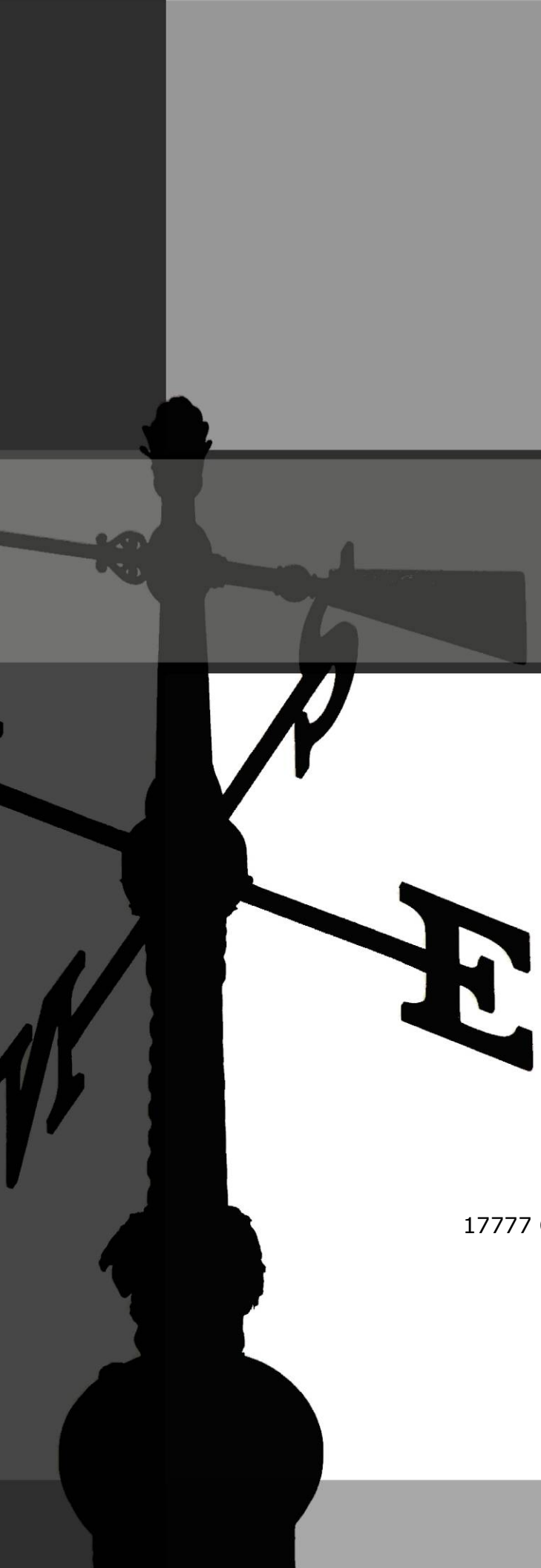


ProLogis Park
Air Quality & Climate Change Assessment

April 2012 (2976 v 1.2)

Prepared for:

ProLogis Logistics Services
17777 Center Court Drive North, Suite 100
Cerritos, California 90703

Prepared by:

Hogle-Ireland
1500 Iowa Avenue, Suite 110
Riverside, California 92507

This document is formatted for double-sided printing to conserve natural resources.

ProLogis Park 187K Building
Air Quality & Climate Change Assessment

April 2012

San Bernardino County

Table of Contents

Table of Contents ..... **i**
List of Tables ii
List of Exhibits iii
Appendices iii
1 Executive Summary **1**
1.1 Project Description 1
1.2 Air Quality 1
1.2.1 Thresholds of Significance 1
1.2.2 AQMP Consistency 2
1.2.3 Building Construction 3
1.2.4 Operational and Area Sources 4
1.2.5 Toxic Air Contaminants 5
1.2.6 Carbon Monoxide Hotspots 5
1.2.7 Odors 6
1.2.8 Cumulative Air Quality Impacts 6
1.2.9 Required Air Quality Mitigation Measures 7
1.3 Climate Change 7
1.3.1 Thresholds of Significance 7
1.3.2 Short-Term Greenhouse Gas Emissions 8
1.3.3 Long-Term Greenhouse Gas Emissions 9
1.3.4 Greenhouse Gas Emissions Inventory 9
1.3.5 California Air Resources Board Scoping Plan 10
1.3.6 Green County San Bernardino 10
2 Introduction **13**
3 Environmental Setting **15**
3.1 Climate 15
3.2 Regional Air Quality 15
3.3 Non-Attainment Status 18
3.4 Local Air Quality 19
3.5 Sensitive Receptors 23
3.6 Toxic Emission Sources 23
3.7 Local Transportation 23
3.8 Odors 23
3.9 Climate Change 23
3.9.1 Defining Climate Change 23
3.9.2 Climate Change and California 26
4 Regulatory Framework **35**
4.1 Clean Air Act 35
4.2 California Clean Air Act 35
4.3 Tanner Bill 35
4.4 California Code of Regulations 36
4.5 2007 Air Quality Management Plan 37
4.6 SCAQMD Rule Book 38
4.7 Executive Order S-3-05 38
4.8 California Global Warming Solutions Act 38
4.9 Sustainable Communities and Climate Protection Act 39

4.10 Air Resources Board Scoping Plan 40
4.11 Water Conservation in Landscaping Act 40
4.12 California Green Building Standards 40
5 Project Description 45
5.1 Building Construction 45
5.2 Landscaping 45
5.3 Circulation 45
5.4 Drainage 46
5.5 Water and Wastewater Service 46
6 Air Quality Impact Analysis 49
6.1 Thresholds of Significance 49
6.2 AQMP Consistency 50
6.3 Pollutant Emissions 51
6.3.1 Building Construction 51
6.3.2 Operational and Area Sources 51
6.4 Localized Emissions 52
6.4.1 Toxic Air Contaminants 52
6.4.2 Carbon Monoxide Hotspots 54
6.5 Odors 56
6.6 Cumulative Impacts 56
6.6.1 Cumulative Construction Impacts 56
6.6.2 Cumulative Operational Impacts 56
7 Climate Change Impact Analysis 59
7.1 Thresholds of Significance 59
7.2 Direct and Indirect Emissions 59
7.2.1 Short-Term Emissions 59
7.2.2 Long-Term Emissions 60
7.2.3 Greenhouse Gas Emissions Inventory 61
7.3 Greenhouse Gas Emissions Reduction Planning 62
7.3.1 California Air Resources Board Scoping Plan 62
7.3.2 Green County San Bernardino 66
8 Mitigation Measures 69
8.1 Required Mitigation 69
8.2 Regulatory Requirements and Standards 69
9 References 71

List of Tables

Table E-1 SCAQMD Maximum Daily Emissions Thresholds (lbs/days) 2
Table E-2 Maximum Daily Construction Emissions (lbs/day) 4
Table E-3 Long-Term Unmitigated Daily Emissions (lbs/day) 4
Table E-4 Cancer and Non-Cancer Risk 5
Table E-5 Carbon Monoxide Concentrations 6
Table E-6 Long-Term Cumulative Emissions Reductions (tons/yr) 7
Table E-7 Construction Greenhouse Gas Emissions 8
Table E-8 Long-Term Greenhouse Gas Emissions 9
Table E-9 Greenhouse Gas Emissions Inventory 10
Table E-10 Scoping Plan Consistency Summary 11

Table 1 Ambient Air Quality Standards 17
Table 2 South Coast Air Basin Attainment Status 19
Table 3 2007-2009 Local Air Quality 21
Table 4 2007-2009 Air Quality Standards Exceedance 21
Table 5 Global Warming Potential (GWP) of Greenhouse Gases (GHG) 26
Table 6 Scoping Plan Measures 42
Table 7 CALGREEN Requirements 43
Table 8 SCAQMD Maximum Daily Emissions Thresholds (lbs/days) 49
Table 9 Maximum Daily Construction Emissions (lbs/day) 51
Table 10 Long-Term Unmitigated Daily Emissions (lbs/day) 52
Table 11 Average Diesel Particulate Concentrations (µg/m^3) 53
Table 12 Cancer and Non-Cancer Risk 54
Table 13 Carbon Monoxide Concentrations 55
Table 14 Long-Term Cumulative Emissions Reductions (tons/yr) 57
Table 15 Construction Greenhouse Gas Emissions 60
Table 16 Long-Term Greenhouse Gas Emissions 61
Table 17 Greenhouse Gas Emissions Inventory 62
Table 18 Scoping Plan Consistency Summary 64

List of Exhibits

Exhibit 1 Regional Context and Vicinity Map 31
Exhibit 2 Radius Map 33
Exhibit 3 Site Plan 47

Appendices

Appendix A Air Quality Modeling Assumptions
Appendix B CalEEMod Output
Appendix C Project Traffic Study
Appendix D EMFAC2007 Output
Appendix E AERMOD Output
Appendix F CALINE4 Output
Appendix G CT-EMFAC2007 Output
Appendix H Kaiser Wastewater Treatment Plant Study
Appendix I Hand Calculations

This Page Intentionally Left Blank

1 Executive Summary

Construction-related and operational emissions of criteria pollutants and toxic air contaminants were modeled and analyzed for the proposed ProLogis Park 187K building. This report also analyzes the project's consistency with the South Coast Air Quality Management District (SCAQMD) 2007 Air Quality Management Plan (AQMP) for the South Coast Air Basin. Cumulative impacts were analyzed using the methodology provided by the 1993 SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook. The results of this report find that the thresholds established by SCAQMD for volume and receptor-specific criteria pollutant emissions and toxic air contaminants will not be exceeded.

Additionally, this report models and analyzes construction- and operation-related emissions of greenhouse gases from the proposed project. This analysis utilizes guidance provided in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper and the *Quantifying Greenhouse Gas Mitigation Measures* handbook. Modeling of emissions utilizes the California Emissions Estimator Model (CalEEMod) v 2011.1.1. This report has been designed to demonstrate project consistency with the San Bernardino County *Greenhouse Gas Emissions Reduction Plan.* The results of this report find that the threshold established by the County for greenhouse gas emissions will not be exceeded, therefore, no mitigation for is required.

1.1 Project Description

The project includes construction of a speculative building that includes 15,000 square feet (SF) of office, a 500 SF fire pump house, and 171,300 SF of warehouse space totaling 186,800 SF of building area. The building is intended to be used as a warehouse/distribution facility; however, an end user has not been identified at this time, as such, specific details about the future operation of the facility are not available. Currently, the site is a stormwater detention basin. Completion of the San Sevaine flood control channel has removed the need for the site as a detention basin; therefore, the site will be developed as intended by the Kaiser Commerce Center Specific Plan that includes filling the detention basin to allow for the construction of an industrial building. A total of 118,255 cubic yards of fill are needed to fill the existing detention basin. The proposed design will be a concrete tilt-up building with elevations that are articulated with painted and scored accents. The project includes 148 parking spaces, 28 trailer spaces, and 34 dock doors. The maximum height of the building is 45 feet from the finish floor.

1.2 Air Quality

1.2.1 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines and the local implementation procedures of San Bernardino County, the project could result in potentially significant impacts related to air quality if it:

A. Conflicts with or obstructs implementation of the applicable air quality plan.
B. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

C. Results in a cumulatively considerable net increase of any criteria pollutant that the region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
D. Exposes sensitive receptors to substantial pollutant concentrations.
E. Create objectionable odors affecting a substantial number of people.

To determine if maximum daily criteria pollutant emissions from construction and operation of the proposed warehouse are significant, the SCAQMD significance thresholds are used. These thresholds are identified in Table E-1.

Table E-1
SCAQMD Maximum Daily Emissions Thresholds (lbs/days)

Pollutant	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM^{10}	150	150
$PM^{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
Source: SCAQMD 2011		

SCAQMD has also established thresholds for emissions of toxic air contaminants. Toxic air emissions from a project are considered potentially significant if maximum incremental cancer risk is greater than 10 persons in 1,000,000 (1E-05). Cancer risk is determined by calculating the annual average toxic concentration ($\mu g/m^3$) and multiplying it by the unit risk factor (URF) for the toxic and the lifetime exposure adjustment (LEA) of the receptor. URF represents the estimated probability that a person will contract cancer as a result of inhalation of a toxic of 1 $\mu g/m^3$ continuously over 70 years. Because some receptors are exposed to toxics for less than 70 years (i.e. off-site workers), the LEA adjusts the receptors' exposure to represent actual exposure time. The LEA for residential uses and other sensitive receptors is 1, representing an assumed exposure of 70 continuous years.

Acute and chronic non-cancer risks are considered significant if the project toxic air contaminant emissions result in a hazard index greater than or equal to 1. The hazard index is determined by calculating the average annual toxic concentration ($\mu g/m^3$) divided by the reference exposure level (REL) for a particular toxic. The REL is the concentration at which no adverse health impacts are anticipated and is established by OEHHA.

1.2.2 AQMP Consistency

A significant impact could occur if the proposed project conflicts with or obstructs the implementation of South Coast Air Basin 2007 Air Quality Management Plan. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the South Coast Air Basin

2007 Air Quality Management Plan (AQMP) is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below:

1. The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by the SCAQMD, with mitigation incorporated, as demonstrated in Section 6.3 et seq of this report; therefore, the project could not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.
2. The project includes construction of 186,800 SF of warehousing and office space on 9.05 AC. The proposed warehouse is consistent with the development and use standards for the Kaiser Commerce Center Specific Plan, West end standards.[1] The Specific Plan was last revised in 2003 and has not been comprehensively updated since the 2007 AQMP was adopted in June 2007; therefore, the land use projections used in the Specific Plan are assumed to be equivalent to the growth projections utilized in the 2007 AQMP. The 2007 AQMP long-term emissions inventory is modeled from the growth projections utilized in the 2004 Regional Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG).[2] RTP growth projections are developed utilizing a comprehensive analysis of fertility, mortality, migration, labor force, housing units, and local policies such as land use plans; therefore, consistency with local planning documents establishes consistency with the RTP projections and the AQMP growth assumptions.

Based on the consistency analysis presented above, the proposed project will not conflict with the AQMP.

1.2.3 Building Construction

Short-term criteria pollutant emissions will occur during site preparation, grading, building construction, paving, and painting activities. Emissions will occur from use of equipment, worker, vendor, and hauling trips, filling the detention basin with soil, and disturbance of onsite soils (fugitive dust). To determine if construction of the proposed warehouse could result in a significant air quality impact, the California Emissions Estimator Model (CalEEMod) has been utilized. It is estimated that the building will take approximately two years to complete. In order to fill the detention basin, approximately 99 haul truck trips per day will be required over the 60 day grading period. The results of the CalEEMod outputs are summarized in Table E-2 (Maximum Daily Construction Emissions). Summer and winter construction emissions are nominally different from each other and the differences do not substantially affect the results of this analysis; the table below reflects the greatest summer or winter emissions. Based on the results of the models, maximum daily emissions from the construction of the warehouse will exceed the threshold established by SCAQMD for volatile organic compounds. To compensate for excessive VOC/ROG emission from coating activities, the model includes use of minimum zero-VOC interior. Use of zero-VOC coatings during construction activities will reduce VOC emissions to 54.47 lbs/day, less than the threshold established by SCAQMD. The

requirement for use of low-VOC coatings has been included as Mitigation Measure AQ1 in Section 8 of this report.

Table E-2
Maximum Daily Construction Emissions (lbs/day)

Activity	Start	End	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Site Preparation	06/01/12	06/14/12	7.18	57.48	33.62	0.05	21.20	12.83
Grading	06/15/12	09/06/12	4.97	37.84	26.21	0.04	15.11	5.09
Building Construction	09/07/12	12/31/12	4.80	31.46	24.76	0.05	3.23	1.94
Building Construction	01/01/13	07/25/13	4.41	29.07	23.77	0.05	3.04	1.74
Paving	07/26/13	08/22/13	6.25	33.91	21.86	0.03	3.13	2.94
Architectural Coating^	08/23/13	09/19/13	216.68	2.07	2.26	0.00	0.38	0.19
		Maximum	*216.68*	*57.48*	*33.62*	*0.05*	*21.20*	*12.83*
		Threshold	75	100	550	150	150	55
		Substantial?	Yes	No	No	No	No	No
^54.47 lbs/day ROG for architectural coating with mitigation incorporated								

1.2.4 Operational and Area Sources

Long-term criteria air pollutant emissions will result from the operation of the proposed warehouse. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions will result from automobile, truck, and other vehicle sources associated with daily trips to and from the warehouse. Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of the proposed warehouse. Energy demand emissions result from use of electricity and natural gas. Based on the results of the model, maximum daily operational emissions associated with the proposed warehouse will not exceed the thresholds established by SCAQMD as summarized in Table E-3.

Table E-3
Long-Term Unmitigated Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Summer						
Area Sources	4.88	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.01	0.11	0.10	0.00	0.01	0.01
Mobile Sources	1.59	7.92	13.01	0.03	2.88	0.29
Summer Total	*6.48*	*8.03*	*13.11*	*0.03*	*2.89*	*0.30*
Winter						
Area Sources	4.88	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.01	0.11	0.10	0.00	0.01	0.01
Mobile Sources	1.67	8.39	13.16	0.02	2.88	0.29
Winter Total	*6.56*	*8.50*	*13.26*	*0.02*	*2.89*	*0.30*
Threshold	55	55	550	150	150	55
Substantial?	No	No	No	No	No	No

1.2.5 Toxic Air Contaminants

There are no sensitive land uses located within one-quarter mile of the proposed warehouse. Pollutants of particular concern when relating to sensitive receptors include carbon monoxide, toxic air contaminants, and odors. High-cube warehouses result in the generation of diesel truck traffic and have been linked with high emissions of diesel particulate matter (DPM) that was established as an air toxic contaminant by ARB in 1998. Potential cancer risk and non-cancer health risks to sensitive receptors within one-quarter mile of the project site due to DPM emissions were estimated using the EPA AERMOD model and guidance provided by SCAQMD in the *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* white paper. The incremental increase of cancer risk in the project vicinity ranges from 4.3 in one million to 5.9 in one million. These incremental increases are less than the threshold of 10 in one million established by SCAQMD. The non-cancer hazard index at the receptors ranges from 0.004 to 0.006. These hazard index values are less than the threshold of 1.0 established by SCAQMD. Table E-4 summarizes the results of this analysis.

Table E-4
Cancer and Non-Cancer Risk

Rank	Cancer Risk	Non-Cancer Risk
1	5.859E-06	0.006
2	5.574E-06	0.006
3	5.330E-06	0.005
4	4.946E-06	0.005
5	4.889E-06	0.005
6	4.853E-06	0.005
7	4.805E-06	0.005
8	4.433E-06	0.004
9	4.425E-06	0.004
10	4.310E-06	0.004
Threshold	*1.000E-05*	*1.000*
Substantial?	No	No

1.2.6 Carbon Monoxide Hotspots

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The traffic study prepared by Kunzman Associates for the project analyzed traffic impacts from the proposed distribution warehouse at an assumed opening year of 2012. The traffic study analyzed the impacts of traffic at the two project driveways on Valley Boulevard, the project driveway on Commerce Drive, the intersection of Valley Boulevard at Commerce Drive, and the intersection of Valley Boulevard/Ontario Mills Parkway at Etiwanda Avenue. The proposed project is estimated to increase traffic at the intersection of Valley Boulevard at Commerce Drive by approximately 0.7 percent (16 project trips/2,106 total volume), based on the project's traffic study. There are no sensitive receptor land uses adjacent to or near this intersection. However, sidewalks are located on all corners of this intersection that can accommodate pedestrian use. The project is estimated to increase traffic by 0.3 percent at the intersection of Valley Boulevard/Ontario Mills Parkway at

Etiwanda Avenue (10 project trips/2,780 total volume), west of the project site. There are no sensitive receptor land uses adjacent to or near this intersection; however, sidewalks are located on all corners of this intersection that can accommodate pedestrian use and have been included in the model pursuant to Caltrans guidance. Carbon monoxide increases based on cumulative traffic increases (including the project) at those intersections were modeled using the CALINE4 (CL4) software as recommended by the Caltrans CO Protocol. Based on the model, a maximum increase of 0.2 ppm carbon monoxide will occur at any intersection and no sensitive receptors will be exposed to carbon monoxide levels that exceed the 20 ppm or 35 ppm AAQS as summarized in Table E-5.

Table E-5
Carbon Monoxide Concentrations

Intersection	Receptor	Concentration Increase (ppm)	Total Concentration (ppm)
Valley/Ontario Mills @ Commerce	Sidewalk A	0.2	3.9
Valley @ Etiwanda	Sidewalk B	0.0	4.0

1.2.7 Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed warehouse is sited within an existing industrial area. The proposed warehouse is not considered a sensitive receptor and therefore would not be substantially affected by potential odors from existing industrial uses operations. The proposed warehouse, in turn, does not produce odors that would affect a substantial number of people considering that the proposed warehouse will not result in the manufacturing of any products and that there are no sensitive receptors in the project vicinity.

1.2.8 Cumulative Air Quality Impacts

To determine if the project could result in cumulative impacts, the methodology identified in Table A9-15 of the Air Quality Handbook has been utilized. This method establishes a minimum one percent per year reduction in project emissions over the life of the project. The variance between year 2040 emissions and the maximum allowable one percent per year emissions threshold indicates that Year 2040 cumulative emissions from operation of the project will not be substantial as summarized in Table E-6.

Table E-6
Long-Term Cumulative Emissions Reductions (tons/yr)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Year 2014						
Area Sources	0.89	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	0.29	1.45	2.40	0.00	0.48	0.05
2014 Total	**1.18**	**1.47**	**2.42**	**0.00**	**0.48**	**0.05**
Year 2040						
Area Sources	0.89	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	0.11	0.30	0.92	0.00	0.45	0.03
2040 Total	**1.00**	**0.32**	**0.94**	**0.00**	**0.45**	**0.03**
Maximum Allowable Emissions	*0.91*	*1.13*	*1.86*	*0.00*	*0.37*	*0.16*
Variance	**-0.09**	**0.81**	**0.92**	**0.00**	**-0.08**	**0.13**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

1.2.9 Required Air Quality Mitigation Measures

AQ1 *Coating Restrictions.* Prior to issuance of building permits, the project proponent shall submit, to the satisfaction of County Planning, a Coating Restriction Plan (CRP), consistent with South Coast Air Quality Management District (SCAQMD) guidelines and a letter agreeing to include in any construction contracts and/or subcontracts a requirement that the contractors adhere to the requirements of the CRP. The CRP measures shall be implemented to the satisfaction of County Building and Safety. These shall include the following:

- The volatile organic compounds (VOC) of proposed architectural coatings shall not exceed zero for interior applications.

This measure shall conform to the performance standard that emissions of volatile organic compounds from application of interior or exterior coatings shall not exceed the daily emissions thresholds established by the South Coast Air Quality Management District. The CRP shall specify use of High-Volume, Low Pressure (HVLP) spray guns for application of coatings.

1.3 Climate Change

1.3.1 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines and the local implementation procedures of San Bernardino County, the project could result in potentially significant impacts related to greenhouse gas emissions and global climate change if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.

The County of San Bernardino adopted its "Greenhouse Gas Emissions Plan" in December 2011. The purpose of the GHG Plan is to reduce the County's internal and external GHG emissions by 15 percent below current (2011) levels by year 2020. The GHG Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the state CEQA Guidelines. The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalent (MTCO2E) per year or more. Projects that do not exceed this threshold require no further climate change analysis. Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions.

1.3.2 Short-Term Greenhouse Gas Emissions

The project will result in short-term greenhouse gas emissions from construction and installation activities associated with construction of the proposed warehouse. Greenhouse gas emissions will be released by equipment used for demolition, grading, paving, and building construction activities. GHG emissions will also result from worker and vendor trips to and from the project site. Table E-7 (Construction Greenhouse Gas Emissions) summarizes the estimated yearly emissions from construction activities. Carbon dioxide emissions from construction equipment and worker/vendor trips were estimated utilizing the California Emissions Estimator Model (CalEEMod) version 2011.1.1 (see Appendix B). Construction activities are short-term and cease to emit greenhouse gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, SCAQMD recommends in its draft threshold to amortize construction emissions over a 30-year operational lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project GHG inventory. Amortized construction emissions are included in Table E-7.

Table E-7
Construction Greenhouse Gas Emissions

Construction Year	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
2012	287.14	0.03	0.00	287.75
2013	321.50	0.03	0.00	322.14
SUB-TOTAL	608.94	0.06	0.00	609.89
*AMORTIZED TOTAL^*	*20.30*	*0.00*	*0.00*	*20.33*

* MTCO2E
Note: Slight variations may occur due to rounding and variations in modeling software
^ Amortized over 30-years

1.3.3 Long-Term Greenhouse Gas Emissions

Warehousing and distribution activities will result in continuous greenhouse gas emissions from mobile, area, and operational sources. Mobile sources include vehicle trips to and from the project site will result primarily in emissions of CO_2 with minor emissions of CH_4 and N_2O. The most significant GHG emission from natural gas usage will be methane. Electricity usage by the warehouse and indirect usage of electricity for water and wastewater conveyance will result primarily in emissions of carbon dioxide. Disposal of solid waste will result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emission from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas inventory for the build-out of the proposed project. To determine this inventory, CalEEMod was used. The methodology utilized for each emissions source is based on the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* handbook. A summary of the project's long-term greenhouse gas emissions inventory is included in Table E-8 (Long-Term Greenhouse Gas Inventory). The emissions inventory is presented as metric tons of carbon dioxide equivalent (MTCO2E) meaning that all emissions have been weighted based on their Global Warming Potential (GWP) (a metric ton is equal to 1.102 short tons). Mobile sources are based on annual vehicle miles traveled (VMT) based on daily trip generation identified in the project traffic study. Natural gas usage, electricity usage, and solid waste disposal are based on default demand figures utilized in CalEEMod.

Table E-8
Long-Term Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area	0.00	0.00	0.00	0.00
Energy	220.10	0.01	0.00	221.47
Mobile	472.00	0.01	0.00	472.27
Solid Waste	379.47	0.01	0.00	850.42
Water/Wastewater	3.91	0.01	0.00	4.16
TOTAL	*1,075.48*	*22.46*	*0.00*	*1,548.32*
* MTCO2E/YR Note: Slight variations may occur due to rounding				

1.3.4 Greenhouse Gas Emissions Inventory

Table E-9 (Greenhouse Gas Emissions Inventory) summarizes the yearly estimated greenhouse gas emissions from construction of the warehouse and operational sources. The total yearly carbon dioxide equivalent emissions will be approximately 1,548.32 MTCO2E. This does not exceed the County screening threshold of 3,000 MTCO2E/YR; therefore, the project will not result in a substantial contribution to global climate change. No mitigation is required.

Table E-9
Greenhouse Gas Emissions Inventory

	GHG Emissions (MT/YR)			
Source	**CO2**	**CH4**	**N2O**	**TOTAL***
Construction^	34.83	0.03	0.00	34.90
Operational	4,227.11	48.46	0.70	5,461.84
GRAND TOTAL	**4,261.94**	**48.49**	**0.70**	**5,496.74**

* MTCO2E/YR
Note: Slight variations may occur due to rounding
^ Construction impacts amortized over 30-years

1.3.5 California Air Resources Board Scoping Plan

ARB's "Scoping Plan" identifies strategies to reduce California's greenhouse gas emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project, such as energy efficiency. Finally, while some measures are not directly applicable, the project would not conflict with their implementation. Table E-10 summarizes the project's consistency with the State Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports six of the action categories through energy efficiency, water conservation, recycling, and landscaping.

1.3.6 San Bernardino County greenhouse Gas Emissions Reduction Plan

As analyzed and discussed in Section 7.2, the project will not exceed the 3,000 MTC2OE/YR screening threshold identified in the GHG Plan; therefore, the project is consistent with the GHG Plan pursuant to Section 15183.5 of the State CEQA Guidelines.

1.3.7 Green County San Bernardino

In August 2007, the San Bernardino County Board of Supervisors launched four environmental initiatives known as Green County San Bernardino. These initiatives include use of green building practices in all new/redeveloped County buildings, a voluntary green building program for developers, waiver of County building fees for incorporation of green building techniques, and establishment of the Green County San Bernardino website. These initiatives are critically tied with the County's current efforts to reduce greenhouse gas emissions through a GHG reduction plan and General Plan amendment. The County's Green County website provides information related to transportation, construction, recycling, and landscaping for the community to learn how to reduce individual and development-related carbon footprints. The proposed warehouse will not result in substantial emissions of greenhouse gases and will not conflict with the Green County initiatives.

Table E-10
Scoping Plan Consistency Summary

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	**Not Applicable.** These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect distribution warehouses.
Light-Duty Vehicle Standards	T-1	**Not Applicable.** This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	**Not Applicable.** Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	**Not Applicable.** Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	**Not Applicable.** The project will result in substantial emissions of greenhouse gas emissions; therefore, transportation related emissions reductions are not required.
Vehicle Efficiency Measures	T-4	**Not Applicable.** Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	**Not applicable.** Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the proposed warehouse would not interfere with their implementation.
	T-6	
Million Solar Roofs Program	E-4	**Not Applicable.** Sets goal for use of solar systems throughout the state. While the project currently does not include solar energy generation, the building could support solar panels in the future.

Action	Supporting Measures	Consistency
Medium- & Heavy-Duty Vehicles	T-7	**Consistent.** MD and HD trucks and trailers working from the proposed warehouse will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	**Not Applicable.** These measures are applicable to large industrial facilities (> 500,000 MTCOE2/YR) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	**Not Applicable.** Supports increased mobility choice.
Green Building Strategy	GB-1	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements.
High Global Warming Potential Gases	H-1	**Not Applicable.** The proposed warehouse is a not substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	**Consistent.** The project will be required recycle a minimum of 50 percent from construction activities and warehouse operations per State and County requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	**Consistent.** The project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	**Consistent.** The project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	**Not Applicable.** The project is not an agricultural use.

2 Introduction

This report models and analyzes construction- and operation-related emissions of criteria air pollutants, toxic air contaminants, and greenhouse gas emissions from the proposed ProLogis Park 187K warehouse/distribution facility. The project includes construction of one warehouse/distribution center totaling 186,800 square feet on 9.05 acres located in unincorporated San Bernardino, California (within the City of Fontana Sphere of Influence).

The air quality analysis provided herein utilizes guidance provided in the South Coast Air Quality Management District (SCAQMD) the 1993 California Environmental Quality Act (CEQA) Air Quality handbook as amended and supplemented (http://www.aqmd.gov/ceqa/hdbk.html). Modeling of emissions utilizes the following software:

- California Emissions Estimator Model (CalEEMod) v 2011.1.1
- California Emissions Factors (EMFAC2007) v 2.3
- United States Environmental Protection Agency AERMOD v 09292
- California Department of Transportation (Caltrans) *Carbon Monoxide Protocol*
- Caltrans Emissions Factors (CT-EMFAC207) v 2.6
- Caltrans CALINE4 (CL4) v 1.32

The climate change analysis provided herein utilizes guidance provided in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper and the *Quantifying Greenhouse Gas Mitigation Measures* handbook. Modeling of greenhouse gas emissions utilizes the California Emissions Estimator Model (CalEEMod) v 2011.1.1. This report has been designed to demonstrate project consistency with the San Bernardino County *Greenhouse Gas Emissions Reduction Plan.*

This report has been prepared utilizing project-specific characteristics where available. In those instances where project-specific data is not available, the analysis has been supplemented by model defaults or other standardized sources of comparable data. In any case where non-project defaults or other data have been used, a "worst-case" scenario was developed to ensure a conservative estimate of emissions.

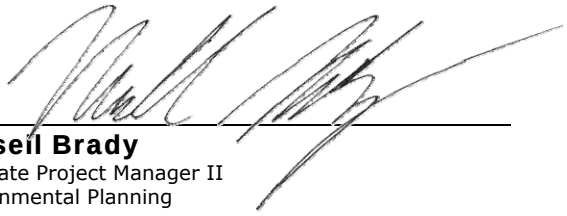
This report has been prepared for use by the Lead Agency to assess potential project-related air quality impacts in compliance with the State CEQA Statues and Guidelines, particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines. This report does not make determinations of significance pursuant to CEQA because such determinations are required to be made solely in the purview of the Lead Agency.

This document has been reviewed in accordance with the *Table 7-2, Checklist for an Air Quality Analysis Section* of the SCAQMD Air Quality Handbook for quality control purposes.

This report was prepared by Pamela Steele (Senior Vice President), Russell Brady (Associate Project Manager II), and Christopher Brown (Senior Environmental Planner) of Hogle-Ireland, Inc. under contract by ProLogis Logistics Services, Inc.

Pamela Steele
Senior Vice President

Christopher Brown
Senior Environmental Planner
Environmental Planning



Russell Brady
Associate Project Manager II
Environmental Planning

3 Environmental Setting

3.1 Climate

The project is located in unincorporated San Bernardino County, surrounded by the city of Fontana. The city of Fontana and the broader Inland Empire are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. Annual rainfall averages 15.32 inches with the rainy season occurring during the winter.[3] The coolest month of the year is January with an average monthly low of 44.0° Fahrenheit (F). The warmest month is July with an average monthly high of 95.0° F. The annual average maximum temperature is 79.4° F and the annual average minimum temperature is 52.3° F. Fontana is located at an elevation of approximately 1,237 feet above mean sea level (AMSL). The project site is located at an approximate elevation of 1,260 AMSL.[4]

3.2 Regional Air Quality

The proposed warehouse is located within the South Coast Air Basin (Basin).[5] The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The Basin is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east that trap ambient air and pollutants within the Los Angeles and Inland Empires valleys below. The Basin is managed by the South Coast Air Quality Management District (SCAQMD). Pursuant to the California Clean Air Act (CCAA), SCAQMD is responsible for bringing air quality within the Basin into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. SCAQMD works with federal, state, and local agencies to reduce pollutant emissions from stationary, mobile, and indirect pollutant sources through the development of rules and regulations.

Both California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as "criteria pollutants"). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM^{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM^{2.5}$), and lead (Pb). The State has also established AAQS for the additional pollutants of visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the State and Federal standards differ, State AAQS are more stringent than Federal AAQS. Federal and State standards are shown in Table 1 (Ambient Air Quality Standards). A brief description of each criteria pollutant is provided below.

Ozone. Ozone is a pungent, colorless, and highly reactive gas that forms from the atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight. Ozone is most commonly associated with smog. Ozone precursors such as reactive organic gases (ROG) and oxides of nitrogen (NO_X) are released from mobile and stationary sources. Ozone is a respiratory irritant and can cause cardiovascular diseases, eye irritation, and impaired cardiopulmonary function. Ozone cause also damage building materials and plant leafs.

Carbon Monoxide. Carbon monoxide is primarily emitted from vehicles due to the incomplete combustion of fuels. Carbon monoxide has wide ranging impacts on human health because is combines with hemoglobin in the body and reduces the amount of oxygen transported in the bloodstream. Carbon monoxide can result in reduced tolerance for exercise, impairment of mental function, impairment of fetal development, headaches, nausea, and death at high levels of exposure.

Nitrogen Dioxide. Nitrogen dioxide and other oxides of nitrogen (NO_X) contribute to the formation of smog and results in the brownish haze associated with it. They are primarily emitted from motor vehicle exhaust but can be omitted from other high-temperature stationary sources. Nitrogen oxides can aggravate respiratory illnesses, reduce visibility, impair plant growth, and form acid rain.

Particulate Matter. Particulate matter is a complex mixture of small-suspended particles and liquid droplets in the air. Particulate matter between ten microns and 2.5 microns is known as PM^{10}, also known as coarse or inhalable particulate matter. PM^{10} is emitted from diverse sources including road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM^{10} can also be formed secondarily in the atmosphere when NO_2 and SO_2 react with ammonia. Particulate matter less than 2.5 microns in size are called $PM^{2.5}$ or fine particulate matter. $PM^{2.5}$ is primarily emitted from point sources such as power plants, industrial facilities, automobiles, wood-burning fireplaces, and construction sites. Particulate matter is deposited in the lungs and cause permanent lung damage, potentially resulting in lung disease and respiratory symptoms like asthma and bronchitis. Particulate matter has also been linked to cardiovascular problems such as arrhythmia and heart attacks. Particulate matter can also interfere with the body's ability to clear the respiratory tract and can act as a carrier of absorbed toxic substances. Particulate matter causes welfare issues because it scatters light and reduces visibility, causes environmental damage such as increasing the acidity of lakes and streams, and can stain and damage stone, such as that applied in statues and monuments.

Sulfur Dioxide. Sulfur dioxide and other oxides of sulfur (SO_X) are reactive gasses emitted from the burning of fossil fuels, primarily from power plants and other industrial facilities. [6] Other less impacting sources include metal extraction activities, locomotives, large ships, and off-road equipment. Human health impacts associated with SO_X emissions include bronchoconstriction and increased asthma symptoms.

Lead. Lead is primarily emitted from metal processing facilities (i.e. secondary lead smelters) and other sources such as manufacturers of batteries, paints, ink, ceramics, and ammunition. Historically, automobiles were the primary sources before lead was phased out of gasoline. The health effects of exposure to lead include gastrointestinal disturbances, anemia, kidney diseases, and potential neuromuscular and neurologic dysfunction. Lead is also classified as a probable human carcinogen.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		-		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/ m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m³)		-	-	-
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m³)		0.100 ppm (see footnote 8)	None	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.03 ppm (µg/m³)	-	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m³)		-	-	
	3 Hour	-		-	0.5 ppm (1,300 µg/m³)	
	1 Hour	0.25 ppm (655 µg/m³)		0.073 ppm (196 µg/m³)	-	-
Lead[9]	30 Day Average	1.5 µg/m³	Atomic Absorption	-	-	
	Calendar Quarter	-		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[10]	-		0.15 µg/m³		
Visibility Reducing Particles	8 Hour	Extinction Coefficient of 0.23 per kilometer visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape		No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board 2010

PPM, parts per million
µg/m3, micrograms per cubic meter

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
9. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
10. National lead standard, rolling 3-month average: final rule signed October 15, 2008.

3.3 Non-Attainment Status

Air pollution levels are measured at monitoring stations located throughout the Basin. Areas that are in nonattainment with respect to criteria pollutants are required to prepare plans and implement measures that will bring the region into attainment. Table 2 (South Coast Air Basin Attainment Status) summarizes the attainment status in the Basin for the criteria pollutants. The Basin is currently in nonattainment status for ozone and inhalable and fine particulate matter.

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward

from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

Table 2
South Coast Air Basin Attainment Status

Pollutant	Federal	State
O_3 (1-hr)	N/A	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM^{10}	Nonattainment	Nonattainment
$PM^{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Attainment	Nonattainment
Sources: CARB 2010, USEPA 2010		

3.4 Local Air Quality

The City of Fontana is located in the Central San Bernardino Valley air monitoring area (Area 34). Air quality in Area 34 is monitored in San Bernardino at Anderson Elementary School (24302 East 4th Street), approximately twelve miles east of the project site and in Fontana at 14360 Arrow Boulevard, approximately two miles west of the project site. Air monitoring results for these two areas over the last three years of available data is summarized in Table 3 (2007-2009 Local Air Quality).[7] [8] [9] [10] Note that these stations do not monitor SO_2. Table 4 (2007-2009 Air Quality Standards Exceedance) summarizes the number of days for each monitoring year that air quality standards were exceeded. Based on the 2007-2009 air quality monitoring data, the San Bernardino Valley area experiences ozone pollution and has exceeded the State 8-hr maximum concentration a minimum of 60 days in both the at both the Fontana and San Bernardino monitoring stations. This is not necessarily due to local production of ozone, but due to how ozone forms and travels over the Basin. Ozone precursors are emitted primarily in the urban centers of the Basin such as Los Angeles. Ozone does not form immediately but rather forms over the day. This combined with prevailing winds blowing ozone precursors inland cause the highest concentrations of ozone in the Basin to occur in the San Bernardino valley and mountain regions. The Central Valley area also experiences particulate matter pollution, with up to 33 PM^{10} samples in any year exceeding the State standard.

This Page Intentionally Left Blank

Table 3
2007-2009 Local Air Quality

Monitoring Station	CO		O_3 (PPM)		NO_2 (PPM)		PM^{10} (µg/m^3)		$PM^{2.5}$ (µg/m^3)		TSP (µg/m^3)		Pb (µg/m^3)		SO_4 (µg/m^3)
	Max 1-hr	Max 8-hr	Max 1-hr	Max 8-hr	Max 1-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max Month	Max Qtr	Max 24-hr
Fontana (Central Valley 1)															
2009	2	1.5	0.142	0.128	0.11	0.0235	75	40.2	46.4	14.3	185	84.3	--	--	6.7
2008	2	1.9	0.162	0.124	0.10	0.0207	75	40.3	49.0	15.4	139	80	--	--	9.5
2007	3	1.8	0.144	0.122	0.09	0.0239	111	54.9	77.5	19.0	242	96.2	--	--	20.3
San Bernardino (Central Valley 2)															
2009	3	1.9	0.150	0.126	0.08	0.0196	66	41.5	37.9	13.0	125	74.3	0.01	0.00	7.1
2008	2	1.8	0.157	0.122	0.09	0.0217	76	42.7	43.5	13.5	166	83.6	0.02	0.02	8.6
2007	4	2.3	0.153	0.121	0.08	0.0245	136	51.4	72.1	18.3	536	106.9	0.04	0.02	13.6

Source: SCAQMD 2007-2009

-- pollutant not monitored
PPM, parts per million
µg/m^3, micrograms per cubic meter
AAM, annual arithmetic mean

Table 4
2007-2009 Air Quality Standards Exceedance

Monitoring Station	O_3 (PPM)			PM^{10} (µg/m^3)		$PM^{2.5}$ (µg/m^3)
	Fed* 8-hr	State 1-hr	State 8-hr	Fed 24-hr	State 24-hr	Fed^ 24-hr
Fontana (Central Valley 1)						
2009	48	45	65	0	13	2
2008	58	55	82	0	14	6
2007	43	40	60	0	33	10
San Bernardino (Central Valley 2)						
2009	62	53	79	0	11	3
2008	62	62	90	2	19	3
2007	51	48	74	0	28	11

Source: SCAQMD 2007-2009

-- pollutant not monitored
* 0.075 ppm
^35 µg/m^3

This Page Intentionally Left Blank

3.5 Sensitive Receptors

Some populations are more susceptible to the effects of air pollution than the population at large; these populations are defined as sensitive receptors. Sensitive receptors include children, the elderly, the sick, and the athletic. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Pollutants of particular concern when relating to sensitive receptors include carbon monoxide, toxic air contaminants, and odors. Exhibit 2 (Radius Map) identifies the latest assessor's information related to existing land uses current as of April 2011. Current assessor's information indicates that no sensitive receptors are located within one-quarter mile of the project site.

3.6 Toxic Emission Sources

According to the EPA, there are no existing sources of industrial- or utility-related toxic emissions uses within one-quarter mile of the project site.[11] There are existing warehouses and distribution centers in the project vicinity that likely emit diesel-particulate matter, an identified toxic air contaminant.

3.7 Local Transportation

The proposed warehouse will be located at the northwest corner of Commerce Drive and Valley Boulevard, east of Etiwanda Avenue. Commerce Drive is a four-lane, divided north-south arterial. Valley Boulevard is a six-lane, divided east-west arterial. Etiwanda Avenue is a two-lane, undivided north-south arterial. Currently, the intersection of Etiwanda Avenue at Valley Boulevard operates at a level of service (LOS) C during the morning peak hour and LOS C during the evening peak hour.[12] The intersection of Commerce Drive at Valley Boulevard currently operates at LOS C during the morning peak hour and LOS D during the evening peak hour.

3.8 Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed warehouse is sited near existing industrial uses to the east, south, and west. To the northeast is the Kaiser Commerce Center Wastewater Treatment Plant that operates specifically to treat discharges from the Specific Plan area. With outdoor settling and treatment facilities, this facility likely emits odors that could be apparent at the proposed project site.

3.9 Climate Change

3.9.1 Defining Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's

orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affects the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term "climate change" is preferred over the term "global warming" because "climate change" conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet approximately 60° F warmer than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

The greenhouse effect is caused by a variety of "greenhouse gases". Greenhouse gases (GHGs) occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since the year 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity. The primary GHGs are discussed below.[13]

Carbon Dioxide. CO_2 is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of carbon dioxide from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO_2 at the sea surface. Carbon dioxide is also released from plants during wildfires. Volcanic eruptions release a small amount of CO_2 from the Earth's crust.

Human activities that affect carbon dioxide in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels is the largest source of carbon dioxide emissions in the United States, accounting for approximately 85 percent of all equivalent emissions. Because of the fossil fuels used, the largest of these sources is electricity generation and transportation. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO_2. Emissions from onsite industrial activities also emit carbon dioxide such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.

Methane. Methane (CH_4) is emitted from human activities and natural sources. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause methane releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 percent of global methane emissions are human generated. Wetlands are the primary producers of methane in the world because the habitat is conducive to bacteria that produce methane during decomposition of organic material. Methane is produced from landfills as solid waste decomposes. Methane is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases methane. Releases from animal digestive processes are the primary source of human-related methane.

Nitrous Oxide. Anthropogenic (human) sources of nitrous oxide include agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N_2O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N_2O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of nitrous oxide, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.

High Global Warming Potential Gases. High global warming potential (GWP) gases (or fluorinated gases) are entirely manmade and are mainly used in industrial processes. HFCs, PFCs, and SF_6 are high GWP gases. These types of gases are used in aluminum production, semiconductor manufacturing, electric power transmission, magnesium production and processing, and in the production of hydrochlorofuorocarbon-22 (HCFC-22). High GWP gases are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons. Use of high GWP gases as substitutes for ozone-depleting substances is the primary use of these gases in the United States.

Water Vapor. It should be noted that water vapor is also a significant GHG in the atmosphere; however, concentration of water vapor in the air is primarily dependent on air temperature and cannot be influenced by humans.

GHGs behave differently in the atmosphere and contribute to climate change in different ways. Some gases have more potential to reflect infrared heat back towards the earth

while some persist in the atmosphere longer than others. To equalize the contribution of GHGs to climate change, the Intergovernmental Panel on Climate Change (IPCC) devised a weighted metric to compare all greenhouse gases to carbon dioxide.[14] The weighting depends on the lifetime of the gas in the atmosphere and its radiative efficiency. As an example, over a time horizon of 100-years, emissions of nitrous oxide will contribute to climate change 298 times more than the same amount of emissions of carbon dioxide while emissions of HFC-23 would contribute 14,800 times more than the same amount of carbon dioxide. These differences define a gas's GWP. Table 5 (Global Warming Potential of Greenhouse Gases) identifies the lifetime and GWP of select GHGs. The lifetime of the GHG represents how many years the GHG will persist in the atmosphere. The GWP of the GHG represents the GHG's relative potential to induce climate change as compared to carbon dioxide.

Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO_2 from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting carbon dioxide faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a "sink". Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that would otherwise absorb CO_2. Forests are a crucial part of sequestration in some parts of the world, but not much in the United States. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO_2 from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

Table 5
Global Warming Potential (GWP) of Greenhouse Gases (GHG)

GHG	Lifetime (yrs)	GWP
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride	3,200	22,800
Source: IPCC 2007		

3.9.2 Climate Change and California

Specific, anticipated impacts to California have been identified in the 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) through extensive modeling efforts.[15] General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevadas
- Some reduction in precipitation is likely by the middle of the century
- Sea-levels will rise up to an estimated 55 inches
- Extreme events such as heat waves, wildfires, droughts, and floods will increase
- Ecological shifts of habitat and animals are already occurring and will continue to occur

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections. The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change includes higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security, reduced water availability, and increased exposure to pesticides. These concerns are all generally related to increase in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change would result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality would increase the severity of health impacts from criteria and other air pollutants discussed in Section 4.3 (Air Quality). Temperature increases and increases in carbon dioxide are also expected to increase plant production of pollens, spores, and fungus. Pollens and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases.

Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence.

Precipitation changes are also suspected to impact the Sierra snowpack (see "Water Management" herein). Earlier snow melts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can cause property damage and loss of life for those affected. Increased wildfires are also of concern as the State "dries" over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises would also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage

that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the state.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (i.e. mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in the state. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes would alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on long-term precipitation patterns in the State has occurred, it is generally accepted by scientists that rising temperatures will impact California's water supply due to changes in the Sierra Nevada snowpack. Currently, the State's water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The State's concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt would overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75-percent of California's available water supply originates in the northern third of the state while 80 percent of demand occurs in the southern two-thirds. There is also concern is that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California. Water from the Colorado River is also used to recharge groundwater basins in the Coachella Valley.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90 percent of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central

Valley but also occurs in Southern California. Strawberries and grapes are grown in San Bernardino and Riverside Counties. Orange County and San Diego County also contribute to strawberry production. Cherries are also grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds would benefit from warming temperatures. Anticipated increases in the number and severity in heat waves would have a negative impact on livestock where heat stress would make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns would impact irrigated farmlands and reduce food security. Furthermore, a drying trend would increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

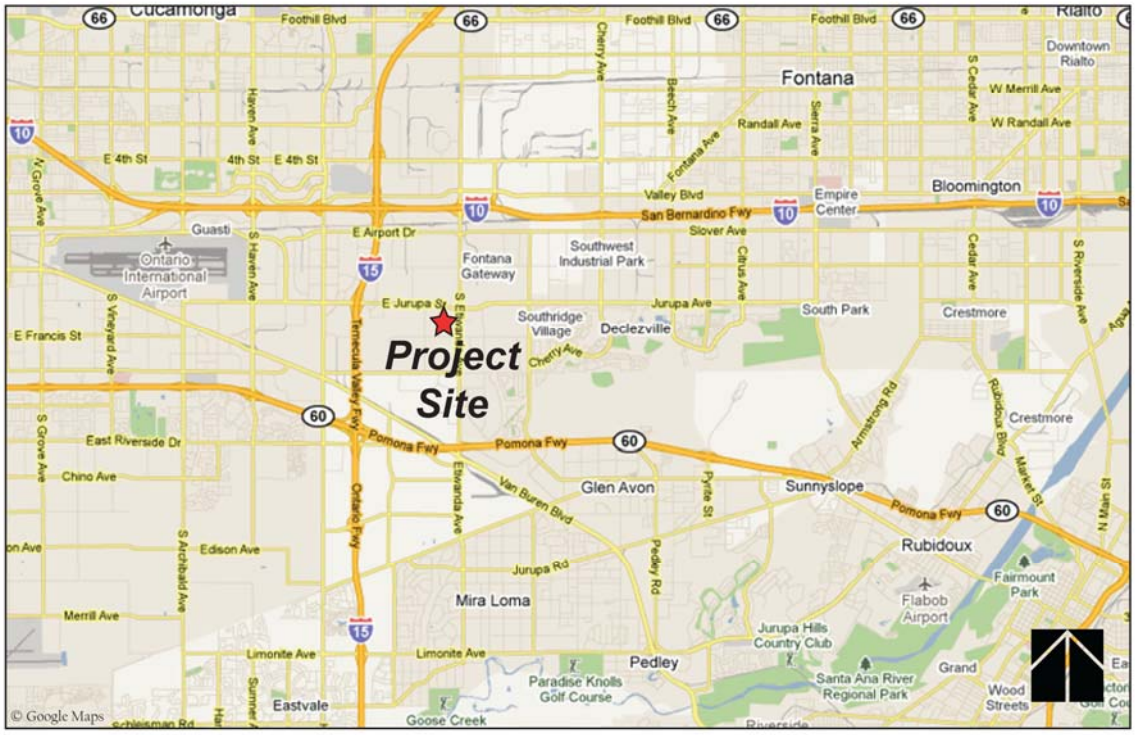
Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior or plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods and moisture deficits and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion. Furthermore, as trees die due to disease and pest invasion (i.e. the Bark Beetle invasion of the San Bernardino Forest), wildfires can spread more rapidly.

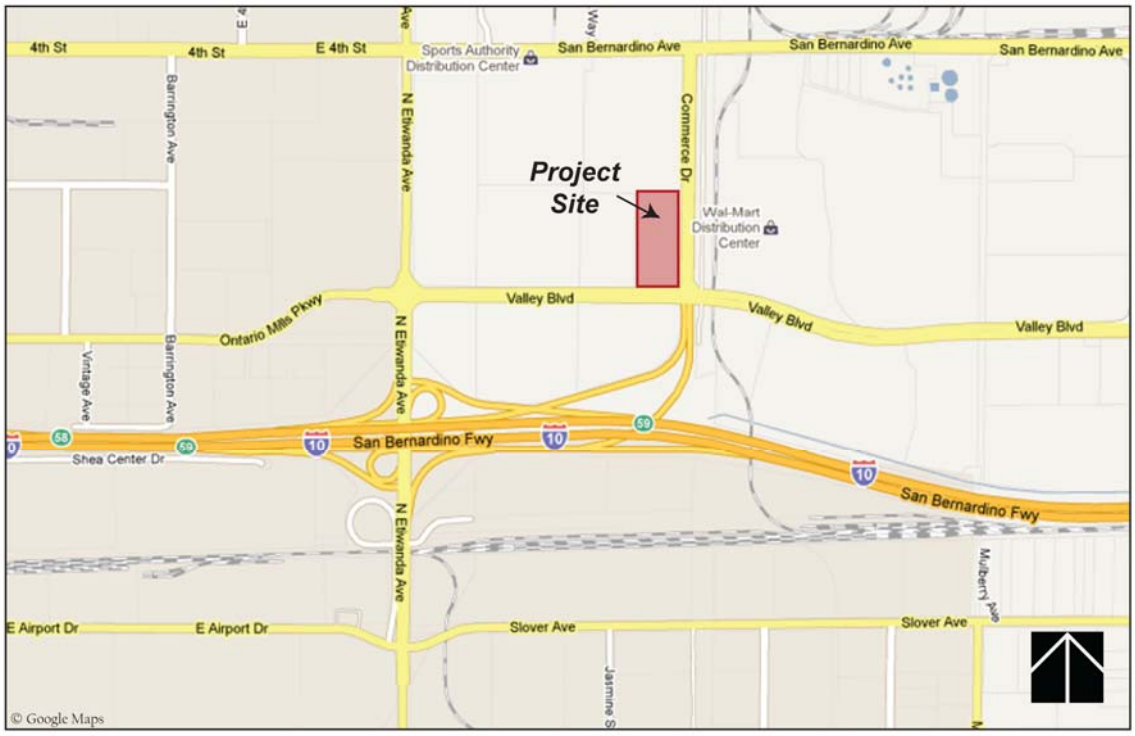
Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes would impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life would increase due to the need to upgrade levees and other flood control devices throughout the state. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

This Page Intentionally Left Blank

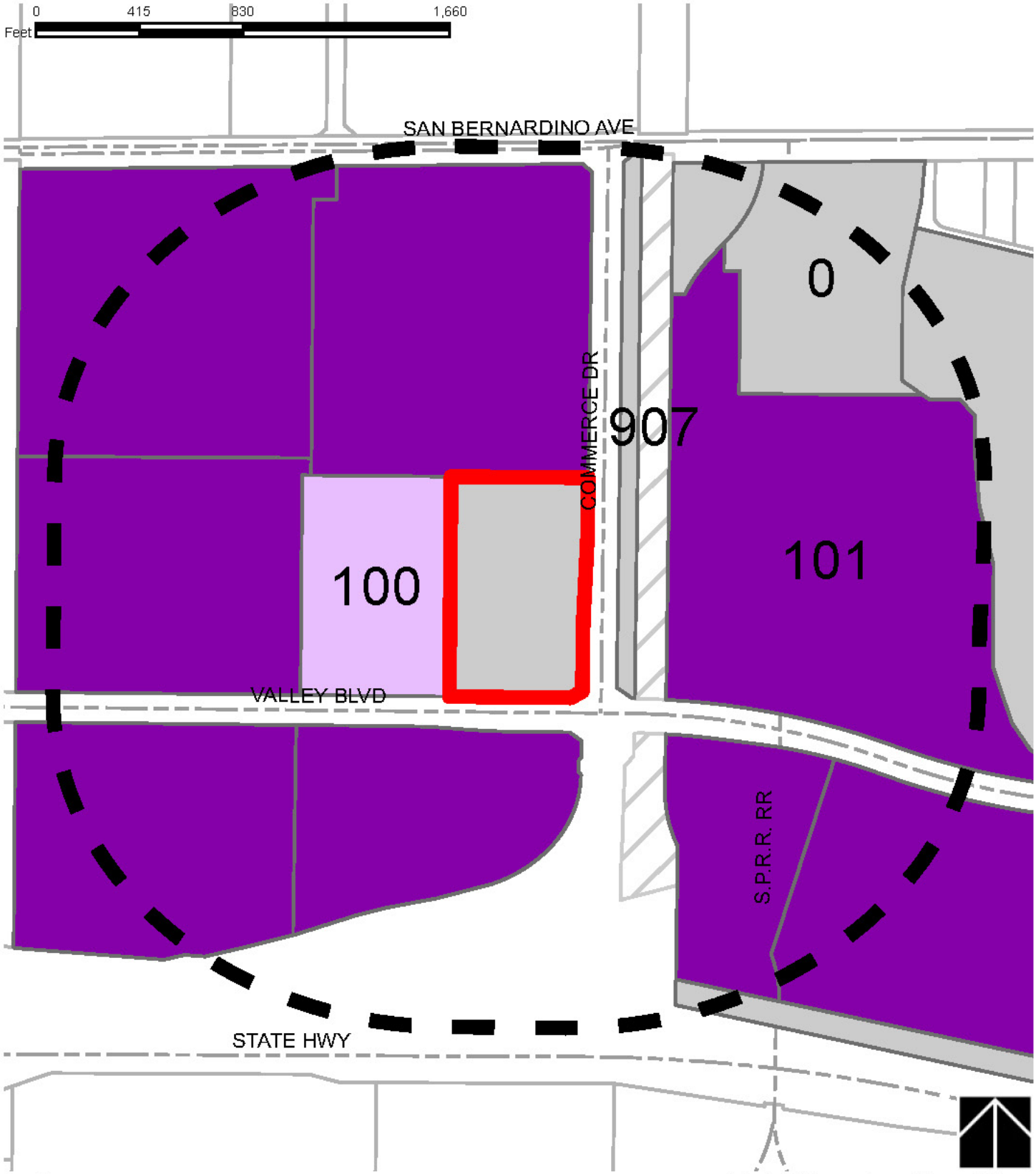


Regional Context Map



Vicinity Map

This Page Intentionally Left Blank



Legend

- One-Quarter Mile Radius
- Project Site

Surrounding Land Uses

- 000 Vacant
- 100 Storage Warehouse
- 101 Distribution Warehouse
- 907 Flood Control
- Roadways

Exhibit 2 Radius Map

ProLogis Park
Fontana, California

Assessor's Data: San Bernardino County 2011
Note: Assessor's land use types may not be reflective of current land uses

This Page Intentionally Left Blank

4 Regulatory Framework

The following summarizes Federal, State, and local regulations related to air quality, pollution control, greenhouse gas emissions.

4.1 Clean Air Act

The Federal Clean Air Act (CAA) defines the Environmental Protection Agency's (EPA) responsibilities for protecting and improving the United States air quality and ozone layer.[16] Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, Carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its AQMPs and updates. Currently, SCAQMD implements the 8-hr Ozone and $PM^{2.5}$ SIP in the 2007 AQMP and the PM^{10} SIP in the 2003 AQMP. The $PM^{2.5}$ SIP is currently being revised by SCAQMD in response to partial disapproval by the EPA.

4.2 California Clean Air Act

The California Clean Air Act (CCAA) of 1988 was enacted to develop plans and strategies for attaining California Ambient Air Quality Standards (CAAQS). The California Air Resources Board (ARB), which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The CCAA is more stringent than Federal law in a number of ways including revised standards for PM^{10} and ozone and State for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

4.3 Tanner Bill

State requirements specifically address air toxics issues through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the State air toxics program and the Air Toxics Hot Spots Information and Assessment Act (AB 2588). The air quality regulations developed from these bills have been modified recently to incorporate the Federal regulations associated with the Federal Clean Air Act Amendments of 1990. The Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) was enacted in September 1987. Under this bill, stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release into the air.

The SCAQMD is required to prepare an annual report on the status and forecast of air toxic "hot spots" pursuant to Section 44363 of the California Health and Safety Code. SCAQMD monitors facilities that are not exempt from the fee and reporting requirements of AB2588.

Some facilities are covered under "umbrella" permits that address industry-wide categories. SCAQMD has issued general permits for the following seven activities:

- Retail gasoline dispensing
- Perchloroethylene dry cleaning
- Auto body shops
- Fiberglass molding
- Printing
- Metal plating
- Wood striping and finishing

Emissions inventories and risk assessment guidelines have been prepared for the seven industry-wide categories. Approximately 1,400 auto body shops, 3,200 gasoline stations, and 1,400 perchloroethylene dry cleaners within the District are covered under these umbrella permits.

Depending on the severity of the facilities' TAC releases, SCAQMD requires either public notification of toxic hot spots or preparation of a risk reduction plan, as follows:

	Cancer Risk (per million)	Acute Risk	Chronic Risk
Action Risk Level	>= 25	>= 3.0	>= 3.0
Public Notification Level	>= 10	>= 1.0	>= 1.0
Exempt	<1	<0.1	<0.1

4.4 California Code of Regulations

In December 2008, the California Air Resources Board (ARB) approved the "Truck and Bus Regulations" as part of their rulemaking authority and adopted in Title 13 (Motor Vehicles) of the California Code of Regulations (CCR).[17] These regulations are applicable to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) of 14,000 pounds or more (Class 4 or greater) that are privately or federally owned and for privately and publically owned school buses.[18] These regulations are designed to reduce emissions of particulate matter and oxides of nitrogen from existing diesel vehicles operating in California. Compliance scheduling is phased for light and heavy vehicle depending on the age of the vehicle engine. Full compliance across vehicle ratings is set in 2023. Regulations affect the following areas:

- Auxiliary Power Units
- Port and Rail Yard Trucks
- Emissions Control Label Inspection
- Greenhouse Gas Emissions Reductions
- Heavy-Duty Diesel Vehicle Inspection
- Idling Reduction

- Periodic Smoke Inspection
- Public and Utility Agencies
- Public Transit Agencies
- School Bus Fleets
- Solid Waste Collection Vehicles
- Transport Refrigeration Units

Regarding the proposed warehouse, vehicle turnover, idling restrictions, and requirements for installation of diesel particulate filters will reduce particulate matter and oxides of nitrogen from future operations. Starting in 2015, lighter trucks (between 14,000 and 26,000 GVWR) will be required to replace the vehicle and/or engine if the engine manufacture date is from 1995 or earlier. Newer engines will be required to be replaced on a graduated scale until 2023 when all engines will be required to meet model year 2010 emissions or equivalent. Heavier trucks (greater than 26,000 GVWR) have options for meeting the regulation requirements through 2023. Vehicles with engine years earlier than 1994 and 1995 will be required to be replaced in 2015 and 2016, respectively. Engines between 1996 and 2006 have the option to install a particulate filter before being required to replace the engine towards the compliance deadline. Later engines are considered compliant 2023 when they demonstrate 2010 emissions levels or equivalent.

Idling restrictions were established in 2008 and apply to vehicles greater than 10,000 GVWR (Class 3 or greater). These restrictions limit idling to five minutes or less before manual or automatic shutdown must be initiated. Engine models manufactured in 2008 and beyond are required to be equipped with a non-programmable engine shutdown mechanism that automatically shuts off the engine after five minutes of idling.

4.5 2007 Air Quality Management Plan

The purpose of an Air Quality Management Plan (AQMP) is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs.[19] The 2003 AQMP was adopted in August 2003 and demonstrated O_3 and PM^{10} for the Basin. It also provides the maintenance plans for CO and NO_2, which the Basin has been in attainment for since 1997 and 1992, respectively. The 2007 AQMP for the Basin was approved by the SCAQMD Board of Directors in June 2007. The 2007 AQMP builds on the 2003 AQMP and is designed to address the federal 8-hour ozone and $PM^{2.5}$ air quality standards. The AQMP identifies short- and long-term control measures designed to reduce stationary, area, and mobile source emissions, organized into four primary components:

1. District Stationary and Mobile Source Control Measures
2. Air Resources Board (ARB) State Strategy
3. Supplement to ARB Control Strategy
4. SCAG Regional Transportation Strategy and Control Measures

The 2007 AQMP was adopted by the SCAQMD board on June 1, 2007, approved by ARB on September 27, 2007, and submitted to the EPA as part of the 2007 SIP on November 16, 2007. On July 14 2011, the EPA issued a notice of proposed partial approval and partial disapproval of the 2007 South Coast SIP for the 1997 $PM^{2.5}$ Standards and corresponding

2007 State strategy. The EPA proposed to approve the emissions inventories, modeling, control measures and technologies, progress and attainment demonstrations, and transportation emissions budgets of the SIP with an attainment extension to April 5, 2012; however, the EPA identified deficiencies in the SIP's contingency measures and would not accept the assignment of 10 tons per day NO_X emissions reductions to the EPA. SCAQMD prepared revised contingency measures that were approved by the SCAQMD Board on October 7, 2011 and forwarded to ARB for approval and submission to the EPA.

4.6 SCAQMD Rule Book

In order to control air pollution in the Basin, SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by ARB or the United States Environmental Protection Agency (EPA). Rules that will be applicable during construction of the proposed warehouse include Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent opacity in the air). Rule 403 requires the implementation of Best Available Control Measures (BACM) and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres. Rule 1113 establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.

4.7 Executive Order S-3-05

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger and established targets for the reduction of greenhouse gas emission at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80 percent beyond that by year 2050. The Order requires the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate with other State departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of CalEPA who reports on the progress of the reduction strategies. The latest CAT *Biennial Report to the Governor and Legislature* was completed in April 2010.[20] CAT also works in 11 subgroups to support development and implementation of the Scoping Plan (see "California Global Warming Solutions Act" herein).

4.8 California Global Warming Solutions Act

The California State Legislature adopted the California Global Warming Solutions Act in 2006 (AB32). AB32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and establishes a regulatory timeline to meet the reduction targets. The timeline is as follows:

January 1, 2009	Adopt Scoping Plan
January 1, 2010	Early action measures take effect

January 1, 2011	Adopt GHG reduction measures
January 1, 2012	Reduction measures take effect
December 31, 2020	Deadline for 2020 reduction target

As part of AB32, CARB had to determine what 1990 GHG emissions levels were and projected a "business-as-usual" (BAU) estimate for 2020 to determine the amount of GHG emissions that will need to be reduced. BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies. 1990 emissions are estimated at 427 million metric tons of carbon dioxide equivalent (MMTCO2E) while 2020 emissions (without implementation of reduction measures) is estimated at 596 MMTCO2E; therefore, California GHG emissions must be reduced 169 MMTCO2E by 2020, a reduction of approximately 29 percent.

The California Air Resources Board (ARB) is responsible for implementation of AB32. Nine discrete early action measures and 35 additional measures were adopted in October 2007 and are now enforceable. The discrete early actions include a low carbon fuel standard, landfill methane capture regulations, reductions in HFCs from mobile air conditioning systems, fluorinated gas emissions from semiconductor manufacturing, sulfur hexafluoride from some industrial processes, high GWP gases in consumer products, and emissions from diesel auxiliary engines on ships at California Ports, improved fuel efficiency in heavy-duty diesel vehicles, and new tire pressure regulations. The early action programs form part of California's comprehensive strategy for achieving the GHG reduction targets.

4.9 Sustainable Communities and Climate Protection Act

In January 2009, California Senate Bill (SB) 375 went into effect known as the Sustainable Communities and Climate Protection Act.[21] The objective of SB375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB375 tasks ARB to set greenhouse gas reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy (APS) may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In the Southern California Association of Governments (SCAG) region (in which the project is located), sub-regions can also elect to prepare their own SCS or APS. In August 2010, ARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the SCAG region were 8-percent by year 2020 and 13-percent by year 2035. The 8-percent year 2020 target was adopted in September 2010 and tentatively adopted the year 2035 until February 2011 to provide additional time for SCAG, ARB, and other stakeholders to account for additional resources (such as state transportation funds) needed to achieve the proposed targets. In February

2011, the SCAG President affirmed the year 2035 reduction target and SCAG Staff updated ARB on additional funding opportunities. The status of funding was requested to be revisited again in year 2014.

4.10 Air Resources Board Scoping Plan

The ARB Scoping Plan is the comprehensive plan to reach the GHG reduction targets stipulated in AB32. The key elements of the plan are to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners in the Western Climate Initiative (includes seven states in the United States and four territories in Canada), establish transportation-related targets, and establish fees.[22] The Scoping Plan measures are identified in Table 6 (Scoping Plan Measures). Note that the current early discrete actions are incorporated into these measures. ARB estimates that implementation of these measures will reduce GHG emissions in the state by 174 MMTCO2E by 2020; therefore, implementation of the Scoping Plan will meet the 2020 reduction target. In a report prepared on September 23, 2010, ARB indicates that 40 percent of the reduction measures identified in the Scoping Plan have been secured.[23] ARB recently held the hearing for the cap-and-trade program rulemaking on December 16, 2010. The cap-and-trade program will begin January 1, 2012 after ARB completes a series of activities that deal with the registration process, compliance cycle, and tracking system; however, covered entities will not have an emissions obligation until 2013.[24] ARB is currently working on the low carbon fuel standard where public hearings and workshops are currently being conducted. In August 2011, the Scoping plan was reapproved by the ARB Board with the program's environmental documentation.

4.11 Water Conservation in Landscaping Act

Section 65591 of the Government Code requires all local jurisdictions to adopt a water efficient landscape ordinance. The ordinance is to address water conservation through appropriate use and grouping of plants based on environmental conditions, water budgeting to maximize irrigation efficiency, storm water retention, and automatic irrigation systems. Failure to adopt a water efficiency ordinance requires a local jurisdiction to enforce the provisions of the State's model water efficiency ordinance. In 2009, the Department of Water Resources (DWR) updated the Model Water Efficient Landscape Ordinance pursuant to amendments to the 1991 Act. These amendments and the new model ordinance went into effect on January 1, 2010. The amended Act is applicable to any new commercial, multi-family, industrial or tract home project containing 2,500 square feet (SF) or more of landscaping. Individual landscape projects of 5,000 SF or more on single-family properties will also be subject to the Act. All landscape plans are required to include calculations verifying conformance with the maximum applied water allowance and must be prepared and stamped by a licensed landscape architect.

4.12 California Green Building Standards

New California Green Building Standards Code (CALGREEN) went into effect on January 1, 2011.[25] The purpose of the new addition to the California Building Code (CBC) is to improve public health, safety, and general welfare by enhancing the design and

construction of buildings using concepts to reduce negative impacts or produce positive impacts on the environment. The CALGREEN regulations cover planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality. Many of the new regulations have the effect of reducing greenhouse gas emissions from the operation of new buildings. Table 7 (CALGREEN Requirements) summarizes the previous requirements of the CBC and the new requirements of CALGREEN that went into effect in January 2011.

Table 6
Scoping Plan Measures

Measure	Description
T-1	Pavely I and II – Light Duty Vehicle Greenhouse Gas Standards
T-2	Low Carbon Fuel Standard
T-3	Regional Transportation-Related Greenhouse Gas Targets
T-4	Vehicle Efficiency Measures
T-5	Ship Electrification at Ports
T-6	Good Movement Efficiency Measures
T-7	Heavy-Duty Vehicle Aerodynamic Efficiency
T-8	Medium and Heavy-Duty Vehicle Hybridization
T-9	High Speed Rail
E-1	Energy Efficiency (Electricity Demand Reduction)
E-2	Increase Combined Heat and Power Use
E-3	Renewable Portfolio Standard
E-4	Million Solar Roofs
CR-1	Energy Efficiency (Natural Gas Demand Reduction)
CR-2	Solar Water Heating
GB-1	Green Buildings
W-1	Water Use Efficiency
W-2	Water Recycling
W-3	Water System Energy Efficiency
W-4	Reuse Urban Runoff
W-5	Increase Renewable Energy Production
W-6	Public Good Charge (Water)
I-1	Energy Efficiency for Large Industrial Sources
I-2	Oil and Gas Extraction GHG Reductions
I-3	Oil and Gas Transmission Leak Reductions
I-4	Refinery Flare Recovery Process Improvements
I-5	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Landfill Methane Control
RW-2	Increase Landfill Methane Capture Efficiency
RW-3	Recycling and Zero Waste
F-1	Sustainable Forest Target
H-1	Motor Vehicle Air Conditioning
H-2	Non-Utilities and Non-Semiconductor SF_6 Limits
H-3	Semiconductor Manufacturing PFC Reductions
H-4	Consumer Products High GWP Limits
H-5	High GWP Mobile Source Reductions
H-6	High GWP Stationary Source Reductions
H-7	High GWP Mitigation Fees
A-1	Large Dairy Methane Capture

Table 7
CALGREEN Requirements

Item		Requirements	
		Previous	CALGREEN
4.1	Stormwater Management	Stormwater management required on projects > than one acre	All projects subject to stormwater management.
	Surface Drainage	Surface water must flow away from building	Drainage patterns must be analyzed
4.2	Energy Efficiency	California Energy Code	Minimum energy efficiency to be established by California Energy Commissions
4.3	Indoor Water Use	HCD maximum flush rates; CEC water use standards for appliances and fixtures	Indoor water use must decrease by at least 20 percent (prescriptive or performance based)
	Multiple Showerheads	Not covered	Multiple showerheads can not exceed combined flow of the code
	Irrigation Controllers	Not covered	Irrigation controllers must be weather or soil moisture based controllers
4.4	Joint Protection	Plumbing and Mechanical Codes	All openings must be sealed with materials that rodents cannot penetrate
	Construction Waste	Local Ordinances	Establishes minimum 50 percent recycling and waste management plan
	Operation	Plumbing Code for gray water systems	Educational materials and manuals must be provided to building occupants and owners to ensure proper equipment operation
4.5	Fireplaces	Local Ordinances	Gas fireplaces must be direct-vent sealed-combustion type; Wood stoves and pellet stoves must meet USEPA Phase II emissions limits
	Mechanical Equipment	Not covered	All ventilation equipment must be sealed from contamination during construction
	VOCs	Local Ordinances	Establishes statewide limits on VOC emissions from adhesives, paints, sealants, and other coatings
	Capillary Break	No prescriptive method of compliance	Establishes minimum requirements for vapor barriers in slab on grade foundations
	Moisture Content	Current mill moisture levels for wall and floor beams is 15-20 percent	Moisture content must be verified prior to enclosure of wall or floor beams
	Whole House Fans	Not covered	Requires insulted louvers and closing mechanism when fan is off
	Bath Exhaust Fans	Not covered	Requires Energy Star compliance and humidistat control
	HVAC Design	Minimal requirements for heat loss, heat gain, and duct systems	Entire system must be designed in respects to the local climate
7	Installer Qualifications	HVAC installers need not be trained	HVAC installers must be trained or certified
	Inspectors	Training only required for structural materials	All inspectors must be trained
Source: HCD 2010			

This Page Intentionally Left Blank

5 Project Description

5.1 Building Construction

The project includes construction of a speculative building that includes 15,000 square feet of office, a 500 fire pump house, and 171,300 square feet of warehouse space totaling 186,800 square feet of building area (see Exhibit 3, Site Plan). The building is intended to be used as a warehouse/distribution facility; however, an end user has not been identified at this time, as such, specific details about the future operation of the facility are not currently available. Currently, the site is a stormwater detention basin. Completion of the San Sevaine flood control channel has removed the need for the site as a detention basin; therefore, the site will be developed as intended by the Kaiser Commerce Center Specific Plan that includes filling the detention basin to allow for the construction of an industrial building. A total of 118,255 cubic yards of fill are needed to fill the existing detention basin. Fill dirt will be imported from the ProLogis stockpile located at the corner of Ontario Mille Parkway at Barington Avenue, approximately one mile west of the project site. The proposed design will be a concrete tilt-up building with elevations that are articulated with painted and scored accents. The project includes 148 parking spaces, 28 trailer spaces, and 34 dock doors. The maximum height of the building is 45 feet from the finish floor.

5.2 Landscaping

The proposed landscape coverage for the site is 52,398 square feet, or 13.3 percent. The landscaping will be designed to significantly reduce the required water consumption of the site as compared to traditional landscape designs. The design includes a variety of trees and shrubs that are described in more detail in the Landscape Plan included in the project submittal. Landscaped areas are to be located around the perimeter of the site and along the street frontage on Valley Boulevard and Commerce Drive. Landscaping will be installed adjacent to the south and east sides of the building to enhance the aesthetics of the facility. All required setbacks will be fully landscaped. The landscape design will compliment existing landscaping found within the Kaiser Commerce Center Specific Plan.

5.3 Circulation

The project will have two access points from Valley Boulevard, a 70 foot wide west driveway and a 30 foot wide east driveway. A 70 foot wide access driveway is proposed from Commerce Drive. A 26 foot wide drive aisle is proposed within the vehicular parking area and 40 foot wide interior access drive aisles are proposed into the truck parking area, which will provide access to the parking/loading area and access for the Fire Department. Two streets abut the project site, Valley Boulevard and Commerce Drive, and both streets have been improved to their ultimate condition, as required by the Kaiser Commerce Center Specific Plan. Per the Specific Plan, Valley Boulevard is classified as a Major Arterial and Commerce Drive is classified as a Major Highway. Existing street improvements include street pavement, landscaped medians, curbs, gutters, sidewalks, and parkway landscape improvements. All existing street and parkway improvements are to remain in place. All required right-of-way dedication has been provided, as required by

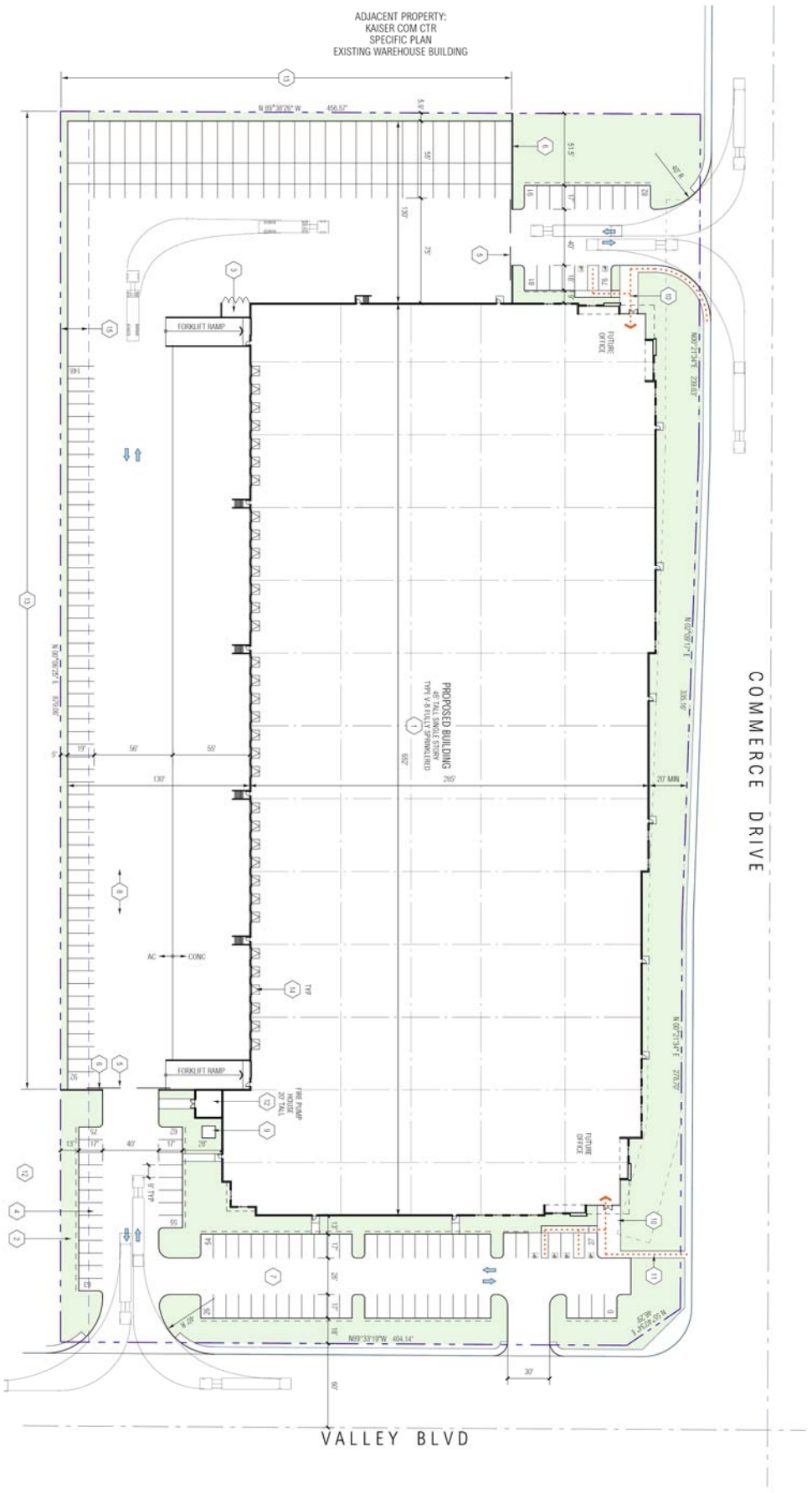
the Kaiser Commerce Center Specific Plan; therefore, additional right-of-way dedication is not required or proposed.

5.4 Drainage

Proposed on-site drainage improvements for this project include the creation of two underground detention basins, which will outflow into the existing drainage system into the San Sevaine Channel. The basins are located within the truck parking/loading dock area on the west side of the site.

5.5 Water and Wastewater Service

The Fontana Water Company is the water purveyor for the project site. Water will be provided by the Fontana Water Company. Wastewater/sewage service is provided to the Kaiser Commerce Center Specific Plan development by the Kaiser Sewage Treatment Plant located northeast of the project site on San Bernardino Avenue. The project proposes to connect to the Kaiser Sewage Treatment Plant to serve its sewer needs. The Kaiser Commerce Center Specific Plan indicates that adequate capacity exists to accommodate the entire build-out of the Specific Plan development.



Not to Scale

Source: RGA Office of Architectural Design

Exhibit 3: Site Plan

Prologis Park (Valley & Commerce)
County of San Bernardino, CA

This Page Intentionally Left Blank

6 Air Quality Impact Analysis

The impact analysis contained herein was prepared utilizing guidance provided in the 1993 SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook. The thresholds identified in Appendix G of the State CEQA Guidelines, as implemented by the County of San Bernardino, have been utilized to determine the significance of potential impacts.

6.1 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines and the local implementation procedures of San Bernardino County, the project could result in potentially significant impacts related to air quality if it:

A. Conflicts with or obstructs implementation of the applicable air quality plan.
B. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
C. Results in a cumulatively considerable net increase of any criteria pollutant that the region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
D. Exposes sensitive receptors to substantial pollutant concentrations.
E. Create objectionable odors affecting a substantial number of people.

To determine if maximum daily criteria pollutant emissions from construction and operation of the proposed warehouse are significant, the SCAQMD significance thresholds are used. These thresholds are identified in Table 8 (SCAQMD Maximum Daily Emissions Thresholds (lbs/day)).

Table 8
SCAQMD Maximum Daily Emissions Thresholds (lbs/days)

Pollutant	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM^{10}	150	150
$PM^{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
Source: SCAQMD 2011		

SCAQMD has also established thresholds for emissions of toxic air contaminants. Toxic air emissions from a project are considered potentially significant if maximum incremental cancer risk is greater than 10 persons in 1,000,000 (1E-05). Cancer risk is determined by calculating the annual average toxic concentration ($\mu g/m^3$) and multiplying it by the unit risk factor (URF) for the toxic and the lifetime exposure adjustment (LEA) of the receptor. URF represents the estimated probability that a person will contract cancer as a result of

inhalation of a toxic of 1 µg/m^3 continuously over 70 years. Because some receptors are exposed to toxics for less than 70 years (i.e. off-site workers), the LEA adjusts the receptors exposure to represent actual exposure time. The LEA for residential uses and other sensitive receptors is 1, representing an assumed exposure of 70 continuous years.

Acute and chronic non-cancer risks are considered significant if the project toxic air contaminant emissions result in a hazard index greater than or equal to 1. The hazard index is determined by calculating the average annual toxic concentration (µg/m^3) divided by the reference exposure level (REL) for a particular toxic. The REL is the concentration at which no adverse health impacts are anticipated and is established by OEHHA.

6.2 AQMP Consistency

A significant impact could occur if the proposed project conflicts with or obstructs the implementation of South Coast Air Basin 2007 Air Quality Management Plan. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the South Coast Air Basin 2007 Air Quality Management Plan (AQMP) is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP.[26] Consistency review is presented below:

1. The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by the SCAQMD, with mitigation incorporated, as demonstrated in Section 6.3 et seq of this report; therefore, the project could not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.
2. The project includes construction of 186,800 SF of warehousing and office space on 9.05 AC. The proposed warehouse is consistent with the development and use standards for the Kaiser Commerce Center Specific Plan, West end standards.[27] The Specific Plan was last revised in 2003 and has not been comprehensively updated since the 2007 AQMP was adopted in June 2007; therefore, the land use projections used in the Specific Plan are assumed to be equivalent to the growth projections utilized in the 2007 AQMP. The 2007 AQMP long-term emissions inventory is modeled from the growth projections utilized in the 2004 Regional Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG).[28] RTP growth projections are developed utilizing a comprehensive analysis of fertility, mortality, migration, labor force, housing units, and local policies such as land use plans; therefore, consistency with local planning documents establishes consistency with the RTP projections and the AQMP growth assumptions.

Based on the consistency analysis presented above, the proposed project will not conflict with the AQMP.

6.3 Pollutant Emissions

6.3.1 Building Construction

Short-term criteria pollutant emissions will occur during site preparation, grading, building construction, paving, and painting activities. Emissions will occur from use of equipment, worker, vendor, and hauling trips, and disturbance of onsite soils (fugitive dust). To determine if construction of the proposed warehouse could result in a significant air quality impact, the California Emissions Estimator Model (CalEEMod) has been utilized. It is estimated that the building will take approximately two years to complete. In order to fill the detention basin, approximately 99 haul truck trips per day will be required over the 60 day grading period. The results of the CalEEMod outputs are summarized in Table 9 (Maximum Daily Construction Emissions). Summer and winter construction emissions are nominally different from each other and the differences do not substantially affect the results of this analysis; the table below reflects the greatest summer or winter emissions. Based on the results of the models, maximum daily emissions from the construction of the warehouse will result in excessive emissions of volatile organic chemicals (identified as reactive organic gases) associated with interior and exterior coating activities.

To compensate for excessive VOC/ROG emission from coating activities, the model includes use of minimum zero grams per liter (g/l) VOC content interior. Use of zero-VOC coatings during construction activities will reduce VOC emissions to 54.47 lbs/day, less than the threshold established by SCAQMD. The requirement for use of zero-VOC coatings for interior applications has been included as Mitigation Measure AQ1 Section 8 of this report.

Table 9
Maximum Daily Construction Emissions (lbs/day)

Activity	Start	End	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Site Preparation	06/01/12	06/14/12	7.18	57.48	33.62	0.05	21.20	12.83
Grading	06/15/12	09/06/12	4.97	37.84	26.21	0.04	15.11	5.09
Building Construction	09/07/12	12/31/12	4.80	31.46	24.76	0.05	3.23	1.94
Building Construction	01/01/13	07/25/13	4.41	29.07	23.77	0.05	3.04	1.74
Paving	07/26/13	08/22/13	6.25	33.91	21.86	0.03	3.13	2.94
Architectural Coating^	08/23/13	09/19/13	216.68	2.07	2.26	0.00	0.38	0.19
		Maximum	*216.68*	*57.48*	*33.62*	*0.05*	*21.20*	*12.83*
		Threshold	75	100	550	150	150	55
		Substantial?	Yes	No	No	No	No	No
^54.47 lbs/day ROG for architectural coating with mitigation incorporated								

6.3.2 Operational and Area Sources

Long-term criteria air pollutant emissions will result from the operation of the proposed warehouse. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions will result from automobile, truck, and other vehicle sources associated with daily trips to and from the warehouse. The California Emissions Estimator Model (CalEEMod) was utilized to estimate mobile source emissions. Trip generation (1.44 daily trips per 1,000 SF) and fleet mixes

(approximately 29 percent truck traffic) is based on the project traffic study prepared by Kunzman Associates (see Appendix C).[29] Note that slight differences between the reports may occur due to rounding. The fleet mix was converted from axels into vehicle weight class based on guidance provided by SCAQMD in Appendix E of the CalEEMod Users' Guide.[30] The default EMFAC2007 fleet mix for trucks has been scaled to approximately seven percent heavy-heavy-duty (HHD), nine percent medium-heavy-duty (MHD), and 13 percent light-heavy-duty (LHD1) to account for the increase in truck traffic to 29 percent. The remaining 71 percent has been allocated to passenger vehicles (LDA). It should be noted that NO_X emissions, as modeled in CalEEMod, do not account for the five-minute idling restrictions required by State law (see Section 4.4 for discussion of these requirements). Assuming an opening year of 2014 with the building occupied and operational, the total results of the CalEEMod model for summer and winter conditions are summarized in Table 10 (Long-Term Unmitigated Daily Emissions).

Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of the proposed warehouse. Energy demand emissions result from use of electricity and natural gas. Emissions from area sources were estimated using CalEEMod. Area source emissions are included in Table 10. Based on the results of the model, maximum daily operational emissions associated with the proposed warehouse will not exceed the thresholds established by SCAQMD, even without consideration of idling restrictions. No mitigation is required.

Table 10
Long-Term Unmitigated Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Summer						
Area Sources	4.88	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.01	0.11	0.10	0.00	0.01	0.01
Mobile Sources	1.59	7.92	13.01	0.03	2.88	0.29
Summer Total	*6.48*	*8.03*	*13.11*	*0.03*	*2.89*	*0.30*
Winter						
Area Sources	4.88	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.01	0.11	0.10	0.00	0.01	0.01
Mobile Sources	1.67	8.39	13.16	0.02	2.88	0.29
Winter Total	*6.56*	*8.50*	*13.26*	*0.02*	*2.89*	*0.30*
Threshold	55	55	550	150	150	55
Substantial?	No	No	No	No	No	No

6.4 Localized Emissions

6.4.1 Toxic Air Contaminants

Distribution warehouses result in the generation of heavy diesel truck traffic and have been linked with high emissions of diesel particulate matter (DPM), established as an air toxic contaminant by ARB in 1998.[31] DPM was identified as a toxic because of its potential to cause cancer, premature deaths, and other health problems. Health hazards

associated with DPM are especially hazardous for children because their lungs are still developing, and the elderly who may have other serious health problems. As identified in Exhibit 2, there are no sensitive land uses located within one-quarter mile of the proposed warehouse.

Cancer risk and non-cancer health risks estimated using the EPA AERMOD model and guidance provided by SCAQMD in the *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* white paper.[32] AERMOD is the EPA regulatory dispersion model that provides multiple source Gaussian plume models with maximum ground-level concentrations for point, area, flare, and volume sources. AERMOD replaced the Industrial Source Complex (ISC3) model in 2005 as the EPA regulatory model for toxic emissions. The composite emissions factor for idling trucks and on-site truck movement was estimated using Emissions Factor (EMFAC2007) version 2.3. EMFAC2007 was developed by ARB to calculate emissions inventories for mobile vehicles operating in California based on raw vehicle data. EMFAC2007 and AERMOD outputs are attached as Appendix D and E, respectively.

The average hourly DPM emissions factor for each idling truck visiting the proposed warehouse is estimated at 0.886 grams per hour (g/hr) for LHD, MHD, and HHD vehicle classes. Based on the estimated peak evening hour traffic of 6 trucks and a building area of 72,555 square meters (m^2), the average hourly idling emissions factor from the proposed building is 1.628E-09 grams per second per square meter ($g/sec/m^2$). Truck movement was estimated at 0.16 miles per truck along north-south drive aisles and 0.07 miles per truck at the northern drive aisle with running (10 miles per hour) emissions factors at 5.4832E-09 $g/sec/m^2$ and 1.226E-08 $g/sec/m^2$, respectively. These emissions factors were input into AERMOD to estimate DPM concentrations in a 400-meter grid around the project site at 40-meter transects. The top ten worst average hourly concentrations around the proposed warehouse are summarized in Table 11 (Average Diesel Particulate Concentrations). Please note that the average concentrations of DPM have been adjusted to account for State regulations that limit truck idling to five minutes.

Table 11
Average Diesel Particulate Concentrations ($\mu g/m^3$)

Rank	Coordinates		Concentrations
	X	Y	
1	40	200	0.02959
2	40	160	0.02815
3	40	120	0.02692
4	40	240	0.02498
5	40	80	0.02469
6	80	200	0.02451
7	80	240	0.02427
8	0	120	0.02239
9	0	160	0.02235
10	80	160	0.02177

Hand calculations for determining cancer and non-cancer risk are attached as Appendix I, HC1 for idling/running emissions factors and HC2 for cancer and non-cancer risk equations. Because there are no sensitive receptors in the area, this report identifies work exposure to DPM. Assuming that the proposed warehouse will not be operated on a 24-hour schedule, average worker exposure is 46 years (0.66 lifetime exposure adjustment). The incremental increase of cancer risk in the project vicinity ranges from 4.3 in one million to 5.9 in one million. These incremental increases are less than the threshold of 10 in one million established by SCAQMD. The non-cancer hazard index at the receptors ranges from 0.004 to 0.006. These hazard index values are less than the threshold of 1.0 established by SCAQMD. The results of the cancer and non-cancer risk assessments are summarized in Table 12 (Cancer and Non-Cancer Risk).

Table 12
Cancer and Non-Cancer Risk

Rank	Cancer Risk	Non-Cancer Risk
1	5.859E-06	0.006
2	5.574E-06	0.006
3	5.330E-06	0.005
4	4.946E-06	0.005
5	4.889E-06	0.005
6	4.853E-06	0.005
7	4.805E-06	0.005
8	4.433E-06	0.004
9	4.425E-06	0.004
10	4.310E-06	0.004
Threshold	*1.000E-05*	*1.000*
Substantial?	No	No

6.4.2 Carbon Monoxide Hotspots

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to violate State and Federal CO standards at intersections, even if the broader Basin is in attainment for Federal and State levels. In general, SCAQMD and the California Department of Transportation *Project-Level Carbon Monoxide Protocol* (CO Protocol) recommend analysis of CO hotspots when a project increases traffic volumes at an intersection by more than two percent that is operating at LOS D or worse.[33] [34] Although the CO Protocol provides a method for screening projects from the need to model CO releases at affected intersections, the proposed project is considered a "special condition" due to the increased generation of heavy-trucks in the fleet mix and therefore fails to pass the screening protocol.

The project traffic study analyzed the impacts of traffic at the two project driveways on Valley Boulevard, the project driveway on Commerce Drive, the intersection of Valley Boulevard at Commerce Drive, and the intersection of Valley Boulevard/Ontario Mills Parkway at Etiwanda Avenue (see Appendix C). In the year 2012, evening peak hour traffic increases from the proposed project are estimated at approximately 0.7 percent

(16 project trips/2,106 total volume) at the intersection of Valley Boulevard at Commerce Drive, 0.3 percent (10 project trips/2,780 total volume) at the intersection of Valley Boulevard/Ontario Mills Parkway at Etiwanda Avenue. There are no residential or other land uses that can be classified as sensitive receptors adjacent to or near these intersections or the project site. Sidewalks are located along Valley Boulevard, Commerce Drive, and Etiwanda Avenue. These uses are considered sensitive receptors because they have the potential to support the elderly, children, and other receptors that may be sensitive to high pollutant concentrations.

Carbon monoxide increases based on the peak evening cumulative traffic increases from ambient traffic volumes and the proposed project in the year 2012 at the project study intersections were modeled using the CALINE4 (CL4) software as recommended by the Caltrans CO Protocol (see Appendix F). CL4 is a linear dispersion model that uses roadway geometry, worst-case meteorological parameters, anticipated traffic volumes, and sensitive receptor positions to predict carbon monoxide concentrations in addition to ambient carbon monoxide levels.[35] Peak evening traffic volumes were utilized because this represents the greatest traffic contribution from the project. The resulting concentrations levels are compared to the State and Federal one-hour carbon monoxide standards to determine if a localized violation would occur, 20 ppm and 35 ppm respectively.

CT-EMFAC2007, a modified version of EMFAC2007 developed for Caltrans projects, was utilized to estimate average hourly emissions (see Appendix G) as recommended by the CO Protocol. All intersections were modeled using a 29 percent truck fleet mix as identified in the project traffic study. Meteorological inputs include an ambient temperature of 32 C that includes a +5 degree evening increase pursuant to the Caltrans CO Protocol, a worst-case wind angle assessment with a standard deviation of 10 degrees, and a wind speed of 0.5 meters per second. Average ambient carbon monoxide levels are set at 3.6 ppm based on project future year 1-hour concentrations for the Central San Bernardino Valley provided by SCAQMD.

The sidewalks along Valley Boulevard at Commerce Drive and Etiwanda Avenue are identified as receptors A and B respectively. Table 13 (Carbon Monoxide Concentrations) summarizes the results of the CL4 model. The table identifies the receptor, vicinal intersections, carbon monoxide increase from the cumulative traffic volumes, and the total carbon monoxide concentration accounting for ambient levels. The results of the model indicate that a maximum increase of 0.2 ppm will occur at any intersection and that no sensitive receptor will be exposed to carbon monoxide levels that exceed the 20 ppm or 35 ppm AAQS.

Table 13
Carbon Monoxide Concentrations

Intersection	Receptor	Concentration Increase (ppm)	Total Concentration (ppm)
Valley/Ontario Mills @ Commerce	Sidewalk A	0.2	3.9
Valley @ Etiwanda	Sidewalk B	0.0	4.0

6.5 Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed warehouse is sited within an existing industrial area. The proposed warehouse is not considered a sensitive receptor and therefore would not be substantially affected by potential odors from existing industrial uses operations. The proposed warehouse, in turn, does not produce odors that would affect a substantial number of people considering that the proposed warehouse will not result in the manufacturing of any products and that there are no sensitive receptors in the project vicinity.

6.6 Cumulative Impacts

6.6.1 Cumulative Construction Impacts

Cumulative short-term, construction-related emissions from the project will not contribute considerably to any potential cumulative air quality impact because short-term project emissions will be less than significant and other concurrent construction projects in the region will be required to implement standard air quality regulations and mitigation pursuant to State CEQA requirements, just as this project has.

6.6.2 Cumulative Operational Impacts

The SCAQMD CEQA Air Quality Handbook identifies methodologies for analyzing long-term cumulative air quality impacts. These methodologies identify three performance standards that can be used to determine if long-term emissions will result in cumulative impacts. Essentially, these methodologies assess growth associated with a land use project and are evaluated for consistency with regional projections. Consistency would demonstrate that the project's cumulative impacts are not significant. Exceedance of regional projections could result in potentially significant impacts.

To determine if the project could result in cumulative impacts, the methodology identified in Table A9-15 of the Air Quality Handbook has been utilized. This method establishes a minimum one percent per year reduction in project emissions over the life of the project. If this minimum reduction is met, the project would not result in a cumulative impact because emissions would demonstrate consistency with the AQMP.

Table 14
Long-Term Cumulative Emissions Reductions (tons/yr)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Year 2014						
Area Sources	0.89	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	0.29	1.45	2.40	0.00	0.48	0.05
2014 Total	**1.18**	**1.47**	**2.42**	**0.00**	**0.48**	**0.05**
Year 2040						
Area Sources	0.89	0.00	0.00	0.00	0.00	0.00
Energy Demand	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	0.11	0.30	0.92	0.00	0.45	0.03
2040 Total	**1.00**	**0.32**	**0.94**	**0.00**	**0.45**	**0.03**
Maximum Allowable Emissions	*0.91*	*1.13*	*1.86*	*0.00*	*0.37*	*0.16*
Variance	**-0.09**	**0.81**	**0.92**	**0.00**	**-0.08**	**0.13**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Opening-year emissions (2014) and year 2040 emissions (Appendix B) are summarized in Table 14 (Long-Term Cumulative Emissions Reductions), based on an assumed 26-year (2014 to 2040) lifespan for the proposed warehouse. Generally, a 30-year lifespan is utilized for the life of a project; however, CalEEMod only provides emissions estimated up to year 2040. As emissions technology improves past year 2040, emissions will be reduced beyond those modeled in Table 14, further reducing emission from the proposed warehouse beyond a 26-year lifespan.

Maximum allowable emissions equivalent to a minimum one percent reduction over the project lifespan for each criteria pollutant are identified in Table 14 and calculations are provided in Appendix H, HC3. Long-term emissions reflect long-term emissions technology improvements as modeled by CalEEMod utilizing State EMFAC2007 emissions factors, long-term CALGREEN building code and State water conservation requirements including use of low-VOC paints (maximum 50 g/l), low-flow faucets and toilets, water efficient irrigation (6.1 percent water demand reduction), and the upcoming minimum 50 percent commercial operations recycling requirement. The variance between year 2040 emissions and the maximum allowable one percent per year emissions threshold indicates that Year 2040 cumulative emissions from operation of the warehouse will be less than maximum allowable emissions for all criteria pollutants except PM^{10}.

Emissions of PM^{10} will be reduced by approximately five percent over the 26 year project life, or approximately 0.18 percent per year. This is 0.08 total tons over the allowable 0.32 tons, or 0.003 tons per year (six lbs per year) over the life of the project. An excess of six pounds per year is not substantial in light of the long-term emissions reductions that will be achieved over the life of the project. Similarly, emissions of reactive organic compounds will be reduced by 15 percent over the life of the project. Table 14 notes that ROG emissions will exceed allowable emissions by 0.09 tons. This is approximately seven excess pounds per year and is not substantial in light of the long-term emissions reductions that will be achieved.

This Page Intentionally Left Blank

7 Climate Change Impact Analysis

7.1 Thresholds of Significance

The proposed project could result in potentially significant impacts related to greenhouse gas emissions and global climate change if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.

The County of San Bernardino adopted its "Greenhouse Gas Emissions Plan" in December 2011.[36] The purpose of the GHG Plan is to reduce the County's internal and external GHG emissions by 15 percent below current (2011) levels by year 2020. The GHG Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the state CEQA Guidelines. The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalent (MTCO2E) per year or more. Projects that do not exceed this threshold require no further climate change analysis. Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions.

7.2 Direct and Indirect Emissions

The proposed warehouse will include activities that emit greenhouse gas emissions over the short- and long-term. While one project could not be said to cause global climate change, individual projects contribute cumulatively to greenhouse gas emissions that result in climate change. To determine if the proposed warehouse will exceed the 3,000 MTC2OE screening threshold, a greenhouse gas emissions inventory was prepared for the project and is analyzed below.

7.2.1 Short-Term Emissions

The project will result in short-term greenhouse gas emissions from construction and installation activities associated with construction of the proposed warehouse. Greenhouse gas emissions will be released by equipment used for demolition, grading, paving, and building construction activities. GHG emissions will also result from worker and vendor trips to and from the project site. Table 15 (Construction Greenhouse Gas Emissions) summarizes the estimated yearly emissions from construction activities. Carbon dioxide emissions from construction equipment and worker/vendor trips were estimated utilizing the California Emissions Estimator Model (CalEEMod) version 2011.1.1 (see Appendix B). Construction activities are short-term and cease to emit greenhouse

gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, SCAQMD recommends in its draft threshold to amortize construction emissions over a 30-year operational lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project GHG inventory. Amortized construction emissions are included in Table 15.

Table 15
Construction Greenhouse Gas Emissions

Construction Year	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
2012	287.14	0.03	0.00	287.75
2013	321.50	0.03	0.00	322.14
SUB-TOTAL	608.94	0.06	0.00	609.89
*AMORTIZED TOTAL^*	*20.30*	*0.00*	*0.00*	*20.33*

* MTCO2E
Note: Slight variations may occur due to rounding and variations in modeling software
^ Amortized over 30-years

7.2.2 Long-Term Emissions

Warehousing and distribution activities will result in continuous greenhouse gas emissions from mobile, area, and operational sources. Mobile sources including vehicle trips to and from the project site will result primarily in emissions of CO_2 with minor emissions of CH_4 and N_2O. The most significant GHG emission from natural gas usage will be methane. Electricity usage by the warehouse and indirect usage of electricity for water and wastewater conveyance will result primarily in emissions of carbon dioxide. Disposal of solid waste will result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emission from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas inventory for the build-out of the proposed project.

To determine this inventory, CalEEMod was used. The methodology utilized for each emissions source is based on the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* handbook.[37] A summary of the project's long-term greenhouse gas emissions inventory is included in Table 16 (Long-Term Greenhouse Gas Inventory). The emissions inventory is presented as metric tons of carbon dioxide equivalent (MTCO2E) meaning that all emissions have been weighted based on their Global Warming Potential (GWP) (a metric ton is equal to 1.102 US short tons). Mobile sources are based on annual vehicle miles traveled (VMT) based on daily trip generation identified in the project traffic study.[38] Natural gas usage, electricity usage, and solid waste disposal are based on default demand figures utilized in CalEEMod.

Water and wastewater demand are based on a study prepared by the project proponent that evaluated actual wastewater discharges from 14 distribution warehouses in unincorporated San Bernardino County, west of the City of Fontana, California (approximately 13 miles west of the project site).[39] This study was performed for the

Kaiser Center Sewer Plant that will treat discharges from the proposed project. The warehouses range in size from 105,041 SF to 849,054 SF with an average size of 499,164 SF. Office space in the distribution centers range from one percent to ten percent with an average of 2.8 percent. This is comparable to the proposed warehouse office ratio of approximately one percent. The study surveyed each operation to gather data on employee counts, hours and days of operation, and water usage. A fixture count for each building was also acquired. Average daily wastewater discharges were estimated between year 2007 and 2009 based on water meter readings and estimates from fixture counts. These figures were used to project a conservative daily discharge rate for each building, based on peak daily flows rounded up. The compilation of the wastewater discharge data is included as Appendix H. Based on the size of the warehouses under study and the estimated daily flow rates, an average of 2.9 gallons per day per 1,000 SF of building is discharged. Utilizing this factor, the proposed warehouse is estimated to discharge 542 gallons per day (GPD) or 197,728 gallons per year. Yearly wastewater discharges were scaled by a factor of 1.25 to determine indoor water demand at 247,160 gallons per year. Estimated irrigation needs for landscaping was calculated by the project landscape architect at 920,839 gallons per year; bringing total water demand to 1,167,999 gallons per year. Hand calculations for project specific wastewater and water demand are included in Appendix I.

Table 16
Long-Term Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area	0.00	0.00	0.00	0.00
Energy	220.10	0.01	0.00	221.47
Mobile	472.00	0.01	0.00	472.27
Solid Waste	379.47	0.01	0.00	850.42
Water/Wastewater	3.91	0.01	0.00	4.16
TOTAL	*1,075.48*	*22.46*	*0.00*	*1,548.32*

* MTCO2E/YR
Note: Slight variations may occur due to rounding

7.2.3 Greenhouse Gas Emissions Inventory

Table 17 (Greenhouse Gas Emissions Inventory) summarizes the yearly estimated greenhouse gas emissions from construction of the warehouse and operational sources. The total yearly carbon dioxide equivalent emissions will be approximately 1,548.32 MTCO2E. This does not exceed the County's threshold of 3,000 MTCO2E/YR; therefore, the project will not result in a substantial contribution to global climate change. No mitigation is required.

Table 17
Greenhouse Gas Emissions Inventory

	GHG Emissions (MT/YR)			
Source	**CO_2**	**CH_4**	**N_2O**	**TOTAL***
Construction^	20.30	0.00	0.00	20.33
Operational	1,075.48	22.46	0.00	1,548.32
GRAND TOTAL	**1,095.78**	**22.46**	**0.00**	**1,568.65**

* MTCO2E/YR
Note: Slight variations may occur due to rounding
^ Construction impacts amortized over 30-years

7.3 Greenhouse Gas Emissions Reduction Planning

7.3.1 California Air Resources Board Scoping Plan

ARB's *Scoping Plan* identifies strategies to reduce California's greenhouse gas emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project, such as energy efficiency. Finally, while some measures are not directly applicable, the project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. **California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions.** Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.[40] Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. **California Light-Duty Vehicle Greenhouse Gas Standards.** Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. **Energy Efficiency.** Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. **Renewables Portfolio Standards.** Achieve 332 percent renewable energy mix statewide.
5. **Low Carbon Fuel Standard.** Develop and adopt the Low Carbon Fuel Standard.
6. **Regional Transportation-Related Greenhouse Gas Targets.** Develop regional greenhouse gas emissions reduction targets for passenger vehicles.
7. **Vehicle Efficiency Measures.** Implement light-duty vehicle efficiency measures.
8. **Goods Movement.** Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.

9. **Million Solar Roofs Program.** Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. **Medium- and Heavy-Duty Vehicles.** Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.[41] Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. **Industrial Emissions.** Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. **High Speed Rail.** Support implementation of a high speed rail system.
13. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. **High Global Warming Potential Gases.** Adopt measures to reduce high warming global potential gases.
15. **Recycling and Waste.** Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. **Sustainable Forests.** Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR.
17. **Water.** Continue efficiency programs and use cleaner energy sources to move and treat water.
18. **Agriculture.** In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 18 summarizes the project's consistency with the State Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports six of the action categories through energy efficiency, water conservation, recycling, and landscaping.

Table 18
Scoping Plan Consistency Summary

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	**Not Applicable.** These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect distribution warehouses.
Light-Duty Vehicle Standards	T-1	**Not Applicable.** This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	**Not Applicable.** Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	**Not Applicable.** Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	**Not Applicable.** The project will result in substantial emissions of greenhouse gas emissions; therefore, transportation related emissions reductions are not required.
Vehicle Efficiency Measures	T-4	**Not Applicable.** Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	**Not applicable.** Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the proposed warehouse would not interfere with their implementation.
	T-6	
Million Solar Roofs Program	E-4	**Not Applicable.** Sets goal for use of solar systems throughout the state. While the project currently does not include solar energy generation, the building could support solar panels in the future.

Action	Supporting Measures	Consistency
Medium- & Heavy-Duty Vehicles	T-7	**Consistent.** MD and HD trucks and trailers working from the proposed warehouse will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	**Not Applicable.** These measures are applicable to large industrial facilities (> 500,000 MTCOE2/YR) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	**Not Applicable.** Supports increased mobility choice.
Green Building Strategy	GB-1	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements.
High Global Warming Potential Gases	H-1	**Not Applicable.** The proposed warehouse is not a substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	**Consistent.** The project will be required recycle a minimum of 50 percent from construction activities and warehouse operations per State and County requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	**Consistent.** The project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	**Consistent.** The project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	**Not Applicable.** The project is not an agricultural use.

7.3.2 San Bernardino County Greenhouse Gas Emissions Reduction Plan

In December 2011, the County of San Bernardino adopted the "Greenhouse Gas Emissions Reduction Plan". The purpose of the GHG Plan is to reduce the County's internal and external GHG emissions by 15 percent below current (2011) levels by year 2020 in consistency with State climate change goals pursuant to AB32. The specific objectives of the GHG Plan are as follows:

- Reduce emissions from activities over which the County has jurisdictional and operational control consistent with the target reductions of Assembly Bill (AB) 32 Scoping Plan;
- Provide estimated GHG reductions associated with the County's existing sustainability efforts and integrate the County's sustainability efforts into the discrete actions of this Plan;
- Provide a list of discrete actions that will reduce GHG emissions; and Approve a GHG Plan that satisfies the requirements of Section 15183.5 of the California Environmental Quality Act (CEQA) Guidelines, so that compliance with the GHG Plan can be used in appropriate situations to determine the significance of a project's effects relating to GHG emissions, thus providing streamlined CEQA analysis of future projects that are consistent with the approved GHG Plan.

The GHG Plan identifies goals and strategies to obtain the 2020 reduction target. Reduction measures are classified into broad classes based on the source of the reduction measure. Class 1 (R1) reduction measures are those adopted at the state or regional level and require no additional action on behalf of the County other than required implementation. Class 2 (R2) reflect quantified measures that have or will be implemented by the County as a result of the GHG Plan. Class 3 (R3) measures are qualified measures that have or will be implemented by the County as a result of the GHG Plan.

Section 5.6 of the GHG Plan identifies the procedures for reviewing development projects for consistency with the GHG Plan. The GHG Plan has been designed in accordance with Section 15183.5 of the State CEQA Guidelines which provides for streamline review of climate change issues related to development projects when found consistent with an applicable greenhouse gas emissions reduction plan. The GHG Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the state CEQA Guidelines. The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalent (MTCO2E) per year or more. Projects that do not exceed this threshold require no further climate change analysis. Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions.

As analyzed and discussed in Section 7.2, the project will not exceed the 3,000 MTC2OE/YR screening threshold identified in the GHG Plan; therefore, the project is consistent with the GHG Plan pursuant to Section 15183.5 of the State CEQA Guidelines.

7.3.3 Green County San Bernardino

In August 2007, the San Bernardino County Board of Supervisors launched four environmental initiatives known as Green County San Bernardino.[42] These initiatives included:

1. Adoption of a County policy that would require that new county buildings and major renovations of existing county facilities comply with U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver standards. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health – sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.
2. Establishment of the San Bernardino County Green Builder Program (SBCGB) as a voluntary green building incentive program for residential construction. Under the SBCGB program, builders who agree to satisfy the requirements of the California Green Builder program would receive priority processing for plan review from the County Land Use Services Department, including guaranteed timelines and priority field inspection service. The California Green Builder program has set goals for significant improvements in energy efficiency, indoor air quality and comfort, onsite waste recycling, and water and wood conservation.
3. Waiver of County building permit fees for the installation of solar energy systems, wind-generated electrical systems, tankless water heaters, and highly energy-efficient heating, ventilation and air-conditioning systems for existing buildings. The waiver of fees would promote energy conservation, facilitate a reduction in greenhouse gas emission, and reduce the public's reliance on commercial energy sources.
4. Establishment of a County website, www.greencountysb.com, to serve as a resource for the public to obtain information on creating and maintaining environmentally friendly buildings, landscapes, and lifestyles. Through this website, the public would have access to the various "green" programs such as the Green Builder Program, the Municipal LEED program, and the New Commercial Construction and Renovation LEED Program. The website would also contain information pertaining to energy efficient building permits, useful "green" tips, and information on affordable ways to protect the environment.

These initiatives are critically tied with the County's current efforts to reduce greenhouse gas emissions through a GHG reduction plan and General Plan amendment. The County's Green County website provides information related to transportation, construction, recycling, and landscaping for the community to learn how to reduce individual and development-related carbon footprints. The proposed warehouse will not result in substantial emissions of greenhouse gases and will not conflict with the Green County initiatives.

This Page Intentionally Left Blank

8 Mitigation Measures

8.1 Required Mitigation

The following mitigation measures are required to ensure that project-related emissions do not exceed established thresholds.

AQ1 *Coating Restrictions.* Prior to issuance of building permits, the project proponent shall submit, to the satisfaction of County Planning, a Coating Restriction Plan (CRP), consistent with South Coast Air Quality Management District (SCAQMD) guidelines and a letter agreeing to include in any construction contracts and/or subcontracts a requirement that the contractors adhere to the requirements of the CRP. The CRP measures shall be implemented to the satisfaction of County Building and Safety. These shall include the following:

- The volatile organic compounds (VOC) of proposed architectural coatings shall not exceed zero for interior applications.

This measure shall conform to the performance standard that emissions of volatile organic compounds from application of interior or exterior coatings shall not exceed the daily emissions thresholds established by the South Coast Air Quality Management District. The CRP shall specify use of High-Volume, Low Pressure (HVLP) spray guns for application of coatings.

8.2 Regulatory Requirements and Standards

The following lists existing regulatory requirements and standards that are required to be implemented as part of the project. While the following measures are not considered mitigation pursuant to the CEQA, the Lead Agency may choose to include the following as conditions of approval to ensure that they appropriately implemented.

S1 *Dust Control Plan.* The developer shall submit to the satisfaction of County Planning a Dust Control Plan (DCP) consistent with SCAQMD guidelines and a letter agreeing to include in any construction contracts and/or subcontracts a requirement that the contractors adhere to the requirements of the approved DCP. The DCP shall include activities to reduce on-site and off-site fugitive dust production, including:

- Exposed soil shall be kept moist through a minimum of twice daily watering to reduce fugitive dust, throughout grading and construction activities. During high wind conditions (i.e., wind speeds exceeding 25 mph), areas with disturbed soil will be watered hourly and activities on unpaved surfaces shall be terminated until wind speeds no longer exceed 25 mph. Use reclaimed water if available.
- Vehicle tires will be washed before leaving the project site to enter a paved road.
- Paved site access driveways and adjacent streets will be washed and swept by street sweepers daily, if there are visible signs of any dirt track-out.

- All trucks hauling soil or other loose materials off-site shall be covered.
- On-site hauling shall either be covered or maintain at least 2 feet of "freeboard".
- Storage piles that are to be left in place for more than 3 working days shall either be: 1) re-vegetated, or 2) covered with plastic or 3) sprayed with a non-toxic soil binder until placed in use.

S2 *CALGREEN Requirements.* Prior to issuance of building permits, the County Building and Safety Division shall verify that construction drawings reflect all applicable CALGREEN requirements of the California Building Code in the design of each proposed building, including use of low-flow fixtures.

S3 *Water Efficient Landscaping.* Prior to approval of landscape plans, the County Planning Division shall verify that the landscape design reflects the efficiency requirements of the County and State water efficient landscape requirements.

9 References

[1] San Bernardino County. Kaiser Commerce Center Specific Plan. July 3, 2003
[2] South Coast Air Quality Management District. 2007 Air Quality Management Plan Final Program Environmental Impact report. June 2007
[3] Western Regional Climate Center. Period of Record Monthly Climate Summary: Fontana Kaiser, California (043120). http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3120 [April 28, 2011]
[4] United States Geological Service. 7.5 Minute Series Quadrangle. Fontana, California. 1980
[5] South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993
[6] United States Environmental Protection Agency. Particulate Matter. http://www.epa.gov/air/particlepollution/index.html [September 20, 2010]
[7] South Coast Air Quality Management District. Air Quality. 2007
[8] South Coast Air Quality Management District. Air Quality. 2008
[9] South Coast Air Quality Management District. Air Quality. 2009
[10] South Coast Air Quality Management District. Air Quality Monitoring Network Plan. July 2010
[11] United States Environmental Protection Agency. EnviroMapper for Envirofacts. [May 23, 2011]
[12] Kunzman Associates. Valley Boulevard/Commerce Drive Project Traffic Impact Analysis. May 23, 2011
[13] United States Environmental Protection Agency. Greenhouse Gas Emissions. www.epa.gov/climatechange/emissions/index.html [September 28, 2010]
[14] Intergovernmental Panel on Climate Change. Changes in Atmospheric Constituents and in Radiative Forcing (Working Group I). Forth Assessment Report. 2007
[15] California Natural Resources Agency. 2009 California Climate Adaptation Strategy.
[16] United States Environmental Protection Agency. Clean Air Act. www.epa.gov/air/caa/ [February 22, 2011]
[17] California Air Resources Board. Statewide Truck and Bus Regulations. www.arb.ca.gov/regact/2008/truckbus08/truckbus08.htm [February 22, 2011]
[18] California Air Resources Board. Facts About Truck and Bus Regulation Compliance Requirements Summary. January 2011
[19] South Coast Air Quality Management District. Air Quality Management Plan. June 2007
[20] California Climate Action Team. Biennial Report. April 2010
[21] Southern California Association of Governments. Senate Bill 3.75 Fact Sheet. www.scag.ca.gov/sb375/factsheets.htm [October 7, 2010]
[22] California Air Resources Board. Climate Change Scoping Plan. December 2008
[23] California Air Resources Board. AB 32 Climate Change, Scoping Plan Progress Report. September 2010

[24] California Air Resources Board. Cap-and-Trade. http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm [September 14, 2011]
[25] California Building Standards Commission. California Code of Regulations Title 24. California Green Building Standards Code. 2010
[26] South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993
[27] San Bernardino County. Kaiser Commerce Center Specific Plan. July 3, 2003
[28] South Coast Air Quality Management District. 2007 Air Quality Management Plan Final Program Environmental Impact report. June 2007
[29] Kunzman Associates. Valley Boulevard/Commerce Drive Project Traffic Impact Analysis. May 23, 2011
[30] South Coast Air Quality Management District. California Emissions Estimator Model User's Guide. February 2011
[31] California Air Resources Board. Facts about California's Accomplishments in Reducing Diesel Particulate Matter Emissions. http://www.arb.ca.gov/diesel/factsheets/dieselpmfs.pdf [February 28, 2011]
[32] South Coast Air Quality Management District. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis. August 2003
[33] California Department of Transportation. Transportation Project-Level Carbon Monoxide Protocol. 1997
[34] South Coast Air Quality Management District. Initial Study (IS) and Draft Mitigated Negative Declaration (Draft MND) for the Proposed Project No. P200500723 The Alabama Business Center – Industrial Warehouse Facility. September 2006
[35] California Department of Transportation. Users' Guide for CL4. June 1998
[36] San Bernardino County. Greenhouse Gas Emissions Reduction Plan. September 2011
[37] California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Emissions. August 2010
[38] Kunzman Associates. Valley Boulevard/Commerce Drive Project Traffic Impact Analysis. May 23, 2011
[39] ProLogis. Kaiser Sewer Plant Study. March 2010
[40] California Air Resources Board. California GHG Emissions – Forecast (2002-2020). October 2010
[41] California Air Resources Board. Scoping Plan Measures Implementation Timeline. October 2010
[42] San Bernardino County. News from the County of San Bernardino. Biane Unveils "Green County San Bernardino" Programs. August 2007

APPENDIX A

Air Quality Modeling Assumptions

Project Charecteristics							
Project Detail							
Project	2976						
Name	2976 KCC ProLogis Park						
Location	SC						
Windspeed	2.2						
Precipitation Frequency	31						
Climate Zone	10						
Land Use Setting	Urban						
Operational Year	2014						
Total Population	0						
Total Acerage	9.05						
Utility Information							
Utility Company	Southern California Edison						
CO2 Intensity Factor	641.26						
CH4 intensity Factor	0.029						
N2O Intensity Factor	0.011						
Using Historical Data?	0						
Pollutants							
ROG	1						
NOX	1						
CO	1						
SO2	1						
PM10	1						
PM2_5	1						
PM10_FUG	1						
PM25_FUG	1						
TOG	0						
PB	0						
CO2_BIO	0						
CO2_NBIO	0						
CO2	1						
CH4	1						
N2O	1						
CO2E	1						
Land Use		***Amount***	***Metric***	***Acres***	***Square Feet***	***Population***	
Commercial	General Office Building	15	1000sqft	0.34	15000	0	
Industrial	Unrefrigerated Warehouse-No Rail	171.8	1000sqft	3.93	171800	0	
Parking	Parking Lot	208.04	1000sqft	4.78	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
Construction Emissions	***Name***	***Type***	***Start***	***End***	***Work Week***	***Total days***	***PhaseDescription***
1	Site Preparation	Site Preparation	2012/06/01	2012/06/14	5	10	0
2	Grading	Grading	2012/06/15	2012/09/06	5	60	0
3	Building Construction	Building Construction	2012/09/07	2013/07/25	5	230	0
4	Paving	Paving	2013/07/26	2013/08/22	5	20	0
5	Architectural Coating	Architectural Coating	2013/08/23	2013/09/19	5	20	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
Equipment	**Type**	**QTY**	**Hours**	**HP**	**Load**		
Site Preparation	Rubber Tired Dozers	3	8	358	0.4		
Site Preparation	Tractors/Loaders/Backhoes	4	8	75	0.37		
Grading	Excavators	1	8	157	0.38		
Grading	Graders	1	8	162	0.41		
Grading	Rubber Tired Dozers	1	8	358	0.4		
Grading	Tractors/Loaders/Backhoes	1	8	75	0.37		
Building Construction	Cranes	1	7	208	0.29		
Building Construction	Forklifts	3	8	149	0.2		
Building Construction	Generator Sets	1	8	84	0.5		
Building Construction	Tractors/Loaders/Backhoes	3	7	75	0.37		
Building Construction	Welders	1	8	46	0.3		
Paving	Pavers	2	8	89	0.62		
Paving	Paving Equipment	2	8	82	0.53		
Paving	Rollers	2	8	84	0.56		
Architectural Coating	Air Compressors	1	6	78	0.32		

0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
		Trips			**Trip Length**			**Vechicle Class**		
Trips and VMT	**Worker**	**Vendor**	**Haul**	**Worker**	**Venddor**	**Haul**	**Worker**	**Vendor**	**Haul**	
Site Preparation	18	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Grading	3	0	5913	10.8	7.3	1	LD_Mix	HDT_Mix	HHDT	
Building Construction	77	31	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Paving	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Architectural Coating	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
	Paved (%)									
On-Road Dust	**Worker**	**Vendor**	**Haul**	**Road Silt**	**Silt Content**	**Moisture Content**	**Vehicle Weight**	**Vehicle Speed**		
Site Preparation	100	100	100	0.1	8.5	0.5	2.4	40		
Grading	100	100	100	0.1	8.5	0.5	2.4	40		
Building Construction	100	100	100	0.1	8.5	0.5	2.4	40		
Paving	100	100	100	0.1	8.5	0.5	2.4	40		
Architectural Coating	100	100	100	0.1	8.5	0.5	2.4	40		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
Demolition	**Metric**	**QTY**								
0	0	0								
0	0	0								
0	0	0								
0	0	0								
							Moisture Content			
Grading	**Import**	**Export**	**Metric**	**Phased?**	**Speed**	**Acres**	**Bulldozing**	**Loading**	**Silt Content**	
Site Preparation	0	0	0	0	7.1	0	7.9	12	6.9	
Grading	118255	0	Cubic Yards	0	7.1	10	7.9	12	6.9	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
				Residential				**Nonresidential**		
Architectural Coating	**Start**	**End**	**Interior**	**Area**	**Exterior**	**Area**	**Interior**	**Area**	**Exterior**	**Area**
Architectural Coating	2008/07/01	3000/12/31	50	0	100	0	250	280200	250	93400
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
Paving Area										
0										
0										
0										
0										
Mobile Sources										
Vehicle Trips	**Metric**	**WD_TR**	**ST_TR**	**SU_TR**	**HW_TL**	**HS_TL**	**HO_TL**			
General Office Building	1000sqft	0	0	0	0	0	0			
Parking Lot	1000sqft	0	0	0	0	0	0			
Unrefrigerated Warehouse-No Rail	1000sqft	1.57	1.57	1.57	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			

General Office Building	1000sqft	CC_TL	CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP							
Parking Lot	1000sqft	7.3	9.5	7.3	77	19	4							
Unrefrigerated Warehouse-No Rail	1000sqft	7.3	9.5	7.3	0	0	0							
0	0	7.3	9.5	7.3	92	5	3							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
General Office Building	1000sqft	HW_TTP	HS_TTP	HO_TTP	CC_TTP	CW_TTP	CNW_TTP							
Parking Lot	1000sqft	0	0	0	48	33	19							
Unrefrigerated Warehouse-No Rail	1000sqft	0	0	0	0	0	0							
0	0	0	0	0	0	59	41							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
Emissions Factors	**EmissionType**	**LDA**	**LDT1**	**LDT2**	**MDV**	**LHD1**	**LHD2**	**MHD**	**HHD**	**OBUS**	**UBUS**	**MCY**	**SBUS**	**MH**
A	FleetMix	0.71	0	0	0	0.13	0	0.09	0.07	0	0	0	0	0
A	CH4_IDLEX	0	0	0	0	0.0015	0.0013	0.0009	0.09	0.0012	0	0	0.03	0
A	CH4_RUNEX	0.01	0.02	0.02	0.03	0.02	0.01	0.01	0.04	0.02	0.05	0.22	0.03	0.03
A	CH4_STREX	0.01	0.01	0.02	0.03	0.02	0.02	0.02	0.09	0.03	0.07	0.13	0.02	0.03
A	CO_IDLEX	0	0	0	0	0.21	0.18	0.14	9.39	0.17	0	0	5.32	0
A	CO_RUNEX	1.59	2.46	2.41	3.02	2.66	1.5	2.36	4.55	2.7	7.93	30.36	6.43	6.64
A	CO_STREX	3.47	4.33	4.85	6.24	5.86	4	5.44	24.05	8.74	17.04	9.83	6.42	11.25
A	CO2_IDLEX	0	0	0	0	7.9588	8.4611	12.4701	1352.0011	11.2093	0	0	546.015	0
A	CO2_RUNEX	355.5554	444.3236	460.4776	627.1002	634.5764	601.5887	1341.8655	1793.3205	1206.5954	2088.32	157.649	1386.09	728.9985
A	CO2_STREX	66.5367	82.1982	85.0941	116.6437	38.149	31.5988	12.8444	16.3608	20.419	45.4479	45.8222	17.3951	34.2583
A	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	24.1	0.12	0	0	8.68	0
A	NOX_RUNEX	0.13	0.22	0.28	0.38	1.24	2.32	5.19	9.44	3.31	14.52	1.15	9.54	1.57
A	NOX_STREX	0.23	0.26	0.45	0.58	1.6	1.34	0.61	2.7	1.19	2.02	0.3	0.41	1.03
A	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0022	0.23	0.0015	0	0	0.11	0
A	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.0092	0.004	0.01	0.01
A	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.02	0.15	0.44	0.08	0.23	0.02	0.38	0.01
A	PM10_STREX	0.0063	0.0075	0.01	0.01	0.0023	0.002	0.0011	0.0019	0.002	0.0037	0.01	0.001	0.0008
A	PM25_IDLEX	0	0	0	0	0.0002	0.0005	0.002	0.21	0.0013	0	0	0.1	0
A	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0088	0.003	0.0023	0.001	0.003	0.003
A	PM25_RUNEX	0.01	0.01	0.02	0.02	0.01	0.01	0.14	0.41	0.08	0.21	0.02	0.35	0.01
A	PM25_STREX	0.0058	0.007	0.01	0.01	0.0021	0.0019	0.001	0.0017	0.0019	0.0034	0.0096	0.0009	0.0007
A	ROG_DIURN	0.09	0.09	0.1	0.1	0.0025	0.0016	0.0006	0.0009	0.0007	0.0079	0.91	0.0075	1.38
A	ROG_HTSK	0.15	0.17	0.16	0.16	0.04	0.03	0.01	0.02	0.01	0.14	0.34	0.05	0.08
A	ROG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.13	0.02	0	0	0.73	0
A	ROG_RESTL	0.06	0.07	0.07	0.07	0.0008	0.0006	0.0003	0.0004	0.0003	0.0039	0.48	0.0028	0.5
A	ROG_RUNEX	0.04	0.08	0.06	0.1	0.19	0.13	0.18	0.87	0.16	1.07	2.96	0.54	0.21
A	ROG_RUNLS	0.070917	0.115038	0.120964	0.11735	0.365684	0.241463	0.088696	0.01229	0.157336	0.03453	0.36145	0.04668	0.017671
A	ROG_STREX	0.27	0.31	0.36	0.54	0.49	0.37	0.39	1.61	0.54	1.29	2.15	0.45	0.67
A	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0
A	SO2_RUNEX	0.0038	0.0047	0.0048	0.0065	0.0062	0.0059	0.01	0.01	0.01	0.02	0.0021	0.01	0.0072
A	SO2_STREX	0.0008	0.0009	0.0009	0.0013	0.0005	0.0004	0.0002	0.0006	0.0003	0.0007	0.0007	0.0003	0.0005
A	TOG_DIURN	0.09	0.09	0.1	0.1	0.0025	0.0016	0.0006	0.0009	0.0007	0.0079	0.91	0.0075	1.38
A	TOG_HTSK	0.15	0.17	0.16	0.16	0.04	0.03	0.01	0.02	0.01	0.14	0.34	0.05	0.08
A	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.43	0.02	0	0	0.81	0
A	TOG_RESTL	0.06	0.07	0.07	0.07	0.0008	0.0006	0.0003	0.0004	0.0003	0.0039	0.48	0.0028	0.5
A	TOG_RUNEX	0.06	0.1	0.09	0.14	0.22	0.15	0.2	0.99	0.19	1.18	3.22	0.6	0.25
A	TOG_RUNLS	0.070917	0.115038	0.120964	0.11735	0.365684	0.241463	0.088696	0.01229	0.157336	0.03453	0.36145	0.04668	0.017671
A	TOG_STREX	0.29	0.33	0.39	0.58	0.52	0.39	0.42	1.72	0.58	1.37	2.31	0.48	0.72
S	FleetMix	0.71	0	0	0	0.13	0	0.09	0.07	0	0	0	0	0
S	CH4_IDLEX	0	0	0	0	0.0015	0.0013	0.0009	0.09	0.0012	0	0	0.03	0
S	CH4_RUNEX	0.01	0.02	0.02	0.03	0.02	0.01	0.01	0.04	0.02	0.05	0.21	0.03	0.03
S	CH4_STREX	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.08	0.02	0.06	0.11	0.02	0.03
S	CO_IDLEX	0	0	0	0	0.21	0.18	0.14	6.83	0.17	0	0	5.32	0
S	CO_RUNEX	1.76	2.65	2.66	3.29	2.71	1.51	2.37	4.57	2.74	7.98	28.74	6.39	6.74
S	CO_STREX	2.64	3.33	3.69	4.77	4.56	3.15	4.46	19.93	7.02	14.23	8.69	5.43	8.7
S	CO2_IDLEX	0	0	0	0	7.9588	8.4611	12.4701	1429.0577	11.2093	0	0	546.015	0
S	CO2_RUNEX	378.6044	471.4899	489.1904	666.2835	634.5764	601.5887	1341.8655	1793.3205	1206.5954	2088.32	157.649	1386.09	728.9985
S	CO2_STREX	66.5367	82.1982	85.0941	116.6437	38.149	31.5988	12.8444	16.3608	20.419	45.4479	45.8222	17.3951	34.2583
S	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	24.95	0.12	0	0	8.68	0
S	NOX_RUNEX	0.12	0.21	0.27	0.36	1.22	2.31	5.18	9.43	3.28	14.45	1.09	9.51	1.54
S	NOX_STREX	0.21	0.24	0.41	0.54	1.54	1.29	0.59	2.59	1.14	1.92	0.29	0.39	0.98
S	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0022	0.19	0.0015	0	0	0.11	0
S	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01
S	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.0092	0.004	0.01	0.01
S	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.02	0.15	0.44	0.08	0.23	0.02	0.38	0.01
S	PM10_STREX	0.0063	0.0075	0.01	0.01	0.0023	0.002	0.0011	0.0019	0.002	0.0037	0.01	0.001	0.0008
S	PM25_IDLEX	0	0	0	0	0.0002	0.0005	0.002	0.18	0.0013	0	0	0.1	0
S	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054
S	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0088	0.003	0.0023	0.001	0.003	0.003
S	PM25_RUNEX	0.01	0.01	0.02	0.02	0.01	0.01	0.14	0.41	0.08	0.21	0.02	0.35	0.01
S	PM25_STREX	0.0058	0.007	0.01	0.01	0.0021	0.0019	0.001	0.0017	0.0019	0.0034	0.0096	0.0009	0.0007
S	ROG_DIURN	0.15	0.16	0.16	0.16	0.0038	0.0025	0.001	0.0014	0.0011	0.01	1.58	0.01	2.1
S	ROG_HTSK	0.17	0.18	0.18	0.17	0.04	0.03	0.01	0.02	0.01	0.15	0.41	0.05	0.08

S	ROG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.01	0.02	0	0	0.73	0
S	ROG_RESTL	0.11	0.12	0.12	0.13	0.0015	0.001	0.0005	0.0008	0.0005	0.0067	1	0.0051	0.86
S	ROG_RUNEX	0.04	0.08	0.06	0.1	0.19	0.13	0.18	0.87	0.16	1.09	2.85	0.54	0.22
S	ROG_RUNLS	0.06793	0.1086	0.113788	0.110635	0.357151	0.234932	0.087685	0.012341	0.15448	0.03256	0.3392	0.0431	0.017331
S	ROG_STREX	0.23	0.26	0.3	0.45	0.42	0.32	0.33	1.38	0.47	1.15	1.86	0.39	0.55
S	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0
S	SO2_RUNEX	0.0041	0.005	0.0051	0.0069	0.0062	0.0059	0.01	0.01	0.01	0.02	0.0021	0.01	0.0072
S	SO2_STREX	0.0007	0.0009	0.0009	0.0013	0.0005	0.0004	0.0002	0.0005	0.0003	0.0007	0.0006	0.0003	0.0005
S	TOG_DIURN	0.15	0.16	0.16	0.16	0.0038	0.0025	0.001	0.0014	0.0011	0.01	1.58	0.01	2.1
S	TOG_HTSK	0.17	0.18	0.18	0.17	0.04	0.03	0.01	0.02	0.01	0.15	0.41	0.05	0.08
S	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.28	0.02	0	0	0.81	0
S	TOG_RESTL	0.11	0.12	0.12	0.13	0.0015	0.001	0.0005	0.0008	0.0005	0.0067	1	0.0051	0.86
S	TOG_RUNEX	0.06	0.11	0.09	0.14	0.22	0.15	0.2	0.99	0.19	1.2	3.11	0.61	0.25
S	TOG_RUNLS	0.06793	0.1086	0.113788	0.110635	0.357151	0.234932	0.087685	0.012341	0.15448	0.03256	0.3392	0.0431	0.017331
S	TOG_STREX	0.24	0.27	0.32	0.48	0.45	0.34	0.36	1.48	0.51	1.22	2	0.42	0.59
W	FleetMix	0.71	0	0	0	0.13	0	0.09	0.07	0	0	0	0	0
W	CH4_IDLEX	0	0	0	0	0.0015	0.0013	0.0009	0.1	0.0012	0	0	0.03	0
W	CH4_RUNEX	0.01	0.02	0.02	0.03	0.02	0.01	0.01	0.04	0.02	0.05	0.22	0.03	0.03
W	CH4_STREX	0.01	0.01	0.02	0.03	0.02	0.02	0.02	0.09	0.03	0.07	0.13	0.02	0.03
W	CO_IDLEX	0	0	0	0	0.21	0.18	0.14	12.98	0.17	0	0	5.32	0
W	CO_RUNEX	1.53	2.39	2.33	2.92	2.65	1.49	2.36	4.54	2.69	7.92	30.52	6.44	6.62
W	CO_STREX	3.56	4.44	4.97	6.39	5.93	4.05	5.47	24.13	8.79	17.16	9.88	6.72	11.27
W	CO2_IDLEX	0	0	0	0	7.9588	8.4611	12.4701	1244.1338	11.2093	0	0	546.015	0
W	CO2_RUNEX	345.5084	432.5135	447.9977	610.0696	634.5764	601.5887	1341.8655	1793.3205	1206.5954	2088.32	157.649	1386.09	728.9985
W	CO2_STREX	66.5367	82.1982	85.0941	116.6437	38.149	31.5988	12.8444	16.3608	20.419	45.4479	45.8222	17.3951	34.2583
W	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	22.91	0.12	0	0	8.68	0
W	NOX_RUNEX	0.14	0.24	0.31	0.42	1.35	2.49	5.57	10.09	3.57	15.55	1.29	10.19	1.73
W	NOX_STREX	0.23	0.27	0.45	0.59	1.61	1.35	0.62	2.71	1.19	2.02	0.3	0.42	1.03
W	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0022	0.28	0.0015	0	0	0.11	0
W	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01
W	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.0092	0.004	0.01	0.01
W	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.02	0.15	0.44	0.08	0.23	0.02	0.38	0.01
W	PM10_STREX	0.0063	0.0075	0.01	0.01	0.0023	0.002	0.0011	0.0019	0.002	0.0037	0.01	0.001	0.0008
W	PM25_IDLEX	0	0	0	0	0.0002	0.0005	0.002	0.26	0.0013	0	0	0.1	0
W	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054
W	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0088	0.003	0.0023	0.001	0.003	0.003
W	PM25_RUNEX	0.01	0.01	0.02	0.02	0.01	0.01	0.14	0.41	0.08	0.21	0.02	0.35	0.01
W	PM25_STREX	0.0058	0.007	0.01	0.01	0.0021	0.0019	0.001	0.0017	0.0019	0.0034	0.0096	0.0009	0.0007
W	ROG_DIURN	0.1	0.11	0.11	0.11	0.0033	0.0022	0.0009	0.0011	0.0009	0.01	1.18	0.01	1.89
W	ROG_HTSK	0.18	0.2	0.19	0.18	0.05	0.04	0.01	0.02	0.02	0.18	0.46	0.06	0.1
W	ROG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.31	0.02	0	0	0.73	0
W	ROG_RESTL	0.05	0.06	0.06	0.07	0.0008	0.0005	0.0003	0.0004	0.0003	0.0041	0.41	0.0029	0.5
W	ROG_RUNEX	0.04	0.08	0.06	0.1	0.19	0.13	0.17	0.87	0.16	1.07	2.97	0.54	0.21
W	ROG_RUNLS	0.080139	0.135052	0.14299	0.1381	0.399117	0.265047	0.094123	0.012908	0.167973	0.04023	0.42719	0.05492	0.018651
W	ROG_STREX	0.28	0.31	0.37	0.55	0.49	0.37	0.39	1.62	0.55	1.29	2.17	0.47	0.67
W	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0
W	SO2_RUNEX	0.0037	0.0046	0.0046	0.0063	0.0062	0.0059	0.01	0.01	0.01	0.02	0.0021	0.01	0.0072
W	SO2_STREX	0.0008	0.0009	0.001	0.0013	0.0005	0.0004	0.0002	0.0006	0.0003	0.0007	0.0007	0.0003	0.0005
W	TOG_DIURN	0.1	0.11	0.11	0.11	0.0033	0.0022	0.0009	0.0011	0.0009	0.01	1.18	0.01	1.89
W	TOG_HTSK	0.18	0.2	0.19	0.18	0.05	0.04	0.01	0.02	0.02	0.18	0.46	0.06	0.1
W	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.64	0.02	0	0	0.81	0
W	TOG_RESTL	0.05	0.06	0.06	0.07	0.0008	0.0005	0.0003	0.0004	0.0003	0.0041	0.41	0.0029	0.5
W	TOG_RUNEX	0.06	0.1	0.09	0.13	0.22	0.15	0.2	0.99	0.19	1.18	3.24	0.6	0.25
W	TOG_RUNLS	0.080139	0.135052	0.14299	0.1381	0.399117	0.265047	0.094123	0.012908	0.167973	0.04023	0.42719	0.05492	0.018651
W	TOG_STREX	0.3	0.34	0.4	0.59	0.53	0.4	0.42	1.73	0.59	1.38	2.33	0.5	0.72
Paved (%)	**Silt Loading**	**Silt**	**Moisture**	**Weight**	**Speed**							
100	0.1	4.3	0.5	2.4	40							
Area Sources												
Woodstoves	**Conventional**	**Catalytic**	**Noncatalytic**	**Pellet**	**Days**	**Mass**						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
Fireplaces	**Wood**	**Gas**	**Propane**	**None**	**Hours/Day**	**Days/syear**	**Mass**					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0					
Consumer Products												
0.0000198												

Architectural Coating												
Residential				*Nonresidential*								
Interior	*Area*	*Exterior*	*Area*	*Interior*	*Area*	*Exterior*	*Area*	*Reapply (%)*				
50	0	100	0	250	592260	250	197420	10				
Landscaping												
NumberSnowDays	*NumberSummerDays*											
0	365											
Energy Use												
Land Use	**T24E**	**NT24E**	**Lighting**	**T24NG**	**NT24NG**							
General Office Building	3.75	2.79	4.15	3.65	0							
Parking Lot	0	0	0	0	0							
Unrefrigerated Warehouse-No Rail	0.45	0.82	1.75	2.11	0.03							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
Water and Wastewater												
				Intensity Factors								
Land Use	**Metric**	**Indoor rate**	**Outdoor Rate**	**Supply**	**Supply Treat**	**Distribute**	**Waste Treat**	**Septic**	**Aerobic**	**Anaerobic**	**Digest**	**Cogen**
General Office Building	1000sqft	0	0	9727	111	1272	1911	10	84.69	2.14	3.17	0
Parking Lot	1000sqft	0	0	9727	111	1272	1911	10	84.69	2.14	3.17	0
Unrefrigerated Warehouse-No Rail	1000sqft	247160	920839	9727	111	1272	1911	10	84.69	2.14	3.17	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
Solid Waste												
Land Use	**Metric**	**Rate**	**No Capture**	**Flare**	**Energy Recoup**							
General Office Building	1000sqft	13.95	6	94	0							
Parking Lot	1000sqft	0	6	94	0							
Unrefrigerated Warehouse-No Rail	1000sqft	1855.44	6	94	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
Land Use Change												
Land Use	**Vegetation Type**	**Acres Begin**	**Acres End**	**CO2**								
0	0	0	0	0								
Sequestration												
BroadSpeciesClass	**NumberOfNewTrees**	**CO2perTree**										
0	0	0										
0	0	0										
0	0	0										
0	0	0										
0	0	0										
0	0	0										
Mitigation												
Construction												
ConstMitigationEquipmentType	*FuelType*	*Tier*	*No.*	*Total*	*DPF*	*OxidationCatalyst*						
Air Compressors	Diesel	0	0	1	0	0						
Cranes	Diesel	0	0	1	0	0						
Excavators	Diesel	No Change	0	1	0	0						
Forklifts	Diesel	0	0	3	0	0						
Generator Sets	Diesel	0	0	1	0	0						
Graders	Diesel	No Change	0	1	0	0						
Pavers	Diesel	0	0	2	0	0						
Paving Equipment	Diesel	0	0	2	0	0						
Rollers	Diesel	0	0	2	0	0						
Rubber Tired Dozers	Diesel	No Change	0	4	0	0						
Tractors/Loaders/Backhoes	Diesel	No Change	0	8	0	0						
Welders	Diesel	0	0	1	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						
0	0	0	0	0	0	0						

0	0	0	0	0	0	0									
0	0	0	0	0	0	0									
0	0	0	0	0	0	0									
0	0	0	0	0	0	0									
0	0	0	0	0	0	0									
Soil Stabilizers	*PM10 Reduction*	*PM2.5 Reduction*													
0	0	0													
Ground Cover	*PM10 Reduction*	*PM2.5 Reduction*													
0	0	0													
Watering	*Frequency*	*PM10 Reduction*	*PM2.5 Reduction*												
0	0	0	0												
Unpaved Roads	*Vehicle Speed*	*Moisture Content*	*Speed*												
0	0	0	0												
Road Cleaning	*PM Reduction*														
0	0														
Land Use and Traffic															
ProjectSetting															
0															
Increase Density	*DU/Acre*	*Job/Acre*	*Increase Diversity*												
0	0	0	0												
Improve Walkability	*Intersections*	*Improve Accessibility*	*Distance*	*Improve Transit*	*Distance*	*Low Income Homes*	*DU*								
0	0	0	0	0	0	0	0								
Improve Ped Network	*Selection*														
0	0														
Traffic Calming	*Streets*	*Intersections*	*NEV network*												
0	0	0	0												
Limit parking	*Reduction*	*Unbundle Costs*	*Cost*	*On-Street pricing*	*Increase*										
0	0	0	0	0	0										
BRT System	*Lines*	*Expand Transit*	*Increase*	*Increase Frequency*	*Level*	*Reducction*									
0	0	0	0	0	0	0									
Trip Reduction	*Employee %*	*Type*													
0	0	0													
Transit Subsidy	*Employee %*	*Amount*													
0	0	0													
Parking Cash Out	*Employee %*	*Parking Charge*	*Employee %*	*WorkplaceParkingChargeCost*											
0	0	0	0	0											
Encourage Telecommuting	*9-80*	*4-40*	*1/5*												
0	0	0	0												
Market Trip Reduction	*Employee %*	*Vanpool*	*Percent %*	*Mode Share*											
0	0	0	0	2											
Ride Sharing	*Employee %*	*School Bus*	*Family %*												
0	0	0	0												
Area															
Lawnmower	*Electric %*	*Leafblower*	*Electric %*	*Chainsaw*	*Electric %*										
0	0	0	0	0	0										
Residential				*Nonresidential*											
Interior	*EF*	*Exterior*	*EF*	*Interior*	*EF*	*Exterior*	*EF*								
0	50	0	100	0	250	0	250								
Natural Gas Hearth	*No Hearth*	*Low VOC Cleaning*													
0	0	0													
Energy					**ApplianceType**	**Land Use**	**Improvement %**								
Exceed Title 24	*Improvement %*	*Efficient Lighting*	*Reduction %*		ClothWasher	0	30								
0	0	0	0		DishWasher	0	15								
Renewable Energy	*KwhGeneratedCheck*	*KwhGenerated*	*Generated %*	*Generated %*	Fan	0	50								
0	0	0	0	0	Refrigerator	0	15								
Water															
Conservation Strategy	*Indoor Reduction*	*Outdoor reduction*													
0	0	0													
Reclaimed Water	*Outdoor*	*Indoor*	*Grey Water*	*Outdoor*	*Indoor*										
0	0	0	0	0	0										
Low Flow WC Faucet	*Reduction %*	*Low Flow Kitchen Faucet*	*Reduction %*												
0	32	0	18												
Low Flow Toileet	*Reduction %*	*Low Flow Shower*	*Reduction %*												
0	20	0	20												
Turf Reduction	*Area*	*Reduction %*	*Efficient Irrigation*	*Reduction %*											
0	0	0	0	6.1											
Efficient landscape	*MAWA*	*ETWU*													
0	0	0													
Solid Waste															
Recycling	Reduction %														
0	0														

Project Charecteristics							
Project Detail							
Project	2976						
Name	2976 KCC ProLogis Park						
Location	SC						
Windspeed	2.2						
Precipitation Frequency	31						
Climate Zone	10						
Land Use Setting	Urban						
Operational Year	2040						
Total Population	0						
Total Acerage	9.05						
Utility Information							
Utility Company	Southern California Edison						
CO2 Intensity Factor	641.26						
CH4 intensity Factor	0.029						
N2O Intensity Factor	0.011						
Using Historical Data?	0						
Pollutants							
ROG	1						
NOX	1						
CO	1						
SO2	1						
PM10	1						
PM2_5	1						
PM10_FUG	1						
PM25_FUG	1						
TOG	0						
PB	0						
CO2_BIO	0						
CO2_NBIO	0						
CO2	0						
CH4	0						
N2O	0						
CO2E	0						
Land Use		***Amount***	***Metric***	***Acres***	***Square Feet***	***Population***	
Commercial	General Office Building	15	1000sqft	0.34	15000	0	
Industrial	Unrefrigerated Warehouse-No Rail	171.8	1000sqft	3.93	171800	0	
Parking	Parking Lot	208.04	1000sqft	4.78	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
Construction Emissions	***Name***	***Type***	***Start***	***End***	***Work Week***	***Total days***	***PhaseDescription***
1	Site Preparation	Site Preparation	2012/06/01	2012/06/14	5	10	0
2	Grading	Grading	2012/06/15	2012/09/06	5	60	0
3	Building Construction	Building Construction	2012/09/07	2013/07/25	5	230	0
4	Paving	Paving	2013/07/26	2013/08/22	5	20	0
5	Architectural Coating	Architectural Coating	2013/08/23	2013/09/19	5	20	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
Equipment	**Type**	**QTY**	**Hours**	**HP**	**Load**		
Site Preparation	Rubber Tired Dozers	3	8	358	0.4		
Site Preparation	Tractors/Loaders/Backhoes	4	8	75	0.37		
Grading	Excavators	1	8	157	0.38		
Grading	Graders	1	8	162	0.41		
Grading	Rubber Tired Dozers	1	8	358	0.4		
Grading	Tractors/Loaders/Backhoes	1	8	75	0.37		
Building Construction	Cranes	1	7	208	0.29		
Building Construction	Forklifts	3	8	149	0.2		
Building Construction	Generator Sets	1	8	84	0.5		
Building Construction	Tractors/Loaders/Backhoes	3	7	75	0.37		
Building Construction	Welders	1	8	46	0.3		
Paving	Pavers	2	8	89	0.62		
Paving	Paving Equipment	2	8	82	0.53		
Paving	Rollers	2	8	84	0.56		
Architectural Coating	Air Compressors	1	6	78	0.32		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		

0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
0	0	0	0	0	0					
	Trips			**Trip Length**			**Vechicle Class**			
Trips and VMT	**Worker**	**Vendor**	**Haul**	**Worker**	**Venddor**	**Haul**	**Worker**	**Vendor**	**Haul**	
Site Preparation	18	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Grading	3	0	5913	10.8	7.3	1	LD_Mix	HDT_Mix	HHDT	
Building Construction	77	31	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Paving	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
Architectural Coating	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
	Paved (%)									
On-Road Dust	**Worker**	**Vendor**	**Haul**	**Road Silt**	**Silt Content**	**Moisture Content**	**Vehicle Weight**	**Vehicle Speed**		
Site Preparation	100	100	100	0.1	8.5	0.5	2.4	40		
Grading	100	100	100	0.1	8.5	0.5	2.4	40		
Building Construction	100	100	100	0.1	8.5	0.5	2.4	40		
Paving	100	100	100	0.1	8.5	0.5	2.4	40		
Architectural Coating	100	100	100	0.1	8.5	0.5	2.4	40		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0		
Demolition	**Metric**	**QTY**								
0	0	0								
0	0	0								
0	0	0								
0	0	0								
							Moisture Content			
Grading	**Import**	**Export**	**Metric**	**Phased?**	**Speed**	**Acres**	**Bulldozing**	**Loading**	**Silt Content**	
Site Preparation	0	0	0	0	7.1	0	7.9	12	6.9	
Grading	118255	0	Cubic Yards	0	7.1	10	7.9	12	6.9	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
				Residential			**Nonresidential**			
Architectural Coating	**Start**	**End**	**Interior**	**Area**	**Exterior**	**Area**	**Interior**	**Area**	**Exterior**	**Area**
Architectural Coating	2008/07/01	3000/12/31	50	0	100	0	250	280200	250	93400
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
Paving Area										
0										
0										
0										
0										
Mobile Sources										
Vehicle Trips	**Metric**	**WD_TR**	**ST_TR**	**SU_TR**	**HW_TL**	**HS_TL**	**HO_TL**			
General Office Building	1000sqft	0	0	0	0	0	0			
Parking Lot	1000sqft	0	0	0	0	0	0			
Unrefrigerated Warehouse-No Rail	1000sqft	1.57	1.57	1.57	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
General Office Building	1000sqft	**CC_TL**	**CW_TL**	**CNW_TL**	**PR_TP**	**DV_TP**	**PB_TP**			
Parking Lot	1000sqft	7.3	9.5	7.3	77	19	4			
Unrefrigerated Warehouse-No Rail	1000sqft	7.3	9.5	7.3	0	0	0			
0	0	7.3	9.5	7.3	92	5	3			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	0			

General Office Building	1000sqft	HW_TTP	HS_TTP	HO_TTP	CC_TTP	CW_TTP	CNW_TTP								
Parking Lot	1000sqft	0	0	0	48	33	19								
Unrefrigerated Warehouse-No Rail	1000sqft	0	0	0	0	0	0								
0	0	0	0	0	0	59	41								
0	0	0	0	0	0	0	0								
0	0	0	0	0	0	0	0								
0	0	0	0	0	0	0	0								
0	0	0	0	0	0	0	0								
Emissions Factors	**EmissionType**	**LDA**	**LDT1**	**LDT2**	**MDV**	**LHD1**	**LHD2**	**MHD**	**HHD**	**OBUS**	**UBUS**	**MCY**	**SBUS**	**MH**	
A	FleetMix	0.455736	0.080945	0.247403	0.117368	0.023696	0.007032	0.016784	0.035467	0.001117	0.00197	0.00505	0.00112	0.006302	
A	CH4_IDLEX	0	0	0	0	0.0014	0.0013	0.0009	0.1	0.0009	0	0	0.03	0	
A	CH4_RUNEX	0.0065	0.0071	0.01	0.01	0.0047	0.004	0.005	0.01	0.0047	0.01	0.21	0.01	0.0071	
A	CH4_STREX	0.0018	0.002	0.0048	0.0065	0.0081	0.0061	0.0057	0.0091	0.007	0.06	0.12	0.0085	0.01	
A	CO_IDLEX	0	0	0	0	0.19	0.18	0.13	11.87	0.13	0	0	4.99	0	
A	CO_RUNEX	0.48	0.54	0.92	1.21	0.26	0.37	1.1	1.55	0.95	1.42	22.75	2.6	0.2	
A	CO_STREX	0.67	0.77	1.45	2.06	1.93	1.64	1.5	5.56	1.95	9.72	10.35	2.41	4.21	
A	CO2_IDLEX	0	0	0	0	7.272	7.704	11.394	1707.057	11.295	0	0	497.547	0	
A	CO2_RUNEX	236.259	299.745	347.463	471.636	602.865	564.3	1223.838	1655.262	1223.127	1332.91	157.167	1277.68	676.764	
A	CO2_STREX	42.147	53.667	61.947	84.393	37.233	31.743	9.828	4.581	10.503	67.545	36.252	12.897	29.889	
A	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	35.4	0.17	0	0	8.84	0	
A	NOX_RUNEX	0.03	0.03	0.06	0.07	0.28	0.48	1.02	2.43	0.92	2.69	1.1	3.77	0.21	
A	NOX_STREX	0.02	0.03	0.07	0.09	1.13	0.88	0.21	0.52	0.29	2.01	0.3	0.26	0.56	
A	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0019	0.03	0.0019	0	0	0.09	0	
A	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01	
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.01	0.004	0.01	0.01	
A	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.09	0.11	0.07	0.06	0.01	0.22	0.0052	
A	PM10_STREX	0.0067	0.0073	0.01	0.01	0.0021	0.0017	0.0011	0.0006	0.001	0.0063	0.0085	0.0008	0.0006	
A	PM25_IDLEX	0	0	0	0	0.0002	0.0004	0.0018	0.03	0.0017	0	0	0.08	0	
A	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054	
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0089	0.003	0.0025	0.001	0.003	0.003	
A	PM25_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.08	0.1	0.07	0.05	0.01	0.21	0.0048	
A	PM25_STREX	0.0062	0.0068	0.01	0.01	0.002	0.0016	0.001	0.0006	0.001	0.0058	0.0066	0.0007	0.0005	
A	ROG_DIURN	0.01	0.02	0.06	0.07	0.0011	0.0008	0.0002	0.0001	0.0003	0.0049	0.94	0.0014	0.3	
A	ROG_HTSK	0.05	0.06	0.11	0.11	0.02	0.01	0.0053	0.004	0.0077	0.07	0.33	0.01	0.01	
A	ROG_IDLEX	0	0	0	0	0.03	0.02	0.01	2.19	0.02	0	0	0.68	0	
A	ROG_RESTL	0.01	0.02	0.07	0.08	0.0006	0.0004	0.0001	0.0001	0.0002	0.0036	0.51	0.0009	0.18	
A	ROG_RUNEX	0.0077	0.0086	0.01	0.02	0.01	0.02	0.08	0.23	0.06	0.15	2.69	0.25	0.01	
A	ROG_RUNLS	0.035029	0.045873	0.071893	0.075083	0.186538	0.110806	0.040396	0.001364	0.066977	0.02945	0.29986	0.00934	0.002082	
A	ROG_STREX	0.03	0.03	0.08	0.11	0.14	0.1	0.1	0.16	0.12	1.16	2.03	0.15	0.23	
A	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0	
A	SO2_RUNEX	0.0038	0.0047	0.0049	0.0066	0.0064	0.006	0.01	0.01	0.01	0.01	0.0021	0.01	0.0072	
A	SO2_STREX	0.0007	0.0009	0.0009	0.0012	0.0004	0.0004	0.0001	0.0001	0.0001	0.0009	0.0006	0.0002	0.0004	
A	TOG_DIURN	0.01	0.02	0.06	0.07	0.0011	0.0008	0.0002	0.0001	0.0003	0.0049	0.94	0.0014	0.3	
A	TOG_HTSK	0.05	0.06	0.11	0.11	0.02	0.01	0.0053	0.004	0.0077	0.07	0.33	0.01	0.01	
A	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.49	0.02	0	0	0.75	0	
A	TOG_RESTL	0.01	0.02	0.07	0.08	0.0006	0.0004	0.0001	0.0001	0.0002	0.0036	0.51	0.0009	0.18	
A	TOG_RUNEX	0.01	0.01	0.03	0.03	0.02	0.03	0.09	0.27	0.07	0.17	2.94	0.29	0.01	
A	TOG_RUNLS	0.035029	0.045873	0.071893	0.075083	0.186538	0.110806	0.040396	0.001364	0.066977	0.02945	0.29986	0.00934	0.002082	
A	TOG_STREX	0.03	0.03	0.09	0.12	0.15	0.11	0.1	0.17	0.13	1.24	2.18	0.16	0.24	
S	FleetMix	0.455736	0.080945	0.247403	0.117368	0.023696	0.007032	0.016784	0.035467	0.001117	0.00197	0.00505	0.00112	0.006302	
S	CH4_IDLEX	0	0	0	0	0.0014	0.0013	0.0009	0.09	0.0009	0	0	0.03	0	
S	CH4_RUNEX	0.007	0.0076	0.01	0.01	0.0048	0.0041	0.0051	0.01	0.0047	0.01	0.21	0.01	0.0073	
S	CH4_STREX	0.0015	0.0017	0.004	0.0054	0.0071	0.0053	0.0051	0.008	0.0062	0.05	0.1	0.0077	0.01	
S	CO_IDLEX	0	0	0	0	0.19	0.18	0.13	8.63	0.13	0	0	4.99	0	
S	CO_RUNEX	0.54	0.61	1.04	1.36	0.26	0.37	1.11	1.55	0.96	1.44	21.73	2.61	0.2	
S	CO_STREX	0.5	0.58	1.1	1.56	1.51	1.28	1.2	4.44	1.56	8.19	8.9	2.05	3.36	
S	CO2_IDLEX	0	0	0	0	7.272	7.704	11.394	1804.338	11.295	0	0	497.547	0	
S	CO2_RUNEX	252.324	319.473	370.323	502.686	602.865	564.3	1223.838	1655.262	1223.127	1332.91	157.167	1277.68	676.764	
S	CO2_STREX	42.147	53.667	61.947	84.393	37.233	31.743	9.828	4.581	10.503	67.545	36.252	12.897	29.889	
S	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	36.65	0.17	0	0	8.84	0	
S	NOX_RUNEX	0.03	0.03	0.06	0.07	0.28	0.48	1.01	2.43	0.92	2.67	1.05	3.76	0.21	
S	NOX_STREX	0.02	0.03	0.07	0.08	1.08	0.84	0.2	0.5	0.27	1.91	0.29	0.25	0.54	
S	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0019	0.02	0.0019	0	0	0.09	0	
S	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01	
S	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.01	0.004	0.01	0.01	
S	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.09	0.11	0.07	0.06	0.01	0.22	0.0052	
S	PM10_STREX	0.0067	0.0073	0.01	0.01	0.0021	0.0017	0.0011	0.0006	0.001	0.0063	0.0085	0.0008	0.0006	
S	PM25_IDLEX	0	0	0	0	0.0002	0.0004	0.0018	0.02	0.0017	0	0	0.08	0	
S	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054	
S	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0089	0.003	0.0025	0.001	0.003	0.003	
S	PM25_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.08	0.1	0.07	0.05	0.01	0.21	0.0048	
S	PM25_STREX	0.0062	0.0068	0.01	0.01	0.002	0.0016	0.001	0.0006	0.001	0.0058	0.0066	0.0007	0.0005	
S	ROG_DIURN	0.02	0.03	0.09	0.11	0.0016	0.0012	0.0003	0.0002	0.0004	0.0074	1.66	0.0022	0.46	
S	ROG_HTSK	0.05	0.07	0.11	0.11	0.02	0.02	0.0055	0.0041	0.0079	0.08	0.41	0.01	0.01	
S	ROG_IDLEX	0	0	0	0	0.03	0.02	0.01	2.06	0.02	0	0	0.68	0	
S	ROG_RESTL	0.02	0.04	0.11	0.12	0.0009	0.0007	0.0002	0.0001	0.0003	0.0057	1.04	0.0014	0.29	
S	ROG_RUNEX	0.0083	0.0092	0.01	0.02	0.01	0.02	0.08	0.23	0.06	0.15	2.63	0.25	0.01	
S	ROG_RUNLS	0.033298	0.043475	0.068182	0.07121	0.180881	0.107363	0.039438	0.00134	0.065592	0.02699	0.27961	0.00858	0.002026	
S	ROG_STREX	0.02	0.03	0.07	0.09	0.12	0.09	0.08	0.14	0.1	1.05	1.78	0.13	0.2	
S	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0	
S	SO2_RUNEX	0.004	0.005	0.0052	0.007	0.0064	0.006	0.01	0.01	0.01	0.01	0.0021	0.01	0.0072	
S	SO2_STREX	0.0007	0.0009	0.0009	0.0012	0.0004	0.0004	0.0001	0.0001	0.0001	0.0009	0.0006	0.0002	0.0004	

S	TOG_DIURN	0.02	0.03	0.09	0.11	0.0016	0.0012	0.0003	0.0002	0.0004	0.0074	1.66	0.0022	0.46
S	TOG_HTSK	0.05	0.07	0.11	0.11	0.02	0.02	0.0055	0.0041	0.0079	0.08	0.41	0.01	0.01
S	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.34	0.02	0	0	0.75	0
S	TOG_RESTL	0.02	0.04	0.11	0.12	0.0009	0.0007	0.0002	0.0001	0.0003	0.0057	1.04	0.0014	0.29
S	TOG_RUNEX	0.01	0.01	0.03	0.03	0.02	0.03	0.09	0.27	0.07	0.17	2.88	0.29	0.01
S	TOG_RUNLS	0.033298	0.043475	0.068182	0.07121	0.180881	0.107363	0.039438	0.00134	0.065592	0.02699	0.27961	0.00858	0.002026
S	TOG_STREX	0.02	0.03	0.07	0.1	0.13	0.1	0.09	0.15	0.11	1.12	1.91	0.14	0.22
W	FleetMix	0.455736	0.080945	0.247403	0.117368	0.023696	0.007032	0.016784	0.035467	0.001117	0.00197	0.00505	0.00112	0.006302
W	CH4_IDLEX	0	0	0	0	0.0014	0.0013	0.0009	0.11	0.0009	0	0	0.03	0
W	CH4_RUNEX	0.0063	0.0069	0.01	0.01	0.0047	0.004	0.005	0.01	0.0047	0.01	0.21	0.01	0.0071
W	CH4_STREX	0.0018	0.0021	0.0049	0.0066	0.0082	0.0062	0.0058	0.0092	0.007	0.06	0.12	0.0087	0.01
W	CO_IDLEX	0	0	0	0	0.19	0.18	0.13	16.41	0.13	0	0	4.99	0
W	CO_RUNEX	0.46	0.52	0.88	1.16	0.26	0.37	1.1	1.55	0.95	1.42	22.85	2.6	0.2
W	CO_STREX	0.68	0.79	1.49	2.11	1.96	1.67	1.51	5.58	1.96	9.78	10.4	2.51	4.22
W	CO2_IDLEX	0	0	0	0	7.272	7.704	11.394	1570.86	11.295	0	0	497.547	0
W	CO2_RUNEX	229.293	291.204	337.572	458.199	602.865	564.3	1223.838	1655.262	1223.127	1332.91	157.167	1277.68	676.764
W	CO2_STREX	42.147	53.667	61.947	84.393	37.233	31.743	9.828	4.581	10.503	67.545	36.252	12.897	29.889
W	NOX_IDLEX	0	0	0	0	0.01	0.04	0.18	33.64	0.17	0	0	8.84	0
W	NOX_RUNEX	0.03	0.04	0.07	0.08	0.31	0.51	1.09	2.6	0.98	2.89	1.23	4.02	0.23
W	NOX_STREX	0.02	0.03	0.07	0.09	1.13	0.88	0.21	0.52	0.29	2.02	0.3	0.27	0.56
W	PM10_IDLEX	0	0	0	0	0.0002	0.0005	0.0019	0.04	0.0019	0	0	0.09	0
W	PM10_PMBW	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.0063	0.01	0.01
W	PM10_PMTW	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.03	0.01	0.01	0.004	0.01	0.01
W	PM10_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.09	0.11	0.07	0.06	0.01	0.22	0.0052
W	PM10_STREX	0.0067	0.0073	0.01	0.01	0.0021	0.0017	0.0011	0.0006	0.001	0.0063	0.0085	0.0008	0.0006
W	PM25_IDLEX	0	0	0	0	0.0002	0.0004	0.0018	0.03	0.0017	0	0	0.08	0
W	PM25_PMBW	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.0054	0.01	0.0054	0.0054	0.0027	0.0054	0.0054
W	PM25_PMTW	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.0089	0.003	0.0025	0.001	0.003	0.003
W	PM25_RUNEX	0.01	0.01	0.03	0.03	0.01	0.01	0.08	0.1	0.07	0.05	0.01	0.21	0.0048
W	PM25_STREX	0.0062	0.0068	0.01	0.01	0.002	0.0016	0.001	0.0006	0.001	0.0058	0.0066	0.0007	0.0005
W	ROG_DIURN	0.01	0.02	0.05	0.06	0.0011	0.0008	0.0002	0.0001	0.0003	0.0054	1.21	0.0015	0.31
W	ROG_HTSK	0.06	0.07	0.11	0.12	0.02	0.02	0.0055	0.0041	0.008	0.08	0.44	0.01	0.01
W	ROG_IDLEX	0	0	0	0	0.03	0.02	0.01	2.37	0.02	0	0	0.68	0
W	ROG_RESTL	0.01	0.02	0.06	0.07	0.0005	0.0004	0.0001	0.0001	0.0001	0.0031	0.43	0.0008	0.15
W	ROG_RUNEX	0.0075	0.0084	0.01	0.01	0.01	0.02	0.08	0.23	0.06	0.15	2.7	0.25	0.01
W	ROG_RUNLS	0.040146	0.053284	0.083317	0.08698	0.205305	0.122137	0.043382	0.001458	0.071757	0.03668	0.36265	0.01108	0.002248
W	ROG_STREX	0.03	0.03	0.08	0.11	0.14	0.11	0.1	0.16	0.12	1.17	2.04	0.15	0.23
W	SO2_IDLEX	0	0	0	0	0.0001	0.0001	0.0001	0.01	0.0001	0	0	0.0053	0
W	SO2_RUNEX	0.0037	0.0046	0.0047	0.0064	0.0064	0.006	0.01	0.01	0.01	0.01	0.0021	0.01	0.0072
W	SO2_STREX	0.0007	0.0009	0.0009	0.0012	0.0004	0.0004	0.0001	0.0001	0.0001	0.0009	0.0006	0.0002	0.0004
W	TOG_DIURN	0.01	0.02	0.05	0.06	0.0011	0.0008	0.0002	0.0001	0.0003	0.0054	1.21	0.0015	0.31
W	TOG_HTSK	0.06	0.07	0.11	0.12	0.02	0.02	0.0055	0.0041	0.008	0.08	0.44	0.01	0.01
W	TOG_IDLEX	0	0	0	0	0.03	0.03	0.02	2.7	0.02	0	0	0.75	0
W	TOG_RESTL	0.01	0.02	0.06	0.07	0.0005	0.0004	0.0001	0.0001	0.0001	0.0031	0.43	0.0008	0.15
W	TOG_RUNEX	0.01	0.01	0.02	0.03	0.02	0.03	0.09	0.27	0.07	0.17	2.95	0.29	0.01
W	TOG_RUNLS	0.040146	0.053284	0.083317	0.08698	0.205305	0.122137	0.043382	0.001458	0.071757	0.03668	0.36265	0.01108	0.002248
W	TOG_STREX	0.03	0.03	0.09	0.12	0.15	0.11	0.1	0.17	0.13	1.25	2.19	0.16	0.25
Paved (%)	**Silt Loading**	**Silt**	**Moisture**	**Weight**	**Speed**									
100	0.1	4.3	0.5	2.4	40									
Area Sources														
Woodstoves	**Conventional**	**Catalytic**	**Noncatalytic**	**Pellet**	**Days**	**Mass**								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
0	0	0	0	0	0	0								
Fireplaces	**Wood**	**Gas**	**Propane**	**None**	**Hours/Day**	**Days/syear**	**Mass**							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
0	0	0	0	0	0	0	0							
Consumer Products														
0.0000198														
Architectural Coating														
Residential				*Nonresidential*										
Interior	*Area*	*Exterior*	*Area*	*Interior*	*Area*	*Exterior*	*Area*	*Reapply (%)*						
50	0	100	0	250	592260	250	197420	10						
Landscaping														
NumberSnowDays	*NumberSummerDays*													
0	365													

Energy Use

Land Use	T24E	NT24E	Lighting	T24NG	NT24NG
General Office Building	3.75	2.79	4.15	3.65	0
Parking Lot	0	0	0	0	0
Unrefrigerated Warehouse-No Rail	0.45	0.82	1.75	2.11	0.03
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

Water and Wastewater

				Intensity Factors								
Land Use	**Metric**	**Indoor rate**	**Outdoor Rate**	**Supply**	**Supply Treat**	**Distribute**	**Waste Treat**	**Septic**	**Aerobic**	**Anaerobic**	**Digest**	**Cogen**
General Office Building	1000sqft	0	0	9727	111	1272	1911	10	84.69	2.14	3.17	0
Parking Lot	1000sqft	0	0	9727	111	1272	1911	10	84.69	2.14	3.17	0
Unrefrigerated Warehouse-No Rail	1000sqft	247160	920839	9727	111	1272	1911	10	84.69	2.14	3.17	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Solid Waste

Land Use	Metric	Rate	No Capture	Flare	Energy Recoup
General Office Building	1000sqft	13.95	6	94	0
Parking Lot	1000sqft	0	6	94	0
Unrefrigerated Warehouse-No Rail	1000sqft	1855.44	6	94	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

Land Use Change

Land Use	Vegetation Type	Acres Begin	Acres End	CO2
0	0	0	0	0

Sequestration

BroadSpeciesClass	NumberOfNewTrees	CO2perTree
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Mitigation

Construction

ConstMitigationEquipmentType	*FuelType*	*Tier*	*No.*	*Total*	*DPF*	*OxidationCatalyst*
Air Compressors	Diesel	0	0	1	0	0
Cranes	Diesel	0	0	1	0	0
Excavators	Diesel	No Change	0	1	0	0
Forklifts	Diesel	0	0	3	0	0
Generator Sets	Diesel	0	0	1	0	0
Graders	Diesel	No Change	0	1	0	0
Pavers	Diesel	0	0	2	0	0
Paving Equipment	Diesel	0	0	2	0	0
Rollers	Diesel	0	0	2	0	0
Rubber Tired Dozers	Diesel	No Change	0	4	0	0
Tractors/Loaders/Backhoes	Diesel	No Change	0	8	0	0
Welders	Diesel	0	0	1	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Soil Stabilizers	*PM10 Reduction*	*PM2.5 Reduction*													
0	0	0													
Ground Cover	*PM10 Reduction*	*PM2.5 Reduction*													
0	0	0													
Watering	*Frequency*	*PM10 Reduction*	*PM2.5 Reduction*												
0	0	0	0												
Unpaved Roads	*Vehicle Speed*	*Moisture Content*	*Speed*												
0	0	0	0												
Road Cleaning	*PM Reduction*														
0	0														
Land Use and Traffic															
ProjectSetting															
0															
Increase Density	*DU/Acre*	*Job/Acre*	*Increase Diversity*												
0	0	0	0												
Improve Walkability	*Intersections*	*Improve Accessibility*	*Distance*	*Improve Transit*	*Distance*	*Low Income Homes*	*DU*								
0	0	0	0	0	0	0	0								
Improve Ped Network	*Selection*														
0	0														
Traffic Calming	*Streets*	*Intersections*	*NEV network*												
0	0	0	0												
Limit parking	*Reduction*	*Unbundle Costs*	*Cost*	*On-Street pricing*	*Increase*										
0	0	0	0	0	0										
BRT System	*Lines*	*Expand Transit*	*Increase*	*Increase Frequency*	*Level*	*Reducction*									
0	0	0	0	0	0	0									
Trip Reduction	*Employee %*	*Type*													
0	0	0													
Transit Subsidy	*Employee %*	*Amount*													
0	0	0													
Parking Cash Out	*Employee %*	*Parking Charge*	*Employee %*	*WorkplaceParkingChargeCost*											
0	0	0	0	0											
Encourage Telecommuting	*9-80*	*4-40*	*1/5*												
0	0	0	0												
Market Trip Reduction	*Employee %*	*Vanpool*	*Percent %*	*Mode Share*											
0	0	0	0	2											
Ride Sharing	*Employee %*	*School Bus*	*Family %*												
0	0	0	0												
Area															
Lawnmower	*Electric %*	*Leafblower*	*Electric %*	*Chainsaw*	*Electric %*										
0	0	0	0	0	0										
Residential				*Nonresidential*											
Interior	*EF*	*Exterior*	*EF*	*Interior*	*EF*	*Exterior*	*EF*								
0	50	0	100	1	50	1	50								
Natural Gas Hearth	*No Hearth*	*Low VOC Cleaning*													
0	0	0													
Energy					**ApplianceType**	**Land Use**	**Improvement %**								
Exceed Title 24	*Improvement %*	*Efficient Lighting*	*Reduction %*		ClothWasher	0	30								
0	0	0	0		DishWasher	0	15								
Renewable Energy	*KwhGeneratedCheck*	*KwhGenerated*	*Generated %*	*Generated %*	Fan	0	50								
0	0	0	0	0	Refrigerator	0	15								
Water															
Conservation Strategy	*Indoor Reduction*	*Outdoor reduction*													
0	0	0													
Reclaimed Water	*Outdoor*	*Indoor*	*Grey Water*	*Outdoor*	*Indoor*										
0	0	0	0	0	0										
Low Flow WC Faucet	*Reduction %*	*Low Flow Kitchen Faucet*	*Reduction %*												
1	32	0	18												
Low Flow Toileet	*Reduction %*	*Low Flow Shower*	*Reduction %*												
1	20	0	20												
Turf Reduction	*Area*	*Reduction %*	*Efficient Irrigation*	*Reduction %*											
0	0	0	1	6.1											
Efficient landscape	*MAWA*	*ETWU*													
0	0	0													
Solid Waste															
Recycling	Reduction %														
1	50														

APPENDIX B

CalEEMod Output

2976 KCC ProLogis Park

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	15	1000sqft
Unrefrigerated Warehouse-No Rail	171.8	1000sqft
Parking Lot	208.04	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	10		2.2		
		Precipitation Freq (Days)			
			31		

1.3 User Entered Comments

Project Characteristics -

Land Use - Adjust Lot Size to Match Project

Construction Phase - Adjust Schedule Per Project Specifications

Off-road Equipment - Adjust Equipment Per Schedule; Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Trips and VMT - Adjust Hauling Trips for 20 CY Trucks, Adjust Haul Length

Grading - Adjust per Project Site Size

Architectural Coating - Use low-VOC coatings (0 g/L) for interior applications

Vehicle Trips - Adjust Traffic Generation per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Water And Wastewater - Revise water demand based on Kaiser study and landscape irrigation calculations

Construction Off-road Equipment Mitigation -

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendations

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	7.17	57.46	33.62	0.05	18.30	2.90	21.20	9.93	2.89	12.83			0.00	0.64	0.00	5,624.10
2013	216.67	33.89	23.77	0.05	1.29	2.94	3.13	0.02	2.94	2.94			0.00	0.50	0.00	4,390.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	7.17	57.46	33.62	0.05	18.08	2.90	20.97	9.93	2.89	12.83			0.00	0.64	0.00	5,624.10
2013	54.47	33.89	23.77	0.05	0.06	2.94	2.94	0.02	2.94	2.94			0.00	0.50	0.00	4,390.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Mobile	1.59	7.92	13.01	0.03	2.62	0.26	2.88	0.04	0.25	0.29				0.08		2,942.34
Total	**6.48**	**8.03**	**13.11**	**0.03**	**2.62**	**0.26**	**2.89**	**0.04**	**0.25**	**0.30**				**0.08**	**0.00**	**3,079.32**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Mobile	1.59	7.92	13.01	0.03	2.62	0.26	2.88	0.04	0.25	0.29				0.08		2,942.34
Total	**6.48**	**8.03**	**13.11**	**0.03**	**2.62**	**0.26**	**2.89**	**0.04**	**0.25**	**0.30**				**0.08**	**0.00**	**3,079.32**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use low-VOC coatings (0 g/L) for interior applications

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	7.06	57.35	32.36	0.05		2.89	2.89		2.89	2.89				0.63		5,426.76
Total	**7.06**	**57.35**	**32.36**	**0.05**	**18.07**	**2.89**	**20.96**	**9.93**	**2.89**	**12.82**				**0.63**		**5,426.76**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.11	0.11	1.26	0.00	0.23	0.01	0.24	0.00	0.01	0.01				0.01		197.34
Total	**0.11**	**0.11**	**1.26**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**				**0.01**		**197.34**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	7.06	57.35	32.36	0.05		2.89	2.89		2.89	2.89				0.63		5,426.76
Total	**7.06**	**57.35**	**32.36**	**0.05**	**18.07**	**2.89**	**20.96**	**9.93**	**2.89**	**12.82**				**0.63**		**5,426.76**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.11	0.11	1.26	0.00	0.01	0.01	0.02	0.00	0.01	0.01				0.01		197.34
Total	**0.11**	**0.11**	**1.26**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**				**0.01**		**197.34**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.42	0.00	6.42	3.34	0.00	3.34						0.00
Off-Road	3.74	29.76	17.65	0.03		1.56	1.56		1.56	1.56				0.33		2,981.44
Total	**3.74**	**29.76**	**17.65**	**0.03**	**6.42**	**1.56**	**7.98**	**3.34**	**1.56**	**4.90**				**0.33**		**2,981.44**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.08	8.25	8.35	0.01	6.89	0.18	7.07	0.00	0.16	0.17				0.06		695.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.02	0.02	0.21	0.00	0.04	0.00	0.04	0.00	0.00	0.00				0.00		32.89
Total	**1.10**	**8.27**	**8.56**	**0.01**	**6.93**	**0.18**	**7.11**	**0.00**	**0.16**	**0.17**				**0.06**		**728.12**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.42	0.00	6.42	3.34	0.00	3.34						0.00
Off-Road	3.74	29.76	17.65	0.03		1.56	1.56		1.56	1.56				0.33		2,981.44
Total	**3.74**	**29.76**	**17.65**	**0.03**	**6.42**	**1.56**	**7.98**	**3.34**	**1.56**	**4.90**				**0.33**		**2,981.44**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.08	8.25	8.35	0.01	0.01	0.18	0.19	0.00	0.16	0.17				0.06		695.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.02	0.02	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		32.89
Total	**1.10**	**8.27**	**8.56**	**0.01**	**0.01**	**0.18**	**0.19**	**0.00**	**0.16**	**0.17**				**0.06**		**728.12**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.78	25.09	15.92	0.03		1.71	1.71		1.71	1.71				0.34		2,719.12
Total	**3.78**	**25.09**	**15.92**	**0.03**		**1.71**	**1.71**		**1.71**	**1.71**				**0.34**		**2,719.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.51	5.56	3.43	0.01	0.29	0.20	0.48	0.01	0.18	0.19				0.03		840.46
Worker	0.47	0.47	5.41	0.01	1.01	0.03	1.04	0.01	0.03	0.04				0.05		844.17
Total	**0.98**	**6.03**	**8.84**	**0.02**	**1.30**	**0.23**	**1.52**	**0.02**	**0.21**	**0.23**				**0.08**		**1,684.63**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.78	25.09	15.92	0.03		1.71	1.71		1.71	1.71				0.34		2,719.12
Total	**3.78**	**25.09**	**15.92**	**0.03**		**1.71**	**1.71**		**1.71**	**1.71**				**0.34**		**2,719.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.51	5.56	3.43	0.01	0.02	0.20	0.22	0.01	0.18	0.19				0.03		840.46
Worker	0.47	0.47	5.41	0.01	0.04	0.03	0.07	0.01	0.03	0.04				0.05		844.17
Total	**0.98**	**6.03**	**8.84**	**0.02**	**0.06**	**0.23**	**0.29**	**0.02**	**0.21**	**0.23**				**0.08**		**1,684.63**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.47	23.27	15.73	0.03		1.53	1.53		1.53	1.53				0.31		2,718.50
Total	**3.47**	**23.27**	**15.73**	**0.03**		**1.53**	**1.53**		**1.53**	**1.53**				**0.31**		**2,718.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.46	5.07	3.08	0.01	0.29	0.18	0.46	0.01	0.16	0.17				0.02		842.67
Worker	0.43	0.43	4.96	0.01	1.01	0.03	1.04	0.01	0.03	0.04				0.05		826.94
Total	**0.89**	**5.50**	**8.04**	**0.02**	**1.30**	**0.21**	**1.50**	**0.02**	**0.19**	**0.21**				**0.07**		**1,669.61**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.47	23.27	15.73	0.03		1.53	1.53		1.53	1.53				0.31		2,718.50
Total	**3.47**	**23.27**	**15.73**	**0.03**		**1.53**	**1.53**		**1.53**	**1.53**				**0.31**		**2,718.50**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.46	5.07	3.08	0.01	0.02	0.18	0.20	0.01	0.16	0.17				0.02		842.67
Worker	0.43	0.43	4.96	0.01	0.04	0.03	0.07	0.01	0.03	0.04				0.05		826.94
Total	**0.89**	**5.50**	**8.04**	**0.02**	**0.06**	**0.21**	**0.27**	**0.02**	**0.19**	**0.21**				**0.07**		**1,669.61**

3.5 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93				0.50		2,928.05
Paving	0.63					0.00	0.00		0.00	0.00						0.00
Total	**6.16**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**				**0.50**		**2,928.05**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.08	0.08	0.97	0.00	0.20	0.01	0.20	0.00	0.01	0.01				0.01		161.09
Total	**0.08**	**0.08**	**0.97**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**				**0.01**		**161.09**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93				0.50		2,928.05
Paving	0.63					0.00	0.00		0.00	0.00						0.00
Total	**6.16**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**				**0.50**		**2,928.05**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.08	0.08	0.97	0.00	0.01	0.01	0.01	0.00	0.01	0.01				0.01		161.09
Total	**0.08**	**0.08**	**0.97**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**				**0.01**		**161.09**

3.6 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	216.27					0.00	0.00		0.00	0.00						0.00
Off-Road	0.32	1.97	1.29	0.00		0.18	0.18		0.18	0.18				0.03		188.07
Total	**216.59**	**1.97**	**1.29**	**0.00**		**0.18**	**0.18**		**0.18**	**0.18**				**0.03**		**188.07**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.08	0.08	0.97	0.00	0.20	0.01	0.20	0.00	0.01	0.01				0.01		161.09
Total	**0.08**	**0.08**	**0.97**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**				**0.01**		**161.09**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.07					0.00	0.00		0.00	0.00						0.00
Off-Road	0.32	1.97	1.29	0.00		0.18	0.18		0.18	0.18				0.03		188.07
Total	**54.39**	**1.97**	**1.29**	**0.00**		**0.18**	**0.18**		**0.18**	**0.18**				**0.03**		**188.07**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.08	0.08	0.97	0.00	0.01	0.01	0.01	0.00	0.01	0.01				0.01		161.09
Total	**0.08**	**0.08**	**0.97**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**				**0.01**		**161.09**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.59	7.92	13.01	0.03	2.62	0.26	2.88	0.04	0.25	0.29				0.08		2,942.34
Unmitigated	1.59	7.92	13.01	0.03	2.62	0.26	2.88	0.04	0.25	0.29				0.08		2,942.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	269.73	269.73	269.73	787,468	787,468
Total	269.73	269.73	269.73	787,468	787,468

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
NaturalGas Unmitigated	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	150	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00				0.00	0.00	17.75
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1007.27	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01				0.00	0.00	119.22
Total		**0.01**	**0.11**	**0.09**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**				**0.00**	**0.00**	**136.97**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	0.15	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00				0.00	0.00	17.75
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1.00727	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01				0.00	0.00	119.22
Total		**0.01**	**0.11**	**0.09**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**				**0.00**	**0.00**	**136.97**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Unmitigated	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.19					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.70					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**4.89**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**				**0.00**		**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.19					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.70					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**4.89**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**				**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

2976 KCC ProLogis Park

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	15	1000sqft
Unrefrigerated Warehouse-No Rail	171.8	1000sqft
Parking Lot	208.04	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	10		2.2		
		Precipitation Freq (Days)			
			31		

1.3 User Entered Comments

Project Characteristics -

Land Use - Adjust Lot Size to Match Project

Construction Phase - Adjust Schedule Per Project Specifications

Off-road Equipment - Adjust Equipment Per Schedule; Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Trips and VMT - Adjust Hauling Trips for 20 CY Trucks, Adjust Haul Length

Grading - Adjust per Project Site Size

Architectural Coating - Use low-VOC coatings (0 g/L) for interior applications

Vehicle Trips - Adjust Traffic Generation per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Water And Wastewater - Revise water demand based on Kaiser study and landscape irrigation calculations

Construction Off-road Equipment Mitigation -

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendations

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	7.18	57.48	33.55	0.05	18.30	2.90	21.20	9.93	2.89	12.83			0.00	0.64	0.00	5,607.63
2013	216.68	33.91	23.83	0.04	1.29	2.94	3.13	0.02	2.94	2.94			0.00	0.50	0.00	4,315.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	7.18	57.48	33.55	0.05	18.08	2.90	20.97	9.93	2.89	12.83			0.00	0.64	0.00	5,607.63
2013	54.48	33.91	23.83	0.04	0.06	2.94	2.94	0.02	2.94	2.94			0.00	0.50	0.00	4,315.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Mobile	1.67	8.39	13.16	0.02	2.62	0.27	2.88	0.04	0.25	0.29				0.08		2,822.70
Total	**6.56**	**8.50**	**13.26**	**0.02**	**2.62**	**0.27**	**2.89**	**0.04**	**0.25**	**0.30**				**0.08**	**0.00**	**2,959.68**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Mobile	1.67	8.39	13.16	0.02	2.62	0.27	2.88	0.04	0.25	0.29				0.08		2,822.70
Total	**6.56**	**8.50**	**13.26**	**0.02**	**2.62**	**0.27**	**2.89**	**0.04**	**0.25**	**0.30**				**0.08**	**0.00**	**2,959.68**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use low-VOC coatings (0 g/L) for interior applications

3.2 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	7.06	57.35	32.36	0.05		2.89	2.89		2.89	2.89				0.63		5,426.76
Total	**7.06**	**57.35**	**32.36**	**0.05**	**18.07**	**2.89**	**20.96**	**9.93**	**2.89**	**12.82**				**0.63**		**5,426.76**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.12	0.13	1.19	0.00	0.23	0.01	0.24	0.00	0.01	0.01				0.01		180.87
Total	**0.12**	**0.13**	**1.19**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**				**0.01**		**180.87**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	7.06	57.35	32.36	0.05		2.89	2.89		2.89	2.89				0.63		5,426.76
Total	**7.06**	**57.35**	**32.36**	**0.05**	**18.07**	**2.89**	**20.96**	**9.93**	**2.89**	**12.82**				**0.63**		**5,426.76**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.12	0.13	1.19	0.00	0.01	0.01	0.02	0.00	0.01	0.01				0.01		180.87
Total	**0.12**	**0.13**	**1.19**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**				**0.01**		**180.87**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.42	0.00	6.42	3.34	0.00	3.34						0.00
Off-Road	3.74	29.76	17.65	0.03		1.56	1.56		1.56	1.56				0.33		2,981.44
Total	**3.74**	**29.76**	**17.65**	**0.03**	**6.42**	**1.56**	**7.98**	**3.34**	**1.56**	**4.90**				**0.33**		**2,981.44**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.21	8.06	10.59	0.01	6.89	0.20	7.09	0.00	0.18	0.19				0.06		657.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.02	0.02	0.20	0.00	0.04	0.00	0.04	0.00	0.00	0.00				0.00		30.14
Total	**1.23**	**8.08**	**10.79**	**0.01**	**6.93**	**0.20**	**7.13**	**0.00**	**0.18**	**0.19**				**0.06**		**687.21**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.42	0.00	6.42	3.34	0.00	3.34						0.00
Off-Road	3.74	29.76	17.65	0.03		1.56	1.56		1.56	1.56				0.33		2,981.44
Total	**3.74**	**29.76**	**17.65**	**0.03**	**6.42**	**1.56**	**7.98**	**3.34**	**1.56**	**4.90**				**0.33**		**2,981.44**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.21	8.06	10.59	0.01	0.01	0.20	0.21	0.00	0.18	0.19				0.06		657.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.02	0.02	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		30.14
Total	**1.23**	**8.08**	**10.79**	**0.01**	**0.01**	**0.20**	**0.21**	**0.00**	**0.18**	**0.19**				**0.06**		**687.21**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.78	25.09	15.92	0.03		1.71	1.71		1.71	1.71				0.34		2,719.12
Total	**3.78**	**25.09**	**15.92**	**0.03**		**1.71**	**1.71**		**1.71**	**1.71**				**0.34**		**2,719.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.53	5.83	3.81	0.01	0.29	0.20	0.48	0.01	0.18	0.19				0.03		834.46
Worker	0.49	0.54	5.07	0.01	1.01	0.03	1.04	0.01	0.03	0.04				0.05		773.71
Total	**1.02**	**6.37**	**8.88**	**0.02**	**1.30**	**0.23**	**1.52**	**0.02**	**0.21**	**0.23**				**0.08**		**1,608.17**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.78	25.09	15.92	0.03		1.71	1.71		1.71	1.71				0.34		2,719.12
Total	**3.78**	**25.09**	**15.92**	**0.03**		**1.71**	**1.71**		**1.71**	**1.71**				**0.34**		**2,719.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.53	5.83	3.81	0.01	0.02	0.20	0.22	0.01	0.18	0.19				0.03		834.46
Worker	0.49	0.54	5.07	0.01	0.04	0.03	0.07	0.01	0.03	0.04				0.05		773.71
Total	**1.02**	**6.37**	**8.88**	**0.02**	**0.06**	**0.23**	**0.29**	**0.02**	**0.21**	**0.23**				**0.08**		**1,608.17**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.47	23.27	15.73	0.03		1.53	1.53		1.53	1.53				0.31		2,718.50
Total	**3.47**	**23.27**	**15.73**	**0.03**		**1.53**	**1.53**		**1.53**	**1.53**				**0.31**		**2,718.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.48	5.31	3.46	0.01	0.29	0.18	0.47	0.01	0.17	0.17				0.02		836.46
Worker	0.46	0.49	4.64	0.01	1.01	0.03	1.04	0.01	0.03	0.04				0.05		757.77
Total	**0.94**	**5.80**	**8.10**	**0.02**	**1.30**	**0.21**	**1.51**	**0.02**	**0.20**	**0.21**				**0.07**		**1,594.23**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.47	23.27	15.73	0.03		1.53	1.53		1.53	1.53				0.31		2,718.50
Total	**3.47**	**23.27**	**15.73**	**0.03**		**1.53**	**1.53**		**1.53**	**1.53**				**0.31**		**2,718.50**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.48	5.31	3.46	0.01	0.02	0.18	0.20	0.01	0.17	0.17				0.02		836.46
Worker	0.46	0.49	4.64	0.01	0.04	0.03	0.07	0.01	0.03	0.04				0.05		757.77
Total	**0.94**	**5.80**	**8.10**	**0.02**	**0.06**	**0.21**	**0.27**	**0.02**	**0.20**	**0.21**				**0.07**		**1,594.23**

3.5 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93				0.50		2,928.05
Paving	0.63					0.00	0.00		0.00	0.00						0.00
Total	**6.16**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**				**0.50**		**2,928.05**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.09	0.10	0.90	0.00	0.20	0.01	0.20	0.00	0.01	0.01				0.01		147.62
Total	**0.09**	**0.10**	**0.90**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**				**0.01**		**147.62**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.53	33.81	20.89	0.03		2.93	2.93		2.93	2.93				0.50		2,928.05
Paving	0.63					0.00	0.00		0.00	0.00						0.00
Total	**6.16**	**33.81**	**20.89**	**0.03**		**2.93**	**2.93**		**2.93**	**2.93**				**0.50**		**2,928.05**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.09	0.10	0.90	0.00	0.01	0.01	0.01	0.00	0.01	0.01				0.01		147.62
Total	**0.09**	**0.10**	**0.90**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**				**0.01**		**147.62**

3.6 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	216.27					0.00	0.00		0.00	0.00						0.00
Off-Road	0.32	1.97	1.29	0.00		0.18	0.18		0.18	0.18				0.03		188.07
Total	**216.59**	**1.97**	**1.29**	**0.00**		**0.18**	**0.18**		**0.18**	**0.18**				**0.03**		**188.07**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.09	0.10	0.90	0.00	0.20	0.01	0.20	0.00	0.01	0.01				0.01		147.62
Total	**0.09**	**0.10**	**0.90**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.01**	**0.01**				**0.01**		**147.62**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.07					0.00	0.00		0.00	0.00						0.00
Off-Road	0.32	1.97	1.29	0.00		0.18	0.18		0.18	0.18				0.03		188.07
Total	**54.39**	**1.97**	**1.29**	**0.00**		**0.18**	**0.18**		**0.18**	**0.18**				**0.03**		**188.07**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.09	0.10	0.90	0.00	0.01	0.01	0.01	0.00	0.01	0.01				0.01		147.62
Total	**0.09**	**0.10**	**0.90**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**				**0.01**		**147.62**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.67	8.39	13.16	0.02	2.62	0.27	2.88	0.04	0.25	0.29				0.08		2,822.70
Unmitigated	1.67	8.39	13.16	0.02	2.62	0.27	2.88	0.04	0.25	0.29				0.08		2,822.70
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	269.73	269.73	269.73	787,468	787,468
Total	269.73	269.73	269.73	787,468	787,468

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
NaturalGas Unmitigated	0.01	0.11	0.10	0.00		0.00	0.01		0.00	0.01				0.00	0.00	136.98
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	150	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00				0.00	0.00	17.75
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1007.27	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01				0.00	0.00	119.22
Total		**0.01**	**0.11**	**0.09**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**				**0.00**	**0.00**	**136.97**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	0.15	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00				0.00	0.00	17.75
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1.00727	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01				0.00	0.00	119.22
Total		**0.01**	**0.11**	**0.09**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**				**0.00**	**0.00**	**136.97**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Unmitigated	4.88	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.19					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.70					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**4.89**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**				**0.00**		**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.19					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.70					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Total	**4.89**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**				**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

2976 KCC ProLogis Park

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	15	1000sqft
Unrefrigerated Warehouse-No Rail	171.8	1000sqft
Parking Lot	208.04	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	10		2.2		
		Precipitation Freq (Days)			
			31		

1.3 User Entered Comments

Project Characteristics -

Land Use - Adjust Lot Size to Match Project

Construction Phase - Adjust Schedule Per Project Specifications

Off-road Equipment - Adjust Equipment Per Schedule; Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Trips and VMT - Adjust Hauling Trips for 20 CY Trucks, Adjust Haul Length

Grading - Adjust per Project Site Size

Architectural Coating -

Vehicle Trips - Adjust Traffic Generation per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Water And Wastewater - Revise water demand based on Kaiser study and landscape irrigation calculations

Construction Off-road Equipment Mitigation -

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendations

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.38	2.70	2.02	0.00	0.52	0.15	0.66	0.15	0.15	0.30			287.14	0.03	0.00	287.75
2013	2.55	2.49	2.00	0.00	0.09	0.16	0.25	0.00	0.16	0.16			321.50	0.03	0.00	322.14
Total	**2.93**	**5.19**	**4.02**	**0.00**	**0.61**	**0.31**	**0.91**	**0.15**	**0.31**	**0.46**			**608.64**	**0.06**	**0.00**	**609.89**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.38	2.70	2.02	0.00	0.29	0.15	0.43	0.15	0.15	0.30			287.14	0.03	0.00	287.75
2013	2.55	2.49	2.00	0.00	0.00	0.16	0.16	0.00	0.16	0.16			321.50	0.03	0.00	322.14
Total	**2.93**	**5.19**	**4.02**	**0.00**	**0.29**	**0.31**	**0.59**	**0.15**	**0.31**	**0.46**			**608.64**	**0.06**	**0.00**	**609.89**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Energy	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			220.10	0.01	0.00	221.47
Mobile	0.29	1.45	2.40	0.00	0.43	0.05	0.48	0.01	0.05	0.05			472.00	0.01	0.00	472.27
Waste						0.00	0.00		0.00	0.00			379.47	22.43	0.00	850.42
Water						0.00	0.00		0.00	0.00			3.91	0.01	0.00	4.16
Total	**1.18**	**1.47**	**2.42**	**0.00**	**0.43**	**0.05**	**0.48**	**0.01**	**0.05**	**0.05**			**1,075.48**	**22.46**	**0.00**	**1,548.32**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Energy	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			220.10	0.01	0.00	221.47
Mobile	0.29	1.45	2.40	0.00	0.43	0.05	0.48	0.01	0.05	0.05			472.00	0.01	0.00	472.27
Waste						0.00	0.00		0.00	0.00			379.47	22.43	0.00	850.42
Water						0.00	0.00		0.00	0.00			3.91	0.01	0.00	4.16
Total	**1.18**	**1.47**	**2.42**	**0.00**	**0.43**	**0.05**	**0.48**	**0.01**	**0.05**	**0.05**			**1,075.48**	**22.46**	**0.00**	**1,548.32**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.09	0.00	0.09	0.05	0.00	0.05			0.00	0.00	0.00	0.00
Off-Road	0.04	0.29	0.16	0.00		0.01	0.01		0.01	0.01			24.55	0.00	0.00	24.61
Total	**0.04**	**0.29**	**0.16**	**0.00**	**0.09**	**0.01**	**0.10**	**0.05**	**0.01**	**0.06**			**24.55**	**0.00**	**0.00**	**24.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.84	0.00	0.00	0.84
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.84**	**0.00**	**0.00**	**0.84**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.09	0.00	0.09	0.05	0.00	0.05			0.00	0.00	0.00	0.00
Off-Road	0.04	0.29	0.16	0.00		0.01	0.01		0.01	0.01			24.55	0.00	0.00	24.61
Total	**0.04**	**0.29**	**0.16**	**0.00**	**0.09**	**0.01**	**0.10**	**0.05**	**0.01**	**0.06**			**24.55**	**0.00**	**0.00**	**24.61**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.84	0.00	0.00	0.84
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.84**	**0.00**	**0.00**	**0.84**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.19	0.00	0.19	0.10	0.00	0.10			0.00	0.00	0.00	0.00
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05			80.93	0.01	0.00	81.12
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.19**	**0.05**	**0.24**	**0.10**	**0.05**	**0.15**			**80.93**	**0.01**	**0.00**	**81.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.04	0.24	0.29	0.00	0.19	0.01	0.19	0.00	0.01	0.01			18.45	0.00	0.00	18.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.84	0.00	0.00	0.84
Total	**0.04**	**0.24**	**0.30**	**0.00**	**0.19**	**0.01**	**0.19**	**0.00**	**0.01**	**0.01**			**19.29**	**0.00**	**0.00**	**19.33**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.19	0.00	0.19	0.10	0.00	0.10			0.00	0.00	0.00	0.00
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05			80.93	0.01	0.00	81.12
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.19**	**0.05**	**0.24**	**0.10**	**0.05**	**0.15**			**80.93**	**0.01**	**0.00**	**81.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.04	0.24	0.29	0.00	0.00	0.01	0.01	0.00	0.01	0.01			18.45	0.00	0.00	18.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.84	0.00	0.00	0.84
Total	**0.04**	**0.24**	**0.30**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**19.29**	**0.00**	**0.00**	**19.33**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	1.03	0.65	0.00		0.07	0.07		0.07	0.07			100.84	0.01	0.00	101.11
Total	**0.15**	**1.03**	**0.65**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**			**100.84**	**0.01**	**0.00**	**101.11**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01			31.15	0.00	0.00	31.17
Worker	0.02	0.02	0.21	0.00	0.04	0.00	0.04	0.00	0.00	0.00			29.53	0.00	0.00	29.57
Total	**0.04**	**0.25**	**0.36**	**0.00**	**0.05**	**0.01**	**0.06**	**0.00**	**0.01**	**0.01**			**60.68**	**0.00**	**0.00**	**60.74**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	1.03	0.65	0.00		0.07	0.07		0.07	0.07			100.84	0.01	0.00	101.11
Total	**0.15**	**1.03**	**0.65**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**			**100.84**	**0.01**	**0.00**	**101.11**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.02	0.23	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01			31.15	0.00	0.00	31.17
Worker	0.02	0.02	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00			29.53	0.00	0.00	29.57
Total	**0.04**	**0.25**	**0.36**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**60.68**	**0.00**	**0.00**	**60.74**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.26	1.72	1.16	0.00		0.11	0.11		0.11	0.11			182.01	0.02	0.00	182.45
Total	**0.26**	**1.72**	**1.16**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**			**182.01**	**0.02**	**0.00**	**182.45**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.04	0.37	0.25	0.00	0.02	0.01	0.03	0.00	0.01	0.01			56.36	0.00	0.00	56.40
Worker	0.03	0.03	0.35	0.00	0.07	0.00	0.07	0.00	0.00	0.00			52.21	0.00	0.00	52.28
Total	**0.07**	**0.40**	**0.60**	**0.00**	**0.09**	**0.01**	**0.10**	**0.00**	**0.01**	**0.01**			**108.57**	**0.00**	**0.00**	**108.68**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.26	1.72	1.16	0.00		0.11	0.11		0.11	0.11			182.01	0.02	0.00	182.45
Total	**0.26**	**1.72**	**1.16**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**			**182.01**	**0.02**	**0.00**	**182.45**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.04	0.37	0.25	0.00	0.00	0.01	0.01	0.00	0.01	0.01			56.36	0.00	0.00	56.40
Worker	0.03	0.03	0.35	0.00	0.00	0.00	0.01	0.00	0.00	0.00			52.21	0.00	0.00	52.28
Total	**0.07**	**0.40**	**0.60**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**			**108.57**	**0.00**	**0.00**	**108.68**

3.5 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.34	0.21	0.00		0.03	0.03		0.03	0.03			26.46	0.00	0.00	26.56
Paving	0.01					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.07**	**0.34**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**			**26.46**	**0.00**	**0.00**	**26.56**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.37	0.00	0.00	1.38
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**1.37**	**0.00**	**0.00**	**1.38**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.34	0.21	0.00		0.03	0.03		0.03	0.03			26.46	0.00	0.00	26.56
Paving	0.01					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.07**	**0.34**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**			**26.46**	**0.00**	**0.00**	**26.56**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.37	0.00	0.00	1.38
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**1.37**	**0.00**	**0.00**	**1.38**

3.6 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.16					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00			1.70	0.00	0.00	1.71
Total	**2.16**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**1.70**	**0.00**	**0.00**	**1.71**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.37	0.00	0.00	1.38
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**1.37**	**0.00**	**0.00**	**1.38**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.16					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00			1.70	0.00	0.00	1.71
Total	**2.16**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**1.70**	**0.00**	**0.00**	**1.71**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.37	0.00	0.00	1.38
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**1.37**	**0.00**	**0.00**	**1.38**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.29	1.45	2.40	0.00	0.43	0.05	0.48	0.01	0.05	0.05			472.00	0.01	0.00	472.27
Unmitigated	0.29	1.45	2.40	0.00	0.43	0.05	0.48	0.01	0.05	0.05			472.00	0.01	0.00	472.27
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	269.73	269.73	269.73	787,468	787,468
Total	269.73	269.73	269.73	787,468	787,468

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00			197.56	0.01	0.00	198.79
Electricity Unmitigated						0.00	0.00		0.00	0.00			197.56	0.01	0.00	198.79
NaturalGas Mitigated	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			22.54	0.00	0.00	22.68
NaturalGas Unmitigated	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			22.54	0.00	0.00	22.68
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	54750	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			2.92	0.00	0.00	2.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	367652	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			19.62	0.00	0.00	19.74
Total		**0.00**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**22.54**	**0.00**	**0.00**	**22.68**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	54750	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			2.92	0.00	0.00	2.94
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	367652	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00			19.62	0.00	0.00	19.74
Total		**0.00**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**22.54**	**0.00**	**0.00**	**22.68**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	160350					46.64	0.00	0.00	46.93
Parking Lot	0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	518836					150.91	0.01	0.00	151.86
Total						**197.55**	**0.01**	**0.00**	**198.79**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	160350					46.64	0.00	0.00	46.93
Parking Lot	0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	518836					150.91	0.01	0.00	151.86
Total						**197.55**	**0.01**	**0.00**	**198.79**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Unmitigated	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.22					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Consumer Products	0.68					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.90**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.22					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Consumer Products	0.68					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.90**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					3.91	0.01	0.00	4.16
Unmitigated					3.91	0.01	0.00	4.16
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	0.24716 / 0.920839					3.91	0.01	0.00	4.16
Total						**3.91**	**0.01**	**0.00**	**4.16**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	0.24716 / 0.920839					3.91	0.01	0.00	4.16
Total						**3.91**	**0.01**	**0.00**	**4.16**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					379.47	22.43	0.00	850.42
Unmitigated					379.47	22.43	0.00	850.42
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	13.95					2.83	0.17	0.00	6.35
Parking Lot	0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1855.44					376.64	22.26	0.00	844.07
Total						**379.47**	**22.43**	**0.00**	**850.42**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	13.95					2.83	0.17	0.00	6.35
Parking Lot	0					0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	1855.44					376.64	22.26	0.00	844.07
Total						**379.47**	**22.43**	**0.00**	**850.42**

9.0 Vegetation

2976 KCC ProLogis Park

South Coast Air Basin, Annual (2040)

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	15	1000sqft
Unrefrigerated Warehouse-No Rail	171.8	1000sqft
Parking Lot	208.04	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	10		2.2		
		Precipitation Freq (Days)			
			31		

1.3 User Entered Comments

Project Characteristics -

Land Use - Adjust Lot Size to Match Project

Construction Phase - Adjust Schedule Per Project Specifications

Off-road Equipment - Reduce load factors by 33% per CARB recommendations

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Adjust Equipment Per Schedule; Reduce load factors by 33% per CARB recommendation

Off-road Equipment - Reduce load factors by 33% per CARB recommendation

Trips and VMT - Adjust Hauling Trips for 20 CY Trucks, Adjust Haul Length

Grading - Adjust per Project Site Size

Architectural Coating - M

Vehicle Trips - Adjust Traffic Generation per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Vechicle Emission Factors - Adjust Fleet Mix per Traffic Study

Water And Wastewater - Revise water demand based on Kaiser study and landscape irrigation calculations

Construction Off-road Equipment Mitigation -

Water Mitigation -

Waste Mitigation -

Area Mitigation - CALGREEN

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.38	2.70	2.02	0.00	0.52	0.15	0.66	0.15	0.15	0.30						
2013	2.55	2.49	2.00	0.00	0.09	0.16	0.25	0.00	0.16	0.16						
Total	**2.93**	**5.19**	**4.02**	**0.00**	**0.61**	**0.31**	**0.91**	**0.15**	**0.31**	**0.46**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.38	2.70	2.02	0.00	0.29	0.15	0.43	0.15	0.15	0.30						
2013	2.55	2.49	2.00	0.00	0.00	0.16	0.16	0.00	0.16	0.16						
Total	**2.93**	**5.19**	**4.02**	**0.00**	**0.29**	**0.31**	**0.59**	**0.15**	**0.31**	**0.46**						

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Energy	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
Mobile	0.11	0.30	0.92	0.00	0.43	0.02	0.45	0.01	0.02	0.03						
Waste						0.00	0.00		0.00	0.00						
Water						0.00	0.00		0.00	0.00						
Total	**1.00**	**0.32**	**0.94**	**0.00**	**0.43**	**0.02**	**0.45**	**0.01**	**0.02**	**0.03**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Energy	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
Mobile	0.11	0.30	0.92	0.00	0.43	0.02	0.45	0.01	0.02	0.03						
Waste						0.00	0.00		0.00	0.00						
Water						0.00	0.00		0.00	0.00						
Total	**0.83**	**0.32**	**0.94**	**0.00**	**0.43**	**0.02**	**0.45**	**0.01**	**0.02**	**0.03**						

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.09	0.00	0.09	0.05	0.00	0.05						
Off-Road	0.04	0.29	0.16	0.00		0.01	0.01		0.01	0.01						
Total	**0.04**	**0.29**	**0.16**	**0.00**	**0.09**	**0.01**	**0.10**	**0.05**	**0.01**	**0.06**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.09	0.00	0.09	0.05	0.00	0.05						
Off-Road	0.04	0.29	0.16	0.00		0.01	0.01		0.01	0.01						
Total	**0.04**	**0.29**	**0.16**	**0.00**	**0.09**	**0.01**	**0.10**	**0.05**	**0.01**	**0.06**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.19	0.00	0.19	0.10	0.00	0.10						
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05						
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.19**	**0.05**	**0.24**	**0.10**	**0.05**	**0.15**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.04	0.24	0.29	0.00	0.19	0.01	0.19	0.00	0.01	0.01						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.04**	**0.24**	**0.30**	**0.00**	**0.19**	**0.01**	**0.19**	**0.00**	**0.01**	**0.01**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.19	0.00	0.19	0.10	0.00	0.10						
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05						
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.19**	**0.05**	**0.24**	**0.10**	**0.05**	**0.15**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.04	0.24	0.29	0.00	0.00	0.01	0.01	0.00	0.01	0.01						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.04**	**0.24**	**0.30**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**						

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	1.03	0.65	0.00		0.07	0.07		0.07	0.07						
Total	**0.15**	**1.03**	**0.65**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01						
Worker	0.02	0.02	0.21	0.00	0.04	0.00	0.04	0.00	0.00	0.00						
Total	**0.04**	**0.25**	**0.36**	**0.00**	**0.05**	**0.01**	**0.06**	**0.00**	**0.01**	**0.01**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	1.03	0.65	0.00		0.07	0.07		0.07	0.07						
Total	**0.15**	**1.03**	**0.65**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.02	0.23	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01						
Worker	0.02	0.02	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.04**	**0.25**	**0.36**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**						

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.26	1.72	1.16	0.00		0.11	0.11		0.11	0.11						
Total	**0.26**	**1.72**	**1.16**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.37	0.25	0.00	0.02	0.01	0.03	0.00	0.01	0.01						
Worker	0.03	0.03	0.35	0.00	0.07	0.00	0.07	0.00	0.00	0.00						
Total	**0.07**	**0.40**	**0.60**	**0.00**	**0.09**	**0.01**	**0.10**	**0.00**	**0.01**	**0.01**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.26	1.72	1.16	0.00		0.11	0.11		0.11	0.11						
Total	**0.26**	**1.72**	**1.16**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.37	0.25	0.00	0.00	0.01	0.01	0.00	0.01	0.01						
Worker	0.03	0.03	0.35	0.00	0.00	0.00	0.01	0.00	0.00	0.00						
Total	**0.07**	**0.40**	**0.60**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**						

3.5 Paving - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.34	0.21	0.00		0.03	0.03		0.03	0.03						
Paving	0.01					0.00	0.00		0.00	0.00						
Total	**0.07**	**0.34**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.34	0.21	0.00		0.03	0.03		0.03	0.03						
Paving	0.01					0.00	0.00		0.00	0.00						
Total	**0.07**	**0.34**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

3.6 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.16					0.00	0.00		0.00	0.00						
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00						
Total	**2.16**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.16					0.00	0.00		0.00	0.00						
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00						
Total	**2.16**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**						

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.11	0.30	0.92	0.00	0.43	0.02	0.45	0.01	0.02	0.03						
Unmitigated	0.11	0.30	0.92	0.00	0.43	0.02	0.45	0.01	0.02	0.03						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	269.73	269.73	269.73	787,468	787,468
Total	269.73	269.73	269.73	787,468	787,468

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00						
Electricity Unmitigated						0.00	0.00		0.00	0.00						
NaturalGas Mitigated	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
NaturalGas Unmitigated	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	54750	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Unrefrigerated Warehouse-No Rail	367652	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
Total		**0.00**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	54750	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Unrefrigerated Warehouse-No Rail	367652	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00						
Total		**0.00**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	160350								
Parking Lot	0								
Unrefrigerated Warehouse-No Rail	518836								
Total									

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	160350								
Parking Lot	0								
Unrefrigerated Warehouse-No Rail	518836								
Total									

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Unmitigated	0.89	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.22					0.00	0.00		0.00	0.00						
Consumer Products	0.68					0.00	0.00		0.00	0.00						
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Total	**0.90**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.04					0.00	0.00		0.00	0.00						
Consumer Products	0.68					0.00	0.00		0.00	0.00						
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Total	**0.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**						

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated								
Unmitigated								
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0								
Parking Lot	0 / 0								
Unrefrigerated Warehouse-No Rail	0.24716 / 0.920839								
Total									

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0								
Parking Lot	0 / 0								
Unrefrigerated Warehouse-No Rail	0.216611 / 0.864668								
Total									

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated								
Unmitigated								
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	13.95								
Parking Lot	0								
Unrefrigerated Warehouse-No Rail	1855.44								
Total									

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	6.975								
Parking Lot	0								
Unrefrigerated Warehouse-No Rail	927.72								
Total									

9.0 Vegetation

APPENDIX C

Project Traffic Study

COUNTY OF SAN BERNARDINO

VALLEY BOULEVARD/ COMMERCE DRIVE PROJECT

TRAFFIC IMPACT ANALYSIS

Prepared by:

Giancarlo Ganddini, E.I.T.,
Carl Ballard, and
William Kunzman, P.E.

William Kunzman

May 23, 2011

KUNZMAN ASSOCIATES, INC.
1111 Town & Country Road, Suite 34
Orange, CA 92868-4667
Phone: (714) 973-8383
Fax: (714) 973-8821
Email: mail@traffic-engineer.com
Web: www.traffic-engineer.com

4906

Table of Contents

I. Introduction 1

A. Project Description 1
B. Study Area 1
C. Analysis Methodology 2
D. Definition of Deficiency and Significant Impact 4
1. Definition of Deficiency 4
2. Definition of Significant Impact 5

II. Existing Conditions 8

A. Existing Roadway System 8
B. Existing Volumes 8
C. Existing Level of Service 8
D. Planned Transportation Improvements and Relationship to General Plan .. 8

III. Project Traffic 16

A. Project Description 16
B. Trip Generation 16
C. Trip Distribution 16
D. Trip Assignment 16
E. Traffic Contribution Test 16

IV. Future Conditions 27

A. Future Volumes 27
1. Opening Year (2012) Without Project 27
2. Opening Year (2012) With Project 27
3. Year 2035 Without Project 27
4. Year 2035 With Project 27
B. Future Level of Service 28
1. Opening Year (2012) Without Project 28
2. Opening Year (2012) With Project 28
3. Year 2035 Without Project 28
4. Year 2035 With Project 28
C. Project Driveway at Commerce Drive Queue Analysis 29

V. Conclusions and Recommendations 47

A. Summary 47
B. Existing Conditions 47
C. Project Traffic 48
D. Future Conditions 48
1. Opening Year (2012) Without Project 48
2. Opening Year (2012) With Project 48
3. Year 2035 Without Project 48
4. Year 2035 With Project 48
5. Project Driveway at Commerce Drive Queue Analysis 49

E. **Recommendations** **49**
1. On-Site Improvements 49
2. Off-Site Improvements 49

APPENDICES

Appendix A – Glossary of Transportation Terms

Appendix B – Traffic Count Worksheets

Appendix C – Future Growth Increment Calculation Worksheets

Appendix D – Explanation and Calculation of Intersection Delay

List of Tables

Table 1. Existing Intersection Delay and Level of Service 9

Table 2. Project Traffic Generation 18

Table 3. Opening Year (2012) Without Project Intersection Delay and Level of Service 30

Table 4. Opening Year (2012) With Project Intersection Delay and Level of Service 31

Table 5. Year 2035 Without Project Intersection Delay and Level of Service 32

Table 6. Year 2035 With Project Intersection Delay and Level of Service 33

Table 7. Project Driveway at Commerce Drive Queue Analysis 34

List of Figures

Figure 1. Project Location Map 6

Figure 2. Site Plan 7

Figure 3. Existing Through Travel Lanes and Intersection Controls 10

Figure 4. Existing Average Daily Traffic Volumes 11

Figure 5. Existing Morning Peak Hour Intersection Turning Movement Volumes 12

Figure 6. Existing Evening Peak Hour Intersection Turning Movement Volumes 13

Figure 7. County of San Bernardino General Plan Circulation Element 14

Figure 8. County of San Bernardino General Plan Roadway Cross-Sections 15

Figure 9. Project Outbound Traffic Distribution – Cars 19

Figure 10. Project Inbound Traffic Distribution – Cars 20

Figure 11. Project Outbound Traffic Distribution – Trucks 21

Figure 12. Project Inbound Traffic Distribution – Trucks 22

Figure 13. Project Average Daily Traffic Volumes 23

Figure 14. Project Morning Peak Hour Intersection Turning Movement Volumes 24

Figure 15. Project Evening Peak Hour Intersection Turning Movement Volumes 25

Figure 16. Project Traffic Contribution Test Volumes 26

Figure 17. Opening Year (2012) Without Project Average Daily Traffic Volumes 35

Figure 18. Opening Year (2012) With Project Average Daily Traffic Volumes 36

Figure 19. Year 2035 Without Project Average Daily Traffic Volumes 37

Figure 20. Year 2035 With Project Average Daily Traffic Volumes 38

Figure 21. Opening Year (2012) Without Project Morning Peak Hour Intersection Turning Movement Volumes 39

Figure 22. Opening Year (2012) Without Project Evening Peak Hour Intersection Turning Movement Volumes 40

Figure 23. Opening Year (2012) With Project Morning Peak Hour Intersection Turning Movement Volumes 41

Figure 24. Opening Year (2012) With Project Evening Peak Hour Intersection Turning Movement Volumes 42

Figure 25. Year 2035 Without Project Morning Peak Hour Intersection Turning Movement Volumes 43

Figure 26. Year 2035 Without Project Evening Peak Hour Intersection Turning Movement Volumes 44

Figure 27. Year 2035 With Project Morning Peak Hour Intersection Turning Movement Volumes 45

Figure 28. Year 2035 With Project Evening Peak Hour Intersection Turning Movement Volumes 46

Figure 29. Circulation Recommendations 50

I. Introduction

The purpose of this report is to provide an assessment of the traffic impacts resulting from the proposed development of the Valley Boulevard/Commerce Drive project, and to identify the traffic mitigation measures necessary to maintain the established Level of Service standard for the elements of the impacted roadway system. The traffic issues related to the proposed land uses and development have been evaluated in the context of the California Environmental Quality Act.

The County of San Bernardino is the lead agency responsible for preparation of the traffic impact analysis, in accordance with the California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Year 2012, at which time it will be generating traffic at its full potential, and for the Year 2035.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

A. Project Description

The proposed development is located on the northwest corner of the Commerce Drive and Valley Boulevard intersection in the County of San Bernardino. A vicinity map showing the project location is provided on Figure 1.

The approximately 9 acre project site is proposed to be developed with 186,300 square feet of high-cube warehouse distribution center. Figure 2 illustrates the project site plan.

B. Study Area

Regional access to the project site is provided by the I-15 Freeway and I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadway which will be most affected by the project includes Valley Boulevard. The north-south roadways which will be most affected by the project include Etiwanda Avenue and Commerce Drive. The project will take access to Valley Boulevard and Commerce Drive.

A series of scoping discussions were conducted with the County of San Bernardino to define the desired analysis locations for each future analysis year. In addition, staff from the County of San Bernardino has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Year 2035) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or

exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute traffic greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute traffic greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana or City of Ontario.

C. Analysis Methodology

The analysis of the traffic impacts from the proposed development and the assessment of the required mitigation measures were based on an evaluation of the existing and forecast traffic conditions in the vicinity of the site with and without the project. The following analysis years are considered in this report:

- Existing Conditions (2011)
- Project Opening Year Conditions (2012)
- Horizon Year Conditions (2035)

Existing intersection traffic conditions were established through morning and evening peak hour traffic counts obtained by Kunzman Associates, Inc. in November 2010 (see Appendix B).

In addition, truck classification counts were conducted at the study area intersections. The existing percent of trucks were used in the conversion of trucks to Passenger Car Equivalent's (see Appendix C).

Trip generation has been estimated based on the Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008.

The distribution of the project traffic was based on the traffic distribution from the Kaiser Commerce Center Specific Plan.

The average daily traffic volume forecasts have been determined using the growth increment approach on the Comprehensive Transportation Plan (CTP) Traffic Model Year 2000 and Year 2035 average daily traffic volume forecasts (see Appendix C). This difference defines the growth in traffic over the 35 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2010 and Year 2035. For this purpose, linear growth between the Year 2000 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2010 and Year 2035 is 25 years of the 35 year time frame, a factor of 0.71 (i.e., 25/35) was used.

The Year 2035 without project daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the Comprehensive Transportation Plan Year 2000 and Year 2035 peak hour volumes. The growth increment calculation worksheets are shown in Appendix C. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing traffic count data serves as both the starting point for the refinement process, and also

provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The Opening Year (2012) traffic volumes have been interpolated from the Year 2035 traffic volumes based upon a portion of the future growth increment.

Project traffic volumes were then added to the Comprehensive Transportation Plan volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix D) based on the 2000 Highway Capacity Manual – Transportation Research Board Special Report 209. To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection. The signalized intersections are considered deficient (Level of Service F) if the overall intersection critical volume to capacity ratio equals or exceeds 1.0, even if the level of service defined by the delay value is below the defined Level of Service standard. The volume to capacity ratio is defined as the critical volumes divided by the intersection capacity. A volume to capacity ratio greater than 1.0 implies an infinite queue.

The Level of Service analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of two seconds per phase. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings has also been considered in the signalized intersection analysis. The following formula has been used to calculate the pedestrian minimum times for all Highway Capacity Manual runs:

[(Curb to curb distance) / (4 feet/second)] + 7 seconds.

For existing and Opening Year traffic conditions, saturation flow rates of 1,800 vehicles per hour of green for through and right turn lanes and 1,700 vehicles per lane for single left turn lanes, 1,600 vehicles per lane for dual left turn lanes and 1,500 vehicles per lane for triple left turn lanes have been assumed for the capacity analysis.

For Year 2035 traffic conditions, saturation flow rates of 1,900 vehicles per hour of green for through and right turn lanes and 1,800 vehicles per lane for single left turn lanes, 1,700 vehicles per lane for dual left turn lanes and 1,800 vehicles per lane for double right turn lanes have been assumed for the capacity analysis.

The peak hour traffic volumes have been adjusted to peak 15 minute volumes for analysis purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. Where feasible improvements in accordance with the local jurisdiction's General Plan and which result in acceptable operations cannot be identified, the Year 2035 peak hour factor has been adjusted upwards to 0.95. This is to account for the effects of congestion on peak spreading. Peak spreading refers to the tendency of traffic to spread more evenly across time as congestion increases.

The traffic mitigation needs anticipated at the time of the project opening with full occupancy and for the Year 2035 were combined into a summary of mitigation requirements and costs. The mitigation cost responsibility for the proposed development was estimated based on the percent of the increase in traffic from the existing condition to the Year 2035 that was attributed to the project-generated traffic.

D. Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the County of San Bernardino requirements.

1. Definition of Deficiency

The definition of an intersection deficiency has been obtained from the County of San Bernardino General Plan. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E or F will be considered deficient.

For freeway facilities, the Congestion Management Program controls the definition of deficiency for purposes of this study. The Congestion Management Program definition of deficiency is based on maintaining a Level of Service standard of Level of Service E or better, except where an existing Level of Service F condition is identified in the Congestion Management Program document (San Bernardino County Congestion Management Program Table 2-1). A Congestion Management Program deficiency is, therefore, defined as any freeway segment operating or projected to operate at Level of Service F, unless the segment is identified explicitly in the Congestion Management Program document.

The identification of a Congestion Management Program deficiency requires further analysis in satisfaction of Congestion Management Program requirements, including:

- Evaluation of the mitigation measures required to restore traffic operations to an acceptable level with respect to Congestion Management Program Level of Service standards.
- Calculation of the project share of new traffic on the impacted Congestion Management Program facility during peak hours of traffic.

- Estimation of the cost required to implement the improvements required to restore traffic operations to an acceptable Level of Service as described above.

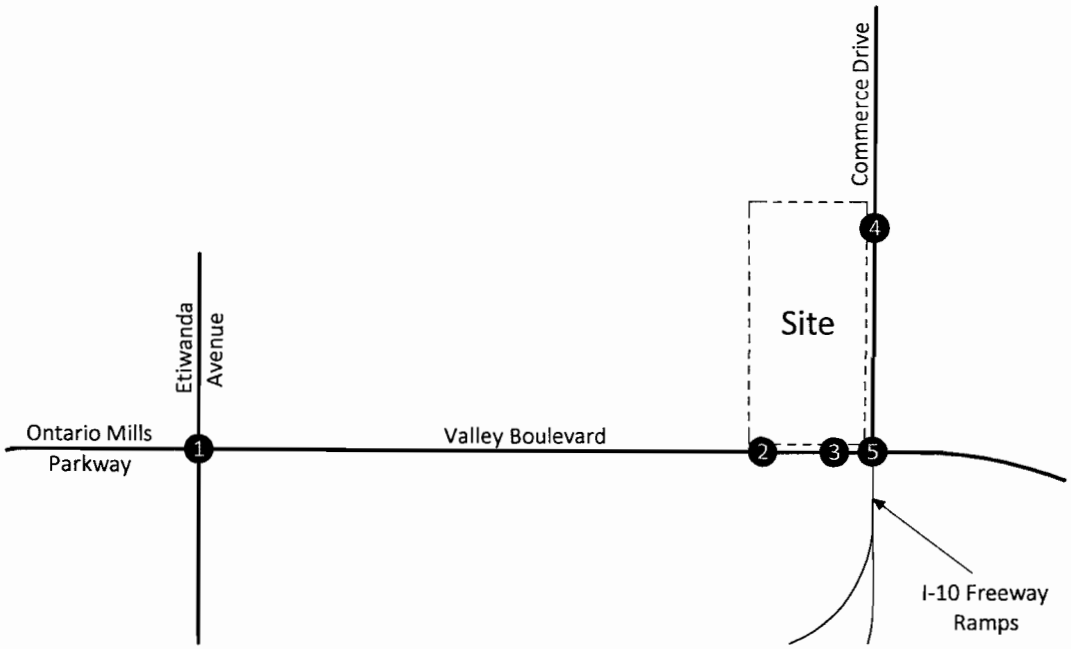
This study incorporates each of these aspects for all locations where a Congestion Management Program deficiency is identified.

2. Definition of Significant Impact

The identification of significant impacts is a requirement of the California Environmental Quality Act. The County of San Bernardino General Plan and Circulation Element have been adopted in accordance with California Environmental Quality Act requirements, and any roadway improvements within the County of San Bernardino that are consistent with these documents are not considered a significant impact, so long as the project contributes its "fair share" funding for improvements.

A traffic impact is considered significant if the project both: i) contributes measurable traffic to and ii) substantially and adversely changes the Level of Service at any off-site location projected to experience deficient operations under foreseeable cumulative conditions, where feasible improvements consistent with the County of San Bernardino General Plan cannot be constructed.

Figure 1
Project Location Map



Legend

1 = Study Area Intersection

N

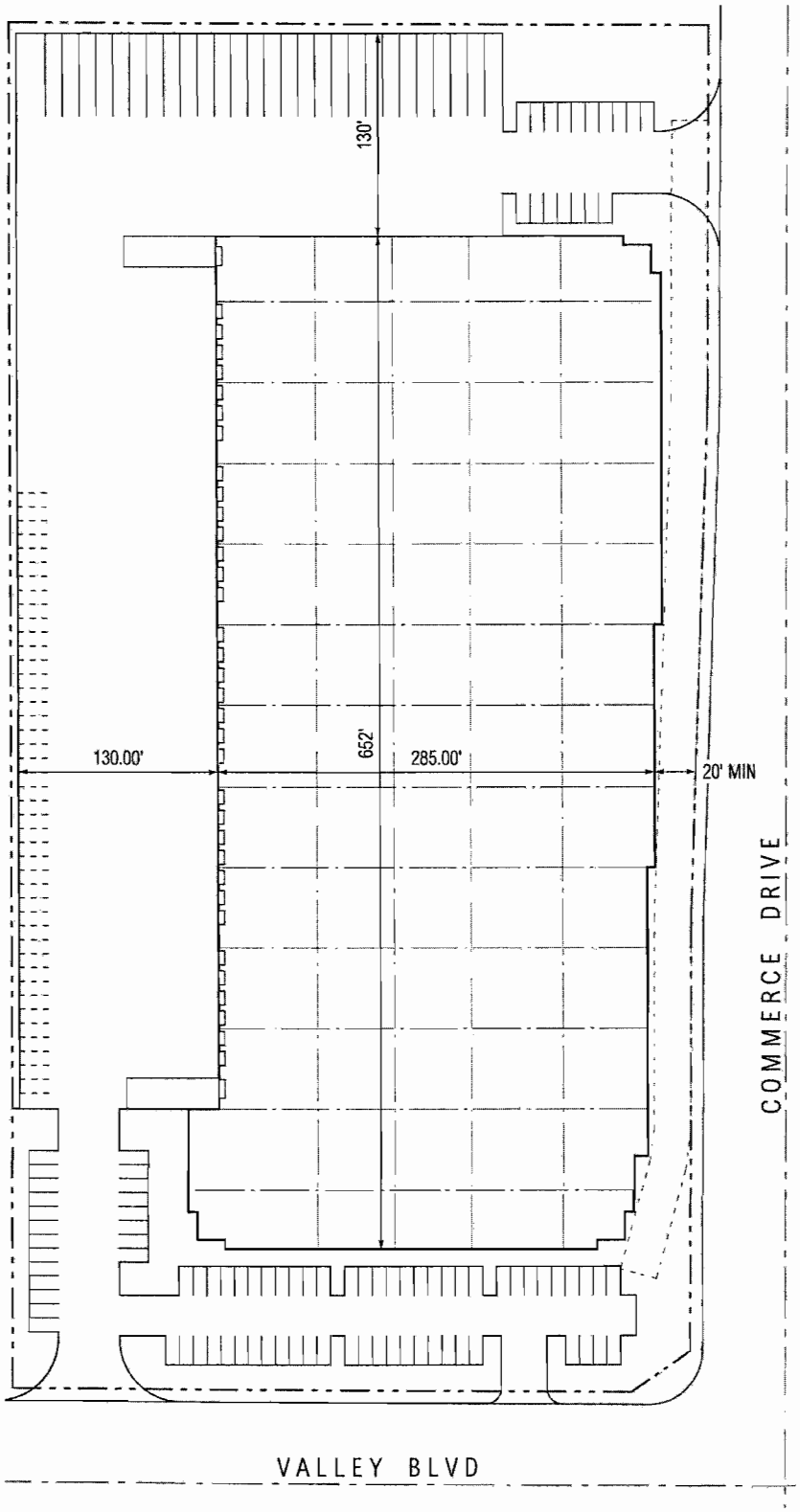
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/1

Figure 2
Site Plan



4906/2

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

II. Existing Conditions

A. Existing Roadway System

Figure 3 identifies the existing conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

Regional access to the project site is provided by the I-15 Freeway and I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadway which will be most affected by the project includes Valley Boulevard. The north-south roadways which will be most affected by the project include Etiwanda Avenue and Commerce Drive.

B. Existing Volumes

Figure 4 depicts the existing average daily traffic volumes. The existing average daily traffic volumes were obtained by Kunzman Associates, Inc. using the following formula for each intersection leg:

PM Peak Hour (Approach + Exit Volume) x 11.5 = Daily Leg Volume.

This is a conservative estimate and may over estimate the average daily traffic volumes.

Existing intersection traffic conditions were established through morning and evening peak hour traffic counts obtained by Kunzman Associates, Inc. from November 2010 (see Appendix B) and shown on Figures 5 and 6, respectively. Explicit peak hour factors have been calculated using the data collected for this effort as well. The morning and evening peak hour traffic volumes were identified by counting the two-hour periods from 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM.

C. Existing Level of Service

The Existing delay and Level of Service for intersections in the vicinity of the project are shown in Table 1. The study area intersections currently operate at Level of Service D or better during the peak hours for Existing traffic conditions. Existing delay worksheets are provided in Appendix D.

D. Planned Transportation Improvements and Relationship to General Plan

The County of San Bernardino General Plan Circulation Element is shown on Figure 7. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 7. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The San Bernardino County General Plan roadway cross-sections is shown on Figure 8.

Table 1

Existing Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Etiwanda Avenue (NS) at: Valley Boulevard (EW) - #1	TS	2	2	1>>	1	2.5	0.5	1	2	1>>	2	2	1	31.1-C	31.3-C
Commerce Drive (NS) at: Valley Boulevard (EW) - #5	TS	2	1	1>>	1	1.5	0.5	1	2	1	2	2	1>>	33.9-C	35.4-D

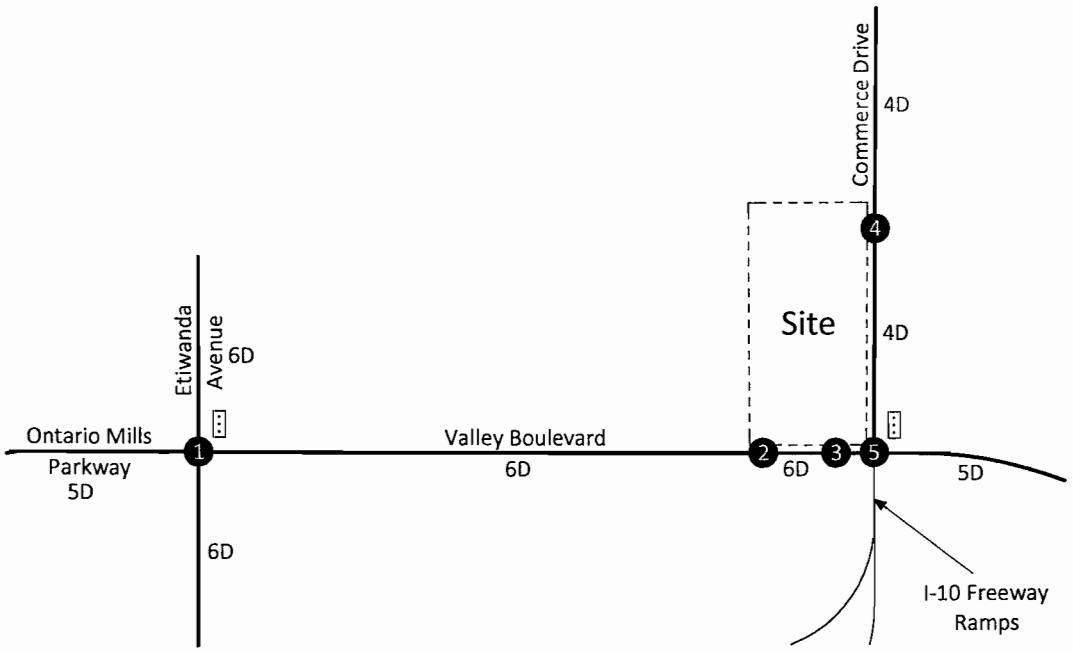
[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

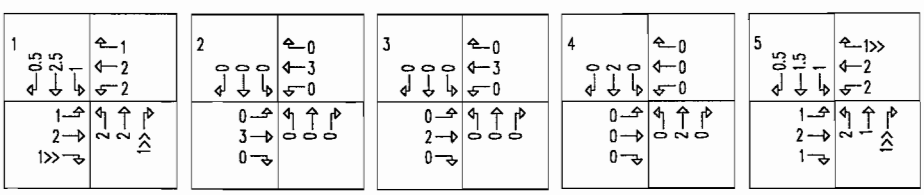
[3] TS = Traffic Signal

Figure 3
Existing Through Travel Lanes and Intersection Controls



Legend

- = Traffic Signal
- 4 = Through Travel Lanes
- D = Divided
- U = Undivided
- >> = Free Right Turn



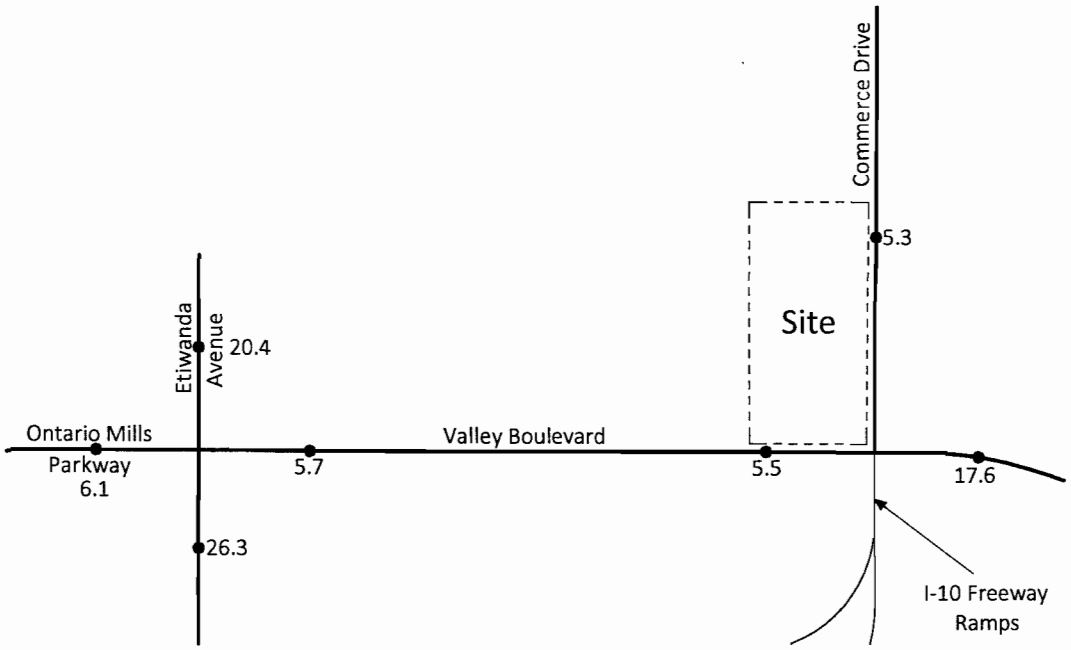
NTS

4906/3

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 4
Existing Average Daily Traffic Volumes



Legend

17.6 = Vehicles Per Day (1,000's)

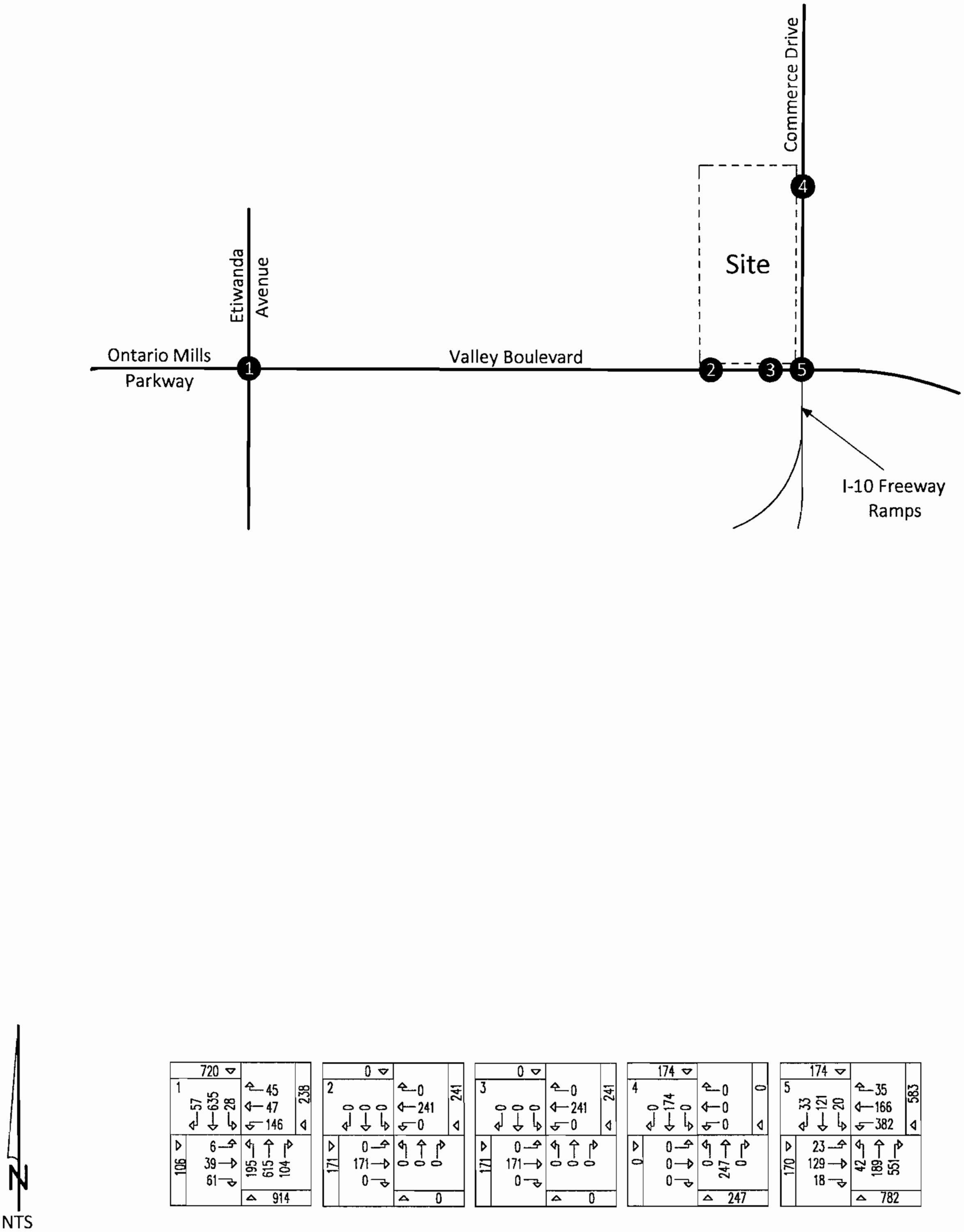
NTS

4906/4

KUNZMAN ASSOCIATES, INC.

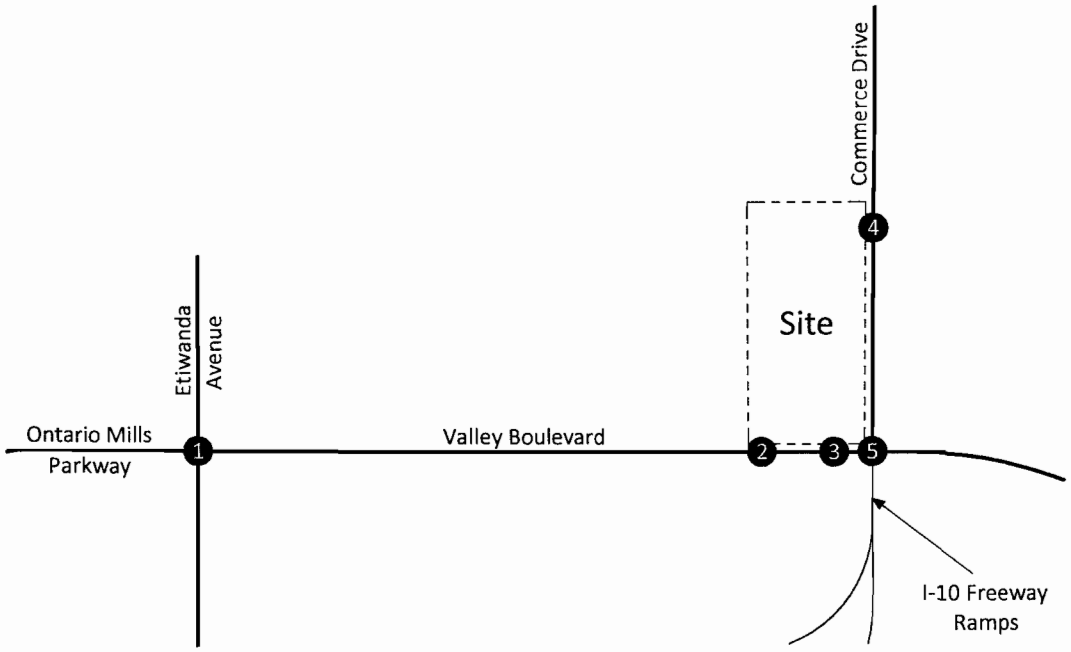
OVER 30 YEARS OF EXCELLENT SERVICE

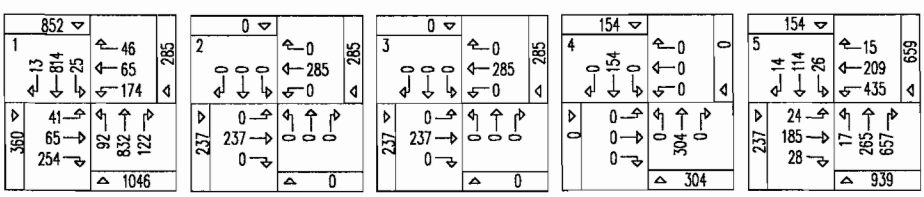
Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes



4906/5

Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes





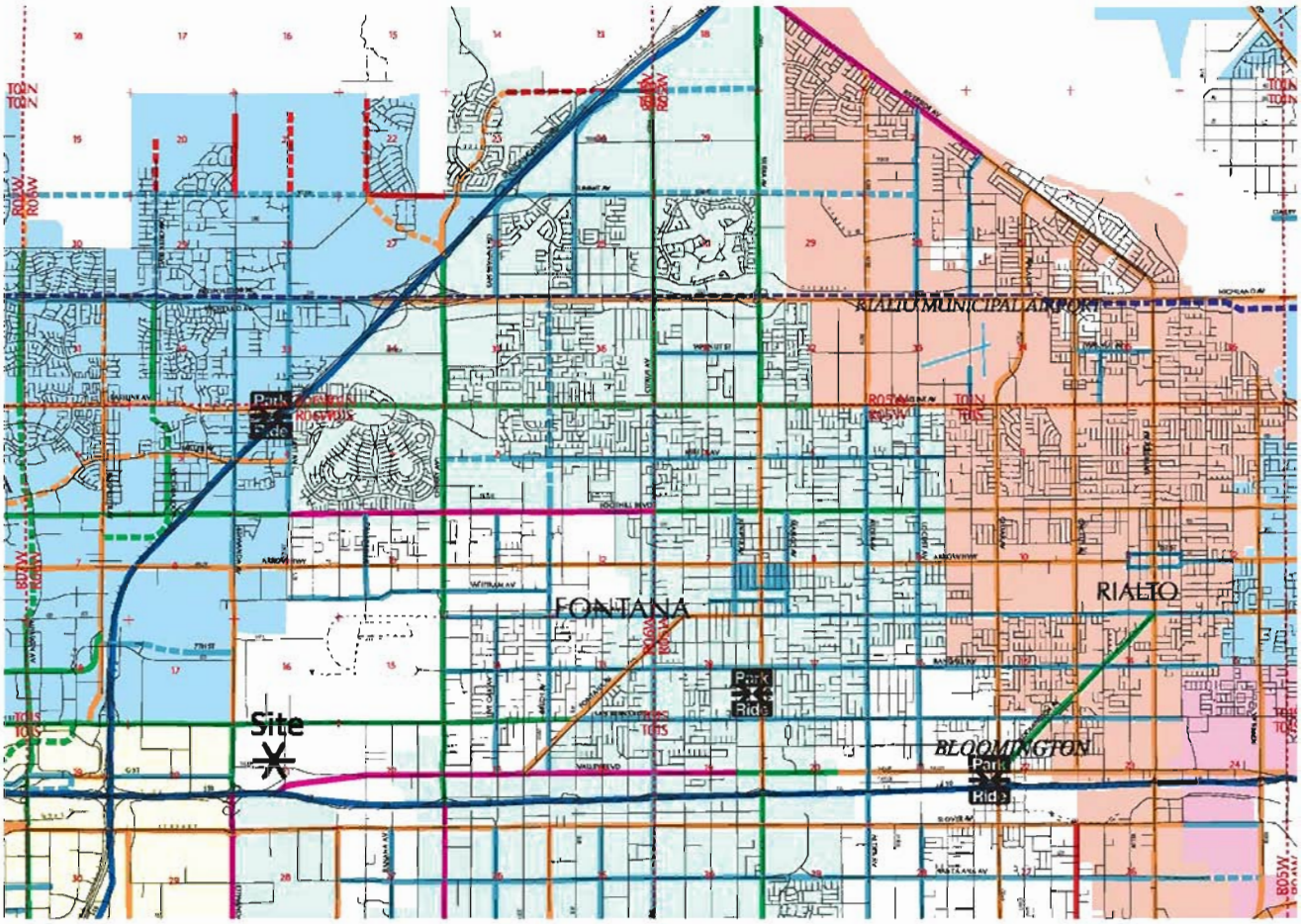
NTS

4906/6

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 7
County of San Bernardino General Plan Circulation Element



Legend

EXISTING PROPOSED

- Freeway
- Major Divided Highway
- Major Arterial Highway
- Major Highway
- Secondary Highway
- Collector/Undivided Access Collector
- Modified Major Highway
- Modified Secondary Highway
- Modified Highway Deficient Standards or Conditions
- Railroads

N

NTS

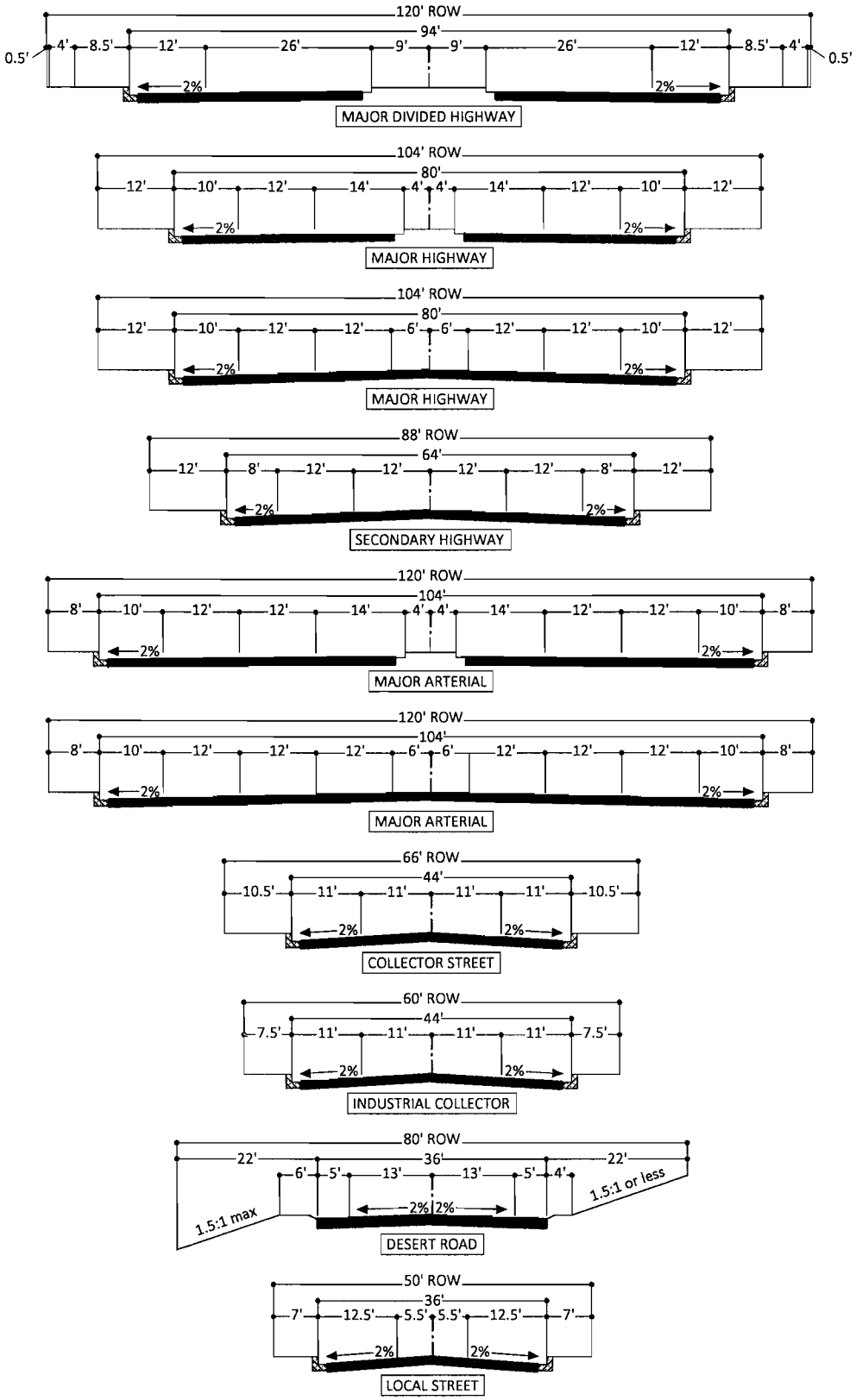
Source: County of San Bernardino

4906/7

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 8
County of San Bernardino General Plan Roadway Cross-Sections



Source: County of San Bernardino

4906/8

III. Project Traffic

A. Project Description

The approximately 9 acre project site is proposed to be developed with 186,300 square feet of high-cube warehouse distribution center. The project will have access to Valley Boulevard and Commerce Drive.

B. Trip Generation

The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the traffic generation rates by the land use quantity, the traffic volumes are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008 and Truck Trip Generation Study, City of Fontana, August 2003.

As shown in Table 2, the proposed development is projected to generate approximately 348 daily vehicle trips, 23 of which will occur during the morning peak hour and 25 of which will occur during the evening peak hour.

C. Trip Distribution

The distribution of the project traffic was based on the traffic distribution from the Kaiser Commerce Center Specific Plan. Figures 9 through 12 contain the directional distributions of the project traffic for the proposed land use.

D. Trip Assignment

Based on the identified traffic generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 13. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 14 and 15, respectively.

E. Traffic Contribution Test

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Year 2035) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the

two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways. Figure 16 graphically depicts the project traffic contribution test volumes on all of the roadway segments adjacent to the potential intersection analysis locations until the project volume contribution has clearly dropped below the 50 trip threshold.

The project does not contribute traffic greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute traffic greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana or City of Ontario.

Table 2

Project Traffic Generation[1]

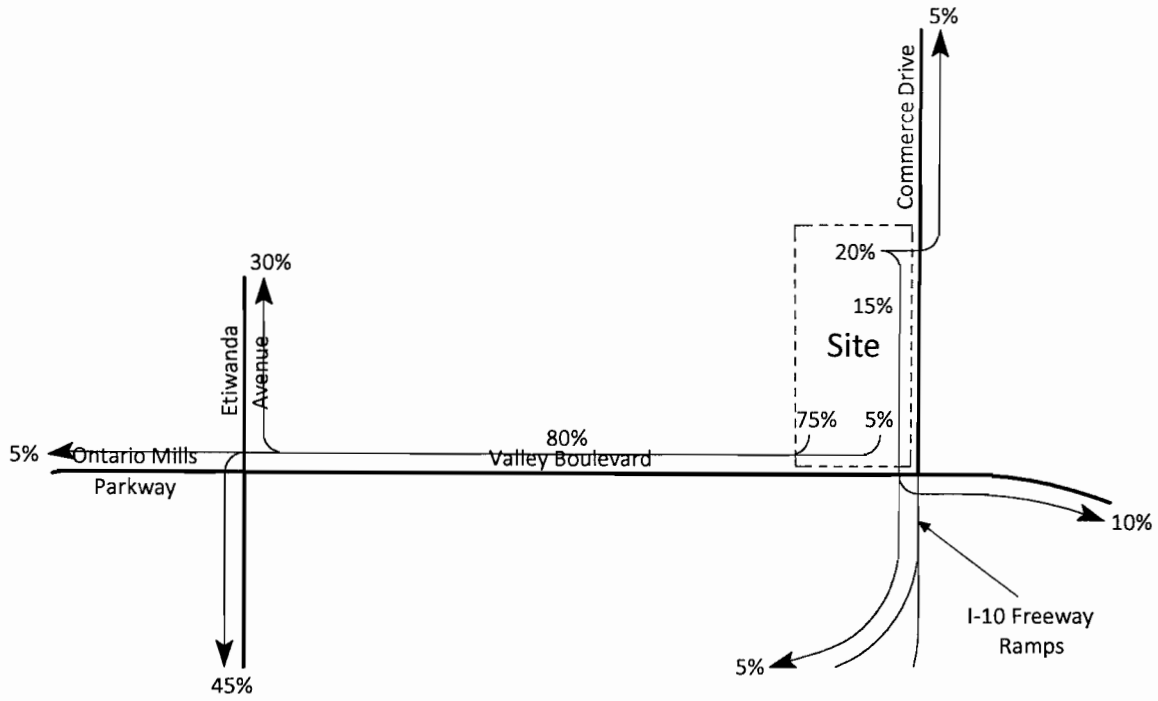
Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	186.300	TSF	71.4%	12.5%	9.1%	6.9%	28.6%	100%
Traffic Generation Rates in trips per TSF								
Daily			1.028	0.180	0.131	0.100	0.411	1.44
Morning Peak Hour			0.064	0.011	0.008	0.006	0.026	0.09
Evening Peak Hour			0.071	0.013	0.009	0.007	0.029	0.10
Traffic Generation in Vehicles								
Daily			192	34	24	19	77	269
Morning Peak Hour								
Inbound			8	1	1	1	3	11
Outbound			4	1	1	-	2	6
Total			12	2	2	1	5	17
Evening Peak Hour								
Inbound			4	1	1	-	2	6
Outbound			9	2	1	1	4	13
Total			13	3	2	1	6	19
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Traffic Generation in PCE's								
Daily			192	51	48	57	156	348
Morning Peak Hour								
Inbound			8	2	2	3	7	15
Outbound			4	2	2	-	4	8
Total			12	4	4	3	11	23
Evening Peak Hour								
Inbound			4	2	2	-	4	8
Outbound			9	3	2	3	8	17
Total			13	5	4	3	12	25

[1] Source: Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008, Land Use Category 152 and Truck Trip Generation Study, City of Fontana, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments.

Figure 9
Project Outbound Traffic Distribution - Cars



Legend

10% = Percent From Project

N

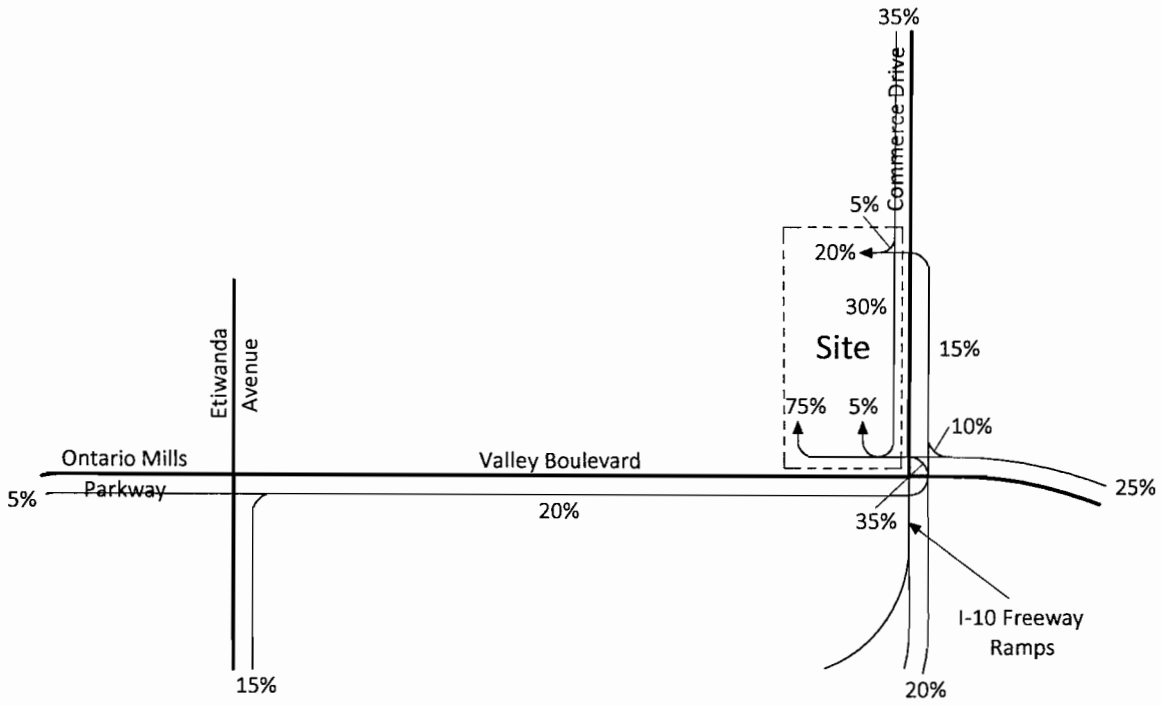
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/9

Figure 10
Project Inbound Traffic Distribution - Cars



Legend

10% = Percent To Project

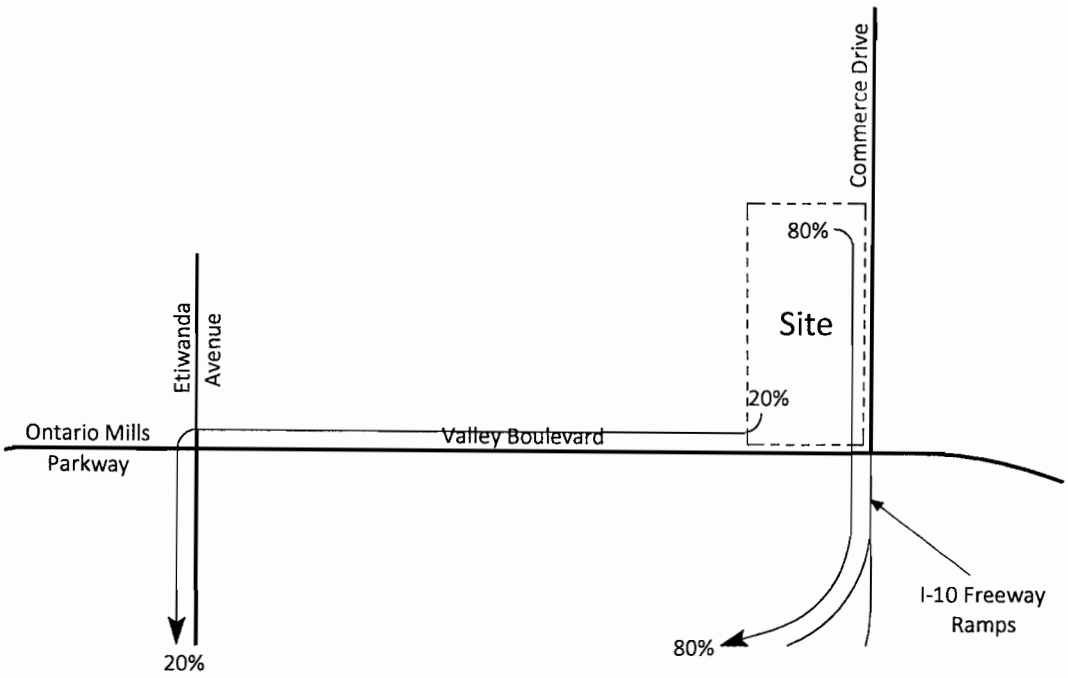
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/10

Figure 11
Project Outbound Traffic Distribution - Trucks



Legend

10% = Percent From Project

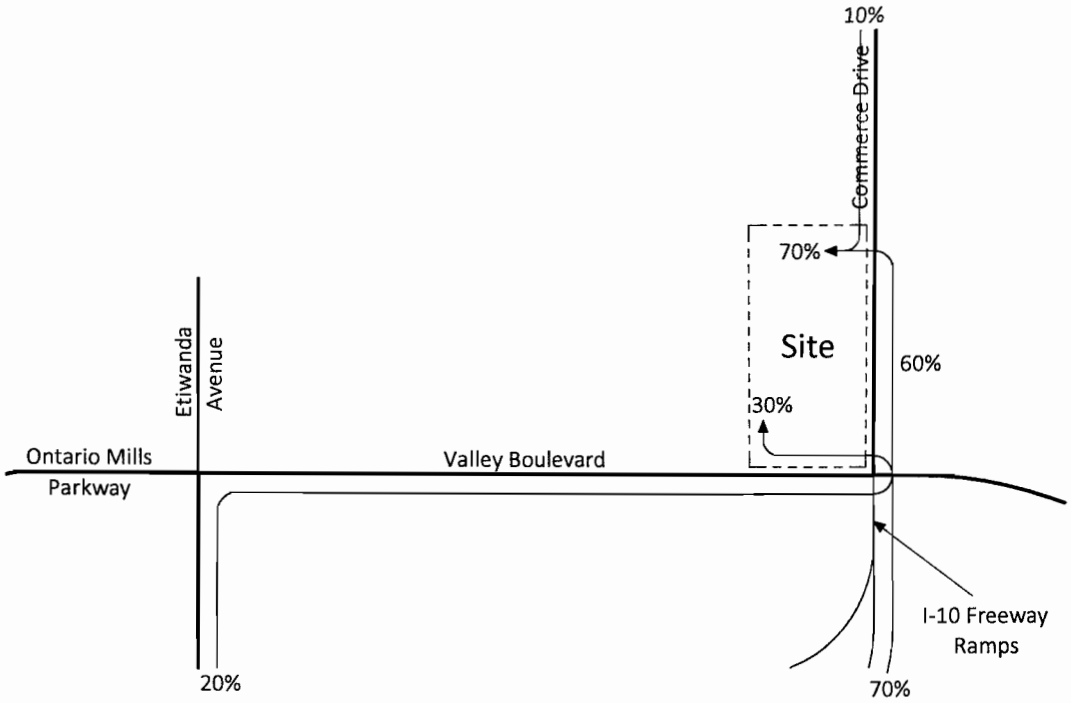
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/11

Figure 12
Project Inbound Traffic Distribution - Trucks



Legend

10% = Percent To Project

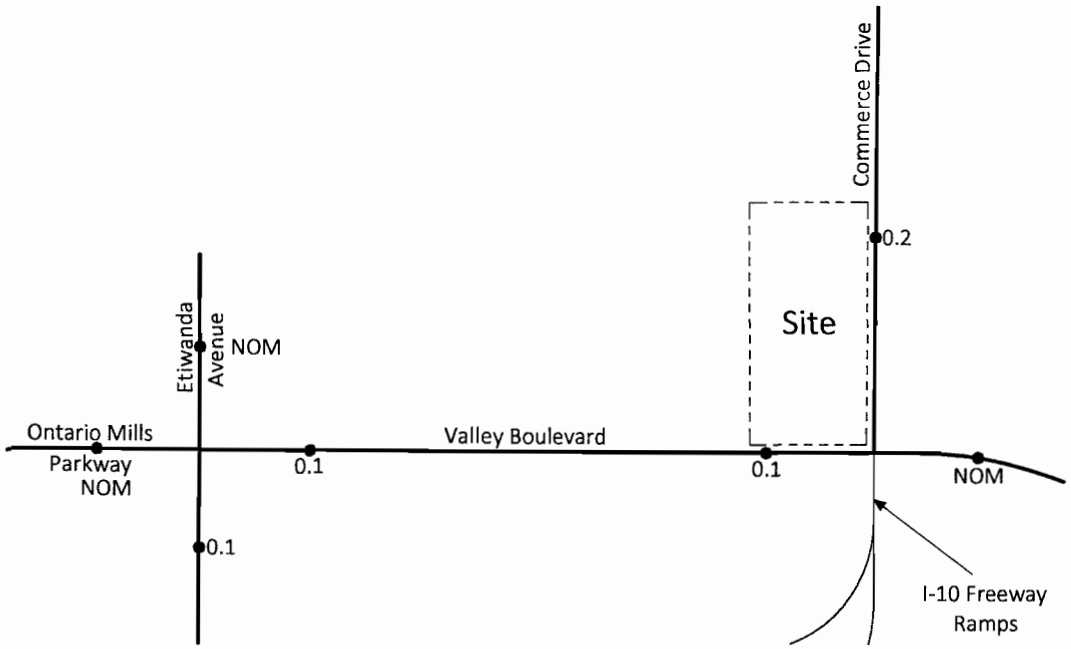
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/12

Figure 13
Project Average Daily Traffic Volumes



Legend

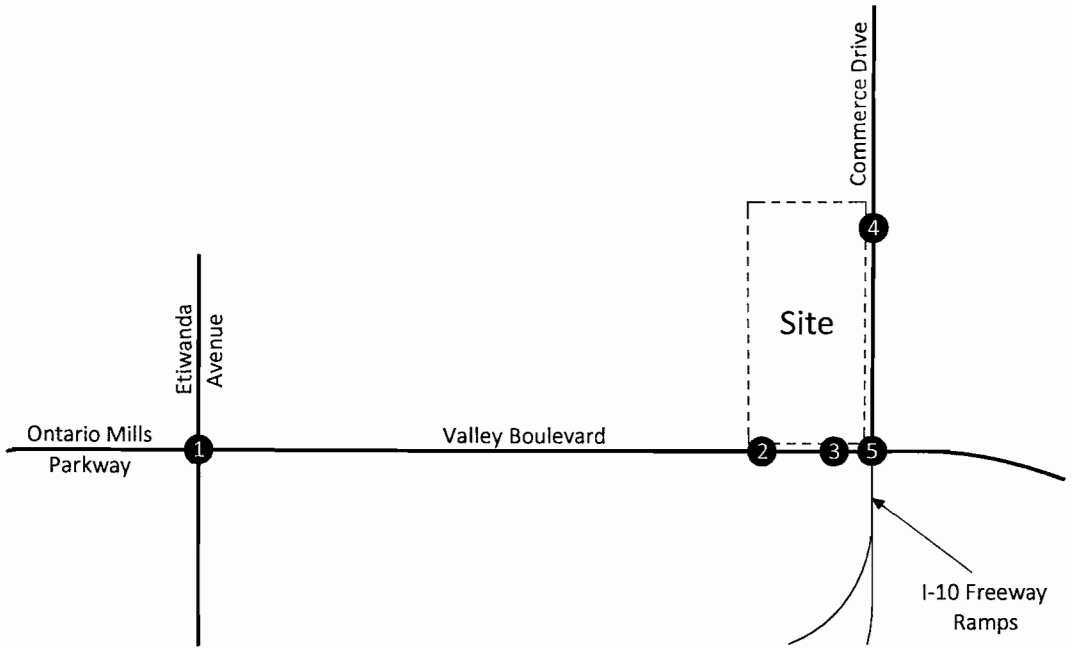
0.1 = Vehicles Per Day (1,000's)
NOM = Nominal, Less Than 50 Vehicles Per Day

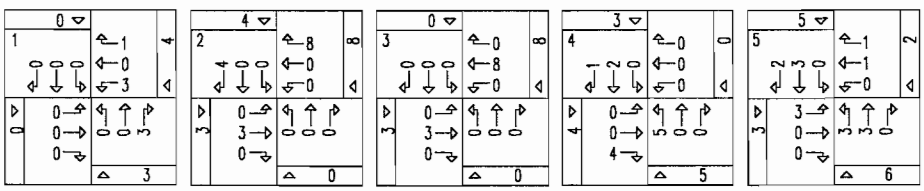
N
NTS

KUNZMAN ASSOCIATES, INC.
OVER 30 YEARS OF EXCELLENT SERVICE

4906/13

Figure 14
Project Morning Peak Hour Intersection Turning Movement Volumes





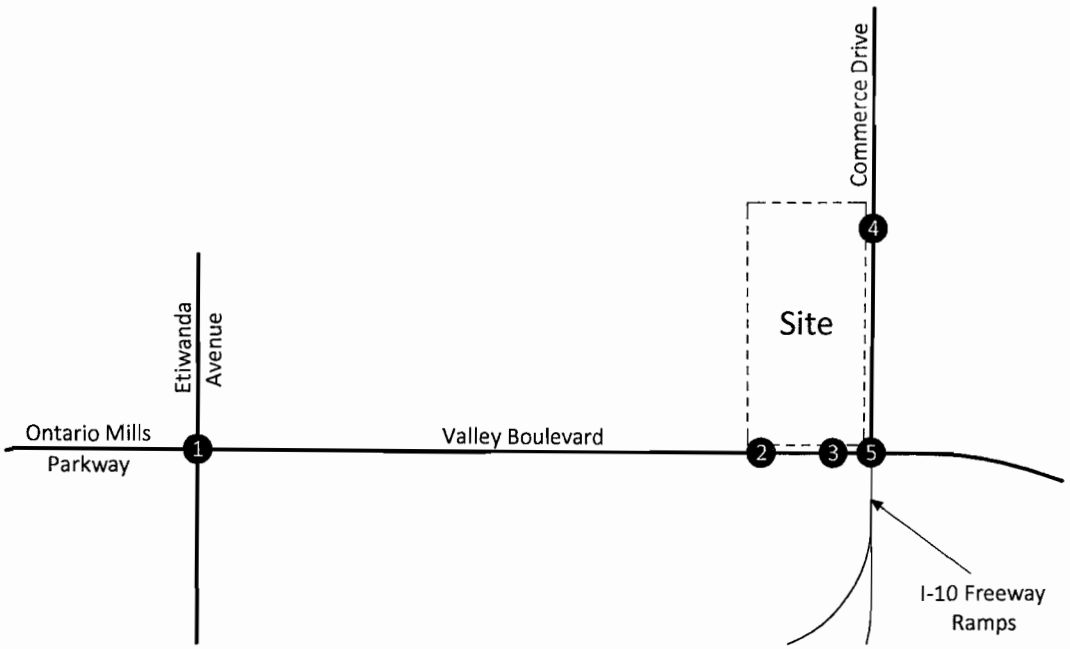
NTS

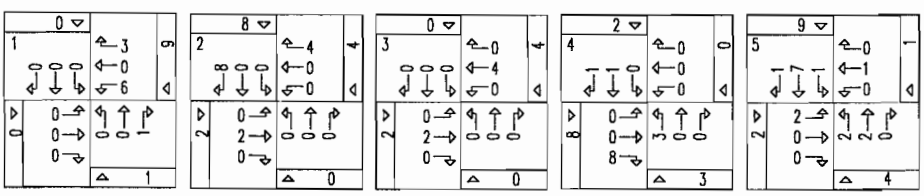
4906/14

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 15
Project Evening Peak Hour Intersection Turning Movement Volumes





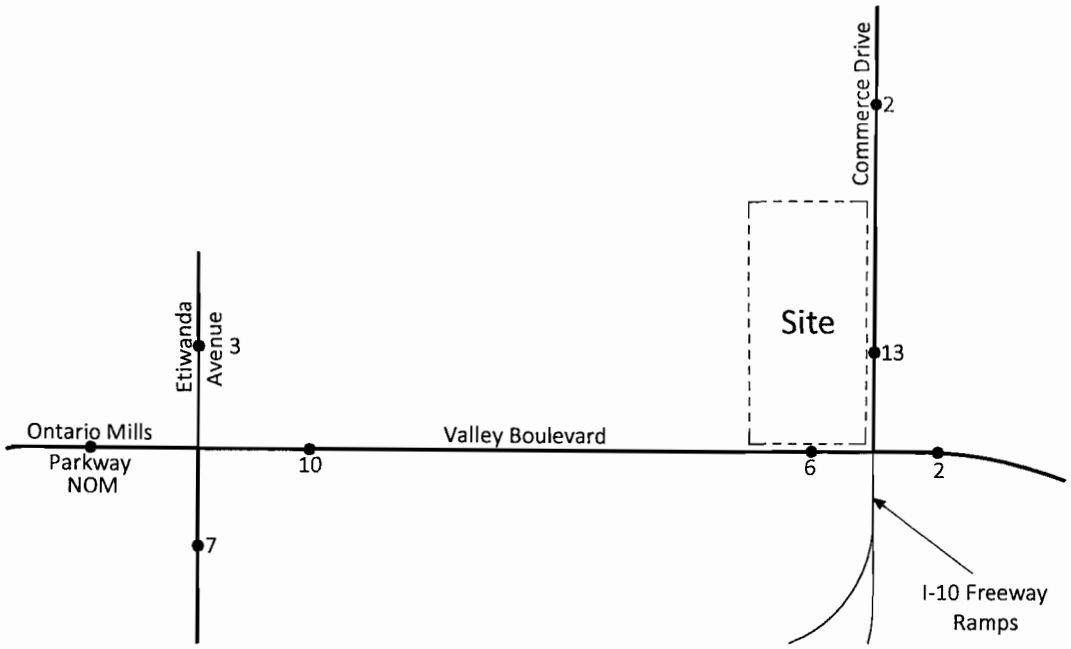
NTS

4906/15

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 16
Project Traffic Contribution Test Volumes



Legend

2 = Project Evening Peak Hour Volumes
NOM = Nominal, Rounding Down Results In 0 Project Evening Peak Hour Volumes

N

NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/16

IV. Future Conditions

A. Future Volumes

As described within Section I.C., the Year 2035 average daily traffic volume forecasts with the project are developed using a growth increment process based on volumes predicted by the Comprehensive Transportation Plan (CTP) Year 2000 and Year 2035 traffic models. The growth increment for Year 2035 on each roadway segment is the increase in Comprehensive Transportation Plan Traffic Model volumes from existing Year 2010 to Year 2035. The final Year 2035 roadway segment volume used for analysis purposes is then determined by adding the Year 2035 growth increment volume to the existing counted volume.

The Opening Year (2012) traffic projections have been interpolated between Year 2035 traffic volumes and existing traffic volumes utilizing a portion of the growth increment (see Section I.C.). Project traffic volumes for all future projections were estimated using the manual approach.

1. Opening Year (2012) Without Project

   The average daily traffic volumes for Opening Year (2012) Without Project traffic conditions have been determined as described above using the growth interpolation process (see Section I.C.). Opening Year (2012) Without Project average daily traffic volumes are shown on Figure 17.

2. Opening Year (2012) With Project

   The average daily traffic volumes for Opening Year (2012) With Project traffic conditions have been determined as described above using the volume addition process (see Section I.C.). Opening Year (2012) With Project average daily traffic volumes are shown on Figure 18.

3. Year 2035 Without Project

   The average daily traffic volumes for Year 2035 Without Project traffic conditions have been determined as described above using the growth increment process (see Section I.C.). Year 2035 Without Project average daily traffic volumes are shown on Figure 19.

4. Year 2035 With Project

   The average daily traffic volumes for Year 2035 With Project traffic conditions have been determined as described above using the volume addition process (see Section I.C.). Year 2035 With Project average daily traffic volumes are shown on Figure 20.

B. Future Level of Service

1. Opening Year (2012) Without Project

The Opening Year (2012) Without Project delay and Level of Service for the study area roadway network without the proposed project are shown in Table 3. Table 3 shows delay values based on the geometrics at the study area intersections, without improvements. Opening Year (2012) Without Project delay calculation worksheets are provided in Appendix D. Opening Year (2012) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 21 and 22, respectively.

For Opening Year (2012) Without Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

2. Opening Year (2012) With Project

The Opening Year (2012) With Project delay and Level of Service for the study area roadway network with the proposed project are shown in Table 4. Table 4 shows delay values based on the geometrics at the study area intersections, without improvements. Opening Year (2012) With Project delay calculation worksheets are provided in Appendix D. Opening Year (2012) With Project morning and evening peak hour intersection turning movement volumes are shown on Figures 23 and 24, respectively.

For Opening Year (2012) With Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

3. Year 2035 Without Project

The Year 2035 delay and Level of Service for the study area roadway network without the proposed project are shown in Table 5. Table 5 shows delay values based on the geometrics at the study area intersections, without and with improvements. Year 2035 Without Project delay calculation worksheets are provided in Appendix D. Year 2035 Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 25 and 26, respectively.

For Year 2035 Without Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

4. Year 2035 With Project

The Year 2035 With Project delay and Level of Service for the study area roadway network with the proposed project are shown in Table 6. Table 6 shows delay values based on the geometrics at the study area intersections, without improvements. Year 2035 With Project delay calculation worksheets are provided in Appendix D. Year

2035 With Project morning and evening peak hour intersection turning movement volumes are shown on Figures 27 and 28, respectively.

For Year 2035 With Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

C. Project Driveway at Commerce Drive Queue Analysis

The project proposes to construct a full access project driveway at Commerce Drive.

The proposed project driveway intersection will provide adequate gaps in vehicular traffic on Commerce Drive to allow vehicles to enter and exit the project site without blocking any parking spaces within the project parking lot or stacking out of the proposed northbound left turn storage bay. It is projected that the 95th percentile demand at this project access will result in two vehicles stacked in the proposed northbound left turn lane and one vehicle stacked in the eastbound left/right turn lane. Specifically, the analysis shows that the 95th percentile likely maximum northbound left turn queue length is 1.8 vehicles (or 2 vehicles when rounded up) and the 95th percentile likely maximum eastbound left/right turn queue length is one vehicle.

Table 7 shows the queue lengths for the proposed full access project driveway at Commerce Drive. The maximum queue lengths of the proposed full access project driveway and Commerce Drive will allow for sufficient storage based upon the proposed storage lengths.

Table 3

Opening Year (Year 2012) Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Etiwanda Avenue (NS) at: Valley Boulevard (EW) - #1	TS	2	2	1>>	1	2.5	0.5	1	2	1>>	2	2	1	32.8-C	31.7-C
Commerce Drive (NS) at: Valley Boulevard (EW) - #5	TS	2	1	1>>	1	1.5	0.5	1	2	1	2	2	1>>	34.0-C	35.6-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal

Table 4

Opening Year (2012) With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Etiwanda Avenue (NS) at:															
Valley Boulevard (EW) - #1	TS	2	2	1>>	1	2.5	0.5	1	2	1>>	2	2	1	32.9-C	31.9-C
Project West Driveway (NS) at:															
Valley Boulevard (EW) - #2	**CSS**	0	0	0	0	0	**1**	0	**3**	0	0	**2.5**	**0.5**	8.9-A	8.9-A
Project East Driveway (NS) at:															
Valley Boulevard (EW) - #3	**CSS**	0	0	0	0	0	**1**	0	**2**	0	0	**2.5**	**0.5**	0.0-A	0.0-A
Commerce Drive (NS) at:															
Project Driveway (EW) - #4	**CSS**	**1**	**2**	0	0	**1.5**	**0.5**	0	**1**	0	0	0	0	10.6-B	11.1-B
Valley Boulevard (EW) - #5	TS	2	1	1>>	1	1.5	0.5	1	2	1	2	2	1>>	34.0-C	35.6-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to trav outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level service for the individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 5

Year 2035 Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Etiwanda Avenue (NS) at: Valley Boulevard (EW) - #1	TS	2	2	1>>	1	2.5	0.5	1	2	1>>	2	2	1	44.2-D	54.5-D
Commerce Drive (NS) at: Valley Boulevard (EW) - #5	TS	2	1	1>>	1	1.5	0.5	1	2	1	2	2	1>>	34.6-C	44.5-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal

Table 6

Year 2035 With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Etiwanda Avenue (NS) at:															
Valley Boulevard (EW) - #1	TS	2	2	1>>	1	2.5	0.5	1	2	1>>	2	2	1	44.2-D	54.7-D
Project West Driveway (NS) at:															
Valley Boulevard (EW) - #2	CSS	0	0	0	0	0	1	0	3	0	0	2.5	0.5	11.2-B	9.2-A
Project East Driveway (NS) at:															
Valley Boulevard (EW) - #3	CSS	0	0	0	0	0	1	0	2	0	0	2.5	0.5	0.0-A	0.0-A
Commerce Drive (NS) at:															
Project Driveway (EW) - #4	CSS	1	2	0	0	1.5	0.5	0	1	0	0	0	0	10.8-B	11.5-B
Valley Boulevard (EW) - #5	TS	2	1	1>>	1	1.5	0.5	1	2	1	2	2	1>>	34.6-C	44.5-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to trav outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn; 1 = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level service for the individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 7

Project Driveway at Commerce Drive Queue Analysis

Descriptor	Peak Hour Queue							
	Opening Year (2012)				Year 2035			
	Northbound Left Turn		Eastbound Left/Right Turn		Northbound Left Turn		Eastbound Left/Right Turn	
	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening
Number of Vehicles[1]	1.2	1.6	1.0*	1.0*	1.3	1.8	1.0*	1.0*
Length of Queue[2]	50 feet	50 feet	25 feet	25 feet	50 feet	50 feet	25 feet	25 feet
Storage Length Available[3]	150 feet	150 feet	70 feet	70 feet	150 feet	150 feet	70 feet	70 feet

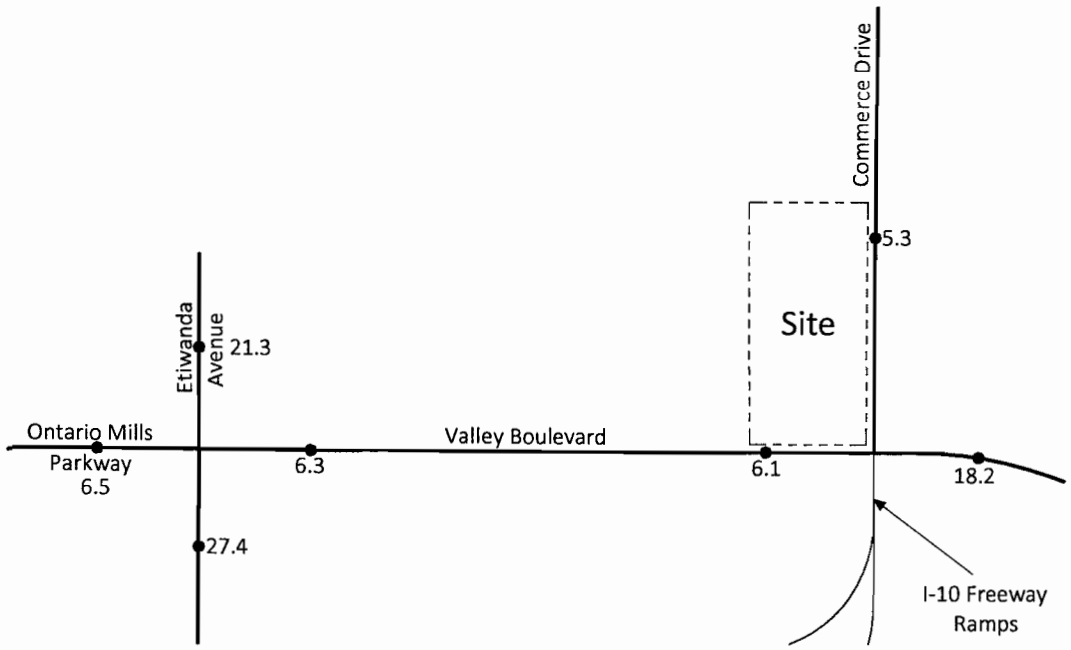
* The trip assignment indicates eastbound left turn traffic to be rounded to zero. In order to analyze the queue, a minimum of one car has been assumed.

[1] Based upon the 95th percentile queue. See intersection delay worksheets in Appendix D.

[2] Number of vehicles (rounded up) times vehicle length. Assumes vehicle length is 25 feet.

[3] Northbound left assumes minimum of 150 feet storage bay (longer storage bay is feasible).

Figure 17
Opening Year (2012) Without Project
Average Daily Traffic Volumes



Legend

18.2 = Vehicles Per Day (1,000's)

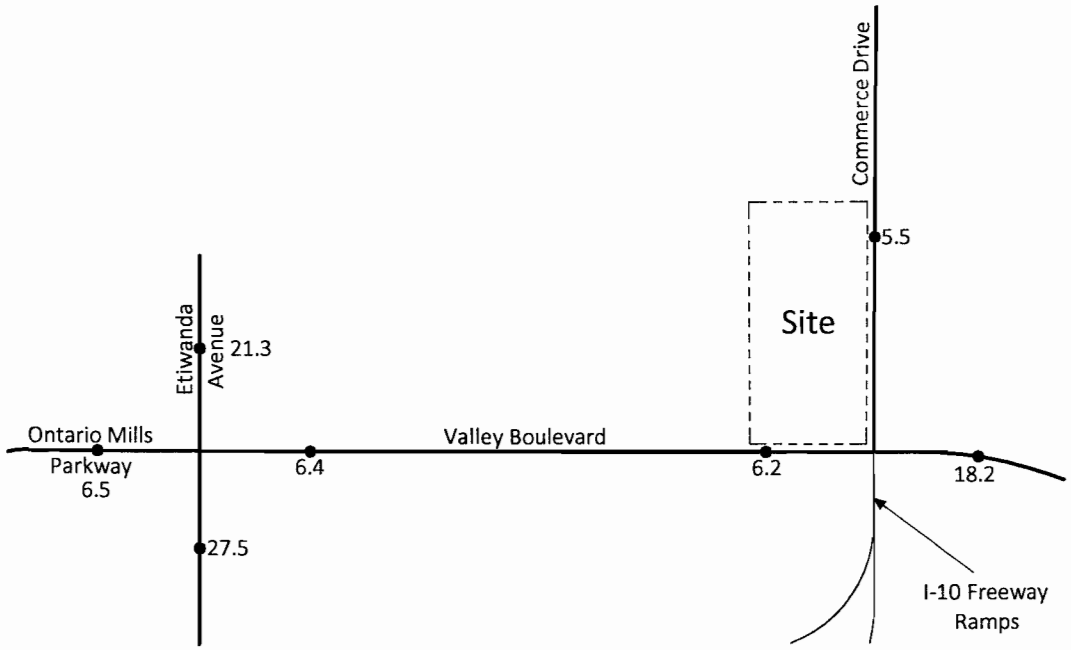
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/17

Figure 18
Opening Year (2012) With Project
Average Daily Traffic Volumes



Legend

18.2 = Vehicles Per Day (1,000's)

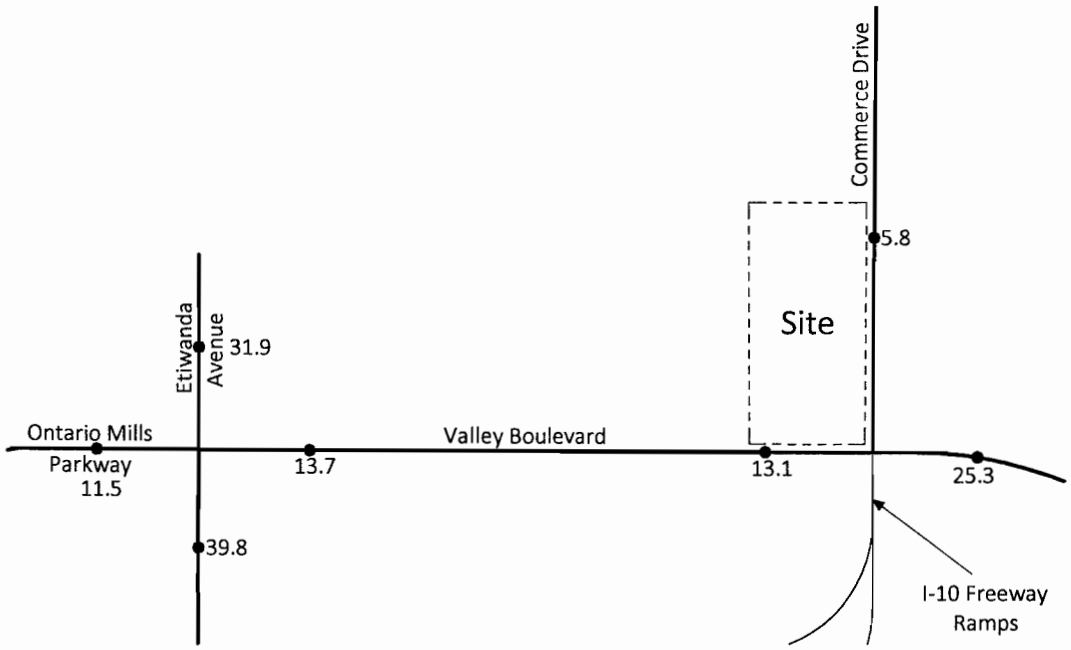
NTS

4906/18

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 19
Year 2035 Without Project
Average Daily Traffic Volumes



Legend

25.3 = Vehicles Per Day (1,000's)

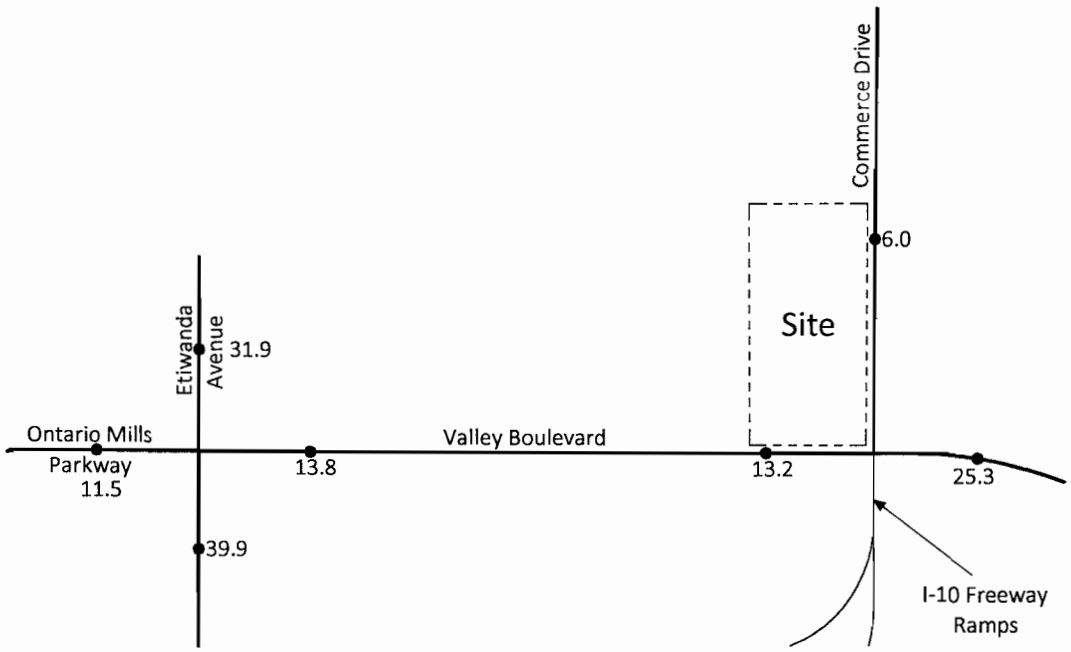
NTS

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/19

Figure 20
Year 2035 With Project
Average Daily Traffic Volumes



Legend

25.3 = Vehicles Per Day (1,000's)

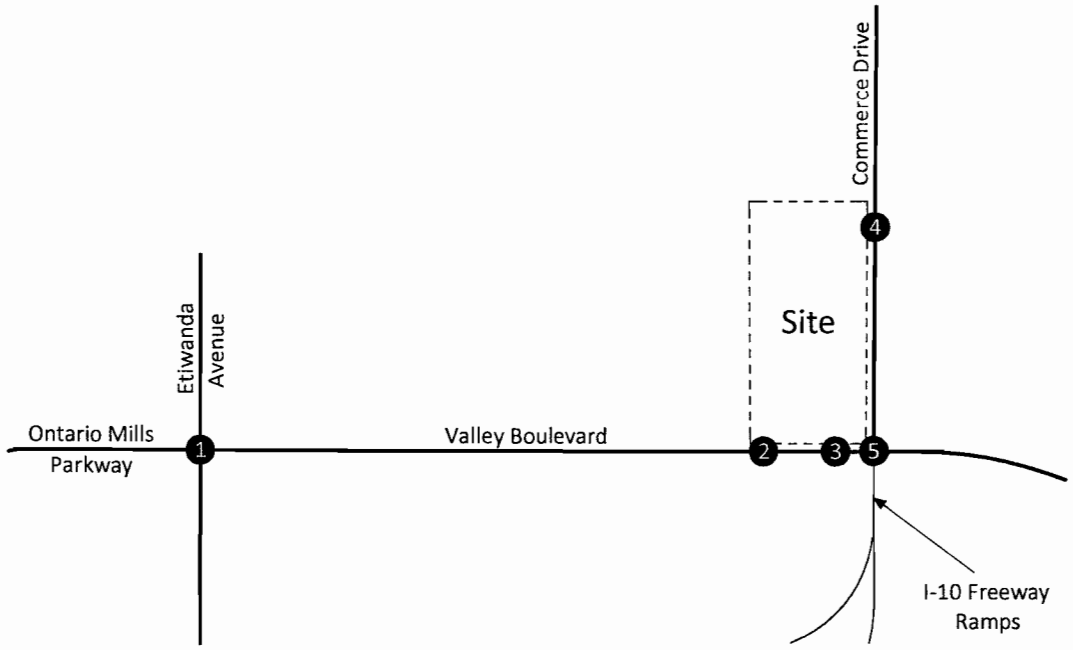
NTS

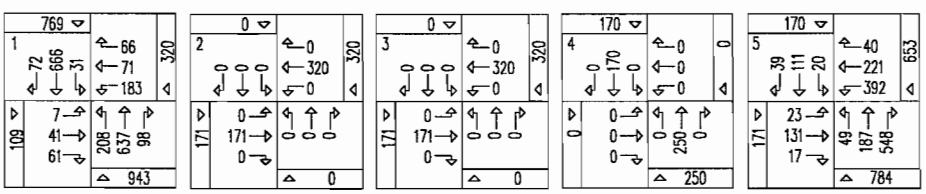
KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

4906/20

Figure 21
Opening Year (2012) Without Project
Morning Peak Hour Intersection Turning Movement Volumes





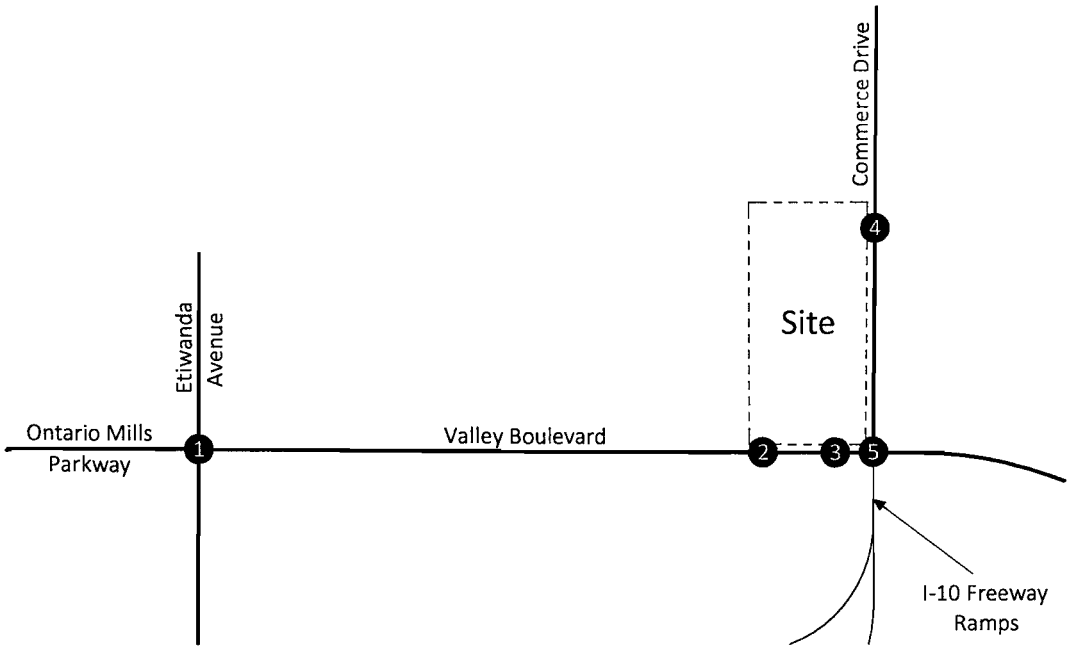
NTS

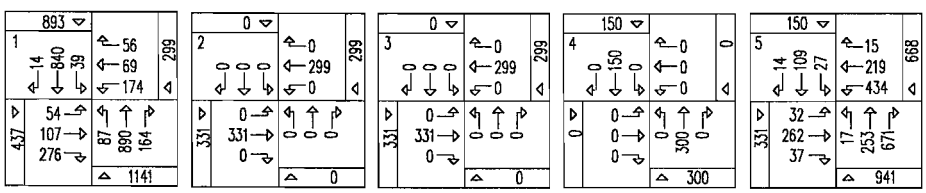
4906/21

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 22
Opening Year (2012) Without Project
Evening Peak Hour Intersection Turning Movement Volumes





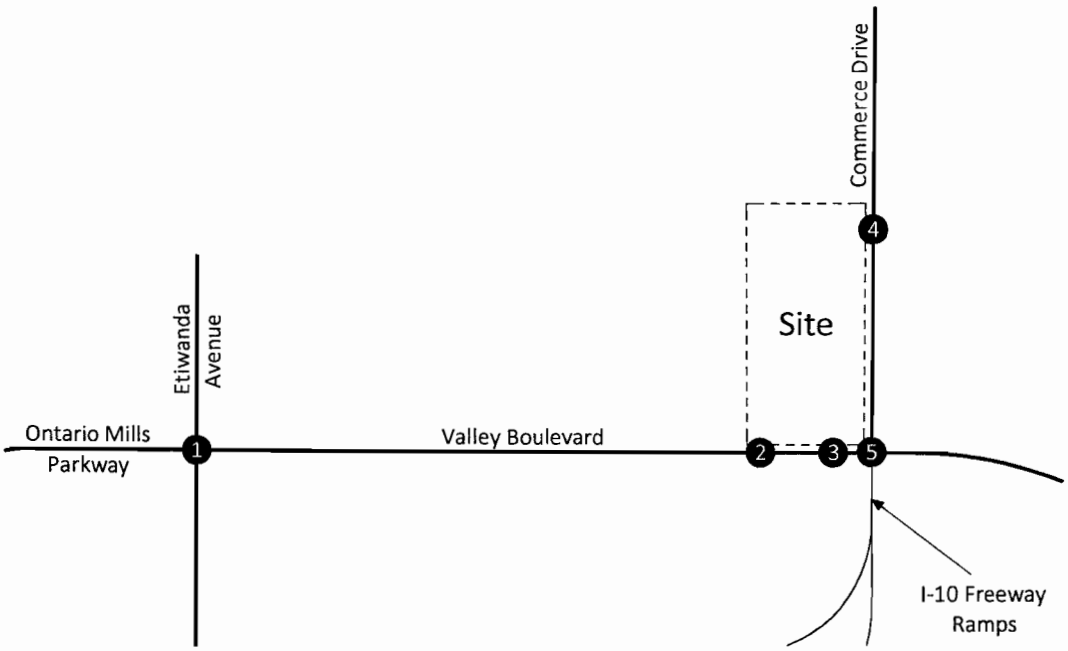
NTS

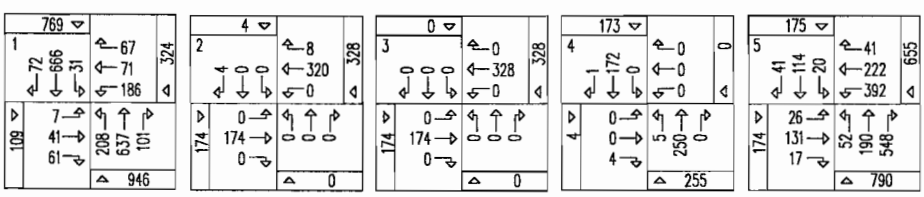
4906/22

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 23
Opening Year (2012) With Project
Morning Peak Hour Intersection Turning Movement Volumes





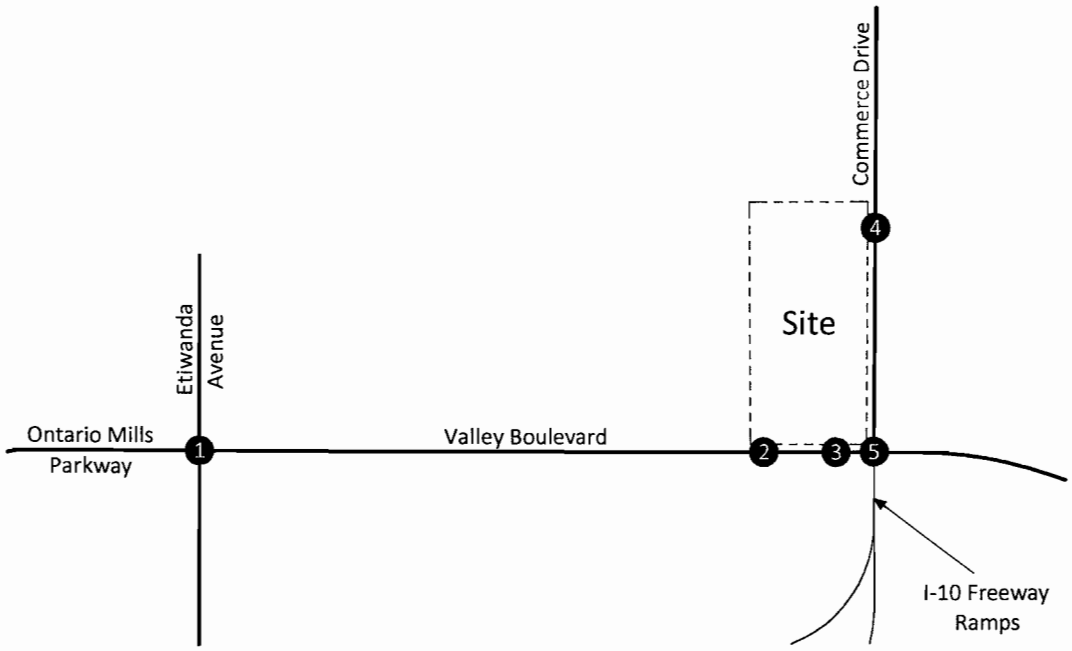
NTS

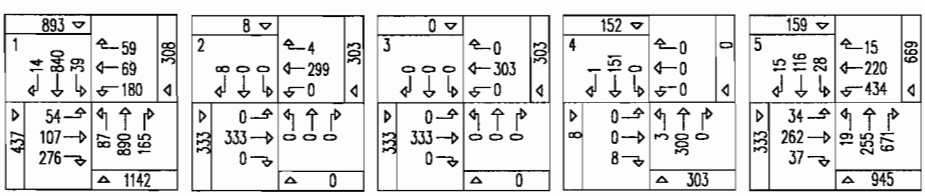
4906/23

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 24
Opening Year (2012) With Project
Evening Peak Hour Intersection Turning Movement Volumes





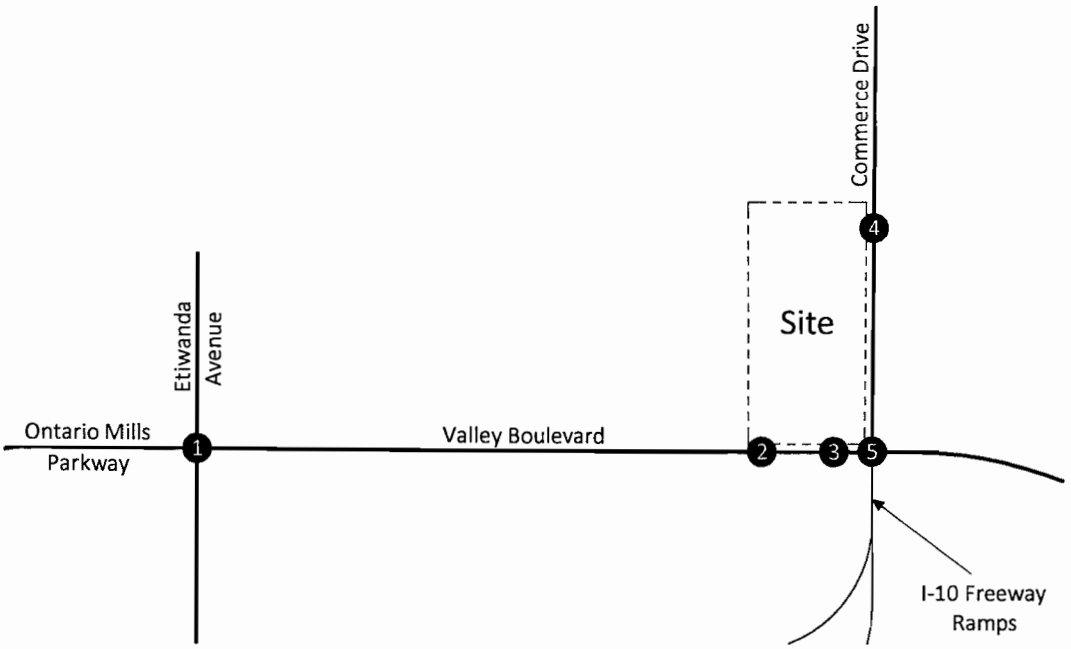
NTS

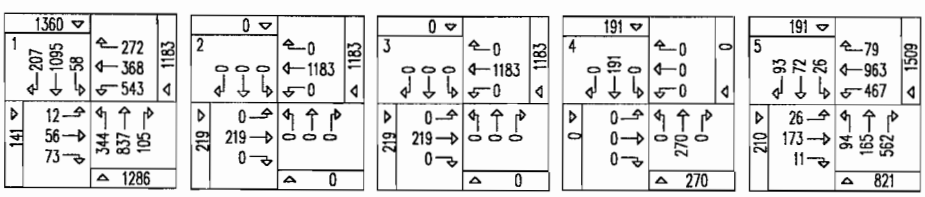
4906/24

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 25
Year 2035 Without Project
Morning Peak Hour Intersection Turning Movement Volumes





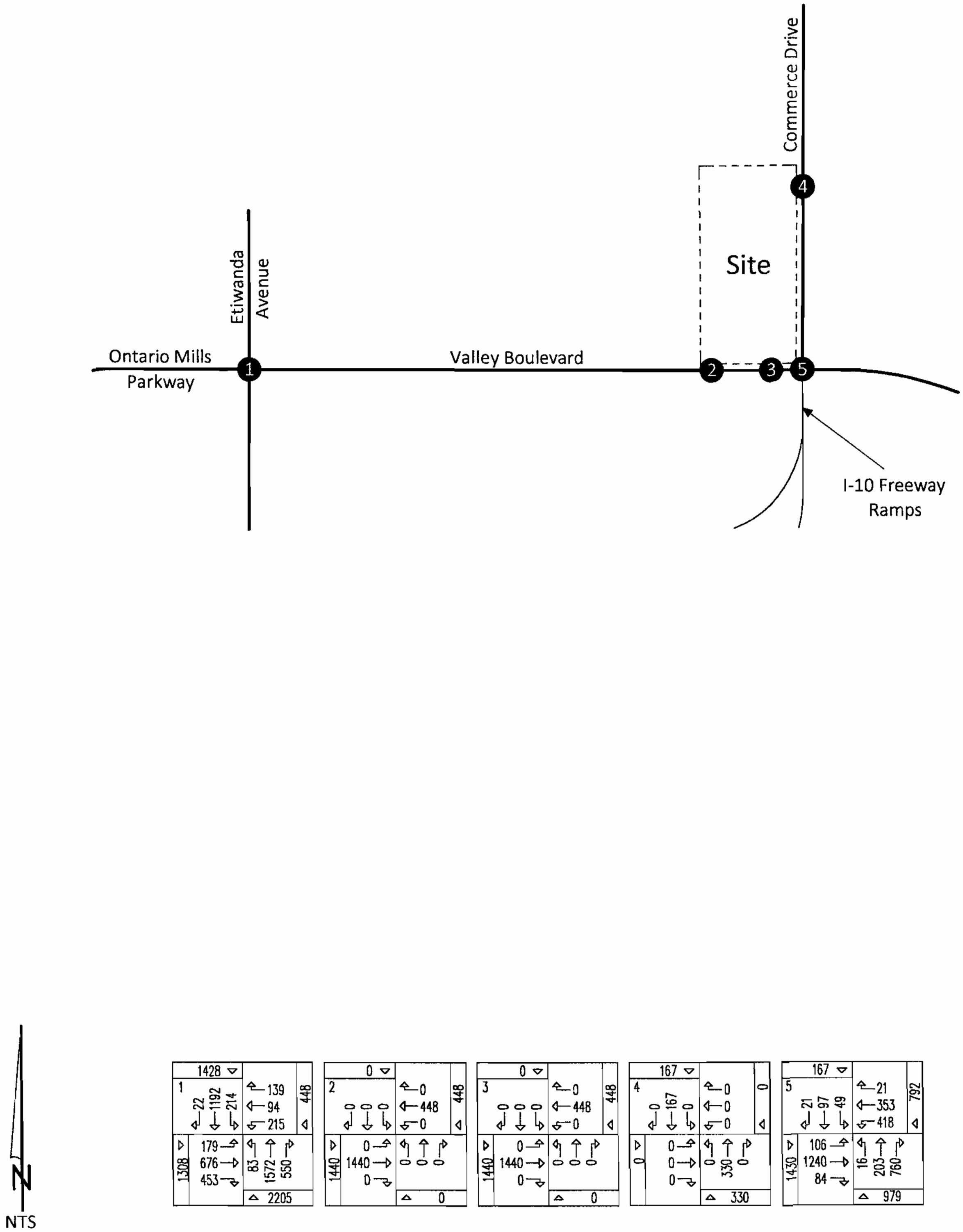
NTS

4906/25

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 26
Year 2035 Without Project
Evening Peak Hour Intersection Turning Movement Volumes

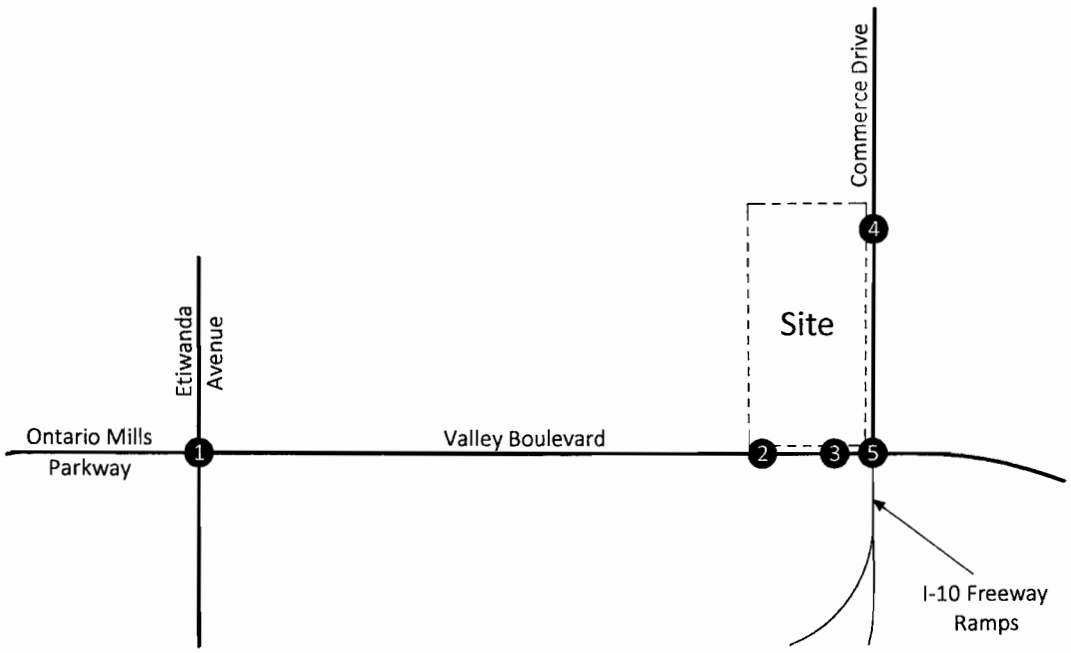


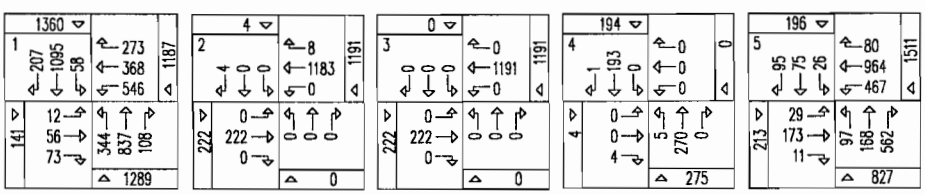
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

4906/26

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 27
Year 2035 With Project
Morning Peak Hour Intersection Turning Movement Volumes





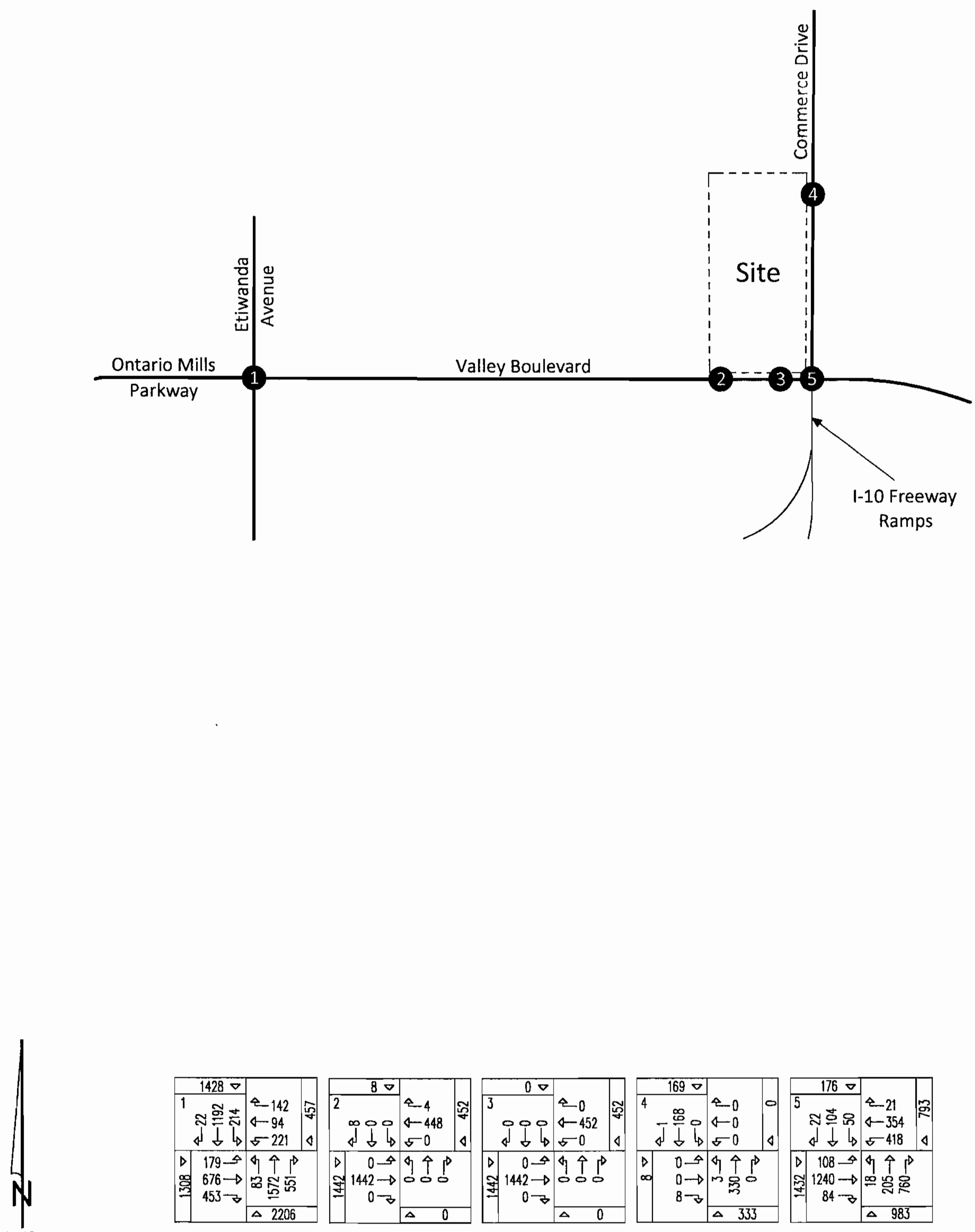
NTS

4906/27

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

Figure 28
Year 2035 With Project
Evening Peak Hour Intersection Turning Movement Volumes



4906/28

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 30 YEARS OF EXCELLENT SERVICE

V. Conclusions and Recommendations

A. Summary

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act.

The County of San Bernardino is the lead agency responsible for preparation of the traffic impact analysis, in accordance with the California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Year 2012, at which time it will be generating traffic at its full potential, and for the Year 2035.

A series of scoping discussions were conducted with the County of San Bernardino to define the desired analysis locations for each future analysis year. In addition, staff from the County of San Bernardino has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Year 2035) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute traffic greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute traffic greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana or City of Ontario.

B. Existing Conditions

Regional access to the project site is provided by the I-15 Freeway and I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadway which will be most affected by the project includes Valley Boulevard. The north-south roadways which will be most affected by the project include Etiwanda Avenue and Commerce Drive. The project will take access to Valley Boulevard and Commerce Drive.

The study area intersections currently operate at Level of Service D or better during the peak hours for Existing traffic conditions. Existing delay worksheets are provided in Appendix D.

C. Project Traffic

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the traffic generation rates by the land use quantity, the traffic volumes are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008 and Truck Trip Generation Study, City of Fontana, August 2003.

As shown in Table 2, the proposed development is projected to generate approximately 348 daily vehicle trips, 23 of which will occur during the morning peak hour and 25 of which will occur during the evening peak hour.

The distribution of the project traffic was based on the traffic distribution from the Kaiser Commerce Center Specific Plan.

D. Future Conditions

An Opening Year (2012) analysis and Year 2035 analysis are included in this report. Opening Year (2012) traffic operations analysis has been completed for the morning and evening peak hours and are shown in Tables 3 and 4. Morning and evening peak hour traffic operations analysis are summarized in Tables 5 and 6 for the Year 2035.

1. Opening Year (2012) Without Project

   For Opening Year (2012) Without Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

2. Opening Year (2012) With Project

   For Opening Year (2012) With Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

3. Year 2035 Without Project

   For Year 2035 Without Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

4. Year 2035 With Project

   For Year 2035 With Project traffic conditions, the study area intersections are projected to operate at Level of Service D or better during the peak hours.

5. Project Driveway at Commerce Drive Queue Analysis

The maximum queue lengths of the proposed full access project driveway and Commerce Drive will allow for sufficient storage based upon the proposed storage lengths.

E. Recommendations

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements.

1. On-Site Improvements

On-site improvements and improvements adjacent to the site will be required in conjunction with the proposed development to ensure adequate circulation within the project itself (see Figure 29).

Construct Commerce Drive from the north project boundary to Valley Boulevard at its ultimate half-section width including landscaping and parkway improvements in conjunction with development.

Construct Valley Boulevard from the west project boundary to Commerce Drive at its ultimate half-section width including landscaping and parkway improvements in conjunction with development.

Sight distance at each project access should be reviewed with respect to California Department of Transportation/County of San Bernardino standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.

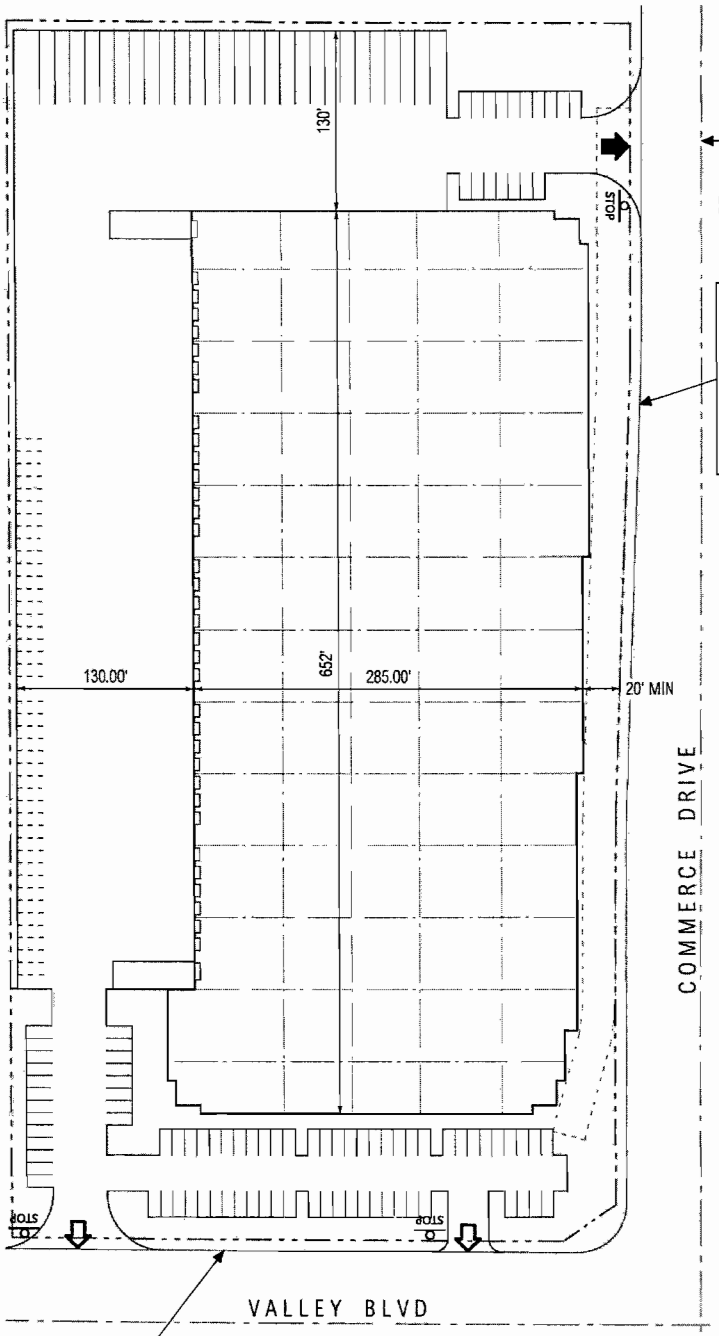
On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

2. Off-Site Improvements

Construct a minimum 150 foot northbound left turn lane at the Commerce Drive and Project Driveway intersection.

As is the case for any roadway design, the County of San Bernardino should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Figure 29
Circulation Recommendations



Construct Commerce Drive from the north project boundary to Valley Boulevard at its ultimate half-section width including landscaping and parkway improvements in conjunction with development.

Legend

- STOP = Stop Sign
- = Full Access Driveway
- = Right Turns In/Out Only Access Driveway
- 150' = Left Turn Pocket Length

Construct Valley Boulevard from the west project boundary to Commerce Drive at its ultimate half-section width including landscaping and parkway improvements in conjunction with development.

Sight distance at each project access should be reviewed with respect to California Department of Transportation/County of San Bernardino standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

N

NTS

4906/29

KUNZMAN ASSOCIATES, INC.

OVER 30 YEARS OF EXCELLENT SERVICE

APPENDIX D

EMFAC2007 Output

Title : 2976 DPM Emissions
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/06/15 14:23:04
Scen Year: 2014 -- All model years in the range 1970 to 2014 selected
Season : Annual
Area : San Bernardino
****

Year: 2014 -- Model Years 1970 to 2014 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average San Bernardino County Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Total Organic Gases Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.479	0.475	0.328	0.456	0	0	0	0	16.713	0.757	0.396	0.471	64.76	7.226	4.653	4.643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20.397	0.84	3.809	3.265

Pollutant Name: Carbon Monoxide Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133.182	137.481	26.3	113.407	0	0	0	0	133.182	137.778	26.3	43.681	0	0	45.327	44.702	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118.583	130.702	41.753	58.296
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216.246	4.149	2.026	3.926	0	0	0	0	324.369	8.386	4.26	5.256	1583.154	103.443	8.496	9.905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404.007	9.527	7.582	8.107

Pollutant Name: Oxides of Nitrogen Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.369	1.451	75.051	17.384	0	0	0	0	1.369	1.457	75.051	63.573	0	0	116.18	114.579	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.219	1.38	108.455	88.534
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.625	0.32	3.753	1.064	0	0	0	0	2.437	0.774	5.9	5.103	17.681	5.924	16.657	16.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.67	0.647	14.522	11.942

Pollutant Name: Carbon Dioxide Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4776.9	4776.9	4098	4629.931	0	0	0	0	4776.9	4776.899	4098	4203.883	0	0	6617.134	6525.903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4253.29	4540.248	6143.952	5845.476
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1672.267	1672.267	519.818	1422.783	0	0	0	0	1672.267	1672.267	1505	1531.087	1672.267	1672.267	3165.446	3144.86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1672.267	1672.267	3861.206	2591.175

Pollutant Name: Sulfur Dioxide Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.049	0.049	0.039	0.047	0	0	0	0	0.049	0.049	0.039	0.041	0	0	0.063	0.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.043	0.046	0.059	0.056
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0.016	0.005	0.014	0	0	0	0	0.021	0.016	0.014	0.015	0.042	0.018	0.03	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.023	0.016	0.027	0.025

Pollutant Name: PM30 Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.776	0.168	0	0	0	0	0	0	0.879	0.742	0	0	1.144	1.128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.089	0.886
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.074	0.028	0.071	0.037	0	0	0	0	0.074	0.032	0.42	0.36	0.074	0.061	0.892	0.881	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.074	0.03	0.785	0.644

Pollutant Name: PM30 - Tire Wear Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.012	0.012	0.012	0.012	0	0	0	0	0.012	0.012	0.012	0.012	0.012	0.012	0.036	0.036	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.012	0.012	0.031	0.028

Pollutant Name: PM30 - Brake Wear Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.013	0.013	0.013	0.013	0	0	0	0	0.013	0.013	0.013	0.013	0.029	0.029	0.029	0.029	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.035	0.014	0.026	0.024

Pollutant Name: Gasoline - mi/gal Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.324	5.274	0	5.273	0	0	0	0	3.959	5.251	0	5.241	2.035	4.773	0	4.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.945	5.247	0	5.244

Pollutant Name: Diesel - mi/gal Temperature: 68F Relative Humidity: 50%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2	LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2	LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD	OBUS	OBUS	OBUS	OBUS	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY	MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL	ALL	ALL
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.391	19.391	0	0	0	0	0	0	6.698	6.698	0	0	3.184	3.184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.519	4.519

APPENDIX E

AERMOD Output

**MODELOPTs: NonDFAULT CONC   FLAT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for   3 Source(s),
for Total of   1 Urban Area(s):
Urban Population =   4143113.0 ; Urban Roughness Length = 1.000 m

**Model Allows User-Specified Options:
1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Urban Roughness Length of 1.0 Meter Used.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 3 Source(s);   1 Source Group(s); and   121 Receptor(s)

**The Model Assumes A Pollutant Type of: PM10

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   0.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
Emission Units = GRAMS/SEC   ; Emission Rate Unit Factor =   0.10000E+07
Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =   3.5 MB of RAM.

**File for Summary of Results: AERTEST.SUM

**MODELOPTs: NonDFAULT CONC FLAT

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	COORD (SW CORNER) Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
BLDG1	0	0.16280E-08	40.0	23.0	0.0	4.12	111.00	199.00	0.00	0.00	YES	HROFDY
LINEW	0	0.54830E-08	0.0	0.0	0.0	4.12	40.00	261.00	0.00	0.00	YES	HROFDY
LINEN	0	0.12260E-07	40.0	222.0	0.0	4.12	102.00	12.00	0.00	0.00	YES	HROFDY

**MODELOPTs: NonDFAULT CONC FLAT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	BLDG1 , LINEW , LINEN ,

**MODELOPTs: NonDFAULT CONC FLAT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = BLDG1 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.10000E+01	2	.10000E+01	3	.10000E+01	4	.10000E+01	5	.10000E+01	6	.10000E+01
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.10000E+01	18	.10000E+01
19	.10000E+01	20	.10000E+01	21	.10000E+01	22	.10000E+01	23	.10000E+01	24	.10000E+01

SOURCE ID = LINEW ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.10000E+01	2	.10000E+01	3	.10000E+01	4	.10000E+01	5	.10000E+01	6	.10000E+01
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.10000E+01	18	.10000E+01
19	.10000E+01	20	.10000E+01	21	.10000E+01	22	.10000E+01	23	.10000E+01	24	.10000E+01

SOURCE ID = LINEN ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.10000E+01	2	.10000E+01	3	.10000E+01	4	.10000E+01	5	.10000E+01	6	.10000E+01
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.10000E+01	18	.10000E+01
19	.10000E+01	20	.10000E+01	21	.10000E+01	22	.10000E+01	23	.10000E+01	24	.10000E+01

**MODELOPTs: NonDFAULT CONC FLAT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: NET1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

0.0, 40.0, 80.0, 120.0, 160.0, 200.0, 240.0, 280.0, 320.0, 360.0,
400.0,

*** Y-COORDINATES OF GRID ***
(METERS)

0.0, 40.0, 80.0, 120.0, 160.0, 200.0, 240.0, 280.0, 320.0, 360.0,
400.0,

```
                                      *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                        (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                        (METERS/SEC)

                                              1.54,   3.09,   5.14,   8.23,  10.80,
```

**MODELOPTs: NonDFAULT CONC FLAT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: snbo.sfc Met Version: 06341
Profile file: snbo.pfl
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: SANBERNARDINO Name: SANBERNARDINO
Year: 2007 Year: 2007

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.3	0.017	-9.000	-9.000	-999.	5.	1.9	0.36	1.00	1.00	0.28	81.	9.1	279.2	5.5
05	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.36	1.00	1.00	0.00	0.	9.1	279.9	5.5
05	01	01	1	03	-0.3	0.017	-9.000	-9.000	-999.	5.	1.9	0.36	1.00	1.00	0.28	94.	9.1	278.8	5.5
05	01	01	1	04	-0.2	0.017	-9.000	-9.000	-999.	5.	2.2	0.36	1.00	1.00	0.28	43.	9.1	278.8	5.5
05	01	01	1	05	-0.2	0.017	-9.000	-9.000	-999.	5.	2.6	0.36	1.00	1.00	0.28	20.	9.1	278.8	5.5
05	01	01	1	06	-0.2	0.019	-9.000	-9.000	-999.	6.	2.8	0.36	1.00	1.00	0.30	69.	9.1	278.8	5.5
05	01	01	1	07	-0.6	0.031	-9.000	-9.000	-999.	12.	4.6	0.36	1.00	1.00	0.50	46.	9.1	278.8	5.5
05	01	01	1	08	-0.3	0.019	-9.000	-9.000	-999.	6.	2.3	0.36	1.00	0.52	0.30	157.	9.1	279.2	5.5
05	01	01	1	09	30.3	0.078	0.385	0.005	68.	50.	-1.4	0.36	1.00	0.31	0.30	22.	9.1	280.4	5.5
05	01	01	1	10	79.7	0.160	1.185	0.005	756.	148.	-4.7	0.36	1.00	0.24	0.80	17.	9.1	283.1	5.5
05	01	01	1	11	120.6	0.128	1.499	0.007	1011.	105.	-1.6	0.36	1.00	0.21	0.50	113.	9.1	285.4	5.5
05	01	01	1	12	133.4	0.221	1.653	0.009	1225.	239.	-7.3	0.36	1.00	0.20	1.20	192.	9.1	284.2	5.5
05	01	01	1	13	81.5	0.197	1.409	0.009	1243.	202.	-8.5	0.36	1.00	0.20	1.10	190.	9.1	285.4	5.5
05	01	01	1	14	81.2	0.089	1.414	0.009	1260.	67.	-1.0	0.36	1.00	0.22	0.30	354.	9.1	285.4	5.5
05	01	01	1	15	36.7	0.122	1.087	0.009	1267.	98.	-4.4	0.36	1.00	0.25	0.60	14.	9.1	284.9	5.5
05	01	01	1	16	0.8	0.061	0.310	0.009	1267.	35.	-24.4	0.36	1.00	0.34	0.40	359.	9.1	284.2	5.5
05	01	01	1	17	0.2	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.36	1.00	0.63	0.00	0.	9.1	283.8	5.5
05	01	01	1	18	-0.4	0.025	-9.000	-9.000	-999.	9.	3.7	0.36	1.00	1.00	0.40	261.	9.1	283.1	5.5
05	01	01	1	19	-2.8	0.068	-9.000	-9.000	-999.	41.	10.2	0.36	1.00	1.00	1.10	224.	9.1	282.5	5.5
05	01	01	1	20	-1.5	0.049	-9.000	-9.000	-999.	25.	7.4	0.36	1.00	1.00	0.80	207.	9.1	282.5	5.5
05	01	01	1	21	-1.5	0.043	-9.000	-9.000	-999.	21.	4.8	0.36	1.00	1.00	0.70	88.	9.1	282.0	5.5
05	01	01	1	22	-0.3	0.019	-9.000	-9.000	-999.	6.	2.0	0.36	1.00	1.00	0.30	97.	9.1	280.9	5.5
05	01	01	1	23	-0.7	0.031	-9.000	-9.000	-999.	12.	4.0	0.36	1.00	1.00	0.50	52.	9.1	279.9	5.5
05	01	01	1	24	-0.2	0.017	-9.000	-9.000	-999.	5.	2.2	0.36	1.00	1.00	0.28	73.	9.1	279.2	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	279.3	99.0	-99.00	-99.00
05	01	01	01	9.1	1	81.	0.10	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC FLAT

*** THE PERIOD (26280 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): BLDG1 , LINEW , LINEN ,

*** NETWORK ID: NET1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	0.00	40.00	80.00	120.00	160.00	200.00	240.00	280.00	320.00
400.00	0.00221	0.00338	0.00454	0.00515	0.00509	0.00447	0.00360	0.00277	0.00211
360.00	0.00301	0.00493	0.00646	0.00691	0.00642	0.00519	0.00386	0.00280	0.00203
320.00	0.00452	0.00817	0.00974	0.00959	0.00820	0.00586	0.00395	0.00269	0.00188
280.00	0.00824	0.01656	0.01564	0.01429	0.01069	0.00620	0.00377	0.00245	0.00168
240.00	0.01573	0.02498	0.02427	0.02040	0.01224	0.00583	0.00339	0.00215	0.00145
200.00	0.02097	0.02959	0.02451	0.01860	0.01062	0.00520	0.00293	0.00182	0.00122
160.00	0.02235	0.02815	0.02177	0.01623	0.00960	0.00449	0.00244	0.00150	0.00102
120.00	0.02239	0.02692	0.01986	0.01447	0.00825	0.00361	0.00195	0.00123	0.00086
80.00	0.02160	0.02469	0.01702	0.01195	0.00638	0.00265	0.00151	0.00102	0.00074
40.00	0.01943	0.01925	0.01155	0.00762	0.00368	0.00184	0.00120	0.00086	0.00066
0.00	0.01426	0.00900	0.00627	0.00408	0.00217	0.00140	0.00100	0.00075	0.00059

**MODELOPTs: NonDFAULT CONC FLAT

*** THE PERIOD (26280 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): BLDG1 , LINEW , LINEN ,

*** NETWORK ID: NET1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 360.00	400.00
400.00	0.00160	0.00123
360.00	0.00150	0.00113
320.00	0.00136	0.00100
280.00	0.00119	0.00088
240.00	0.00102	0.00076
200.00	0.00087	0.00065
160.00	0.00074	0.00056
120.00	0.00064	0.00050
80.00	0.00057	0.00045
40.00	0.00052	0.00042
0.00	0.00048	0.00039

**MODELOPTs: NonDFAULT CONC FLAT

*** THE SUMMARY OF MAXIMUM PERIOD (26280 HRS) RESULTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02959	AT (	40.00,	200.00,	0.00,	0.00,	0.00)	GC	NET1
	2ND HIGHEST VALUE IS	0.02815	AT (	40.00,	160.00,	0.00,	0.00,	0.00)	GC	NET1
	3RD HIGHEST VALUE IS	0.02692	AT (	40.00,	120.00,	0.00,	0.00,	0.00)	GC	NET1
	4TH HIGHEST VALUE IS	0.02498	AT (	40.00,	240.00,	0.00,	0.00,	0.00)	GC	NET1
	5TH HIGHEST VALUE IS	0.02469	AT (	40.00,	80.00,	0.00,	0.00,	0.00)	GC	NET1
	6TH HIGHEST VALUE IS	0.02451	AT (	80.00,	200.00,	0.00,	0.00,	0.00)	GC	NET1
	7TH HIGHEST VALUE IS	0.02427	AT (	80.00,	240.00,	0.00,	0.00,	0.00)	GC	NET1
	8TH HIGHEST VALUE IS	0.02239	AT (	0.00,	120.00,	0.00,	0.00,	0.00)	GC	NET1
	9TH HIGHEST VALUE IS	0.02235	AT (	0.00,	160.00,	0.00,	0.00,	0.00)	GC	NET1
	10TH HIGHEST VALUE IS	0.02177	AT (	80.00,	160.00,	0.00,	0.00,	0.00)	GC	NET1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: NonDFAULT CONC FLAT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1292 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1100 Calm Hours Identified

A Total of 192 Missing Hours Identified (0.73 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

APPENDIX F

CALINE4 Output

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

JOB: 2976 - Commerce and Valley
RUN: Hour 1
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	310. (M)
BRG=	.0 DEGREES	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	3.6 PPM		
SIGTH=	10. DEGREES	TEMP=	37.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. VAL1WD	0	170	160	170	AG	250	3.8	.0	42.0
B. VAL1WA	160	170	294	155	AG	234	3.8	.0	42.0
C. VAL2EA	0	150	160	150	AG	299	3.8	.0	42.0
D. VAL2ED	160	150	294	135	AG	960	5.7	.0	42.0
E. COM1SA	150	300	150	160	AG	123	3.8	.0	33.0
F. COM1SD	150	160	150	0	AG	580	4.6	.0	33.0
G. COM2ND	170	300	170	160	AG	300	3.8	.0	33.0
H. COM2NA	170	160	170	0	AG	924	5.7	.0	33.0
I. VAL2EL	0	150	160	160	AG	434	3.8	.0	42.0
J. VAL1WL	294	155	160	160	AG	32	3.8	.0	42.0
K. COM1SL	150	300	160	160	AG	27	3.8	.0	33.0
L. COM2NL	170	0	160	160	AG	17	3.8	.0	33.0
M. I10ONRAMP1	150	0	65	-65	AG	580	2.3	.0	31.0
N. I10ONRAMP2	65	-65	-420	-195	AG	580	2.3	.0	31.0
O. COM3NEXT	170	0	120	-135	AG	941	2.3	.0	31.0
P. COM4NEXT	120	-135	-135	-255	AG	941	2.3	.0	31.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. VALCOMSW	137	137	1.8

JOB: 2976 - Commerce and Valley
RUN: Hour 1
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. VALCOMSW	3.9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O	P
1. VALCOMSW	.0	.0	.0	.0	.0	.0

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

JOB: 2976 - Etiwanda and Valley
RUN: Hour 1
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	310. (M)
BRG=	.0 DEGREES	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	3.6 PPM		
SIGTH=	10. DEGREES	TEMP=	37.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. ONT1WD	0	170	160	170	AG	170	2.7	.0	42.0
B. VAL1WA	160	170	300	170	AG	125	3.8	.0	42.0
C. ONT2EA	0	150	160	150	AG	383	3.8	.0	42.0
D. VAL2ED	160	150	300	150	AG	310	2.7	.0	42.0
E. ETW1SA	150	300	150	160	AG	854	4.6	.0	42.0
F. ETW1SD	150	160	150	0	AG	1290	3.3	.0	42.0
G. ETW2ND	170	300	170	160	AG	1000	3.3	.0	42.0
H. ETW2NA	170	160	170	0	AG	1054	5.7	.0	42.0
I. ONT2EL	0	150	160	160	AG	54	3.3	.0	42.0
J. VAL1WL	300	170	160	160	AG	174	3.3	.0	42.0
K. ETW1SL	150	300	160	160	AG	39	3.3	.0	42.0
L. ETW2NL	170	0	160	160	AG	87	3.3	.0	42.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. VALETWSE	185	135	1.8

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. VALETWSE	4.0	.0	.0	.0	.0	.0	.0	.2	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 2976 - Etiwanda and Valley
RUN: Hour 1
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	* CONC/LINK (PPM) K	L
1. VALETWSE	.0	.0

APPENDIX G

CT-EMFAC2007 Output

Title : ProLogis Detention Basin Warehouse
Version : CT-EMFAC 2.6
Run Date : 06 July 2011 01:42 PM
Scen Year : 2012
Season : Annual
Temperature : 68F
Relative Humidity: 50%
Area : San Bernardino (SC) County

==========

Running Exhaust Emissions (grams/mile)

Pollutant Name : CO

speed(mph)	Emission Factor
5	5.703343
10	4.609887
15	3.844415
20	3.310974
25	2.944235
30	2.666093
35	2.456649
40	2.307635
45	2.213466
50	2.178460
55	2.213194
60	2.340937
65	2.603566
70	2.929615
75	3.486743

Idling Emissions (grams/idle-hour) (Currently NOT Available)

Pollutant Name :

speed(mph)	Emission Factor
	0.000000

Evaporative Running Loss Emissions (grams/minute)

---------- END----------

APPENDIX H

Kaiser Wastewater Treatment Plant Study

Kaiser Sewer Plant
San Bernardino County, California

#	Properties	Address	Square Footage	Office %	Workers	Year Built	Estimated Gallons Per Day	1/10/07 to 12/13/07	12/13/07 to 12/10/08	12/10/2008 to 11/30/09	Notes
	ProLogis / Catellus										
1	Wal-Mart	13550 Valley Boulevard	757,765	2.5%	409	2004	3,500	3,180	3,375	3,261	- Five shifts, 24 hrs per day, 7 days a week
2	Johnson & Johnson	9211 Kaiser Way	830,000	2.0%	175	2002	2,500	2,201	1,451	2,259	- Two shifts, M-Sat, 4 am - 10 pm
3	Kellogg's	13048 Valley Boulevard	450,052	1.2%	68	2003	1,000	846	836	821	- Two shifts, M-F, 5 am - 10 pm
4	Scott's Company	13277 San Bernardino Avenue	577,905	2.0%	90	2003	1,000	1,266	550	869	- Two shifts, M-F, 4 am - 12 am
5	The Sports Authority	13053 San Bernardino Avenue	616,551	10.0%	200	2004	1,500	2,027	1,118	1,547	- Two shifts, Su-F, 4 am - 4:30 pm
6	LG Electronics	9415 Kaiser Way	544,768	1.0%	90	2005	1,000	1,051	862	1,009	- Two shifts, M-F, 5 am - 11 pm
											- Only water meter # 63833719 used in calculation
											- Water meter # 63833722 is for irrigation (??)
7	UTI Logistics	13230 San Bernardino Avenue	484,250	1.0%	25	2004	1,000	710	862	748	- One shift, M-F, 7 am - 3:30 pm
7	Specialty Merchandise Corporation	13230 San Bernardino Avenue	388,130	2.0%	60	2004					- One shift, Four days only, 7 am - 5 pm
											- Only using 268,138 sq. ft. of leased space
											- SMC & UTI share same bldg; one sewer service
											- Only water meter # 41685710 used in calculation
											- Water meter # 40409780 is for irrigation (??)
8	Mohawk Carpet Distribution	9687 Transportation Way	849,054	1.0%	227	2005	1,500	958	778	1,508	- Two shifts, Su-F, 24 hrs per day
9	Falken Tire Company	13649 Valley Boulevard	334,800	1.0%	91	2005	1,000	651	673	849	- 1 1/2 shifts, 6 days a week, 5 am - 9 pm
	Total		5,833,275				14,000	12,890	10,505	12,871	
	3rd Party Owners										
10	Watson Land Company	13055 Valley Boulevard	349,552	1.0%	45	2004	500	355	435	439	- Occupied by TTI Floorcare (vacum cleaners)
											- One shift, M-Sat, 6 am - 5 pm
11	Watson Land Company	13265 Valley Boulevard	302,622	1.3%	60	2004	750	592	872	643	- Occupied by Weber Distribution, 3PL
											- Two shifts, M - Sat, 6 am - 7 pm
12	Appel Family Trust	13369 Valley Boulevard	105,041	7.0%	??	2005	1,250	884	1,085	1,156	- Occupied by Keefe Group
											- Did not want to provide operating info or head count
13	Bolger & Company, Inc.	13232 Valley Boulevard	210,930	7.0%	203	2009	2,000	N/A	N/A	2,000	- Occupied by New Breed, 3PL for Verizon
											- Three shifts; Su-F, 24 hrs per day
											- Estimated actual sewer flows
											- Incorrectly included water meter for irrigation (??)
14	Estate of James Campbell	13479 Valley Boulevard	575,000	1.0%	45	2003	1,750	651	1,695	1,688	- Occupied by Leapfrog Enterprises
											- One shift, 7 days a week, 7:30 am - 4:30 pm
	Total		1,543,145				6,250	2,481	4,088	5,927	

#1

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13550 Valley Blvd, INEOO 305
Fontana, CA 92335

Occupant Name: Wal-Mart Stores East, LP

Square Footage Leased: 757,765 sf

Square Footage Used: 757,765

Office Percentage: 2.5% = 18,922 S.F.

Warehouse Percentage: 97.5% = 738,843 S.F.

Number of Employees: 374 C&C + 35 W.M= 409

Hours of Operations: 24 Hours

Days of Operations: 7 Days

Number of Shifts: 5 Shifts

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

2 Scrubbers and use them on 2 shifts.

#2

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address:	9211 Kaiser Way Fontana, CA 92335
Occupant Name:	Johnson & Johnson Sales and Logistics Co
Square Footage Leased:	830,000 sf
Square Footage Used:	830,000
Office Percentage:	2%
Warehouse Percentage:	98%
Number of Employees:	175
Hours of Operations:	0400 – 2300, but we have two 24 hours/7 days a week guards on the property.
Days of Operations:	Monday - Saturday
Number of Shifts:	2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

We use water in the floor scrubber to clean the floors.

#3

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address:	13048 San Bernardino Ave INE00304 Fontana, CA 92335
Occupant Name:	Kellogg Sales Company
Square Footage Leased:	450,052 sf
Square Footage Used:	450,052 sf
Office Percentage:	5,410
Warehouse Percentage:	444,642
Number of Employees:	Average 68 per day (can jump higher depending on DM volume)
Hours of Operations:	5 am to 10 pm
Days of Operations:	Monday through Friday (Saturday – as business dictates)
Number of Shifts:	2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

Warehouse Floor Scrubber – We use daily to scrub floors.

#4

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13277 San Bernardino Ave INE 00302
Fontana, CA 92335

Occupant Name: Ozburn-Hessey Logistics, LLC

Square Footage Leased: 577,905 sf

Square Footage Used: 577,905

Office Percentage: 2%

Warehouse Percentage: 98%

Number of Employees: 90

Hours of Operations: 4am to midnight

Days of Operations: Monday - Friday

Number of Shifts: 2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

No

#5

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13053 San Bernardino Ave /NE 00303
Fontana, CA 92335

Occupant Name: TSA Stores, Inc.

Square Footage Leased: 616,551 sf

Square Footage Used: 616,551 sf

Office Percentage: ≈ 10%

Warehouse Percentage: ≈ 90%

Number of Employees: 200

Hours of Operations: 04:00 AM - 04:30 pm

Days of Operations: Sun - Fri

Number of Shifts: 2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

(1) Sweeper / Scrubber usage for Dock cleaning

(2)

#6

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 9415 Kaiser Way, INC-00306
Fontana, CA 92335

Occupant Name: LG Electronics, USA, Inc.

Square Footage Leased: 544,768 sf

Square Footage Used: 544,768 sf

Office Percentage: 1%

Warehouse Percentage: 99%

Number of Employees: 90 approx.

Hours of Operations: 5:00 am-11:00 pm

Days of Operations: Monday-Friday

Number of Shifts: 2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

Floor scrubber runs on average once a week.

#7

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address:	13230 San Bernardino Ave, B 1NE00 307 Fontana, CA 92335
Occupant Name:	UTi Integrated Logistics Inc.
Square Footage Leased:	484,250 sf
Square Footage Used:	484,250 sf
Office Percentage:	1%
Warehouse Percentage:	99%
Number of Employees:	Varies depending on the season – Full time UTi 25
Hours of Operations:	Varies depending on the season – Currently 7:00 a.m. – 3:30 p.m.
Days of Operations:	Mon. – Fri.
Number of Shifts:	1

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

None.

#7

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13230 San Bernardino Ave, A 1NEOD307
Fontana, CA 92335

Occupant Name: Specialty Merchandise Corporation

Square Footage Leased: 388,130 sf

Square Footage Used: 268,130

Office Percentage: 2%

Warehouse Percentage: 98%

Number of Employees: 60

Hours of Operations: 7 AM – 5 PM

Days of Operations: 4

Number of Shifts: 1

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

Occasional usage once a month

#8

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 9687 Transportation Way
Fontana, CA 92335

LAX04501 (SUBLEASED SPACE)

Occupant Name: Mohawk Carpet Distribution, L.P.

Square Footage Leased: 849,054 sf

Square Footage Used: 262,715

Office Percentage: 1%

Warehouse Percentage: 99%

Number of Employees: 150

Hours of Operations: 24 hr

Days of Operations: Sunday-Friday

Number of Shifts: 2 shifts

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

_____

_____

_____

#8

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 9687 Transportation Way
Fontana, CA 92335

LAX04501 (MOHAWK ONLY NOT INCL SUBLEASED SPACE)

Occupant Name: Mohawk Carpet Distribution, L.P.

Square Footage Leased: 849,054 sf

Square Footage Used: 586,339

Office Percentage: 1%

Warehouse Percentage: 99%

Number of Employees: 77

Hours of Operations: 24 hr

Days of Operations: Sunday-Friday

Number of Shifts: 2 shifts

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

scrubber empties every other day about a little less than 100 gal.

#9

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13649 Valley Blvd
Fontana, CA 92335

INE60308

Occupant Name: Falken Tire Corporation

Square Footage Leased: 334,800 sf

Square Footage Used: 334,800 sf

Office Percentage: 10%

Warehouse Percentage: 90%

Number of Employees: 91

Hours of Operations: 5am to 9pm

Days of Operations: 6

Number of Shifts: 1 1/2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

_____

_____

_____

#10

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13055 S. Valley Blvd.
Fontana, CA

Occupant Name: TTI FloorCare

Square Footage Leased: 349,552

Square Footage Used: 349,552

Office Percentage: 1%

Warehouse Percentage: 99%

Number of Employees: 45

Hours of Operations: 6A-5P

Days of Operations: Mon-Sat

Number of Shifts: One

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

No

#11

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13265 S. Valley Blvd.
Fontana, CA

Occupant Name: Weber Distribution

Square Footage Leased: 302,622

Square Footage Used: 302,622

Office Percentage: 1.3%

Warehouse Percentage: 98.7%

Number of Employees: 60

Hours of Operations: 6A-7P

Days of Operations: Mon-Sat

Number of Shifts: 2

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

no

#12

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13369 Valley Blvd.

Fontana, CA 92335

Occupant Name: Keefe Group

Square Footage Leased: 105,041

Square Footage Used: 105,041

Office Percentage: 7%

Warehouse Percentage: 93%

Number of Employees:

Hours of Operations:

Days of Operations:

Number of Shifts:

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

NO

#13

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13232 Valley Blvd

Fontana, CA 92335

Occupant Name: New Breed

Square Footage Leased: ~~100,000 sf~~ 210,930 (estimated)

Square Footage Used: ~~100,000 sf~~ 162,930 (100% of space)

Office Percentage: 7%

Warehouse Percentage: 93%

Number of Employees: 185 employees & 18 security

Hours of Operations: Open 24hours

Days of Operations: ~~Monday-Saturday~~ Sunday - Friday (6 days)

Number of Shifts: 3 shifts

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

Do you use floor scrubber? If so how often? Floor scrubber used 3 days pee week. Walk behind Floor Scrubber

#14

Sewer Plant Customer Survey

Dear customer:

In connection with a possible sewer plant upgrade, we are asking you to provide the following information to assist us in evaluating improvements that may be required.

Property Address: 13479 Valley Blvd
Fontana, CA 92335

Occupant Name: NGL Network Global Logistics

Square Footage Leased: 600,080 > as of 4/9/2000

Square Footage Used: 600,080

Office Percentage: 1.0

Warehouse Percentage: 99.0

Number of Employees: 45

Hours of Operations: 7:30A - 4:00P

Days of Operations: 7 Days

Number of Shifts: ONE

Is there any water usage at the property beyond that used in bathrooms, break room areas or for landscaping irrigation? If so, please describe.

A small amount of water used in Floor Scrubbing (Breakrooms) and in Floor Scrubber/Sweeper Machine.

#1 2nd DC Fountain

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

Plan Check No.: [redacted] Address: Walmart 13550 B Vallejo Blvd INB00305 A+B

Date: 3/8/10 + 3/10/10 Plans Examiner: [redacted]

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	6	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	14	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					7	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	19	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					4	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	7	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	27	x 4	=	0		x 6	=	0
Water heater drain		x	=	0	1	x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: [redacted] (0.xxxx) = **0.0000 EDU'S**

SEWER EXPANSION FEE:	0.0000 EDU'S	x $ 4,673.00	= $ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x $ 876.61	= $ -

COMMENTS: [redacted]

#2 City of Fontana

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

Exel

Plan Check No.: [redacted] Address: 9211 Kaiser INE00301

Date: 3/15/10 Plans Examiner: [redacted]

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	4	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	10	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					5	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	18	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					4	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	7	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	20	x 4	=	0		x 6	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: [redacted] (0.xxxx) = **0.0000 EDU'S**

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$	-
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$	-

COMMENTS: [redacted]

#3 end of Fountain

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

APL - Kellogg

Plan Check No.: _____ Address: 13048 Valley INEOD 304

Date: 3/10/10 Plans Examiner: _____

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	2	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	3	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					1	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	9	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					1	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	2	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	9	x 4	=	0		x 6	=	0
		x	=	0	9	x	=	0		x	=	0
Eye wash Station		x	=	0	1	x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: _____ (0.xxxx) = **0.0000 EDU'S**

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$	4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$	876.61	=	$ -

COMMENTS: _____

(REV. 11/18/04)

#4 City of Fontana

FIXTURE UNIT WORKSHEET

Plan Check No.:

Address: 13277 San Bernardino Scotts INE00302

Date: 3/16/10

Plans Examiner:

NEW ADDITIONAL FIXTURES									
	PRIVATE			PUBLIC			ASSEMBLY		
PLUMBING APPLIANCE / FIXTURE	QTY	F.U.	SUB	QTY	F.U.	SUB	QTY	F.U.	SUB
Bathtub or Combo Bath/Shower		x 2 =	0		x 2 =	0			
Bidet		x 2 =	0						
Clothes Washer		x 3 =	0		x 3 =	0		x 3 =	0
Dental Units / Cuspidor					x 1 =	0		x 1 =	0
Dishwasher - Domestic		x 2 =	0		x 2 =	0		x 2 =	0
Dishwasher - Commercial					x =	0		x =	0
Drinking Fountain		x 0.5 =	0	4	x 0.5 =	0		x 1 =	0
Floor Drain		x 2 =	0	4	x 2 =	0		x 2 =	0
Shower - Single Head		x 2 =	0		x 2 =	0		x 2 =	0
Shower - Multi Head, each additional		x 1 =	0		x 1 =	0		x 1 =	0
Sink - Bar		x 1 =	0		x 2 =	0		x 2 =	0
Sink - Commercial (Other than Lavatory)				3	x 3 =	0		x 3 =	0
Sink - Floor (Condensate / Low Flow)					x 1 =	0		x 1 =	0
Sink - Laundry		x 2 =	0		x 2 =	0		x 2 =	0
Sink - Hand Wash / Lavatory		x 1 =	0	8	x 1 =	0		x 1 =	0
Sink - Service or Mop Basin				2	x 3 =	0		x 3 =	0
Sink - Service, flushing rim					x 6 =	0		x 6 =	0
Sink - Shampoo					x 2 =	0		x 2 =	0
Urinal, 1.0 GPF		x 2 =	0	2	x 2 =	0		x 5 =	0
Water Closet, 1.6 GPF		x 3 =	0	9	x 4 =	0		x 6 =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		Sub Total:	0.0		Sub Total:	0.0		Sub Total:	0
				Total New/Additional Fixtures:					0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR:	(0.xxx)	=	0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$	-
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$	-

COMMENTS:

#5 End of Fountain

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

Sports Authority

Plan Check No.: _____ Address: 13053 San Bernardino 1NB00305

Date: 3/10/10 Plans Examiner: _____

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	2	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	7	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					2	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	17	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					2	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	7	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	24	x 4	=	0		x 6	=	0
Pump house - 1 Floor Drain		x	=	0		x	=	0		x	=	0
		x	=	0	1	x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR: (0.xxxx)	=	0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS: _____

#6 City of Fontana

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

LG Electronics

Plan Check No.: Address: 9415 Kaiser 1NE00306

Date: 3/16/10 Plans Examiner:

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	2	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	4	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					1	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0	6	x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	11	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					2	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	2	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	11	x 4	=	0		x 6	=	0
Ice Machine		x	=	0	1	x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: (0.xxxx) = 0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$	4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$	876.61	=	$ -

COMMENTS:

(REV. 11/18/04)

#7 City of Fontana

FIXTURE UNIT WORKSHEET

SMC + U.T.F.

Plan Check No.: [redacted] Address: 13230 San Bernardino, CA 92337

Date: 3/15/10 Plans Examiner: [redacted]

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	2	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	10	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0	1	x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					2	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	26	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					3	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	6	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	25	x 4	=	0		x 6	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR: [redacted] (0.xxx)	=	0.0000	EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$	4,673.00	=	$	-
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$	876.61	=	$	-

COMMENTS: [redacted]

#8 Two drinking Fountains

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

Mohawk

Plan Check No.: _____ Address: 9687 Transportation Way CA 90501

Date: 3/15/10 Plans Examiner: _____

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	6	x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	5	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					3	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	20	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					3	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	5	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	20	x 4	=	0		x 6	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR: (0.xxxx)	=	0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS: _____

(REV. 11/18/04)

#9 City of Fontana

FIXTURE UNIT WORKSHEET

Falken Tire

Plan Check No.: Address: 13649 Valley Blvd INE00308

Date: 3/17/10 Plans Examiner:

NEW ADDITIONAL FIXTURES

PLUMBING APPLIANCE / FIXTURE	PRIVATE QTY	F.U.	SUB	PUBLIC QTY	F.U.	SUB	ASSEMBLY QTY	F.U.	SUB
Bathtub or Combo Bath/Shower		x 2 =	0		x 2 =	0			
Bidet		x 2 =	0						
Clothes Washer		x 3 =	0		x 3 =	0		x 3 =	0
Dental Units / Cuspidor					x 1 =	0		x 1 =	0
Dishwasher - Domestic		x 2 =	0	1	x 2 =	0		x 2 =	0
Dishwasher - Commercial					x =	0		x =	0
Drinking Fountain		x 0.5 =	0		x 0.5 =	0		x 1 =	0
Floor Drain		x 2 =	0	9	x 2 =	0		x 2 =	0
Shower - Single Head		x 2 =	0		x 2 =	0		x 2 =	0
Shower - Multi Head, each additional		x 1 =	0		x 1 =	0		x 1 =	0
Sink - Bar		x 1 =	0		x 2 =	0		x 2 =	0
Sink - Commercial (Other than Lavatory)				3	x 3 =	0		x 3 =	0
Sink - Floor (Condensate / Low Flow)					x 1 =	0		x 1 =	0
Sink - Laundry		x 2 =	0		x 2 =	0		x 2 =	0
Sink - Hand Wash / Lavatory		x 1 =	0	15	x 1 =	0		x 1 =	0
Sink - Service or Mop Basin				3	x 3 =	0		x 3 =	0
Sink - Service, flushing rim					x 6 =	0		x 6 =	0
Sink - Shampoo					x 2 =	0		x 2 =	0
Urinal, 1.0 GPF		x 2 =	0	4	x 2 =	0		x 5 =	0
Water Closet, 1.6 GPF		x 3 =	0	19	x 4 =	0		x 6 =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		Sub Total:	0.0		Sub Total:	0.0		Sub Total:	0
								Total New/Additional Fixtures:	0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR: (3.xxxx)	=	0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS:

(REV. 11/18/04)

#10 City of Fontana

FIXTURE UNIT WORKSHEET

Royal Appliance

Plan Check No.: _____ Address: 13055 Valley Blvd WATSON I

Date: 3/3/10 Plans Examiner: _____

NEW ADDITIONAL FIXTURES											
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY		
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.	SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0			
Bidet		x 2	=	0							
Clothes Washer		x 3	=	0		x 3	=	0		x 3	= 0
Dental Units / Cuspidor						x 1	=	0		x 1	= 0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	= 0
Dishwasher - Commercial						x	=	0		x	= 0
Drinking Fountain		x 0.5	=	0		x 0.5	=	0		x 1	= 0
Floor Drain		x 2	=	0	4	x 2	=	0		x 2	= 0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	= 0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	= 0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	= 0
Sink - Commercial (Other than Lavatory)					2	x 3	=	0		x 3	= 0
Sink - Floor (Condensate / Low Flow) Kitchen						x 1	=	0		x 1	= 0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	= 0
Sink - Hand Wash / Lavatory		x 1	=	0	8	x 1	=	0		x 1	= 0
Sink - Service or Mop Basin					1	x 3	=	0		x 3	= 0
Sink - Service, flushing rim						x 6	=	0		x 6	= 0
Sink - Shampoo						x 2	=	0		x 2	= 0
Urinal, 1.0 GPF		x 2	=	0	2	x 2	=	0		x 5	= 0
Water Closet, 1.6 GPF		x 3	=	0	8	x 4	=	0		x 6	= 0
		x	=	0		x	=	0		x	= 0
		x	=	0		x	=	0		x	= 0
		x	=	0		x	=	0		x	= 0
	Sub Total:			0.0	Sub Total:			0.0	Sub Total:		0
									Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR:		=	0.0000 EDU'S
				(3 places)		

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$	4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$	876.61	=	$ -

COMMENTS:

(REV. 11/18/04)

#11 City of Fontana

FIXTURE UNIT WORKSHEET

Weber

Plan Check No.: Address: 13265 Valley Blvd WATSON 2

Date: 3/8/10 Plans Examiner:

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0		x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	10	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					2	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	12	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					2	x 3	=	0		x 3	=	0
Sink - Service, flushing rim Hand Wash Station					1	x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	2	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	12	x 4	=	0		x 6	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR: (0.xxxx)	=	0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS:

(REV. 11/18/04)

#12 2nd floor Fountain

FIXTURE UNIT WORKSHEET

Keefe Group

Plan Check No.: [redacted] Address: 13369 Valley Blvd. APPEL TRUST

Date: 3/18/10 Plans Examiner: [redacted]

NEW ADDITIONAL FIXTURES												
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0	1	x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0		x 0.5	=	0		x 1	=	0
Floor Drain		x 2	=	0	8	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					2	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	10	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin						x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	4	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF		x 3	=	0	11	x 4	=	0		x 6	=	0
ice machine (small)		x	=	0	1	x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: [redacted] (0.xxxx) = **0.0000 EDU'S**

SEWER EXPANSION FEE:	0.0000 EDU'S	x $ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x $ 876.61	=	$ -

COMMENTS: [redacted]

#13 City of Fontana

(REV. 11/18/04)

FIXTURE UNIT WORKSHEET

Plan Check No.: [illegible]　　Address: 13232 Valley Blvd Fontana 92335

Date: 3-22-10　　Plans Examiner: [illegible]

NEW ADDITIONAL FIXTURES									
	PRIVATE			PUBLIC			ASSEMBLY		
PLUMBING APPLIANCE / FIXTURE	QTY	F.U.	SUB	QTY	F.U.	SUB	QTY	F.U.	SUB
Bathtub or Combo Bath/Shower		x 2 =	0		x 2 =	0			
Bidet		x 2 =	0						
Clothes Washer		x 3 =	0		x 3 =	0		x 3 =	0
Dental Units / Cuspidor					x 1 =	0		x 1 =	0
Dishwasher - Domestic		x 2 =	0		x 2 =	0		x 2 =	0
Dishwasher - Commercial					x [illegible] =	0		x [illegible] =	0
Drinking Fountain		x 0.5 =	0	2	x 0.5 =	0		x 1 =	0
Floor Drain	2	x 2 =	0	1	x 2 =	0		x 2 =	0
Shower - Single Head		x 2 =	0		x 2 =	0		x 2 =	0
Shower - Multi Head, each additional		x 1 =	0		x 1 =	0		x 1 =	0
Sink - Bar		x 1 =	0		x 2 =	0		x 2 =	0
Sink - Commercial (Other than Lavatory)	2			1	x 3 =	0		x 3 =	0
Sink - Floor (Condensate / Low Flow)					x 1 =	0		x 1 =	0
Sink - Laundry		x 2 =	0		x 2 =	0		x 2 =	0
Sink - Hand Wash / Lavatory	6	x 1 =	0	10	x 1 =	0		x 1 =	0
Sink - Service or Mop Basin	2				x 3 =	0		x 3 =	0
Sink - Service, flushing rim					x 6 =	0		x 6 =	0
Sink - Shampoo					x 2 =	0		x 2 =	0
Urinal, 1.0 GPF	3	x 2 =	0	4	x 2 =	0		x 5 =	0
Water Closet, 1.6 GPF	9	x 3 =	0	12	x 4 =	0		x 6 =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		x =	0		x =	0		x =	0
		Sub Total:	0.0		Sub Total:	0.0		Sub Total:	0
							Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS: 0.0 x SEWAGE FACTOR: [illegible] (0.xxxx) = 0.0000 EDU'S

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS: [illegible]

(REV. 11/18/04)

#14 City of Fontana

FIXTURE UNIT WORKSHEET

Leap Frog

Plan Check No.: _____ Address: 13479 Valley CAMPSOU

Date: 3/8/10 Plans Examiner: _____

NEW ADDITIONAL FIXTURES											
PLUMBING APPLIANCE / FIXTURE	PRIVATE				PUBLIC				ASSEMBLY			
	QTY	F.U.		SUB	QTY	F.U.		SUB	QTY	F.U.		SUB
Bathtub or Combo Bath/Shower		x 2	=	0		x 2	=	0				
Bidet		x 2	=	0								
Clothes Washer		x 3	=	0		x 3	=	0		x 3	=	0
Dental Units / Cuspidor						x 1	=	0		x 1	=	0
Dishwasher - Domestic		x 2	=	0		x 2	=	0		x 2	=	0
Dishwasher - Commercial						x	=	0		x	=	0
Drinking Fountain		x 0.5	=	0	6	x 0.5	=	0		x 1	=	0
Floor Drain	*	x 2	=	0	10	x 2	=	0		x 2	=	0
Shower - Single Head		x 2	=	0		x 2	=	0		x 2	=	0
Shower - Multi Head, each additional		x 1	=	0		x 1	=	0		x 1	=	0
Sink - Bar		x 1	=	0		x 2	=	0		x 2	=	0
Sink - Commercial (Other than Lavatory)					4	x 3	=	0		x 3	=	0
Sink - Floor (Condensate / Low Flow)						x 1	=	0		x 1	=	0
Sink - Laundry		x 2	=	0		x 2	=	0		x 2	=	0
Sink - Hand Wash / Lavatory		x 1	=	0	33	x 1	=	0		x 1	=	0
Sink - Service or Mop Basin					2	x 3	=	0		x 3	=	0
Sink - Service, flushing rim						x 6	=	0		x 6	=	0
Sink - Shampoo						x 2	=	0		x 2	=	0
Urinal, 1.0 GPF		x 2	=	0	6	x 2	=	0		x 5	=	0
Water Closet, 1.6 GPF	3	x 3	=	0	31	x 4	=	0		x 6	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		x	=	0		x	=	0		x	=	0
		Sub Total:		0.0		Sub Total:		0.0		Sub Total:		0
										Total New/Additional Fixtures:		0.0

New/Additional Fixtures: 0.0

Existing Fixtures To Be Removed: 0.0

TOTAL NET NEW/ADDITIONAL FIXTURE UNITS:	0.0	x	SEWAGE FACTOR:	=	0.0000 EDU'S
			(0.xxxx)		

SEWER EXPANSION FEE:	0.0000 EDU'S	x	$ 4,673.00	=	$ -
SEWER MASTER CONNECTION FEE:	0.0000 EDU'S	x	$ 876.61	=	$ -

COMMENTS: _____

APPENDIX I

Hand Calculations

HC1, 2976 Idling and Running Emissions Factors

BLDG1 DPM Emissions Factor (Idling)

8.860E-01	g/hr
1.477E-02	g/min
2.461E-04	g/sec
6	PM Peak Hour Trucks
1.477E-03	g/sec
72555	Site Area (m)
2.035E-08	g/sec/m2
1.628E-09	g/sec/m2 with idling restrictions

LINEW DPM Emissions Factor (Running, 10 mph)

6.440E-01	g/mile
2.00	Trucks
0.16	Miles
2.061E-01	Total g/mile/hr
3.435E-03	Total g/mile/min
5.724E-05	Total g/mile/sec
10440	Area
5.483E-09	g/sec/m2

LINEN DPM Emissions Factor (Running, 10 mph)

6.440E-01	g/mile
4.00	Trucks
0.07	Miles
1.803E-01	Total g/mile/hr
3.005E-03	Total g/mile/min
5.009E-05	Total g/mile/sec
4085	Area
1.226E-08	g/sec/m2

HC2, 2976 Cancer and Non-Cancer Risk

Cancer Risk

Rank	Conc	URF	LEA	CR
1	0.02959	0.0003	0.66	5.859E-06
2	0.02815	0.0003	0.66	5.574E-06
3	0.02692	0.0003	0.66	5.330E-06
4	0.02498	0.0003	0.66	4.946E-06
5	0.02469	0.0003	0.66	4.889E-06
6	0.02451	0.0003	0.66	4.853E-06
7	0.02427	0.0003	0.66	4.805E-06
8	0.02239	0.0003	0.66	4.433E-06
9	0.02235	0.0003	0.66	4.425E-06
10	0.02177	0.0003	0.66	4.310E-06

Non-Cancer Risk

Rank	Conc	REL	HI
1	0.02959	5	0.006
2	0.02815	5	0.006
3	0.02692	5	0.005
4	0.02498	5	0.005
5	0.02469	5	0.005
6	0.02451	5	0.005
7	0.02427	5	0.005
8	0.02239	5	0.004
9	0.02235	5	0.004
10	0.02177	5	0.004

HC3, 2976 Cumulative Operational Impacts

Table A9-14, ARB Performance Standards

Not Applicable to Commercial Projects

Table A9-15, 1% Emissions Reductions

		ROG	NOX	CO	SO2	PM10	PM2.5
TOTAL	Area	0.89	0.00	0.00	0.00	0.00	0.00
	Energy	0.00	0.02	0.02	0.00	0.00	0.00
	Mobile	0.29	1.45	2.40	0.00	0.48	0.05
		1.18	1.47	2.42	0.00	0.48	0.21

		ROG	NOX	CO	SO2	PM10	PM2.5
B	Starting Emissions	1.18	1.47	2.42	0.00	0.48	0.21
C	Reduction Factor	0.99	0.99	0.99	0.99	0.99	0.99
D	Project Life	26.00	26.00	26.00	26.00	26.00	26.00
	A=B-(C^D*B)	0.27	0.34	0.56	0.00	0.11	0.05
	B-A	0.91	1.13	1.86	0.00	0.37	0.16
	Year 2040 Emissions	1.00	0.32	0.94	0.00	0.45	0.03
	Significant if YR2040 > B-A	**No**	**No**	**No**	**No**	**No**	**No**
	Variance	**(0.09)**	**0.81**	**0.92**	**0.00**	**(0.08)**	**0.13**

A9-16, Average Vehicle Ridership

Not Applicable Because Employee/Occupancy Information not Available

HC1, 2976 Wastewater Discharges and Water Demand

Property	Address	Size (SF)	Office %	AVG TSF	Estimated GPD	2007	2008	2009
Wal-Mart	13550 Valley Boulevard	757,765	2.5	4.62	3,500	3,180	3,375	3,261
Johnson & Johnson	9211 Kaiser Way	830,000	2.0	3.01	2,500	2,201	1,451	2,259
Kellogg's	13048 Valley Boulevard	450,052	1.2	2.22	1,000	846	836	821
Scott's Company	13277 San Bernardino Avenue	577,905	2.0	1.73	1,000	1,266	550	869
The Sports Authority	13053 San Bernardino Avenue	616,551	10.0	2.43	1,500	2,027	1,118	1,547
LG Electronics	9415 Kaiser Way	544,768	1.0	1.84	1,000	1,051	862	1,009
UTI Logistics	13230 San Bernardino Avenue	484,250	1.0	2.07	1,000	710	862	748
Mohawk Carpet Distribution	9687 Transportation Way	849,054	1.0	1.77	1,500	958	778	1,508
Falken Tire Company	13649 Valley Boulevard	334,800	1.0	2.99	1,000	651	673	849
Watson Land Company	13055 Valley Boulevard	349,552	1.0	1.43	500	355	435	439
Watson Land Company	13265 Valley Boulevard	302,622	1.3	2.48	750	592	872	643
Appel Family Trust	13369 Valley Boulevard	105,041	7.0	11.90	1,250	884	1,085	1,156
Bolger & Company, Inc.	13232 Valley Boulevard	210,930	7.0	9.48	2,000	N/A	N/A	2,000
Estate of James Campbell	13479 Valley Boulevard	575,000	1.0	3.04	1,750	651	1,695	1,688
	Total	6,988,290	2.8	2.90	20,250	15,372	14,592	20,808
	AVG	499,164		3.64	1,446	1,182	1,122	1,343
	Project Wastewater (GPD)	186,800		2.90	542			
	Project Wastewater (MGY)				197,728			

	Total	*Indoor*	*Outdoor*
Project Water (MGY)	1,167,999	247,160	920,839

Notes: Discharge rates based on survey prepared for the Kaiser Commerce Center Sewer Plant