

Attachment 1: CalEEMod Input and Output Worksheets

San Pablo Ave. Specific Plan Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,706.00	Dwelling Unit	44.89	1,706,000.00	4879
Strip Mall	243.11	1000sqft	5.58	243,112.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	289.84	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor (289.84 lb/MWh) for 2020 obtained from CPUC GHG Calculator version 3c.

Land Use - Specific Plan land uses from NOP and traffic report.

Vehicle Trips - Daily trip rates and average trip lengths (9.7 miles) from Ellen Polling, Fehr & Peers.

Woodstoves - No woodstoves or wood fireplaces, possible gas-powered fireplaces.

Energy Use - No change.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00

tblFireplaces	FireplaceWoodMass	92.40	0.00
tblFireplaces	NumberGas	938.30	1,706.00
tblFireplaces	NumberNoFireplace	528.86	0.00
tblFireplaces	NumberWood	238.84	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	289.84
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	CC_TL	7.30	9.70
tblVehicleTrips	CNW_TL	7.30	9.70
tblVehicleTrips	CW_TL	9.50	9.70
tblVehicleTrips	HO_TL	5.40	9.70
tblVehicleTrips	HS_TL	4.30	9.70
tblVehicleTrips	HW_TL	12.40	9.70
tblVehicleTrips	ST_TR	7.16	3.39
tblVehicleTrips	ST_TR	42.04	56.52
tblVehicleTrips	SU_TR	6.07	3.39
tblVehicleTrips	SU_TR	20.43	56.52
tblVehicleTrips	WD_TR	6.59	3.39
tblVehicleTrips	WD_TR	44.32	56.52
tblWoodstoves	NumberCatalytic	8.53	0.00
tblWoodstoves	NumberNoncatalytic	8.53	0.00
tblWoodstoves	WoodstoveDayYear	10.82	0.00
tblWoodstoves	WoodstoveWoodMass	954.80	0.00

2.0 Emissions Summary

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
	Area	9.3259	0.1457	12.6254	6.7000e-004		0.0760	0.0760		0.0759	0.0759	0.0000	102.7128	102.7128	0.0213	1.5000e-003
Energy	0.0877	0.7532	0.3442	4.7900e-003		0.0606	0.0606		0.0606	0.0606	0.0000	2,050.2484	2,050.2484	0.1349	0.0404	2,065.6012
Mobile	6.4355	11.4671	63.8164	0.2396	16.7066	0.2783	16.9849	4.4728	0.2570	4.7299	0.0000	15,232.8659	15,232.8659	0.4155	0.0000	15,241.5907
Waste						0.0000	0.0000		0.0000	0.0000	211.1167	0.0000	211.1167	12.4766	0.0000	473.1261
Water						0.0000	0.0000		0.0000	0.0000	40.9767	129.2051	170.1818	4.2216	0.1021	290.4718
Total	15.8491	12.3659	76.7860	0.2451	16.7066	0.4149	17.1215	4.4728	0.3936	4.8664	252.0934	17,515.0321	17,767.1255	17.2699	0.1439	18,174.4156

4.0 Operational Detail - Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Unmitigated	6.4355	11.4671	63.8164	0.2396	16.7066	0.2783	16.9849	4.4728	0.2570	4.7299	0.0000	15,232.8659	15,232.8659	0.4155	0.0000	15,241.5907

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	5,783.34	5,783.34	5783.34	18,128,903	18,128,903
Strip Mall	13,740.69	13,740.69	13740.69	26,758,620	26,758,620
Total	19,524.03	19,524.03	19,524.03	44,887,523	44,887,523

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	9.70	9.70	9.70	26.10	29.10	44.80	86	11	3
Strip Mall	9.70	9.70	9.70	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.526722	0.065482	0.174404	0.141043	0.036208	0.004860	0.010810	0.027646	0.001315	0.001390	0.006584	0.001558	0.001978

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,181.9500	1,181.9500	0.1183	0.0245	1,192.0184
NaturalGas Unmitigated	0.0877	0.7532	0.3442	4.7900e-003		0.0606	0.0606		0.0606	0.0606	0.0000	868.2985	868.2985	0.0166	0.0159	873.5828

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	1.16694e+006	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2722	62.2722	1.1900e-003	1.1400e-003	62.6512
Apartments Mid Rise	1.51044e+007	0.0815	0.6960	0.2962	4.4400e-003		0.0563	0.0563		0.0563	0.0563	0.0000	806.0262	806.0262	0.0155	0.0148	810.9316
Total		0.0877	0.7532	0.3442	4.7800e-003		0.0606	0.0606		0.0606	0.0606	0.0000	868.2985	868.2985	0.0166	0.0159	873.5828

5.3 Energy by Land Use - Electricity

Hearth	8.2900e-003	0.0000	4.5000e-004	0.0000		5.7300e-003	5.7300e-003		5.6700e-003	5.6700e-003	0.0000	82.0167	82.0167	1.5700e-003	1.5000e-003	82.5159
Landscaping	0.3776	0.1457	12.6249	6.7000e-004		0.0703	0.0703		0.0703	0.0703	0.0000	20.6961	20.6961	0.0197	0.0000	21.1100
Total	9.3259	0.1457	12.6254	6.7000e-004		0.0760	0.0760		0.0759	0.0759	0.0000	102.7128	102.7128	0.0213	1.5000e-003	103.6258

7.0 Water Detail

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	170.1818	4.2216	0.1021	290.4718

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	111.153 / 70.0746	146.5798	3.6331	0.0878	250.0998
Strip Mall	18.0078 / 11.037	23.6020	0.5886	0.0142	40.3720
Total		170.1818	4.2216	0.1021	290.4718

8.0 Waste Detail

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	211.1167	12.4766	0.0000	473.1261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	784.76	159.2992	9.4143	0.0000	356.9998
Strip Mall	255.27	51.8175	3.0623	0.0000	116.1264
Total		211.1167	12.4766	0.0000	473.1261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

San Pablo Ave. Specific Plan - Mode Shift Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,706.00	Dwelling Unit	44.89	1,706,000.00	4879
Strip Mall	243.11	1000sqft	5.58	243,112.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	289.84	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity Factor (289.84 lb/MWh) for 2020 obtained from CPUC GHG Calculator version 3c.

Land Use - Specific Plan land uses from NOP and traffic report.

Vehicle Trips - Daily trip rates and average trip lengths (9.7 miles) from Ellen Polling, Fehr & Peers.

Woodstoves - No woodstoves or wood fireplaces, possible gas-powered fireplaces.

Energy Use - No change.

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tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00

tblFireplaces	FireplaceWoodMass	92.40	0.00
tblFireplaces	NumberGas	938.30	1,706.00
tblFireplaces	NumberNoFireplace	528.86	0.00
tblFireplaces	NumberWood	238.84	0.00
tblLandUse	LandUseSquareFeet	243,110.00	243,112.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	289.84
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	CC_TL	7.30	9.70
tblVehicleTrips	CNW_TL	7.30	9.70
tblVehicleTrips	CW_TL	9.50	9.70
tblVehicleTrips	HO_TL	5.40	9.70
tblVehicleTrips	HS_TL	4.30	9.70
tblVehicleTrips	HW_TL	12.40	9.70
tblVehicleTrips	ST_TR	7.16	3.16
tblVehicleTrips	ST_TR	42.04	52.56
tblVehicleTrips	SU_TR	6.07	3.16
tblVehicleTrips	SU_TR	20.43	52.56
tblVehicleTrips	WD_TR	6.59	3.16
tblVehicleTrips	WD_TR	44.32	52.56
tblWoodstoves	NumberCatalytic	8.53	0.00
tblWoodstoves	NumberNoncatalytic	8.53	0.00
tblWoodstoves	WoodstoveDayYear	10.82	0.00
tblWoodstoves	WoodstoveWoodMass	954.80	0.00

2.0 Emissions Summary

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.3259	0.1457	12.6254	6.7000e-004		0.0760	0.0760		0.0759	0.0759	0.0000	102.7128	102.7128	0.0213	1.5000e-003	103.6258
Energy	0.0877	0.7532	0.3442	4.7900e-003		0.0606	0.0606		0.0606	0.0606	0.0000	2,050.2484	2,050.2484	0.1349	0.0404	2,065.6012
Mobile	5.9893	10.6732	59.3961	0.2231	15.5510	0.2591	15.8100	4.1634	0.2393	4.4027	0.0000	14,179.0321	14,179.0321	0.3867	0.0000	14,187.1533
Waste						0.0000	0.0000		0.0000	0.0000	211.1167	0.0000	211.1167	12.4766	0.0000	473.1261
Water						0.0000	0.0000		0.0000	0.0000	40.9767	129.2051	170.1818	4.2216	0.1021	290.4718
Total	15.4029	11.5721	72.3657	0.2285	15.5510	0.3957	15.9466	4.1634	0.3758	4.5392	252.0934	16,461.1984	16,713.2918	17.2412	0.1439	17,119.9781

4.0 Operational Detail - Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	5.9893	10.6732	59.3961	0.2231	15.5510	0.2591	15.8100	4.1634	0.2393	4.4027	0.0000	14,179.0321	14,179.0321	0.3867	0.0000	14,187.1533

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartments Mid Rise	5,390.96	5,390.96	5390.96	16,898,918	16,898,918
Strip Mall	12,777.86	12,777.86	12777.86	24,883,608	24,883,608
Total	18,168.82	18,168.82	18,168.82	41,782,526	41,782,526

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	9.70	9.70	9.70	26.10	29.10	44.80	86	11	3

Strip Mall	9.70	9.70	9.70	16.60	64.40	19.00	45	40	15
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LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.526722	0.065482	0.174404	0.141043	0.036208	0.004860	0.010810	0.027646	0.001315	0.001390	0.006584	0.001558	0.001978

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,181.9500	1,181.9500	0.1183	0.0245	1,192.0184
NaturalGas Unmitigated	0.0877	0.7532	0.3442	4.7900e-003		0.0606	0.0606		0.0606	0.0606	0.0000	868.2985	868.2985	0.0166	0.0159	873.5828

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	1.16694e+006	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2722	62.2722	1.1900e-003	1.1400e-003	62.6512
Apartments Mid Rise	1.51044e+007	0.0815	0.6960	0.2962	4.4400e-003		0.0563	0.0563		0.0563	0.0563	0.0000	806.0262	806.0262	0.0155	0.0148	810.9316
Total		0.0877	0.7532	0.3442	4.7800e-003		0.0606	0.0606		0.0606	0.0606	0.0000	868.2985	868.2985	0.0166	0.0159	873.5828

Consumer Products	7.6123				0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.2900e-003	0.0000	4.5000e-004	0.0000	5.7300e-003	5.7300e-003		5.6700e-003	5.6700e-003	0.0000	82.0167	82.0167	1.5700e-003	1.5000e-003	82.5159
Landscaping	0.3776	0.1457	12.6249	6.7000e-004	0.0703	0.0703		0.0703	0.0703	0.0000	20.6961	20.6961	0.0197	0.0000	21.1100
Total	9.3259	0.1457	12.6254	6.7000e-004	0.0760	0.0760		0.0759	0.0759	0.0000	102.7128	102.7128	0.0213	1.5000e-003	103.6258

7.0 Water Detail

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	170.1818	4.2216	0.1021	290.4718

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	111.153 / 70.0746	146.5798	3.6331	0.0878	250.0998
Strip Mall	18.0078 / 11.037	23.6020	0.5886	0.0142	40.3720
Total		170.1818	4.2216	0.1021	290.4718

8.0 Waste Detail

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	211.1167	12.4766	0.0000	473.1261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	784.76	159.2992	9.4143	0.0000	356.9998
Strip Mall	255.27	51.8175	3.0623	0.0000	116.1264
Total		211.1167	12.4766	0.0000	473.1261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation
