

Attachment 1

WHY THE PROJECT IS NOT A PROJECT OF AIR QUALITY CONCERN UNDER 40 CFR 93.123(b)(1)

The following are the types of projects that are considered POAQC and the reasons (*in italics*) why the proposed bridge replacement project does not meet any of the definitions:

- 1) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles (significant number is defined as greater than 125,000 ADT and 8% or more of such ADT is diesel truck traffic, or in practice 10,000 truck ADT or more regardless of total ADT; significant increase is defined in practice as a 10% increase in heavy duty truck traffic);

Given the roadway capacity and the expected percentage of diesel vehicles along Heacock Street, the project will not result in a significant increase in diesel vehicle traffic.

- 2) Projects affecting intersections that are at a Level of Service D, E, F, with a significant number of diesel vehicles, or that that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

According to the traffic study (Rutherford and Li, 2008), all intersections in the area surrounding the proposed project are currently at a level of service (LOS) of C or better. The project will not result in a sufficient increase in traffic to change the LOS to D or lower, even during detours of trucks during project construction.

- 3) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

The proposed project is not a new bus or rail terminal or transfer point.

- 4) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location;

The proposed project is not an expanded bus or rail terminal or transfer point.

- 5) Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{2.5} or PM₁₀ implementation plan or implementation plan submission, as appropriate, as sites of possible violation.

The project is not in, and does not affect, locations, areas or categories of sites that are identified in the 2007 AQMP as sites of possible violation.

In accordance with the EPA's Transportation Conformity Guidance, the Project is not considered a POAQC for PM₁₀ and/or PM_{2.5}. Therefore, a PM hotspot analysis is not required.

Attachment 2
DRAFT AIR QUALITY REPORT



Air Quality Report

Heacock Street Bridge Replacement Project BRLS 5441 (039)

June 2009

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1.0 BACKGROUND AND PROJECT INFORMATION

After reviewing the Preliminary Environmental Study (PES) for the Heacock Street bridge replacement project, The California Department of Transportation (Caltrans) determined that a project air quality study had to be prepared (Burton, 2009a). This study was prepared in March 2009 in accordance with the requirements and procedures in Chapter 11 of Caltrans' *Standard Environmental Reference*,¹ and revised in June 2009 in accordance with review comments from Caltrans (Burton, 2009b).

1.1 Project Location and Description

1.1.1 Location

Figure 1 shows the project's regional location. The project area is generally located south of State Route 60 and is adjacent to the east side of March Air Reserve Base, in the southeast portion of the City of Moreno Valley (City), in Riverside County, California. Figure 2 shows the project vicinity.

1.1.2 Project Description

The City proposes to replace the two-lane Heacock Street Bridge (No. 56C0233), which crosses over the Perris Valley Storm Drain (PVSD) Lateral "A." The existing bridge, which will be demolished, is a single span reinforced concrete slab that was constructed by the U.S. Army Corps of Engineers in 1955. The project Initial Site Assessment report (Leighton Consulting, Inc., 2009) did not identify any asbestos containing materials associated with the existing bridge. The replacement bridge would line up with the current two lane configuration, but would be built to accommodate future expansion of Heacock Street to a four lane arterial, as shown in the City's General Plan. The traffic count conducted for the Project's traffic study showed a current total daily traffic of 2,372 vehicles along Heacock Street between the bridge and San Michele Road. Among the traffic, 13.4 percent of vehicles are trucks (Rutherford and Li, 2008). The maximum two-way traffic average daily traffic (ADT) volume on a four-lane arterial is expected to be 28,700 at Level of Service (LOS) "C" (County of Riverside, 2003). Because the Project will accommodate future traffic already projected for the area, it is not traffic-inducing.

1.1.3 Project Alternatives

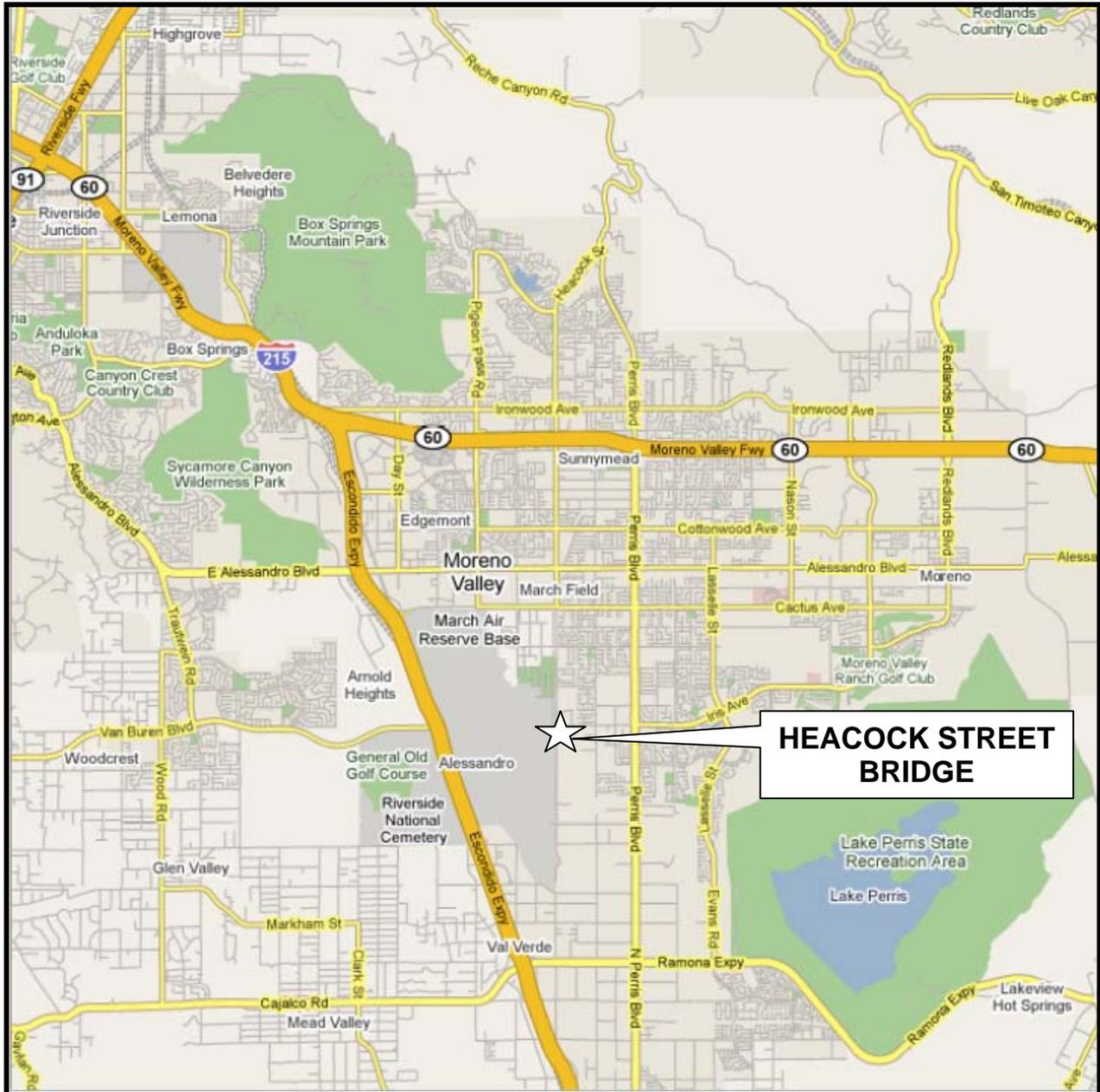
No alternatives to the Project have been proposed.

1.2 Air Quality Regulatory Framework

Federal, State, and local agencies have set ambient air quality standards for certain air pollutants through statutory requirements and have established regulations and various plans and policies to maintain and improve air quality, as described below.

¹ Available online at www.dot.ca.gov/ser/voll/sec3/physical/ch11air/chap11.htm (Updated December 19, 2008).

Figure 1
Regional Map



Source: Google Maps, 2008.
Map not to scale.

Figure 2
Local Vicinity Map



Source: Google Earth, 2008.
Map not to scale.

Federal Regulation

The Federal Clean Air Act (CAA), passed in 1970, established the national air pollution control program. The basic elements of the CAA are the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The NAAQS are the maximum allowable concentrations of criteria pollutants, over specified averaging periods, to protect human health. The CAA requires that the U.S. Environmental Protection Agency (USEPA) establish NAAQS and reassess, at least every five years, whether they are adequate to protect public health, based on current scientific evidence. The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life.

Data collected at permanent monitoring stations are used by the USEPA to classify regions as “attainment” or “nonattainment,” depending on whether the regions meet the requirements stated in the primary NAAQS. Nonattainment areas are subject to additional restrictions, as required by the USEPA.

The CAA Amendments in 1990 substantially revised the planning provisions for those areas not currently meeting NAAQS. The Amendments identify specific emission reduction goals, require both a demonstration of reasonable further progress and attainment, and incorporate more stringent sanctions for failure to attain the NAAQS or to meet interim attainment milestones.

State Regulation

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. There were no attainment deadlines for the CAAQS originally. However, the State Legislature passed the California Clean Air Act (California CAA) in 1988 to establish air quality goals, planning mechanisms, regulatory strategies, and standards of progress to promote their attainment. The California Air Resources Board (CARB), which became part of the California Environmental Protection Agency (Cal EPA) in 1991, is responsible for ensuring implementation of California CAA, responding to the federal CAA, and for regulating emissions from motor vehicles and consumer products.

The California CAA requires attainment of CAAQS by the earliest practicable date. The State standards are generally more stringent than the corresponding federal standards. Attainment plans are required for air basins in violation of the State O₃, PM₁₀, CO, SO₂, or NO₂ standards. Responsibility for achieving State standards is placed on the CARB and local air pollution control districts. District plans for nonattainment areas must be designed to achieve a 5-percent annual reduction in emissions. Preparation of and adherence to attainment plans are the responsibility of the local air pollution districts or air quality management districts.

Local Regulations

The project site is located within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is the local agency responsible for monitoring air quality, as well as planning, implementing and enforcing programs designed to attain and maintain NAAQS and CAAQS over the region.

1.3 Criteria Air Pollutants

The “criteria” air pollutants of concern under this air quality study are ozone, carbon monoxide, particulate matter, and oxides of nitrogen. For these pollutants, the NAAQS (as maximum concentration levels of pollutants) and CAAQS have been established to protect public health and welfare. Presented below are descriptions of the criteria pollutants of concern and their known health effects.

Nitrogen Oxides (NO_x) serve as integral participants in the process of photochemical smog production. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO₂ is a reddish-brown irritating gas formed by the combination of NO and oxygen. NO_x acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Carbon Monoxide (CO) is a non-reactive pollutant produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary adverse health effect associated with CO is the interference of normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Particulate Matter (PM) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes and mists. Two forms of fine particulate are now regulated. Respirable particles, or PM₁₀, include that portion of the particulate matter with an aerodynamic diameter of 10 micrometers (i.e., 10 millionths of a meter or 0.0004 inch) or less. Fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 micrometers (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on the arid landscape also contributes substantially to the local particulate loading. Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Ozone (O₃) is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_x. O₃ creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. The health effects of O₃ include eye and respiratory irritation, reduction of resistance to lung infection and possible aggravation of pulmonary conditions in persons with lung disease. O₃ is also damaging to vegetation and untreated rubber.

1.4 Ambient Air Quality Standards

Table 1 (Ambient Air Quality Standards for Criteria Air Pollutants) illustrates NAAQS and CAAQS for the studied criteria pollutants.

Table 1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Standard	
			Primary	Secondary
Ozone (O ₃)	1-hour	0.09 ppm	---	---
	8-hour	0.070 ppm	0.075 ppm	0.075 ppm
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm	---
	8-hour	9.0 ppm	9 ppm	---
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm	---	---
	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.053 ppm
Respirable Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	---	---
Fine Particulate Matter (PM _{2.5})	24-hour	---	35 µg/m ³	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	15.0 µg/m ³	15.0 µg/m ³

Source: CARB, Ambient Air Quality Standards. Nov 17, 2008.

1.5 Regulation of Greenhouse Gas Emissions

1.5.1 Federal Climate Change Regulation

The federal government has been involved in climate change issues at least since 1978, when Congress passed the National Climate Program Act (92 Stat. 601), under authority of which the National Research Council prepared a report predicting that additional increases in atmospheric carbon dioxide would lead to non-negligible changes in climate. At the “Earth Summit” in 1992 in Rio de Janeiro, President George H.W. Bush signed the United Nations Framework Convention on Climate Change (UNFCCC), a nonbinding agreement among 154 nations to reduce atmospheric concentrations of carbon dioxide and other greenhouse gases. The treaty was ratified by the U.S. Senate. However, when the UNFCCC signatories met in 1997 in Kyoto, Japan, and adopted a protocol that assigned mandatory targets for industrialized nations to reduce greenhouse gas emissions, the U.S. Senate expressed its opposition to the treaty. The Kyoto Protocol was not submitted to the Senate for ratification.

Under the aforementioned legislation and the UNFCCC, according to the EPA, “the United States government has established a comprehensive policy to address climate change” that includes slowing the growth of emissions; strengthening science, technology, and institutions;

and enhancing international cooperation (EPA 2007). To implement this policy, the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. However, at this writing there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

The Federal role in regulating GHG emissions is about to change. In *Massachusetts et al. v. Environmental Protection Agency et al.* [549 U.S. 497 (2007)], the U.S. Supreme Court ruled that carbon dioxide (CO₂), a greenhouse gas (GHG), was an air pollutant under the CAA, and that, consequently, the EPA had the authority to regulate its emissions. The Court also held that the Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On April 24, 2009, the EPA published its intention to find that proposing to find that (1) the current and projected concentrations of the mix of six key greenhouse gases—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations, and that (2) the combined emissions of GHG from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change (74 Fed. Reg. 18886). These findings are required for subsequent regulations that would control GHG emissions from motor vehicles.

1.5.2 California Climate Change Regulation

Executive Order S-3-05 (GHG Emissions Reductions)

Executive Order #S-3-05, signed by Governor Arnold Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80% reduction in GHG emissions to below 1990 levels by 2050.

The California Climate Solutions Act of 2006 (AB 32)

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006 (Health and Safety Code § 38500 et seq.), into law. AB 32 was intended to effectively end the scientific debate in California over the existence and consequences of global warming. In general, AB 32 directs CARB to do the following:

- On or before June 30, 2007, publicly make available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit;
- By January 1, 2008, determine the statewide levels of GHG emissions in 1990, and adopt a statewide GHG emissions limit that is equivalent to the 1990 level (an approximately 25% reduction in existing statewide GHG emissions);
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures;

- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources as CARB finds necessary to achieve the statewide GHG emissions limit; and
- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

On December 11, 2008, the CARB approved the *Climate Change Scoping Plan* (CARB 2008a) pursuant to AB 32. The Scoping Plan recommends a wide range of measures for reducing GHG emissions, including (but not limited to):

- Expanding and strengthening of existing energy efficiency programs;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a GHG emissions cap-and-trade program;
- Establishing targets for transportation-related GHG emissions for regions throughout the State, and pursuing policies and incentives to meet those targets;
- Implementing existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Targeted fees to fund the State's long-term commitment to administering AB 32.

Executive Order S-01-07 (Low Carbon Fuel Standard)

Executive Order #S-01-07 (January 18, 2007) establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 through establishment of a Low Carbon Fuel Standard. Carbon intensity is the amount of carbon dioxide equivalent (CO₂e) per unit of fuel energy emitted from each stage of producing, transporting, and using the fuel in a motor vehicle. On April 23, 2009, the Air Resources Board adopted a regulation to implement the standard (CARB 2009). The required carbon reduction needs to be taken into account in analyzing the no-project alternative.

Senate Bill 97

Senate Bill 97 was signed by the governor on August 24, 2007. This bill provides that in an environmental impact report, negative declaration, mitigated negative declaration, or other document required by CEQA for either transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, or for projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006, the failure to analyze adequately the effects of GHG emissions otherwise required to be reduced pursuant to regulations adopted under the Global Warming Solutions Act of 2006 does not create a cause of

action for a violation of CEQA. The bill provides that this provision shall apply retroactively for any of the above documents that are not final and shall be repealed on January 1, 2010.

The bill requires the Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the resources agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The resources agency is required to certify and adopt those guidelines by January 1, 2010. The proposed amendments treat GHG emissions as a separate category of impacts; i.e. they are not to be addressed as part of an analysis of air quality impacts.

Until the new guidelines are adopted, lead agencies have been given “a technical advisory” that provides interim guidance on how lead agencies should address GHG emissions and climate change in CEQA documents (Office of Planning and Research 2008). Public agencies are to consider three general “factors” when analyzing whether a proposed project has the potential to cause a significant climate change impact:

- Calculate, model or estimate the amount of carbon dioxide (CO₂) and other GHG emissions from the project;
- Determine what constitutes a “significant impact;” and
- Impose mitigation measures that are necessary to reduce GHG emissions to a less than significant level.

The technical advisory does not contain specific guidance on how to determine significant impacts. However, the OPR has asked the CARB to make recommendations for GHG-related thresholds of significance. On October 24, 2008, the CARB issued a preliminary draft staff proposal for *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act* (CARB, 2008c). Although the CARB proposal includes specific—and, in many cases, quantitative—thresholds for industrial, commercial and residential projects, it presently excludes thresholds for transportation projects. Transportation project thresholds for significance may be included in future versions of the CARB proposal. Transportation project thresholds for significance are being developed by a working group of constituent departments of the California Business, Transportation and Housing Agency (Weaver, 2009). As of this writing little progress has been made (Andrews, 2009).

2.0 AFFECTED ENVIRONMENT

2.1 Regional Meteorology and Climate

The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The general region

lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. An upper layer of dry air that warms as it descends characterizes high-pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located. This upper layer restricts the mobility of cooler marine-influenced air near the ground surface and results in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 mph, smog potential is greatly reduced.

2.2 Regional Air Quality

Table 2 (Project Area Attainment Status) shows the area designation status for the studied criteria pollutants for the NAAQS. The proposed project is located in an area that is nonattainment for O₃, PM₁₀, and PM_{2.5}. This analysis therefore focuses on these criteria pollutants.

Table 2 – Project Area Attainment Status

Pollutants	Federal Classification
Ozone (O ₃)	Non-Attainment
Nitrogen Dioxide (NO ₂)	Maintenance
Carbon Monoxide (CO)	Maintenance
Particulate Matter (PM ₁₀)	Non-Attainment
Fine Particulate Matter (PM _{2.5})	Non-Attainment

Source: USEPA [<http://www.epa.gov/oar/oaqps/greenbk/>], March 2008.

2.3 Local Air Quality

A network of ambient air monitoring stations is operated throughout Riverside County. The purpose of the monitoring stations is to measure ambient concentrations of criteria pollutants. The nearest ambient monitoring station to the project site is the Perris Station, located at 237 1/2 North D Street, in Perris, about 6.5 miles from the project site. This station monitors O₃ and PM₁₀. CO, NO₂ and PM_{2.5} data were obtained from the Riverside – Rubidoux Station, located at 5888 Mission Blvd., in Riverside, about 12.8 miles from the project site. Ambient pollutant concentrations measured at the two monitoring stations over the last three years are presented in **Table 3** (Existing Air Quality Data for the Project Area).

Table 3 – Ambient Air Quality Data for the Project Area

Pollutant Standard	2008	2007	2006
Carbon Monoxide (CO)			
Maximum 1-hour Concentration (ppm)	2.7*	3.8	2.7
Maximum 8-hour Concentration (ppm)	1.86	2.93	2.29
No. Days Standard Exceeded			
NAAQS (1-hour) \geq 35 ppm	-0-	-0-	-0-
NAAQS (8-hour) \geq 9 ppm	-0-	-0-	-0-
Nitrogen Dioxide (NO₂)			
Maximum 1-hour Concentration (ppm)	0.072	0.072	0.076
Annual Average Compared to Federal Standard (Average arithmetic Mean) $>$ 0.053 ppm	N/A	0.020	0.020
Ozone (O₃)			
Maximum 8-hour Concentration (ppm)	0.114	0.116	0.122
Fourth High 8-hour Concentration (ppm)	0.106	0.103	0.114
No. Days Standard Exceeded			
NAAQS (8-hour) $>$ 0.075 ppm (2008 Standard)	-77-	-73-	-83-
Respirable Particulate Matter (PM₁₀)			
Maximum 24-hour Concentration ($\mu\text{g}/\text{m}^3$) – National	62	1212	125
No. Samples Exceeding Standards			
NAAQS (24-hour) $>$ 150 ($\mu\text{g}/\text{m}^3$)	-0-	-2-	-0-
Fine Particulate Matter (PM_{2.5})			
Maximum 24-hour Concentration ($\mu\text{g}/\text{m}^3$) - National	47.9	75.6	68.4
No. Samples Exceeding Standards			
NAAQS (24-hour) $>$ 35 ($\mu\text{g}/\text{m}^3$)	-5-	-33-	-32-
Note:			
“*” – Maximum value per available data. Data for the last three months of the year were not available at the time this table was compiled.			
N/A – Data unavailable at the time this table was compiled			

Source: California Air Resources Board www.arb.ca.gov/adam, accessed March 13, 2008.

2.4 Sensitive Land Uses

The project site is located on the east side of March Air Reserve Base (MARB), and is located to the north of Mariposa Avenue and to the south of Iris Avenue. The *City of Moreno Valley Land Use Map* designates the land use to the east of Heacock Street adjacent to the project site as Business Park/Light Industrial.² The March Joint Powers Authority *General Plan Land Use Map* designates the land use to the west of Heacock Street adjacent to the project site as Aviation.³

No sensitive receptors were identified within 2,000 feet of the Project site.

² City of Moreno Valley. *City of Moreno Valley Land Use Map*. Dated January 12, 2009.

³ March Joint Powers Authority. *General Plan Land Use Map*. Dated August 30, 2004. Accessed at http://www.marchjpa.com/docs_forms/planning_gpmmap.pdf on February 3, 2009.

3.0 AIR QUALITY IMPACTS

This section discusses potential Project impacts to air quality, including direct, indirect and cumulative, and temporary impacts.

3.1 Direct Impacts

This section discusses permanent impacts directly and locally attributable to implementation and operation of the Project, and documents the project-level conformity analysis.

3.1.1 Carbon Monoxide Hotspot Analysis

Carbon monoxide conformity requirements were determined according to the decision flowchart for new projects in the *Transportation Project-Level Carbon Monoxide Protocol* (Niemeier et al., 1997). A copy of the flowchart is provided in Appendix A. The following are the questions and responses pertinent to the Project. (The numbers in parentheses are from the flowchart.)

- Q (3.1.1) Is this project exempt from **all** emissions analyses? (See Table 1.)⁴
No. The Project is in none of the categories listed in Table 1 of the Carbon Monoxide Protocol.
- Q (3.1.2) Is the project exempt from regional emissions analyses (See Table 2.)⁵
No. The Project is in none of the categories listed in Table 2 of the Carbon Monoxide Protocol.
- Q (3.1.3) Is the project locally defined as regionally significant?
No. A “regionally significant” transportation project is one that is defined as regionally significant in accordance with 40 CFR §93.101. The referenced CFR section defines a “regionally significant” transportation project as one that is on a facility that serves regional transportation needs, “such as access to and from the areas outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves...” The Project is in none of the categories that define “regionally significant.” Therefore the project is not regionally significant.

Because the answer to the last question is “no,” the flowchart indicates that local impacts must be examined under Section 4 (Local Analyses) of the *Carbon Monoxide Protocol*. The following are the questions and responses pertinent to the Project. (The numbers in parentheses are from the text of Section 4 and the flowchart in Figure 3 of the *Carbon Monoxide Protocol*.)

⁴ Table 1 of the *Carbon Monoxide Protocol*.

⁵ Table 2 of the *Carbon Monoxide Protocol*.

Q (4.1) Is the project in a CO nonattainment area?

No. The South Coast Air Basin has been designated in attainment with the State ambient air quality standard (CAAQS) for carbon monoxide since 2004 (California Air Resources Board, 2007). The Basin is also in attainment with the national ambient air quality standard (NAAQS) for carbon monoxide (California Air Resources Board, 2009).

Q (4.1.2) Was the area redesignated as “attainment” after the 1990 Clean Air Act?

Yes. On June 11, 2007, the U.S. Environmental Protection Agency redesignated the South Coast Air Basin from nonattainment to attainment for the CO NAAQS (U.S. Environmental Protection Agency, 2007). EPA also approved a state implementation plan (SIP) revision for the South Coast nonattainment area in California as meeting the Clean Air Act (CAA) requirements for maintenance plans for CO.

Q (4.1.3) Has “continued attainment” been verified with the local Air District, if appropriate?

Yes. The CARB indicates that the South Coast Air Basin continues to be in attainment for CO as of February 2009 (California Air Resources Board, 2009). Furthermore, as seen in Table 3 above, the SCAQMD reported no exceedances of the CO NAAQS in 2006, 2007 or 2008.

The flowchart in Figure 3 of the *Carbon Monoxide Protocol* instructs the user to go to “Level 7” of the analysis. The questions and responses are as follows:

Q (4.7.1) Does the project worsen air quality?

No. The Carbon Monoxide Protocol has three criteria for determining whether a project is likely to worsen air quality for the area substantially affected by the Project. These criteria and their evaluations are as follows:

(a) The project significantly increases the percentage of vehicles operating in cold start mode.

The Project will not generate new trips and therefore will not result in operation of vehicles in cold start mode.

(b) The project significantly increases traffic volumes.

The Project will not increase traffic volumes. It will accommodate anticipated future increased traffic volumes, but those increases will not be due to the Project.

(c) The project worsens traffic flow.

The project will improve traffic flow. Because Heacock Street is to be widened to four lanes, retention of a two-lane bridge would impede traffic flow. The new bridge will have four lanes to match the widening of Heacock Street.

At this point in the analysis, the *Carbon Monoxide Protocol* indicates that the project is satisfactory and needs no further analysis.

For the sake of completeness, we note that, in accordance with the Caltrans CO Protocol (Niemeier et al., 1997), CO hotspots are evaluated when a project degrades the level of service (LOS) at a nearby signalized intersection to “E” or worse. Typically, hotspot analyses are not performed for unsignalized intersections, which have lower traffic volumes than those with signals.

The Project would relieve traffic on Heacock Street once expanded. It would not contribute to traffic congestion or degrade pre-existing LOS along Heacock Street without the Project. Further, no sensitive receptors are identified within 2,000 feet of the Project site. As a result, no CO hotspots would occur.

3.1.2 PM_{2.5}/PM₁₀ Hotspot Analysis

Qualitative PM hotspot analysis is required under the EPA Transportation Conformity rule for Projects of Air Quality Concern (POAQC), as described in EPA's Final Rule of March 10, 2006 (USEPA, 2006). Projects that are not POAQC do not require detailed PM hot-spot analysis.

UltraSystems has conducted extensive research as to whether the Transportation Conformity Working Group (TCWG) has concurred that the Project is not a POAQC for PM₁₀/PM_{2.5}. The Project is not listed on the Southern California Association of Governments’ TCWG web page listings spanning July 2006 – June 2009. In addition, the Riverside County Transportation Commission (RCTC) has no record of having received a project review form from the City (Medina, 2009). However, the following analysis demonstrates that the Project is not a POAQC.

The following are the types of projects that are considered POAQC and the reasons (*in italics*) why the proposed bridge replacement project does not meet any of the definitions:

- 1) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles (significant number is defined as greater than 125,000 ADT **and** 8% or more of such ADT is diesel truck traffic, or in practice 10,000 truck ADT or more regardless of total ADT; significant increase is defined in practice as a 10% increase in heavy duty truck traffic);

Given the roadway capacity and the expected percentage of diesel vehicles along Heacock Street, the project will not result in a significant increase in diesel vehicle traffic.

- 2) Projects affecting intersections that are at a Level of Service D, E, F, with a significant number of diesel vehicles, or that that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

According to the traffic study (Rutherford and Li, 2008), all intersections in the area surrounding the proposed project are currently at a level of service (LOS) of C or

better. The project will not result in a sufficient increase in traffic to change the LOS to D or lower, even during detours of trucks during project construction.

- 3) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

The proposed project is not a new bus or rail terminal or transfer point.

- 4) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location;

The proposed project is not an expanded bus or rail terminal or transfer point.

- 5) Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{2.5} or PM₁₀ implementation plan or implementation plan submission, as appropriate, as sites of possible violation.

The project is not in, and does not affect, locations, areas or categories of sites that are identified in the 2007 AQMP as sites of possible violation.

In accordance with the EPA's Transportation Conformity Guidance, the Project is not considered a POAQC for PM₁₀ and/or PM_{2.5}. Therefore, a PM hotspot analysis is not required.

3.1.3 Mobile Source Air Toxic (MSAT) Analysis

As previously stated, the Project would not contribute to a significant number of or increase in AADT along Heacock Street. Moreover, USEPA regulations for vehicle engines and fuels will cause overall MSATs to decline in the range of 57 percent to 87 percent over the next 20 years (FHWA, 2006). This will both reduce the background level of MSATs as well as minor MSAT emissions from this project. Therefore, the MSAT emissions would in the study area are likely to be lower in the future.

3.1.4 Diesel Exhaust

It is known that exposure to diesel exhaust over time can have effects on health. However, criteria and quantitative methods for assessing diesel impacts are not yet developed at the regulatory level.

The Project is not expected to generate a significant amount of diesel traffic. Further, no sensitive receptors are identified within 2,000 feet of the Project site. As a result, no significant impact due to diesel exhaust would occur.

3.2 Indirect and Cumulative Impacts

3.2.1 Regional Conformity Analysis

Air pollutant emissions from a project may have an indirect or cumulative effect at a regional scale, since they combine with all other emissions in a region to produce certain pollutant concentrations. If a project is included in a regional plan and transportation improvement program that contributes to attainment or maintenance of applicable air quality standards (as

documented in a program level environmental document or a conformity analysis), it would not typically have a cumulative adverse impact on regional air quality.

This section discusses and documents the regional conformity analysis.

The Project was included in the regional emissions analysis conducted by the Southern California Association of Governments (SCAG) for the conforming 2008 Regional Transportation Plan (RTP), *Transportation Conformity Report* (SCAG, 2008a). The project's design concept and scope have not changed significantly from what was analyzed in the RTP. This analysis found that the plan and, therefore, the individual projects contained in the plan, are conforming projects, and will have air quality impacts consistent with those identified in the state implementation plans (SIPs) for achieving the NAAQS.

The Project (PTP I.D. RIV060122) is also included in the SCAG's 2006 Regional Transportation Improvement Program (RTIP) through Amendment #13 (SCAG, 2008b). The RTIP gives priority to eligible Transportation Control Measures (TCMs) identified in the SIP and provides sufficient funds to provide for their implementation.

FHWA determined the RTP and RTIP to conform to the SIP on June 5, 2008. Additional documentation related to the regional emissions analysis is contained in **Appendix A**.

3.2.2 Climate Change

As discussed in Section 1.5.2, criteria for evaluating the significance of GHG emissions from individual projects are still under development. According to a recent white paper (Hendrix and Wilson, 2007), "an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases."

The incremental contribution of the proposed bridge widening will be small or even negative, considering that the widening will improve traffic flow. The highest levels of CO₂ from mobile sources are associated with congested, stop-and-go speeds (0-to-25 miles) and speeds over 55 miles per hour (California Department of Transportation, 2006). Relieving congestion by widening the bridge to accommodate four lanes of traffic will result in an overall reduction in GHG emissions.

3.3 Construction-Related Hot-Spot Emissions

Project construction activities will generate short-term air quality impacts. Construction emissions can be distinguished as either on-site or off-site. On-site air pollutant emissions would principally consist of exhaust emissions from off-road heavy-duty construction equipment, as well as fugitive particulate matter from earthworking and material handling operations. Off-site emissions would result from workers commuting to and from the job site, as well as from trucks bringing construction materials to the job site and hauling construction debris for disposal.

The Project construction shall implement typical fugitive dust control measures that are required under SCAQMD Rule 403.

As construction of the project is expected to last approximately less than one year, construction-related emissions were not considered in the hotspot analysis.

4.0 MITIGATION

The Project would have insignificant air quality impacts from its operation. Therefore, no mitigation measures would be required.

The Project construction shall implement typical fugitive dust control measures that are required under SCAQMD Rule 403. These mandatory measures should not be considered mitigation measures under NEPA and/or CEQA.

DRAFT

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APPENDICES

APPENDIX A

ADDITIONAL DOCUMENTATION RELATED TO REGIONAL CONFORMITY

RTP AND RTIP LISTINGS

CO PROTOCOL FLOWCHARTS
