AIR QUALITY IMPACT ANALYSIS

ESPERANZA SPECIFIC PLAN

Prepared For:

City of Ontario Planning Department

November 16, 2005

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SECTION 1 – INTRODUCTION AND SUMMARY

PURPOSE AND METHODS OF ANALYSIS

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and long-term operations (i.e., resident vehicle emissions) of the proposed Project would cause significant impacts to air resources in the Project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.). The methodology follows the "CEQA Air Quality Handbook" prepared by the South Coast Air Quality Management District ("SCAQMD") for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the URBEMIS 2002 for Windows version 8.7.0 computer program was used to quantify project-related emissions.

EXECUTIVE SUMMARY

SITE LOCATION

The Project is located in southwestern San Bernardino County, within the City of Ontario. The City of Ontario is located approximately 40 miles east of downtown Los Angeles, 20 miles west of San Bernardino, and 30 miles northeast of Orange County. The Project site consists of approximately 223 gross acres of land generally located north of Bellegrave Avenue, south of Edison Avenue, east of Mill Creek Avenue (Cleveland), and west of Milliken/Hamner Avenue. The eastern and southern boundary of the site abuts Riverside County.

DEVELOPMENT DESCRIPTION

The Esperanza Specific Plan (the "Project") proposes the development of approximately 1,410 residential dwelling units. The general breakdown of these units consists of 765 single-family residential units and 645 residential condominium/townhouse units. Also, the proposed Project provides for a 10-acre elementary school site near the central area of the site, approximately 9 acres dedicated for neighborhood parks, and all major streets will include enhanced parkway landscaping and medians.

FINDINGS

The study found that all criteria pollutant emissions are above the SCAQMD suggested regional and localized significance thresholds during the construction of this Project, except for SO_2 and PM-10 (localized impact only). The long-term operational emissions of the Project for ROG, NO_X, and CO are all above the regional thresholds of significance. The following findings are supported with regard to this Project:

- The Project is in compliance with the SCAQMD Air Quality Management Plan.
- Project-generated construction and operational emissions will exceed SCAQMD's regional and localized thresholds and are considered significant.
- The Project's contribution to cumulative impacts will be significant.

- The Project will expose sensitive receptors to substantial ROG, NO_X, CO, and PM-10 (during construction only) concentrations.
- Project-generated odors will not affect a substantial number of people.
- Project-related traffic will not result in any CO hotspots.

MITIGATION MEASURES

In order to reduce emissions from project construction equipment, the following mitigation measures shall be implemented:

MM Air 1: During construction, mobile construction equipment will be properly maintained at an offsite location, which includes proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.

MM Air 2: Prohibit all vehicles from idling in excess of ten minutes, both on-site and off-site.

MM Air 3: Configure construction parking to minimize traffic interference.

In order to reduce emissions from project operation, the following mitigation measure shall be implemented:

MM Air 4: Local transit agencies shall be contacted to determine bus routing in the Project area that can accommodate bus stops at the Project access points and the Project shall provide bus passenger benches and shelters at these project access points.

CONCLUSION

The Project-specific evaluation presented in the following analysis demonstrates that all projected short-term emissions from construction of the Project are above the applicable SCAQMD regional thresholds, except for SO_2. Project construction will also cause a significant localized impact from PM-10 emissions.

Operational emissions for ROG, NO_X, and CO exceed the SCAQMD regional thresholds and are considered significant. However the Project will not result in any CO hotspots. Since the Project area is non-attainment for ozone, CO, and PM-10 and the Project exceeds thresholds for emissions of ROG (an ozone precursor), CO, and PM-10 (on a localized level), the Project will result in cumulatively significant air quality impacts. The mitigation measures proposed will reduce the emissions of the Project; however, it is not possible to quantify the emissions reduction associated with the mitigation measures and none have been taken. Therefore, short-term, long-term, and cumulative impacts to air quality are considered significant.

SECTION 2 - SETTING

PROJECT DESCRIPTION

The Project is located in southwestern San Bernardino County, within the City of Ontario. The City of Ontario is located approximately 40 miles east of downtown Los Angeles, 20 miles west of San Bernardino, and 30 miles northeast of Orange County. The Project site consists of approximately 223 gross acres of land generally located north of Bellegrave Avenue, south of Edison Avenue, east of Mill Creek Avenue (Cleveland), and west of Milliken/Hamner Avenue (Figure 1). The Project site is located in the southern portion of what was formerly the City's Sphere of Influence ("SOI"), an 8,200 acre area south of Riverside Drive that was annexed into the City of Ontario on November 30, 1999, and is now called the New Model Colony. The Sphere of Influence General Plan Amendment was adopted on January 7, 1998 to establish land use designations, goals, and implementation policies for the development of the New Model Colony ("NMC"). All the property within the NMC has been pre-zoned as Specific Plan (SP) to create cohesive, identifiable neighborhoods, in order to carry out the objectives of the SOI General Plan.

The Project proposes the development of approximately 1,410 residential dwelling units. The general breakdown of these units consists of 916 single-family residential units and 494 cluster/town home attached dwellings. Also, the proposed Project provides for a 10-acre elementary school site near the central area of the site, approximately 9 acres dedicated for neighborhood parks, and all major streets will include enhanced parkway landscaping and medians.

PHYSICAL SETTING

The Project site is located in the City of Ontario within the South Coast Air Basin ("SCAB"), which is under the jurisdiction of the South Coast Air Quality Management District. The SCAB consists of Orange County, together with the coastal and mountain portions of Los Angeles, Riverside and San Bernardino counties. Regionally, the interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area. Daytime winds typically flow from the coast to the inland areas, while this pattern usually reverses in the evenings, flowing from the inland areas to the ocean (SCAQMD 1993). Air stagnation may occur during the early evening and early morning due to periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. Locally, the prevailing wind is generally from West to East (Figure 2).

Source: AirPhoto USA
February 2005

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ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS

Figure 1

Project Location

Esperanza Specific Plan

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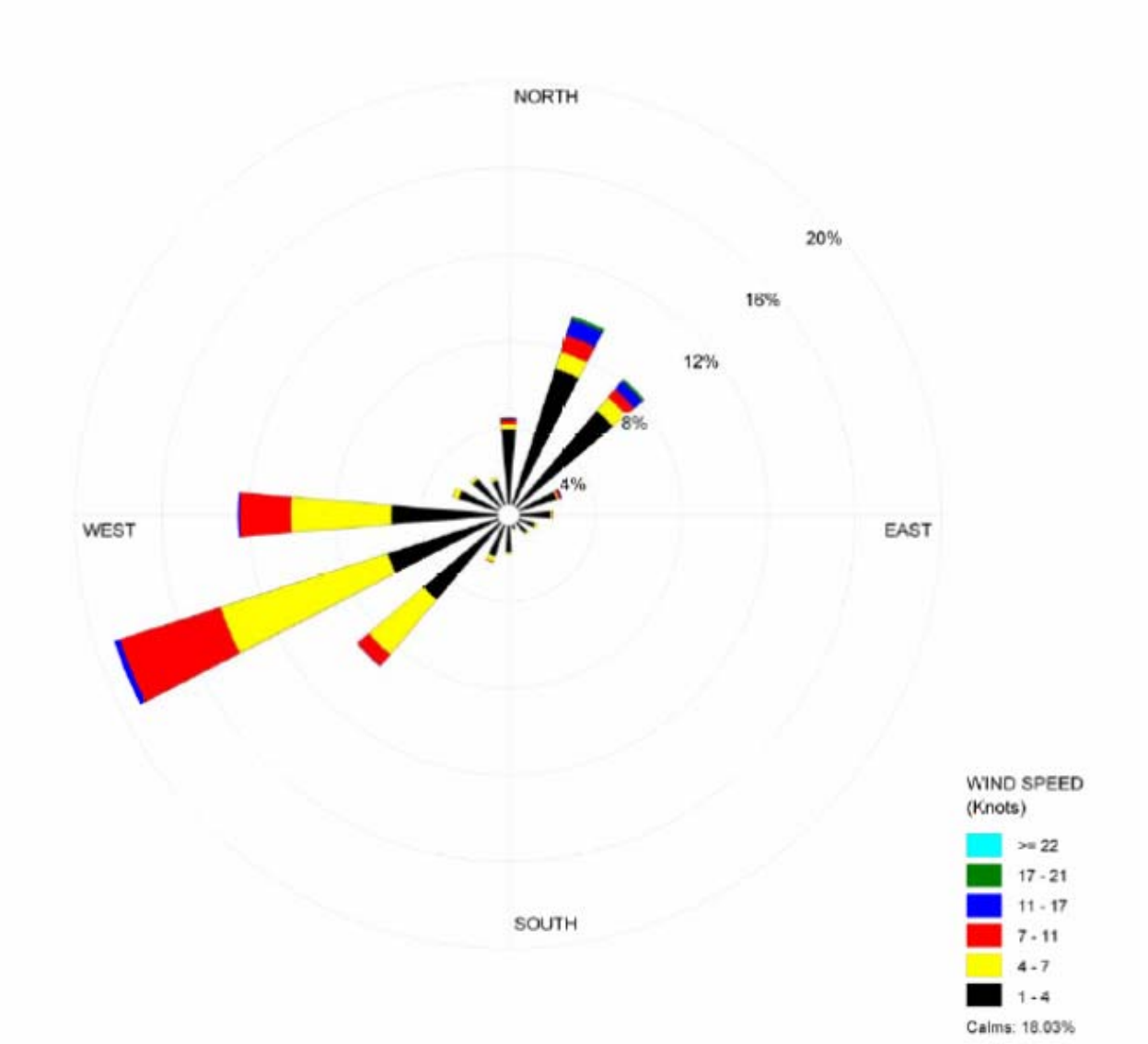
Fontana, California – 1981
January 1-December 31; Midnight-11PM



Note: Data taken from the Monitoring Station in Fontana, California, between January 1 and December 31, 1981.
Calm winds: 18.03%. Direction of the colored bars show the direction the wind is blowing from, colors represent various wind speeds, and percentages marked on rings indicate the percentage that the wind blows from that direction and at that particular wind speed.

Figure 2, Wind Rose (Fontana)

Esperanza Specific Plan
Ontario, San Bernardino County, California

Regional and local air quality within the SCAB is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel and San Bernardino Mountains form natural barriers to the dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. Due to expansional cooling, the temperature usually decreases with increasing altitude. However, at some elevation, this trend reverses and temperature begins to increase as altitude increases, this transition establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants. A dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion.

Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is reached, limiting the horizontal dispersion of pollutants. This results in a gradual degradation of air quality from coastal areas to inland areas, which is most evident with photochemical pollutants like ozone. The greatest ozone levels are registered at the South Coast Air Quality Management District's monitoring stations located at the base of the San Gabriel and San Bernardino mountains, ranging from the City of Santa Clarita, east to the City of San Bernardino.

The Project site is located within SCAQMD Source Receptor Area ("SRA") 33. The most recent published data for SRA 33 is presented in Table 1, below. This data indicates that the baseline air quality conditions in the Project area include occasional events of very unhealthful air. However, the frequency of smog alerts has dropped significantly in the last decade. Ozone and particulates are the two most significant air quality concerns in the Project area. It is encouraging to note that ozone levels have dropped significantly in the last few years with less than one-fifth of the days each year experiencing a violation of the state hourly ozone standard since 1999. Locally, no second stage alert (0.35 ppm/hour) has been called by SCAQMD in the last ten years.

Monitoring for PM-2.5 did not begin until 1999. Since then, the 1997 Federal annual average standard for PM-2.5 (15 $\mu g/m^3$) was upheld by the U.S. Supreme Court in February 2001. The State standard annual average standard for PM-2.5 (12 $\mu g/m^3$) was finalized in 2003 and became effective on July 5, 2003.

Table 1, Source Receptor Area (SRA) 33 - Air Quality Monitoring Summary - 1997-2004

	Pollutant/Standard Source: CARB 1/25/99	**Monitoring Year**							
		1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**

No. Days Exceeded	**Ozone:**								
	Health Advisory - 0.15 ppm	-	-	-	-	6 0	2 1	7 4	0 1
	California Standard:								
	1-Hour - 0.09 ppm	102	85	45	48	55	43	65	55
	Federal Primary Standards:								
	1-Hour - 0.12 ppm	32	39	14	7	18	6	26	9
	8-Hour - 0.08 ppm	65	50	31	27	39	30	48	38
	Max 1-Hour Conc. (ppm)	0.20	0.21	0.16	0.15	0.184	0.147	0.176	0.157
	Max 8-Hour Conc. (ppm)	0.14	0.18	0.13	0.125	0.144	0.113	0.148	0.130
No. Days Exceeded	**Carbon Monoxide:**								
	California Standard:								
	1-Hour - 20 ppm	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0
	Federal Primary Standards:								
	1-Hour - 35 ppm	0	0	0	0	0	0	0	0
	8-Hour - 9.5 ppm	0	0	0	0	0	0	0	0
	Max 1-Hour Conc. (ppm)	8	6	5	5	4	5	5	4
	Max 8-Hour Conc. (ppm)	6.0	4.8	4.0	4.3	3.25	3.3	4.6	3.3
No. Days Exceeded	**Nitrogen Dioxide:**								
	California Standard:								
	1-Hour - 0.25 ppm	0	0	0	0	0	0	0	0
	Federal Standard:								
	Annual Mean - 0.053ppm	0	0	0	0	0	0	0	0
	Max. 1-Hour Conc. (ppm)	0.14	0.11	0.14	0.10	0.066	0.11	0.10	0.12
No. Days Exceeded	**Sulfur Dioxide:**								
	California Standards:								
	1-Hour – 0.25 ppm	0	0	0	0	0	0	0	0
	24-Hour – 0.04 ppm	0	0	0	0	0	0	0	0
	Federal Primary Standards:								
	24-Hour – 0.14 ppm	0	0	0	0	0	0	0	0
	Annual Mean – 0.03 ppm	0	0	0	0	0	0	0	0
	Max. 1-Hour Conc. (ppm)	0.01	0.02	0.01	0.02	0.01	0.03	0.01	0.01
	Max. 24-Hour Conc. (ppm)	0.001	0.010	0.010	0.010	0.010	0.010	0.004	0.006
No. Days Exceeded	**Inhalable Particulates (PM-10):**								
	California Standards:								
	24-Hour - 50 μg/m^3	21	20	37	26	27	25	27	29.3
	Annual Geometric Mean (μg/m^3)	44.8	40.2	58.6	46.3	46.2	41.0	47.2	42.8
No Days Exceeded	Federal Primary Standards:								
	24-Hour – 150 μg/m^3	1	0	1	0	1	0	0	0
	Annual Arithmetic Mean (μg/m^3)	51.3	46.5	65.9	50.4	52.4	44.9	47.2	48.6
	Max. 24-Hour Conc. (μg/m^3)	208	92	183	124	166	91	98	118
No Days Exceeded	**Inhalable Particulates (PM-2.5):**								
	Federal Primary Standards:								
	Annual Standard (15μg/m^3)			-	-	-	-	-	-
	24-Hour – 65 μg/m^3			4 [a]	2	2	0	1	1.8
	Annual Arithmetic Mean (μg/m^3)			25.7 [a]	24.2	26.2	25.2	22.2	20.9
	Max. 24-Hour Conc. (μg/m^3)			121.5 [a]	73.4	71.2	64.8	98.1	86.1

Note: - Pollutant not monitored/data not available.

[a] Central San Bernardino Valley 2 air monitoring station (SRA34) data summaries used.

[d] Central San Bernardino Valley 1 air monitoring station (SRA34) data summaries used.

[e] Yes or No indicating whether or not the standard has been exceeded for that year.

Unique to the south Ontario/ Mira Loma area, which surrounds the Project site is the presence of the large dairy area in what is known as the Chino Basin. Currently, the Chino Basin dairy area consists of approximately 250,000 cows that produce 1 million tons of manure per year. Current methods at a dairy include manure stockpiling. The air quality impacts associated with the manure generation from the dairies are that as it decomposes, release of ammonia and volatile organic compounds ("VOC") occurs into the air. Nitrogen oxides (NO_X) and sulfur oxides (SO_X), produced from automobiles (concentration in Los Angeles County and Orange County) which then mix with the ammonia and VOCs (produced by the decomposition of manure in the Chino Basin) to create ammonium nitrate, ammonium sulfate, and ozone smog, respectively. A recent study by Hughes et al found that as air masses move east along meteorological patterns (i.e., wind direction), the levels of ammonium nitrate and ammonium sulfate increase significantly east of Los Angeles and Orange County (Hughes et al, 2002).

In order to address the air quality pollution associated with vehicle emissions mixing with dairy emissions, the South Coast Air Quality Management District (AQMD) recently proposed Rule 1127 which will require dairies to remove manure four times per year and be disposed of at a facility approved by the AQMD. Table 2222222 shows the pollutant tons per day at historic and projected levels with both the implementation of Rule 1127 and without. Note the natural decrease in pollutants without Rule 1127 due to the displacement of dairies as a result of urban development.

Table 2, Inland Empire Dairies (Tons per Day)

Pollutant	Year 2002	Year 2010 (w/o Rule 1127)	Year 2010 (w Rule 1127)	Reductions
Ammonia	16.4	12.7	9.4	3.3
VOCs	5.8	4.5	3.3	1.2

Source: AQMD (www.aqmd.gov/news1/2004/DairyRulePR.html)

REGULATORY SETTING

The Federal and California ambient air quality standards ("AAQS") establish the context for the local air quality management plans ("AQMP") and for determination of the significance of a Project's contribution to local or regional pollutant concentrations. The California and federal AAQS are presented in Table 1. The AAQS represent the level of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other diseases or illness and persons engaged in strenuous work or exercise, all referred to as "sensitive receptors." SCAQMD defines a "sensitive receptor" as a land use or facility such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes and convalescent homes.

Both federal and state Clean Air Acts require that each non-attainment area prepare a plan to reduce air pollution to healthful levels. The 1988 California Clean Air Act and the 1990 amendments to the federal Clean Air Act ("CAA") established new planning requirements and deadlines for attainment of the air quality standards within specified time frames which are contained in the State Implementation Plan ("SIP"). Amendments to the SIP have been proposed,

revised, and approved over the past decade. The currently adopted clean air plan for the basin is the 1999 SIP Amendment, approved by the U.S. Environmental Protection Agency ("EPA") in 2000.

The AQMP for the SCAB establishes a program of rules and regulations directed at attainment of the state and national air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. The SCAQMD adopted an updated AQMP in August 2003, which outlines the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006 (SCAQMD 2003). The AQMP was forwarded to the California Air Resources Board ("CARB") in October 2003 for review. If approved, the AQMP will be sent to the EPA for its final approval and included as a revision to California's SIP.

The California Air Resources Board maintains records as to the attainment status of air basins throughout the state, under both state and federal criteria. The portion of the SCAB within which the proposed Project is located is designated as a non-attainment area for ozone and PM-10 under state standards, and as a non-attainment area for ozone, carbon monoxide, PM-2.5, and PM-10 under federal standards.

SECTION 3 – EMISSIONS ESTIMATES

THRESHOLDS OF SIGNIFICANCE

Under CEQA, air quality impacts may be considered significant if:

- The proposed Project would conflict with or obstruct the implementation of the applicable air quality plan.

- The proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

- The proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

- The proposed Project would expose sensitive receptors to substantial pollutant concentrations.

- The proposed Project would create objectionable odors affecting a substantial number of people.

Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts will occur during site grading and Project construction. Long-term air quality impacts will occur once the Project is in operation.

Many air quality impacts from dispersed mobile sources (cars and trucks), i.e., the dominant pollution generators from the proposed Project, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual source is generally immeasurably small. The SCAQMD has, therefore, developed suggested surrogate significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. Air quality impacts can be analyzed on a regional and localized level. Regional air quality thresholds examine the effect of project emissions on the air quality of the basin, while localized air quality impacts examine the effect of project emissions on the neighborhood around the Project site. This report contains analysis of both regional and local air quality impacts from project construction (short-term) and operation (long-term).

REGIONAL SIGNIFICANCE THREHSOLD ANALYSIS

The thresholds contained in the SCAQMD CEQA Air Quality Handbook are considered regional thresholds and are shown in Table 3333333. These regional thresholds were developed based on the SCAQMD's treatment of a major stationary source.

Table 3, SCAQMD CEQA Regional Significance Thresholds

Emission Threshold	Units	ROG	NO_X	CO	SO_X	PM-10
Daily Threshold – Construction	lbs/day	75	100	550	150	150
Daily Threshold – Operations	lbs/day	55	55	550	150	150

SHORT-TERM ANALYSIS

Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Short-term impacts will also include emissions generated during construction as a result of operation of personal vehicles by construction workers, asphalt degassing, and architectural coating (painting) operations during construction.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project, a Fugitive Dust Control Plan or Large Operation Notification would be required.

Short-term emissions were evaluated using the URBEMIS 2002 for Windows version 8.7.0 for Windows computer program. The model evaluated emissions resulting from site grading and construction. The total construction period for the proposed Project is expected to require approximately 8.5 years, from July 2006 to December 2014. The default parameters within URBEMIS were used and these default values reflect a worst-case scenario, which means that project emissions are expected to be equal to or less than the estimated construction emissions. In addition to the default values used, several assumptions relevant to model input for short-term construction emission estimates are:

- There are homes and an active dairy currently on-site. Therefore, the demolition of these existing structures was included in the analysis.

- 1 foot of topsoil from the dairy will be removed and hauled away.

- This Project will be built in three phases. It is assumed in this analysis that the next phase will begin after the completion of the previous phase and there will be no overlap during construction.

- Phase 1 of the Project consists of the construction of 291 single-family residential units and the 736-student elementary school and will take approximately 2.5 years to complete (July 2006 to December 2008).

- Phase 2 of the Project consists of the construction of 309 single-family residential units and will take approximately 2.5 years to complete (January 2009 to June 2011).

- Phase 3 of the Project consists of the construction of 165 single-family residential units and 645 condominium/townhouse units and will take approximately 3.5 years to complete (July 2011 to December 2014).

Table 44 summarizes the estimated construction emissions.

Table 4, Estimated Daily Construction Emissions

Activity/Year	**Peak Daily Emissions (lb/day)**				
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**
PHASE 1					
Construction 2006					
Demolition	24.31	189.51	185.66	0.46	16.34
Site Grading	86.46	689.28	617.12	0.00	90.35
Building Construction[1]	79.69	607.14	588.50	0.00	27.67
Maximum[2]	86.46	689.28	617.12	0.46	90.35
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2007					
Building Construction[1]	79.58	580.49	606.51	0.00	25.32
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2008					
Building Construction[1]	583.12	617.47	720.32	0.01	25.30
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
PHASE 2					
Construction 2009					
Demolition	23.96	170.43	193.39	0.05	14.44

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	NO_X	CO	SO_2	PM-10
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**
Site Grading	86.39	592.78	687.88	0.00	85.82
Building Construction[1]	77.27	513.64	624.91	0.00	21.01
Maximum[2]	86.39	592.78	687.88	0.05	85.82
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2010					
Building Construction[1]	77.17	489.19	641.62	0.00	19.04
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2011					
Building Construction[1]	575.05	549.78	736.02	0.01	21.02
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
PHASE 3					
Construction 2011					
Demolition	23.84	157.84	196.76	0.05	13.86
Site Grading	86.68	567.52	712.09	0.02	78.93
Maximum[2]	86.68	567.52	712.09	0.05	78.93
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2012					
Site Grading	86.68	567.52	712.09	0.02	78.93
Building Construction[1]	115.94	734.79	964.16	0.00	28.63
Maximum[2]	115.94	734.79	964.16	0.02	78.93
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2013					
Building Construction[1]	115.94	734.79	964.16	0.00	28.63
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Construction 2014					
Building Construction[1]	661.39	794.75	1,065.67	0.01	30.73
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**

Notes: See Appendix A for model output report.

[1] Building construction includes emissions from asphalt and painting also since those could all be occurring concurrently.

[2] Since demolition, site grading, and building construction (including painting and asphalt) occur independently of each other, the maximum emissions will be the highest emission amount for each criteria pollutant for demolition, grading, or building construction.

Evaluation of the above table indicates that all criteria pollutant emissions from construction of this Project are above the SCAQMD recommended daily thresholds for ROG, NO_X, and CO, during each year of every phase. The main source of ROG is from painting. The main source of CO and NO_X is from construction vehicle exhaust. Since SCAQMD thresholds are exceeded in the short term, significant impacts will occur with project construction.

Since this Project will be constructed in phases, there is the possibility that one or more of the earlier phases will be in operation while the later phase is being constructed. The maximum daily emissions from these overlapping phases are contained in Table 55.

Table 5, Estimated Maximum Daily Emissions (2009-2014)

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**
2009					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Construction	86.39	592.78	687.88	0.05	85.82
Maximum	**153.47**	**646.88**	**1059.29**	**0.43**	**123.59**
2010					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Construction	77.17	489.19	641.62	0.00	19.04
Maximum	**144.25**	**543.29**	**1013.03**	**0.38**	**56.81**
2011					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 or 3 Construction	575.05	567.52	736.02	0.05	78.93
Maximum	**642.13**	**621.62**	**1107.43**	**0.43**	**116.7**
2012					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21
Phase 3 Construction	115.94	734.79	964.16	0.02	78.93
Maximum	**233.47**	**829.9**	**1612.86**	**0.74**	**146.91**
2013					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21
Phase 3 Construction	115.94	734.79	964.16	0.00	28.63
Maximum	**233.47**	**829.9**	**1612.86**	**0.72**	**96.61**
2014					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**
Phase 3 Construction	661.39	794.75	1,065.67	0.01	30.73
Maximum	**778.92**	**889.86**	**1,714.37**	**0.73**	**98.71**

Note: To ensure a worse-case analysis, the largest criteria emissions for either winter or summer for each year was used.

The short-term emissions during 2009 to 2014 will be higher than the construction emissions alone when operation of earlier completed phases is also considered. Emissions of ROG, NO_X, CO and PM-10 will exceed SCAQMD's regional significance thresholds. Therefore, the short-term emissions from project construction are considered significant.

LONG-TERM ANALYSIS

Long-term emissions are evaluated at buildout for the completed Project at the end of construction. Operational emissions refer to on-road motor vehicle emissions from project buildout. Area Source emissions include stationary combustion emissions of natural gas used for space and water heating, yard and landscape maintenance, and consumer use of solvents and personal care products. URBEMIS 2002 computes operational and area source emissions based upon default factors and land use assumptions for each project.

Separate emissions were computed for both summer and winter.

Table 6, Estimated Daily Project Operation Emissions

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**
SCAQMD Daily Thresholds	**55**	**55**	**550**	**150**	**150**
Summer					
Natural Gas	1.15	14.96	6.57	0.00	0.03
Hearth	0	0	0	0	0
Landscaping	4.65	0.16	30.40	0.34	0.12
Consumer Products	68.98	0	0	0	0
Architectural Coatings	37.16	0	0	0	0
Vehicles	71.29	59.07	661.72	0.80	121.69
Maximum	**183.23**	**74.19**	**698.69**	**1.14**	**121.84**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**
Winter					
Natural Gas	1.15	14.96	6.57	0.00	0.03
Hearth	0.58	9.91	4.22	0.06	0.80
Landscaping	4.65	0.16	30.40	0.34	0.12
Consumer Products	68.98	0	0	0	0
Architectural Coatings	37.16	0	0	0	0
Vehicles	54.25	84.94	618.34	0.65	121.69
Maximum	**166.77**	**109.97**	**659.53**	**1.05**	**122.64**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**

Summer and winter emissions of ROG, NO_X, and CO will exceed SCAQMD operational thresholds. Since both summer and winter operational emissions will exceed the significance threshold for at least one criteria pollutant, project impacts would be considered significant for long-term air quality impacts.

CONCLUSION

Emissions of all criteria air pollutants from both project construction (short-term) and project operation (long-term) will exceed the SCAQMD established regional thresholds of significance.

LOCALIZED SIGNIFICANCE THRESHOLD ANALYSIS

BACKGROUND

Recently, as part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold ("LST") methodology that can be used by public agencies to determine whether or not

a project may generate significant adverse localized air quality impacts (both short-term and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each SRA.

METHODOLOGY

The emissions analyzed under the LST methodology are NO_2, CO, and PM-10. For attainment pollutants, nitrogen dioxide (NO_2) and CO, the LSTs are derived using an air quality dispersion model to back-calculate the emissions per day that would cause or contribute to a violation of any ambient air quality standard for a particular source receptor area. LSTs for NO_2 and CO are derived by adding the incremental emission impacts from the Project activity to the peak background NO_2 and CO concentrations and comparing the total concentration to the most stringent ambient air quality standards. The most stringent standard for NO_2 is the 1-hour state standard of 25 parts per hundred million and for CO it is the 1-hour and 8-hour state standards of 9 parts per million (ppm) and 20 ppm respectively. For PM-10, which the SCAB is non-attainment, the operation LST is derived using an air quality dispersion model to back-calculate the emissions necessary to make an existing violation in the specific source receptor area worse, using the allowable change in concentration thresholds approved by the SCAQMD. For PM-10, the allowable change in concentration thresholds is 2.5 $\mu g/m^3$.

The LST analysis was performed using the ISCST3 computer model. For dispersion analysis, ISCST3 has four source types that the user can choose from. The first type is a point source, which refers to stacks, where the pollutants are released from a single point. The second type is an area source, used to simulate the effects of fugitive emissions from sources such as storage piles and slag lumps. The third type is an open pit source, used to stimulate fugitive emissions from below-grade open pits, such as surface coal mines or stone quarries. The fourth type is a volume source, used to simulate the effects of emissions from sources such as building roof monitors and line sources, which include roads.

SHORT-TERM ANALYSIS

Based on current property ownership, it is anticipated that the southwest portion of the site will be developed in Phase 1, with the southeast portion of the site to be developed in Phase 2, and the northern portion of the site to be developed in Phase 3. Therefore, the residents of Phase 1 will be the closest sensitive receptors during Phase 2 construction and the residents of Phase 1 and 2 will be the closest sensitive receptors during the construction of Phase 3. In order to ensure a worst-case analysis, the maximum emissions of NO_X, CO, and PM-10 in Table 4 were used.

For NO_X and CO emissions, the maximum emissions occur in 2014 during the construction of Phase 3. Since the maximum daily area disturbed for Phase 3 is 24 acres, the mobile source emissions were modeled as multiple adjacent 50-meter by 50-meter volume sources with a release height of 5 meters along the southern boundary of Phase 3. Construction was estimated to occur for only 8 hours per day (between 8 a.m. and 4 p.m.). The initial horizontal and vertical plume standard deviations must be computed for each volume source modeled. According to the ISCST3 user's guide, the initial horizontal standard deviation (σ_y) of individual volume sources should be estimated as the distance between adjacent volume sources divided by 2.15. In a

similar manner, the ISCST3 user guide specifies that the source initial vertical standard deviation (σ_z) for a surface-based source should be estimated as the height of the source divided by the same factor of 2.15. For truck sources during construction, the typical effective exhaust height is approximately 14 feet. Therefore, the LST volume source used 23.26 m (50m/2.15 = 23.26m) for σ_y and 1.99 m (14 feet = 4.27 m; 4.27m/2.15 = 1.99m) for σ_z. Additionally, the localized impacts to existing residential uses south of the Project site (across Bellegrave Avenue) from Phase 1 of construction was analyzed. The results show that the impacts from Phase 3 of construction are greater than from Phase 1 (Appendix B); therefore, only the results from the construction of Phase 3 are reported here.

For PM-10 emissions, the maximum emissions occur during the construction of Phase 1. The nearest sensitive receptor during that time would be either across Mill Creek Avenue (Cleveland) or Bellegrave Avenue. Since the maximum daily area disturbed for Phase 1 is 25 acres, the PM-10 emissions were modeled as an area source with dimensions of 320 meters by 320 meters. Construction was estimated to occur for only 8 hours per day (between 8 a.m. and 4 p.m.). The initial vertical dimension (σ_z) was set at 1 meter.

A radial receptor grid was used to determine impacts. The grid was centered on the source and built in ten degree increments at the following downwind distances from the proposed Project boundary: 25, 50, 100, 200, and 500 meters. Flat terrain was assumed. All receptors were placed within the breathing zone at 2 meters above ground level.

Figure 3, Short-Term Maximum 1-Hour NO_X Concentration Contours

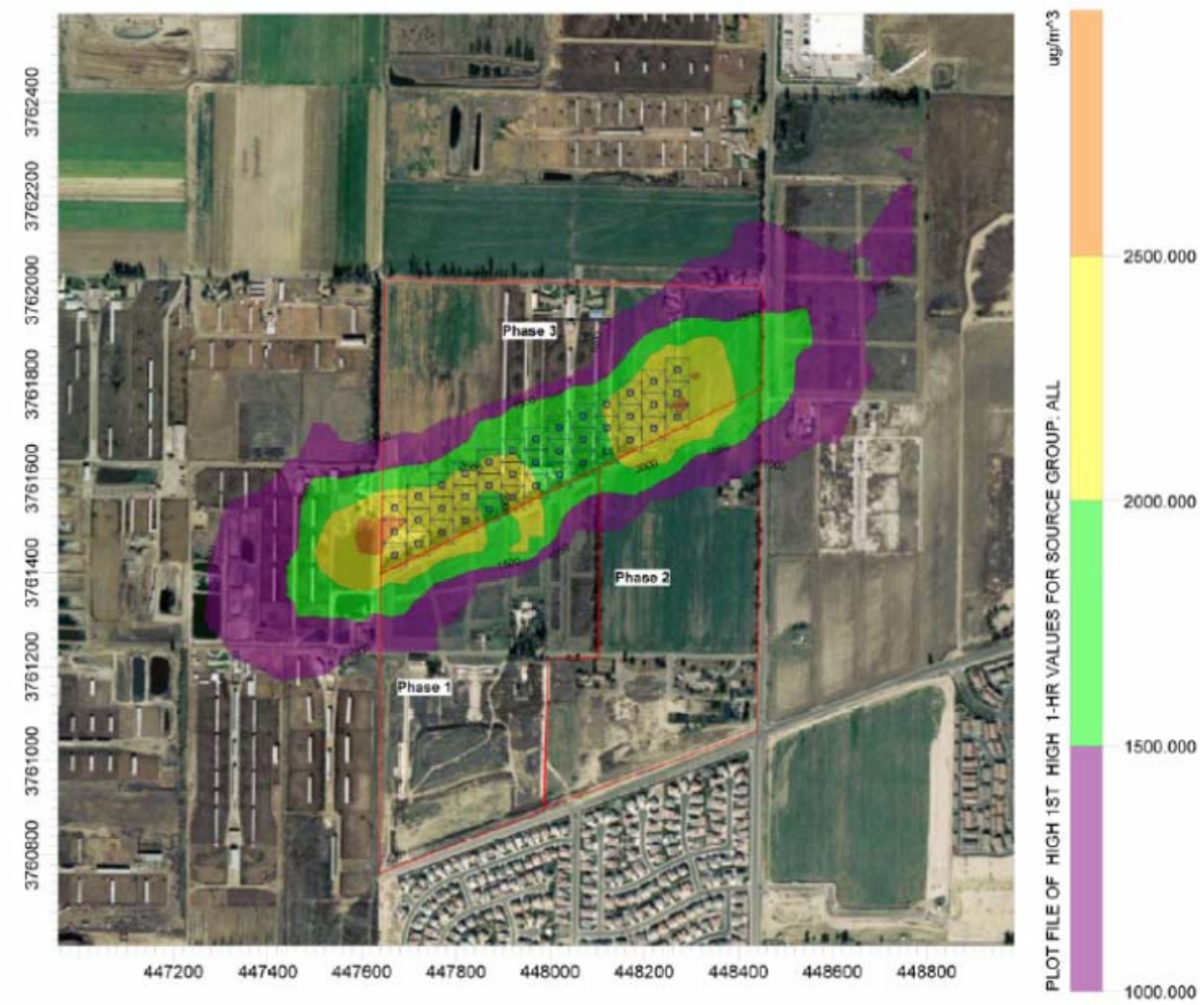
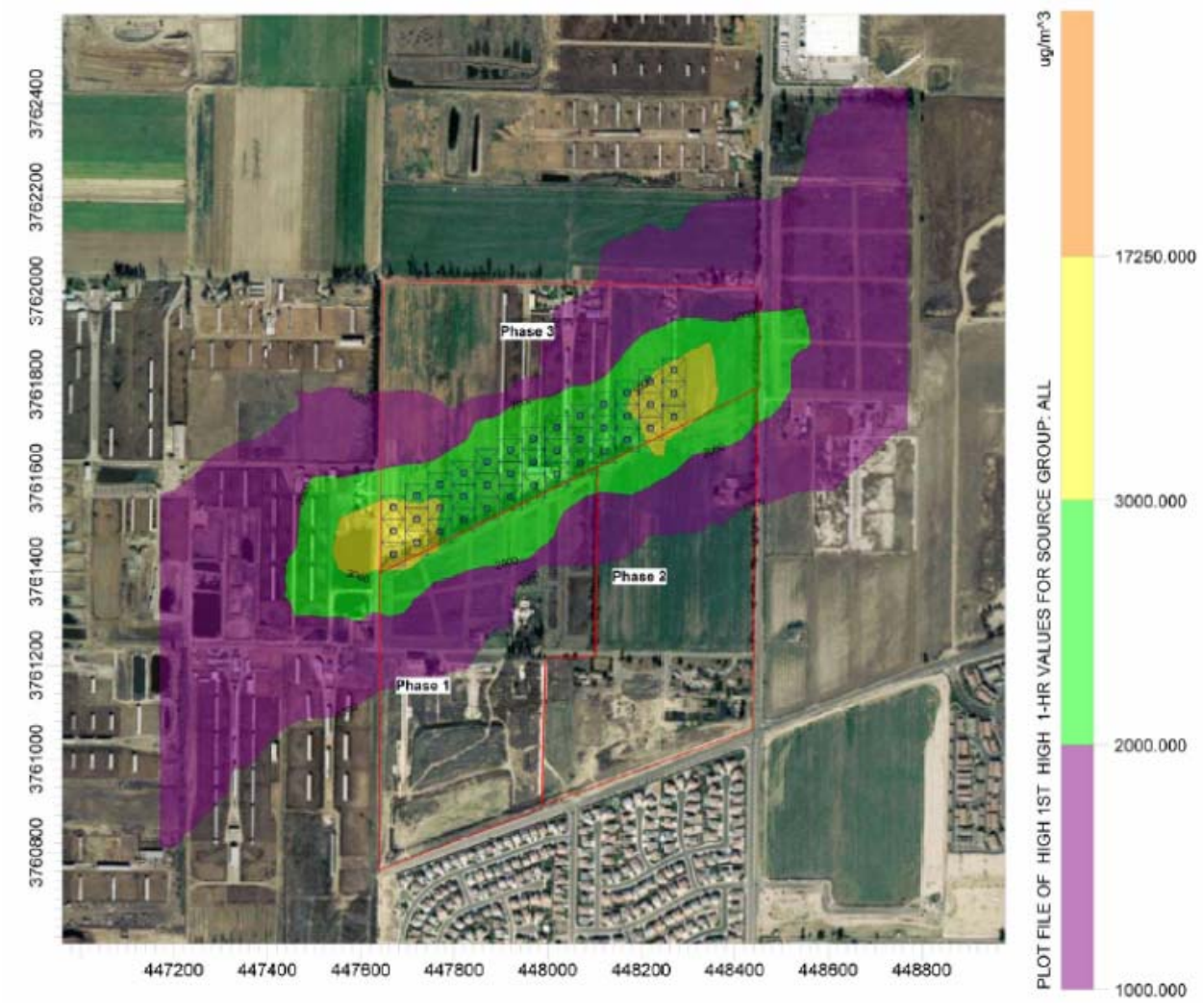


Figure 3 shows the maximum 1-hour concentration from the dispersion of NO_X emitted from the construction vehicles on the Project site. The dark blue squares located in Phase 3 represent the multiple adjacent volume sources used to model 26 acres of construction activity. Combustion processes occurring from equipment yield NO_X emissions, which is a combination of nitric oxide (NO) and nitrogen dioxide (NO_2). The majority of primary emissions are in the form of NO; however, the conversion of NO to NO_2 occurs through reaction of NO with ozone (O_3) and the reaction of NO with hydrocarbon radical species. Adverse health effects are associated with NO_2 and not NO, which is why the air quality standard is for NO_2 only.

In order to determine the localized impact, the monitored background NO_2 concentration must first be determined. Since NO_2 concentrations were not monitored in SRA 33, where the Project site is located, the NO_2 concentrations in SRA 32 (Upland) and SRA 34 (Fontana) were used since they are the closest locations where NO_2 concentrations were monitored. For SRA 32, the maximum 1-hour NO_2 concentration in the last 3 years was 0.13 ppm and the maximum NO_2 concentration at SRA 34 was 0.12 ppm, which is less than at SRA 32, therefore, the maximum concentration of 0.13 ppm for SRA 32 was used. The AAQS for NO_2 is a 1-hour maximum

concentration of 0.25 ppm. Therefore, the difference in concentrations is 0.12 ppm (226 $\mu g/m^3$) and the Project will have significant air quality impacts if NO_2 concentrations at the nearest sensitive receptor exceed this amount. In Figure 3, all colored areas have NO_X concentrations greater than 226 $\mu g/m^3$. However, NO_X emissions are simulated in the air quality dispersion model and the NO_2 conversion rate is treated by an NO_2-to-NO_X ratio, which is a function of downwind distance. According to the LST methodology developed by staff at SCAQMD, at 5,000 meters downwind, 100 percent conversion of NO-to NO_2 is assumed. The nearest sensitive receptor is 25m away. The NO_X concentration at this location is approximately 3,000 $\mu g/m^3$ and the NO_2-to-NO_X ratio is approximately 0.053. Therefore, the sensitive receptor will be exposed to an NO_2 concentration of 159 $\mu g/m^3$, which is less than the threshold of 226 $\mu g/m^3$. Therefore, the Project will not exceed the LST for NO_2 during construction.

Figure 4, Short-Term Maximum 1-Hour CO Concentration Contours



For carbon monoxide (CO), there is an AAQS for both maximum 1-hour and 8-hour concentrations.

Figure 4 shows the maximum 1-hour concentration from the dispersion of CO emitted from vehicles during project construction. In order to determine the localized impact, the monitored background CO concentration must first be determined. Since CO concentrations were not monitored in SRA 33, where the Project site is located, the CO concentrations in SRA 32 and SRA 34 were used. For SRA 34, the maximum 1-hour CO concentration in the last 3 years was 5 ppm the maximum 1-hour CO concentration at SRA 32 was 4 ppm, which is less than at SRA 34, therefore, the maximum concentration of 5 ppm for SRA 34 was used. The 1-hour AAQS for CO is a maximum concentration of 20 ppm. Therefore, the difference in concentrations is 15 ppm (17,250 $\mu g/m^3$) and the Project will have significant air quality impacts if 1-hour CO concentrations at the nearest sensitive receptor exceed this amount. As shown in Figure 4, none of the areas will be exposed to 1-hour CO concentrations greater than 17,250 $\mu g/m^3$ (indicated by areas in orange). Therefore, it is evident that no on-site or off-site areas will experience 1-

hour CO concentrations higher than the threshold value. In fact, the maximum 1-hour off-site CO concentrations will not exceed 3,570 μg/m^3, which is much lower than the threshold of 17,250 μg/m^3. Therefore, the Project will not exceed the LST for 1-hour CO concentrations during construction.

Figure 5, Short-Term Maximum 8-Hour CO Concentration Contours

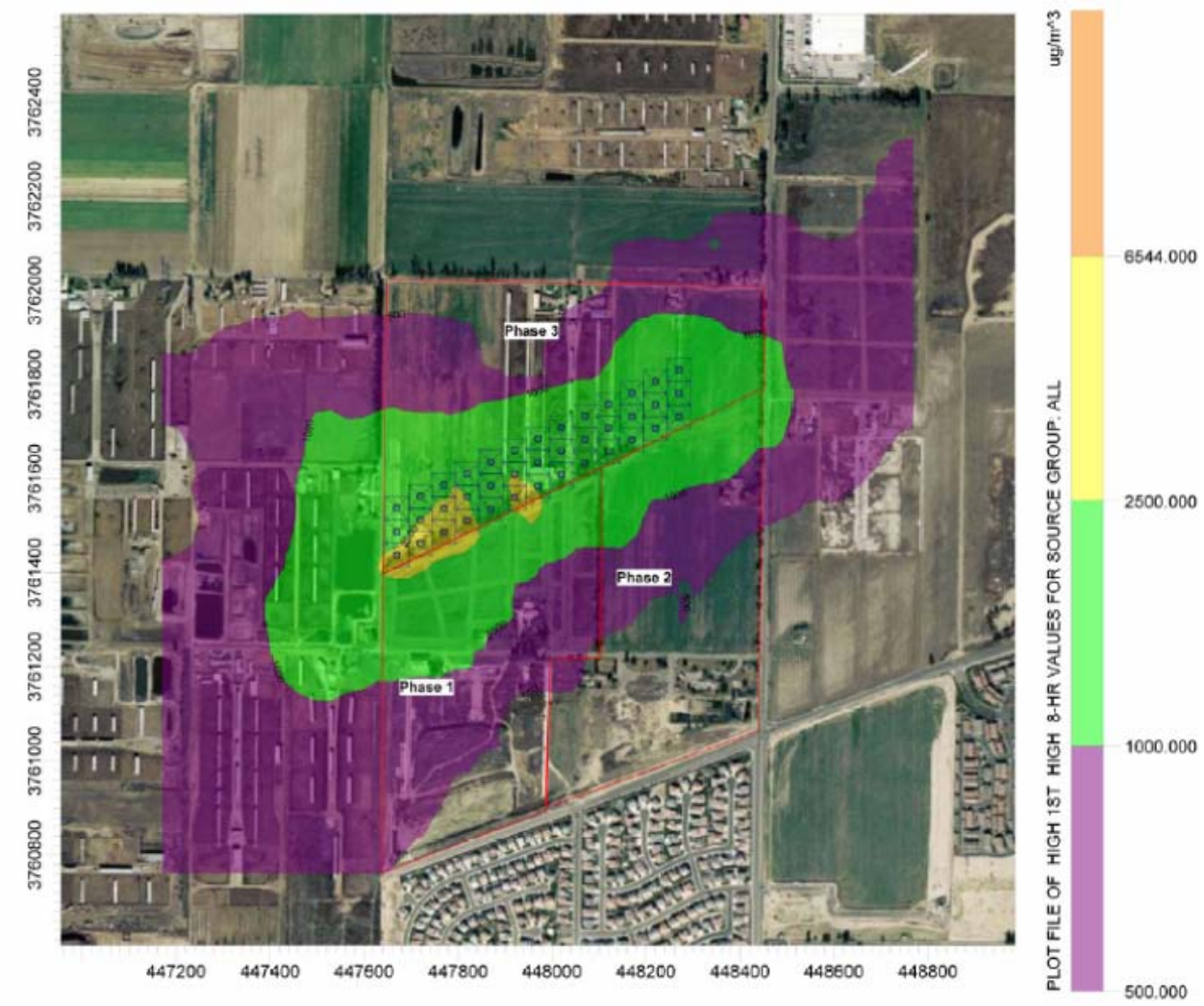
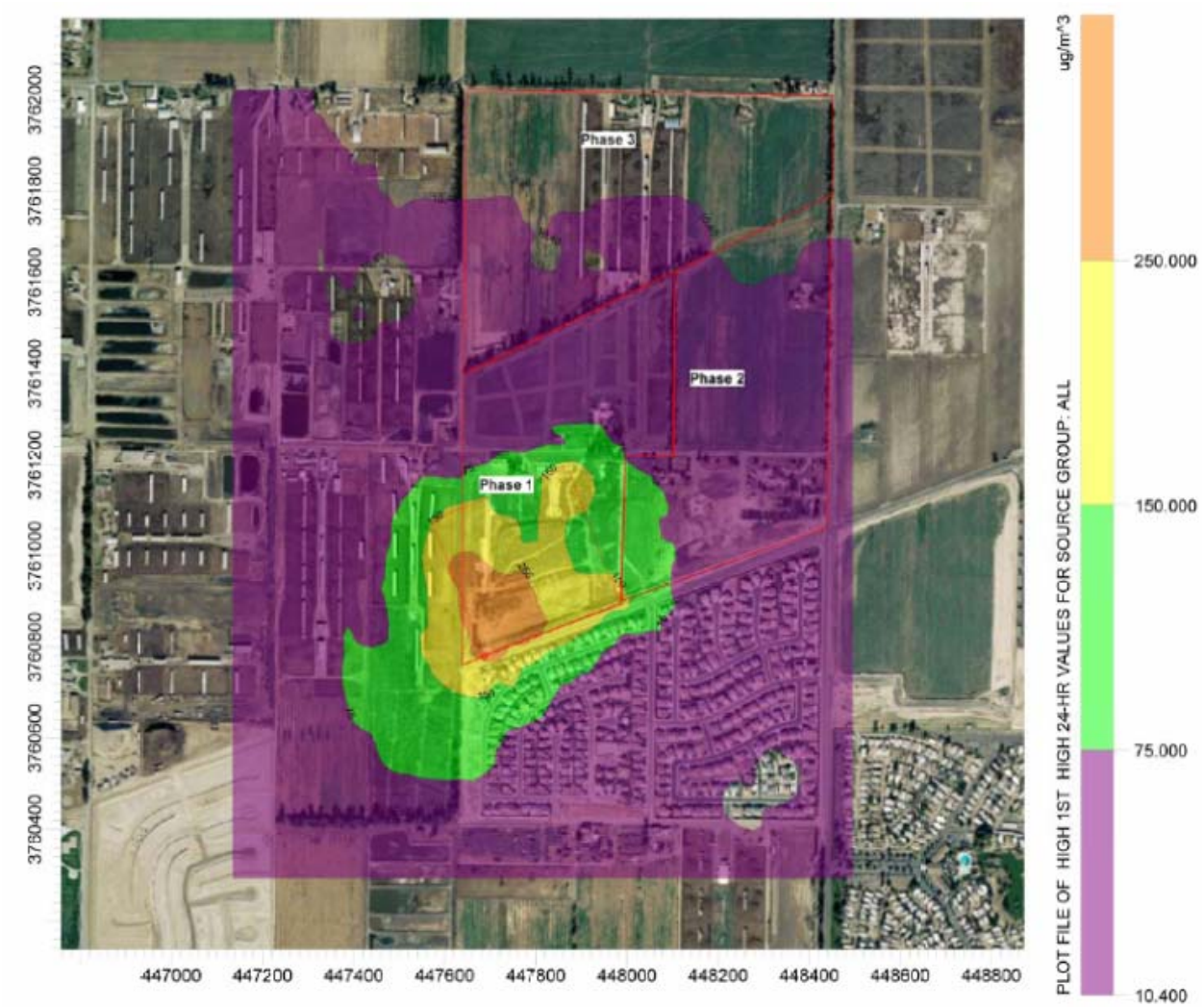


Figure 5 shows the maximum 8-hour concentration from the dispersion of CO emitted from vehicles during construction. In order to determine the localized impact, the monitored background CO concentration must first be determined. Since CO concentrations were not monitored in SRA 33, where the Project site is located; the CO concentrations in SRA 32 and SRA 34 were used. For SRA 34, the maximum 8-hour CO concentration in the last 3 years was 3.3 ppm the maximum 8-hour CO concentration at SRA 32 was 2.9 ppm, which is less than at SRA 34, therefore, the maximum concentration of 3.3 ppm for SRA 34 was used. The 8-hour AAQS for CO is a maximum concentration of 9 ppm. Therefore, the difference in concentrations is 5.7 ppm (6,544 μg/m^3) and the Project will have significant air quality impacts if 8-hour CO concentrations at the nearest sensitive receptor exceed this amount. As shown in Figure 5, none of the areas will be exposed to 8-hour CO concentrations greater than 6,544 μg/m^3 (shown by

areas in orange). Therefore, it is evident that no on-site or off-site areas will experience 8-hour CO concentrations higher than the threshold value. In fact, the maximum 8-hour off-site CO concentrations are less than 2,910 μg/m^3, which is lower than the threshold of 6,544 μg/m^3. Therefore, the Project will not exceed the LST for 8-hour CO concentrations during construction.

Figure 6, Short-Term Maximum 24-Hour PM-10 Concentration Contours



For PM-10, the basin is in non-attainment, therefore, the LST for PM-10 during project construction was developed using a dispersion model to back-calculate the emissions necessary to exceed a concentration equivalent to 50 μg/m^3 averaged over five hours, which results in an equivalent concentration for PM-10 LST of 10.4 μg/m^3, averaged over 24-hours. Therefore, the Project will have significant air quality impacts if 24-hour PM-10 concentrations at the nearest sensitive receptor exceed this amount. For downwind distances from the boundary of the construction area to 100 meters, the following equation describes the change in PM-10 concentrations with distance:

$$C_X = 0.9403\ C_0\ e^{-0.0462\ X}$$

Where: C_X is the predicted PM-10 concentration at X meters from the fence line
C_0 is the PM-10 concentration at the fence line as estimated by ISC-ST3
e is the natural logarithm
X is the distance in meters from the fence line

Concentrations are linearly interpolated between the two approaches for downwind distance from 100 meters to 500 meters.

The highest PM-10 concentration at the boundary is approximately 275 $\mu g/m^3$ (Figure 6). The nearest sensitive receptor is approximately 25 meters away (south of Bellegrave Avenue). Therefore, based on the equation above, the PM-10 concentration at the sensitive receptor will be 81.5 $\mu g/m^3$, which is higher than the threshold of 10.4 $\mu g/m^3$. Therefore, project construction will cause localized PM-10 impacts to the nearest sensitive receptor.

Emissions during project construction will exceed the localized significance thresholds for PM-10 and is considered significant.

LONG-TERM ANALYSIS

This Project involves the development of residential units and a school. The majority of the operational emissions are in the form of mobile source emissions, without any stationary sources present. Therefore, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is needed.

CONCLUSION

Based on the LST analysis of the proposed Project, the short-term construction of the Project will result in localized air quality impacts to sensitive receptors in the Project vicinity for PM-10 during construction of the Project.

CO HOTSPOTS ANALYSIS

The traffic study for the Esperanza Specific Plan (Webb Associates 2005) indicates that the study intersections currently operate at a level of service ("LOS") ranging from A to F during peak hours. Taking into account the Project, the LOS of study intersections will range from B to E with the addition of project-generated traffic. The traffic study also includes various recommendations, which will be included in the project design or as conditions of approval to the Project in order to improve the LOS of the intersections to C or better.

Given the traffic improvements needed, the Project has the potential to negatively impact the LOS on adjacent roadways. Where LOS is negatively impacted, CO can become a localized problem ("hot spot") requiring additional analysis beyond total project emissions quantification. A CO hot spot is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air quality standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SCAQMD recommends that projects with sensitive receptors or projects that could negatively affect LOS of existing roads use the screening procedures outlined in the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993) to determine the potential to create a CO hot spot.

The SCAQMD CEQA Air Quality Handbook recommends using CALINE4 (Caltrans 1999) to estimate 1-hour CO concentration from roadway traffic. Input data for this model includes meteorology, street network information, vehicle counts on each link, fleet-average CO emission factors, and receptor locations. CALINE4 can be with user-input meteorological data or default worst-case meteorological data. For this study, default worst-case meteorological data was used. The link information required for CALINE4 is in the form of east and north (x,y) coordinates for the two ends of each link. Up to 20 links can be supplied. For each link, the vehicle counts for the peak traffic period were taken from the project-specific traffic study (Webb Associates 2005). The fleet average emission factors for CO are estimated using the EMFAC2002 computer program (CARB 2002).

CALINE4 was run using the peak evening rush-hour traffic counts in the project-specific traffic study (Webb Associates 2005) and default worst-case meteorology. According to staff at SCAQMD, intersections where the LOS decreases from LOS C with the Project should be modeled. With the improvements included in the traffic study, none of the study intersections will operate at LOS C or worse. However, when the cumulative projects are considered, there are thirteen intersections that will operate at LOS D, even with the identified improvements. The intersections modeled are:

- Milliken Avenue / SR-60 WB Ramps
- Milliken Avenue / SR-60 EB Ramps
- Hamner Avenue / Riverside Drive
- Archibald Avenue / Edison Avenue
- Haven Avenue / Edison Avenue
- Archibald Avenue / Merrill Avenue
- Haven Avenue / Merrill Avenue
- Cleveland Avenue / Merrill Avenue
- Hamner Avenue / Merrill Avenue
- Hamner Avenue / Bellegrave Avenue
- Hamner Avenue / Limonite Avenue
- I-15 SB Ramps / Limonite Avenue
- I-15 NB Ramps / Limonite Avenue

Calculations used as well as CALINE4 output files are included in Appendix C.

Emission factors for CO were estimated from EMFAC2002, which estimates of emission factors by vehicle speed and vehicle class within the geographic area. According to the CO Hot Spots Protocol (Caltrans 1997), the average temperature for Riverside in January was found to be approximately 54.0 °F and the relative humidity was approximately 67%. Using these meteorological conditions, the vehicle emissions were calculated for 2007 by EMFAC2002. Additionally, in order to ensure a worse case scenario, the highest emission factor corresponding to a speed of 1 mph was used.

Receptors were located a distance of 3 meters from each roadway at the four corners of each intersection modeled. According to the Caltrans protocol, this represents a worse case scenario; therefore, no other sensitive receptors were modeled.

The predicted peak 1-hour CO concentrations at each receptor were determined by adding the background 1-hour CO concentrations to the modeled 1-hour CO concentration. The background CO concentration was obtained from SCAQMD. The peak 8-hour CO concentration was estimated by multiplying the peak 1-hour model estimate by the persistence factor for the Project and adding the ambient background 8-hour CO concentration. The persistence factor is the ratio between the maximum 1-hour and 8-hour measured CO concentration. Since meteorological data is available, the persistence factor was calculated from data from the latest 3 years in and found to be 0.92. The results are presented in Table by intersection where the receptor position with the highest CO concentration is shown.

Table 7, CO Hotspot Analysis Results

Intersection	1-Hour CO Concentration (ppm)		8-Hour CO Concentration (ppm)	
	Existing[1]	Project[2]	Existing[1]	Project[2]
State Threshold	**20**	**20**	**9**	**9**
Federal Threshold	**35**	**35**	**9.5**	**9.5**
Milliken Ave/ SR-60 WB Ramps	6.0	6.3	5.5	5.6
Milliken Ave/ SR-60 EB Ramps	6.1	6.6	5.6	6.0
Hamner Ave/ Riverside Dr	6.4	7.2	5.9	6.6
Archibald Ave/ Edison Ave	6.2	8.9	5.7	8.2
Haven Ave/ Edison Ave	5.5	5.9	5.0	5.4
Archibald Ave/ Merrill Ave	5.9	6.0	5.4	5.6
Haven Ave/ Merrill Ave	4.8	5.9	4.4	5.4
Cleveland Ave/ Merrill Ave	4.8	5.9	4.4	5.4
Hamner Ave/ Merrill Ave	6.3	6.5	5.8	6.0
Hamner Ave/ Bellegrave Ave	6.7	6.5	6.2	6.0
Hamner Ave/ Limonite Ave	7.1	6.7	6.5	6.2
I-15 SB Ramps/ Limonite Ave	7.0	6.9	6.4	6.3
I-15 NB Ramps/ Limonite Ave	7.0	7.0	6.4	6.4

Note: [1] Includes existing conditions only.
[2] Includes existing plus area growth plus project traffic.

For all of the intersections modeled, the CO emissions from project-generated traffic are less than the California and National (federal) thresholds of significance. Therefore, the Project will not result in CO hotspots or contribute to an exceedance of either the CAAQS or NAAQS for CO emissions and will not form any CO hotspots in the Project area.

MITIGATION MEASURES

In order to reduce emissions from project construction equipment, the following mitigation measures shall be implemented:

MM Air 1: During construction, mobile construction equipment will be properly maintained at an offsite location, which includes proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.

MM Air 2: Prohibit all vehicles from idling in excess of ten minutes, both on-site and off-site.

MM Air 3: Configure construction parking to minimize traffic interference.

In order to reduce emissions from project operation, the following mitigation measure shall be implemented:

MM Air 4: Local transit agencies shall be contacted to determine bus routing in the Project area that can accommodate bus stops at the Project access points and the Project shall provide bus passenger benches and shelters at these project access points.

IMPACTS AFTER MITIGATION

In an effort to reduce estimated emissions, the mitigation measures listed above were considered. Although implementation of the above-listed mitigation measures will reduce project-generated emissions, there is no quantitative reduction associated with them; therefore, there is no change in the estimated emissions of the Project.

There is no change in terms of exceeding the SCAQMD thresholds of significance related to short-term and long-term emissions. The Project's short-term construction and long-term operation emissions will exceed the SCAQMD significance thresholds and are considered significant.

SECTION 4 – FINDINGS AND CONCLUSIONS

EVALUATION OF SIGNIFICANCE

Under the California Environmental Quality Act, air quality impacts may be considered significant if the Project would:

- **Conflict with or obstruct implementation of the applicable air quality plan.**

The Air Quality Management Plan ("AQMP") for the South Coast Air Basin ("SCAB") sets forth a comprehensive program that will lead the SCAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections or evaluation of assumed emissions.

The existing 2003 AQMP was developed based on SCAG (Southern California Association of Governments) population projections for the region. The population projections made by SCAG are based on existing and planned land uses as set forth in the various general plans of local governmental jurisdictions within the region. The New Model Colony GPA (General Plan Amendment) to the City of Ontario's General Plan was adopted in 1997. The Project site is Sub-Area 25 of the New Model Colony GPA and designated Low Density Residential, with a small portion of Medium Density Residential. Since the Project will be developed with land use in accordance with the GPA, the Project is in compliance with the AQMP.

- **Violate any air quality standard or contribute substantially to an existing or projected air quality violation.**

The short-term construction emissions from this Project were modeled using URBEMIS2002 for Windows computer program (Appendix A). The Project is expected to be built in three phases. Phase 1 of the Project consists of the construction of 291 single-family dwelling units and the 736-student elementary school and will take approximately 2.5 years to complete. Phase 2 of the Project consists of the construction of 309 single-family dwelling units and will take approximately 2.5 years to complete. Phase 3 of the Project consists of the construction of 165 single-family dwelling units and 645 condominium/townhouse residential units and will take approximately 3.5 years to complete. Each phase is expected to be built and operational before the start of construction of the next phase. Maximum daily short-term emissions (for construction only) are 661.39 lbs for ROG, 794.75 lbs for NO_X, 1,065.67 lbs for CO, 0.05 lbs for SO_2, and 90.35 lbs for PM-10, which will exceed the thresholds set by SCAQMD, except for SO_2 and PM-10. Since it is possible that one or more phases of the Project could be in operation while one phase being constructed, the maximum daily short-term emissions during those years (2009 to 2014) are 778.92 lbs for ROG, 889.86 for NO_X, 1,714.37 lbs for CO, 0.74 lbs for SO_2, and

146.91 lbs for PM-10, which will exceed the regional thresholds set by SCAQMD, except for SO_2 and PM-10. Additionally, construction emissions were shown to exceed the localized significance threshold for PM-10.

Long-term emissions from the Project are 183.23 lbs for ROG, 74.19 lbs for NO_X, 698.69 lbs for CO, 1.14 lbs for SO_2, and 121.84 lbs for PM-10 in summer, and 166.77 lbs for ROG, 109.97 lbs for NO_X, 659.53 lbs for CO, 1.05 lbs for SO_2, and 122.64 lbs for PM-10 in winter. The long-term emissions for ROG, NO_X, and CO all exceed the SCAQMD thresholds of significance in both summer and winter. Therefore, the impacts are considered significant.

- **Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

The portion of the South Coast Air Basin within which the Project is located is designated as a non-attainment area for ozone and PM-10 under state standards, and as a non-attainment area for ozone, carbon monoxide, PM-10, and PM-2.5 under federal standards. The preceding analysis demonstrates that the Project's projected emissions are above the applicable SCAQMD thresholds for ROG, NO_X, and CO. Since the Project area is non-attainment for ozone and ROG is a pre-cursor of ozone, any exceedance of the SCAQMD threshold for ROG will result in cumulatively significant impacts to air quality. In addition, the Project exceeds the threshold for significance for CO for which the area is also a non-attainment zone; thus the Project will result in a cumulatively significant impact to air quality. Although the Project does not exceed the long-term thresholds of significance for the emission of PM-10, because the area is a non-attainment area for PM-10 and PM-2.5 and the Project will result in short-term localized PM-10 impacts, the Project is considered to result in cumulative impacts to air quality.

- **Expose sensitive receptors to substantial pollutant concentrations.**

The Project will expose sensitive receptors to substantial pollutant concentrations. Residential receptors within or adjacent to the Project site could be impacted by the short-term construction emissions generated by the Project. In addition, the Project's long-term impacts could impact the elementary school that is planned as part of the Project, the Project's residents, as well as adjacent residents. Therefore, the Project will expose sensitive receptors to substantial pollutant concentrations.

- **Create objectionable odors affecting a substantial number of people.**

Dairies generate a substantial amount of manure, which is stockpiled, spread and stored on the dairy and exposed to the open air. The animals on a dairy can also be a source of odor to the surrounding vicinity. Transition of dairy uses to residential uses will eliminate the source of existing odors resulting from the dairy operations. In the long term, the proposed Project will have a beneficial impact related to odors in this instance.

However, the Project presents the potential for generation of objectionable odors in the form of diesel exhaust during construction in the immediate vicinity of the Project site. Impacts of construction-related odors can not be quantified because it is subjective to each person's sensitivity to smell. Recognizing the short-term duration and quantity of emissions in the Project area, the Project will not expose substantial numbers of people to objectionable odors. Impacts from short-term construction odors are considered less than significant.

CONCLUSIONS

The Project-specific evaluation presented in the preceding analysis demonstrates that all projected short-term emissions from construction of the Project are above the applicable SCAQMD regional thresholds, except for SO_2. Project construction will also cause a significant localized impact from PM-10 emissions.

Operational emissions for ROG, NO_X, and CO exceed the SCAQMD regional thresholds and are considered significant. However, the Project will not result in any CO hotspots. Since the Project area is non-attainment for ozone, CO, and PM-10 and the Project exceeds thresholds for emissions of ROG (an ozone precursor), CO, and PM-10 (on a localized level), the Project will result in cumulatively significant air quality impacts. Therefore, short-term, long-term, and cumulative impacts to air quality are considered significant.

SECTION 5 – REFERENCES

REFERENCES CITED

The following documents were referred to as general information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section. Some of these documents are also available at public libraries and at other public agency offices.

AQMD — *Emission Reduction From Livestock Waste Draft Staff Report*. June 4, 2004.

Caltrans 1997 — California Department of Transportation. Transportation Project-Level Carbon Monoxide Protocol. Revised December 1997. (Available on the internet at http://www.dot.ca.gov/hq/env/air/coprot.htm)

Caltrans 1998 — California Department of Transportation. User's Guide for CL4: A User-Friendly Interface for the CALINE4 Model for Transportation Project Impact Assessments. June 1998. (Available on the internet at http://www.dot.ca.gov/hq/env/air/calinesw.htm)

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SCAQMD 2002	California Air Resources Control Board. URBEMIS 2002 for Windows Computer Program and User's Guide. (Available at SCAQMD,)
SCAQMD 2003	South Coast Air Quality Management District. 2003 Air Quality Management Plan. August, 2003. (Available at SCAQMD.)
Webb 2005	Traffic Impact Study Report. Sub-Area 29 Specific Plan. March 2005. (Available at City of Ontario.)
Location:	**Address:**
City of Ontario	City of Ontario Planning Department 303 E B Street, Ontario, CA 91764
SCAQMD	South Coast Air Quality Management District 21865 East Copley Drive Diamond Bar, CA 91765-4182

DOCUMENT PREPARATION STAFF

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APPENDIX A

URBEMIS 2002 FOR WINDOWS OUTPUT FILES

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URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase1.urb
Project Name: Esperanza SP - Phase 1
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.46	689.28	617.12	0.46	279.92	31.87	248.05
TOTALS (lbs/day, mitigated)	86.46	689.28	617.12	0.46	90.35	31.87	58.48

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	79.58	580.49	606.51	0.00	25.32	25.08	0.24
TOTALS (lbs/day, mitigated)	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	583.12	617.47	720.32	0.01	25.30	24.81	0.49
TOTALS (lbs/day, mitigated)	583.12	617.47	720.32	0.01	25.30	24.81	0.49

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	27.00	4.21	13.73	0.13	0.05

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	40.08	32.85	357.68	0.25	37.56

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	67.08	37.06	371.41	0.38	37.62

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URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase1.urb
Project Name: Esperanza SP - Phase 1
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.46	689.28	617.12	0.46	279.92	31.87	248.05
TOTALS (lbs/day, mitigated)	86.46	689.28	617.12	0.46	90.35	31.87	58.48

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	79.58	580.49	606.51	0.00	25.32	25.08	0.24
TOTALS (lbs/day, mitigated)	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	583.12	617.47	720.32	0.01	25.30	24.81	0.49
TOTALS (lbs/day, mitigated)	583.12	617.47	720.32	0.01	25.30	24.81	0.49

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	25.34	6.57	3.00	0.02	0.20

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	28.38	47.54	339.18	0.20	37.56

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	53.72	54.10	342.18	0.22	37.77

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URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase1.urb
Project Name: Esperanza SP - Phase 1
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: July, 2006
Construction Duration: 30
Total Land Use Area to be Developed: 99.4 acres
Maximum Acreage Disturbed Per Day: 24.8 acres
Single Family Units: 291 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 52256

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	163.50	175.08	-	7.19	7.19	0.00
On-Road Diesel	1.42	25.74	5.29	0.46	0.73	0.61	0.12
Worker Trips	0.22	0.27	5.29	0.00	0.02	0.01	0.01
Maximum lbs/day	24.31	189.51	185.66	0.46	16.34	7.81	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	248.00	-	248.00
Off-Road Diesel	86.14	689.10	613.30	-	31.87	31.87	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.32	0.18	3.82	0.00	0.05	0.00	0.05
Maximum lbs/day	86.46	689.28	617.12	0.00	279.92	31.87	248.05
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	606.32	571.22	-	27.42	27.42	0.00
Bldg Const Worker Trips	1.44	0.82	17.28	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.69	607.14	588.50	0.00	27.67	27.43	0.24
Max lbs/day all phases	86.46	689.28	617.12	0.46	279.92	31.87	248.05
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	579.72	590.26	-	25.07	25.07	0.00
Bldg Const Worker Trips	1.34	0.77	16.24	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.58	580.49	606.51	0.00	25.32	25.08	0.24
Max lbs/day all phases	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	553.13	608.63	-	22.72	22.72	0.00
Bldg Const Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	491.21	-	-	-	-	-	-
Arch Coatings Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.38	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	57.79	79.89	-	1.94	1.94	0.00
Asphalt On-Road Diesel	0.27	5.09	0.99	0.01	0.12	0.11	0.01
Asphalt Worker Trips	0.04	0.03	0.54	0.00	0.01	0.00	0.01
Maximum lbs/day	583.12	617.47	720.32	0.01	25.30	24.81	0.49
Max lbs/day all phases	583.12	617.47	720.32	0.01	25.30	24.81	0.49

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '06
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Aug '06
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '06
Phase 3 Duration: 25.5 months
  Start Month/Year for SubPhase Building: Nov '06
  SubPhase Building Duration: 25.5 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
26	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Oct '08
  SubPhase Architectural Coatings Duration: 2.6 months
  Start Month/Year for SubPhase Asphalt: Nov '08
  SubPhase Asphalt Duration: 1.3 months
  Acres to be Paved: 15.1
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	163.50	175.08	-	7.19	7.19	0.00
On-Road Diesel	1.42	25.74	5.29	0.46	0.73	0.61	0.12
Worker Trips	0.22	0.27	5.29	0.00	0.02	0.01	0.01
Maximum lbs/day	24.31	189.51	185.66	0.46	16.34	7.81	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	58.43	-	58.43
Off-Road Diesel	86.14	689.10	613.30	-	31.87	31.87	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.32	0.18	3.82	0.00	0.05	0.00	0.05
Maximum lbs/day	86.46	689.28	617.12	0.00	90.35	31.87	58.48
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	606.32	571.22	-	27.42	27.42	0.00
Bldg Const Worker Trips	1.44	0.82	17.28	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.69	607.14	588.50	0.00	27.67	27.43	0.24
Max lbs/day all phases	86.46	689.28	617.12	0.46	90.35	31.87	58.48
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	579.72	590.26	-	25.07	25.07	0.00
Bldg Const Worker Trips	1.34	0.77	16.24	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.58	580.49	606.51	0.00	25.32	25.08	0.24
Max lbs/day all phases	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	553.13	608.63	-	22.72	22.72	0.00
Bldg Const Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	491.21	-	-	-	-	-	-
Arch Coatings Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.38	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	57.79	79.89	-	1.94	1.94	0.00
Asphalt On-Road Diesel	0.27	5.09	0.99	0.01	0.12	0.11	0.01
Asphalt Worker Trips	0.04	0.03	0.54	0.00	0.01	0.00	0.01
Maximum lbs/day	583.12	617.47	720.32	0.01	25.30	24.81	0.49
Max lbs/day all phases	583.12	617.47	720.32	0.01	25.30	24.81	0.49

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '06
Phase 1 Duration: 1.5 months

Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Aug '06
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '06
Phase 3 Duration: 25.5 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 25.5 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
26	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Oct '08
SubPhase Architectural Coatings Duration: 2.6 months
Start Month/Year for SubPhase Asphalt: Nov '08
SubPhase Asphalt Duration: 1.3 months
Acres to be Paved: 15.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

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AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.32	4.15	1.98	0	0.01
Hearth	0.14	2.41	1.03	0.02	0.20
Landscaping - No winter emissions					
Consumer Prdcts	14.24	-	-	-	-
Architectural Coatings	10.64	-	-	-	-
TOTALS(lbs/day,unmitigated)	25.34	6.57	3.00	0.02	0.20

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	21.38	35.73	256.91	0.15	28.26
Elementary school	7.00	11.81	82.27	0.05	9.30
TOTAL EMISSIONS (lbs/day)	28.38	47.54	339.18	0.20	37.56

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	97.00	9.57 trips/dwelling unit	291.00	2,784.87
Elementary school		1.29 trips/students	736.00	949.44
		Sum of Total Trips		3,734.31
		Total Vehicle Miles Traveled		24,765.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	75.00	25.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

10/30/2005 3:23 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase1.urb
Project Name: Esperanza SP - Phase 1
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: July, 2006
Construction Duration: 30
Total Land Use Area to be Developed: 99.4 acres
Maximum Acreage Disturbed Per Day: 24.8 acres
Single Family Units: 291 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 52256

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	163.50	175.08	-	7.19	7.19	0.00
On-Road Diesel	1.42	25.74	5.29	0.46	0.73	0.61	0.12
Worker Trips	0.22	0.27	5.29	0.00	0.02	0.01	0.01
Maximum lbs/day	24.31	189.51	185.66	0.46	16.34	7.81	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	248.00	-	248.00
Off-Road Diesel	86.14	689.10	613.30	-	31.87	31.87	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.32	0.18	3.82	0.00	0.05	0.00	0.05
Maximum lbs/day	86.46	689.28	617.12	0.00	279.92	31.87	248.05
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	606.32	571.22	-	27.42	27.42	0.00
Bldg Const Worker Trips	1.44	0.82	17.28	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.69	607.14	588.50	0.00	27.67	27.43	0.24
Max lbs/day all phases	86.46	689.28	617.12	0.46	279.92	31.87	248.05
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	579.72	590.26	-	25.07	25.07	0.00
Bldg Const Worker Trips	1.34	0.77	16.24	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.58	580.49	606.51	0.00	25.32	25.08	0.24
Max lbs/day all phases	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	553.13	608.63	-	22.72	22.72	0.00
Bldg Const Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	491.21	-	-	-	-	-	-
Arch Coatings Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.38	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	57.79	79.89	-	1.94	1.94	0.00
Asphalt On-Road Diesel	0.27	5.09	0.99	0.01	0.12	0.11	0.01
Asphalt Worker Trips	0.04	0.03	0.54	0.00	0.01	0.00	0.01
Maximum lbs/day	583.12	617.47	720.32	0.01	25.30	24.81	0.49
Max lbs/day all phases	583.12	617.47	720.32	0.01	25.30	24.81	0.49

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '06
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Aug '06
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '06
Phase 3 Duration: 25.5 months
  Start Month/Year for SubPhase Building: Nov '06
  SubPhase Building Duration: 25.5 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
26	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Oct '08

  SubPhase Architectural Coatings Duration: 2.6 months
  Start Month/Year for SubPhase Asphalt: Nov '08
  SubPhase Asphalt Duration: 1.3 months
  Acres to be Paved: 15.1
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	163.50	175.08	-	7.19	7.19	0.00
On-Road Diesel	1.42	25.74	5.29	0.46	0.73	0.61	0.12
Worker Trips	0.22	0.27	5.29	0.00	0.02	0.01	0.01
Maximum lbs/day	24.31	189.51	185.66	0.46	16.34	7.81	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	58.43	-	58.43
Off-Road Diesel	86.14	689.10	613.30	-	31.87	31.87	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.32	0.18	3.82	0.00	0.05	0.00	0.05
Maximum lbs/day	86.46	689.28	617.12	0.00	90.35	31.87	58.48
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	606.32	571.22	-	27.42	27.42	0.00
Bldg Const Worker Trips	1.44	0.82	17.28	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.69	607.14	588.50	0.00	27.67	27.43	0.24
Max lbs/day all phases	86.46	689.28	617.12	0.46	90.35	31.87	58.48
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	579.72	590.26	-	25.07	25.07	0.00
Bldg Const Worker Trips	1.34	0.77	16.24	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	79.58	580.49	606.51	0.00	25.32	25.08	0.24
Max lbs/day all phases	79.58	580.49	606.51	0.00	25.32	25.08	0.24

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	78.25	553.13	608.63	-	22.72	22.72	0.00
Bldg Const Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	491.21	-	-	-	-	-	-
Arch Coatings Worker Trips	1.23	0.72	15.14	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.38	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	57.79	79.89	-	1.94	1.94	0.00
Asphalt On-Road Diesel	0.27	5.09	0.99	0.01	0.12	0.11	0.01
Asphalt Worker Trips	0.04	0.03	0.54	0.00	0.01	0.00	0.01
Maximum lbs/day	583.12	617.47	720.32	0.01	25.30	24.81	0.49
Max lbs/day all phases	583.12	617.47	720.32	0.01	25.30	24.81	0.49

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '06
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Aug '06
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '06
Phase 3 Duration: 25.5 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 25.5 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
26	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Oct '08
SubPhase Architectural Coatings Duration: 2.6 months
Start Month/Year for SubPhase Asphalt: Nov '08
SubPhase Asphalt Duration: 1.3 months
Acres to be Paved: 15.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

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AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.32	4.15	1.98	0	0.01
Hearth - No summer emissions					
Landscaping	1.80	0.06	11.75	0.13	0.05
Consumer Prdcts	14.24	-	-	-	-
Architectural Coatings	10.64	-	-	-	-
TOTALS(lbs/day,unmitigated)	27.00	4.21	13.73	0.13	0.05

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	23.16	24.68	271.27	0.19	28.26
Elementary school	16.92	8.16	86.41	0.06	9.30
TOTAL EMISSIONS (lbs/day)	40.08	32.85	357.68	0.25	37.56

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	97.00	9.57 trips/dwelling unit	291.00	2,784.87
Elementary school		1.29 trips/students	736.00	949.44
		Sum of Total Trips		3,734.31
		Total Vehicle Miles Traveled		24,765.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	75.00	25.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

10/30/2005 3:30 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase2.urb
Project Name: Esperanza SP - Phase 2
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.39	592.78	687.88	0.05	283.03	24.98	258.05
TOTALS (lbs/day, mitigated)	86.39	592.78	687.88	0.05	85.82	24.98	60.84

*** 2010 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	77.17	489.19	641.62	0.00	19.04	18.80	0.24
TOTALS (lbs/day, mitigated)	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	575.05	549.78	736.02	0.01	21.02	20.53	0.49
TOTALS (lbs/day, mitigated)	575.05	549.78	736.02	0.01	21.02	20.53	0.49

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	27.72	3.93	13.30	0.14	0.05

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	22.73	23.91	263.99	0.20	30.00

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	50.45	27.84	277.29	0.34	30.05

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URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase2.urb
Project Name: Esperanza SP - Phase 2
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.39	592.78	687.88	0.05	283.03	24.98	258.05
TOTALS (lbs/day, mitigated)	86.39	592.78	687.88	0.05	85.82	24.98	60.84

*** 2010 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	77.17	489.19	641.62	0.00	19.04	18.80	0.24
TOTALS (lbs/day, mitigated)	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	575.05	549.78	736.02	0.01	21.02	20.53	0.49
TOTALS (lbs/day, mitigated)	575.05	549.78	736.02	0.01	21.02	20.53	0.49

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	26.09	6.43	2.74	0.02	0.21

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	20.86	34.58	249.97	0.16	30.00

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	46.95	41.01	252.71	0.18	30.21

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase2.urb
Project Name: Esperanza SP - Phase 2
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: January, 2009
Construction Duration: 30
Total Land Use Area to be Developed: 103 acres
Maximum Acreage Disturbed Per Day: 25.8 acres
Single Family Units: 309 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	146.07	185.68	-	5.43	5.43	0.00
On-Road Diesel	1.12	24.05	4.18	0.05	0.59	0.47	0.12
Worker Trips	0.17	0.31	3.53	0.00	0.02	0.01	0.01
Maximum lbs/day	23.96	170.43	193.39	0.05	14.44	5.91	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	258.00	-	258.00
Off-Road Diesel	86.14	592.63	684.79	-	24.98	24.98	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.25	0.15	3.09	0.00	0.05	0.00	0.05
Maximum lbs/day	86.39	592.78	687.88	0.00	283.03	24.98	258.05
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	513.00	611.17	-	20.76	20.76	0.00
Bldg Const Worker Trips	1.10	0.65	13.73	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.27	513.64	624.91	0.00	21.01	20.77	0.24
Max lbs/day all phases	86.39	592.78	687.88	0.05	283.03	24.98	258.05
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.17	489.19	641.62	0.00	19.04	18.80	0.24
Max lbs/day all phases	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	485.70	-	-	-	-	-	-
Arch Coatings Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.41	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.23	4.15	0.85	0.01	0.10	0.09	0.01
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	575.05	549.78	736.02	0.01	21.02	20.53	0.49
Max lbs/day all phases	575.05	549.78	736.02	0.01	21.02	20.53	0.49

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jan '09
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '09
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: May '09
Phase 3 Duration: 25.5 months
  Start Month/Year for SubPhase Building: May '09
  SubPhase Building Duration: 25.5 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
25	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Apr '11
  SubPhase Architectural Coatings Duration: 2.6 months
  Start Month/Year for SubPhase Asphalt: May '11
  SubPhase Asphalt Duration: 1.3 months
  Acres to be Paved: 15.4
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	146.07	185.68	-	5.43	5.43	0.00
On-Road Diesel	1.12	24.05	4.18	0.05	0.59	0.47	0.12
Worker Trips	0.17	0.31	3.53	0.00	0.02	0.01	0.01
Maximum lbs/day	23.96	170.43	193.39	0.05	14.44	5.91	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	60.79	-	60.79
Off-Road Diesel	86.14	592.63	684.79	-	24.98	24.98	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.25	0.15	3.09	0.00	0.05	0.00	0.05
Maximum lbs/day	86.39	592.78	687.88	0.00	85.82	24.98	60.84
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	513.00	611.17	-	20.76	20.76	0.00
Bldg Const Worker Trips	1.10	0.65	13.73	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.27	513.64	624.91	0.00	21.01	20.77	0.24
Max lbs/day all phases	86.39	592.78	687.88	0.05	85.82	24.98	60.84
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.17	489.19	641.62	0.00	19.04	18.80	0.24
Max lbs/day all phases	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	485.70	-	-	-	-	-	-
Arch Coatings Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.41	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.23	4.15	0.85	0.01	0.10	0.09	0.01
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	575.05	549.78	736.02	0.01	21.02	20.53	0.49
Max lbs/day all phases	575.05	549.78	736.02	0.01	21.02	20.53	0.49

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jan '09
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '09
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: May '09
Phase 3 Duration: 25.5 months
Start Month/Year for SubPhase Building: May '09
SubPhase Building Duration: 25.5 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
25	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '11
SubPhase Architectural Coatings Duration: 2.6 months
Start Month/Year for SubPhase Asphalt: May '11
SubPhase Asphalt Duration: 1.3 months
Acres to be Paved: 15.4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

10/30/2005 3:30 PM

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.30	3.87	1.65	0	0.01
Hearth	0.15	2.56	1.09	0.02	0.21
Landscaping - No winter emissions					
Consumer Prdcts	15.12	-	-	-	-
Architectural Coatings	10.52	-	-	-	-
TOTALS(lbs/day,unmitigated)	26.09	6.43	2.74	0.02	0.21

10/30/2005 3:30 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	20.86	34.58	249.97	0.16	30.00
TOTAL EMISSIONS (lbs/day)	20.86	34.58	249.97	0.16	30.00

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	103.00	9.57 trips/dwelling unit	309.00	2,957.13
		Sum of Total Trips		2,957.13
		Total Vehicle Miles Traveled		19,784.68

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase2.urb
Project Name: Esperanza SP - Phase 2
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: January, 2009
Construction Duration: 30
Total Land Use Area to be Developed: 103 acres
Maximum Acreage Disturbed Per Day: 25.8 acres
Single Family Units: 309 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	146.07	185.68	-	5.43	5.43	0.00
On-Road Diesel	1.12	24.05	4.18	0.05	0.59	0.47	0.12
Worker Trips	0.17	0.31	3.53	0.00	0.02	0.01	0.01
Maximum lbs/day	23.96	170.43	193.39	0.05	14.44	5.91	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	258.00	-	258.00
Off-Road Diesel	86.14	592.63	684.79	-	24.98	24.98	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.25	0.15	3.09	0.00	0.05	0.00	0.05
Maximum lbs/day	86.39	592.78	687.88	0.00	283.03	24.98	258.05
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	513.00	611.17	-	20.76	20.76	0.00
Bldg Const Worker Trips	1.10	0.65	13.73	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.27	513.64	624.91	0.00	21.01	20.77	0.24
Max lbs/day all phases	86.39	592.78	687.88	0.05	283.03	24.98	258.05
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.17	489.19	641.62	0.00	19.04	18.80	0.24
Max lbs/day all phases	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	485.70	-	-	-	-	-	-
Arch Coatings Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.41	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.23	4.15	0.85	0.01	0.10	0.09	0.01
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	575.05	549.78	736.02	0.01	21.02	20.53	0.49
Max lbs/day all phases	575.05	549.78	736.02	0.01	21.02	20.53	0.49

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jan '09
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '09
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: May '09
Phase 3 Duration: 25.5 months
  Start Month/Year for SubPhase Building: May '09
  SubPhase Building Duration: 25.5 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
25	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Apr '11
  SubPhase Architectural Coatings Duration: 2.6 months
  Start Month/Year for SubPhase Asphalt: May '11
  SubPhase Asphalt Duration: 1.3 months
  Acres to be Paved: 15.4
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	146.07	185.68	-	5.43	5.43	0.00
On-Road Diesel	1.12	24.05	4.18	0.05	0.59	0.47	0.12
Worker Trips	0.17	0.31	3.53	0.00	0.02	0.01	0.01
Maximum lbs/day	23.96	170.43	193.39	0.05	14.44	5.91	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	60.79	-	60.79
Off-Road Diesel	86.14	592.63	684.79	-	24.98	24.98	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.25	0.15	3.09	0.00	0.05	0.00	0.05
Maximum lbs/day	86.39	592.78	687.88	0.00	85.82	24.98	60.84
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	513.00	611.17	-	20.76	20.76	0.00
Bldg Const Worker Trips	1.10	0.65	13.73	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.27	513.64	624.91	0.00	21.01	20.77	0.24
Max lbs/day all phases	86.39	592.78	687.88	0.05	85.82	24.98	60.84
*** 2010***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	77.17	489.19	641.62	0.00	19.04	18.80	0.24
Max lbs/day all phases	77.17	489.19	641.62	0.00	19.04	18.80	0.24

*** 2011***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	76.17	488.60	628.98	-	18.78	18.78	0.00
Bldg Const Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Arch Coatings Off-Gas	485.70	-	-	-	-	-	-
Arch Coatings Worker Trips	1.00	0.59	12.64	0.00	0.25	0.01	0.24
Asphalt Off-Gas	1.41	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.23	4.15	0.85	0.01	0.10	0.09	0.01
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	575.05	549.78	736.02	0.01	21.02	20.53	0.49
Max lbs/day all phases	575.05	549.78	736.02	0.01	21.02	20.53	0.49

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jan '09
Phase 1 Duration: 1.5 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '09
Phase 2 Duration: 3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: May '09
Phase 3 Duration: 25.5 months
Start Month/Year for SubPhase Building: May '09
SubPhase Building Duration: 25.5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
13	Concrete/Industrial saws	84	0.730	8.0
25	Other Equipment	190	0.620	8.0
13	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '11
SubPhase Architectural Coatings Duration: 2.6 months
Start Month/Year for SubPhase Asphalt: May '11
SubPhase Asphalt Duration: 1.3 months
Acres to be Paved: 15.4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

10/30/2005 3:30 PM

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.30	3.87	1.65	0	0.01
Hearth - No summer emissions					
Landscaping	1.78	0.06	11.65	0.14	0.05
Consumer Prdcts	15.12	-	-	-	-
Architectural Coatings	10.52	-	-	-	-
TOTALS(lbs/day,unmitigated)	27.72	3.93	13.30	0.14	0.05

10/30/2005 3:30 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	22.73	23.91	263.99	0.20	30.00
TOTAL EMISSIONS (lbs/day)	22.73	23.91	263.99	0.20	30.00

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	103.00	9.57 trips/dwelling unit	309.00	2,957.13
		Sum of Total Trips		2,957.13
		Total Vehicle Miles Traveled		19,784.68

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

10/30/2005 3:39 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase3.urb
Project Name: Esperanza SP - Phase 3
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.68	567.52	712.09	0.05	261.62	22.53	239.09
TOTALS (lbs/day, mitigated)	86.68	567.52	712.09	0.05	78.93	22.53	56.40

*** 2012 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	115.94	734.79	964.16	0.02	267.35	28.26	239.09
TOTALS (lbs/day, mitigated)	115.94	734.79	964.16	0.02	84.66	28.26	56.40

*** 2013 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	115.94	734.79	964.16	0.00	28.63	28.26	0.37
TOTALS (lbs/day, mitigated)	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
TOTALS (lbs/day, mitigated)	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	57.23	6.97	9.95	0.07	0.04

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	30.29	26.33	295.91	0.36	54.27

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	87.51	33.30	305.86	0.43	54.31

10/30/2005 3:39 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase3.urb
Project Name: Esperanza SP - Phase 3
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2011 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	86.68	567.52	712.09	0.05	261.62	22.53	239.09
TOTALS (lbs/day, mitigated)	86.68	567.52	712.09	0.05	78.93	22.53	56.40

*** 2012 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	115.94	734.79	964.16	0.02	267.35	28.26	239.09
TOTALS (lbs/day, mitigated)	115.94	734.79	964.16	0.02	84.66	28.26	56.40

*** 2013 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	115.94	734.79	964.16	0.00	28.63	28.26	0.37
TOTALS (lbs/day, mitigated)	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
TOTALS (lbs/day, mitigated)	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	56.44	11.87	5.05	0.03	0.41

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	24.23	37.86	276.40	0.29	54.27

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	80.67	49.73	281.45	0.32	54.68

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase3.urb
Project Name: Esperanza SP - Phase 3
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: July, 2011
Construction Duration: 42
Total Land Use Area to be Developed: 95.31 acres
Maximum Acreage Disturbed Per Day: 23.9 acres
Single Family Units: 165 Multi-Family Units: 645
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	140.55	189.12	-	4.90	4.90	0.00
On-Road Diesel	1.02	17.11	3.82	0.05	0.54	0.42	0.12
Worker Trips	0.15	0.18	3.82	0.00	0.02	0.01	0.01
Maximum lbs/day	23.84	157.84	196.76	0.05	13.86	5.33	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	239.00	-	239.00
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	261.62	22.53	239.09
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	86.68	567.52	712.09	0.05	261.62	22.53	239.09
*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	239.00	-	239.00
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	261.62	22.53	239.09

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.02	267.35	28.26	239.09

*** 2013***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	533.08	-	-	-	-	-	-
Arch Coatings Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Asphalt Off-Gas	1.08	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.18	3.17	0.65	0.01	0.07	0.07	0.00
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
Max lbs/day all phases	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '11
Phase 1 Duration: 2.1 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Sep '11
Phase 2 Duration: 4.2 months
On-Road Truck Travel (VMT): 350
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '12
Phase 3 Duration: 35.7 months
Start Month/Year for SubPhase Building: Jan '12
SubPhase Building Duration: 35.7 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
19	Concrete/Industrial saws	84	0.730	8.0
38	Other Equipment	190	0.620	8.0
19	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Sep '14
SubPhase Architectural Coatings Duration: 3.6 months
Start Month/Year for SubPhase Asphalt: Nov '14
SubPhase Asphalt Duration: 1.8 months
Acres to be Paved: 16.3
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	140.55	189.12	-	4.90	4.90	0.00
On-Road Diesel	1.02	17.11	3.82	0.05	0.54	0.42	0.12
Worker Trips	0.15	0.18	3.82	0.00	0.02	0.01	0.01
Maximum lbs/day	23.84	157.84	196.76	0.05	13.86	5.33	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	56.31	-	56.31
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	78.93	22.53	56.40

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	86.68	567.52	712.09	0.05	78.93	22.53	56.40

*** 2012***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	56.31	-	56.31
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	78.93	22.53	56.40
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.02	84.66	28.26	56.40

*** 2013***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	533.08	-	-	-	-	-	-
Arch Coatings Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Asphalt Off-Gas	1.08	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.18	3.17	0.65	0.01	0.07	0.07	0.00
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
Max lbs/day all phases	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '11
Phase 1 Duration: 2.1 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Sep '11
Phase 2 Duration: 4.2 months
On-Road Truck Travel (VMT): 350
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '12
Phase 3 Duration: 35.7 months
  Start Month/Year for SubPhase Building: Jan '12
  SubPhase Building Duration: 35.7 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
19	Concrete/Industrial saws	84	0.730	8.0
38	Other Equipment	190	0.620	8.0
19	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Sep '14
  SubPhase Architectural Coatings Duration: 3.6 months
  Start Month/Year for SubPhase Asphalt: Nov '14
  SubPhase Asphalt Duration: 1.8 months
  Acres to be Paved: 16.3
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

10/30/2005 3:39 PM

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.54	6.93	2.95	0	0.01
Hearth	0.29	4.94	2.10	0.03	0.40
Landscaping - No winter emissions					
Consumer Prdcts	39.63	-	-	-	-
Architectural Coatings	15.99	-	-	-	-
TOTALS(lbs/day,unmitigated)	56.44	11.87	5.05	0.03	0.41

10/30/2005 3:39 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	7.10	11.16	81.45	0.09	15.99
Condo/townhouse general	17.13	26.71	194.95	0.21	38.28
TOTAL EMISSIONS (lbs/day)	24.23	37.86	276.40	0.29	54.27

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	55.00	9.57 trips/dwelling unit	165.00	1,579.05
Condo/townhouse general	40.31	5.86 trips/dwelling unit	645.00	3,779.70
		Sum of Total Trips		5,358.75
		Total Vehicle Miles Traveled		35,852.72

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/40.31 to 5.86/40.31

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

10/30/2005 3:39 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Phase3.urb
Project Name: Esperanza SP - Phase 3
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: July, 2011
Construction Duration: 42
Total Land Use Area to be Developed: 95.31 acres
Maximum Acreage Disturbed Per Day: 23.9 acres
Single Family Units: 165 Multi-Family Units: 645
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	140.55	189.12	-	4.90	4.90	0.00
On-Road Diesel	1.02	17.11	3.82	0.05	0.54	0.42	0.12
Worker Trips	0.15	0.18	3.82	0.00	0.02	0.01	0.01
Maximum lbs/day	23.84	157.84	196.76	0.05	13.86	5.33	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	239.00	-	239.00
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	261.62	22.53	239.09
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	86.68	567.52	712.09	0.05	261.62	22.53	239.09
*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	239.00	-	239.00
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	261.62	22.53	239.09

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.02	267.35	28.26	239.09

*** 2013***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	533.08	-	-	-	-	-	-
Arch Coatings Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Asphalt Off-Gas	1.08	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.18	3.17	0.65	0.01	0.07	0.07	0.00
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
Max lbs/day all phases	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '11
Phase 1 Duration: 2.1 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Sep '11
Phase 2 Duration: 4.2 months
On-Road Truck Travel (VMT): 350
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '12
Phase 3 Duration: 35.7 months
Start Month/Year for SubPhase Building: Jan '12
SubPhase Building Duration: 35.7 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
19	Concrete/Industrial saws	84	0.730	8.0
38	Other Equipment	190	0.620	8.0
19	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Sep '14
SubPhase Architectural Coatings Duration: 3.6 months
Start Month/Year for SubPhase Asphalt: Nov '14
SubPhase Asphalt Duration: 1.8 months
Acres to be Paved: 16.3
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	8.40	-	8.40
Off-Road Diesel	22.67	140.55	189.12	-	4.90	4.90	0.00
On-Road Diesel	1.02	17.11	3.82	0.05	0.54	0.42	0.12
Worker Trips	0.15	0.18	3.82	0.00	0.02	0.01	0.01
Maximum lbs/day	23.84	157.84	196.76	0.05	13.86	5.33	8.53
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	56.31	-	56.31
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	78.93	22.53	56.40

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	86.68	567.52	712.09	0.05	78.93	22.53	56.40

*** 2012***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	56.31	-	56.31
Off-Road Diesel	86.14	560.75	708.05	-	22.40	22.40	0.00
On-Road Diesel	0.32	6.64	1.20	0.02	0.17	0.13	0.04
Worker Trips	0.22	0.13	2.84	0.00	0.05	0.00	0.05
Maximum lbs/day	86.68	567.52	712.09	0.02	78.93	22.53	56.40
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.02	84.66	28.26	56.40

*** 2013***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	115.94	734.79	964.16	0.00	28.63	28.26	0.37
Max lbs/day all phases	115.94	734.79	964.16	0.00	28.63	28.26	0.37

*** 2014***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	114.36	733.86	944.21	-	28.24	28.24	0.00
Bldg Const Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Arch Coatings Off-Gas	533.08	-	-	-	-	-	-
Arch Coatings Worker Trips	1.58	0.93	19.95	0.00	0.39	0.02	0.37
Asphalt Off-Gas	1.08	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	55.84	80.46	-	1.62	1.62	0.00
Asphalt On-Road Diesel	0.18	3.17	0.65	0.01	0.07	0.07	0.00
Asphalt Worker Trips	0.04	0.02	0.45	0.00	0.01	0.00	0.01
Maximum lbs/day	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75
Max lbs/day all phases	661.39	794.75	1,065.67	0.01	30.73	29.98	0.75

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jul '11
Phase 1 Duration: 2.1 months
Building Volume Total (cubic feet): 640000
Building Volume Daily (cubic feet): 20000
On-Road Truck Travel (VMT): 1110
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Sep '11
Phase 2 Duration: 4.2 months
On-Road Truck Travel (VMT): 350
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
20	Rubber Tired Dozers	352	0.590	8.0
20	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '12
Phase 3 Duration: 35.7 months
  Start Month/Year for SubPhase Building: Jan '12
  SubPhase Building Duration: 35.7 months
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
19	Concrete/Industrial saws	84	0.730	8.0
38	Other Equipment	190	0.620	8.0
19	Rough Terrain Forklifts	94	0.475	8.0

  Start Month/Year for SubPhase Architectural Coatings: Sep '14
  SubPhase Architectural Coatings Duration: 3.6 months
  Start Month/Year for SubPhase Asphalt: Nov '14
  SubPhase Asphalt Duration: 1.8 months
  Acres to be Paved: 16.3
  Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

10/30/2005 3:39 PM

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.54	6.93	2.95	0	0.01
Hearth - No summer emissions					
Landscaping	1.07	0.04	7.00	0.07	0.03
Consumer Prdcts	39.63	-	-	-	-
Architectural Coatings	15.99	-	-	-	-
TOTALS(lbs/day,unmitigated)	57.23	6.97	9.95	0.07	0.04

10/30/2005 3:39 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	8.12	7.76	87.19	0.11	15.99
Condo/townhouse general	22.17	18.57	208.71	0.25	38.28
TOTAL EMISSIONS (lbs/day)	30.29	26.33	295.91	0.36	54.27

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	55.00	9.57 trips/dwelling unit	165.00	1,579.05
Condo/townhouse general	40.31	5.86 trips/dwelling unit	645.00	3,779.70
		Sum of Total Trips		5,358.75
		Total Vehicle Miles Traveled		35,852.72

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/40.31 to 5.86/40.31

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

10/30/2005 3:41 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Project.urb
Project Name: Esperanza SP - Total Project Operation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	111.94	15.12	36.97	0.34	0.15

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	71.29	59.07	661.72	0.80	121.69

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	183.24	74.19	698.69	1.14	121.84

10/30/2005 3:41 PM

URBEMIS 2002 For Windows 8.7.0

File Name: \020393E\Air\Project.urb
Project Name: Esperanza SP - Total Project Operation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	107.87	24.87	10.79	0.06	0.83

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	54.25	84.94	618.34	0.65	121.69

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	162.13	109.81	629.13	0.72	122.52

10/30/2005 3:41 PM

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.15	14.96	6.57	0	0.03
Hearth	0.58	9.91	4.22	0.06	0.80
Landscaping - No winter emissions					
Consumer Prdcts	68.98	-	-	-	-
Architectural Coatings	37.16	-	-	-	-
TOTALS(lbs/day,unmitigated)	107.87	24.87	10.79	0.06	0.83

10/30/2005 3:41 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	32.91	51.73	377.61	0.40	74.14
Condo/townhouse general	17.13	26.71	194.95	0.21	38.28
Elementary school	4.22	6.50	45.77	0.05	9.28
TOTAL EMISSIONS (lbs/day)	54.25	84.94	618.34	0.65	121.69

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	255.00	9.57 trips/dwelling unit	765.00	7,321.05
Condo/townhouse general	40.31	5.86 trips/dwelling unit	645.00	3,779.70
Elementary school		1.29 trips/students	736.00	949.44
		Sum of Total Trips		12,050.19
		Total Vehicle Miles Traveled		80,402.95

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/40.31 to 5.86/40.31

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

10/30/2005 3:41 PM

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.15	14.96	6.57	0	0.03
Hearth - No summer emissions					
Landscaping	4.65	0.16	30.40	0.34	0.12
Consumer Prdcts	68.98	-	-	-	-
Architectural Coatings	37.16	-	-	-	-
TOTALS(lbs/day,unmitigated)	111.94	15.12	36.97	0.34	0.15

10/30/2005 3:41 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	37.64	35.97	404.26	0.49	74.14
Condo/townhouse general	22.17	18.57	208.71	0.25	38.28
Elementary school	11.49	4.53	48.74	0.06	9.28
TOTAL EMISSIONS (lbs/day)	71.29	59.07	661.72	0.80	121.69

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	255.00	9.57 trips/dwelling unit	765.00	7,321.05
Condo/townhouse general	40.31	5.86 trips/dwelling unit	645.00	3,779.70
Elementary school		1.29 trips/students	736.00	949.44
		Sum of Total Trips		12,050.19
		Total Vehicle Miles Traveled		80,402.95

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/40.31 to 5.86/40.31

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.

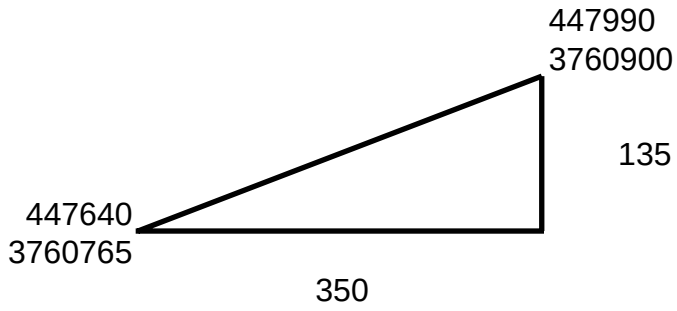
Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

APPENDIX B

LST ANALYSIS SUPPORTING INFORMATION

Esperanza SP
Volume Sources Modeled for LST Analysis
Phase 1



Volume Source = 50

	X	Y		X	Y
1	447665.0	3760799.6	**22**	447665.0	3760949.6
2	447715.0	3760818.9	**23**	447715.0	3760968.9
3	447765.0	3760838.2	**24**	447765.0	3760988.2
4	447815.0	3760857.5	**25**	447815.0	3761007.5
5	447865.0	3760876.8	**26**	447865.0	3761026.8
6	447915.0	3760896.1	**27**	447915.0	3761046.1
7	447965.0	3760915.4	**28**	447965.0	3761065.4
8	447665.0	3760849.6	**29**	447665.0	3760999.6
9	447715.0	3760868.9	**30**	447715.0	3761018.9
10	447765.0	3760888.2	**31**	447765.0	3761038.2
11	447815.0	3760907.5	**32**	447815.0	3761057.5
12	447865.0	3760926.8	**33**	447865.0	3761076.8
13	447915.0	3760946.1	**34**	447915.0	3761096.1
14	447965.0	3760965.4	**35**	447965.0	3761115.4
15	447665.0	3760899.6	**36**	447665.0	3761049.6
16	447715.0	3760918.9	**37**	447715.0	3761068.9
17	447765.0	3760938.2	**38**	447765.0	3761088.2
18	447815.0	3760957.5	**39**	447815.0	3761107.5
19	447865.0	3760976.8	**40**	447865.0	3761126.8
20	447915.0	3760996.1	**41**	447915.0	3761146.1
21	447965.0	3761015.4	**42**	447965.0	3761165.4

NOx Emissions

Construction Max = 689.28

Const Area	Volume Sources	URBEMIS Emissions lbs/day	g/s
50mx50m	42	689.28	0.258

CO Emissions

Construction Max = 720.32

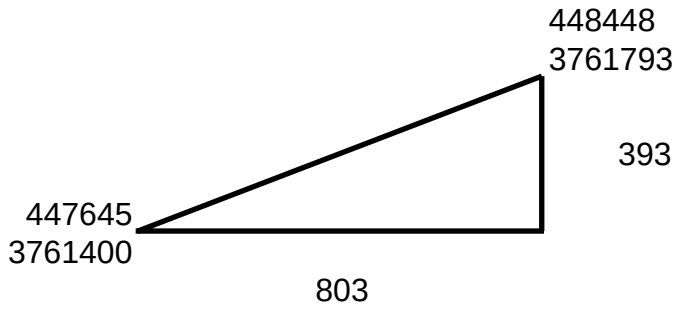
Const Area	Volume Sources	URBEMIS Emissions lbs/day	g/s
50mx50m	42	720.32	0.270

PM-10 Emissions

Construction Max = 90.35

Const Area	Area Source	URBEMIS Emissions lbs/day	g/s	g/s-m^2
25 acres	320 x 320	90.35	1.423	1.390E-05

Esperanza SP
Volume Sources Modeled for LST Analysis
Phase 3



Volume Source = 50

	X	Y		X	Y
1	447670	3761437.24	**21**	448020	3761658.53
2	447720	3761461.71	**22**	448070	3761683.00
3	447770	3761486.18	**23**	448120	3761707.47
4	447820	3761510.65	**24**	448170	3761731.94
5	447870	3761535.12	**25**	448220	3761756.41
6	447920	3761559.59	**26**	448270	3761780.88
7	447970	3761584.06	**27**	447670	3761537.24
8	448020	3761608.53	**28**	447720	3761561.71
9	448070	3761633.00	**29**	447770	3761586.18
10	448120	3761657.47	**30**	447820	3761610.65
11	448170	3761681.94	**31**	447870	3761635.12
12	448220	3761706.41	**32**	447920	3761659.59
13	448270	3761730.88	**33**	447970	3761684.06
14	447670	3761487.24	**34**	448020	3761708.53
15	447720	3761511.71	**35**	448070	3761733.00
16	447770	3761536.18	**36**	448120	3761757.47
17	447820	3761560.65	**37**	448170	3761781.94
18	447870	3761585.12	**38**	448220	3761806.41
19	447920	3761609.59	**39**	448270	3761830.88
20	447970	3761634.06			

NOx Emissions

Construction Max = 794.75

Const Area	Volume Sources	URBEMIS Emissions lbs/day	g/s
50mx50m	39	794.75	0.321

CO Emissions

Construction Max = 1065.67

Const Area	Volume Sources	URBEMIS Emissions lbs/day	g/s
50mx50m	39	1065.67	0.430

PM-10 Emissions

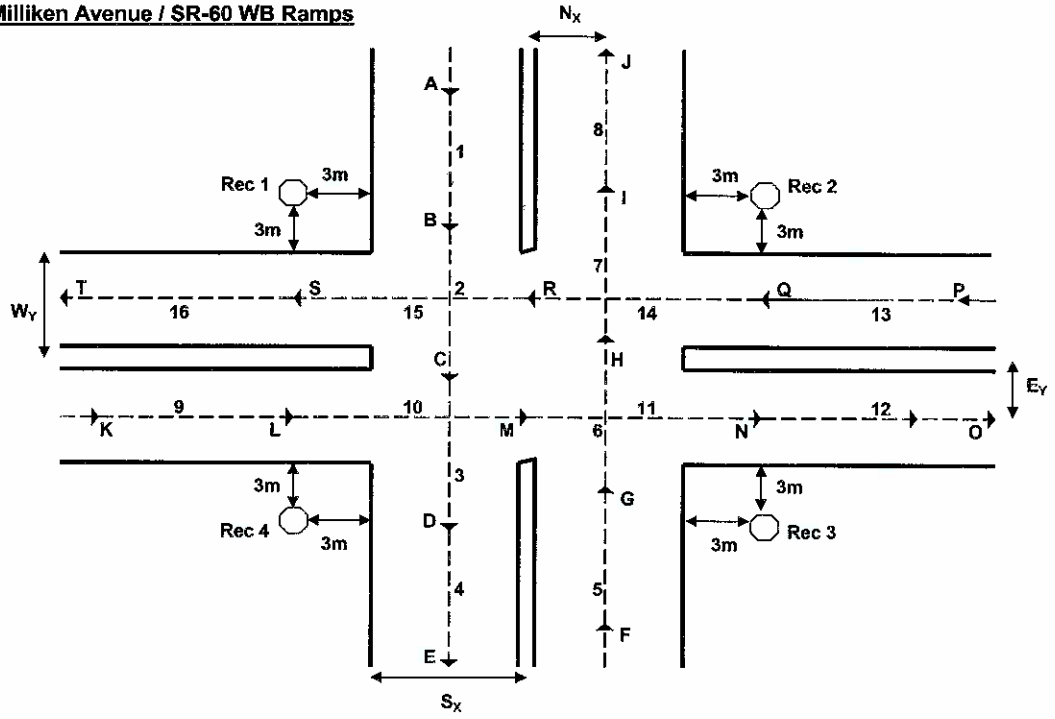
Construction Max = 85.82

Const Area	Area Source	URBEMIS Emissions lbs/day	g/s	g/s-m^2
26 acres	325 x 325	85.82	1.352	1.280E-05

APPENDIX C

CALINE4 MODEL OUTPUT AND SUPPORTING INFORMATION

Milliken Avenue / SR-60 WB Ramps



Variables

N_X	7.9	S_X	16.2	E_Y	4.6	W_Y	9.1

Co-ordinates

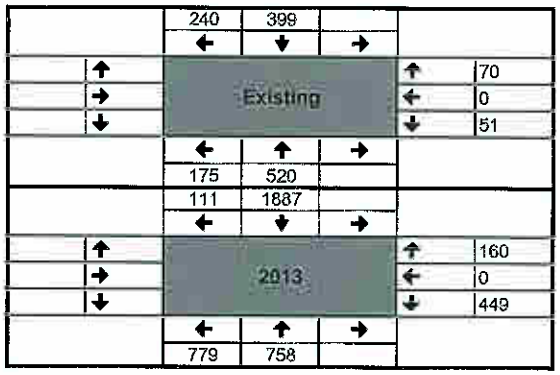
Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-4.60
L	-150.00	-4.60
M	0.00	-4.60
N	150.00	-4.60
O	650.00	-4.60
P	650.00	4.60
Q	150.00	4.60
R	0.00	4.60
S	-150.00	4.60
T	-650.00	4.60

Receptors

Point	X	Y
1	-19.20	12.10
2	19.20	12.10
3	19.20	-12.10
4	-19.20	-12.10

Traffic Volumes (PM Peak)

Link	Exist	2013
1	639	1998
2	639	2336
3	639	2336
4	450	2336
5	695	1537
6	695	1537
7	695	1537
8	590	918
9	0	0
10	0	0
11	0	0
12	0	0
13	121	609
14	226	1228
15	415	1228
16	415	890



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza 02-393e Milliken_SR60WB_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	639	13.1	1.8	16.2
B. Link B	-8	150	-8	0	AG	639	13.1	1.8	16.2
C. Link C	-8	0	-8	-150	AG	639	13.1	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	450	13.1	1.8	16.2
E. Link E	8	-650	8	-150	AG	695	13.1	1.8	16.2
F. Link F	8	-150	8	0	AG	695	13.1	1.8	16.2
G. Link G	8	0	8	150	AG	695	13.1	1.8	16.2
H. Link H	8	150	8	650	AG	590	13.1	1.8	16.2
I. Link I	-650	-5	-150	-5	AG	0	13.1	1.8	10.0
J. Link J	-150	-5	0	-5	AG	0	13.1	1.8	10.0
K. Link K	0	-5	150	-5	AG	0	13.1	1.8	10.0
L. Link L	150	-5	650	-5	AG	0	13.1	1.8	10.0
M. Link M	650	5	150	5	AG	121	13.1	1.8	10.0
N. Link N	150	5	0	5	AG	226	13.1	1.8	10.0
O. Link O	0	5	-150	5	AG	415	13.1	1.8	10.0
P. Link P	-150	5	-650	5	AG	415	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	12	1.8
2. Recpt 2	19	12	1.8
3. Recpt 3	19	-12	1.8
4. Recpt 4	-19	-12	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	174.	6.0	.0	.0	.6	.1	.3	.0	.0	.0
2. Recpt 2	185.	6.0	.0	.0	.0	.3	.3	.5	.0	.0
3. Recpt 3	355.	6.0	.3	.0	.0	.0	.0	.0	.5	.2
4. Recpt 4	5.	6.0	.2	.5	.0	.0	.0	.0	.0	.3

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.2	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.1	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Milliken_SR60WB_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	1998	5.7	1.8	16.2
B. Link B	-8	150	-8	0	AG	2336	5.7	1.8	16.2
C. Link C	-8	0	-8	-150	AG	2336	5.7	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	2336	5.7	1.8	16.2
E. Link E	8	-650	8	-150	AG	1537	5.7	1.8	16.2
F. Link F	8	-150	8	0	AG	1537	5.7	1.8	16.2
G. Link G	8	0	8	150	AG	1537	5.7	1.8	16.2
H. Link H	8	150	8	650	AG	918	5.7	1.8	16.2
I. Link I	-650	-5	-150	-5	AG	0	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	0	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	0	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	0	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	609	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	1228	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	1228	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	890	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

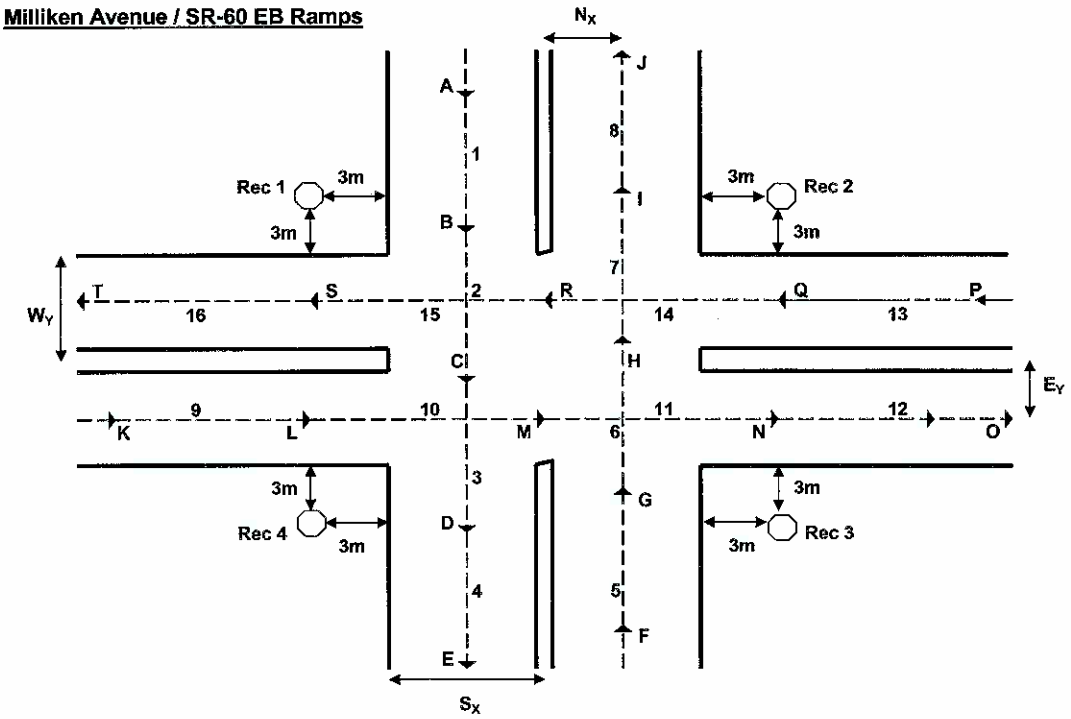
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	12	1.8
2. Recpt 2	19	12	1.8
3. Recpt 3	19	-12	1.8
4. Recpt 4	-19	-12	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	175.	6.3	.0	.0	.7	.3	.3	.0	.0	.0
2. Recpt 2	186.	6.1	.0	.0	.0	.4	.2	.5	.0	.0
3. Recpt 3	353.	6.0	.3	.1	.0	.0	.0	.0	.5	.0
4. Recpt 4	6.	6.1	.2	.7	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.2	.0
2. Recpt 2	.0	.0	.0	.0	.0	.2	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0	.1	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.1	.0

Milliken Avenue / SR-60 EB Ramps



Variables

N_X	7.9	S_X	16.2	E_Y	4.6	W_Y	9.1

Co-ordinates

Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-4.60
L	-150.00	-4.60
M	0.00	-4.60
N	150.00	-4.60
O	650.00	-4.60
P	650.00	4.60
Q	150.00	4.60
R	0.00	4.60
S	-150.00	4.60
T	-650.00	4.60

Receptors

Point	X	Y
1	-19.20	12.10
2	19.20	12.10
3	19.20	-12.10
4	-19.20	-12.10

Traffic Volumes (PM Peak)

Link	Exist	2013
1	498	2337
2	498	2337
3	719	3496
4	719	3496
5	459	2133
6	651	2133
7	651	2133
8	651	1537
9	616	1235
10	616	1235
11	616	1235
12	203	672
13	0	0
14	0	0
15	0	0
16	0	0

			374	124	
266	↑	Existing		↑	
5	→			←	
345	↓			↓	
			385	74	
			2268	69	
7	↑	2013		↑	
0	→			←	
1228	↓			↓	
			1530	603	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Milliken_SR60EB_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-8	650	-8	150	* AG	498	13.1	1.8	16.2
B. Link B	*	-8	150	-8	0	* AG	498	13.1	1.8	16.2
C. Link C	*	-8	0	-8	-150	* AG	719	13.1	1.8	16.2
D. Link D	*	-8	-150	-8	-650	* AG	719	13.1	1.8	16.2
E. Link E	*	8	-650	8	-150	* AG	459	13.1	1.8	16.2
F. Link F	*	8	-150	8	0	* AG	651	13.1	1.8	16.2
G. Link G	*	8	0	8	150	* AG	651	13.1	1.8	16.2
H. Link H	*	8	150	8	650	* AG	651	13.1	1.8	16.2
I. Link I	*	-650	-5	-150	-5	* AG	616	13.1	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	616	13.1	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	616	13.1	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	203	13.1	1.8	10.0
M. Link M	*	650	5	150	5	* AG	0	13.1	1.8	10.0
N. Link N	*	150	5	0	5	* AG	0	13.1	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	0	13.1	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	0	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-19	12	1.8
2. Recpt 2	*	19	12	1.8
3. Recpt 3	*	19	-12	1.8
4. Recpt 4	*	-19	-12	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	175.	* 6.1	*	.0	.0	.6	.3	.3	.0	.0	.0
2. Recpt 2	*	186.	* 6.1	*	.0	.0	.0	.3	.1	.6	.0	.0
3. Recpt 3	*	355.	* 6.1	*	.3	.0	.0	.0	.0	.0	.5	.2
4. Recpt 4	*	84.	* 5.9	*	.0	.0	.3	.0	.0	.2	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.2	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.2	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.0	.6	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Milliken_SR60EB_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-8	650	-8	150	* AG	2337	5.7	1.8	16.2
B. Link B	*	-8	150	-8	0	* AG	2337	5.7	1.8	16.2
C. Link C	*	-8	0	-8	-150	* AG	3496	5.7	1.8	16.2
D. Link D	*	-8	-150	-8	-650	* AG	3496	5.7	1.8	16.2
E. Link E	*	8	-650	8	-150	* AG	2133	5.7	1.8	16.2
F. Link F	*	8	-150	8	0	* AG	2133	5.7	1.8	16.2
G. Link G	*	8	0	8	150	* AG	2133	5.7	1.8	16.2
H. Link H	*	8	150	8	650	* AG	1537	5.7	1.8	16.2
I. Link I	*	-650	-5	-150	-5	* AG	1235	5.7	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	1235	5.7	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	1235	5.7	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	672	5.7	1.8	10.0
M. Link M	*	650	5	150	5	* AG	0	5.7	1.8	10.0
N. Link N	*	150	5	0	5	* AG	0	5.7	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	0	5.7	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	0	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

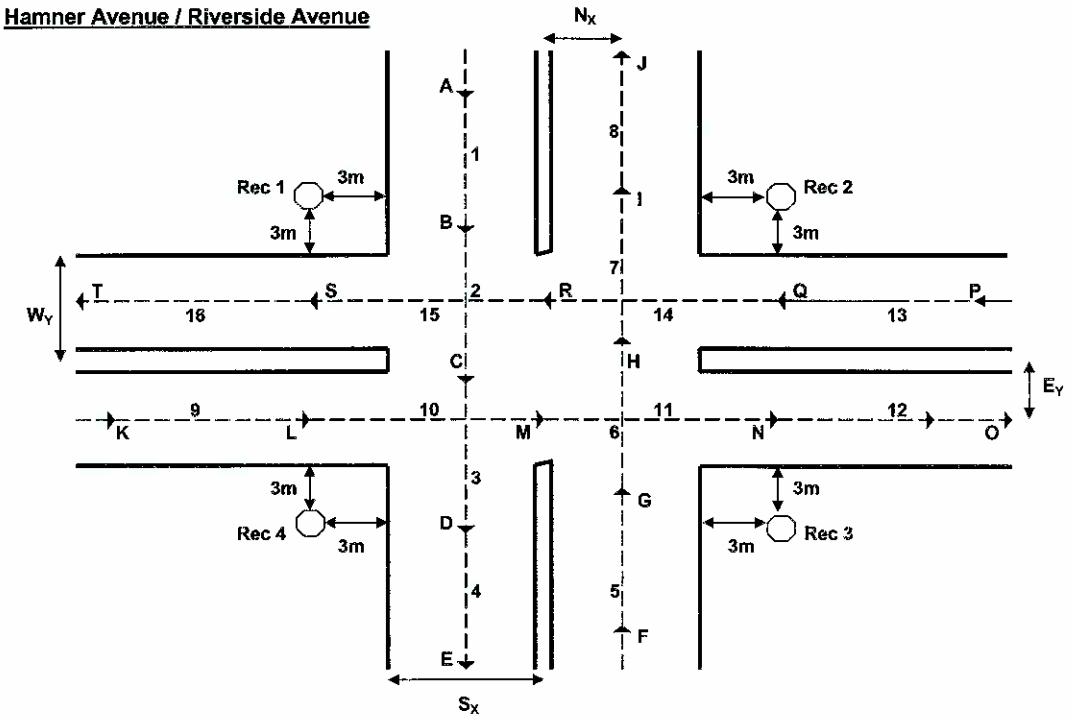
RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-19	12	1.8
2. Recpt 2	*	19	12	1.8
3. Recpt 3	*	19	-12	1.8
4. Recpt 4	*	-19	-12	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	174.	* 6.6	*	.0	.0	1.0	.3	.3	.0	.0	.0
2. Recpt 2	*	186.	* 6.4	*	.0	.0	.0	.5	.2	.7	.0	.0
3. Recpt 3	*	354.	* 6.3	*	.4	.0	.0	.0	.0	.0	.7	.2
4. Recpt 4	*	174.	* 6.5	*	.0	.0	.9	.3	.4	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.1	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.1	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.0	.0	.0	.0	.0	.0	.0

Hamner Avenue / Riverside Avenue



Variables

N_X	6.7	S_X	11.6	E_Y	6.7	W_Y	11.6

Co-ordinates

Point	X	Y
A	-6.70	650.00
B	-6.70	150.00
C	-6.70	0.00
D	-6.70	-150.00
E	-6.70	-650.00
F	6.70	-650.00
G	6.70	-150.00
H	6.70	0.00
I	6.70	150.00
J	6.70	650.00
K	-650.00	-6.70
L	-150.00	-6.70
M	0.00	-6.70
N	150.00	-6.70
O	650.00	-6.70
P	650.00	6.70
Q	150.00	6.70
R	0.00	6.70
S	-150.00	6.70
T	-650.00	6.70

Receptors

Point	X	Y
1	-14.60	14.60
2	14.60	14.60
3	14.60	-14.60
4	-14.60	-14.60

Traffic Volumes (PM Peak)

Link	Exist	2013
1	767	3496
2	767	3496
3	767	3496
4	758	2351
5	473	611
6	530	1509
7	577	2132
8	577	2132
9	427	1495
10	427	2140
11	427	2140
12	326	1242
13	230	1644
14	230	1644
15	236	1644
16	236	1521

	65	576	126		
74 ↑	Existing			↑	157
183 →				←	61
170 ↓				↓	12
	← 110	↑ 346	→ 17		
	635	2073	788		
915 ↑	2013			↑	700
437 →				←	809
143 ↓				↓	135
	← 77	↑ 517	→ 17		

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Hamner_Riverside_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-7	650	-7	150	* AG	767	13.1	1.8	11.6
B. Link B	*	-7	150	-7	0	* AG	767	13.1	1.8	11.6
C. Link C	*	-7	0	-7	-150	* AG	767	13.1	1.8	11.6
D. Link D	*	-7	-150	-7	-650	* AG	758	13.1	1.8	11.6
E. Link E	*	7	-650	7	-150	* AG	473	13.1	1.8	11.6
F. Link F	*	7	-150	7	0	* AG	530	13.1	1.8	11.6
G. Link G	*	7	0	7	150	* AG	577	13.1	1.8	11.6
H. Link H	*	7	150	7	650	* AG	577	13.1	1.8	11.6
I. Link I	*	-650	-7	-150	-7	* AG	427	13.1	1.8	11.6
J. Link J	*	-150	-7	0	-7	* AG	427	13.1	1.8	11.6
K. Link K	*	0	-7	150	-7	* AG	427	13.1	1.8	11.6
L. Link L	*	150	-7	650	-7	* AG	326	13.1	1.8	11.6
M. Link M	*	650	7	150	7	* AG	230	13.1	1.8	11.6
N. Link N	*	150	7	0	7	* AG	230	13.1	1.8	11.6
O. Link O	*	0	7	-150	7	* AG	236	13.1	1.8	11.6
P. Link P	*	-150	7	-650	7	* AG	236	13.1	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-15	15	1.8
2. Recpt 2	*	15	15	1.8
3. Recpt 3	*	15	-15	1.8
4. Recpt 4	*	-15	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	175.	* 6.3	*	.0	.0	.8	.2	.2	.0	.0	.0
2. Recpt 2	*	185.	* 6.2	*	.0	.0	.1	.4	.1	.6	.0	.0
3. Recpt 3	*	355.	* 6.3	*	.4	.1	.0	.0	.0	.0	.6	.2
4. Recpt 4	*	5.	* 6.4	*	.2	.8	.0	.0	.0	.0	.0	.3

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.1	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.1	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Hamner_Riverside_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-7	650	-7	150	AG	3496	5.7	1.8	11.6
B. Link B	-7	150	-7	0	AG	3496	5.7	1.8	11.6
C. Link C	-7	0	-7	-150	AG	3496	5.7	1.8	11.6
D. Link D	-7	-150	-7	-650	AG	2351	5.7	1.8	11.6
E. Link E	7	-650	7	-150	AG	611	5.7	1.8	11.6
F. Link F	7	-150	7	0	AG	1509	5.7	1.8	11.6
G. Link G	7	0	7	150	AG	2132	5.7	1.8	11.6
H. Link H	7	150	7	650	AG	2132	5.7	1.8	11.6
I. Link I	-650	-7	-150	-7	AG	1495	5.7	1.8	11.6
J. Link J	-150	-7	0	-7	AG	2140	5.7	1.8	11.6
K. Link K	0	-7	150	-7	AG	2140	5.7	1.8	11.6
L. Link L	150	-7	650	-7	AG	1242	5.7	1.8	11.6
M. Link M	650	7	150	7	AG	1644	5.7	1.8	11.6
N. Link N	150	7	0	7	AG	1644	5.7	1.8	11.6
O. Link O	0	7	-150	7	AG	1644	5.7	1.8	11.6
P. Link P	-150	7	-650	7	AG	1521	5.7	1.8	11.6

III. RECEPTOR LOCATIONS

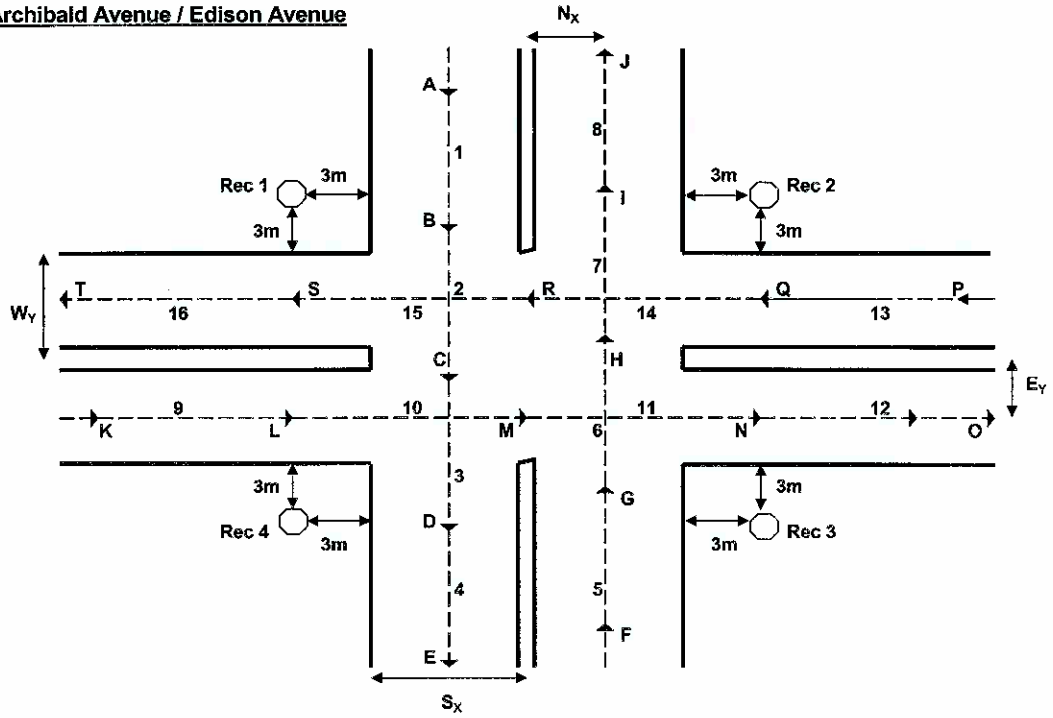
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-15	15	1.8
2. Recpt 2	15	15	1.8
3. Recpt 3	15	-15	1.8
4. Recpt 4	-15	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	171.	6.9	.0	.1	1.2	.0	.0	.2	.0	.0
2. Recpt 2	265.	6.7	.0	.4	.0	.0	.0	.0	.4	.0
3. Recpt 3	355.	6.9	.4	.1	.0	.0	.0	.0	.8	.2
4. Recpt 4	5.	7.2	.2	1.2	.0	.0	.0	.0	.1	.3

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.2	.0	.0	.0	.0	.3	.0
2. Recpt 2	.3	.1	.0	.0	.0	.0	.6	.1
3. Recpt 3	.0	.0	.4	.0	.0	.2	.0	.0
4. Recpt 4	.0	.4	.0	.0	.0	.0	.2	.0

Archibald Avenue / Edison Avenue



Variables

N_X	7.9	S_X	16.1	E_Y	4.9	W_Y	9.7

Co-ordinates

Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-19.10	12.70
2	19.10	12.70
3	19.10	-12.70
4	-19.10	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2010
1	529	1715
2	556	1715
3	641	2454
4	641	2454
5	618	1537
6	656	1828
7	656	1828
8	600	1231
9	517	2158
10	517	2158
11	517	2158
12	394	828
13	157	609
14	213	1206
15	213	1506
16	186	1506

	30	456	43		
89 ↑	Existing			↑	23
300 →				←	77
128 ↓				↓	57
	79	488	51		
	393	1143	179		
402 ↑	2013			↑	120
538 →				←	396
1216 ↓				↓	93
	717	709	111		

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Archibald_Edison_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-8	650	-8	150	* AG	529	13.1	1.8	16.1
B. Link B	*	-8	150	-8	0	* AG	556	13.1	1.8	16.1
C. Link C	*	-8	0	-8	-150	* AG	641	13.1	1.8	16.1
D. Link D	*	-8	-150	-8	-650	* AG	641	13.1	1.8	16.1
E. Link E	*	8	-650	8	-150	* AG	618	13.1	1.8	16.1
F. Link F	*	8	-150	8	0	* AG	656	13.1	1.8	16.1
G. Link G	*	8	0	8	150	* AG	656	13.1	1.8	16.1
H. Link H	*	8	150	8	650	* AG	600	13.1	1.8	16.1
I. Link I	*	-650	-5	-150	-5	* AG	517	13.1	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	517	13.1	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	517	13.1	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	394	13.1	1.8	10.0
M. Link M	*	650	5	150	5	* AG	157	13.1	1.8	10.0
N. Link N	*	150	5	0	5	* AG	213	13.1	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	213	13.1	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	186	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-19	13	1.8
2. Recpt 2	*	19	13	1.8
3. Recpt 3	*	19	-13	1.8
4. Recpt 4	*	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	175.	* 6.1	*	.0	.0	.5	.2	.3	.0	.0	.0
2. Recpt 2	*	185.	* 6.2	*	.0	.0	.0	.3	.2	.5	.0	.0
3. Recpt 3	*	355.	* 6.1	*	.3	.0	.0	.0	.0	.0	.5	.2
4. Recpt 4	*	5.	* 6.1	*	.2	.5	.0	.0	.0	.0	.0	.3

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.1	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.1	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Archibald_Edison_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-8	650	-8	150	* AG	1715	13.1	1.8	16.1
B. Link B	*	-8	150	-8	0	* AG	1715	13.1	1.8	16.1
C. Link C	*	-8	0	-8	-150	* AG	2454	13.1	1.8	16.1
D. Link D	*	-8	-150	-8	-650	* AG	2454	13.1	1.8	16.1
E. Link E	*	8	-650	8	-150	* AG	1537	13.1	1.8	16.1
F. Link F	*	8	-150	8	0	* AG	1828	13.1	1.8	16.1
G. Link G	*	8	0	8	150	* AG	1828	13.1	1.8	16.1
H. Link H	*	8	150	8	650	* AG	1231	13.1	1.8	16.1
I. Link I	*	-650	-5	-150	-5	* AG	2158	13.1	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	2158	13.1	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	2158	13.1	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	829	13.1	1.8	10.0
M. Link M	*	650	5	150	5	* AG	609	13.1	1.8	10.0
N. Link N	*	150	5	0	5	* AG	1206	13.1	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	1506	13.1	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	1506	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

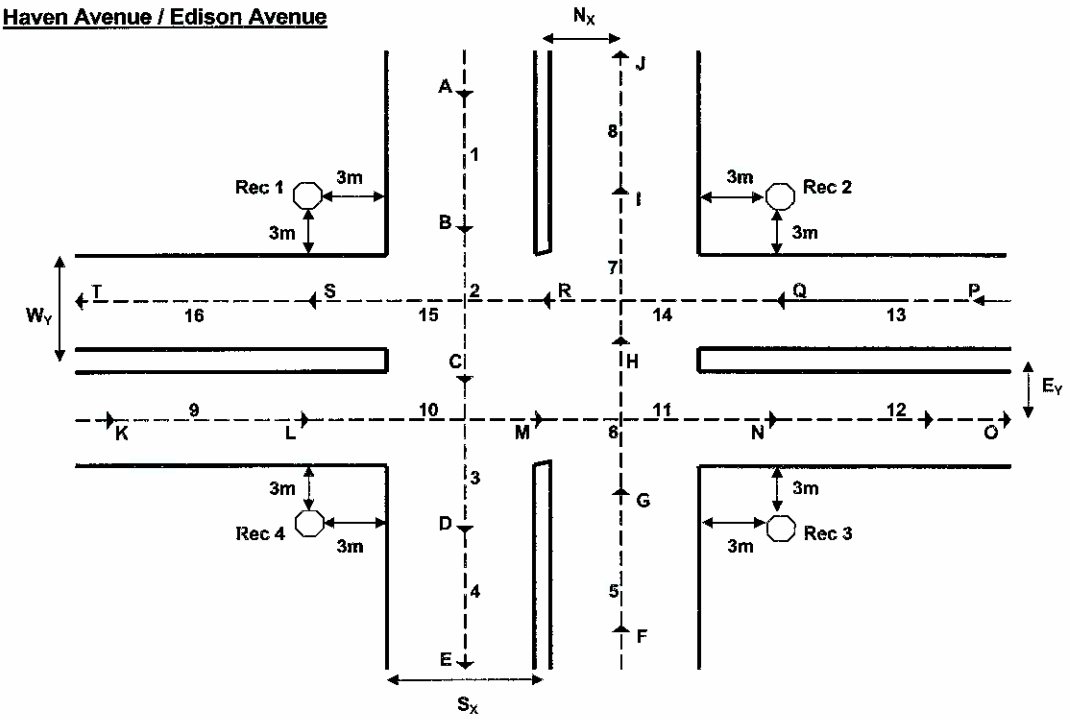
RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-19	13	1.8
2. Recpt 2	*	19	13	1.8
3. Recpt 3	*	19	-13	1.8
4. Recpt 4	*	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	174.	8.9	*	.0	.0	1.8	.5	.6	.1	.0	.0
2. Recpt 2	*	186.	8.6	*	.0	.0	.2	.9	.3	1.4	.0	.0
3. Recpt 3	*	275.	8.9	*	.0	.0	.6	.0	.0	.7	.0	.0
4. Recpt 4	*	82.	8.6	*	.0	.0	.9	.0	.0	.4	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.5	.0	.0	.0	.0	.6	.0
2. Recpt 2	*	.0	.0	.5	.0	.0	.5	.0	.0
3. Recpt 3	*	.4	1.6	.0	.0	.0	.0	.3	.5
4. Recpt 4	*	.0	.1	1.7	.0	.1	.5	.0	.0

Haven Avenue / Edison Avenue



Variables

N_X	4.9	S_X	9.7	E_Y	4.9	W_Y	9.7

Co-ordinates

Point	X	Y
A	-4.90	650.00
B	-4.90	150.00
C	-4.90	0.00
D	-4.90	-150.00
E	-4.90	-650.00
F	4.90	-650.00
G	4.90	-150.00
H	4.90	0.00
I	4.90	150.00
J	4.90	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-12.70	12.70
2	12.70	12.70
3	12.70	-12.70
4	-12.70	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2013
1	107	1152
2	107	1152
3	107	1152
4	7	884
5	7	538
6	139	976
7	155	976
8	155	868
9	305	898
10	339	898
11	339	898
12	207	367
13	89	329
14	89	437
15	139	798
16	139	798

	67	2	38		
	←	↓	→		
134 ↑	Existing			↑	18
167 →				←	70
4 ↓				↓	1
	←	↑	→		
	2	3	2		
	387	595	170		
	←	↓	→		
456 ↑	2013			↑	106
179 →				←	197
263 ↓				↓	26
	←	↑	→		
	214	306	18		

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Haven_Edison_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-5	650	-5	150	* AG	107	13.1	1.8	10.0
B. Link B	*	-5	150	-5	0	* AG	107	13.1	1.8	10.0
C. Link C	*	-5	0	-5	-150	* AG	107	13.1	1.8	10.0
D. Link D	*	-5	-150	-5	-650	* AG	7	13.1	1.8	10.0
E. Link E	*	5	-650	5	-150	* AG	7	13.1	1.8	10.0
F. Link F	*	5	-150	5	0	* AG	139	13.1	1.8	10.0
G. Link G	*	5	0	5	150	* AG	155	13.1	1.8	10.0
H. Link H	*	5	150	5	650	* AG	15	13.1	1.8	10.0
I. Link I	*	-650	-5	-150	-5	* AG	305	13.1	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	339	13.1	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	339	13.1	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	207	13.1	1.8	10.0
M. Link M	*	650	5	150	5	* AG	89	13.1	1.8	10.0
N. Link N	*	150	5	0	5	* AG	89	13.1	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	139	13.1	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	139	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-13	13	1.8
2. Recpt 2	*	13	13	1.8
3. Recpt 3	*	13	-13	1.8
4. Recpt 4	*	-13	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	95.	* 5.3	*	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	266.	* 5.4	*	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	274.	* 5.5	*	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	*	85.	* 5.4	*	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.0	.0	.1	.0	.1	.0	.0
2. Recpt 2	*	.2	.0	.0	.0	.0	.0	.2	.0
3. Recpt 3	*	.1	.3	.0	.0	.0	.0	.0	.1
4. Recpt 4	*	.0	.0	.4	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Haven_Edison_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-5	650	-5	150	AG	1152	5.7	1.8	10.0
B. Link B	-5	150	-5	0	AG	1152	5.7	1.8	10.0
C. Link C	-5	0	-5	-150	AG	1152	5.7	1.8	10.0
D. Link D	-5	-150	-5	-650	AG	884	5.7	1.8	10.0
E. Link E	5	-650	5	-150	AG	538	5.7	1.8	10.0
F. Link F	5	-150	5	0	AG	976	5.7	1.8	10.0
G. Link G	5	0	5	150	AG	976	5.7	1.8	10.0
H. Link H	5	150	5	650	AG	868	5.7	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	898	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	898	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	898	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	367	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	329	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	437	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	798	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	798	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

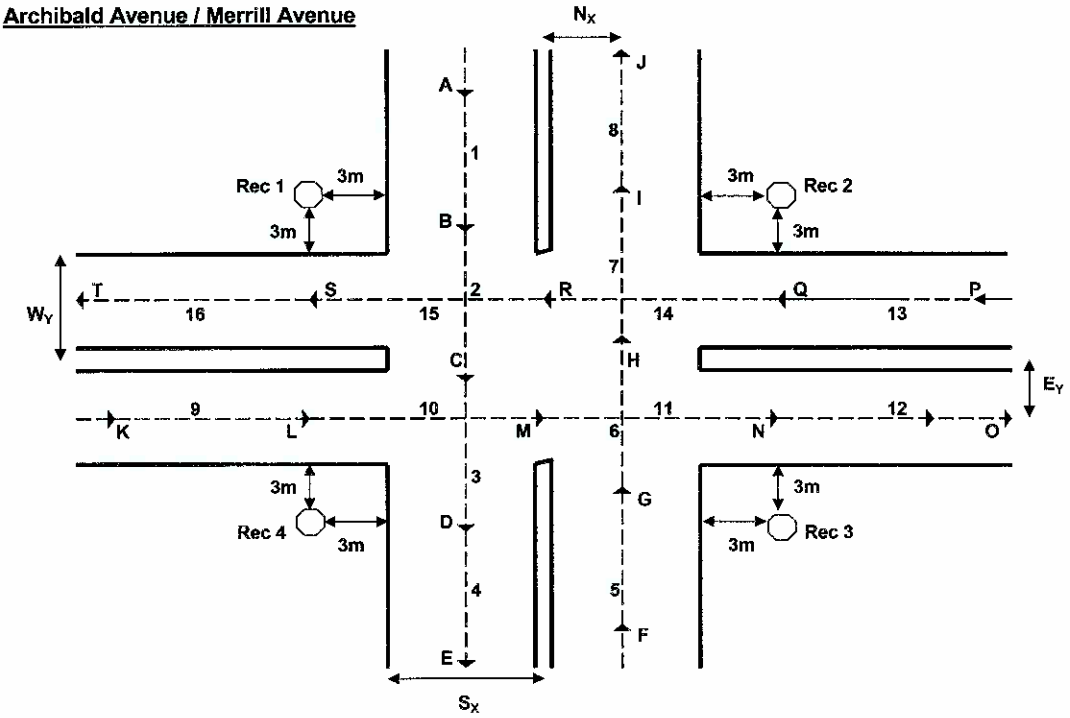
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-13	13	1.8
2. Recpt 2	13	13	1.8
3. Recpt 3	13	-13	1.8
4. Recpt 4	-13	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	174.	5.8	.0	.0	.5	.0	.0	.1	.0	.0
2. Recpt 2	186.	5.7	.0	.0	.1	.1	.0	.4	.0	.0
3. Recpt 3	355.	5.8	.2	.1	.0	.0	.0	.0	.4	.0
4. Recpt 4	5.	5.9	.1	.4	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.1	.0	.0	.0	.0	.1	.0
2. Recpt 2	.0	.0	.1	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.1	.0	.0	.0	.0	.0
4. Recpt 4	.0	.1	.0	.0	.0	.0	.0	.0

Archibald Avenue / Merrill Avenue



Variables

N_X	7.9	S_X	16.1	E_Y	4.9	W_Y	9.7

Co-ordinates

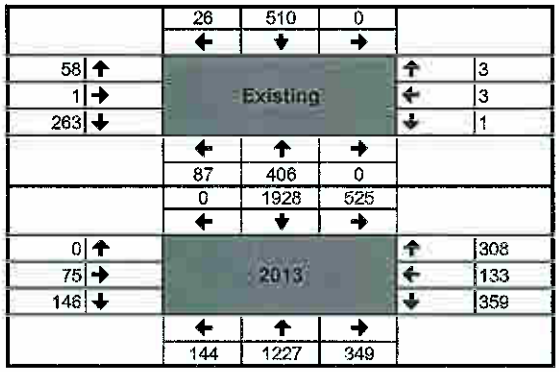
Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-19.10	12.70
2	19.10	12.70
3	19.10	-12.70
4	-19.10	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2013
1	536	2453
2	536	2812
3	774	2812
4	774	2433
5	493	1720
6	551	1720
7	551	1720
8	467	1535
9	322	221
10	322	600
11	322	949
12	1	949
13	7	800
14	91	800
15	116	800
16	116	277



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Archibald_Merrill_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	536	13.1	1.8	10.0
B. Link B	-8	150	-8	0	AG	536	13.1	1.8	10.0
C. Link C	-8	0	-8	-150	AG	774	13.1	1.8	10.0
D. Link D	-8	-150	-8	-650	AG	774	13.1	1.8	10.0
E. Link E	8	-650	8	-150	AG	493	13.1	1.8	10.0
F. Link F	8	-150	8	0	AG	551	13.1	1.8	10.0
G. Link G	8	0	8	150	AG	551	13.1	1.8	10.0
H. Link H	8	150	8	650	AG	467	13.1	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	322	13.1	1.8	10.0
J. Link J	-150	-5	0	-5	AG	322	13.1	1.8	10.0
K. Link K	0	-5	150	-5	AG	322	13.1	1.8	10.0
L. Link L	150	-5	650	-5	AG	1	13.1	1.8	10.0
M. Link M	650	5	150	5	AG	7	13.1	1.8	10.0
N. Link N	150	5	0	5	AG	91	13.1	1.8	10.0
O. Link O	0	5	-150	5	AG	116	13.1	1.8	10.0
P. Link P	-150	5	-650	5	AG	116	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	13	1.8
2. Recpt 2	19	13	1.8
3. Recpt 3	19	-13	1.8
4. Recpt 4	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	175.	5.9	.0	.0	.4	.3	.2	.0	.0	.0
2. Recpt 2	186.	5.8	.0	.0	.0	.3	.1	.4	.0	.0
3. Recpt 3	355.	5.7	.3	.0	.0	.0	.0	.0	.3	.2
4. Recpt 4	175.	5.8	.0	.0	.4	.3	.3	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.1	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Archibald_Merrill_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	2453	5.7	1.8	10.0
B. Link B	-8	150	-8	0	AG	2812	5.7	1.8	10.0
C. Link C	-8	0	-8	-150	AG	2812	5.7	1.8	10.0
D. Link D	-8	-150	-8	-650	AG	2433	5.7	1.8	10.0
E. Link E	8	-650	8	-150	AG	1720	5.7	1.8	10.0
F. Link F	8	-150	8	0	AG	1720	5.7	1.8	10.0
G. Link G	8	0	8	150	AG	1720	5.7	1.8	10.0
H. Link H	8	150	8	650	AG	1535	5.7	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	221	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	600	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	949	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	949	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	800	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	800	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	800	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	277	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

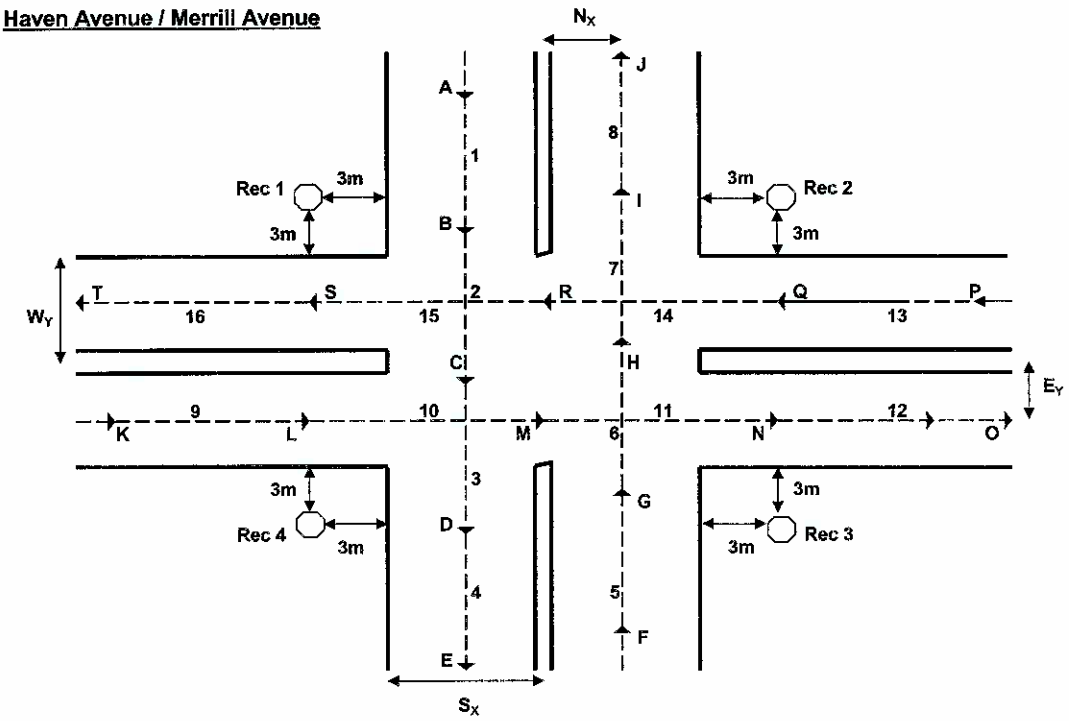
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	13	1.8
2. Recpt 2	19	13	1.8
3. Recpt 3	19	-13	1.8
4. Recpt 4	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	174.	6.0	.0	.0	.6	.2	.3	.0	.0	.0
2. Recpt 2	186.	6.0	.0	.0	.0	.3	.1	.4	.0	.0
3. Recpt 3	354.	6.0	.3	.0	.0	.0	.0	.0	.4	.1
4. Recpt 4	6.	6.0	.2	.6	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.1	.0
2. Recpt 2	.0	.0	.1	.0	.0	.1	.0	.0
3. Recpt 3	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0

Haven Avenue / Merrill Avenue



Variables

N_X	4.9	S_X	9.7	E_Y	4.9	W_Y	9.7

Co-ordinates

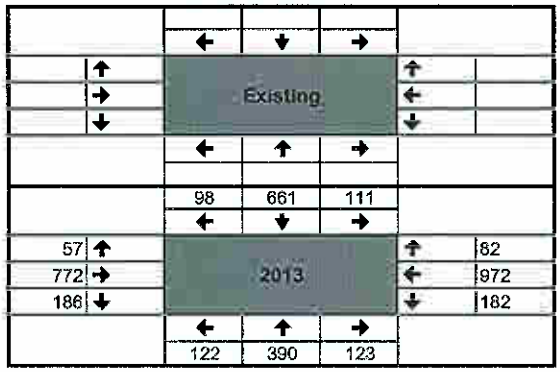
Point	X	Y
A	-4.90	650.00
B	-4.90	150.00
C	-4.90	0.00
D	-4.90	-150.00
E	-4.90	-650.00
F	4.90	-650.00
G	4.90	-150.00
H	4.90	0.00
I	4.90	150.00
J	4.90	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-12.70	12.70
2	12.70	12.70
3	12.70	-12.70
4	-12.70	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2013
1	0	870
2	0	954
3	0	1029
4	0	1029
5	0	635
6	0	635
7	0	635
8	0	529
9	0	1015
10	0	1015
11	0	1015
12	0	1006
13	0	1236
14	0	1276
15	0	1276
16	0	1192



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Haven_Merrill_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-5	650	-5	150	* AG	0	13.1	1.8	10.0
B. Link B	*	-5	150	-5	0	* AG	0	13.1	1.8	10.0
C. Link C	*	-5	0	-5	-150	* AG	0	13.1	1.8	10.0
D. Link D	*	-5	-150	-5	-650	* AG	0	13.1	1.8	10.0
E. Link E	*	5	-650	5	-150	* AG	0	13.1	1.8	10.0
F. Link F	*	5	-150	5	0	* AG	0	13.1	1.8	10.0
G. Link G	*	5	0	5	150	* AG	0	13.1	1.8	10.0
H. Link H	*	5	150	5	650	* AG	0	13.1	1.8	10.0
I. Link I	*	-650	-5	-150	-5	* AG	0	13.1	1.8	10.0
J. Link J	*	-150	-5	0	-5	* AG	0	13.1	1.8	10.0
K. Link K	*	0	-5	150	-5	* AG	0	13.1	1.8	10.0
L. Link L	*	150	-5	650	-5	* AG	0	13.1	1.8	10.0
M. Link M	*	650	5	150	5	* AG	0	13.1	1.8	10.0
N. Link N	*	150	5	0	5	* AG	0	13.1	1.8	10.0
O. Link O	*	0	5	-150	5	* AG	0	13.1	1.8	10.0
P. Link P	*	-150	5	-650	5	* AG	0	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-13	13	1.8
2. Recpt 2	*	13	13	1.8
3. Recpt 3	*	13	-13	1.8
4. Recpt 4	*	-13	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	10.	* 4.8	*	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	100.	* 4.8	*	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	10.	* 4.8	*	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	*	10.	* 4.8	*	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Haven_Merrill_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-5	650	-5	150	AG	870	5.7	1.8	10.0
B. Link B	-5	150	-5	0	AG	954	5.7	1.8	10.0
C. Link C	-5	0	-5	-150	AG	1029	5.7	1.8	10.0
D. Link D	-5	-150	-5	-650	AG	1029	5.7	1.8	10.0
E. Link E	5	-650	5	-150	AG	635	5.7	1.8	10.0
F. Link F	5	-150	5	0	AG	635	5.7	1.8	10.0
G. Link G	5	0	5	150	AG	635	5.7	1.8	10.0
H. Link H	5	150	5	650	AG	529	5.7	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	1015	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	1015	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	1015	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	1006	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	1236	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	1276	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	1276	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	1192	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

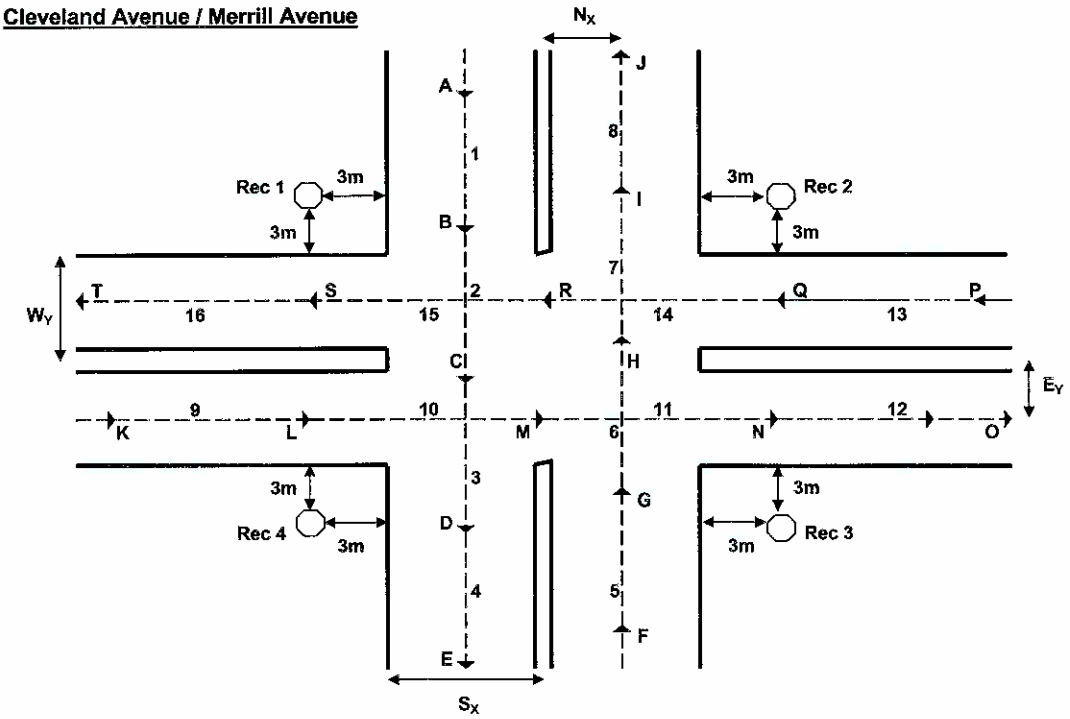
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-13	13	1.8
2. Recpt 2	13	13	1.8
3. Recpt 3	13	-13	1.8
4. Recpt 4	-13	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	5.9	.0	.2	.0	.0	.0	.0	.0	.0
2. Recpt 2	265.	5.9	.0	.1	.0	.0	.0	.0	.1	.0
3. Recpt 3	275.	5.9	.0	.0	.1	.0	.0	.1	.0	.0
4. Recpt 4	85.	5.9	.0	.0	.2	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.2	.1	.5	.0	.0
2. Recpt 2	.2	.0	.0	.0	.0	.0	.5	.1
3. Recpt 3	.1	.4	.0	.0	.0	.0	.1	.2
4. Recpt 4	.0	.0	.4	.1	.2	.1	.0	.0

Cleveland Avenue / Merrill Avenue



Variables

N_X	3	S_X	6.1	E_Y	4.9	W_Y	9.7

Co-ordinates

Point	X	Y
A	-3.00	650.00
B	-3.00	150.00
C	-3.00	0.00
D	-3.00	-150.00
E	-3.00	-650.00
F	3.00	-650.00
G	3.00	-150.00
H	3.00	0.00
I	3.00	150.00
J	3.00	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-9.10	12.70
2	9.10	12.70
3	9.10	-12.70
4	-9.10	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2013
1	0	36
2	0	41
3	0	178
4	0	178
5	0	154
6	0	161
7	0	161
8	0	55
9	0	1222
10	0	1222
11	0	1222
12	0	1078
13	0	1434
14	0	1540
15	0	1540
16	0	1535

		←	↓	→	
↑		Existing		↑	
→				←	
↓				↓	
		←	↑	→	
		10	20	6	
		←	↓	→	
19	↑	2013		↑	10
1060	→			←	1409
143	↓			↓	15
		←	↑	→	
		116	26	12	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Cleveland_Merrill_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-3	650	-3	150	AG	0	13.1	1.8	10.0
B. Link B	-3	150	-3	0	AG	0	13.1	1.8	10.0
C. Link C	-3	0	-3	-150	AG	0	13.1	1.8	10.0
D. Link D	-3	-150	-3	-650	AG	0	13.1	1.8	10.0
E. Link E	3	-650	3	-150	AG	0	13.1	1.8	10.0
F. Link F	3	-150	3	0	AG	0	13.1	1.8	10.0
G. Link G	3	0	3	150	AG	0	13.1	1.8	10.0
H. Link H	3	150	3	650	AG	0	13.1	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	0	13.1	1.8	10.0
J. Link J	-150	-5	0	-5	AG	0	13.1	1.8	10.0
K. Link K	0	-5	150	-5	AG	0	13.1	1.8	10.0
L. Link L	150	-5	650	-5	AG	0	13.1	1.8	10.0
M. Link M	650	5	150	5	AG	0	13.1	1.8	10.0
N. Link N	150	5	0	5	AG	0	13.1	1.8	10.0
O. Link O	0	5	-150	5	AG	0	13.1	1.8	10.0
P. Link P	-150	5	-650	5	AG	0	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-9	13	1.8
2. Recpt 2	9	13	1.8
3. Recpt 3	9	-13	1.8
4. Recpt 4	-9	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	10.	4.8	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	100.	4.8	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	10.	4.8	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	10.	4.8	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Cleveland_Merrill_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-3	650	-3	150	AG	36	5.7	1.8	10.0
B. Link B	-3	150	-3	0	AG	41	5.7	1.8	10.0
C. Link C	-3	0	-3	-150	AG	178	5.7	1.8	10.0
D. Link D	-3	-150	-3	-650	AG	178	5.7	1.8	10.0
E. Link E	3	-650	3	-150	AG	154	5.7	1.8	10.0
F. Link F	3	-150	3	0	AG	161	5.7	1.8	10.0
G. Link G	3	0	3	150	AG	161	5.7	1.8	10.0
H. Link H	3	150	3	650	AG	55	5.7	1.8	10.0
I. Link I	-650	-5	-150	-5	AG	1222	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	1222	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	1222	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	1078	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	1434	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	1540	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	1540	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	1535	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

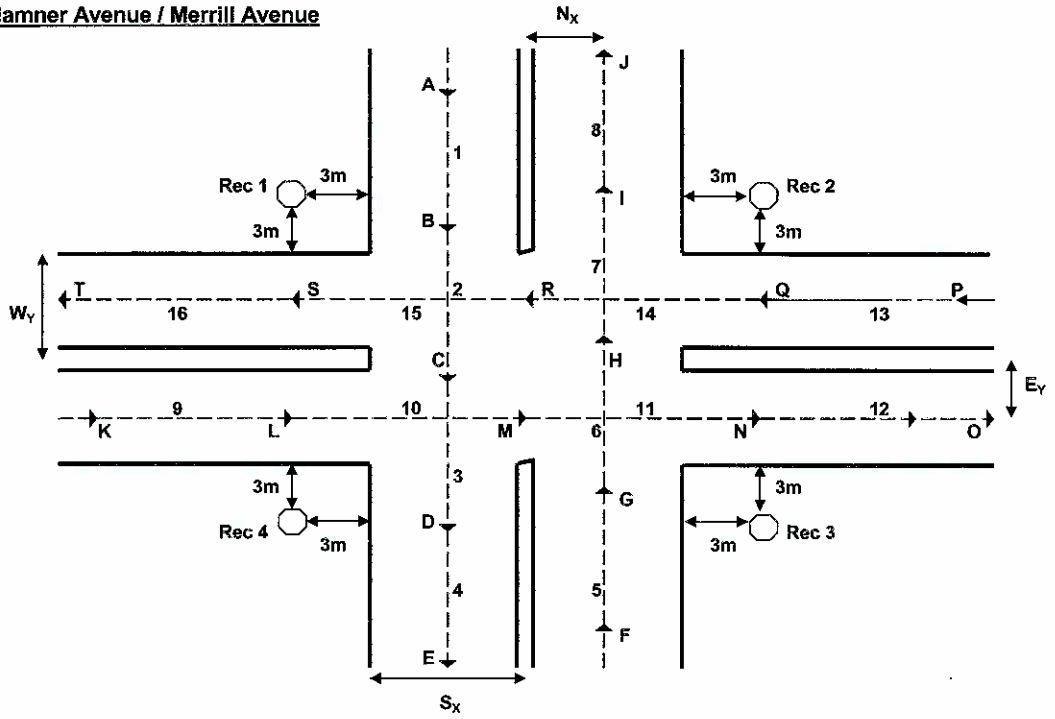
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-9	13	1.8
2. Recpt 2	9	13	1.8
3. Recpt 3	9	-13	1.8
4. Recpt 4	-9	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	5.8	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	265.	5.9	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	275.	5.8	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	85.	5.8	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.1	.2	.1	.6	.0	.0
2. Recpt 2	.2	.1	.0	.0	.0	.0	.6	.1
3. Recpt 3	.1	.5	.0	.0	.0	.0	.1	.2
4. Recpt 4	.0	.0	.5	.1	.2	.1	.0	.0

Hamner Avenue / Merrill Avenue



Variables

N_X	7.9	S_X	16.2	E_Y	4.9	W_Y	9.7

Co-ordinates

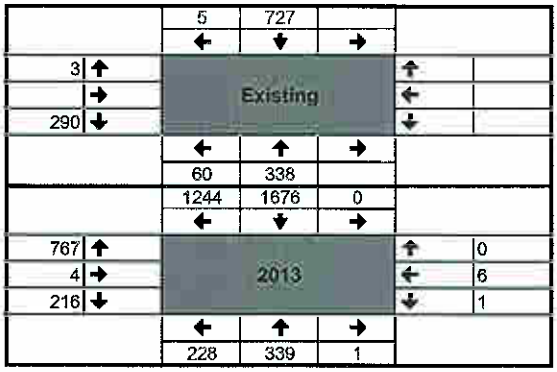
Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-4.90
L	-150.00	-4.90
M	0.00	-4.90
N	150.00	-4.90
O	650.00	-4.90
P	650.00	4.90
Q	150.00	4.90
R	0.00	4.90
S	-150.00	4.90
T	-650.00	4.90

Receptors

Point	X	Y
1	-19.20	12.70
2	19.20	12.70
3	19.20	-12.70
4	-19.20	-12.70

Traffic Volumes (PM Peak)

Link	Exist	2013
1	732	2920
2	732	2920
3	1017	2920
4	1017	1893
5	398	568
6	401	1334
7	401	1334
8	341	1106
9	293	987
10	293	987
11	293	987
12	0	5
13	0	7
14	60	235
15	65	1478
16	65	1478



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Hamner_Merrill_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	732	13.1	1.8	16.2
B. Link B	-8	150	-8	0	AG	732	13.1	1.8	16.2
C. Link C	-8	0	-8	-150	AG	1017	13.1	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	1017	13.1	1.8	16.2
E. Link E	8	-650	8	-150	AG	398	13.1	1.8	16.2
F. Link F	8	-150	8	0	AG	401	13.1	1.8	16.2
G. Link G	8	0	8	150	AG	401	13.1	1.8	16.2
H. Link H	8	150	8	650	AG	341	13.1	1.8	16.2
I. Link I	-650	-5	-150	-5	AG	293	13.1	1.8	10.0
J. Link J	-150	-5	0	-5	AG	293	13.1	1.8	10.0
K. Link K	0	-5	150	-5	AG	293	13.1	1.8	10.0
L. Link L	150	-5	650	-5	AG	0	13.1	1.8	10.0
M. Link M	650	5	150	5	AG	0	13.1	1.8	10.0
N. Link N	150	5	0	5	AG	60	13.1	1.8	10.0
O. Link O	0	5	-150	5	AG	65	13.1	1.8	10.0
P. Link P	-150	5	-650	5	AG	65	13.1	1.8	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	13	1.8
2. Recpt 2	19	13	1.8
3. Recpt 3	19	-13	1.8
4. Recpt 4	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	175.	6.3	.0	.0	.8	.3	.2	.0	.0	.0
2. Recpt 2	185.	5.9	.0	.0	.0	.5	.2	.3	.0	.0
3. Recpt 3	355.	5.8	.4	.0	.0	.0	.0	.0	.3	.1
4. Recpt 4	175.	6.1	.0	.0	.7	.4	.2	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.1	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Hamner_Merrill_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	2920	5.7	1.8	16.2
B. Link B	-8	150	-8	0	AG	2920	5.7	1.8	16.2
C. Link C	-8	0	-8	-150	AG	2920	5.7	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	1893	5.7	1.8	16.2
E. Link E	8	-650	8	-150	AG	568	5.7	1.8	16.2
F. Link F	8	-150	8	0	AG	1334	5.7	1.8	16.2
G. Link G	8	0	8	150	AG	1334	5.7	1.8	16.2
H. Link H	8	150	8	650	AG	1106	5.7	1.8	16.2
I. Link I	-650	-5	-150	-5	AG	987	5.7	1.8	10.0
J. Link J	-150	-5	0	-5	AG	987	5.7	1.8	10.0
K. Link K	0	-5	150	-5	AG	987	5.7	1.8	10.0
L. Link L	150	-5	650	-5	AG	5	5.7	1.8	10.0
M. Link M	650	5	150	5	AG	7	5.7	1.8	10.0
N. Link N	150	5	0	5	AG	235	5.7	1.8	10.0
O. Link O	0	5	-150	5	AG	1478	5.7	1.8	10.0
P. Link P	-150	5	-650	5	AG	1478	5.7	1.8	10.0

III. RECEPTOR LOCATIONS

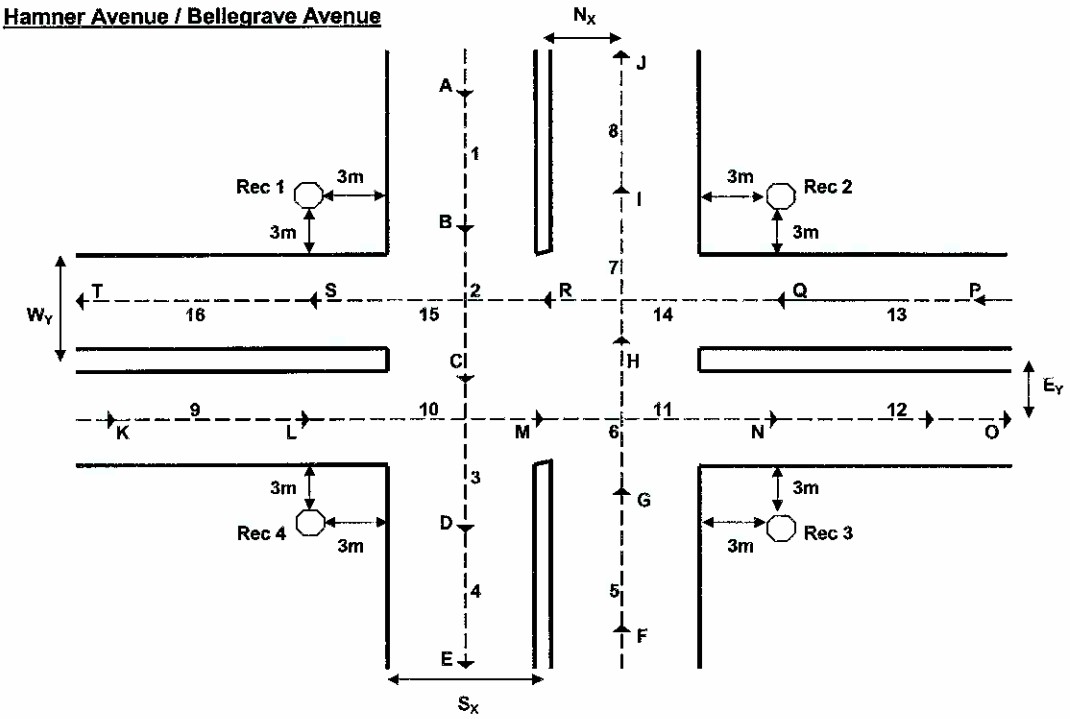
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	13	1.8
2. Recpt 2	19	13	1.8
3. Recpt 3	19	-13	1.8
4. Recpt 4	-19	-13	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	172.	6.4	.0	.0	1.0	.0	.0	.0	.0	.0
2. Recpt 2	265.	6.2	.0	.3	.0	.0	.0	.0	.2	.0
3. Recpt 3	275.	6.2	.0	.0	.3	.0	.0	.2	.0	.0
4. Recpt 4	5.	6.5	.3	.8	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.1	.0	.0	.0	.0	.2	.0
2. Recpt 2	.2	.1	.0	.0	.0	.0	.5	.1
3. Recpt 3	.0	.4	.0	.0	.0	.0	.1	.2
4. Recpt 4	.0	.2	.0	.0	.0	.0	.2	.0

Hamner Avenue / Bellegrave Avenue



Variables

N_X	7.9	S_X	16.2	E_Y	6.7	W_Y	11.6

Co-ordinates

Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-6.70
L	-150.00	-6.70
M	0.00	-6.70
N	150.00	-6.70
O	650.00	-6.70
P	650.00	6.70
Q	150.00	6.70
R	0.00	6.70
S	-150.00	6.70
T	-650.00	6.70

Receptors

Point	X	Y
1	-19.20	14.60
2	19.20	14.60
3	19.20	-14.60
4	-19.20	-14.60

Traffic Volumes (PM Peak)

Link	Exist	2013
1	1208	2009
2	1360	2735
3	1360	2735
4	1032	2438
5	624	509
6	624	509
7	624	629
8	495	629
9	33	805
10	361	1102
11	588	1215
12	588	1215
13	294	2013
14	294	2013
15	294	2013
16	44	1054

		36	844	328	
		←	↓	→	
20	↑	Existing		↑	101
13	→			←	5
0	↓			↓	188
		←	↑	→	
		3	374	247	
		78	1567	364	
		←	↓	→	
45	↑	2013		↑	307
693	→			←	902
67	↓			↓	804
		←	↑	→	
		74	277	158	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Hamner_Bellegrave_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	1208	13.1	1.8	16.2
B. Link B	-8	150	-8	0	AG	1360	13.1	1.8	16.2
C. Link C	-8	0	-8	-150	AG	1360	13.1	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	1032	13.1	1.8	16.2
E. Link E	8	-650	8	-150	AG	624	13.1	1.8	16.2
F. Link F	8	-150	8	0	AG	624	13.1	1.8	16.2
G. Link G	8	0	8	150	AG	624	13.1	1.8	16.2
H. Link H	8	150	8	650	AG	495	13.1	1.8	16.2
I. Link I	-650	-7	-150	-7	AG	33	13.1	1.8	11.6
J. Link J	-150	-7	0	-7	AG	361	13.1	1.8	11.6
K. Link K	0	-7	150	-7	AG	588	13.1	1.8	11.6
L. Link L	150	-7	650	-7	AG	588	13.1	1.8	11.6
M. Link M	650	7	150	7	AG	294	13.1	1.8	11.6
N. Link N	150	7	0	7	AG	294	13.1	1.8	11.6
O. Link O	0	7	-150	7	AG	294	13.1	1.8	11.6
P. Link P	-150	7	-650	7	AG	44	13.1	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	15	1.8
2. Recpt 2	19	15	1.8
3. Recpt 3	19	-15	1.8
4. Recpt 4	-19	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	175.	6.7	.0	.0	1.0	.3	.3	.0	.0	.0
2. Recpt 2	186.	6.4	.0	.0	.1	.5	.2	.5	.0	.0
3. Recpt 3	354.	6.4	.5	.1	.0	.0	.0	.0	.5	.1
4. Recpt 4	5.	6.7	.4	1.0	.0	.0	.0	.0	.0	.3

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.0	.0	.0	.1	.0
2. Recpt 2	.0	.0	.2	.0	.0	.1	.0	.0
3. Recpt 3	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	.0	.1	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Hamner_Bellegrave_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	2009	5.7	1.8	16.2
B. Link B	-8	150	-8	0	AG	2735	5.7	1.8	16.2
C. Link C	-8	0	-8	-150	AG	2735	5.7	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	2488	5.7	1.8	16.2
E. Link E	8	-650	8	-150	AG	509	5.7	1.8	16.2
F. Link F	8	-150	8	0	AG	509	5.7	1.8	16.2
G. Link G	8	0	8	150	AG	629	5.7	1.8	16.2
H. Link H	8	150	8	650	AG	629	5.7	1.8	16.2
I. Link I	-650	-7	-150	-7	AG	805	5.7	1.8	11.6
J. Link J	-150	-7	0	-7	AG	1102	5.7	1.8	11.6
K. Link K	0	-7	150	-7	AG	1215	5.7	1.8	11.6
L. Link L	150	-7	650	-7	AG	1215	5.7	1.8	11.6
M. Link M	650	7	150	7	AG	2013	5.7	1.8	11.6
N. Link N	150	7	0	7	AG	2013	5.7	1.8	11.6
O. Link O	0	7	-150	7	AG	2013	5.7	1.8	11.6
P. Link P	-150	7	-650	7	AG	1054	5.7	1.8	11.6

III. RECEPTOR LOCATIONS

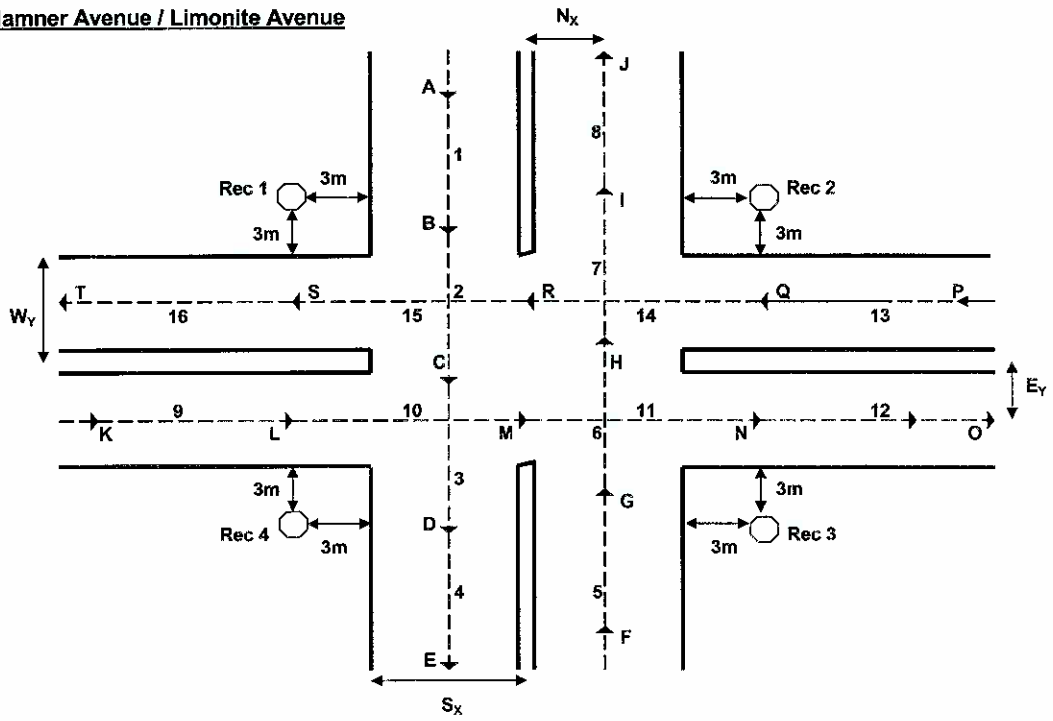
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	15	1.8
2. Recpt 2	19	15	1.8
3. Recpt 3	19	-15	1.8
4. Recpt 4	-19	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	6.5	.0	.4	.0	.0	.0	.0	.0	.0
2. Recpt 2	264.	6.3	.0	.3	.0	.0	.0	.0	.1	.0
3. Recpt 3	277.	6.0	.0	.0	.3	.0	.0	.0	.0	.0
4. Recpt 4	6.	6.4	.2	.8	.0	.0	.0	.0	.0	.1

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.0	.2	.2	.7	.0	.0
2. Recpt 2	.1	.0	.0	.0	.0	.0	.7	.0
3. Recpt 3	.0	.5	.0	.0	.0	.0	.2	.1
4. Recpt 4	.0	.2	.0	.0	.0	.0	.2	.0

Hamner Avenue / Limonite Avenue



Variables

N_X	7.9	S_X	16.2	E_Y	6.7	W_Y	11.6

Co-ordinates

Point	X	Y
A	-7.90	650.00
B	-7.90	150.00
C	-7.90	0.00
D	-7.90	-150.00
E	-7.90	-650.00
F	7.90	-650.00
G	7.90	-150.00
H	7.90	0.00
I	7.90	150.00
J	7.90	650.00
K	-650.00	-6.70
L	-150.00	-6.70
M	0.00	-6.70
N	150.00	-6.70
O	650.00	-6.70
P	650.00	6.70
Q	150.00	6.70
R	0.00	6.70
S	-150.00	6.70
T	-650.00	6.70

Receptors

Point	X	Y
1	-19.20	14.60
2	19.20	14.60
3	19.20	-14.60
4	-19.20	-14.60

Traffic Volumes (PM Peak)

Link	Exist	2013
1	837	2350
2	968	2552
3	968	2552
4	750	2482
5	546	526
6	642	526
7	769	526
8	769	524
9	848	2123
10	1066	2193
11	1066	2271
12	970	2271
13	887	2216
14	887	2216
15	887	2216
16	629	1938

	185	378	274		
279 ↑	Existing			↑	161
513 →				←	410
56 ↓				↓	316
	← 34	↑ 329	→ 183		
	166	2035	149		
106 ↑	2013			↑	134
1938 →				←	1714
79 ↓				↓	368
	← 58	↑ 284	→ 184		

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) Hamner_Limonite_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	837	13.1	1.8	16.2
B. Link B	-8	150	-8	0	AG	968	13.1	1.8	16.2
C. Link C	-8	0	-8	-150	AG	968	13.1	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	750	13.1	1.8	16.2
E. Link E	8	-650	8	-150	AG	546	13.1	1.8	16.2
F. Link F	8	-150	8	0	AG	642	13.1	1.8	16.2
G. Link G	8	0	8	150	AG	769	13.1	1.8	16.2
H. Link H	8	150	8	650	AG	769	13.1	1.8	16.2
I. Link I	-650	-7	-150	-7	AG	848	13.1	1.8	11.6
J. Link J	-150	-7	0	-7	AG	1066	13.1	1.8	11.6
K. Link K	0	-7	150	-7	AG	1066	13.1	1.8	11.6
L. Link L	150	-7	650	-7	AG	970	13.1	1.8	11.6
M. Link M	650	7	150	7	AG	887	13.1	1.8	11.6
N. Link N	150	7	0	7	AG	887	13.1	1.8	11.6
O. Link O	0	7	-150	7	AG	887	13.1	1.8	11.6
P. Link P	-150	7	-650	7	AG	629	13.1	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	15	1.8
2. Recpt 2	19	15	1.8
3. Recpt 3	19	-15	1.8
4. Recpt 4	-19	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	7.0	.0	.4	.0	.0	.0	.0	.2	.0
2. Recpt 2	265.	6.9	.0	.2	.0	.0	.0	.0	.3	.0
3. Recpt 3	275.	7.0	.0	.0	.2	.0	.0	.2	.0	.0
4. Recpt 4	85.	7.1	.0	.0	.4	.0	.0	.2	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.2	.4	.2	.9	.0	.0
2. Recpt 2	.4	.2	.0	.0	.0	.0	.9	.2
3. Recpt 3	.2	1.0	.0	.0	.0	.0	.1	.3
4. Recpt 4	.0	.0	1.0	.2	.4	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) Hamner_Limonite_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-8	650	-8	150	AG	2350	5.7	1.8	16.2
B. Link B	-8	150	-8	0	AG	2552	5.7	1.8	16.2
C. Link C	-8	0	-8	-150	AG	2552	5.7	1.8	16.2
D. Link D	-8	-150	-8	-650	AG	2482	5.7	1.8	16.2
E. Link E	8	-650	8	-150	AG	526	5.7	1.8	16.2
F. Link F	8	-150	8	0	AG	526	5.7	1.8	16.2
G. Link G	8	0	8	150	AG	526	5.7	1.8	16.2
H. Link H	8	150	8	650	AG	524	5.7	1.8	16.2
I. Link I	-650	-7	-150	-7	AG	2123	5.7	1.8	11.6
J. Link J	-150	-7	0	-7	AG	2193	5.7	1.8	11.6
K. Link K	0	-7	150	-7	AG	2271	5.7	1.8	11.6
L. Link L	150	-7	650	-7	AG	2271	5.7	1.8	11.6
M. Link M	650	7	150	7	AG	2216	5.7	1.8	11.6
N. Link N	150	7	0	7	AG	2216	5.7	1.8	11.6
O. Link O	0	7	-150	7	AG	2216	5.7	1.8	11.6
P. Link P	-150	7	-650	7	AG	1938	5.7	1.8	11.6

III. RECEPTOR LOCATIONS

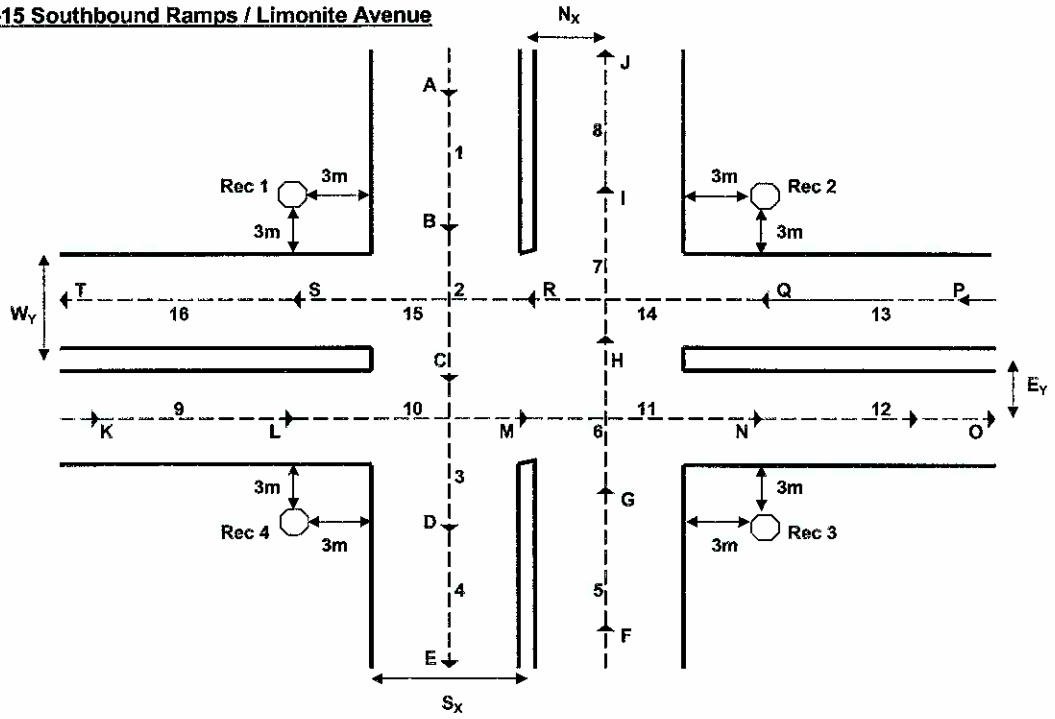
RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-19	15	1.8
2. Recpt 2	19	15	1.8
3. Recpt 3	19	-15	1.8
4. Recpt 4	-19	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	6.7	.0	.4	.0	.0	.0	.0	.0	.0
2. Recpt 2	265.	6.6	.0	.3	.0	.0	.0	.0	.0	.0
3. Recpt 3	275.	6.5	.0	.0	.3	.0	.0	.0	.0	.0
4. Recpt 4	85.	6.7	.0	.0	.4	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.1	.3	.2	.8	.0	.0
2. Recpt 2	.3	.1	.0	.0	.0	.0	.8	.2
3. Recpt 3	.2	.8	.0	.0	.0	.0	.1	.3
4. Recpt 4	.0	.0	.8	.2	.3	.1	.0	.0

I-15 Southbound Ramps / Limonite Avenue



Variables

N_X	4.6	S_X	9.1	E_Y	6.7	W_Y	11.6

Co-ordinates

Point	X	Y
A	-4.60	650.00
B	-4.60	150.00
C	-4.60	0.00
D	-4.60	-150.00
E	-4.60	-650.00
F	4.60	-650.00
G	4.60	-150.00
H	4.60	0.00
I	4.60	150.00
J	4.60	650.00
K	-650.00	-6.70
L	-150.00	-6.70
M	0.00	-6.70
N	150.00	-6.70
O	650.00	-6.70
P	650.00	6.70
Q	150.00	6.70
R	0.00	6.70
S	-150.00	6.70
T	-650.00	6.70

Receptors

Point	X	Y
1	-12.10	14.60
2	12.10	14.60
3	12.10	-14.60
4	-12.10	-14.60

Traffic Volumes (PM Peak)

Link	Exist	2013
1	611	1511
2	611	2244
3	772	2355
4	772	2355
5	0	0
6	0	0
7	0	0
8	0	0
9	1139	2409
10	1139	2409
11	1139	2409
12	957	2298
13	960	3106
14	960	3106
15	981	3106
16	981	2373

		425	2	184	
		←	↓	→	
	↑	Existing		↑	
773	→			←	556
366	↓			↓	404
		←	↑	→	
		773	0	738	
		←	↓	→	
	↑	2013		↑	
1560	→			←	1600
849	↓			↓	1506
		←	↑	→	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) I-15 SB Ramps_Limonite_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-5	650	-5	150	AG	611	13.1	1.8	10.0
B. Link B	-5	150	-5	0	AG	611	13.1	1.8	10.0
C. Link C	-5	0	-5	-150	AG	772	13.1	1.8	10.0
D. Link D	-5	-150	-5	-650	AG	772	13.1	1.8	10.0
E. Link E	5	-650	5	-150	AG	0	13.1	1.8	10.0
F. Link F	5	-150	5	0	AG	0	13.1	1.8	10.0
G. Link G	5	0	5	150	AG	0	13.1	1.8	10.0
H. Link H	5	150	5	650	AG	0	13.1	1.8	10.0
I. Link I	-650	-7	-150	-7	AG	1139	13.1	1.8	11.6
J. Link J	-150	-7	0	-7	AG	1139	13.1	1.8	11.6
K. Link K	0	-7	150	-7	AG	1139	13.1	1.8	11.6
L. Link L	150	-7	650	-7	AG	957	13.1	1.8	11.6
M. Link M	650	7	150	7	AG	960	13.1	1.8	11.6
N. Link N	150	7	0	7	AG	960	13.1	1.8	11.6
O. Link O	0	7	-150	7	AG	981	13.1	1.8	11.6
P. Link P	-150	7	-650	7	AG	981	13.1	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-12	15	1.8
2. Recpt 2	12	15	1.8
3. Recpt 3	12	-15	1.8
4. Recpt 4	-12	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	95.	6.8	.0	.2	.0	.0	.0	.0	.0	.0
2. Recpt 2	265.	6.8	.0	.2	.0	.0	.0	.0	.0	.0
3. Recpt 3	275.	7.0	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	85.	7.0	.0	.0	.3	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.1	.4	.2	1.0	.0	.0
2. Recpt 2	.5	.1	.0	.0	.0	.0	1.0	.2
3. Recpt 3	.3	1.1	.0	.0	.0	.0	.1	.4
4. Recpt 4	.0	.0	1.1	.2	.4	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) I-15 SB Ramps_Limonite_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-5	650	-5	150	* AG	1511	5.7	1.8	10.0
B. Link B	*	-5	150	-5	0	* AG	2244	5.7	1.8	10.0
C. Link C	*	-5	0	-5	-150	* AG	2355	5.7	1.8	10.0
D. Link D	*	-5	-150	-5	-650	* AG	2355	5.7	1.8	10.0
E. Link E	*	5	-650	5	-150	* AG	0	5.7	1.8	10.0
F. Link F	*	5	-150	5	0	* AG	0	5.7	1.8	10.0
G. Link G	*	5	0	5	150	* AG	0	5.7	1.8	10.0
H. Link H	*	5	150	5	650	* AG	0	5.7	1.8	10.0
I. Link I	*	-650	-7	-150	-7	* AG	2409	5.7	1.8	11.6
J. Link J	*	-150	-7	0	-7	* AG	2409	5.7	1.8	11.6
K. Link K	*	0	-7	150	-7	* AG	2409	5.7	1.8	11.6
L. Link L	*	150	-7	650	-7	* AG	2298	5.7	1.8	11.6
M. Link M	*	650	7	150	7	* AG	3106	5.7	1.8	11.6
N. Link N	*	150	7	0	7	* AG	3106	5.7	1.8	11.6
O. Link O	*	0	7	-150	7	* AG	3106	5.7	1.8	11.6
P. Link P	*	-150	7	-650	7	* AG	2373	5.7	1.8	11.6

III. RECEPTOR LOCATIONS

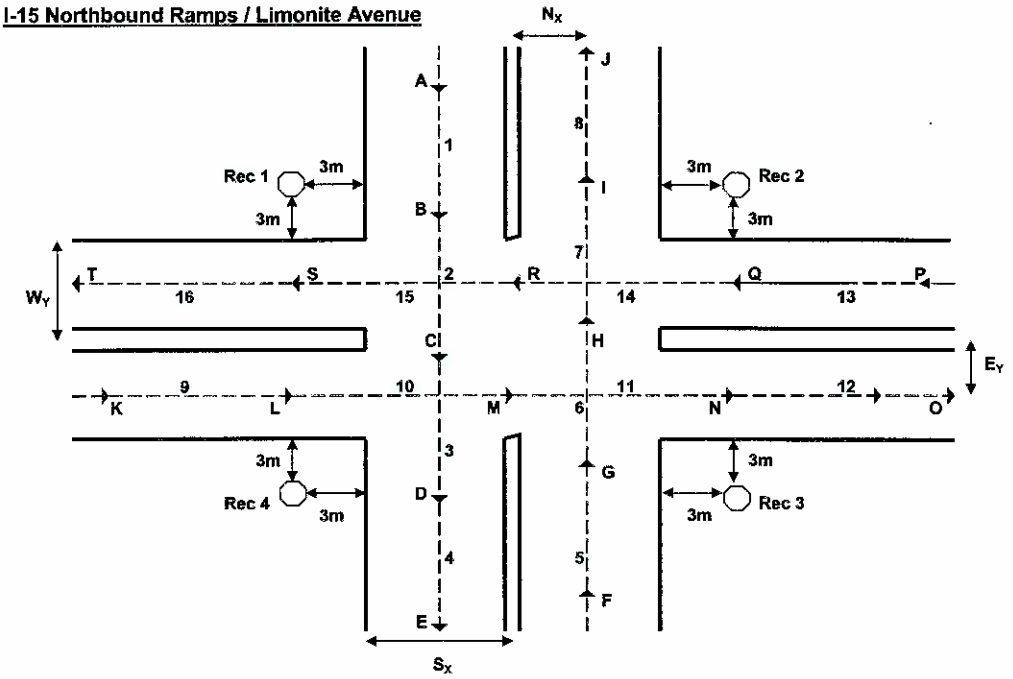
RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-12	15	1.8
2. Recpt 2	*	12	15	1.8
3. Recpt 3	*	12	-15	1.8
4. Recpt 4	*	-12	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	95.	* 6.9	*	.0	.4	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	264.	* 6.8	*	.0	.3	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	276.	* 6.6	*	.0	.0	.3	.0	.0	.0	.0	.0
4. Recpt 4	*	85.	* 6.8	*	.0	.0	.4	.0	.0	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.0	.1	.3	.2	1.1	.0	.0
2. Recpt 2	*	.3	.2	.0	.0	.0	.0	1.1	.1
3. Recpt 3	*	.1	.9	.0	.0	.0	.0	.2	.3
4. Recpt 4	*	.0	.0	.9	.2	.4	.1	.0	.0

I-15 Northbound Ramps / Limonite Avenue



Variables

N_X	4.6	S_X	9.1	E_Y	6.7	W_Y	11.6

Co-ordinates

Point	X	Y
A	-4.60	650.00
B	-4.60	150.00
C	-4.60	0.00
D	-4.60	-150.00
E	-4.60	-650.00
F	4.60	-650.00
G	4.60	-150.00
H	4.60	0.00
I	4.60	150.00
J	4.60	650.00
K	-650.00	-6.70
L	-150.00	-6.70
M	0.00	-6.70
N	150.00	-6.70
O	650.00	-6.70
P	650.00	6.70
Q	150.00	6.70
R	0.00	6.70
S	-150.00	6.70
T	-650.00	6.70

Receptors

Point	X	Y
1	-12.10	14.60
2	12.10	14.60
3	12.10	-14.60
4	-12.10	-14.60

Traffic Volumes (PM Peak)

Link	Exist	2013
1	0	0
2	0	0
3	0	0
4	0	0
5	899	2205
6	899	2205
7	899	2205
8	516	1024
9	1026	2298
10	1026	2298
11	1287	3422
12	1287	3422
13	854	3049
14	976	3106
15	976	3106
16	976	3106

		←	↓	→			
373	↑	Existing			↑	142	
653	→				←	712	
	↓				↓		
		←	↑	→			
		264	1	634			
		←	↓	→			
447	↑	2013			↑	577	
1851	→				←	2472	
	↓				↓		
		←	↑	→			
		634	0	1571			

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Esperanza (02-393E) I-15 NB Ramps_Limonite_E
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	-5	650	-5	150	* AG	0	13.1	1.8	10.0
B. Link B	*	-5	150	-5	0	* AG	0	13.1	1.8	10.0
C. Link C	*	-5	0	-5	-150	* AG	0	13.1	1.8	10.0
D. Link D	*	-5	-150	-5	-650	* AG	0	13.1	1.8	10.0
E. Link E	*	5	-650	5	-150	* AG	899	13.1	1.8	10.0
F. Link F	*	5	-150	5	0	* AG	899	13.1	1.8	10.0
G. Link G	*	5	0	5	150	* AG	899	13.1	1.8	10.0
H. Link H	*	5	150	5	650	* AG	516	13.1	1.8	10.0
I. Link I	*	-650	-7	-150	-7	* AG	1026	13.1	1.8	11.6
J. Link J	*	-150	-7	0	-7	* AG	1026	13.1	1.8	11.6
K. Link K	*	0	-7	150	-7	* AG	1287	13.1	1.8	11.6
L. Link L	*	150	-7	650	-7	* AG	1287	13.1	1.8	11.6
M. Link M	*	650	7	150	7	* AG	854	13.1	1.8	11.6
N. Link N	*	150	7	0	7	* AG	976	13.1	1.8	11.6
O. Link O	*	0	7	-150	7	* AG	976	13.1	1.8	11.6
P. Link P	*	-150	7	-650	7	* AG	976	13.1	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Recpt 1	*	-12	15	1.8
2. Recpt 2	*	12	15	1.8
3. Recpt 3	*	12	-15	1.8
4. Recpt 4	*	-12	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	*	95.	* 6.9	*	.0	.0	.0	.0	.0	.0	.3	.0
2. Recpt 2	*	265.	* 6.9	*	.0	.0	.0	.0	.0	.0	.3	.0
3. Recpt 3	*	275.	* 7.0	*	.0	.0	.0	.0	.0	.3	.0	.0
4. Recpt 4	*	85.	* 7.1	*	.0	.0	.0	.0	.0	.3	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.0	.2	.5	.2	1.0	.0	.0
2. Recpt 2	*	.5	.1	.0	.0	.0	.0	1.0	.2
3. Recpt 3	*	.3	1.0	.0	.0	.0	.0	.1	.4
4. Recpt 4	*	.0	.0	1.2	.3	.4	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Esperanza (02-393E) I-15 NB Ramps_Limonite_B
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	4.8 PPM		
SIGTH=	5. DEGREES	TEMP=	4.1 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	-5	650	-5	150	AG	0	5.7	1.8	10.0
B. Link B	-5	150	-5	0	AG	0	5.7	1.8	10.0
C. Link C	-5	0	-5	-150	AG	0	5.7	1.8	10.0
D. Link D	-5	-150	-5	-650	AG	0	5.7	1.8	10.0
E. Link E	5	-650	5	-150	AG	2205	5.7	1.8	10.0
F. Link F	5	-150	5	0	AG	2205	5.7	1.8	10.0
G. Link G	5	0	5	150	AG	2205	5.7	1.8	10.0
H. Link H	5	150	5	650	AG	1024	5.7	1.8	10.0
I. Link I	-650	-7	-150	-7	AG	2298	5.7	1.8	11.6
J. Link J	-150	-7	0	-7	AG	2298	5.7	1.8	11.6
K. Link K	0	-7	150	-7	AG	3422	5.7	1.8	11.6
L. Link L	150	-7	650	-7	AG	3422	5.7	1.8	11.6
M. Link M	650	7	150	7	AG	3049	5.7	1.8	11.6
N. Link N	150	7	0	7	AG	3106	5.7	1.8	11.6
O. Link O	0	7	-150	7	AG	3106	5.7	1.8	11.6
P. Link P	-150	7	-650	7	AG	3106	5.7	1.8	11.6

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-12	15	1.8
2. Recpt 2	12	15	1.8
3. Recpt 3	12	-15	1.8
4. Recpt 4	-12	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	96.	6.9	.0	.0	.0	.0	.0	.0	.2	.0
2. Recpt 2	265.	6.9	.0	.0	.0	.0	.0	.0	.4	.0
3. Recpt 3	275.	6.7	.0	.0	.0	.0	.0	.4	.0	.0
4. Recpt 4	85.	7.0	.0	.0	.0	.0	.0	.2	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. Recpt 1	.0	.0	.2	.4	.1	1.1	.0	.0
2. Recpt 2	.3	.1	.0	.0	.0	.0	1.1	.2
3. Recpt 3	.2	.8	.0	.0	.0	.0	.1	.4
4. Recpt 4	.0	.0	1.2	.2	.4	.1	.0	.0