

Appendix B Air Quality Data

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\21454\Desktop\20838.01 Revised Rosebowl Renovation.urb9

Project Name: D20838.01 Revised Rosebowl Renovation Project

Project Location: Los Angeles County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2009 TOTALS (lbs/day unmitigated)	16.95	200.46	126.09	0.20	36.31	8.89	45.20	7.67	8.18	15.85	23,563.71
2009 TOTALS (lbs/day mitigated)	16.95	200.46	126.09	0.20	20.84	8.89	29.74	4.44	8.18	12.62	23,563.71
2010 TOTALS (lbs/day unmitigated)	11.38	85.55	118.02	0.18	0.72	4.19	4.90	0.25	3.83	4.08	19,795.06
2010 TOTALS (lbs/day mitigated)	11.38	85.55	118.02	0.18	0.72	4.19	4.90	0.25	3.83	4.08	19,795.06
2011 TOTALS (lbs/day unmitigated)	311.16	78.08	110.14	0.18	0.72	3.83	4.54	0.25	3.50	3.75	19,793.56
2011 TOTALS (lbs/day mitigated)	311.16	78.08	110.14	0.18	0.72	3.83	4.54	0.25	3.50	3.75	19,793.56

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	3.94	0.02	1.55	0.00	0.01	0.01	2.81

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
	40.04	61.61	537.98	0.61	100.33	19.50	59,500.99

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
	43.98	61.63	539.53	0.61	100.34	19.51	59,503.80

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AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.72	0.00	0.28	0.00	0.00	0.00	0.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.66	12.01	96.85	0.10	18.31	3.56	10,515.26

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	8.38	12.01	97.13	0.10	18.31	3.56	10,515.77

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\Projects - All Employees\ID2000000+-\ID20838.01 Revised Rosebowl Renovation\URBEMIS files\ID20838.01 Revised Rosebowl Renovation.urb9

Project Name: D20838.01 Revised Rosebowl Renovation Project

Project Location: Los Angeles County

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

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2009 TOTALS (lbs/day unmitigated)	16.95	200.46	126.09	0.20	36.31	8.89	45.20	7.67	15.85	23,563.71
2009 TOTALS (lbs/day mitigated)	16.95	200.46	126.09	0.20	20.84	8.89	29.74	4.44	12.62	23,563.71
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AREA SOURCE EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
	3.94	0.02	1.55	0.00	0.01	0.01	2.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
	40.04	61.61	537.98	0.61	100.33	19.50	59,500.99

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
	43.98	61.63	539.53	0.61	100.34	19.51	59,503.80

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 2/2/2009-6/26/2009 Active Days: 105	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Demolition 02/02/2009-06/26/2009	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Fugitive Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Demo Off Road Diesel	3.73	27.72	15.92	0.00	0.00	1.76	1.76	0.00	1.62	1.62	2,281.38
Demo On Road Diesel	0.45	5.75	2.32	0.01	0.02	0.25	0.27	0.01	0.23	0.24	700.51

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- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 6/29/2009 - 11/13/2009 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 7.81

Maximum Daily Acreage Disturbed: 1.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 5000

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 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: Paving 5/2/2011 - 9/2/2011 - Default Architectural Coating Description

Acres to be Paved: 23

Off-Road Equipment:

- 1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 11/16/2009 - 2/25/2011 - Default Paving 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: Architectural Coating 2/28/2011 - 4/29/2011 - Default Building Construction 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

Time Slice	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Days: 105	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Demolition 02/02/2009-06/26/2009	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Fugitive Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00

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Demo Off Road Diesel	3.73	27.72	15.92	0.00	0.00	1.76	0.00	1.62	1.62	2,281.38
Demo On Road Diesel	0.45	5.75	2.32	0.01	0.02	0.27	0.01	0.23	0.24	700.51
Demo Worker Trips	0.05	0.09	1.45	0.00	0.01	0.01	0.00	0.00	0.01	155.48
Time Slice 6/29/2009-11/13/2009 Active Dvs: 100	<u>16.95</u>	<u>200.46</u>	<u>84.35</u>	<u>0.20</u>	<u>20.84</u>	<u>29.74</u>	<u>4.44</u>	<u>8.18</u>	<u>12.62</u>	<u>23,563.71</u>
Mass Grading 06/29/2009-11/13/2009 Mass Grading Dust	16.95	200.46	84.35	0.20	20.84	29.74	4.44	8.18	12.62	23,563.71
Mass Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	20.13	4.20	0.00	4.20	0.00
Mass Grading On Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	0.00	1.23	1.23	2,247.32
Mass Grading Worker Trips	13.73	173.93	70.21	0.20	0.70	8.26	0.23	6.95	7.18	21,192.00
Time Slice 11/16/2009-12/31/2009 Active Dvs: 34	0.04	0.07	1.16	0.00	0.01	0.01	0.00	0.00	0.00	124.39
Building 11/16/2009-02/25/2011	12.21	92.86	<u>126.09</u>	0.18	0.72	5.30	0.25	4.20	4.45	19,797.11
Building Off Road Diesel	12.21	92.86	126.09	0.18	0.72	5.30	0.25	4.20	4.45	19,797.11
Building Vendor Trips	3.87	17.35	11.50	0.00	0.00	1.28	0.00	1.17	1.17	1,621.20
Building Worker Trips	6.25	71.65	50.84	0.11	0.39	3.13	0.13	2.87	3.00	11,348.96
Time Slice 11/16/2009-02/25/2011	2.08	3.86	63.75	0.07	0.32	0.18	0.12	0.16	0.27	6,826.95
Building Off Road Diesel	<u>11.38</u>	<u>85.55</u>	<u>118.02</u>	<u>0.18</u>	<u>0.72</u>	<u>4.90</u>	<u>0.25</u>	<u>3.83</u>	<u>4.08</u>	<u>19,795.06</u>
Building Vendor Trips	11.38	85.55	118.02	0.18	0.72	4.90	0.25	3.83	4.08	19,795.06
Building Worker Trips	3.65	16.55	11.20	0.00	0.00	1.19	0.00	1.10	1.10	1,621.20
Time Slice 1/3/2011-2/25/2011 Active Dvs: 40	5.81	65.45	47.14	0.11	0.39	3.20	0.13	2.58	2.71	11,349.21
Building Off Road Diesel	1.91	3.55	59.68	0.07	0.32	0.18	0.12	0.16	0.27	6,824.66
Building Vendor Trips	10.50	<u>78.08</u>	<u>110.14</u>	<u>0.18</u>	<u>0.72</u>	<u>4.54</u>	<u>0.25</u>	<u>3.50</u>	<u>3.75</u>	<u>19,793.56</u>
Building Worker Trips	10.50	78.08	110.14	0.18	0.72	4.54	0.25	3.50	3.75	19,793.56
Time Slice 2/28/2011-4/29/2011 Active Dvs: 45	3.39	15.67	10.85	0.00	0.00	1.14	0.00	1.05	1.05	1,621.20
Coating 02/28/2011-04/29/2011	5.37	59.15	43.63	0.11	0.39	2.51	0.13	2.30	2.43	11,349.18
Architectural Coating	1.75	3.26	55.67	0.07	0.32	0.19	0.12	0.16	0.27	6,823.19
Coating Worker Trips	<u>311.16</u>	0.22	3.68	0.00	0.02	0.01	0.01	0.01	0.02	451.27
Time Slice 5/2/2011-9/2/2011 Active Dvs: 90	311.16	0.22	3.68	0.00	0.02	0.03	0.01	0.01	0.02	451.27
Asphalt 05/02/2011-09/02/2011	311.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off-Gas	0.12	0.22	3.68	0.00	0.02	0.03	0.01	0.01	0.02	451.27
Paving Off Road Diesel	3.62	19.01	11.59	0.01	0.02	1.58	0.01	1.44	1.44	1,816.62
Paving On Road Diesel	3.62	19.01	11.59	0.01	0.02	1.58	0.01	1.44	1.44	1,816.62
Paving Worker Trips	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 6/29/2009-11/13/2009 - Default Mass Site Grading/Excavation Description	2.70	16.30	9.26	0.00	0.00	1.45	0.00	1.33	1.33	1,272.41
For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:	0.22	2.63	1.06	0.00	0.01	0.12	0.00	0.10	0.11	388.81
	0.04	0.07	1.27	0.00	0.01	0.01	0.00	0.00	0.01	155.40

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 6/29/2009 - 11/13/2009 - Default Mass Site Grading/Excavation Description
For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	3.82						
TOTALS (lbs/day, unmitigated)	3.94	0.02	1.55	0.00	0.01	0.01	2.81

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
Stadium	40.04	61.61	537.98	0.61	100.33	19.50	59,500.99
TOTALS (lbs/day, unmitigated)	40.04	61.61	537.98	0.61	100.33	19.50	59,500.99

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 80 Season: Summer

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
Stadium	215.80	acres	30.00	6,474.00	58,091.20	58,091.20
				6,474.00	58,091.20	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.5	0.7	99.1	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Med-Heavy Truck 14,001-33,000 lbs
 Heavy-Heavy Truck 33,001-60,000 lbs
 Other Bus
 Urban Bus
 Motorcycle
 School Bus
 Motor Home

0.9	0.0	22.2	77.8
0.5	0.0	0.0	100.0
0.1	0.0	0.0	100.0
0.1	0.0	0.0	100.0
2.3	65.2	34.8	0.0
0.1	0.0	0.0	100.0
0.8	0.0	87.5	12.5

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)

Stadium	2.0	1.0	97.0
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Operational Changes to Defaults

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\Projects - All Employees\ID2000000+1\OD20838.01 Revised Rosebowl Renovation\URBEMIS files\ID20838.01 Revised Rosebowl Renovation.urb9

Project Name: D20838.01 Revised Rosebowl Renovation Project

Project Location: Los Angeles County

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

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2011 TOTALS (lbs/day unmitigated)	311.16	78.08	110.14	0.18	0.72	3.83	4.54	0.25	3.50	3.75	19,793.56
2011 TOTALS (lbs/day mitigated)	311.16	78.08	110.14	0.18	0.72	3.83	4.54	0.25	3.50	3.75	19,793.56

AREA SOURCE EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	3.82	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	45.81	74.21	516.15	0.50	100.33	19.50	53,851.62

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

TOTALS (lbs/day, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	49.63	74.21	516.15	0.50	100.33	19.50	53,851.62

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 2/2/2009-6/26/2009 Active Days: 105	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Demolition 02/02/2009-06/26/2009	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.05	1.85	2.90	3,137.38
Fugitive Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Demo Off Road Diesel	3.73	27.72	15.92	0.00	0.00	1.76	1.76	0.00	1.62	1.62	2,281.38
Demo On Road Diesel	0.45	5.75	2.32	0.01	0.02	0.25	0.27	0.01	0.23	0.24	700.51

3/10/2008 11:23:16 AM

- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 6/29/2009 - 11/13/2009 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 7.81

Maximum Daily Acreage Disturbed: 1.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 5000

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 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: Paving 5/2/2011 - 9/2/2011 - Default Architectural Coating Description

Acres to be Paved: 23

Off-Road Equipment:

- 1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 11/16/2009 - 2/25/2011 - Default Paving 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: Architectural Coating 2/28/2011 - 4/29/2011 - Default Building Construction 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	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 2/2/2009-6/26/2009 Active Days: 105	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.85	2.90	3,137.38
Demolition 02/02/2009-06/26/2009	4.23	33.55	19.69	0.01	5.03	2.01	7.04	1.85	2.90	3,137.38
Fugitive Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00	1.04	0.00

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Demo Off Road Diesel	3.73	27.72	15.92	0.00	0.00	1.76	1.76	0.00	1.62	1.62	0.00	1.62	1.62	2,281.38
Demo On Road Diesel	0.45	5.75	2.32	0.01	0.02	0.27	0.27	0.01	0.23	0.23	0.01	0.23	0.24	700.51
Demo Worker Trips	0.05	0.09	1.45	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	155.48
Time Slice 6/29/2009-11/13/2009 Active Days: 100 Mass Grading 06/29/2009-11/13/2009 Mass Grading Dust	<u>16.95</u>	<u>200.46</u>	84.35	<u>0.20</u>	<u>20.84</u>	<u>8.89</u>	<u>29.74</u>	<u>4.44</u>	<u>8.18</u>	<u>12.62</u>	<u>4.44</u>	<u>8.18</u>	<u>12.62</u>	<u>23,563.71</u>
Mass Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	0.00	1.23	1.23	2,247.32
Mass Grading On Road Diesel	13.73	173.93	70.21	0.20	0.70	7.56	8.26	0.23	6.95	7.18	0.23	6.95	7.18	21,192.00
Mass Grading Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	124.39
Time Slice 11/16/2009-12/31/2009 Active Days: 34 Building 11/16/2009-02/25/2011	12.21	92.86	<u>126.09</u>	0.18	0.72	4.59	5.30	0.25	4.20	4.45	0.25	4.20	4.45	19,797.11
Building Off Road Diesel	3.87	17.35	11.50	0.00	0.00	1.28	1.28	0.00	1.17	1.17	0.00	1.17	1.17	1,621.20
Building Vendor Trips	6.25	71.65	50.84	0.11	0.39	3.13	3.52	0.13	2.87	3.00	0.13	2.87	3.00	11,348.96
Building Worker Trips	2.08	3.86	63.75	0.07	0.32	0.18	0.51	0.12	0.16	0.27	0.12	0.16	0.27	6,826.95
Time Slice 1/1/2010-12/31/2010 Active Days: 261 Building 11/16/2009-02/25/2011	<u>11.38</u>	<u>85.55</u>	<u>118.02</u>	<u>0.18</u>	<u>0.72</u>	<u>4.19</u>	<u>4.90</u>	<u>0.25</u>	<u>3.83</u>	<u>4.08</u>	<u>0.25</u>	<u>3.83</u>	<u>4.08</u>	<u>19,795.06</u>
Building Off Road Diesel	3.65	16.55	11.20	0.00	0.00	1.19	1.19	0.00	1.10	1.10	0.00	1.10	1.10	1,621.20
Building Vendor Trips	5.81	65.45	47.14	0.11	0.39	2.81	3.20	0.13	2.58	2.71	0.13	2.58	2.71	11,349.21
Building Worker Trips	1.91	3.55	59.68	0.07	0.32	0.18	0.51	0.12	0.16	0.27	0.12	0.16	0.27	6,824.66
Time Slice 1/3/2011-2/25/2011 Active Days: 40 Building 11/16/2009-02/25/2011	10.50	<u>78.08</u>	<u>110.14</u>	<u>0.18</u>	<u>0.72</u>	<u>3.83</u>	<u>4.54</u>	<u>0.25</u>	<u>3.50</u>	<u>3.75</u>	<u>0.25</u>	<u>3.50</u>	<u>3.75</u>	<u>19,793.56</u>
Building Off Road Diesel	3.39	15.67	10.85	0.00	0.00	1.14	1.14	0.00	1.05	1.05	0.00	1.05	1.05	1,621.20
Building Vendor Trips	5.37	59.15	43.63	0.11	0.39	2.51	2.90	0.13	2.30	2.43	0.13	2.30	2.43	11,349.18
Building Worker Trips	1.75	3.26	55.67	0.07	0.32	0.19	0.51	0.12	0.16	0.27	0.12	0.16	0.27	6,823.19
Time Slice 2/28/2011-4/29/2011 Active Days: 45 Coating 02/28/2011-04/29/2011	<u>311.16</u>	0.22	3.68	0.00	0.02	0.01	0.03	0.01	0.01	0.02	0.01	0.01	0.02	451.27
Architectural Coating	311.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.12	0.22	3.68	0.00	0.02	0.01	0.03	0.01	0.01	0.02	0.01	0.01	0.02	451.27
Time Slice 5/2/2011-9/2/2011 Active Days: 90 Asphalt 05/02/2011-09/02/2011	3.62	19.01	11.59	0.01	0.02	1.56	1.58	0.01	1.44	1.44	0.01	1.44	1.44	1,816.62
Paving Off-Gas	0.67	0.00	0.00	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	2.70	16.30	9.26	0.00	0.00	1.45	1.45	0.00	1.33	1.33	0.00	1.33	1.33	1,272.41
Paving On Road Diesel	0.22	2.63	1.06	0.00	0.01	0.11	0.12	0.00	0.10	0.11	0.00	0.10	0.11	388.81
Paving Worker Trips	0.04	0.07	1.27	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	155.40

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 6/29/2009 - 11/13/2009 - Default Mass Site Grading/Excavation Description
For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	3.82						
TOTALS (lbs/day, unmitigated)	3.82	0.00	0.00	0.00	0.00	0.00	0.00

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
Stadium	45.81	74.21	516.15	0.50	100.33	19.50	53,851.62
TOTALS (lbs/day, unmitigated)	45.81	74.21	516.15	0.50	100.33	19.50	53,851.62

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acres	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Stadium	215.80	acres	30.00	6,474.00	58,091.20	
				6,474.00	58,091.20	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.5	0.7	99.1	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Med-Heavy Truck 14,001-33,000 lbs
 Heavy-Heavy Truck 33,001-60,000 lbs
 Other Bus
 Urban Bus
 Motorcycle
 School Bus
 Motor Home

0.9
 0.5
 0.1
 0.1
 2.3
 0.1
 0.8

0.0
 0.0
 0.0
 0.0
 65.2
 0.0
 0.0

22.2
 0.0
 0.0
 0.0
 34.8
 0.0
 87.5

77.8
 100.0
 100.0
 100.0
 0.0
 100.0
 12.5

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)

Stadium

2.0

1.0

97.0

Operational Changes to Defaults

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\Projects - All Employees\ID2000000+1\OD20838.01 Revised Rosebowl Renovation\URBEMIS files\ID20838.01 Revised Rosebowl Renovation.urb9

Project Name: D20838.01 Revised Rosebowl Renovation Project

Project Location: Los Angeles County

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	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (tons/year unmitigated)	1.28	13.36	7.39	0.01	2.09	0.63	0.44	0.58	1.02	1,679.45
2009 TOTALS (tons/year mitigated)	1.28	13.36	7.39	0.01	1.32	0.63	0.28	0.58	0.86	1,679.45
Percent Reduction	0.00	0.00	0.00	0.00	36.98	0.00	36.48	0.00	15.83	0.00
2010 TOTALS (tons/year unmitigated)	1.48	11.16	15.40	0.02	0.09	0.55	0.03	0.50	0.53	2,583.26
2010 TOTALS (tons/year mitigated)	1.48	11.16	15.40	0.02	0.09	0.55	0.03	0.50	0.53	2,583.26
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011 TOTALS (tons/year unmitigated)	7.37	2.42	2.81	0.00	0.02	0.15	0.01	0.13	0.14	487.77
2011 TOTALS (tons/year mitigated)	7.37	2.42	2.81	0.00	0.02	0.15	0.01	0.13	0.14	487.77
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

TOTALS (tons/year, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	0.72	0.00	0.28	0.00	0.00	0.00	0.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

TOTALS (tons/year, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	7.66	12.01	96.85	0.10	18.31	3.56	10,515.26

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

TOTALS (tons/year, unmitigated)	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
	8.38	12.01	97.13	0.10	18.31	3.56	10,515.77

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
2009	1.28	13.36	7.39	0.01	2.09	0.63	2.72	0.44	0.58	1.02	1,679.45
Demolition 02/02/2009-06/26/2009	0.22	1.76	1.03	0.00	0.26	0.11	0.37	0.06	0.10	0.15	164.71

Fugitive Dust	0.00	0.00	0.00	0.11	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00
Demo Off Road Diesel	0.20	1.46	0.84	0.00	0.09	0.00	0.08	0.00	0.08	0.00	0.08	0.00	119.77
Demo On Road Diesel	0.02	0.30	0.12	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	36.78
Demo Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.16
Mass Grading 06/29/2009-11/13/2009	0.85	10.02	4.22	1.82	0.44	2.26	0.41	2.26	0.44	2.26	0.41	2.26	1,178.19
Mass Grading Dust	0.00	0.00	0.00	1.78	0.00	1.78	0.00	1.78	0.00	1.78	0.00	1.78	0.00
Mass Grading Off Road Diesel	0.16	1.32	0.65	0.00	0.07	0.00	0.06	0.07	0.00	0.00	0.06	0.07	112.37
Mass Grading On Road Diesel	0.69	8.70	3.51	0.04	0.38	0.41	0.38	0.41	0.01	0.35	0.36	0.41	1,059.60
Mass Grading Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.22
Building 11/16/2009-02/25/2011	0.21	1.58	2.14	0.01	0.08	0.09	0.01	0.09	0.00	0.07	0.07	0.00	336.55
Building Off Road Diesel	0.07	0.29	0.20	0.00	0.02	0.00	0.02	0.00	0.00	0.02	0.02	0.00	27.56
Building Vendor Trips	0.11	1.22	0.86	0.01	0.05	0.06	0.01	0.06	0.00	0.05	0.05	0.00	192.93
Building Worker Trips	0.04	0.07	1.08	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	116.06
2010	1.48	11.16	15.40	0.09	0.55	0.64	0.55	0.64	0.03	0.50	0.53	0.03	2,583.26
Building 11/16/2009-02/25/2011	1.48	11.16	15.40	0.09	0.55	0.64	0.55	0.64	0.03	0.50	0.53	0.03	2,583.26
Building Off Road Diesel	0.48	2.16	1.46	0.00	0.16	0.16	0.16	0.16	0.00	0.14	0.14	0.00	211.57
Building Vendor Trips	0.76	8.54	6.15	0.05	0.37	0.42	0.37	0.42	0.02	0.34	0.35	0.02	1,481.07
Building Worker Trips	0.25	0.46	7.79	0.04	0.02	0.07	0.02	0.07	0.02	0.02	0.04	0.02	890.62
2011	7.37	2.42	2.81	0.02	0.15	0.16	0.15	0.16	0.01	0.13	0.14	0.01	487.77
Building 11/16/2009-02/25/2011	0.21	1.56	2.20	0.01	0.08	0.09	0.08	0.09	0.00	0.07	0.07	0.00	395.87
Building Off Road Diesel	0.07	0.31	0.22	0.00	0.02	0.02	0.02	0.00	0.00	0.02	0.02	0.00	32.42
Building Vendor Trips	0.11	1.18	0.87	0.01	0.05	0.06	0.05	0.06	0.00	0.05	0.05	0.00	226.98
Building Worker Trips	0.03	0.07	1.11	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	136.46
Coating 02/28/2011-04/29/2011	7.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.15
Architectural Coating	7.00	0.00	0.00	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	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.15
Asphalt 05/02/2011-09/02/2011	0.16	0.86	0.52	0.00	0.07	0.07	0.07	0.07	0.00	0.06	0.06	0.00	81.75
Paving Off-Gas	0.03	0.00	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	0.12	0.73	0.42	0.00	0.07	0.07	0.07	0.07	0.00	0.06	0.06	0.00	57.26
Paving On Road Diesel	0.01	0.12	0.05	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	17.50
Paving Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.99

Phase Assumptions

Phase: Demolition 2/2/2009 - 6/26/2009 - Default Demolition Description

Building Volume Total (cubic feet): 5100000

Building Volume Daily (cubic feet): 11900

On Road Truck Travel (VMT): 165.28

Off-Road Equipment:

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

3/10/2008 11:23:26 AM

- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Mass Grading 6/29/2009 - 11/13/2009 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 7.81

Maximum Daily Acreage Disturbed: 1.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 5000

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 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: Paving 5/2/2011 - 9/2/2011 - Default Architectural Coating Description

Acres to be Paved: 23

Off-Road Equipment:

- 1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 11/16/2009 - 2/25/2011 - Default Paving 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: Architectural Coating 2/28/2011 - 4/29/2011 - Default Building Construction 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	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009	1.28	13.36	7.39	0.01	1.32	0.63	0.28	0.58	0.86	1,679.45
Demolition 02/02/2009-06/26/2009	0.22	1.76	1.03	0.00	0.26	0.11	0.06	0.10	0.15	164.71
Fugitive Dust	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.00	0.02	0.00
Demo Off Road Diesel	0.20	1.46	0.84	0.00	0.00	0.09	0.00	0.08	0.08	119.77

School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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)

Stadium	2.0	1.0	97.0
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Operational Changes to Defaults