

Appendix C

Energy Data

Energy Calculations Summary RIVER PARK

Operational Fuel Use Summary (SEIR Land Uses)

Vehicle Class	Diesel Gallons	Gasoline Gallons
Passenger	8,468	1,162,163
Truck	436,320	979,995
Bus	15,266	33,107
Other	1,218	5,677
Total	461,273	2,180,942

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

Operational Energy Consumption Summary

Land Use	Electricity (kWW/year)	Natural Gas (kBTU/year)	Electricity (MWW/year)	Natural Gas (therm/year)
Apt High Rise	7,891,940	19,476,500	78,919	194,765
Apt Low Rise	232,760	3,917,890	2,328	39,179
Apt Mid Rise	13,011,400	11,813,300	130,114	118,133
Total	21,136,100	35,207,690	35,208	352,077

therm/kbtu

100.000000

Region: Sacramento

Calendar Year: 2030

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Class	MdlYr	Speed	Fuel	Fuel_Consumption			CO2_RUNEX		% of vehicle class EMFAC	% vehicle class CalEEMod	% vehicle class project	VMT by project				
							Population	VMT (mi/day)	Trips	Fuel (gal/day)	mi/gal				(tons/day)	CO2 (lb/day)	vehicle class (mi/yr)	Gallons of fuel	
SACRAMENTO	2030	HHDT	Truck	Aggregated	Aggregated	GAS	4.378608	596.9609148	87.60718867	0.116302636	116.3026356	5.132823617	1.097982155	2.196	0.000612919	0.026318	1.61308E-05	1247.914084	243.1242873
SACRAMENTO	2030	HHDT	Truck	Aggregated	Aggregated	DSL	12327.54	973967.5061	94768.87368	129.6945068	129.6945068	7.505078897	1350.418492	2,700.837	0.999387081	0.026318	0.026301869	2034771.439	271119.2603
SACRAMENTO	2030	LDA	Passenger	Aggregated	Aggregated	GAS	709747.4	23397085.97	3311414.94	608.382746	608383.2746	38.45879225	5597.649815	11,195.300	0.988425293	0.578893	0.572192483	4426690.49	1151000.538
SACRAMENTO	2030	LDA	Passenger	Aggregated	Aggregated	DSL	7960.516	27392.7439	37685.52964	4.476018597	4476.018597	61.21349543	50.22291741	100.446	0.011574707	0.578893	0.005700517	518366.9708	8468.181192
SACRAMENTO	2030	LDT1	Truck	Aggregated	Aggregated	GAS	73141.68	2276860.904	334156.2042	69.81400205	69814.00205	32.61324143	641.430016	1,282.860	0.999522094	0.033999	0.033882752	2628981.688	80610.86762
SACRAMENTO	2030	LDT1	Truck	Aggregated	Aggregated	DSL	74.26615	1088.646825	259.3937738	0.046358215	46.35821455	23.48336397	0.520159765	1.040	0.000477906	0.033999	1.62483E-05	1257.008086	53.52759885
SACRAMENTO	2030	LDT2	Truck	Aggregated	Aggregated	GAS	234188.8	7403480.864	1078221.547	232.7198983	232719.8983	31.8128399	2136.968233	4,273.936	0.990840132	0.21284	0.210890414	16314954.16	512841.8026
SACRAMENTO	2030	LDT2	Truck	Aggregated	Aggregated	DSL	1974.815	68441.82837	9419.154557	1.510829851	1510.829851	45.30081818	16.95218221	33.904	0.009159868	0.21284	0.001949586	150824.364	3329.396025
SACRAMENTO	2030	LHDT1	Truck	Aggregated	Aggregated	GAS	14437.5	453287.803	215097.1904	49.01806071	49018.06071	9.247363041	458.3492613	916.699	0.507511626	0.010628	0.005339834	417279.0302	45124.11034
SACRAMENTO	2030	LHDT1	Truck	Aggregated	Aggregated	DSL	13641.03	439869.6734	171587.0304	21.69106687	21691.06687	20.27883995	241.5069727	483.014	0.492488374	0.010628	0.005234166	404926.8246	19967.94815
SACRAMENTO	2030	LHDT2	Truck	Aggregated	Aggregated	GAS	2115.309	67182.91556	31514.95647	8.283818563	8283.818563	8.110138465	77.48022967	154.960	0.28942461	0.004325	0.001251761	96839.06503	11940.49466
SACRAMENTO	2030	LHDT2	Truck	Aggregated	Aggregated	DSL	5132.585	164942.8721	64561.46025	9.114967988	9114.967988	18.09582572	101.1490402	202.298	0.71057539	0.004325	0.003073239	237752.61	13138.53337
SACRAMENTO	2030	MCY	Passenger	Aggregated	Aggregated	GAS	32922.54	203129.869	65845.07191	5.435646511	5435.646511	37.36995564	47.09670077	94.193	1	0.005392	0.005392	417137.1819	11162.3676
SACRAMENTO	2030	MDV	Truck	Aggregated	Aggregated	GAS	153104.3	4597116.377	695429.0639	177.3298379	177329.8379	25.92409958	1625.725507	3,251.451	0.968229166	0.104491	0.101171234	7826832.968	301913.3969
SACRAMENTO	2030	MDV	Truck	Aggregated	Aggregated	DSL	4521.458	150846.7471	21362.06044	4.38454241	4384.54241	34.40421668	49.19651394	98.393	0.031770834	0.104491	0.003319766	256824.5388	7464.914583
SACRAMENTO	2030	MH	Other	Aggregated	Aggregated	GAS	2401.982	21378.13403	240.2943232	3.95833112	3958.33112	5.400794776	37.49461087	74.989	0.700215779	0.000566	0.000396322	30660.3666	5677.010121
SACRAMENTO	2030	MH	Other	Aggregated	Aggregated	DSL	1110.852	9152.64617	111.0851542	0.849584707	849.5847067	10.77308254	9.53271789	19.065	0.299784221	0.000566	0.000169678	13126.65954	1218.468297
SACRAMENTO	2030	MHDT	Truck	Aggregated	Aggregated	GAS	1838.756	83408.90894	36789.82699	15.57943559	15579.43559	5.353782456	145.1709809	290.342	0.100916333	0.018736	0.001890768	146274.0747	27321.63212
SACRAMENTO	2030	MHDT	Truck	Aggregated	Aggregated	DSL	16026.9	743106.5441	126453.2941	69.13769356	69137.69356	10.74821137	753.1099195	1,506.220	0.899083667	0.018736	0.016845232	1303184.798	121246.6663
SACRAMENTO	2030	OBUS	Bus	Aggregated	Aggregated	GAS	482.1242	18484.29623	9646.341825	3.485006576	3485.006576	5.303948737	32.55996485	65.120	0.331182329	0.001852	0.00061335	47450.1028	8946.184277
SACRAMENTO	2030	OBUS	Bus	Aggregated	Aggregated	DSL	592.9203	37328.75479	5806.739202	4.321349286	4321.349286	8.638217445	46.77310286	93.546	0.668817671	0.001852	0.00123865	95824.76012	11093.11739
SACRAMENTO	2030	SBUS	Bus	Aggregated	Aggregated	GAS	191.6287	8653.610812	766.5148402	0.83769334	837.6933402	10.33028484	7.40595715	14.812	0.22833001	0.000598	0.000136541	10563.14397	1022.541405
SACRAMENTO	2030	SBUS	Bus	Aggregated	Aggregated	DSL	937.9608	29245.96626	10823.9378	3.418732001	3418.732001	8.554623834	34.66268585	69.325	0.77166999	0.000598	0.000461459	35699.47376	4173.120227
SACRAMENTO	2030	UBUS	Bus	Aggregated	Aggregated	GAS	276.605	20883.4518	1106.419843	4.585864075	4585.864075	4.533875007	43.34166769	86.683	1	0.001362	0.001362	105367.3668	23137.95759
SACRAMENTO	2030	UBUS	Bus	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0	0.001362	0	0	0

Project VMT (mi/yr)	77,362,237	From CalEEMod output
Project Mobile Emissions (MT/yr)	24,326	From CalEEMod output

gasoline Sum	2,180,942
Diesel Sum	461,273

	Gas (gal)	Diesel (gal)
Passenger	1,162,163	8,468
Truck	979,995	436,320
Bus	33,107	15,266
Other	5,677	1,218
Total	2,180,942	461,273

Energy Calculations Summary				
Construction Fuel Usage Summary				
	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
2021	65,983	12,214	3,899	69,882
2022	30,065	377,166	140,328	170,393
2023	30,065	366,588	133,049	163,114
2024	30,296	358,805	132,332	162,628
2025	30,181	346,902	129,918	160,099
2026	30,181	337,199	127,878	158,059
2027	30,181	328,263	125,504	155,685
2028	30,065	318,954	122,588	152,653
2029	15,264	268,810	84,476	99,739
TOTAL	292,280	2,714,901	999,972	1,292,252
Total Gasoline	2,714,901	gallons		
Total Diesel	1,292,252	gallons		

2021 Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Prep	Tractors/Loaders/Backhoes	4	8	97	0.37	71	4,077
Site Prep	Rubber Tired Dozers	3	8	247	0.40	71	8,418
Grading	Excavators	2	8	158	0.38	183	8,790
Grading	Rubber Tired Dozers	1	8	247	0.40	183	7,232
Grading	Graders	1	8	187	0.41	183	5,612
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	183	5,254
Grading	Scrapers	2	8	367	0.48	183	25,790
Building Construction	Cranes	1	7	231	0.29	7	164
Building Construction	Forklifts	3	8	89	0.20	7	150
Building Construction	Generator Sets	1	8	84	0.74	7	174
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	7	264
Building Construction	Welders	1	8	46	0.45	7	58
						TOTAL	65,983

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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	71	1278	0	-	10.00	6.50	20.00	12780	0	-	459	0
Grading	20	0	0	183	3660	0	-	10.00	6.50	20.00	36600	0	-	1,316	0
Building Construction	4148	616	0	7	29036	4312	-	10.00	6.50	20.00	290360	28028	-	10,439	3,899
													TOTAL	12,214	3,899

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).

Site Preparation

Construction Start Date 1/1/2021
 Construction End Date 4/9/2021
 Total Work Days 71

Grading

Construction Start Date 4/10/2021
 Construction End Date 12/22/2021
 Total Work Days 183

Building Construction

Construction Start Date 12/23/2021
 Construction End Date 12/31/2021
 Total Work Days 7

2022 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	260	6,096
Building Construction	Forklifts	3	8	89	0.20	260	5,554
Building Construction	Generator Sets	1	8	84	0.74	260	6,465
Building Construction	Tractors/Loaders /Backhoes	3	7	97	0.37	260	9,798
Building Construction	Welders	1	8	46	0.45	260	2,153
TOTAL							30,065

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	260	1078480	160160	-	10.00	6.50	20.00	10784800	1041040	-	377,166	140,328
TOTAL													377,166	140,328	

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).

Building Construction

Construction Start Date 1/1/2022
 Construction End Date 12/31/2022
 Total Work Days 260

2025 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	260	6,096
Building Construction	Forklifts	3	8	89	0.20	260	5,554
Building Construction	Generator Sets	1	8	84	0.74	260	6,465
Building Construction	Tractors/Loaders/Back hoes	3	7	97	0.37	260	9,798
Building Construction	Welders	1	8	46	0.45	260	2,153
TOTAL							30,065

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	260	1078480	160160	-	10.00	6.50	20.00	10784800	1041040	-	366,588	133,049
TOTAL													366,588	133,049	

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).

Building Construction

Construction Sta	1/1/2023
Construction Enc	12/31/2023
Total Work Days	260

2024 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	262	6,143
Building Construction	Forklifts	3	8	89	0.20	262	5,596
Building Construction	Generator Sets	1	8	84	0.74	262	6,514
Building Construction	Tractors/Loaders/Balckhoes	3	7	97	0.37	262	9,873
Building Construction	Welders	1	8	46	0.45	262	2,169
TOTAL							30,296

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	262	1086776	161392	-	10.00	6.50	20.00	10867760	1049048	-	358,805	132,332
TOTAL													358,805	132,332	

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).

Building Construction

2025 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	261	6,120
Building Construction	Forklifts	3	8	89	0.20	261	5,575
Building Construction	Generator Sets	1	8	84	0.74	261	6,490
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	261	9,836
Building Construction	Welders	1	8	46	0.45	261	2,161
						TOTAL	30,181

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	261	1082628	160776	-	10.00	6.50	20.00	10826280	1045044	-	346,902	129,918
													TOTAL	346,902	129,918

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).

Number of Days Adjusted as demolition would occur over 2 years, but not at same degree year round

Building Construction

Constructic	1/1/2025
Constructic	12/31/2025
Total Work	261

2026 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	261	6,120
Building Construction	Forklifts	3	8	89	0.20	261	5,575
Building Construction	Generator Sets	1	8	84	0.74	261	6,490
Building Construction	Tractors/Loaders /Backhoes	3	7	97	0.37	261	9,836
Building Construction	Welders	1	8	46	0.45	261	2,161
						TOTAL	30,181

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	261	1082628	160776	-	10.00	6.50	20.00	10826280	1045044	-	337,199	127,878
													TOTAL	337,199	127,878

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).

Number of Days Adjusted as demolition would occur over 2 years, but not at same degree year round

Building Construction

Constructic	1/1/2026
Constructic	12/31/2026
Total Work	261

2027 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	261	6,120
Building Construction	Forklifts	3	8	89	0.20	261	5,575
Building Construction	Generator Sets	1	8	84	0.74	261	6,490
Building Construction	Tractors/Loaders/Back hoes	3	7	97	0.37	261	9,836
Building Construction	Welders	1	8	46	0.45	261	2,161
TOTAL							30,181

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	261	1082628	160776	-	10.00	6.50	20.00	10826280	1045044	-	328,263	125,504
TOTAL													328,263	125,504	

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).

Number of Days Adjusted as demolition would occur over 2 years, but not at same degree year round

Building Construction

Constructic	1/1/2027
Constructic	12/31/2027
Total Work	261

2028 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	260	6,096
Building Construction	Forklifts	3	8	89	0.20	260	5,554
Building Construction	Generator Sets	1	8	84	0.74	260	6,465
Building Construction	Tractors/Loaders /Backhoes	3	7	97	0.37	260	9,798
Building Construction	Welders	1	8	46	0.45	260	2,153
						TOTAL	30,065

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	260	1078480	160160	-	10.00	6.50	20.00	10784800	1041040	-	318,954	122,588
													TOTAL	318,954	122,588

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).

Number of Days Adjusted as demolition would occur over 2 years, but not at same degree year round

Building Construction

Constructic 1/1/2028

Constructic 12/31/2028

Total Work 260

2025 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Building Construction	Cranes	1	7	231	0.29	132	3,095
Building Construction	Forklifts	3	8	89	0.20	132	2,820
Building Construction	Generator Sets	1	8	84	0.74	132	3,282
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	132	4,974
Building Construction	Welders	1	8	46	0.45	132	1,093
Paving	Pavers	2	8	130	0.42	130	5,678
Paving	Rollers	2	8	80	0.38	130	3,162
Paving	Paving Equipment	2	8	132	0.36	130	4,942
Architectural Coating	Air Compressors	1	6	78	0.48	129	1,449
						TOTAL	15,264

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.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Total Hauling 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
Building Construction	4148	616	0	132	547536	81312	-	15.00	9.00	20.00	8213040	731808	-	237,371	84,476
Paving	280	0	0	130	36400	0	-	15.00	9.00	20.00	546000	0	-	15,780	0
Architectural Coating	280	0	0	129	36120	0	-	15.00	9.00	20.00	541800	0	-	15,659	0
													TOTAL	268,810	84,476

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).

Building Construction

Construction Start Date 1/1/2029
 Construction End Date 7/3/2029
 Total Work Days 132

Paving

Construction Start Date 1/3/2029
 Construction End Date 7/3/2029
 Total Work Days 130

Architectural Coating

Construction Start Date 7/4/2029
 Construction End Date 12/31/2029
 Total Work Days 129

EMFAC MPG

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: County

Region: Sacramento

Year Range: 2021-2029

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	MdYr	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	2021	LDA	Aggregated	Aggregated	GAS	576916.86	20787699.97	2693628.523	680.3867171	0.00	30.55	27.82	7.19
Sacramento	2021	LDT1	Aggregated	Aggregated	GAS	63439.28	2114017.763	287695.6243	80.67265944	0.00	26.20		
Sacramento	2021	LDT2	Aggregated	Aggregated	GAS	203602.05	7045516.111	940182.7893	294.1321023	0.00	23.95		
Sacramento	2021	T7 tractor	Aggregated	Aggregated	DSL	820.91937	111864.8033	10425.67597	0.00	15.56244981	7.19		

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).

Region	CalYr	VehClass	MdYr	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	2022	LDA	Aggregated	Aggregated	GAS	591545.26	21127372.04	2764927.853	673.142382	0.00	31.39	28.59	7.42
Sacramento	2022	LDT1	Aggregated	Aggregated	GAS	64366.141	2129386.502	292380.935	79.27891431	0.00	26.86		
Sacramento	2022	LDT2	Aggregated	Aggregated	GAS	206880.89	7073751.275	955128.7989	285.8595601	0.00	24.75		
Sacramento	2022	T7 tractor	Aggregated	Aggregated	DSL	836.83148	113851.5548	10627.75974	0.00	15.34673242	7.42		

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).

Region	CalYr	VehClass	MdYr	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	2023	LDA	Aggregated	Aggregated	GAS	606308.32	21470907.57	2835871.384	665.4181032	0.00	32.27	29.42	7.82
Sacramento	2023	LDT1	Aggregated	Aggregated	GAS	65368.825	2148247.633	297348.0731	77.95506082	0.00	27.56		
Sacramento	2023	LDT2	Aggregated	Aggregated	GAS	210187.04	7110545.533	970164.8507	277.9033637	0.00	25.59		
Sacramento	2023	T7 tractor	Aggregated	Aggregated	DSL	843.52756	115843.1119	10712.79998	0.00	14.80517215	7.82		

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).

Region	CalYr	VehClass	MdYr	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	2024	LDA	Aggregated	Aggregated	GAS	621184.54	21791121.19	2906212.223	656.5160125	0.00	33.19	30.29	7.93
Sacramento	2024	LDT1	Aggregated	Aggregated	GAS	66406.622	2167045.803	302428.5847	76.58153967	0.00	28.30		
Sacramento	2024	LDT2	Aggregated	Aggregated	GAS	213508.83	7147811.653	985234.2998	269.9971475	0.00	26.47		
Sacramento	2024	T7 tractor	Aggregated	Aggregated	DSL	893.57481	117962.8427	11348.40011	0.00	14.88039404	7.93		

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).

Region	CalYr	VehClass	MdYr	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	2025	LDA	Aggregated	Aggregated	GAS	635993.87	22083309.1	2975296.709	646.2925243	0.00	34.17	31.21	8.04
Sacramento	2025	LDT1	Aggregated	Aggregated	GAS	67470.712	2184625.242	307534.2504	75.11737391	0.00	29.08		
Sacramento	2025	LDT2	Aggregated	Aggregated	GAS	216827.92	7183351.656	1000201.342	262.0448109	0.00	27.41		
Sacramento	2025	T7 tractor	Aggregated	Aggregated	DSL	940.90359	119815.9531	11949.47558	0.00	14.89529384	8.04		

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).

Region	CalYr	VehClass	MdYr	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	2026	LDA	Aggregated	Aggregated	GAS	650890.56	22324683.48	3044173.045	635.6845866	0.00	35.12	32.11	8.17
Sacramento	2026	LDT1	Aggregated	Aggregated	GAS	68561.706	2198584.977	312731.9546	73.66224469	0.00	29.85		
Sacramento	2026	LDT2	Aggregated	Aggregated	GAS	220207.04	7209553.922	1015428.352	254.3874455	0.00	28.34		
Sacramento	2026	T7 tractor	Aggregated	Aggregated	DSL	983.60764	121654.5714	12491.81697	0.00	14.8864067	8.17		

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).

Region	CalYr	VehClass	MdYr	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	2027	LDA	Aggregated	Aggregated	GAS	665732.21	22606022.92	3112130.849	627.315091	0.00	36.04	32.98	8.33
Sacramento	2027	LDT1	Aggregated	Aggregated	GAS	69667.754	2217549.142	317955.7587	72.48993299	0.00	30.59		
Sacramento	2027	LDT2	Aggregated	Aggregated	GAS	223593.32	7253504.725	1030657.367	247.9098294	0.00	29.26		
Sacramento	2027	T7 tractor	Aggregated	Aggregated	DSL	1021.5428	123795.7684	12973.59362	0.00	14.86721035	8.33		

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).

Region	CalYr	VehClass	MdYr	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	2028	LDA	Aggregated	Aggregated	GAS	680629.01	22875971.57	3179760.737	619.9168101	0.00	36.90	33.81	8.49
Sacramento	2028	LDT1	Aggregated	Aggregated	GAS	70827.557	2236933.386	323356.3407	71.46442989	0.00	31.30		
Sacramento	2028	LDT2	Aggregated	Aggregated	GAS	227090.43	7300334.168	1046352.217	242.1556308	0.00	30.15		
Sacramento	2028	T7 tractor	Aggregated	Aggregated	DSL	1050.1639	125264.7557	13337.08145	0.00	14.7505817	8.49		

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).

Region	CalYr	VehClass	MdYr	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	2029	LDA	Aggregated	Aggregated	GAS	695364.21	23139220.76	3246325.843	613.5995278	0.00	37.71	34.60	8.66
Sacramento	2029	LDT1	Aggregated	Aggregated	GAS	71973.339	2256537.449	328717.0129	70.56567199	0.00	31.98		
Sacramento	2029	LDT2	Aggregated	Aggregated	GAS	230626.6	7350505.665	1062230.802	237.1043058	0.00	31.00		
Sacramento	2029	T7 tractor	Aggregated	Aggregated	DSL	1073.892	126733.755	13638.42838	0.00	14.6293958	8.66		

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).