APPENDIX B

AIR QUALITY ANALYSIS DATA

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: H:\PDATA\Urbemis\25-104231\Copy of Copy of SD Courthouse.urb924

Project Name: San Diego Courthouse

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (tons/year unmitigated)	0.79	8.19	3.71	0.01	11.68	0.33	12.01	2.44	0.30	2.75	1,599.37
2014 TOTALS (tons/year mitigated)	0.79	8.19	3.71	0.01	1.34	0.33	1.67	0.29	0.30	0.59	1,599.37
Percent Reduction	0.00	0.00	0.00	0.00	88.49	0.00	86.06	88.29	0.00	78.54	0.00
2015 TOTALS (tons/year unmitigated)	0.38	1.92	3.00	0.00	0.01	0.12	0.13	0.01	0.11	0.11	545.17
2015 TOTALS (tons/year mitigated)	0.38	1.92	3.00	0.00	0.01	0.12	0.13	0.01	0.11	0.11	545.17
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016 TOTALS (tons/year unmitigated)	2.99	1.74	2.88	0.00	0.01	0.10	0.12	0.01	0.10	0.10	544.56
2016 TOTALS (tons/year mitigated)	2.73	1.74	2.88	0.00	0.01	0.10	0.12	0.01	0.10	0.10	544.56
Percent Reduction	8.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017 TOTALS (tons/year unmitigated)	0.24	1.53	1.65	0.00	0.06	0.08	0.13	0.01	0.07	0.08	329.34

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2017 TOTALS (tons/year mitigated)	0.24	1.53	1.65	0.00	0.06	0.08	0.13	0.01	0.07	0.08	329.34
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.30	0.30	0.53	0.00	0.00	0.00	361.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.30	0.15	1.28	0.00	0.38	0.07	221.87

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.60	0.45	1.81	0.00	0.38	0.07	583.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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2014	0.79	8.19	3.71	0.01	11.68	0.33	12.01	2.44	0.30	2.75	1,599.37
Demolition 06/02/2014-06/06/2014	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
Demo Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
Mass Grading 08/01/2014-10/30/2014	0.76	7.94	3.57	0.01	11.64	0.32	11.96	2.44	0.29	2.73	1,567.78
Mass Grading Dust	0.00	0.00	0.00	0.00	11.59	0.00	11.59	2.42	0.00	2.42	0.00
Mass Grading Off Road Diesel	0.24	1.88	1.17	0.00	0.00	0.09	0.09	0.00	0.08	0.08	229.55
Mass Grading On Road Diesel	0.52	6.06	2.36	0.01	0.04	0.23	0.27	0.01	0.21	0.23	1,332.16
Mass Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.06
Fine Grading 11/01/2014-11/28/2014	0.02	0.15	0.08	0.00	0.04	0.01	0.05	0.01	0.01	0.01	18.54
Fine Grading Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.02	0.15	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	17.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Trenching 12/01/2014-01/30/2015	0.01	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.62
Trenching Off Road Diesel	0.01	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.90
Trenching Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71

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2015	0.38	1.92	3.00	0.00	0.01	0.12	0.13	0.01	0.11	0.11	545.17
Building 01/01/2015-12/30/2016	0.38	1.84	2.96	0.00	0.01	0.11	0.13	0.01	0.11	0.11	534.06
Building Off Road Diesel	0.31	1.57	1.26	0.00	0.00	0.10	0.10	0.00	0.09	0.09	211.57
Building Vendor Trips	0.02	0.19	0.19	0.00	0.00	0.01	0.01	0.00	0.01	0.01	66.05
Building Worker Trips	0.04	0.08	1.51	0.00	0.01	0.01	0.02	0.00	0.01	0.01	256.44
Trenching 12/01/2014-01/30/2015	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.43
Trenching Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
2016	2.99	1.74	2.88	0.00	0.01	0.10	0.12	0.01	0.10	0.10	544.56
Building 01/01/2015-12/30/2016	0.34	1.70	2.81	0.00	0.01	0.10	0.12	0.01	0.09	0.10	534.03
Building Off Road Diesel	0.29	1.46	1.23	0.00	0.00	0.09	0.09	0.00	0.08	0.08	211.57
Building Vendor Trips	0.02	0.17	0.18	0.00	0.00	0.01	0.01	0.00	0.01	0.01	66.05
Building Worker Trips	0.04	0.08	1.41	0.00	0.01	0.01	0.02	0.00	0.01	0.01	256.41
Coating 01/01/2016-11/30/2016	2.65	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84
Architectural Coating	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84
Asphalt 05/01/2016-05/31/2016	0.01	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.69
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.99
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71

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2017	0.24	1.53	1.65	0.00	0.06	0.08	0.13	0.01	0.07	0.08	329.34
Demolition 01/01/2017-04/30/2017	0.12	0.83	0.77	0.00	0.05	0.04	0.09	0.01	0.04	0.05	140.80
Fugitive Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Demo Off Road Diesel	0.12	0.80	0.70	0.00	0.00	0.04	0.04	0.00	0.04	0.04	121.59
Demo On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.32
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.88
Trenching 05/01/2017-09/30/2017	0.04	0.31	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01	55.55
Trenching Off Road Diesel	0.04	0.31	0.19	0.00	0.00	0.01	0.01	0.00	0.01	0.01	52.14
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42
Building 10/01/2017-12/31/2017	0.08	0.39	0.67	0.00	0.00	0.02	0.03	0.00	0.02	0.02	132.99
Building Off Road Diesel	0.06	0.34	0.30	0.00	0.00	0.02	0.02	0.00	0.02	0.02	52.69
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.45
Building Worker Trips	0.01	0.02	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.85

Phase Assumptions

Phase: Demolition 6/2/2014 - 6/6/2014 - Demolition of Stahlman Block Buidlings

Building Volume Total (cubic feet): 5100

Building Volume Daily (cubic feet): 1021.38

On Road Truck Travel (VMT): 14.19

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 1 hours per day

Phase: Demolition 1/1/2017 - 4/30/2017 - Future Work

Building Volume Total (cubic feet): 175112.2

Building Volume Daily (cubic feet): 2925

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On Road Truck Travel (VMT): 40.62

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

4 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 0 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 1817.95 cubic yards/day; Offsite Cut/Fill: 179 cubic yards/day

On Road Truck Travel (VMT): 8059.18

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 16 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 14 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 14 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 14 hours per day

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Phase: Trenching 12/1/2014 - 1/30/2015 - Default Trenching Description

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Trenching 5/1/2017 - 9/30/2017 - Future Work

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Paving 5/1/2016 - 5/31/2016 - Default Paving Description

Acres to be Paved: 0

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 1/1/2015 - 12/30/2016 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 10/1/2017 - 12/31/2017 - Installation of new machinery; testing; clean-up

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

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1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014	0.79	8.19	3.71	0.01	1.34	0.33	1.67	0.29	0.30	0.59	1,599.37
Demolition 06/02/2014-06/06/2014	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
Demo Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

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Mass Grading 08/01/2014-10/30/2014	0.76	7.94	3.57	0.01	1.33	0.32	1.65	0.28	0.29	0.58	1,567.78
Mass Grading Dust	0.00	0.00	0.00	0.00	1.29	0.00	1.29	0.27	0.00	0.27	0.00
Mass Grading Off Road Diesel	0.24	1.88	1.17	0.00	0.00	0.09	0.09	0.00	0.08	0.08	229.55
Mass Grading On Road Diesel	0.52	6.06	2.36	0.01	0.04	0.23	0.27	0.01	0.21	0.23	1,332.16
Mass Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.06
Fine Grading 11/01/2014-11/28/2014	0.02	0.15	0.08	0.00	0.01	0.01	0.02	0.00	0.01	0.01	18.54
Fine Grading Dust	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.02	0.15	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	17.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Trenching 12/01/2014-01/30/2015	0.01	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.62
Trenching Off Road Diesel	0.01	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.90
Trenching Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
2015	0.38	1.92	3.00	0.00	0.01	0.12	0.13	0.01	0.11	0.11	545.17
Building 01/01/2015-12/30/2016	0.38	1.84	2.96	0.00	0.01	0.11	0.13	0.01	0.11	0.11	534.06
Building Off Road Diesel	0.31	1.57	1.26	0.00	0.00	0.10	0.10	0.00	0.09	0.09	211.57
Building Vendor Trips	0.02	0.19	0.19	0.00	0.00	0.01	0.01	0.00	0.01	0.01	66.05
Building Worker Trips	0.04	0.08	1.51	0.00	0.01	0.01	0.02	0.00	0.01	0.01	256.44
Trenching 12/01/2014-01/30/2015	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.43
Trenching Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68

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2016	2.73	1.74	2.88	0.00	0.01	0.10	0.12	0.01	0.10	0.10	544.56
Building 01/01/2015-12/30/2016	0.34	1.70	2.81	0.00	0.01	0.10	0.12	0.01	0.09	0.10	534.03
Building Off Road Diesel	0.29	1.46	1.23	0.00	0.00	0.09	0.09	0.00	0.08	0.08	211.57
Building Vendor Trips	0.02	0.17	0.18	0.00	0.00	0.01	0.01	0.00	0.01	0.01	66.05
Building Worker Trips	0.04	0.08	1.41	0.00	0.01	0.01	0.02	0.00	0.01	0.01	256.41
Coating 01/01/2016-11/30/2016	2.38	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84
Architectural Coating	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84
Asphalt 05/01/2016-05/31/2016	0.01	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.69
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.99
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71

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2017	0.24	1.53	1.65	0.00	0.06	0.08	0.13	0.01	0.07	0.08	329.34
Demolition 01/01/2017-04/30/2017	0.12	0.83	0.77	0.00	0.05	0.04	0.09	0.01	0.04	0.05	140.80
Fugitive Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Demo Off Road Diesel	0.12	0.80	0.70	0.00	0.00	0.04	0.04	0.00	0.04	0.04	121.59
Demo On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.32
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.88
Trenching 05/01/2017-09/30/2017	0.04	0.31	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01	55.55
Trenching Off Road Diesel	0.04	0.31	0.19	0.00	0.00	0.01	0.01	0.00	0.01	0.01	52.14
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42
Building 10/01/2017-12/31/2017	0.08	0.39	0.67	0.00	0.00	0.02	0.03	0.00	0.02	0.02	132.99
Building Off Road Diesel	0.06	0.34	0.30	0.00	0.00	0.02	0.02	0.00	0.02	0.02	52.69
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.45
Building Worker Trips	0.01	0.02	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.85

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

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PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.30	0.25	0.00	0.00	0.00	360.62
Hearth							
Landscape	0.02	0.00	0.28	0.00	0.00	0.00	0.51
Consumer Products	0.00						
Architectural Coatings	0.26						
TOTALS (tons/year, unmitigated)	0.30	0.30	0.53	0.00	0.00	0.00	361.13

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
New SD Courthouse	0.30	0.15	1.28	0.00	0.38	0.07	221.87
TOTALS (tons/year, unmitigated)	0.30	0.15	1.28	0.00	0.38	0.07	221.87

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2017 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
New SD Courthouse		0.55	1000 sq ft	247.00	135.85	1,218.98
					135.85	1,218.98

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	44.8	55.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
New SD Courthouse				2.0	1.0	97.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: H:\PDATA\Urbemis\25-104231\Copy of Copy of SD Courthouse.urb924

Project Name: San Diego Courthouse

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (lbs/day unmitigated)	19.47	203.63	91.48	0.32	298.42	8.17	306.59	62.46	7.52	69.98	40,199.46
2014 TOTALS (lbs/day mitigated)	19.47	203.63	91.48	0.32	34.22	8.17	42.39	7.28	7.52	14.80	40,199.46
2015 TOTALS (lbs/day unmitigated)	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
2015 TOTALS (lbs/day mitigated)	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
2016 TOTALS (lbs/day unmitigated)	25.27	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
2016 TOTALS (lbs/day mitigated)	23.06	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
2017 TOTALS (lbs/day unmitigated)	2.80	19.47	20.56	0.03	1.25	0.93	2.17	0.26	0.85	1.11	4,092.03
2017 TOTALS (lbs/day mitigated)	2.80	19.47	20.56	0.03	1.25	0.93	2.17	0.26	0.85	1.11	4,092.03

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.57	1.65	1.38	0.00	0.00	0.00	1,976.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.25	0.94	6.73	0.01	2.10	0.41	1,135.39

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.82	2.59	8.11	0.01	2.10	0.41	3,111.39

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/2/2014-6/6/2014 Active Days: 5	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Demolition 06/02/2014-06/06/2014	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Fugitive Dust	0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.09	0.00	0.09	0.00
Demo Off Road Diesel	0.47	3.37	2.71	0.00	0.00	0.19	0.19	0.00	0.18	0.18	451.25
Demo On Road Diesel	0.02	0.27	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.13
Demo Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 8/1/2014-10/30/2014 Active Days: 78	19.47	**203.63**	**91.48**	**0.32**	**298.42**	**8.17**	**306.59**	**62.46**	**7.52**	**69.98**	**40,199.46**
Mass Grading 08/01/2014-10/30/2014	19.47	203.63	91.48	0.32	298.42	8.17	306.59	62.46	7.52	69.98	40,199.46
Mass Grading Dust	0.00	0.00	0.00	0.00	297.28	0.00	297.28	62.08	0.00	62.08	0.00
Mass Grading Off Road Diesel	6.21	48.22	29.95	0.00	0.00	2.29	2.29	0.00	2.11	2.11	5,886.01
Mass Grading On Road Diesel	13.22	155.36	60.55	0.32	1.14	5.88	7.01	0.37	5.41	5.78	34,158.05
Mass Grading Worker Trips	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.40
Time Slice 11/3/2014-11/28/2014 Active Days: 20	1.88	14.99	8.45	0.00	4.00	0.66	4.67	0.84	0.61	1.45	1,853.85
Fine Grading 11/01/2014-11/28/2014	1.88	14.99	8.45	0.00	4.00	0.66	4.67	0.84	0.61	1.45	1,853.85
Fine Grading Dust	0.00	0.00	0.00	0.00	4.00	0.00	4.00	0.84	0.00	0.84	0.00
Fine Grading Off Road Diesel	1.87	14.95	7.86	0.00	0.00	0.66	0.66	0.00	0.61	0.61	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.03	0.59	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.24
Time Slice 12/1/2014-12/31/2014 Active Days: 23	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching 12/01/2014-01/30/2015	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching Off Road Diesel	0.89	7.61	3.63	0.00	0.00	0.36	0.36	0.00	0.33	0.33	947.92
Trenching Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 1/1/2015-1/30/2015 Active Days: 22	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Trenching 12/01/2014-01/30/2015	0.85	6.90	3.93	0.00	0.00	0.34	0.34	0.00	0.31	0.31	1,010.07
Trenching Off Road Diesel	0.84	6.88	3.57	0.00	0.00	0.34	0.34	0.00	0.31	0.31	947.92
Trenching Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.15
Time Slice 2/2/2015-12/31/2015 Active Days: 239	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Time Slice 1/1/2016-4/29/2016 Active Days: 86	24.76	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 5/2/2016-5/31/2016 Active Days: 22	**25.27**	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
Asphalt 05/01/2016-05/31/2016	0.50	3.20	3.81	0.00	0.01	0.20	0.20	0.00	0.18	0.18	608.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.48	3.15	2.95	0.00	0.00	0.19	0.19	0.00	0.18	0.18	453.19
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.02	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.37
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Time Slice 6/1/2016-11/30/2016 Active Days: 131	24.76	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 12/1/2016-12/30/2016 Active Days: 22	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Time Slice 1/2/2017-4/28/2017 Active Days: 85	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Demolition 01/01/2017- 04/30/2017	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Fugitive Dust	0.00	0.00	0.00	0.00	1.23	0.00	1.23	0.26	0.00	0.26	0.00
Demo Off Road Diesel	2.71	18.86	16.50	0.00	0.00	0.90	0.90	0.00	0.83	0.83	2,861.02
Demo On Road Diesel	0.05	0.53	0.21	0.00	0.01	0.02	0.02	0.00	0.02	0.02	172.19
Demo Worker Trips	0.04	0.08	1.43	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.64
Time Slice 5/1/2017-9/29/2017 Active Days: 110	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching 05/01/2017-09/30/2017	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching Off Road Diesel	0.73	5.55	3.50	0.00	0.00	0.24	0.24	0.00	0.22	0.22	947.92
Trenching Worker Trips	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.14
Time Slice 10/2/2017-12/29/2017 Active Days: 65	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building 10/01/2017-12/31/2017	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building Off Road Diesel	1.98	10.41	9.21	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,621.20
Building Vendor Trips	0.12	1.14	1.27	0.00	0.02	0.05	0.06	0.01	0.04	0.05	506.16
Building Worker Trips	0.28	0.54	10.07	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.67

Phase Assumptions

Phase: Demolition 6/2/2014 - 6/6/2014 - Demolition of Stahlman Block Buidlings

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Building Volume Total (cubic feet): 5100

Building Volume Daily (cubic feet): 1021.38

On Road Truck Travel (VMT): 14.19

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 1 hours per day

Phase: Demolition 1/1/2017 - 4/30/2017 - Future Work

Building Volume Total (cubic feet): 175112.2

Building Volume Daily (cubic feet): 2925

On Road Truck Travel (VMT): 40.62

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

4 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 0 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

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Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 1817.95 cubic yards/day; Offsite Cut/Fill: 179 cubic yards/day

On Road Truck Travel (VMT): 8059.18

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 16 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 14 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 14 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 14 hours per day

Phase: Trenching 12/1/2014 - 1/30/2015 - Default Trenching Description

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Trenching 5/1/2017 - 9/30/2017 - Future Work

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Paving 5/1/2016 - 5/31/2016 - Default Paving Description

Acres to be Paved: 0

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 1/1/2015 - 12/30/2016 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

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2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 10/1/2017 - 12/31/2017 - Installation of new machinery; testing; clean-up

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 6/2/2014-6/6/2014 Active Days: 5	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Demolition 06/02/2014-06/06/2014	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Fugitive Dust	0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.09	0.00	0.09	0.00
Demo Off Road Diesel	0.47	3.37	2.71	0.00	0.00	0.19	0.19	0.00	0.18	0.18	451.25
Demo On Road Diesel	0.02	0.27	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.13
Demo Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16
Time Slice 8/1/2014-10/30/2014 Active Days: 78	19.47	**203.63**	**91.48**	**0.32**	34.22	**8.17**	42.39	7.28	**7.52**	14.80	**40,199.46**
Mass Grading 08/01/2014-10/30/2014	19.47	203.63	91.48	0.32	34.22	8.17	42.39	7.28	7.52	14.80	40,199.46
Mass Grading Dust	0.00	0.00	0.00	0.00	33.07	0.00	33.07	6.91	0.00	6.91	0.00
Mass Grading Off Road Diesel	6.21	48.22	29.95	0.00	0.00	2.29	2.29	0.00	2.11	2.11	5,886.01
Mass Grading On Road Diesel	13.22	155.36	60.55	0.32	1.14	5.88	7.01	0.37	5.41	5.78	34,158.05
Mass Grading Worker Trips	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.40
Time Slice 11/3/2014-11/28/2014 Active Days: 20	1.88	14.99	8.45	0.00	0.91	0.66	1.58	0.19	0.61	0.80	1,853.85
Fine Grading 11/01/2014-11/28/2014	1.88	14.99	8.45	0.00	0.91	0.66	1.58	0.19	0.61	0.80	1,853.85
Fine Grading Dust	0.00	0.00	0.00	0.00	0.91	0.00	0.91	0.19	0.00	0.19	0.00
Fine Grading Off Road Diesel	1.87	14.95	7.86	0.00	0.00	0.66	0.66	0.00	0.61	0.61	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.03	0.59	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.24
Time Slice 12/1/2014-12/31/2014 Active Days: 23	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching 12/01/2014-01/30/2015	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching Off Road Diesel	0.89	7.61	3.63	0.00	0.00	0.36	0.36	0.00	0.33	0.33	947.92
Trenching Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 1/1/2015-1/30/2015 Active Days: 22	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Trenching 12/01/2014-01/30/2015	0.85	6.90	3.93	0.00	0.00	0.34	0.34	0.00	0.31	0.31	1,010.07
Trenching Off Road Diesel	0.84	6.88	3.57	0.00	0.00	0.34	0.34	0.00	0.31	0.31	947.92
Trenching Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.15
Time Slice 2/2/2015-12/31/2015 Active Days: 239	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Time Slice 1/1/2016-4/29/2016 Active Days: 86	22.55	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 5/2/2016-5/31/2016 Active Days: 22	23.06	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
Asphalt 05/01/2016-05/31/2016	0.50	3.20	3.81	0.00	0.01	0.20	0.20	0.00	0.18	0.18	608.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.48	3.15	2.95	0.00	0.00	0.19	0.19	0.00	0.18	0.18	453.19
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.02	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.37
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Time Slice 6/1/2016-11/30/2016 Active Days: 131	22.55	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 12/1/2016-12/30/2016 Active Days: 22	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Time Slice 1/2/2017-4/28/2017 Active Days: 85	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Demolition 01/01/2017-04/30/2017	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Fugitive Dust	0.00	0.00	0.00	0.00	1.23	0.00	1.23	0.26	0.00	0.26	0.00
Demo Off Road Diesel	2.71	18.86	16.50	0.00	0.00	0.90	0.90	0.00	0.83	0.83	2,861.02
Demo On Road Diesel	0.05	0.53	0.21	0.00	0.01	0.02	0.02	0.00	0.02	0.02	172.19
Demo Worker Trips	0.04	0.08	1.43	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.64
Time Slice 5/1/2017-9/29/2017 Active Days: 110	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching 05/01/2017-09/30/2017	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching Off Road Diesel	0.73	5.55	3.50	0.00	0.00	0.24	0.24	0.00	0.22	0.22	947.92
Trenching Worker Trips	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.14
Time Slice 10/2/2017-12/29/2017 Active Days: 65	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building 10/01/2017-12/31/2017	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building Off Road Diesel	1.98	10.41	9.21	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,621.20
Building Vendor Trips	0.12	1.14	1.27	0.00	0.02	0.05	0.06	0.01	0.04	0.05	506.16
Building Worker Trips	0.28	0.54	10.07	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.67

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

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For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.12	1.65	1.38	0.00	0.00	0.00	1,976.00
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	1.45						
TOTALS (lbs/day, unmitigated)	1.57	1.65	1.38	0.00	0.00	0.00	1,976.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
New SD Courthouse	1.25	0.94	6.73	0.01	2.10	0.41	1,135.39
TOTALS (lbs/day, unmitigated)	1.25	0.94	6.73	0.01	2.10	0.41	1,135.39

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2017 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
New SD Courthouse		0.55	1000 sq ft	247.00	135.85	1,218.98
					135.85	1,218.98

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	44.8	55.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
New SD Courthouse				2.0	1.0	97.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: H:\PDATA\Urbemis\25-104231\Copy of Copy of SD Courthouse.urb924

Project Name: San Diego Courthouse

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (lbs/day unmitigated)	19.47	203.63	91.48	0.32	298.42	8.17	306.59	62.46	7.52	69.98	40,199.46
2014 TOTALS (lbs/day mitigated)	19.47	203.63	91.48	0.32	34.22	8.17	42.39	7.28	7.52	14.80	40,199.46
2015 TOTALS (lbs/day unmitigated)	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
2015 TOTALS (lbs/day mitigated)	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
2016 TOTALS (lbs/day unmitigated)	25.27	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
2016 TOTALS (lbs/day mitigated)	23.06	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
2017 TOTALS (lbs/day unmitigated)	2.80	19.47	20.56	0.03	1.25	0.93	2.17	0.26	0.85	1.11	4,092.03
2017 TOTALS (lbs/day mitigated)	2.80	19.47	20.56	0.03	1.25	0.93	2.17	0.26	0.85	1.11	4,092.03

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.69	1.67	2.93	0.00	0.01	0.01	1,978.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.87	0.78	7.12	0.01	2.10	0.41	1,255.87

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.56	2.45	10.05	0.01	2.11	0.42	3,234.68

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/2/2014-6/6/2014 Active Days: 5	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Demolition 06/02/2014-06/06/2014	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Fugitive Dust	0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.09	0.00	0.09	0.00
Demo Off Road Diesel	0.47	3.37	2.71	0.00	0.00	0.19	0.19	0.00	0.18	0.18	451.25
Demo On Road Diesel	0.02	0.27	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.13
Demo Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 8/1/2014-10/30/2014 Active Days: 78	19.47	**203.63**	**91.48**	**0.32**	**298.42**	**8.17**	**306.59**	**62.46**	**7.52**	**69.98**	**40,199.46**
Mass Grading 08/01/2014-10/30/2014	19.47	203.63	91.48	0.32	298.42	8.17	306.59	62.46	7.52	69.98	40,199.46
Mass Grading Dust	0.00	0.00	0.00	0.00	297.28	0.00	297.28	62.08	0.00	62.08	0.00
Mass Grading Off Road Diesel	6.21	48.22	29.95	0.00	0.00	2.29	2.29	0.00	2.11	2.11	5,886.01
Mass Grading On Road Diesel	13.22	155.36	60.55	0.32	1.14	5.88	7.01	0.37	5.41	5.78	34,158.05
Mass Grading Worker Trips	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.40
Time Slice 11/3/2014-11/28/2014 Active Days: 20	1.88	14.99	8.45	0.00	4.00	0.66	4.67	0.84	0.61	1.45	1,853.85
Fine Grading 11/01/2014-11/28/2014	1.88	14.99	8.45	0.00	4.00	0.66	4.67	0.84	0.61	1.45	1,853.85
Fine Grading Dust	0.00	0.00	0.00	0.00	4.00	0.00	4.00	0.84	0.00	0.84	0.00
Fine Grading Off Road Diesel	1.87	14.95	7.86	0.00	0.00	0.66	0.66	0.00	0.61	0.61	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.03	0.59	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.24
Time Slice 12/1/2014-12/31/2014 Active Days: 23	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching 12/01/2014-01/30/2015	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching Off Road Diesel	0.89	7.61	3.63	0.00	0.00	0.36	0.36	0.00	0.33	0.33	947.92
Trenching Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 1/1/2015-1/30/2015 Active Days: 22	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Trenching 12/01/2014-01/30/2015	0.85	6.90	3.93	0.00	0.00	0.34	0.34	0.00	0.31	0.31	1,010.07
Trenching Off Road Diesel	0.84	6.88	3.57	0.00	0.00	0.34	0.34	0.00	0.31	0.31	947.92
Trenching Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.15
Time Slice 2/2/2015-12/31/2015 Active Days: 239	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Time Slice 1/1/2016-4/29/2016 Active Days: 86	24.76	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 5/2/2016-5/31/2016 Active Days: 22	**25.27**	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
Asphalt 05/01/2016-05/31/2016	0.50	3.20	3.81	0.00	0.01	0.20	0.20	0.00	0.18	0.18	608.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.48	3.15	2.95	0.00	0.00	0.19	0.19	0.00	0.18	0.18	453.19
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.02	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.37
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Time Slice 6/1/2016-11/30/2016 Active Days: 131	24.76	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	22.14	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	22.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 12/1/2016-12/30/2016 Active Days: 22	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Time Slice 1/2/2017-4/28/2017 Active Days: 85	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Demolition 01/01/2017- 04/30/2017	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Fugitive Dust	0.00	0.00	0.00	0.00	1.23	0.00	1.23	0.26	0.00	0.26	0.00
Demo Off Road Diesel	2.71	18.86	16.50	0.00	0.00	0.90	0.90	0.00	0.83	0.83	2,861.02
Demo On Road Diesel	0.05	0.53	0.21	0.00	0.01	0.02	0.02	0.00	0.02	0.02	172.19
Demo Worker Trips	0.04	0.08	1.43	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.64
Time Slice 5/1/2017-9/29/2017 Active Days: 110	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching 05/01/2017-09/30/2017	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching Off Road Diesel	0.73	5.55	3.50	0.00	0.00	0.24	0.24	0.00	0.22	0.22	947.92
Trenching Worker Trips	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.14
Time Slice 10/2/2017-12/29/2017 Active Days: 65	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building 10/01/2017-12/31/2017	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building Off Road Diesel	1.98	10.41	9.21	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,621.20
Building Vendor Trips	0.12	1.14	1.27	0.00	0.02	0.05	0.06	0.01	0.04	0.05	506.16
Building Worker Trips	0.28	0.54	10.07	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.67

Phase Assumptions

Phase: Demolition 6/2/2014 - 6/6/2014 - Demolition of Stahlman Block Buidlings

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Building Volume Total (cubic feet): 5100

Building Volume Daily (cubic feet): 1021.38

On Road Truck Travel (VMT): 14.19

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 1 hours per day

Phase: Demolition 1/1/2017 - 4/30/2017 - Future Work

Building Volume Total (cubic feet): 175112.2

Building Volume Daily (cubic feet): 2925

On Road Truck Travel (VMT): 40.62

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

4 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 0 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

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Total Acres Disturbed: 0.4

Maximum Daily Acreage Disturbed: 0.4

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 1817.95 cubic yards/day; Offsite Cut/Fill: 179 cubic yards/day

On Road Truck Travel (VMT): 8059.18

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 16 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 14 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 14 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 14 hours per day

Phase: Trenching 12/1/2014 - 1/30/2015 - Default Trenching Description

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Trenching 5/1/2017 - 9/30/2017 - Future Work

Off-Road Equipment:

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Paving 5/1/2016 - 5/31/2016 - Default Paving Description

Acres to be Paved: 0

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 1/1/2015 - 12/30/2016 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

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2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 10/1/2017 - 12/31/2017 - Installation of new machinery; testing; clean-up

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 6/2/2014-6/6/2014 Active Days: 5	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Demolition 06/02/2014-06/06/2014	0.50	3.67	3.21	0.00	0.43	0.20	0.64	0.09	0.19	0.28	573.53
Fugitive Dust	0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.09	0.00	0.09	0.00
Demo Off Road Diesel	0.47	3.37	2.71	0.00	0.00	0.19	0.19	0.00	0.18	0.18	451.25
Demo On Road Diesel	0.02	0.27	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	60.13
Demo Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16
Time Slice 8/1/2014-10/30/2014 Active Days: 78	19.47	**203.63**	**91.48**	**0.32**	34.22	**8.17**	42.39	7.28	**7.52**	14.80	**40,199.46**
Mass Grading 08/01/2014-10/30/2014	19.47	203.63	91.48	0.32	34.22	8.17	42.39	7.28	7.52	14.80	40,199.46
Mass Grading Dust	0.00	0.00	0.00	0.00	33.07	0.00	33.07	6.91	0.00	6.91	0.00
Mass Grading Off Road Diesel	6.21	48.22	29.95	0.00	0.00	2.29	2.29	0.00	2.11	2.11	5,886.01
Mass Grading On Road Diesel	13.22	155.36	60.55	0.32	1.14	5.88	7.01	0.37	5.41	5.78	34,158.05
Mass Grading Worker Trips	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.40
Time Slice 11/3/2014-11/28/2014 Active Days: 20	1.88	14.99	8.45	0.00	0.91	0.66	1.58	0.19	0.61	0.80	1,853.85
Fine Grading 11/01/2014-11/28/2014	1.88	14.99	8.45	0.00	0.91	0.66	1.58	0.19	0.61	0.80	1,853.85
Fine Grading Dust	0.00	0.00	0.00	0.00	0.91	0.00	0.91	0.19	0.00	0.19	0.00
Fine Grading Off Road Diesel	1.87	14.95	7.86	0.00	0.00	0.66	0.66	0.00	0.61	0.61	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.03	0.59	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.24
Time Slice 12/1/2014-12/31/2014 Active Days: 23	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching 12/01/2014-01/30/2015	0.90	7.63	4.02	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,010.08
Trenching Off Road Diesel	0.89	7.61	3.63	0.00	0.00	0.36	0.36	0.00	0.33	0.33	947.92
Trenching Worker Trips	0.01	0.02	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16

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Time Slice 1/1/2015-1/30/2015 Active Days: 22	3.72	21.02	26.59	0.03	0.11	1.22	1.33	0.04	1.12	1.16	5,102.46
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Trenching 12/01/2014-01/30/2015	0.85	6.90	3.93	0.00	0.00	0.34	0.34	0.00	0.31	0.31	1,010.07
Trenching Off Road Diesel	0.84	6.88	3.57	0.00	0.00	0.34	0.34	0.00	0.31	0.31	947.92
Trenching Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.15
Time Slice 2/2/2015-12/31/2015 Active Days: 239	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building 01/01/2015-12/30/2016	2.88	14.12	22.66	0.03	0.11	0.88	0.99	0.04	0.81	0.84	4,092.39
Building Off Road Diesel	2.40	12.04	9.62	0.00	0.00	0.76	0.76	0.00	0.70	0.70	1,621.20
Building Vendor Trips	0.15	1.45	1.47	0.00	0.02	0.06	0.08	0.01	0.05	0.06	506.13
Building Worker Trips	0.33	0.63	11.57	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,965.07
Time Slice 1/1/2016-4/29/2016 Active Days: 86	22.55	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 5/2/2016-5/31/2016 Active Days: 22	23.06	16.26	25.55	0.03	0.12	0.98	1.10	0.04	0.90	0.94	4,732.84
Asphalt 05/01/2016-05/31/2016	0.50	3.20	3.81	0.00	0.01	0.20	0.20	0.00	0.18	0.18	608.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.48	3.15	2.95	0.00	0.00	0.19	0.19	0.00	0.18	0.18	453.19
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Worker Trips	0.02	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.37
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Time Slice 6/1/2016-11/30/2016 Active Days: 131	22.55	13.07	21.75	0.03	0.11	0.79	0.90	0.04	0.72	0.76	4,124.28
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Coating 01/01/2016-11/30/2016	19.93	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11
Architectural Coating	19.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.11

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Time Slice 12/1/2016-12/30/2016 Active Days: 22	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building 01/01/2015-12/30/2016	2.62	13.06	21.57	0.03	0.11	0.78	0.90	0.04	0.72	0.76	4,092.17
Building Off Road Diesel	2.19	11.19	9.40	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,621.20
Building Vendor Trips	0.13	1.28	1.37	0.00	0.02	0.05	0.07	0.01	0.05	0.05	506.14
Building Worker Trips	0.30	0.58	10.80	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.83
Time Slice 1/2/2017-4/28/2017 Active Days: 85	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Demolition 01/01/2017-04/30/2017	2.80	19.47	18.15	0.00	1.25	0.93	2.17	0.26	0.85	1.11	3,312.84
Fugitive Dust	0.00	0.00	0.00	0.00	1.23	0.00	1.23	0.26	0.00	0.26	0.00
Demo Off Road Diesel	2.71	18.86	16.50	0.00	0.00	0.90	0.90	0.00	0.83	0.83	2,861.02
Demo On Road Diesel	0.05	0.53	0.21	0.00	0.01	0.02	0.02	0.00	0.02	0.02	172.19
Demo Worker Trips	0.04	0.08	1.43	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.64
Time Slice 5/1/2017-9/29/2017 Active Days: 110	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching 05/01/2017-09/30/2017	0.74	5.57	3.82	0.00	0.00	0.24	0.25	0.00	0.23	0.23	1,010.06
Trenching Off Road Diesel	0.73	5.55	3.50	0.00	0.00	0.24	0.24	0.00	0.22	0.22	947.92
Trenching Worker Trips	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.14
Time Slice 10/2/2017-12/29/2017 Active Days: 65	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building 10/01/2017-12/31/2017	2.38	12.09	20.56	0.03	0.11	0.71	0.82	0.04	0.64	0.68	4,092.03
Building Off Road Diesel	1.98	10.41	9.21	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,621.20
Building Vendor Trips	0.12	1.14	1.27	0.00	0.02	0.05	0.06	0.01	0.04	0.05	506.16
Building Worker Trips	0.28	0.54	10.07	0.02	0.09	0.06	0.15	0.03	0.05	0.08	1,964.67

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 11/1/2014 - 11/28/2014 - Default Fine Site Grading/Excavation Description

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For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Mass Grading 8/1/2014 - 10/30/2014 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 1/1/2016 - 11/30/2016 - Default Architectural Coating Description

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.12	1.65	1.38	0.00	0.00	0.00	1,976.00
Hearth							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	1.45						
TOTALS (lbs/day, unmitigated)	1.69	1.67	2.93	0.00	0.01	0.01	1,978.81

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
New SD Courthouse	1.87	0.78	7.12	0.01	2.10	0.41	1,255.87
TOTALS (lbs/day, unmitigated)	1.87	0.78	7.12	0.01	2.10	0.41	1,255.87

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2017 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
New SD Courthouse		0.55	1000 sq ft	247.00	135.85	1,218.98
					135.85	1,218.98

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	44.8	55.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
New SD Courthouse				2.0	1.0	97.0

Operational Changes to Defaults

Construction Emissions

Year 2014

Demolition

Duration (days): 5

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Excavators	119.6	0.0134	0.0031	6	1	119.6	0.0134	0.0031	1.7940	0.0002	0.0000
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	1	2	133.6	0.0184	0.0034	0.3340	0.0000	0.0000
NA	0.0	0.0000	0.0000	0	0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
								Total Emissions for Mass Grading	2.1280	0.0002	0.0001

Mass Grading

Duration (days): 78

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Excavators	119.6	0.0134	0.0031	16	2	239.2	0.0268	0.0062	149.2608	0.0167	0.0039
Rubber Tired Dozers	239.1	0.0305	0.0062	14	1	239.1	0.0305	0.0062	130.5486	0.0167	0.0034
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	14	1	66.8	0.0092	0.0017	36.4728	0.0050	0.0009
Off-Highway Trucks	260.1	0.0224	0.0067	14	1	260.1	0.0224	0.0067	142.0146	0.0122	0.0037
								Total Emissions for Mass Grading	458.2968	0.0506	0.0118

Fine Grading

Duration (days): 20

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Rubber Tired Dozers	239.1	0.0305	0.0062	6	1	239.1	0.0305	0.0062	14.3460	0.0018	0.0004
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	7	1	66.8	0.0092	0.0017	4.6760	0.0006	0.0001
Other Construction Equipment	122.8	0.0095	0.0032	8	1	122.8	0.0095	0.0032	9.8240	0.0008	0.0003
NA	0.0	0.0000	0.0000	0	0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
								Total Emissions for Mass Grading	28.8460	0.0032	0.0007

Trenching

Duration (days): 23

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Other General Industrial Equipment	152.2	0.0166	0.0040	8	1	152.2	0.0166	0.0040	14.0024	0.0015	0.0004
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	6.1456	0.0008	0.0002
NA	0.0	0.0000	0.0000	0	0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
								Total Emissions for Mass Grading	20.1480	0.0024	0.0005

Total Construction Emissions - Year 2014

tons/year	509.42	0.06	0.01
metric tons/year	462.14	0.05	0.01
metric tons CO_2 eq/year	462.14	15.88	0.25

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

Construction Emissions

Year 2015

Trenching (Underground work)
Duration (days): 22

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Other General Industrial Equipment	152.2	0.0166	0.0040	8	1	152.2	0.0166	0.0040	13.3936	0.0015	0.0004
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	5.8784	0.0008	0.0001
NA	0.0	0.0000	0.0000	0	0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
								Total Emissions for Trenching	19.2720	0.0023	0.0005

Building Construction
Duration (days): 261

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Cranes	128.7	0.0144	0.0033	6	1	128.7	0.0144	0.0033	100.7721	0.0113	0.0026
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	85.1904	0.0097	0.0022
Generator Sets	61.0	0.0087	0.0016	8	1	61.0	0.0087	0.0016	63.6840	0.0091	0.0017
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	69.7392	0.0096	0.0018
Welders	25.6	0.0073	0.0007	8	3	76.8	0.0219	0.0021	80.1792	0.0229	0.0022
								Total Emissions for Building Construction	399.5649	0.0625	0.0104

Total Construction Emissions - Year 2015

tons/year	418.84	0.06	0.01
metric tons/year	379.96	0.06	0.01
metric tons CO_2 eq/year	379.96	18.23	0.21

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

Construction Emissions

Year 2016

Building

Duration (days): 261

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Cranes	128.7	0.0144	0.0033	6	1	128.7	0.0144	0.0033	100.7721	0.0113	0.0026
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	85.1904	0.0097	0.0022
Generator Sets	61.0	0.0087	0.0016	8	1	61.0	0.0087	0.0016	63.6840	0.0091	0.0017
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	69.7392	0.0096	0.0018
Welders	25.6	0.0073	0.0007	8	3	76.8	0.0219	0.0021	80.1792	0.0229	0.0022
Total Emissions for Building Construction									399.5649	0.0625	0.0104

Asphalt Paving

Duration (days): 22

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Cement and Mortar Mixers	7.2	0.0009	0.0002	8	4	28.8	0.0036	0.0008	2.5344	0.0003	0.0001
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	5.8784	0.0008	0.0001
NA	0.0	0.0000	0.0000	8	1	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
NA	0.0	0.0000	0.0000	8	1	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
NA	0.0	0.0000	0.0000	8	1	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
Total Emissions for Asphalt Paving									8.4128	0.0011	0.0002

Total Construction Emissions - Year 2016

tons/year	407.98	0.06	0.01
metric tons/year	370.11	0.06	0.01
metric tons CO_2 eq/year	370.11	17.90	0.20

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

Construction Emissions

Year 2017

Demolition

Duration (days): 85

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Concrete/Industrial Saws	58.5	0.0114	0.0015	8	1	58.5	0.0114	0.0015	19.8900	0.0039	0.0005
Excavators	119.6	0.0134	0.0031	8	2	239.2	0.0268	0.0062	81.3280	0.0091	0.0021
Rubber Tired Dozers	239.1	0.0305	0.0062	6	1	239.1	0.0305	0.0062	60.9705	0.0078	0.0016
Skid Steer Loaders	30.3	0.0062	0.0008	8	4	121.2	0.0248	0.0032	41.2080	0.0084	0.0011
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	6	1	66.8	0.0092	0.0017	17.0340	0.0023	0.0004
Total Emissions for Demolition									220.4305	0.0315	0.0057

Trenching

Duration (days): 110

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Other General Industrial Equipment	152.2	0.0166	0.0040	8	1	152.2	0.0166	0.0040	66.9680	0.0073	0.0018
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	29.3920	0.0040	0.0007
Total Emissions for Trenching									96.3600	0.0114	0.0025

Building (machinery installation)

Duration (days): 65

Equipment	Emission Factors (pounds/hour)			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Cranes	128.7	0.0144	0.0033	6	1	128.7	0.0144	0.0033	25.0965	0.0028	0.0006
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	21.2160	0.0024	0.0005
Generator Sets	61.0	0.0087	0.0016	8	1	61.0	0.0087	0.0016	15.8600	0.0023	0.0004
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	17.3680	0.0024	0.0004
Welders	25.6	0.0073	0.0007	8	3	76.8	0.0219	0.0021	19.9680	0.0057	0.0005
Total Emissions for Building (machinery installation)									99.5085	0.0156	0.0026

Total Construction Emissions - Year 2017

tons/year	416.30	0.06	0.01
metric tons/year	377.66	0.05	0.01
metric tons CO_2 eq/year	377.66	16.44	0.21

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

Emissions From Natural Gas Consumed By Land Uses

Land Use	*Amount*	Cubic feet per unit/square feet/customer per month	*CO*	*ROG*	*NO_X* *Residential*	*NO_X* *Non-Residential*	*SO_X*	*PM_{10}*	*CO_2*	*N_2O*	*CH_4*
			2.00E+01	5.30E+00	8.00E+01	1.20E+02	negligible	2.00E-01	0.12	2.20E-06	2.30E-06
Residential											
Single Family Units		6,665	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Multi-Family Units		4,011.5	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
NonResidential											
Indutsrial		241,611	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Hotel/Motel		4.8	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Retail/Shopping Center		2.9	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Office		2.0	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Blank	247,000	0.5	6,767.12	1,793.29	27,068.49		--	67.67	487.50	0.01	0.01
TOTAL - pounds per day	--	--	**6.77E+03**	**1.79E+03**	**2.71E+04**	**0.00E+00**	--	**6.77E+01**	**487.50**	**0.01**	**0.01**
TOTAL - tons per year	--	--	**1.24E+03**	**3.27E+02**	**4.94E+03**	**0.00E+00**	--	**1.24E+01**	**88.9688**	**0.0016**	**0.0017**
TOTAL - metric tons per year	--	--	**1.12E+03**	**2.97E+02**	**4.48E+03**	**0.00E+00**	--	**1.12E+01**	**8.07E+01**	**1.48E-03**	**1.55E-03**

	CO_2	N_2O	CH_4
metric tons per year	80.71	0.00	0.00
metric tons CO_2eq per year	80.71	0.46	0.03

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook* , November 1993, Table A9-12.

Emissions From Electricity Consumed By Land Uses

Land Use	*Amount*	kilowatt-hours per year[1]	*CO* 2.00E-04	*ROG* 1.00E-05	*NO_X* 1.15E-03	*SO_X* 1.20E-04	*PM_{10}* 4.00E-05	*CO_2* 0.772	*N_2O* 6.59E-06	*CH_4* 4.04E-05
Residential (Dwelling Units)		5626.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food Store (SF)		53.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Restaurant (SF)		47.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospitals (SF)		21.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retail (SF)		13.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
College/University (SF)		11.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High School (SF)		10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elementary School (SF)		5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office (SF)		12.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hotel/Motel (SF)		9.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warehouse (SF)		4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous (SF)		10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blank	247,000	9.07	1.23	0.06	7.06	0.74	0.25	4,738.37	0.04	0.25
TOTAL - pounds per day	**--**	**--**	**1.23E-03**	**6.14E-02**	**7.06E+00**	**7.37E-01**	**2.46E-01**	**4,738.37**	**0.04**	**0.25**
TOTAL - tons per year	**--**	**--**	**2.24E-04**	**1.12E-02**	**1.29E+00**	**1.34E-01**	**4.48E-02**	**864.75**	**0.01**	**0.05**
TOTAL - metric tons per year	**--**	**--**	**2.03E-04**	**1.02E-02**	**1.17E+00**	**1.22E-01**	**4.06E-02**	**784.49**	**0.01**	**0.04**

	CO_2	N_2O	CH_4
metric tons per year	784.49	0.01	0.04
metric tons CO_2eq per year	784.49	2.08	0.86

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook* , November 1993, Table A9-11.

Source for greenhouse gas emissions rates:

U.S. Energy Information Administration, *Domestic Electricity Emissions Factors 1999-2002* , October 2007. http://www.eia.doe.gov/oiaf/1605/techassist.html

Water Consumption Indirect Emissions

	Acre Feet per year	Electricity Usage kWh/year	Units	*CO* 2.00E-04	*ROG* 1.00E-05	*NO_X* 1.15E-03	*SO_X* 1.20E-04	*PM_{10}* 4.00E-05	*CO_2* 0.772	*N_2O* 6.59E-06	*CH_4* 4.04E-05
Project Demand	138.34	8.30	pounds/yr	1.66E-03	8.30E-05	9.55E-03	9.96E-04	3.32E-04	6.41E+00	5.47E-05	3.35E-04
			tons/yr	8.30E-07	4.15E-08	4.77E-06	4.98E-07	1.66E-07	3.20E-03	2.73E-08	1.68E-07
			mt/yr	7.53E-07	3.76E-08	4.33E-06	4.52E-07	1.51E-07	2.91E-03	2.48E-08	1.52E-07
								$MTCO_2EQ$	0.00	0.00	0.00

Energy Factor 1,666 kWh/acre-foot

Based on energy usage factors for water conveyance from the California Energy Commission, Water Energy Use in California, Accessed May 2009.
http://www.energy.ca.gov/research/iaw/industry/water.html

Mobile Source Emissions Calculations

	Total	Breakdown		Emission Factor		Total Emis Passenger	Total Emis Delivery	Passnger	Delivery	Total Emissions	
	VMT	Passnger	Delivery	Passnger	Delivery	pounds/day		tons/year	tons/year	tons/year	metric tons/year
CO	1,219	1158.05	60.95	0.00709228	0.01407778	8.21	0.86	1.50	0.16	1.66	1.50
NO_X	1,219	1158.05	60.95	0.00071158	0.01577311	0.82	0.96	0.15	0.18	0.33	0.30
N_2O[1]	1,219	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.02	0.01
ROG	1,219	1158.05	60.95	0.00074567	0.00206295	0.86	0.13	0.16	0.02	0.18	0.16
SO_X	1,219	1158.05	60.95	0.00001072	0.00002682	0.01	0.00	0.00	0.00	0.00	0.00
PM_{10}	1,219	1158.05	60.95	0.00009067	0.00059956	0.11	0.04	0.02	0.01	0.03	0.02
$PM_{2.5}$	1,219	1158.05	60.95	0.00005834	0.00050174	0.07	0.03	0.01	0.01	0.02	0.02
CH_4	1,219	1158.05	60.95	0.00006707	0.00009703	0.08	0.01	0.01	0.00	0.02	0.01
CO_2	1,219	1158.05	60.95	1.10087435	2.78163459	1274.87	169.54	232.66	30.94	263.60	239.14

	CO_2	N_2O	CH_4
metric tons per year	239.14	0.01	0.01
metric tons CO_2eq per year	239.14	4.47	0.29

Notes:
1. VMT based upon URBEMIS 2007 model output.
2. Emission Factor based upon EMFAC 2007 (version 2.3), *Highest (Most Conservative) Emission Factors fo On-Road Passenger Vehicles and Delivery Trucks* .
3. Breakdown of Passenger and Delivery Trucks assumes 95% auto and 5% truck.
4. Emission Factor for N_2O based upon a conversion ratio of 0.04873 from NO_X to N_2O. Based upon California Air Resources Board: *Estimates of Nitrous Oxide*

New San Diego Central Courthouse
RBF JN 25-104231.001
Construction Questionnaire

In order to accurately customize the air quality program for the project, the following information regarding site construction is requested.

2014 DEMOLITION OF STAHLMAN BLOCK BUILDINGS

Anticipated construction schedule (June 2, 2014 through June 6, 2014); 5 working days per week.

If actual buildings will be demolished, the following is needed:

- Total volume of all buildings to be demolished – expressed in total width (ft), length (ft) and height (ft) to equal total cubic feet

5,100 c.y.[1]

- Maximum daily volume of buildings to be demolished – expressed in total width (ft), length (ft) and height (ft) to equal total volume in cubic feet

1,020 c.y./day

- Total volume of demolition time in days to demolish structures

5 days

DEMO EQUIPMENT

Equipment Type	# pieces of equipment	# hours/day each piece
Concrete Industrial Saw		
Excavator	*1*	*6*
Tractor/Loader/Backhoe	*1*	*1*

MASS SITE GRADING

Anticipated construction schedule (August 1, 2014 through October 30, 2014) ; 6 working days per week.Site Grading Mobile Equipment:

- From the following choices of equipment, please estimate the # of pieces of each type and # hours/day (these are the only equipment choices provided by the model)

Equipment Type	# pieces of equipment	# hours/day each piece
Bore/Drill Rig		
Concrete/industrial Saw		
Crane		
Crawler Tractor		

[1] Building 1: 94*46*36*.35=2061, Building 2: 108*44.5*12*.35=748, & Building 3: 100*49*36*.35= 2287; total cubic yards = approximately 5,100

Equipment Type	# pieces of equipment	# hours/day each piece
Crushing/Processing Equipment		
Excavators	*2*	*16*
Graders		
Off-Highway Tractors		
Off-Highway Trucks		
Pavers		
Paving Equipment		
Rollers		
Rough Terrain Forklift		
Rubber Tired Dozers	*1*	*14*
Rubber Tired Loaders		
Scrapers		
Signal Boards		
Skid Steer Loaders		
Surfacing Equipment		
Tractors/Loaders/Backhoes	*1*	*14*
Trenchers		
Roller		
Motor Grader		
Miscellaneous		
Other Equipment (Please Describe)	*Water Truck (1)*	*14*

Fugitive Dust:

- Estimate of maximum daily amount of site grading expressed in acres

0.40-acre daily, 0.4 acres total

- Annual days that earth moving will occur

3 months (6 days a week, 78 days)

- Estimated amount of cut/fill (cubic yards per day)

1,795 c.y. cut and 179 c.y. import (total 64,000 c.y. cut and 14,000 c.y import)

FINE GRADING

Anticipated construction schedule (November 1, 2014 through November 28, 2014) ; 5 working days per week.

FINE GRADING MOBILE EQUIPMENT:

- From the following choices of equipment, please estimate the # of pieces of each type and # hours/day (these are the only equipment choices provided by the model)

Equipment Type	# pieces of equipment	# hours/day each piece
Bore/Drill Rig		
Concrete/industrial Saw		
Crane		
Crawler Tractor		
Crushing/Processing Equipment		
Excavators		
Graders		
Off-Highway Tractors		
Off-Highway Trucks		
Pavers		
Paving Equipment		
Rollers		
Rough Terrain Forklift		
Rubber Tired Dozers	*1*	*6*
Rubber Tired Loaders		
Scrapers		
Signal Boards		
Skid Steer Loaders		
Surfacing Equipment		
Tractors/Loaders/Backhoes	*1*	*7*
Trenchers		
Roller		
Motor Grader		
Miscellaneous		
Other Equipment (Please Describe)	*Water Truck (1)*	*8*

TRENCHING

Anticipated construction schedule (First Trenching Phase – Tunnel – December 1, 2014 through January 30, 2015; Second Trenching Phase – Relocate Utilities – May 1, 2017 through September 30, 2017); 5 working days per week.

TRENCHING MOBILE EQUIPMENT:

- From the following choices of equipment, please estimate the # of pieces of each type and # hours/day (these are the only equipment choices provided by the model)

Equipment Type	# pieces of equipment	# hours/day each piece
Bore/Drill Rig		
Concrete/industrial Saw		
Crane		
Crawler Tractor		
Crushing/Processing Equipment		
Excavators		
Graders		
Off-Highway Tractors		
Off-Highway Trucks		
Pavers		
Paving Equipment		
Rollers		
Rough Terrain Forklift		
Rubber Tired Dozers		
Rubber Tired Loaders		
Scrapers		
Signal Boards		
Skid Steer Loaders		
Surfacing Equipment		
Tractors/Loaders/Backhoes	*1*	*8*
Trenchers		
Roller		
Motor Grader		
Miscellaneous		

Equipment Type	# pieces of equipment	# hours/day each piece
Other Equipment (Please Describe)	*Other General Industrial Equipment (1)*	*8*

BUILDING CONSTRUCTION EQUIPMENT

- Please provide the following information as it relates to construction of proposed land uses:

Equipment Type	# pieces of equipment	# hours/day each piece
Bore/Drill Rig		
Concrete/industrial Saw		
Crane	*1*	*6*
Crawler Tractor		
Crushing/Processing Equipment		
Excavators		
Graders		
Off-Highway Tractors		
Off-Highway Trucks		
Pavers		
Paving Equipment		
Rollers		
Rough Terrain Forklift		
Rubber Tired Dozers		
Rubber Tired Loaders		
Scrapers		
Signal Boards		
Skid Steer Loaders		
Surfacing Equipment		
Tractors/Loaders/Backhoes	*1*	*8*
Trenchers		
Roller		
Motor Grader		
Miscellaneous		

Equipment Type	# pieces of equipment	# hours/day each piece
Other Equipment (Please Describe)	*Forklifts (2)* *Welders (3)* *Generator Sets (1)*	*6* *8* *8*

ARCHITECTURAL COATINGS

Duration – 10 Months

Low VOC coatings

(URBEMIS2007 default all phases)

PAVING

Anticipated construction schedule (May 1, 2016 through May 31, 2016); 5 working days per week.

- Acres to be paved (total)

0.00 acre

- Total # days paving would occur

5 months

Paving Equipment:

- From the following choices of equipment, please estimate the # of pieces of each type and # hours/day (these are the only equipment choices provided by the model)

Equipment Type	# pieces of equipment	# hours/day each piece
Bore/Drill Rig		
Concrete/industrial Saw		
Crane		
Crawler Tractor		
Crushing/Processing Equipment		
Excavators		
Graders		
Off-Highway Tractors		
Off-Highway Trucks		
Pavers		
Paving Equipment		
Rollers		

Equipment Type	# pieces of equipment	# hours/day each piece
Rough Terrain Forklift		
Rubber Tired Dozers		
Rubber Tired Loaders		
Scrapers		
Signal Boards		
Skid Steer Loaders		
Surfacing Equipment		
Tractors/Loaders/Backhoes	*1*	*8*
Trenchers		
Roller		
Motor Grader		
Miscellaneous		
Other Equipment (Please Describe)	*Cement and Mortar Mixers (4)*	*8*

2017 DEMOLITION OF COUNTY COURTHOUSE and OLD JAIL

Anticipated construction schedule (January 1, 2017 through April 30, 2017) ; 5 working days per week.

If actual buildings will be demolished, the following is needed:

- Total volume of all buildings to be demolished – expressed in total width (ft), length (ft) and height (ft) to equal total cubic feet

175,000 c.y.

- Maximum daily volume of buildings to be demolished – expressed in total width (ft), length (ft) and height (ft) to equal total volume in cubic feet

2,917 c.y./day

- Total volume of demolition time in days to demolish structures

60 days

DEMO EQUIPMENT

Equipment Type	# pieces of equipment	# hours/day each piece
Concrete Industrial Saw	*1*	*8*
Excavator	*2*	*8*

Equipment Type	**# pieces of equipment**	**# hours/day each piece**
Skid Steer loaders	***4***	***8***
Rubber-tired Loader	***1***	***6***
Tractor/Loader/Backhoe	***1***	***6***

Inputs	
Acres	1.4
PM10 Exhaust (pounds/day)	1.93
Construction Months	6

Inputs For Screen 3	
Emissions Rate (g/s-m**2)	1.7884E-06
Source Relase Height =	3 meters
Length of Larger Side (m) =	75.27
Length of Smaller Side (m) =	75.27
Receptor Ht. Above Ground =	1.5 meters
Urban/Rural Option = Urban	Urban
Search Through Range = Y	Y
Choice of Meterology = 1	1
Automated Dist. Array = Y	Y
Min Dist =	1
Max Dist =	1000

AC/day to meters**2 conversion	
1 acre = 4046.873 m**2	
Acres	1.4
Meters**2	5,665.62
Length of Each Side	75.27032749
PM10 Exhaust (pounds/day)	1.93
Conversion to grams/second	0.010132321
grams/second/m**2	1.78839E-06

Enter Screen 3 Results (µg/m3)
23

Risk Calculation	
Inhalation Chronic Risk	0.0069
Inhalation Cancer Risk	0.155053848

Fwind	1
EMFAC	23
URF70 year exposure	3.00E-04
Dilution	1

Info for SCREEN3 Assumptions Sheet	
Conversion to grams/second	1.0132E-02
grams/second/m**2	1.7884E-06
Area of Project Site (m**2)	5,665.62

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 ******  SCREEN3 MODEL  ******
 **** VERSION DATED 96043 ****

ENTER TITLE FOR THIS RUN (UP TO 79 CHARACTERS):
San Diego Courthouse Excelerated Schedule

ENTER SOURCE TYPE: P    FOR POINT
                   F    FOR FLARE
                   A    FOR AREA
                   V    FOR VOLUME
   ALSO ENTER ANY OF THE FOLLOWING OPTIONS ON THE SAME LINE:

     N    - TO USE THE NON-REGULATORY BUT CONSERVATIVE BRODE 2
            MIXING HEIGHT OPTION,
     nn.n - TO USE AN ANEMOMETER HEIGHT OTHER THAN THE REGULATORY
            (DEFAULT) 10 METER HEIGHT.
     SS   - TO USE A NON-REGULATORY CAVITY CALCULATION ALTERNATIVE
  Example - PN 7.0 SS (entry for a point source)

 ENTER SOURCE TYPE AND ANY OF THE ABOVE OPTIONS:
A
ENTER EMISSION RATE (G/(S-M**2)):
2.7317E-5
ENTER SOURCE RELEASE HEIGHT (M):
3
ENTER LENGTH OF LARGER SIDE FOR AREA (M):
75.27
ENTER LENGTH OF SMALLER SIDE FOR AREA (M):
75.27
ENTER RECEPTOR HEIGHT ABOVE GROUND (FOR FLAGPOLE RECEPTOR) (M):
1.5
ENTER URBAN/RURAL OPTION (U=URBAN, R=RURAL):
u
SEARCH THROUGH RANGE OF DIRECTIONS TO FIND THE MAXIMUM?
ENTER Y OR N:
y
ENTER CHOICE OF METEOROLOGY;
1 - FULL METEOROLOGY (ALL STABILITIES & WIND SPEEDS)
2 - INPUT SINGLE STABILITY CLASS
3 - INPUT SINGLE STABILITY CLASS AND WIND SPEED
1
USE AUTOMATED DISTANCE ARRAY? ENTER Y OR N:
y
ENTER MIN AND MAX DISTANCES TO USE (M):
1
1000

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC             U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   (DEG)
-------  ----------  ----  -----  -----  ------  ------  -------
     1.   175.7        5     1.0    1.0 10000.0    3.00     45.
   100.   253.9        5     1.0    1.0 10000.0    3.00     45.
   200.   112.9        5     1.0    1.0 10000.0    3.00     45.
   300.   64.29        5     1.0    1.0 10000.0    3.00     45.
   400.   41.81        5     1.0    1.0 10000.0    3.00     43.
   500.   29.65        5     1.0    1.0 10000.0    3.00     43.
   600.   22.34        5     1.0    1.0 10000.0    3.00     40.
```

```
   700.   17.58        5     1.0    1.0 10000.0    3.00     45.
   800.   14.31        5     1.0    1.0 10000.0    3.00     38.
   900.   11.94        5     1.0    1.0 10000.0    3.00     45.
  1000.   10.18        5     1.0    1.0 10000.0    3.00      1.
ITERATING TO FIND MAXIMUM CONCENTRATION . . .

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
    62.   351.9        5     1.0    1.0 10000.0    3.00     45.

USE DISCRETE DISTANCES?  ENTER Y OR N:
n

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   -------   -------
SIMPLE TERRAIN      351.9           62.        0.


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** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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DO YOU WANT TO PRINT A HARDCOPY OF THE RESULTS?  ENTER Y OR N:
```