RUNEX	NOx_PREE	CO_TOTL	CO_RUNEX	CO_PREE	CO2_TOTL	CO2_RUNEX	CH4_TOTL	CH4_RUNEX	CH4_PREE	CH4_SPEC	CH4_DIAL	CH4_STEX	NH3_TOTL	NH3_RUNEX	NH3_PREE	NH3_SPEC	NH3_DIAL	NH3_STEX	PM10_TOTL	PM10_PRIMEX	PM10_PRIMBR	PM10_PRIMTW	PM2_5_TOTL	PM2_5_PRIMEX	PM2_5_PRIMBR	PM2_5_PRIMTW	SOx_RUNEX	SOx_PREE	SOx_STEX	N2O_TOTL	N2O_RUNEX	N2O_PREE	N2O_STEX	Fuel Consumption
SACRAMENTO	2035	All Other Buses	Aggregated	Aggregate	Gasoline	438.1404057	20774.20269	3680.38	0.00027616	2.38257E-05	0.00028144		0	0	0.00028142	0.000259276	2.71238E-05		0	0	0.000204	0.00033523	0.001089	0	0.00410019	0.00356498	0.001379111	0.00895128	0.00436738	22.26535371	0.279920709	0	22.54526342	1.196566-05	1.10664E-06	0	1.30722E-05	0.000140836	3.44236E-07	0	0	0	0	0	0	0	0	0	0.00014118	0.000274797	0.002847512	0.001400729	0.001347041	0.259167-07	0	0	0	0.000139996	0.003499803	4.29981E-05	0	0.003543803	2.009303198
SACRAMENTO	2035	LDA	Aggregated	Aggregate	Gasoline	9155.966700	300004.331	43173.71	0.001762674	0	0.001762674		0	0	0.001762674	0.000266688	0		0	0	0.002066688	0	0	0	0.001812237	0.000420339	0	0	0.004609269	53.80251146	0.187206	0	0.004032041	0	0	0	0.187206	0.004032041	0	0	0	0	0	0	0	0	0	0.000139996	0.003499803	4.29981E-05	0	0.003543803	0.000420339	0	0	0	0.000419219	0.000419219	0	0	0.004089272	0.005145613
SACRAMENTO	2035	LDT1	Aggregated	Aggregate	Gasoline	38.03557668	415.5504147	137.3937	2.99184E-05	0	2.99184E-05		0	0	2.99184E-05	3.40601E-05	0		0	0	3.40601E-05	0.000011361	0	0	0.000011361	0.000010937	0	0	0.000183197	0.201724378	0	0	0.189619016	0.167467519	0	0	0.201724378	0.189619016	0	0	0	0	0	0	0	0	0	0.000011361	0.000010937	0	0	0	0.000010937	0	0	0	0.000011361	0.000011361	0	0	0.000183197	0.000183197
SACRAMENTO	2035	LDT2	Aggregated	Aggregate	Gasoline	2367.715374	76457.50923	11137.27	0.001231754	0	0.001231754		0	0	0.001231754	0.001402227	0		0	0	0.001402227	0.012778954	0	0	0.011778954	0.011550395	0	0	0.023705	17.17792546	0	0	17.17792546	1.731065-05	0	0	17.17792546	1.731065-05	0	0	0	0	0	0	0	0	0	0.000366675	0.000474329	0.003097697	0.001387875	0.001509113	0	0	0	0	0.001401813	0.001401812	0.011317584	0.010368698	0.001147498	0	0.002784277
SACRAMENTO	2035	LHDT1	Aggregated	Aggregate	Gasoline	1373515904	43682.5136	17272.2.5	0.064669548	0.001661245	0.066329833		0	0	0.066329833	0.039362088	0.001881217		0	0	0.041012106	0.031284558	0.013783026		0.033503814	0.271935307	0.020373948	0	0.291067255	225.3049462	1.795367277	0	227.0748602	0.003007732	7.716175-05	0	0.003008994	0.00013449	0.000413	0	0.000547489	0.095778966	0.056812016	0.049138472	0.095869114	0.056812016	0.000395134	0	0.002624248	0.001444742	0.015776178	0.023485568	0.002129942	1.672032E-05	0	0.002146672	0.0354148	0.007119157	0.011341513	0.000924633	1.067897E-05	0	0.000946071	0.001365603	0.011341513	0.000924633	1.067897E-05	0	0.001365603	0.000420339	0	0	0	0	0.000420339	0.000419219	0	0.000419219	0.000420339	0	0	0.000419219	0.000419219	0	0	0.000419219	0.000419219	0	0	0.000419219	0.000419219