

Appendix G: Greenhouse Gases Calculations

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**Merced Gateway Operational All Phases Business As Usual
Merced County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	9.21	1000sqft	1.10	9,209.00	0
User Defined Commercial	1.00	User Defined Unit	0.45	2,000.00	0
Parking Lot	35.70	Acre	35.70	1,555,092.00	0
Fast Food Restaurant with Drive Thru	21.45	1000sqft	0.86	21,450.00	0
High Turnover (Sit Down Restaurant)	17.52	1000sqft	0.89	17,522.00	0
High Turnover (Sit Down Restaurant)	4.33	1000sqft	0.18	4,330.00	0
High Turnover (Sit Down Restaurant)	9.09	1000sqft	0.47	9,093.00	0
Hotel	81.00	Room	4.73	49,900.00	0
Movie Theater (No Matinee)	38.77	1000sqft	2.01	38,773.00	0
Apartments Low Rise	178.00	Dwelling Unit	5.50	178,000.00	509
Convenience Market With Gas Pumps	12.00	Pump	0.07	6,305.00	0
Discount Club	21.28	1000sqft	0.86	21,280.00	0
Free-Standing Discount Superstore	131.19	1000sqft	5.27	131,190.00	0
Regional Shopping Center	71.33	1000sqft	3.65	71,330.00	0
Regional Shopping Center	8.24	1000sqft	0.33	8,240.00	0
Regional Shopping Center	165.64	1000sqft	8.57	165,641.00	0
Supermarket	54.18	1000sqft	2.76	54,176.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3	Operational Year		2010	

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 733.81 CH4 Intensity (lb/MWhr) 0.033 N2O Intensity (lb/MWhr) 0.007

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E - 733.81 CO2, 0.033 CH4 and 0.007 N2O Intensity Factors

Land Use - All Phases

Construction Phase -

Vehicle Trips - Pass-by trips % moved to Primary Trips %

Vehicle Emission Factors - Fleet Mix adjusted to project

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves

Area Coating -

Energy Use -

Mobile Land Use Mitigation - Suburban Center, Improve Pedestrian Network on project site.

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150
tblLandUse	LandUseSquareFeet	9,210.00	9,209.00
tblLandUse	LandUseSquareFeet	0.00	2,000.00
tblLandUse	LandUseSquareFeet	17,520.00	17,522.00
tblLandUse	LandUseSquareFeet	9,090.00	9,093.00
tblLandUse	LandUseSquareFeet	117,612.00	49,900.00
tblLandUse	LandUseSquareFeet	38,770.00	38,773.00

tblLandUse	LandUseSquareFeet	1,694.10	6,305.00
tblLandUse	LandUseSquareFeet	165,640.00	165,641.00
tblLandUse	LandUseSquareFeet	54,180.00	54,176.00
tblLandUse	LotAcreage	0.21	1.10
tblLandUse	LotAcreage	0.00	0.45
tblLandUse	LotAcreage	0.49	0.86
tblLandUse	LotAcreage	0.40	0.89
tblLandUse	LotAcreage	0.10	0.18
tblLandUse	LotAcreage	0.21	0.47
tblLandUse	LotAcreage	2.70	4.73
tblLandUse	LotAcreage	0.89	2.01
tblLandUse	LotAcreage	11.13	5.50
tblLandUse	LotAcreage	0.04	0.07
tblLandUse	LotAcreage	0.49	0.86
tblLandUse	LotAcreage	3.01	5.27
tblLandUse	LotAcreage	3.80	8.57
tblLandUse	LotAcreage	1.64	3.65
tblLandUse	LotAcreage	0.19	0.33
tblLandUse	LotAcreage	1.24	2.76
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	641.35	733.81
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2010
tblVehicleEF	HHD	0.12	2.0000e-003
tblVehicleEF	LDA	0.40	0.51
tblVehicleEF	LDT1	0.06	0.08
tblVehicleEF	LDT2	0.15	0.20
tblVehicleEF	LHD1	0.05	0.00
tblVehicleEF	LHD2	7.5910e-003	0.00
tblVehicleEF	MCY	7.0950e-003	9.0000e-003

tblVehicleEF	MDV	0.18	0.21
tblVehicleEF	MH	1.8800e-003	0.00
tblVehicleEF	MHD	0.02	5.0000e-003
tblVehicleEF	OBUS	2.1690e-003	0.00
tblVehicleEF	SBUS	1.5360e-003	0.00
tblVehicleEF	UBUS	1.9620e-003	2.0000e-003
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	89.00
tblVehicleTrips	PR_TP	14.00	79.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	47.50	64.50
tblVehicleTrips	PR_TP	50.00	66.00
tblVehicleTrips	PR_TP	37.00	80.00
tblVehicleTrips	PR_TP	58.00	62.00
tblVehicleTrips	PR_TP	66.00	83.00
tblVehicleTrips	PR_TP	54.00	65.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	PR_TP	0.00	100.00

tblVehicleTrips	ST_TR	7.16	6.31
tblVehicleTrips	ST_TR	204.47	72.61
tblVehicleTrips	ST_TR	53.75	11.31
tblVehicleTrips	ST_TR	722.03	248.06
tblVehicleTrips	ST_TR	64.07	14.86
tblVehicleTrips	ST_TR	0.00	1.75
tblVehicleTrips	ST_TR	158.37	78.55
tblVehicleTrips	ST_TR	8.19	7.76
tblVehicleTrips	ST_TR	80.00	59.52
tblVehicleTrips	ST_TR	49.97	33.73
tblVehicleTrips	ST_TR	177.59	60.34
tblVehicleTrips	ST_TR	0.00	19.00
tblVehicleTrips	SU_TR	6.07	6.31
tblVehicleTrips	SU_TR	166.88	72.61
tblVehicleTrips	SU_TR	33.67	11.31
tblVehicleTrips	SU_TR	542.72	248.06
tblVehicleTrips	SU_TR	56.12	14.86
tblVehicleTrips	SU_TR	0.00	1.75
tblVehicleTrips	SU_TR	131.84	78.55
tblVehicleTrips	SU_TR	5.95	7.76
tblVehicleTrips	SU_TR	80.00	59.52
tblVehicleTrips	SU_TR	25.24	33.73
tblVehicleTrips	SU_TR	166.44	60.34
tblVehicleTrips	SU_TR	0.00	19.00
tblVehicleTrips	WD_TR	6.59	6.31
tblVehicleTrips	WD_TR	542.60	72.61
tblVehicleTrips	WD_TR	41.80	11.31
tblVehicleTrips	WD_TR	496.12	248.06
tblVehicleTrips	WD_TR	53.13	14.86
tblVehicleTrips	WD_TR	68.93	1.75

tblVehicleTrips	WD_TR	127.15	78.55
tblVehicleTrips	WD_TR	8.17	7.76
tblVehicleTrips	WD_TR	80.00	59.52
tblVehicleTrips	WD_TR	42.94	33.73
tblVehicleTrips	WD_TR	102.24	60.34
tblVehicleTrips	WD_TR	0.00	19.00
tblWoodstoves	NumberCatalytic	0.00	5.50
tblWoodstoves	NumberNoncatalytic	0.00	5.50

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											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253
Energy											0.0000	4,568.4045	4,568.4045	0.1750	0.0540	4,588.8076
Mobile											0.0000	25,771.9989	25,771.9989	2.4687	0.0000	25,823.8418
Waste											444.5177	0.0000	444.5177	26.2703	0.0000	996.1929
Water											26.4004	183.6688	210.0692	2.7198	0.0658	287.5769
Total											493.1531	30,603.3542	31,096.5073	31.7419	0.1212	31,800.6444

Mitigated 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										M1/yr					
Area											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253
Energy											0.0000	4,568.4045	4,568.4045	0.1750	0.0540	4,588.8076
Mobile											0.0000	25,523.3691	25,523.3691	2.4480	0.0000	25,574.7759
Waste											444.5177	0.0000	444.5177	26.2703	0.0000	996.1929
Water											26.4004	183.6688	210.0692	2.7193	0.0657	287.5281
Total											493.1531	30,354.7244	30,847.8775	31.7206	0.1210	31,551.5297

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.80	0.07	0.10	0.78

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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										M1/yr					
Mitigated											0.0000	25,523.3691	25,523.3691	2.4480	0.0000	25,574.7759
Unmitigated											0.0000	25,771.9989	25,771.9989	2.4687	0.0000	25,823.8418

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,123.18	1,123.18	1123.18	3,380,815	3,347,007
Convenience Market With Gas Pumps	871.32	871.32	871.32	1,955,319	1,935,766
Discount Club	240.68	240.68	240.68	470,199	465,497
Fast Food Restaurant with Drive Thru	5,320.89	5,320.89	5320.89	11,990,799	11,870,891
Free-Standing Discount Superstore	1,949.48	1,949.48	1949.48	3,952,153	3,912,631
Government Office Building	16.12	16.12	16.12	35,080	34,729
High Turnover (Sit Down Restaurant)	1,376.20	1,376.20	1376.20	3,187,927	3,156,048
High Turnover (Sit Down Restaurant)	340.12	340.12	340.12	787,884	780,005
High Turnover (Sit Down Restaurant)	714.02	714.02	714.02	1,654,010	1,637,470
Hotel	628.56	628.56	628.56	1,264,020	1,251,379
Movie Theater (No Matinee)	2,307.59	2,307.59	2307.59	5,378,955	5,325,166
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,405.96	2,405.96	2405.96	4,946,538	4,897,073
Regional Shopping Center	277.94	277.94	277.94	571,421	565,707
Regional Shopping Center	5,587.04	5,587.04	5587.04	11,486,676	11,371,809
Supermarket	3,269.22	3,269.22	3269.22	6,864,287	6,795,644
User Defined Commercial	19.00	19.00	19.00	50,487	49,982
Total	26,447.31	26,447.31	26,447.31	57,976,569	57,396,803

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 Low Rise	10.80	7.30	7.50	46.90	17.40	35.70	89	11	0
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	79	21	0
Discount Club	9.50	7.30	7.30	16.70	64.30	19.00	60	40	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	79	21	0
Free-Standing Discount	9.50	7.30	7.30	13.20	67.80	19.00	64.5	35.5	0
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	66	34	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	62	38	0
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	83	17	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0

Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	70	30	0
User Defined Commercial	9.50	7.30	7.30	0.00	100.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.507000	0.075000	0.196000	0.211000	0.000000	0.000000	0.005000	0.002000	0.000000	0.002000	0.009000	0.000000	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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 Mitigated											0.0000	3,387.6036	3,387.6036	0.1523	0.0323	3,400.8205
Electricity Unmitigated											0.0000	3,387.6036	3,387.6036	0.1523	0.0323	3,400.8205
NaturalGas Mitigated											0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871
NaturalGas Unmitigated											0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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					
Apartments Low Rise	2.62445e+006											0.0000	140.0505	140.0505	2.6800e-003	2.5700e-003	140.9028
Convenience Market With Gas	70300.8											0.0000	3.7515	3.7515	7.0000e-005	7.0000e-005	3.7744
Discount Club	237272											0.0000	12.6617	12.6617	2.4000e-004	2.3000e-004	12.7388
Fast Food Restaurant with Drive-Thru	4.55362e+006											0.0000	242.9985	242.9985	4.6600e-003	4.4500e-003	244.4774
Free-Standing Discount Supermarket	1.46277e+006											0.0000	78.0589	78.0589	1.5000e-003	1.4300e-003	78.5340
Government Office Building	126347											0.0000	6.7424	6.7424	1.3000e-004	1.2000e-004	6.7834
High Turnover (Sit Down Restaurant)	1.93035e+006											0.0000	103.0110	103.0110	1.9700e-003	1.8900e-003	103.6379
High Turnover (Sit Down Restaurant)	3.71975e+006											0.0000	198.4998	198.4998	3.8000e-003	3.6400e-003	199.7078
High Turnover (Sit Down Restaurant)	919216											0.0000	49.0529	49.0529	9.4000e-004	9.0000e-004	49.3514
Hotel	1.30189e+006											0.0000	69.4739	69.4739	1.3300e-003	1.2700e-003	69.8967
Movie Theater (No Matinee)	843700											0.0000	45.0231	45.0231	8.6000e-004	8.3000e-004	45.2971
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.8469e+006											0.0000	98.5575	98.5575	1.8900e-003	1.8100e-003	99.1573
Regional Shopping Center	795330											0.0000	42.4418	42.4418	8.1000e-004	7.8000e-004	42.7001
Regional Shopping Center	91876											0.0000	4.9029	4.9029	9.0000e-005	9.0000e-005	4.9327
Supermarket	1.60361e+006											0.0000	85.5747	85.5747	1.6400e-003	1.5700e-003	86.0955
User Defined Commercial	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871

Mitigated

	Natural Gas 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					
Apartments Low Rise	2.62445e+006											0.0000	140.0505	140.0505	2.6800e-003	2.5700e-003	140.9028
Convenience Market With Gas Dispensing	70300.8											0.0000	3.7515	3.7515	7.0000e-005	7.0000e-005	3.7744
Discount Club	237272											0.0000	12.6617	12.6617	2.4000e-004	2.3000e-004	12.7388
Fast Food Restaurant with Drive-Thru	4.55362e+006											0.0000	242.9985	242.9985	4.6600e-003	4.4500e-003	244.4774
Free-Standing Discount Supermarket	1.46277e+006											0.0000	78.0589	78.0589	1.5000e-003	1.4300e-003	78.5340
Government Office Building	126347											0.0000	6.7424	6.7424	1.3000e-004	1.2000e-004	6.7834
High Turnover (Sit Down Restaurant)	1.93035e+006											0.0000	103.0110	103.0110	1.9700e-003	1.8900e-003	103.6379
High Turnover (Sit Down Restaurant)	3.71975e+006											0.0000	198.4998	198.4998	3.8000e-003	3.6400e-003	199.7078
High Turnover (Sit Down Restaurant)	919216											0.0000	49.0529	49.0529	9.4000e-004	9.0000e-004	49.3514
Hotel	1.30189e+006											0.0000	69.4739	69.4739	1.3300e-003	1.2700e-003	69.8967
Movie Theater (No Matinee)	843700											0.0000	45.0231	45.0231	8.6000e-004	8.3000e-004	45.2971
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.8469e+006											0.0000	98.5575	98.5575	1.8900e-003	1.8100e-003	99.1573
Regional Shopping Center	795330											0.0000	42.4418	42.4418	8.1000e-004	7.8000e-004	42.7001
Regional Shopping Center	91876											0.0000	4.9029	4.9029	9.0000e-005	9.0000e-005	4.9327
Supermarket	1.60361e+006											0.0000	85.5747	85.5747	1.6400e-003	1.5700e-003	86.0955
User Defined Commercial	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	683867	227.6256	0.0102	2.1700e-003	228.5137
Convenience Market With Gas	57564.6	19.1604	8.6000e-004	1.8000e-004	19.2352
Discount Club	194286	64.6684	2.9100e-003	6.2000e-004	64.9207
Fast Food Restaurant with Drive Thru	669026	222.6856	0.0100	2.1200e-003	223.5544
Free-Standing Discount Superstore	1.19776e+006	398.6767	0.0179	3.8000e-003	400.2322
Government Office Building	93195.1	31.0200	1.3900e-003	3.0000e-004	31.1411
High Turnover (Sit Down Restaurant)	135053	44.9524	2.0200e-003	4.3000e-004	45.1278
High Turnover (Sit Down Restaurant)	283611	94.4000	4.2500e-003	9.0000e-004	94.7683
High Turnover (Sit Down Restaurant)	546511	181.9066	8.1800e-003	1.7400e-003	182.6163
Hotel	456585	151.9746	6.8300e-003	1.4500e-003	152.5675
Movie Theater (No Matinee)	374547	124.6683	5.6100e-003	1.1900e-003	125.1547
Parking Lot	1.36848e+006	455.4997	0.0205	4.3500e-003	457.2769
Regional Shopping Center	1.5123e+006	503.3708	0.0226	4.8000e-003	505.3347
Regional Shopping Center	651243	216.7666	9.7500e-003	2.0700e-003	217.6123
Regional Shopping Center	75231.2	25.0408	1.1300e-003	2.4000e-004	25.1385
Supermarket	1.87828e+006	625.1873	0.0281	5.9600e-003	627.6265
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		3,387.6036	0.1524	0.0323	3,400.8206

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	683867	227.6256	0.0102	2.1700e-003	228.5137
Convenience Market With Gas Dispenser	57564.6	19.1604	8.6000e-004	1.8000e-004	19.2352
Discount Club	194286	64.6684	2.9100e-003	6.2000e-004	64.9207
Fast Food Restaurant with Drive Thru	669026	222.6856	0.0100	2.1200e-003	223.5544
Free-Standing Discount Superstore	1.19776e+006	398.6767	0.0179	3.8000e-003	400.2322
Government Office Building	93195.1	31.0200	1.3900e-003	3.0000e-004	31.1411
High Turnover (Sit Down Restaurant)	135053	44.9524	2.0200e-003	4.3000e-004	45.1278
High Turnover (Sit Down Restaurant)	283611	94.4000	4.2500e-003	9.0000e-004	94.7683
High Turnover (Sit Down Restaurant)	546511	181.9066	8.1800e-003	1.7400e-003	182.6163
Hotel	456585	151.9746	6.8300e-003	1.4500e-003	152.5675
Movie Theater (No Matinee)	374547	124.6683	5.6100e-003	1.1900e-003	125.1547
Parking Lot	1.36848e+006	455.4997	0.0205	4.3500e-003	457.2769
Regional Shopping Center	1.5123e+006	503.3708	0.0226	4.8000e-003	505.3347
Regional Shopping Center	651243	216.7666	9.7500e-003	2.0700e-003	217.6123
Regional Shopping Center	75231.2	25.0408	1.1300e-003	2.4000e-004	25.1385
Supermarket	1.87828e+006	625.1873	0.0281	5.9600e-003	627.6265
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		3,387.6036	0.1524	0.0323	3,400.8206

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253
Unmitigated											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											22.2350	77.1109	99.3459	0.1054	1.4100e-003	101.9980
Landscaping											0.0000	2.1711	2.1711	2.6700e-003	0.0000	2.2273
Total											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											22.2350	77.1109	99.3459	0.1054	1.4100e-003	101.9980
Landscaping											0.0000	2.1711	2.1711	2.6700e-003	0.0000	2.2273
Total											22.2350	79.2820	101.5170	0.1081	1.4100e-003	104.2253

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	210.0692	2.7193	0.0657	287.5281
Unmitigated	210.0692	2.7198	0.0658	287.5769

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.5974 / 7.31141	33.0845	0.3792	9.2000e-003	43.9014
Convenience Market With Gas Discount Club	0.125486 / 0.0769109	0.3554	4.1000e-003	1.0000e-004	0.4725
Fast Food Restaurant with Drive Thru	1.57626 / 0.966097	4.4645	0.0515	1.2500e-003	5.9345
Free-Standing Discount Supermarket	6.5108 / 0.415583	14.2760	0.2127	5.1300e-003	20.3318
Government Office Building	9.71757 / 5.95593	27.5234	0.3178	7.7100e-003	36.5861
High Turnover (Sit Down Restaurant)	1.82966 / 1.1214	5.1822	0.0598	1.4500e-003	6.8885
Hotel	9.39133 / 0.599447	20.5921	0.3068	7.3900e-003	29.3271
Movie Theater (No Matinee)	2.05471 / 0.228301	4.6185	0.0671	1.6200e-003	6.5300
Parking Lot	15.5701 / 0.993835	34.1401	0.5087	0.0123	48.6221
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	18.1633 / 11.1324	51.4445	0.5939	0.0144	68.3838
User Defined Commercial	6.67867 / 0.206557	14.3881	0.2182	5.2600e-003	20.5991
Total		210.0692	2.7198	0.0658	287.5769

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.5974 / 7.31141	33.0845	0.3792	9.1900e-003	43.8946
Convenience Market With Gas Discount	0.125486 / 0.0769109	0.3554	4.1000e-003	1.0000e-004	0.4724
Discount Club	1.57626 / 0.966097	4.4645	0.0515	1.2500e-003	5.9336
Fast Food Restaurant with Drive Thru	6.5108 / 0.415583	14.2760	0.2127	5.1200e-003	20.3280
Free-Standing Discount Supermarket	9.71757 / 5.95593	27.5234	0.3177	7.7000e-003	36.5804
Government Office Building	1.82966 / 1.1214	5.1822	0.0598	1.4500e-003	6.8875
High Turnover (Sit Down Restaurant)	9.39133 / 0.599447	20.5921	0.3068	7.3800e-003	29.3216
Hotel	2.05471 / 0.228301	4.6185	0.0671	1.6200e-003	6.5288
Movie Theater (No Matinee)	15.5701 / 0.993835	34.1401	0.5086	0.0122	48.6129
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	18.1633 / 11.1324	51.4445	0.5938	0.0144	68.3732
Supermarket	6.67867 / 0.206557	14.3881	0.2181	5.2500e-003	20.5952
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		210.0692	2.7193	0.0657	287.5281

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	444.5177	26.2703	0.0000	996.1929
Mitigated	444.5177	26.2703	0.0000	996.1929

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	81.88	16.6209	0.9823	0.0000	37.2485
Discount Club	91.52	18.5777	1.0979	0.0000	41.6339
Fast Food Restaurant with Drive-Thru	247.08	50.1550	2.9641	0.0000	112.4006
Free-Standing Discount Supermarket	564.21	114.5295	6.7685	0.0000	256.6681
Government Office Building	8.57	1.7396	0.1028	0.0000	3.8986
High Turnover (Sit Down Restaurant)	368.19	74.7392	4.4170	0.0000	167.4955
Hotel	44.35	9.0027	0.5320	0.0000	20.1755
Movie Theater (No Matinee)	220.99	44.8590	2.6511	0.0000	100.5319
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	257.47	52.2641	3.0887	0.0000	117.1272
Supermarket	305.58	62.0300	3.6659	0.0000	139.0132
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		444.5177	26.2703	0.0000	996.1929

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	81.88	16.6209	0.9823	0.0000	37.2485
Discount Club	91.52	18.5777	1.0979	0.0000	41.6339
Fast Food Restaurant with Drive Thru	247.08	50.1550	2.9641	0.0000	112.4006
Free-Standing Discount Supermarket	564.21	114.5295	6.7685	0.0000	256.6681
Government Office Building	8.57	1.7396	0.1028	0.0000	3.8986
High Turnover (Sit Down Restaurant)	368.19	74.7392	4.4170	0.0000	167.4955
Hotel	44.35	9.0027	0.5320	0.0000	20.1755
Movie Theater (No Matinee)	220.99	44.8590	2.6511	0.0000	100.5319
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	257.47	52.2641	3.0887	0.0000	117.1272
Supermarket	305.58	62.0300	3.6659	0.0000	139.0132
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		444.5177	26.2703	0.0000	996.1929

9.0 Operational Offroad

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

Mitigated Merced Gateway Operational All Phases Year 2020
Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	9.21	1000sqft	1.10	9,209.00	0
User Defined Commercial	1.00	User Defined Unit	0.45	2,000.00	0
Parking Lot	35.70	Acre	35.70	1,555,092.00	0
Fast Food Restaurant with Drive Thru	21.45	1000sqft	0.86	21,450.00	0
High Turnover (Sit Down Restaurant)	17.52	1000sqft	0.89	17,522.00	0
High Turnover (Sit Down Restaurant)	4.33	1000sqft	0.18	4,330.00	0
High Turnover (Sit Down Restaurant)	9.09	1000sqft	0.47	9,093.00	0
Hotel	81.00	Room	4.73	49,900.00	0
Movie Theater (No Matinee)	38.77	1000sqft	2.01	38,773.00	0
Apartments Low Rise	178.00	Dwelling Unit	5.50	178,000.00	509
Convenience Market With Gas Pumps	12.00	Pump	0.07	6,305.00	0
Discount Club	21.28	1000sqft	0.86	21,280.00	0
Free-Standing Discount Superstore	131.19	1000sqft	5.27	131,190.00	0
Regional Shopping Center	71.33	1000sqft	3.65	71,330.00	0
Regional Shopping Center	8.24	1000sqft	0.33	8,240.00	0
Regional Shopping Center	165.64	1000sqft	8.57	165,641.00	0
Supermarket	54.18	1000sqft	2.76	54,176.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3	Operational Year			

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 CH4 Intensity (lb/MWhr) 0.029 N2O Intensity (lb/MWhr) 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E - 491.65 CO2, 0.022 CH4 and 0.005 N2O Intensity Factors

Construction Phase -

Vehicle Trips - Pass-by trips % moved to Primary Trips %

Vehicle Emission Factors - Fleet Mix adjusted to project

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No woodstoves

Energy Use -

Mobile Land Use Mitigation - Suburban Center, 21 dwelling units per acre, Improve Pedestrian Network on project site. Increase transit accessibility 0.01 mile. NEV Network 9 charging

Mobile Commute Mitigation - Implement Voluntary Trip Reduction Program 50% eligible. Provide Ride Sharing Program 50% Eligible.

Energy Mitigation - Exceed Title 24 by 25%.

Water Mitigation - Install Low-flow faucets, toilets, and showers. Use water-efficient irrigation system.

Waste Mitigation - Institute Recycling and Composting Services 50% reduction

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	9,210.00	9,209.00
tblLandUse	LandUseSquareFeet	0.00	2,000.00
tblLandUse	LandUseSquareFeet	17,520.00	17,522.00
tblLandUse	LandUseSquareFeet	9,090.00	9,093.00
tblLandUse	LandUseSquareFeet	117,612.00	49,900.00
tblLandUse	LandUseSquareFeet	38,770.00	38,773.00
tblLandUse	LandUseSquareFeet	1,694.10	6,305.00
tblLandUse	LandUseSquareFeet	165,640.00	165,641.00
tblLandUse	LandUseSquareFeet	54,180.00	54,176.00

tblLandUse	LotAcreage	0.21	1.10
tblLandUse	LotAcreage	0.00	0.45
tblLandUse	LotAcreage	0.49	0.86
tblLandUse	LotAcreage	0.40	0.89
tblLandUse	LotAcreage	0.10	0.18
tblLandUse	LotAcreage	0.21	0.47
tblLandUse	LotAcreage	2.70	4.73
tblLandUse	LotAcreage	0.89	2.01
tblLandUse	LotAcreage	11.13	5.50
tblLandUse	LotAcreage	0.04	0.07
tblLandUse	LotAcreage	0.49	0.86
tblLandUse	LotAcreage	3.01	5.27
tblLandUse	LotAcreage	3.80	8.57
tblLandUse	LotAcreage	1.64	3.65
tblLandUse	LotAcreage	0.19	0.33
tblLandUse	LotAcreage	1.24	2.76
tblVehicleEF	HHD	0.15	2.0000e-003
tblVehicleEF	LDA	0.39	0.51
tblVehicleEF	LDT1	0.06	0.08
tblVehicleEF	LDT2	0.15	0.20
tblVehicleEF	LHD1	0.05	0.00
tblVehicleEF	LHD2	6.7520e-003	0.00
tblVehicleEF	MCY	6.6330e-003	9.0000e-003
tblVehicleEF	MDV	0.16	0.21
tblVehicleEF	MH	1.7770e-003	0.00
tblVehicleEF	MHD	0.02	5.0000e-003
tblVehicleEF	OBUS	2.0940e-003	0.00
tblVehicleEF	SBUS	1.2990e-003	0.00
tblVehicleEF	UBUS	1.6450e-003	2.0000e-003
tblVehicleTrips	PB_TP	3.00	0.00

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	17.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	89.00
tblVehicleTrips	PR_TP	14.00	79.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	47.50	64.50
tblVehicleTrips	PR_TP	50.00	66.00
tblVehicleTrips	PR_TP	37.00	80.00
tblVehicleTrips	PR_TP	58.00	62.00
tblVehicleTrips	PR_TP	66.00	83.00
tblVehicleTrips	PR_TP	54.00	65.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	7.16	6.31
tblVehicleTrips	ST_TR	204.47	72.61
tblVehicleTrips	ST_TR	53.75	11.31
tblVehicleTrips	ST_TR	722.03	248.06
tblVehicleTrips	ST_TR	64.07	14.86
tblVehicleTrips	ST_TR	0.00	1.75
tblVehicleTrips	ST_TR	158.37	78.55
tblVehicleTrips	ST_TR	8.19	7.76

tblVehicleTrips	ST_TR	80.00	59.52
tblVehicleTrips	ST_TR	49.97	33.73
tblVehicleTrips	ST_TR	177.59	60.34
tblVehicleTrips	ST_TR	0.00	19.00
tblVehicleTrips	SU_TR	6.07	6.31
tblVehicleTrips	SU_TR	166.88	72.61
tblVehicleTrips	SU_TR	33.67	11.31
tblVehicleTrips	SU_TR	542.72	248.06
tblVehicleTrips	SU_TR	56.12	14.86
tblVehicleTrips	SU_TR	0.00	1.75
tblVehicleTrips	SU_TR	131.84	78.55
tblVehicleTrips	SU_TR	5.95	7.76
tblVehicleTrips	SU_TR	80.00	59.52
tblVehicleTrips	SU_TR	25.24	33.73
tblVehicleTrips	SU_TR	166.44	60.34
tblVehicleTrips	SU_TR	0.00	19.00
tblVehicleTrips	WD_TR	6.59	6.31
tblVehicleTrips	WD_TR	542.60	72.61
tblVehicleTrips	WD_TR	41.80	11.31
tblVehicleTrips	WD_TR	496.12	248.06
tblVehicleTrips	WD_TR	53.13	14.86
tblVehicleTrips	WD_TR	68.93	1.75
tblVehicleTrips	WD_TR	127.15	78.55
tblVehicleTrips	WD_TR	8.17	7.76
tblVehicleTrips	WD_TR	80.00	59.52
tblVehicleTrips	WD_TR	42.94	33.73
tblVehicleTrips	WD_TR	102.24	60.34
tblVehicleTrips	WD_TR	0.00	19.00
tblWoodstoves	NumberCatalytic	5.50	0.00
tblWoodstoves	NumberNoncatalytic	5.50	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											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802
Energy											0.0000	4,141.5667	4,141.5667	0.1565	0.0494	4,160.1509
Mobile											0.0000	19,227.5239	19,227.5239	0.9657	0.0000	19,247.8039
Waste											444.5177	0.0000	444.5177	26.2703	0.0000	996.1929
Water											26.4004	160.5266	186.9269	2.7188	0.0655	264.3360
Total											470.9181	23,606.7281	24,077.6462	30.1128	0.1163	24,746.0639

Mitigated 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											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802
Energy											0.0000	3,844.1909	3,844.1909	0.1467	0.0453	3,861.3194
Mobile											0.0000	15,839.9639	15,839.9639	0.8094	0.0000	15,856.9615
Waste											222.2589	0.0000	222.2589	13.1351	0.0000	498.0964
Water											21.1203	132.5267	153.6470	2.1749	0.0524	215.5564
Total											243.3792	19,893.7924	20,137.1715	16.2675	0.0991	20,509.5139

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.32	15.73	16.37	45.98	14.77	17.12

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Transit Accessibility

Improve Pedestrian Network

Implement NEV Network

Implement Trip Reduction Program

Provide Riade Sharing Program

	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					
Mitigated											0.0000	15,839.9639	15,839.9639	0.8094	0.0000	15,856.9615
Unmitigated											0.0000	19,227.5239	19,227.5239	0.9657	0.0000	19,247.8039

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,123.18	1,123.18	1123.18	3,380,815	2,832,809
Convenience Market With Gas Pumps	871.32	871.32	871.32	1,955,319	1,596,330
Discount Club	240.68	240.68	240.68	470,199	383,521

Fast Food Restaurant with Drive Thru	5,320.89	5,320.89	5320.89	11,990,799	9,788,512
Free-Standing Discount Superstore	1,949.48	1,949.48	1949.48	3,952,153	3,224,223
Government Office Building	16.12	16.12	16.12	35,080	28,202
High Turnover (Sit Down Restaurant)	1,376.20	1,376.20	1376.20	3,187,927	2,601,454
High Turnover (Sit Down Restaurant)	340.12	340.12	340.12	787,884	642,939
High Turnover (Sit Down Restaurant)	714.02	714.02	714.02	1,654,010	1,349,727
Hotel	628.56	628.56	628.56	1,264,020	1,030,853
Movie Theater (No Matinee)	2,307.59	2,307.59	2307.59	5,378,955	4,391,136
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,405.96	2,405.96	2405.96	4,946,538	4,034,761
Regional Shopping Center	277.94	277.94	277.94	571,421	466,093
Regional Shopping Center	5,587.04	5,587.04	5587.04	11,486,676	9,369,378
Supermarket	3,269.22	3,269.22	3269.22	6,864,287	5,602,134
User Defined Commercial	0.00	0.00	0.00		
Total	26,428.31	26,428.31	26,428.31	57,926,082	47,342,071

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 Low Rise	10.80	7.30	7.50	46.90	17.40	35.70	89	11	0
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	79	21	0
Discount Club	9.50	7.30	7.30	16.70	64.30	19.00	60	40	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	79	21	0
Free-Standing Discount	9.50	7.30	7.30	13.20	67.80	19.00	64.5	35.5	0
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	66	34	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	80	20	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	62	38	0
Movie Theater (No Matinee)	9.50	7.30	7.30	1.80	79.20	19.00	83	17	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	65	35	0
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	70	30	0
User Defined Commercial	9.50	7.30	7.30	0.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.507000	0.075000	0.196000	0.211000	0.000000	0.000000	0.005000	0.002000	0.000000	0.002000	0.009000	0.000000	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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 Mitigated											0.0000	2,802.4052	2,802.4052	0.1267	0.0262	2,813.1936
Electricity Unmitigated											0.0000	2,960.7658	2,960.7658	0.1339	0.0277	2,972.1639
NaturalGas Mitigated											0.0000	1,041.7856	1,041.7856	0.0200	0.0191	1,048.1258
NaturalGas Unmitigated											0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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					
Apartments Low Rise	2.62445e+006											0.0000	140.0505	140.0505	2.6800e-003	2.5700e-003	140.9028
Convenience Market With Gas	70300.8											0.0000	3.7515	3.7515	7.0000e-005	7.0000e-005	3.7744
Discount Club	237272											0.0000	12.6617	12.6617	2.4000e-004	2.3000e-004	12.7388
Fast Food Restaurant with Drive-Thru	4.55362e+006											0.0000	242.9985	242.9985	4.6600e-003	4.4500e-003	244.4774
Free-Standing Discount Supermarket	1.46277e+006											0.0000	78.0589	78.0589	1.5000e-003	1.4300e-003	78.5340
Government Office Building	126347											0.0000	6.7424	6.7424	1.3000e-004	1.2000e-004	6.7834
High Turnover (Sit Down Restaurant)	1.93035e+006											0.0000	103.0110	103.0110	1.9700e-003	1.8900e-003	103.6379
High Turnover (Sit Down Restaurant)	3.71975e+006											0.0000	198.4998	198.4998	3.8000e-003	3.6400e-003	199.7078
High Turnover (Sit Down Restaurant)	919216											0.0000	49.0529	49.0529	9.4000e-004	9.0000e-004	49.3514
Hotel	1.30189e+006											0.0000	69.4739	69.4739	1.3300e-003	1.2700e-003	69.8967
Movie Theater (No Matinee)	843700											0.0000	45.0231	45.0231	8.6000e-004	8.3000e-004	45.2971
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.8469e+006											0.0000	98.5575	98.5575	1.8900e-003	1.8100e-003	99.1573
Regional Shopping Center	795330											0.0000	42.4418	42.4418	8.1000e-004	7.8000e-004	42.7001
Regional Shopping Center	91876											0.0000	4.9029	4.9029	9.0000e-005	9.0000e-005	4.9327
Supermarket	1.60361e+006											0.0000	85.5747	85.5747	1.6400e-003	1.5700e-003	86.0955
User Defined Commercial	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												0.0000	1,180.8009	1,180.8009	0.0226	0.0217	1,187.9871

Mitigated

	Natural Gas 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					
Apartments Low Rise	2.0795e+06											0.0000	110.9698	110.9698	2.1300e-003	2.0300e-003	111.6452
Convenience Market With Gas Dispensing	56004.2											0.0000	2.9886	2.9886	6.0000e-005	5.0000e-005	3.0068
Discount Club	189020											0.0000	10.0868	10.0868	1.9000e-004	1.8000e-004	10.1482
Fast Food Restaurant with Drive-Thru	4.35204e+006											0.0000	232.2417	232.2417	4.4500e-003	4.2600e-003	233.6550
Free-Standing Discount Supermarket	1.1653e+06											0.0000	62.1846	62.1846	1.1900e-003	1.1400e-003	62.5630
Government Office Building	95405.2											0.0000	5.0912	5.0912	1.0000e-004	9.0000e-005	5.1222
High Turnover (Sit Down Restaurant)	1.8449e+06											0.0000	98.4510	98.4510	1.8900e-003	1.8000e-003	99.0501
High Turnover (Sit Down Restaurant)	3.55508e+006											0.0000	189.7127	189.7127	3.6400e-003	3.4800e-003	190.8673
High Turnover (Sit Down Restaurant)	878525											0.0000	46.8814	46.8814	9.0000e-004	8.6000e-004	47.1667
Hotel	1.06574e+006											0.0000	56.8719	56.8719	1.0900e-003	1.0400e-003	57.2180
Movie Theater (No Matinee)	669997											0.0000	35.7536	35.7536	6.9000e-004	6.6000e-004	35.9712
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.47131e+006											0.0000	78.5145	78.5145	1.5000e-003	1.4400e-003	78.9923
Regional Shopping Center	633589											0.0000	33.8107	33.8107	6.5000e-004	6.2000e-004	34.0165
Regional Shopping Center	73191.8											0.0000	3.9058	3.9058	7.0000e-005	7.0000e-005	3.9296
Supermarket	1.39273e+006											0.0000	74.3214	74.3214	1.4200e-003	1.3600e-003	74.7737
User Defined Commercial	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												0.0000	1,041.7856	1,041.7856	0.0200	0.0191	1,048.1258

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	683867	198.9448	9.0000e-003	1.8600e-003	199.7107
Convenience Market With Gas	57564.6	16.7462	7.6000e-004	1.6000e-004	16.8107
Discount Club	194286	56.5201	2.5600e-003	5.3000e-004	56.7377
Fast Food Restaurant with Drive Thru	669026	194.6272	8.8000e-003	1.8200e-003	195.3764
Free-Standing Discount Superstore	1.19776e+006	348.4435	0.0158	3.2600e-003	349.7849
Government Office Building	93195.1	27.1115	1.2300e-003	2.5000e-004	27.2159
High Turnover (Sit Down Restaurant)	135053	39.2884	1.7800e-003	3.7000e-004	39.4396
High Turnover (Sit Down Restaurant)	283611	82.5056	3.7300e-003	7.7000e-004	82.8232
High Turnover (Sit Down Restaurant)	546511	158.9864	7.1900e-003	1.4900e-003	159.5984
Hotel	456585	132.8258	6.0100e-003	1.2400e-003	133.3372
Movie Theater (No Matinee)	374547	108.9601	4.9300e-003	1.0200e-003	109.3795
Parking Lot	1.36848e+006	398.1068	0.0180	3.7200e-003	399.6394
Regional Shopping Center	1.5123e+006	439.9461	0.0199	4.1200e-003	441.6398
Regional Shopping Center	651243	189.4540	8.5700e-003	1.7700e-003	190.1834
Regional Shopping Center	75231.2	21.8856	9.9000e-004	2.0000e-004	21.9699
Supermarket	1.87828e+006	546.4138	0.0247	5.1100e-003	548.5173
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		2,960.7659	0.1339	0.0277	2,972.1639

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	666036	193.7574	8.7600e-003	1.8100e-003	194.5033
Convenience Market With Gas Dispenser	53450.6	15.5494	7.0000e-004	1.5000e-004	15.6093
Discount Club	180401	52.4808	2.3700e-003	4.9000e-004	52.6828
Fast Food Restaurant with Drive Thru	626126	182.1471	8.2400e-003	1.7000e-003	182.8483
Free-Standing Discount Supermarket	1.11216e+006	323.5410	0.0146	3.0300e-003	324.7866
Government Office Building	85827.9	24.9683	1.1300e-003	2.3000e-004	25.0644
High Turnover (Sit Down Restaurant)	126393	36.7691	1.6600e-003	3.4000e-004	36.9106
High Turnover (Sit Down Restaurant)	265425	77.2151	3.4900e-003	7.2000e-004	77.5123
High Turnover (Sit Down Restaurant)	511467	148.7917	6.7300e-003	1.3900e-003	149.3645
Hotel	393586	114.4988	5.1800e-003	1.0700e-003	114.9395
Movie Theater (No Matinee)	351380	102.2206	4.6200e-003	9.6000e-004	102.6141
Parking Lot	1.36848e+006	398.1068	0.0180	3.7200e-003	399.6394
Regional Shopping Center	1.40422e+006	408.5042	0.0185	3.8200e-003	410.0768
Regional Shopping Center	604700	175.9142	7.9500e-003	1.6500e-003	176.5914
Regional Shopping Center	69854.6	20.3215	9.2000e-004	1.9000e-004	20.3997
Supermarket	1.81368e+006	527.6195	0.0239	4.9400e-003	529.6506
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		2,802.4052	0.1267	0.0262	2,813.1936

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802
Unmitigated											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802
Landscaping											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802
Landscaping											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											0.0000	77.1109	77.1109	1.4800e-003	1.4100e-003	77.5802

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	153.6470	2.1749	0.0524	215.5564
Unmitigated	186.9269	2.7188	0.0655	264.3360

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.5974 / 7.31141	29.3795	0.3791	9.1600e-003	40.1805
Convenience Market With Gas Dispenser	0.125486 / 0.0769109	0.3157	4.1000e-003	1.0000e-004	0.4325
Discount Club	1.57626 / 0.966097	3.9650	0.0515	1.2500e-003	5.4329
Fast Food Restaurant with Drive Thru	6.5108 / 0.415583	12.7375	0.2126	5.1100e-003	18.7868
Free-Standing Discount Supermarket	9.71757 / 5.95593	24.4439	0.3176	7.6800e-003	33.4935
Government Office Building	1.82966 / 1.1214	4.6024	0.0598	1.4500e-003	6.3063
High Turnover (Sit Down Restaurant)	9.39133 / 0.599447	18.3729	0.3067	7.3700e-003	27.0985
Hotel	2.05471 / 0.228301	4.1187	0.0671	1.6100e-003	6.0281
Movie Theater (No Matinee)	15.5701 / 0.993835	30.4608	0.5085	0.0122	44.9271
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	18.1633 / 11.1324	45.6885	0.5937	0.0144	62.6034
Supermarket	6.67867 / 0.206557	12.8422	0.2181	5.2400e-003	19.0466
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		186.9269	2.7188	0.0655	264.3360

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	9.27793 / 6.86542	24.5384	0.3032	7.3300e-003	33.1785
Convenience Market With Gas	0.100389 / 0.0722193	0.2634	3.2800e-003	8.0000e-005	0.3569
Discount Club	1.26101 / 0.907165	3.3087	0.0412	1.0000e-003	4.4829
Fast Food Restaurant with Drive Thru	5.20864 / 0.390232	10.2488	0.1701	4.0800e-003	15.0858
Free-Standing Discount Supermarket	7.77406 / 5.59262	20.3980	0.2541	6.1400e-003	27.6370
Government Office Building	1.46372 / 1.053	3.8406	0.0478	1.1600e-003	5.2036
High Turnover (Sit Down Restaurant)	7.51307 / 0.562881	14.7832	0.2453	5.8900e-003	21.7601
Hotel	1.64377 / 0.214375	3.3273	0.0537	1.2900e-003	4.8541
Movie Theater (No Matinee)	12.4561 / 0.933211	24.5093	0.4067	9.7600e-003	36.0766
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	14.5307 / 10.4533	38.1264	0.4749	0.0115	51.6569
Supermarket	5.34294 / 0.193957	10.3030	0.1745	4.1800e-003	15.2639
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		153.6470	2.1749	0.0524	215.5564

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	444.5177	26.2703	0.0000	996.1929
Mitigated	222.2589	13.1351	0.0000	498.0964

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	81.88	16.6209	0.9823	0.0000	37.2485
Discount Club	91.52	18.5777	1.0979	0.0000	41.6339
Fast Food Restaurant with Drive-Thru	247.08	50.1550	2.9641	0.0000	112.4006
Free-Standing Discount Supermarket	564.21	114.5295	6.7685	0.0000	256.6681
Government Office Building	8.57	1.7396	0.1028	0.0000	3.8986
High Turnover (Sit Down Restaurant)	368.19	74.7392	4.4170	0.0000	167.4955
Hotel	44.35	9.0027	0.5320	0.0000	20.1755
Movie Theater (No Matinee)	220.99	44.8590	2.6511	0.0000	100.5319
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	257.47	52.2641	3.0887	0.0000	117.1272
Supermarket	305.58	62.0300	3.6659	0.0000	139.0132
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		444.5177	26.2703	0.0000	996.1929

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	40.94	8.3105	0.4911	0.0000	18.6243
Discount Club	45.76	9.2889	0.5490	0.0000	20.8170
Fast Food Restaurant with Drive Thru	123.54	25.0775	1.4820	0.0000	56.2003
Free-Standing Discount Supermarket	282.105	57.2648	3.3843	0.0000	128.3340
Government Office Building	4.285	0.8698	0.0514	0.0000	1.9493
High Turnover (Sit Down Restaurant)	184.095	37.3696	2.2085	0.0000	83.7477
Hotel	22.175	4.5013	0.2660	0.0000	10.0878
Movie Theater (No Matinee)	110.495	22.4295	1.3255	0.0000	50.2659
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	128.735	26.1320	1.5444	0.0000	58.5636
Supermarket	152.79	31.0150	1.8329	0.0000	69.5066
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		222.2589	13.1351	0.0000	498.0964

9.0 Operational Offroad

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