B. AIR QUALITY

1. Emissions

This Section is based upon the Air Quality Assessment prepared by Mestre Greve Associates, dated June 25, 2002 (**Appendix 3**). Project traffic data utilized to assess the Project's mobile source air quality impacts was obtained from the Project traffic study, generated by Crain & Associates (**Appendix 18**).

Existing Conditions

Environmental Setting and Meteorology

The Project falls within the South Coast Air Basin (Basin). The climate in and around the Project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. The cell maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter "wet" season. Temperatures are normally mild, except during the summer months, which commonly bring substantially higher temperatures. In all portions of the Basin, summer temperatures measuring well above 100 degrees Fahrenheit have been recorded in recent years. The annual average temperature in the Basin is approximately 62 degrees Fahrenheit.

Winds in the Project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling towards the sea. Wind direction is altered by local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent. Therefore, there is little stagnation in the Project vicinity, especially during busy daytime traffic hours.

Southern California frequently experiences temperature inversions, that inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Dispersion is not restricted below the elevated inversion. Mixing heights for elevated inversions are lower and more persistent in the summer. This low summer inversion puts a lid over the Basin and is responsible for the high levels of ozone observed during summer months in the air Basin.

Air Quality Pollutants and Regulatory Standards

<u>Air Quality Pollutants</u>

Air quality studies generally focus on five pollutants that are most commonly measured and regulated: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), respirable particulate matter (PM_{10}), and sulfur dioxide (SO_2). Ozone is not directly emitted from pollution sources, but rather forms in the atmosphere through a chemical reaction between Reactive Organic Gases (ROG) and nitrogen oxides (NOx). Thus, air quality studies analyze ROG and NOx, as emissions of these ozone precursors are more easily modeled and estimated for environmental review purposes.

Carbon monoxide (CO) is a colorless gas that interferes with the transfer of oxygen to the brain. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Along with carbon dioxide, CO is emitted by motor vehicles, power plants, refineries, industrial boilers, ships, aircrafts and trains. Automobile exhausts release most of the CO in urban areas. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability.

Ozone is a colorless gas that enters the human bloodstream and interferes with the transfer of oxygen, depriving sensitive tissues in the heart and brain of oxygen. Ozone also damages vegetation by inhibiting their growth. Although ozone is not directly emitted, it forms in the atmosphere through a chemical reaction between Reactive Organic Gases (ROG) and nitrogen oxides (NOx), which are emitted from industrial sources and from automobiles. Substantial ozone formation generally requires a stable atmosphere with strong sunlight.

Nitrogen Dioxide (NO_2) is a brownish gas that irritates the lungs. At high concentrations, it can cause breathing difficulties and aggravate respiratory illnesses. Like ozone, NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as nitrogen oxides (NOx) and are major contributors to ozone formation. NO_2 also contributes to the formation of PM_{10}, small liquid and solid particles that measure less than 10 microns in diameter. At atmospheric concentration, NO_2 is only potentially irritating. High concentrations produce a brownish-red cast to the atmosphere and reduced visibility.

PM_{10} refers to particulate matter which measures less than 10 microns in diameter, about one/seventh the thickness of a human hair. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when emissions from motor vehicles undergo chemical reactions in the atmosphere. Major sources of PM_{10} include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfire, brush and waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Suspended particulates produce haze and reduce visibility. Additionally, PM_{10} poses a greater health risk than large-sized particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defense and damage the respiratory tracts. PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections.

Sulfur dioxide (SO_2) is a product of high-sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, industry and for domestic heating. Industrial chemical manufacturing is another source of SO_2. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Air Quality Regulatory Standards

Air quality regulations are promulgated by the U.S. Environmental Protection Agency (EPA), the Federal Clean Air Act (CAA), the California EPA and the California CAA (CCAA). All of these regulations are administered locally by State-designated air quality regions and districts. The Project falls within the South Coast Air Basin (Basin), and is therefore regulated locally by the South Coast Air Quality Management District (SCAQMD) and by the California Air Resources Board (CARB). The SCAQMD establishes and enforces regulations for stationary sources in the Basin and develops and implements Transportation Control Measures. The CARB is charged with regulating vehicle emissions. CARB also is responsible for the vehicle inspection program. In areas that are not achieving the federal ambient air quality standards, the CAA requires CARB, the SCAQMD and Southern California Association of Governments (SCAG) to develop and implement plans to meet the standards. In California these plans are known as the Air Quality Management Plan (AQMP). The U.S. EPA oversees these efforts to ensure that the AQMP is being adequately developed and implemented. For the Basin, the SCAQMD prepares all of the AQMP, except the transportation component, which is prepared by SCAG.

The Basin has been designated by the U.S. EPA as a non-attainment area for ozone, carbon monoxide, and suspended particulates. As a result, CARB, SCAQMD and SCAG, in coordination with local governments and the private sector, have developed an AQMP for the Basin, which provides the blueprint for meeting State and Federal ambient air quality standards. The governing board of the SCAQMD adopted the 1997 AQMP on November 8, 1996. CARB amended the Ozone portion of the 1997 AQMP in 1999, as part of the California State Implementation Plan. The U.S. EPA adopted the 1997 AQMP, together with the 1999 Amendments, in December of 1999. The 1997 AQMP (with the 1999 Amendments) supersedes the previous AQMP (revised in 1994 and adopted locally in November 1996).

Nitrogen dioxide in the Basin has met the Federal standards for three consecutive years, and therefore, is qualified for redesignation to attainment. A maintenance plan for nitrogen dioxide is included in the 1997 AQMP. The CCAA mandates the implementation of the program that will achieve the California Ambient Air Quality Standards (CAAQS) and the CAA mandates the implementation of new air quality performance standards.

Attainment of all Federal PM_{10} health standards is to be achieved by December 31, 2006, and ozone standards are to be achieved by November 15, 2010. For CO, the deadline was December 31, 2000. The basin was very close to attaining the CO standard at the end of 2000 and was granted a two year extension to meet the federal standards. The 2001 AQMP currently being prepared will contain measures to ensure attainment of the federal CO standard by the end of 2002.

The overall control strategy for the AQMP is to meet applicable State and Federal requirements and to demonstrate attainment with ambient air quality standards. The 1997 AQMP uses two tiers of emission reduction measures; (1) short- and intermediate- term measures, and (2) long-term measures.

Short- and intermediate-term measures propose the application of available technologies and management practices between 1994 and the year 2005. These measures rely on known technologies and proposed actions to be taken by several agencies that currently have statutory authority to implement such measures. Short- and intermediate-term measures in the 1997 AQMP include 35 stationary source, seven on-road, six off-road, one transportation control and indirect source, five advanced transportation technology, and one further study measures. All of these measures are proposed to be implemented between 1995 and 2005. These measures rely on both traditional command and control and on alternative approaches to implement technological solutions and control measures.

To ultimately achieve ambient air quality standards, additional emission reductions will be necessary beyond the implementation of short- and intermediate-term measures. Long-term measures rely on the advancement of technologies and control methods that can reasonably be expected to occur between 1997 and 2010. These long-term measures rely on further development and refinement of known low- and zero-emission control technologies for both mobile and stationary sources, along with technological breakthroughs.

State law mandates the revision of the AQMP at least every three years, and Federal law specifies dates certain for developing attainment plans for criteria pollutants. Accordingly, SCAQMD and SCAG are currently in the process of preparing an updated AQMP.

Ambient Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air Basin. Estimates for the Basin have been made for existing emissions ("1997 Air Quality Management Plan," October 1996). The data indicate that mobile sources are the major source of regional emissions. Motor vehicles (i.e., on-road mobile sources) account for approximately 51 percent of volatile organic compounds (VOC), 63 percent of nitrogen oxide (NOx) emissions, and approximately 78 percent of CO emissions.

The Project site is located in SCAQMD Source Receptor Area 2 (West LA). Certain air quality data for this area is collected at the West Los Angeles Veteran's Administration (West LA/VA) Hospital monitoring station, which is considered representative of the air quality experienced in the vicinity of the Project. The air pollutants measured at the West LA/VA Hospital station include ozone, carbon monoxide (CO), and nitrogen dioxide (NO_2). Sulfur dioxide (SO_2) and particulate (PM_{10}) concentrations for the area encompassing the Project site are measured at the Hawthorne Station. The air quality monitored data from 1998-2001 for all of these pollutants are shown in **Table V.B-1**. This table also presents the Federal and State air quality standards.

Table V.B-1

Air Quality Levels Measured at the West LA/VA Hospital & Hawthorne Monitoring Stations

Pollutant	California Standard	National Standard	Year	% Msrd.[1]	Max. Level	Days State Std. Exceeded
Ozone	0.09 ppm for 1 hr.	0.12 ppm for 1 hr.	2001	99	0.099	1
			2000	100	0.104	2
			1999	100	0.117	4
			1998	100	0.127	7
CO	20 ppm for 1 hour	35 ppm for 1 hour	2001	100	4.5	0
			2000	82	4.4	0
			1999	98	6.1	0
			1998	97	6.8	0
CO	9.0 ppm for 8 hour	9 ppm for 8 hour	2001	100	4	0
			2000	98	4.3	0
			1999	98	3.6	0
			1998	97	4.5	0
Particulates PM_{10}[4]* (24 Hour)	50 ug/m3 for 24 hr.	150 ug/m3 for 24 hr.	2001	96	75	8/48
			2000	96	74	9/54
			1999	98	69	6/33
			1998	95	66	7/42
Particulates PM_{10}[5]* (Annual)	30 ug/m3 AGM[3]	50 ug/m3 AAM[2]	2001	96	34/37	yes
			2000	96	33/36	yes
			1999	98	33/35	yes
			1998	95	30/33	yes
NO_2 (1-Hour)	0.25 PPM for 1 hour	None	2001	100	0.109	0
			2000	100	0.162	0
			1999	100	0.133	0
			1998	99	0.130	0
NO_2 (AAM[2])	None	0.053 ppm AAM[2]	2001	100	0.024	n/a
			2000	100	0.026	n/a
			1999	100	0.028	n/a
			1998	99	0.026	n/a

Table V.B-1 (Cont.)

Air Quality Levels Measured at the West LA/VA Hospital &Hawthorne Monitoring Stations

Pollutant	California Standard	National Standard	Year	% Msrd.[1]	Max. Level	Days State Std. Exceeded
SO_2* (24 Hour)	0.04 ppm 24 Hr.	0.14 ppm for 24 hr.	2001	100	0.009	0
			2000	100	0.016	0
			1999	100	0.019	0
			1998	98	0.013	0
SO_2* (AAM[2])	None	0.030 ppm AAM[2]	2001	100	0.004	n/a
			2000	100	0.003	n/a
			1999	100	0.004	n/a
			1998	98	0.004	n/a

*PM_{10} and SO_2 measurements are taken from the Hawthorne Station.

1. Percent of year where high pollutant levels were expected that measurements were made.
2. Annual Arithmetic Mean (AAM)
3. Annual Geometric Mean (AGM)
4. First number shown in Days State Standard Exceeded column represents the actual number of days measured that State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken everyday.
5. Levels Shown for Annual PM_{10} are AGM/AAM

Source: California Air Resources Board website, Air Quality Data Statistics, ADAM Data Summaries, www.arb.ca.gov/adam/welcome.html

The monitoring data presented in **Table V.B-1** shows that ozone and particulates are the air pollutants of primary concern in the Project area. The State ozone standard was exceeded between 1 and 7 days per year in the last 4 years; the Federal standard was exceeded one day in 1998 and has not been exceeded since. The data from the past four years shows a downward trend in the maximum ozone concentrations and the number of days exceeding the State and Federal ozone standards.

The data indicates that over the past four years, the State standards for PM_{10} have been exceeded as few as 33 days and as many as 54 days per year. There does not appear to be any trend toward fewer days of exceeding the standard, PM_{10} levels in the area are due to natural sources, grading operations motor vehicles and chemical reactions in the atmosphere.

Currently, CO levels in the Project region comply with the State and Federal 1-hour and 8-hour standards. High levels of CO commonly occur near major roadways and freeways. CO may potentially be a continual problem in the future for areas next to freeways and other major roadways.

The monitored data shown in **Table V.B-1** shows that other than ozone and PM_{10}, no State or Federal standards were exceeded for the remaining criteria pollutants.

Existing Regional Emissions

The current uses on the Project site generate air pollutant emissions. The primary source of regional emissions is motor vehicles. Other emissions are generated from the combustion of natural gas for space heating and the generation of electricity. Emissions are also generated by the use of natural gas and oil for the generation of electricity off-site.

Emission rates for employee vehicle trips and heavy truck operations were taken from EMFAC2000 (Version 2.02). EMFAC2000 is a computer program generated by the California Air Resources Board that calculates emission rates for vehicles. The emission factors were calculated for an average speed of 25 miles per hour.

The data used to estimate the on-site combustion of natural gas and off-site electrical usage, which are based on the proposed land uses in terms of dwelling units and square footages, and emission factors, were obtained from the 1993 SCAQMD CEQA Handbook.

The Project traffic analysis shows that the existing uses on the Project site generate 19,161 daily trips. The average trip length used to calculate pollutant emissions was 9 miles. This is a composite trip length derived from data contained in the SCAQMD CEQA Handbook. The product of the existing daily trips and trip length translates to a total of 172,449 vehicle miles traveled (VMT) generated by the existing uses on the Project site. An average speed of 25 miles per hour was assumed.

Additional pollutant emissions are generated on-site by the combustion of natural gas for space and water heating and off-site due to electrical usage. The square footages and emission factors utilized in calculating the emissions with these sources are provided in **Appendix 3**. The emissions are projected for 2001. The existing emissions from the Project site are presented in **Table V.B-2**.

Table V.B-2

Regional Air Pollutant Emissions from Existing Uses

	Air Pollutant Emissions (lbs/day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Vehicular Emissions	6280.3	433.4	800.1	28.1	110.3
Natural Gas Consumption	1.2	0.3	7.5	0.0	0.0
Electrical Generation	7.1	0.4	40.6	1.4	4.2
Total Existing Emissions	**6288.6**	**434.1**	**848.1**	**29.5**	**114.5**

Local Air Quality

Introduction & Criteria

Locally, carbon monoxide is a primary pollutant. While CO is directly emitted from a variety of sources, the most notable source of carbon monoxide is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used to assess its impacts on the local air quality. The Federal and State standards for CO are presented in **Table V.B-3**.

Table V.B-3

Federal and State Carbon Monoxide Standards

	Averaging Time	**Standard**
Federal	1 hour	35 ppm
	8 hours	9 ppm
State	1 hour	20 ppm
	8 hours	9 ppm

Some land uses are considered more sensitive to the effects of CO concentrations and air pollution than others, due to the types of population, groups or activities present. Land uses considered relatively sensitive to air pollution include, schools, hospitals, playgrounds, childcare centers, retirement homes, and convalescent homes. Residential areas are also considered to be sensitive because residents are likely to be home for extended periods of time, resulting in prolonged exposure to present pollutants.

Carbon monoxide levels in the Project vicinity due to nearby roadways were assessed with the CALINE4 computer model. CALINE4 is a fourth generation line source air quality model developed by the California Department of Transportation ("CALINE4," Report No. FHWA / CA / TL-84 / 15, June 1989). The precise methodology used in modeling existing air quality with the CALINE4 computer model is discussed in more detail under Operational Phase Impacts, Local Air Quality, below. The remainder of this section discusses the existing carbon monoxide levels in comparison to the State and Federal carbon monoxide standards.

Local CO Modeling

The CALINE4 CO modeling was conducted for two intersections in the Project area: (1) Santa Monica Boulevard (South) at Wilshire Boulevard, and (2) Santa Monica Boulevard at Beverly Glen Boulevard. CO levels were modeled for four receptors in each corner of each intersection. The highest concentration of the four receptors at each intersection is reported in **Table V.B-4**.

The background CO concentrations used to determine the total CO concentrations were taken from the SCAQMD CEQA Handbook for Source Receptor Area 2. This data indicates the 1-hour background CO concentration is 6.3 ppm in the area and the 8-hour background concentration is 3.4 ppm. The background concentrations are intended to account for all other sources of CO in the area that are not directly modeled. Therefore, 6.3 ppm is added to the worst-case modeled 1-hour projections, and 3.4 ppm to the 8-hour projections, to account for the background carbon monoxide levels.

The peak hour traffic and Level of Service (LOS) data were taken from the traffic analysis prepared for the Project. The modeling results of the existing CO levels are presented in **Table V.B-4**. (Printouts of the CALINE4 input and output files are presented in Appendix 3.)

Table V.B-4

Existing Modeled Carbon Monoxide Concentrations (ppm)

Intersection	**1-Hour CO Concentration (ppm)**	**8-Hour CO Concentration (ppm)**
1. Santa Monica at Beverly Glen	12.3	7.7
2. Santa Monica (South) at Wilshire Boulevard	18.5	12.2
State Standard	20	9

NOTE: The CO concentrations include the ambient concentrations of 6.3 ppm for 1-hour levels, and 3.4 ppm for 8-hour levels.

Table V.B-4 shows that the CO concentrations in the vicinity of the Project do not exceed the 1-hour standard. However, the 8-hour standard is exceeded immediately adjacent to Intersection #2 (Santa

Monica Boulevard (South) at Wilshire Boulevard). Note that the modeling assumes conditions that will result in the highest possible concentrations. The specific weather and traffic conditions would need to occur during the same simultaneous period to approach the levels modeled. In addition, background levels are added to the modeled concentrations. These background concentrations represent a worst-case assumption about how much all other sources of CO not included in the model contribute to the total CO concentration. These background concentrations were developed by the SCAQMD for their 1992 CEQA Handbook and have not been updated since but represent the best available data. The modeling indicates the possibility for the 8-hour CO standard to be exceeded near Intersection #2 on occasion but this would not be expected to occur on a regular basis. With improvements in vehicle technology and compliance with stricter regulations, vehicle emissions for the region are projected to be significantly lower in the future.

Threshold of Significance

Regional Air Quality

In its "1993 CEQA Air Quality Handbook" the SCAQMD established significance thresholds to assess the regional impact of project related air pollutant emissions. **Table V.B-5** presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project resulting in net increases in daily air pollutant emissions below these thresholds are considered to have a less than significant effect on regional air quality throughout the South Coast Air Basin.

Table V.B-5

SCAQMD Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions				
	CO	**ROG**	**NOx**	**PM_{10}**	**SOx**
Construction (lbs/day)	550	75	100	150	150
Construction (tons/qtr)	24.75	2.5	2.5	6.75	6.75
Operation (lbs/day)	550	55	55	150	150

Local Air Quality

The significance thresholds for local air quality impacts include the State standards of 20 ppm for 1-hour CO concentration levels, and 9 ppm for 8-hour CO concentration levels. If the future CO concentration levels with the Project are below the standards, then there is no significant impact. If CO concentrations are over the standards and the Project increases the concentrations by 1 ppm for the 1-hour, and 0.45 ppm for the 8 hour, then the project results in a significant local air quality impact.

Project Impacts

Air quality impacts from the Project are divided into short term and long-term. Short-term impacts are the result of Project construction and demolition operations. Long-term impacts are associated with the operation of the completed Project.

Construction Phase Impacts

Construction Air Pollutant Emissions

Temporary air quality impacts would result from Project construction and demolition activities. Air pollutants would be emitted by construction equipment and fugitive dust would be generated during demolition of the existing buildings on site. Peak periods of demolition would result in the greatest level of air pollution emissions. Project development would occur in two general phases: 1) demolition of existing structures; and 2) erection of the new building. Demolition would consist of removal of the concrete and steel skeletal structures. Removal of the plaza areas is also included in this stage. Erection of the new structure includes: foundation strengthening, steel framing, flooring, fireproofing, external finishing, infrastructure installation, interior finishing and site work. The demolition and construction activities are discussed in greater detail in Appendix 5.

In order to minimize functional disruption to surrounding uses, demolition of the exterior skin will occur within shrink wrap-enclosed scaffolding surrounding each of the two existing buildings, and Concourse and Plaza level locations. By shrink wrapping, each building becomes an air containment area under negative pressure so that exterior work can be performed within this area in a controlled environment.

The demolition process will involve the removal of all remaining furnishings, carpeting, window treatments, partitions, door assemblies, mechanical ducting, cabinetry and millwork, theatre seating, stages and all associated rigging, catwalks as needed, electrical systems, lighting, plumbing, fencing, suspended ceilings, insulation, stairwell enclosures, shaft wall construction, piping, sprinklers, curtain wall construction such as travertine and glazing, metals studs and framing, store front glass systems, restaurant equipment, counters and benches, theatre screens, etc.

Due to construction, excavation and material removal activities, the demolition phase represents the "worst-case" scenario with respect to short-term air pollutant emissions and is analyzed in this document. Demolition is labor and equipment intensive. The work will require on average crew sizes of approximately 100 men which will fluctuate in accordance with the work phasing. This phase would require mobilization of approximately seven excavators, a crawler loader / wheel loader, eight bobcats with material handling attachments, crane and cable, and hand tools, which would be used for initial cutting and felling of the material and for manipulating and downsizing concrete, steel, and other building demolition materials.

Hazardous demolition materials will be sent down sealed chutes to an on-site lockable, and sealed bin / dumpster. Stockpiling will be limited to non-hazardous materials in the existing loading dock areas to the extent possible. A goal of the Project is to reuse and / or recycle as much of the existing structure as possible. The recycling component of the Project is a major design feature. It is anticipated that at least 50 percent of all materials would be recycled. Items with salvage value such as doors, bathroom fixtures, theater seats, mirrors, and glass would be removed intact. Other materials, such as structural steel, decking, and concrete, would be separated on-site and sent to appropriate recycling facilities. It is currently expected that there would be two staging areas adjacent to the site: one along Constellation Boulevard and the other along Avenue of the Stars. Incoming trucks, except those required to support the immediate operations, would be staged outside the Century City boundary.

Concrete from the site would be hauled via the Santa Monica (I-10) Freeway to recycling sites located to the east. Steel would be hauled via the San Diego (I-405) Freeway or Harbor Freeway (I-110) to recycling sites located to the south.

Approximately 4,000 roundtrip truck trips would be required to haul the debris away at a rate of 41 round trips per day. At this time it is not known where all of the materials would be taken. All potential sites are within a one-way trip length of 40 miles[18] from the Project site. Therefore, a worst-

[18] Potential haul off destinations include without limitation: Hazardous Materials: Azusa Land Reclamation in Azusa; Crusher Locations: Hanson Aggregate, Santa Monica; Copp Crushing, El Segundo; Dump Sites: Waste Transfer & Recycling, Los Angeles; Western USA Waste, Carson; Bradley West, Sun Valley: Recyclable Steel: steel recyclers at the Port of Los Angeles.

case one-way trip length of 40 miles was used for all trips. It was assumed conservatively that there would be a maximum of 200 employee vehicles traveling to and from the site each day and the average trip length for each employee vehicle is 20 miles[19]

Emissions from construction activities for large development projects are estimated by the U.S. EPA. The 1993 CEQA Handbook establishes an emission factor of 0.00042 pounds of PM_{10} per cubic foot of building space for demolition activities. Demolition emissions were calculated based on the gross existing floor square footage multiplied by a 12-foot height to determine volume.

Typical emission rates for construction equipment were obtained from the 1993 CEQA Air Quality Handbook. These emission factors are presented in terms of pounds of pollutant per hour of equipment operation. It should be noted that most of these emission factors were initially published in 1985 in the EPA's AP-42 Compilation of Emission Factors. These emission rates have not been updated since their original publication. Several State and Federal regulations have been enacted since this time that require reduced emissions from construction equipment. The effect of these regulations is not included in the emission factors used to calculate construction equipment emissions presented below. The actual emissions from construction equipment, therefore, would likely be lower than presented below. However, the exact reduction is not known. The exact reduction would depend on the age of the specific equipment used at the construction site. As time passes, older equipment would be replaced with newer equipment manufactured with the lower emission requirements. Therefore, construction occurring farther in the future would likely be reduced by a greater amount versus near term construction.

Emission rates for employee vehicle trips and heavy truck operations were taken from EMFAC2000 (Version 2.02). EMFAC2000 is a computer program generated by the California Air Resources Board that calculates emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile.

Using the estimates presented above, the peak emissions for the demolition are calculated and presented in **Table V.B-6**. The data used to calculate the demolition emissions are shown in **Appendix 3**.

<u>Table V.B-6</u>

Total Air Pollutant Emissions Generated by Demolition

	Pollutant Emissions (lbs./day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Demolition Particulates	0.0	0.0	0.0	35.2	0.0
Construction Equipment	97.9	16.7	144.9	10.1	13.1
Debris Hauling Trucks	36.5	11.7	70.2	5.2	2.2
Employee Travel (200 employees)	257.6	17.7	33.7	1.3	0.9
Gross Demolition Emissions	**392.0**	**46.1**	**248.8**	**51.8**	**16.2**
Gross Tons per Quarter	**17.9**	**2.1**	**11.4**	**0.8**	**0.7**

The existing office space, retail uses, theater, cinema and health club would continue to generate emissions on the Project site without the Project. The net changes in pollutants generated by the demolition are determined by subtracting the emissions that would be generated with the existing land uses. This is shown in **Table V.B-7** for daily emissions and **Table V.B-8** for quarterly emissions.

[19] Derived from the SCAQMD CEQA Handbook.

The gross total Project emissions are shown in the first row with the emissions from the existing uses in the second row. The differences, the net demolition emissions, are shown in the third row.

Table V.B-7

Daily Net Air Pollutant Emissions during Demolition

	Pollutant Emissions (lbs./day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Gross Demolition Emissions	392.0	46.0	248.8	51.8	16.2
Existing Use Emissions	6288.6	434.1	848.1	29.5	114.5
Net Demolition Emissions	**-5,896.6**	**-388.1**	**-599.3**	**22.3**	**-98.3**
SCAQMD Thresholds	*550*	*75*	*100*	*150*	*150*

Table V.B-8

Quarterly Net Air Pollutant Emissions during Demolition

	Pollutant Emissions (tons./day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Gross Demolition Emissions	17.9	2.1	11.4	2.4	0.7
Existing Use Emissions	286.9	19.8	38.7	1.3	5.2
Net Demolition Emissions	**-269.0**	**-17.7**	**-27.3**	**1.0**	**-4.5**
SCAQMD Thresholds	*24.75*	*2.5*	*2.5*	*6.75*	*6.75*

Tables V.B-7 and V.B-8 show that the Project results in a net reduction in emissions during demolition for all pollutants with the exception of PM_{10}. The reductions range from 71% to 94% of the existing use emissions. The projected net increase in PM_{10} emissions during demolition is below the daily and quarterly SCAQMD significance thresholds. This phase of construction would generate the highest emission levels, and emissions from all other phases of construction would be below the thresholds. Therefore, the Project does not result in a significant short-term air quality impact.

Operational Phase Impacts

<u>Regional Air Quality</u>

The primary source of regional emissions generated by the proposed Project occur from motor vehicles. Other emissions would be generated from the combustion of natural gas for space heating and the generation of electricity. Emissions would also be generated by the use of natural gas and oil for the generation of electricity off-site.

The data used to estimate the on-site combustion of natural gas and off-site electrical usage are based on the proposed land uses in terms of dwelling units and square footages, and emission factors taken from the 1993 SCAQMD CEQA Handbook (see Appendix 3).

The Project traffic analysis shows that the Project would generate 12,450 daily trips. The average trip length for the proposed Project is assumed to be 9 miles. This is a composite trip length derived from data contained in the SCAQMD CEQA Handbook. The product of the Project daily trips and trip length, translate to total of 112,050 vehicle miles traveled (VMT) generated by the proposed Project. An average speed of 25 miles per hour was assumed.

Total Project emissions projected for 2005, based on the Project traffic analysis and on-site combustionof natural gas and off-site electrical usage data are presented in **Table V.B-9**.

Table V.B-9

Total Project Emissions

	Pollutant Emissions (lbs./day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Vehicular Trips	2685.6	184.3	383.0	17.3	71.6
Natural Gas Consumption	1.1	0.3	6.7	0.0	0.0
Electrical Generation	4.7	0.2	27.0	0.9	2.8
Total Project Generation	**2691.4**	**184.8**	**416.7**	**18.3**	**74.5**

The existing office space, retail uses, theater, cinema and health club would continue to generate emissions on the Project site without the Project. The net changes in pollutants generated by the Project are determined by subtracting the emissions that would be generated with the existing land uses in future years. This is shown in **Table VB-10**. The gross total Project emissions are shown in the first row with the emissions from the existing uses in the second row. The differences, the net Project emissions, are shown in the third row. Note that the emissions from existing uses presented, are lower than those shown in **Table V.B-2**. This is due to **Table V.B-10** presenting emissions from existing uses as calculated for the year 2005. This is the same year used to calculate proposed Project emissions. This provides a more conservative analysis.

Table V.B-10

Net Project Emissions

	Pollutant Emissions (lbs./day)				
	CO	**ROG**	**NO_x**	**PM_{10}**	**SO_x**
Gross Project Emissions	2691.4	184.8	416.7	18.3	74.5
Existing Use Emissions	4141.5	284.3	637.5	28.1	114.5
Net Project Emissions	**-1450.1**	**-99.5**	**-220.8**	**-9.8**	**-40.0**
SCAQMD Thresholds	*550*	*55*	*55*	*150*	*150*

Table V.B-10 shows that the Project results in a net reduction in emissions. This is primarily due to the reduced trip generation by the Project over the existing uses. Air pollutant emissions would be less with the proposed Project than with continuation of the current uses. Emissions would be reduced with the Project. As net emissions would be less than zero, the Project would be well below SCAQMD thresholds, and the operation of the Project would not result in any significant regional air quality impacts.

Local Air Quality

As discussed above, carbon monoxide (CO) is the pollutant of major concern along roadways because motor vehicles are the most notable source of CO. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network, and are used as an indicator of its impacts on local air quality. Local air quality impacts can be assessed by comparing future carbon monoxide levels with State and Federal carbon monoxide standards, and by comparing future CO concentrations with and without the Project. The Federal and State standards for carbon monoxide are presented in **Table V.B-3**, above.

Future carbon monoxide concentrations associated with the proposed Project were forecasted with the CALINE4 computer model. CALINE4 is a fourth generation line source air quality model developed by the California Department of Transportation ("CALINE4," Report No. FHWA/CA/TL-84/15, June 1989). The purpose of the model is to forecast air quality impacts near transportation facilities in what is known as the "microscale region", which encompasses the region a few thousand feet around the pollutant source. Given source strength, meteorology, site geometry, and site characteristics, the model can reliably predict pollutant concentrations.

The analysis set forth in this EIR with regard to meteorology, wind speed, stability class, directional characteristics, and temperature data used for the modeling are those recommended in the "Development of Worst Case Meteorology Criteria" (California Department of Transportation, June 1989). Other worst case model parameters were determined as recommended in the CALINE4 Manual.

Vehicular pollutant emission factors used with the CALINE4 computer model were taken from the EMFAC2000 program published by the California Air Resources Board (CARB).

The future peak hour traffic volumes and Level of Service (LOS) used for the CALINE4 modeling were provided by the traffic consultant. The LOS data are important in the CALINE4 computer modeling because they determine the speeds at the intersections. The speeds ultimately determine the emission factors. For both intersections analyzed it was found that PM peak is projected to have the highest levels of traffic with the Project. The periods of the highest levels of traffic were modeled to generate the worst-case CO concentrations.

The peak traffic hour conditions result in the peak 1-hour CO concentration. According to the Caltrans Air Quality Technical Analysis Notes, changes in meteorology and traffic over time disperse CO and cause it to be less severe than the peak 1-hour concentration. Therefore, it is highly unlikely that the 1-hour CO levels would persist for a full eight hours. As a result, a 1-hour CO level is generally considered to be the peak level and is higher than an 8-hour CO level.

Eight-hour carbon monoxide levels were projected using Caltrans methodology described in their "Transportation Project-Level Carbon Monoxide Protocol." The method essentially uses a persistence factor which is multiplied times the 1-hour emission projections. The projected 8-hour ambient background concentration is then added to the product. The persistence factor was determined by the average ratio of the 8-hour to 1-hour CO concentrations at the West LA/VA Hospital monitoring station for the ten highest 8-hour concentrations over the past three years. This results in a persistence factor of 0.72. The data and results of the CALINE4 modeling are also provided in the appendix.

The background CO concentrations used in modeling for the future cases is the same as used for the existing CO modeling presented above. It is expected that background CO concentrations will decrease somewhat in the future but no definite information is available to quantify this. Use of the existing background levels represents a worst-case assumption. Background CO concentrations of 6.3 ppm for 1-hour, and 3.4 ppm for 8-hour were used in the existing and future CO concentration modeling.

The CALINE4 CO modeling was conducted for two intersections in the project area: (1) Santa Monica Boulevard (South) at Wilshire Boulevard, and (2) Santa Monica Boulevard at Beverly Glen Boulevard.

These two intersections were selected because they are projected to have an LOS of D or worse in the future with the Project. Intersection #1 (Santa Monica Boulevard (South) at Wilshire Boulevard) is expected to have the largest "increase" in traffic with the Project. Because the Project results in fewer vehicle trips than the existing uses on the Project site, the Project actually results in lower traffic volumes at all intersections. Therefore, the largest "increase" in traffic is actually the smallest decrease in traffic volumes. Intersection #2 (Santa Monica Boulevard (North) at Beverly Glen Boulevard) is projected to have the highest overall traffic volumes and lowest level of service.

Receptors were located 10 feet from the edge of the roads in each corner of the intersection per EPA and Caltrans modeling guidelines. The modeling results for the receptor with the highest concentration at each intersection are reported here.

The results of the CALINE4 CO modeling for the future (2005) with and without Project are shown in **Table V.B-11**. Note that the existing scenario is also included for comparison purposes. The CO modeling results are shown for the projected 1-hour and 8-hour CO concentration levels. The pollutant levels are expressed in parts per million (ppm) for each receptor. The carbon monoxide levels reported in Table V.B-10 are the composites of the background levels of carbon monoxide coming into the area plus those generated by the local roadways.

Table V.B-11

Worst Case Future Projections of Carbon Monoxide Concentrations

	Modeled CO Concentration (ppm)					
	1-Hour			8-Hour		
Intersection	Existing	Future Without Project	Future With Project	Existing	Future Without Project	Future With Project
1) Santa Monica at Beverly Glen	12.3	14.2	14.0	7.7	9.1	8.9
2) Santa Monica (South) at Wilshire Boulevard	18.5	15.4	15.3	12.2	10.0	9.9
State Standard	20	20	20	9	9	9
Federal Standard	35	35	35	9	9	9

NOTE: The CO concentrations include the ambient concentrations of 6.3 ppm for 1-hour levels, and 3.4 ppm for 8-hour levels.

Table V.B-11 shows that the 1 hour CO standards are not projected to be exceeded in the future with or without the Project. The 8 hour CO standard at both intersections would be exceeded in the future without the Project and at Intersection #2 with the Project. At Intersection #1 (Santa Monica at Boulevard (North) at Beverly Glen Boulevard) the future concentrations are projected to increase over existing conditions. At Intersection #2 (Santa Monica Boulevard (South) at Wilshire Boulevard) future concentrations are lower than existing concentrations. In the future, average pollutant emission rates from vehicles are projected to be lower with newer vehicles complying with stricter standards becoming a larger part of the overall fleet. Near Intersection #1 future traffic increases are greater than the decrease in vehicle emissions resulting in higher CO concentrations. While future traffic volumes are projected to increase at Intersection #2, the reduction in individual vehicle emissions results in lowering CO concentrations.

At Intersection #1, the future with Project 1-hour CO concentrations are projected to be 1.7 ppm higher than existing conditions. Future with Project 1-hour CO concentrations are projected to be 0.2 ppm lower than future without Project conditions. 8-hour CO concentrations are projected to be 1.2 ppm higher than existing conditions in the future with the Project and 0.2 ppm lower than without the Project.

At Intersection #2, the future with Project 1-hour CO concentrations are projected to be 3.2 ppm lower than existing conditions. The future with Project 1-hour CO concentrations are projected to be 0.1 ppm lower than future without project conditions. Future with Project 8-hour CO concentrations are projected to be 2.3 ppm lower than existing conditions and 0.1 ppm lower than the future without Project conditions.

A significant local air quality impact occurs if the modeled CO concentrations exceed the 1-hour or 8-hour standard and the Project results in a substantial concentration increase (1 ppm for 1-hour, and 0.45 ppm for 8-hour) over the future without Project conditions. As shown in **Table V.B-11** the 1 hour CO standards are not projected to be exceeded in the future with or without the Project. The 8 hour CO standard at both intersections would be exceeded in the future without the Project and at Intersection #2 with the Project. However, in both instances the with Project concentrations would be lower than the future without Project concentrations. Therefore, the proposed Project will not result in a significant local air quality impact.

Consistency with Regional Air Quality Policies

An EIR must discuss any inconsistencies between the proposed Project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). Regional plans that apply to the proposed Project include the AQMP. In this regard, this section will discuss any inconsistencies between the proposed Project and the AQMP.

The purpose of the consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and to discuss whether the Project would interfere with the region’s ability to comply with Federal and State air quality standards. If the decision-maker determines that the Project is inconsistent, the lead agency may consider Project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD’s CEQA Handbook states "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. The Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

<u>Criterion 1 - Increase in the Frequency or Severity of Violations</u>

Based on the air quality modeling analysis contained in this report, the Project results in a net reduction in emissions during both construction and operation for all pollutants with the exception of

PM_{10} during demolition. The projected net increase in PM_{10} emission during demolition is below the SCAQMD significance thresholds and would not contribute significantly to Basin wide emissions. The Project results in lower traffic levels than the without Project conditions and would result in a slight decrease in air pollutant concentrations along roadways in the vicinity of the Project.

The proposed Project is not projected to contribute to the exceedence of any air pollutant concentration standards, thus the Project is found to be consistent with the AQMP for the first criterion.

<u>Criterion 2 - Exceed Assumptions in the AQMP</u>

Consistency with the AQMP assumptions is determined by performing an analysis of the Project with the assumptions in the AQMP. Thus, the emphasis of this criterion is to insure that the analyses conducted for the Project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCPG) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to Federal and State requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

The assessment of the Project's consistency with the AQMP's growth assumptions is based on a comparison of net employment generated by the Project with SCAG's employment forecasts, which form the basis of the AQMP assumptions. Since the SCAG forecasts are not detailed, the test for consistency of this Project is not specific.

The AQMP assumptions are based upon projections from local general plans. Accordingly, projects that are consistent with the local general plan are also consistent with the AQMP assumptions. The proposed Project is consistent with the City of Los Angeles General Plan, the West Los Angeles Community Plan and with the Century City North Specific Plan. Therefore, the second criterion is met for consistency with the AQMP.

Consistency with Local Plans

New projects within the City of Los Angeles must comply with the Congestion Management Program (CMP) for Los Angeles County, which was adopted by the Los Angeles County Metropolitan Transportation Authority (LACMTA) in November 1995 pursuant to State law. The CMP involves monitoring traffic conditions on the designated transportation network, performance measures to evaluate current and future system performance, promotion of alternative transportation methods, analysis of the impact of land use decisions on the transportation network, and mitigation to reduce impacts on the network.

The CMP considers a project impact at an intersection to be significant if a proposed project increases traffic demand by 2 percent of capacity causing or worsening LOS F conditions. As discussed in Section V.M, the proposed Project would generate fewer trips than the existing uses. Therefore, the Project would result in less traffic on local roadways. Pollutant concentrations along roadways and intersections in the vicinity of the Project would be slightly reduced with the Project. The Project would not add to or result in any local exceedences of air pollutant concentration standards near any intersections.

The Project does not conflict with or obstruct implementation of the SCAQMD or Congestion Management Plan.

Mitigation Measures

Construction Phase Mitigation

Emissions from construction of the Project are not considered significant and the Project does not result in a significant regional air quality impact. Implementation of the following mitigation measure would further reduce Project related construction impacts:

AQ-1 The Project shall comply with the requirements of SCAQMD Rule 403, Fugitive Dust, which requires the implementation of Reasonably Available Control Measures (RACM) for all fugitive dust sources, and the Air Quality Management Plan (AQMP), which identifies Best Available Control Measures (BACM) and Best Available Control Technologies (BACT) for area sources and point sources, respectively.

AQ-2 All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.

AQ-3 The applicant or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind.

AQ-4 All loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.

AQ-5 All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amount of dust.

AQ-6 All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.

AQ-7 General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.

AQ-8 The Project applicant shall be required to coordinate with a representative of the Santa Monica Transit Parkway Project regarding construction-related activities.

Operational Phase Mitigation

The Project results in a net reduction in emissions during operation for all pollutants. Emissions from the operation of the Project are below the SCAQMD thresholds. Therefore, emissions from operation of the Project are not considered significant and the Project does not result in a significant regional air quality impact. No mitigation is required.

Significant Project Impacts After Mitigation

The proposed Project would not result in significant unavoidable impacts.

Cumulative Impacts

Cumulative Construction Impacts

Of the projects noted in the related projects table (Section IV, Table IV-1), it is possible that some may overlap schedules with the Project and raise the issue of significance of cumulative construction air quality impacts. The closest of these include Constellation Place, Santa Monica Boulevard Transit Parkway project, Westfield Shoppingtown Century City Expansion, and the Fox Studio Expansion, and are discussed below.

Constellation Place

Construction of the 700,000 square foot, 35-story office building located at 10250 Constellation Place began in March 2001. The building is expected to be ready for occupancy in June 2003. All mass excavation and grading activities, along with the building superstructure, have been completed. Work is continuing on the exterior curtain wall, and interior construction of tenant improvements has commenced. Constellation Place was determined to have a short-term significant impact from NOx and PM_{10} emissions during demolition and a significant NOx impact during foundation placement and erection of the tower. However, as discussed above, these short-term activities have been completed.

Fox Studios

Fox Studios received approval in 1993 for the construction or replacement of 1,895,000 square feet of studio related uses at the Fox Studios located at 10201 Pico Boulevard. No construction of new facilities involving mass quantities of grading and/or excavation is anticipated to occur simultaneously with the construction of the 2000 Avenue of the Stars project.

Westfield Shoppingtown Century City

Westfield Shoppingtown Century City (formerly known as the Century City Shopping Center), located at 10250 Santa Monica Boulevard, was recently purchased by Westfield America. Previous owners of the shopping center obtained approval to construct 71,700 square feet of net new building area on the property. The status of construction of any additional floor area is not presently known.

Santa Monica Boulevard Transit Parkway Project

Construction of the Santa Monica Boulevard Transit Parkway Project is scheduled to begin in January 2003 and be complete in July 2005. The project is designed to rehabilitate, reconstruct and reconfigure Santa Monica Boulevard between the Beverly Hills city limit on the east and the San Diego (405) Freeway on the west. Construction of the project will occur during five phases in seven segments of Santa Monica Boulevard. The preliminary schedule calls for construction between Century Park West and Moreno Drive (the Beverly Hills City limit) during the first 10 to 14 months of the project, with construction activities diminishing over the next six to eight months. Construction east of Avenue of the Stars is anticipated to be complete by the end of 2002/beginning of 2003, and construction between Avenue of the Stars and Century Park West is anticipated to be complete by August of 2003. The Santa Monica Boulevard Transit Parkway Project was determined to have a temporary significant impact from PM_{10} emissions during project construction.

The AQMP anticipates growth and associated construction in the region, consistent with SCAG projections. Each project must be evaluated for the need for CEQA analysis, and mitigation measures applied to reduce impacts where appropriate.

The construction schedules for each of the projects discussed above could coincide; however, because initiation and completion of the projects depends in part on economic and other unpredictable factors, any overlap is uncertain. For example, the Fox Studios project has been approved for some time, yet not all of the construction has been initiated. Further, construction impacts are short term, and will cease upon occupancy/opening of the related projects. It is unlikely that the worst-case situation, where all four related projects are under construction with their emissions, would occur.

Further, it is noted that construction air quality emissions vary considerably from day to day, and the worst-day emissions are assumed for purposes of this analysis. In addition, each of the related projects has been required to mitigate their impacts to the maximum extent feasible. Thus it is likely that actual air emissions will be less than predicted. In any case, the proposed Project's contribution is substantially less than significant (the 22.3 lbs. per day projected Project construction emissions of PM_{10} are only 15% of the SCAQMD threshold of 150 lbs. per day, all other emissions are reduced). However, the Santa Monica Transit Parkway Project is currently scheduled to be under construction at the same time as the proposed Project. Such scheduling, coupled with other projects which could commence construction during this time could result in a potentially significant cumulative air quality impact due to construction emissions.

Cumulative Operational Impacts

The Basin has been designated by the U.S. Environmental Protection Agency (EPA) as a non-attainment area for ozone, carbon monoxide, and suspended particulates (PM_{10}). Data presented in **Table V.B-1** shows that ozone and particulates are the air pollutants of primary concern in the Project area. The State ozone standard was exceeded two days in the year 2000, four days in 1999, seven days in 1998 and six days in 1997; the Federal standard was only exceeded one day in the past four years, in 1998. The data from the past four years shows a downward trend in the maximum ozone concentrations and the number of days exceeding the State and Federal ozone standards. Over the past four years, State standards for PM_{10} have been exceeded as few as 33 and as many as 54 days per year. There does not appear to be any trend toward fewer days of exceeding the standard, although the maximum level in 2000 was the lowest in the past four years.

Ozone is a secondary pollutant; it is not directly emitted but rather the result of chemical reactions between other precursor pollutants, most importantly ROG and NO_2. The net changes in pollutants generated by the Project are determined by subtracting the emissions that would be generated with the existing land uses from the Project's emissions. The Project results in a net reduction in emissions. This is primarily due to the reduced trip generation by the Project over the existing uses. Emissions of precursor pollutants would be reduced during Project construction and operation when compared to existing conditions. Therefore, the Project would likely result in a cumulative reduction in ozone levels.

Carbon monoxide (CO) is another important pollutant that is due primarily to motor vehicles. Data presented in **Table V.B-1** indicates that CO levels in the Project region are currently in compliance with the State and Federal 1-hour and 8-hour standards. As shown in **Table V.B-11**, the Project would result in a net reduction in CO levels over future without Project conditions. The Project would not contribute to a cumulative increase in CO levels in the region.

PM_{10} levels in the area are due to natural sources, grading operations and motor vehicles. During Project operation, PM_{10} emissions would be reduced when compared to existing conditions. The operation of the Project would not contribute to a cumulative increase in PM_{10} levels in the region.

Related future projects that are included in the adopted plans are included in SCAQMD projections for the region. In addition, individual projects would be reviewed for impacts and mitigation measures required, where possible and applicable. In the event related projects propose plan amendments, environmental documentation would be required to assess impacts and mitigation measures. Further, the SCAQMP, and continuing updates of that plan, are required to include air emission reduction strategies for the Basin (such as increased stationary source emission controls, improved vehicle emission standards, transportation alternatives, etc.). These, in concert with individual project mitigation measures would help reduce impacts. However, until the Basin as a whole attains all federal and state EPA standards, which is not anticipated to occur until 2010, any net increase in regional air pollutant emissions would contribute to a cumulative air quality impact that would be deemed significant. Because the operational phase of the Project results in a net reduction in emissions for all pollutants, it does not contribute to any potential cumulative air quality impacts.