

### **2.2.5 AIR QUALITY**

The following section analyzes the potential impacts on air quality resulting from the proposed project. Regional and local air quality conditions are presented along with pertinent air quality standards and regulations.

#### **REGULATORY SETTING**

##### **Federal**

The 1977 Federal Clean Air Act (CAA), amended in 1990, required the U. S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six criteria air pollutants. EPA publishes criteria documents to justify the choice of standards. Standards for these pollutants are listed in **Table 2.2.5-1**.

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for the pollutants listed above. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would result in a violation of the Clean Air Act. If no violations would occur, then the regional planning organization, such as SACOG for Sacramento area and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to be in conformity at the regional level.

Conformity at the project-level is also required. Again the pollutants of concern are: carbon monoxide (CO), nitrous dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>) and particulate matter that is 10 microns in diameter or smaller (PM<sub>10</sub>). If a region is meeting the standard for a given pollutant, then the region is said to be in “attainment” for that pollutant. If the region is not meeting the standard, then it is designated a “non-attainment” area for that pollutant. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas. If a project is located in a non-attainment or maintenance area for a given pollutant, then additional air quality analysis and reduction measures in regard to that pollutant is required. This is most frequently done for CO and PM<sub>10</sub>.

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**TABLE 2.2.5-1  
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 ppm	0.09 ppm
	8-Hour	0.08 ppm	--
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	--
	1-Hour	--	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.05 ppm
	1-Hour	--	0.5 ppm
PM <sub>10</sub>	Annual	50 ug/m <sup>3</sup>	20 ug/m <sup>3</sup>
	24-Hour	150 ug/m <sup>3</sup>	50 ug/m <sup>3</sup>
PM <sub>2.5</sub>	Annual	15 ug/m <sup>3</sup>	12 ug/m <sup>3</sup>
	24-Hour	65 ug/m <sup>3</sup>	--
Lead	30-Day Avg.	--	1.5 ug/m <sup>3</sup>
	Month Avg.	1.5 ug/m <sup>3</sup>	--

*ppm = parts per million*

*ug/m<sup>3</sup> = Micrograms per Cubic Meter*

*Source: Don Ballanti 2004*

### State

The California Clean Air Act (CCAA) of 1988, patterned after the Federal CAA, requires the adoption of California Ambient Air Quality Standards (CAAQS). California has adopted standards that are more stringent than the federal standards for the criteria air pollutants (see **Table 2.2.5-1**). Also, the CCAA establishes more criteria pollutants than the Federal CAA. Under the state standards, Sacramento County is 'Non-Attainment' for ozone and PM<sub>10</sub> and 'Attainment' or 'Unclassified' for other criteria pollutants. Sacramento County is also 'Non-Attainment' under federal ozone standards, but is considered 'Attainment' or 'Unclassified' for other federal criteria pollutants. **Table 2.2.5-2** shows the Attainment Status of Sacramento Metropolitan Air Quality Management District (SMAQMD).

**TABLE 2.2.5-2**  
**ATTAINMENT STATUS OF SACRAMENTO METROPOLITAN**  
**AIR QUALITY MANAGEMENT DISTRICT (SMAQMD)<sup>1</sup>**

Pollutant		State Standard	Federal Standard
O <sub>3</sub>	1 Hour Standard	Non-Attainment	Non-Attainment
	8 Hour Standard	N/A	Non-Attainment
PM <sub>10</sub>		Non-Attainment	Non-Attainment
NO <sub>2</sub>		Unclassified/Attainment	Unclassified/Attainment
SO <sub>2</sub>		Unclassified/Attainment	Unclassified/Attainment
CO		Unclassified/Attainment	Unclassified/Attainment
Sulfates		Unclassified/Attainment	N/A

### Local

The project is in Sacramento County, under the jurisdiction of the SMAQMD. SMAQMD is the agency responsible for preparing regional air quality plans under the state and federal Clean Air Acts. The current regional plan addresses ozone and identifies strategies for progressive reduction in emissions of ozone precursors. The Sacramento region is moving toward a 2005 deadline for meeting the health-based federal standard for ozone.

Additionally, SMAQMD has developed regional thresholds of significance for construction of projects. The threshold level is 38.5 kilograms (85 pounds) per day for NO<sub>x</sub>.

#### City of Elk Grove General Plan

The City of Elk Grove General Plan identifies policies and action items that relate to air quality within the City, as they relate to the proposed project:

- **CAQ-26** It is the policy of the City of Elk Grove to minimize air pollutant emissions from all City facilities and operations to the extent feasible and consistent with the City's need to provide a high level of public service.
- **CAQ-26-Action 3** The City shall encourage City contractors and vendors to reduce emission from their operations (such as by using low emission vehicles), and shall consider including a preference for low emission contractors and vendors in City requests for proposals where appropriate.
- **CAQ-28** The City shall emphasize "demand management" strategies which seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.

<sup>1</sup><http://www.arb.ca.gov/desig/adm/adm.htm>. Site accessed 2-18-04.

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- **CAQ-29** The City shall seek to ensure that public transit is a viable and attractive alternative to the use of private motor vehicles.
- **CAQ-33** The City shall require that public and private development projects use low emission vehicles and equipment as part of project construction and operation, unless determined to be infeasible.

### City of Sacramento General Plan

The City of Sacramento General Plan identifies policies that relate to air quality within the City, as they relate to the proposed project:

- **Transportation Systems Management Goal A Policy 1** Encourage and support programs that increase vehicle occupancy.
- **Transportation Systems Management Goal A Policy 2** Support actions/ordinance/development/agreements that reduce peak hour trips.
- **Transportation Systems Management Goal B Policy 1** Support programs to improve traffic flow. Examples might include signal optimization and/or geometric improvements to intersections.

### **Other**

*Transportation Project-Level Carbon Monoxide Protocol*, dated December 1997, prepared by the Institute of Transportation Studies, University of California at Davis, identifies three types of criteria for determination of the acceptability of impacts.

- All projects involving federal funding and/or approval are subject to NEPA. According to NEPA, the project must not violate any national ambient air quality standard or the project must incorporate all practicable means to avoid or minimize expected exceedances of the national ambient air quality standards.
- All projects involving federal funding and/or approval, and not otherwise exempt, require a federal conformity determination. Within Federal non-attainment and maintenance areas, a project must not cause or contribute to any new localized carbon monoxide violations or increase the frequency or severity of any existing carbon monoxide violations.

### AFFECTED ENVIRONMENT

The project is located in the southern portion of the Sacramento Valley, a broad, flat valley bounded by the coastal ranges to the west and the Sierra Nevada mountain range to the east. A sea level gap in the Coast Range, the Carquinez Strait, is located about 80 km (50 miles) southwest and the intervening terrain is very flat. The prevailing wind direction is southwesterly, which is the wind direction when marine breezes flow through the Carquinez strait. Marine breezes dominate during the spring and summer months and show a strong daily variation.

Highest average wind speeds occur in the afternoon and evening hours; lightest winds occur in the night and morning hours. During fall and winter when the sea breeze diminishes, northerly winds occur more frequently, but southwesterly winds still predominate.

The project is within the Sacramento Valley Air Basin (SVAB), which consists of nine (9) counties or portions of counties stretching from Plumas County to the north to Mariposa County to the south. The San Francisco Bay Area Air Basin lies to the west and the San Joaquin Valley Air Basin is located to the south. Considerable transport of pollutants occurs between these air basins so air quality in Sacramento County is partially determined by the release of pollutants elsewhere. In turn, pollutants generated in Sacramento County affect air quality in areas to the north and east.

### **Attainment Status**

Elk Grove is within the SMAQMD, which is part of the SVAB. Sacramento County is included in the Greater Sacramento Ozone Nonattainment Area as delineated by the EPA for ozone and PM<sub>10</sub>. The air districts within the non-attainment area have committed through the State Implementation Plan (SIP) to achieving attainment of the federal ozone standard by 2005. Because the air basin's status as a non-attainment area, the air pollution control districts and air quality management districts within the air basin are required to prepare attainment plans as the basins' contribution to the SIP, pursuant to the CAAA. The SIP includes plans for each of the state's non-attainment areas, along with rules and regulations and other control measures adopted by the air districts and the California Air Resources Board (CARB).

### **Conformity Statement**

The Metropolitan Transportation Plan (MTP) for 2025 Amendment 1 was found to conform by the Sacramento Area Council of Governments on October 4, 2002, and FHWA and FTA adopted the air quality conformity finding on February 6, 2003. The Sheldon Road/SR 99 Interchange Improvement Project was also included in the SACOG financially constrained Amendment 03-01 to the 2003/05 Metropolitan Transportation Improvement Program, Page 3-41. SACOG's Amendment 03-01 Amendment to the 2003/05 Metropolitan Transportation Improvement Program was found to conform by FHWA and FTA on February 6, 2003. The design concept and scope of the proposed project was consistent with the project description on the MTP for 2025 and 2003/05 Metropolitan Transportation Improvement Program, and SACOG's regional emission analysis.

In July 2002, the MTP for 2025 was certified by federal agencies as valid until July 24, 2005. Because of air quality issues in the Sacramento air basin, the air quality conformity finding on the MTP lapsed in October 2004. In response to this lapse, SACOG has developed and, in October 2004 approved, an interim, reduced MTP that will preserve at least some federal funding for Sacramento Air Basin project until a new MTP can be adopted in 2005. The Interim MTP lists only projects that qualify as exempt from air quality conformity requirements, and the proposed Sheldon Road/SR 99 Interchange Improvement Project is not included in the Interim MTP because it is not an exempt project. The Sheldon Road/SR 99 Interchange Improvement Project will be included in the next regular MTP that replaces the Interim MTP.

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In order for the region to come back into conformity with federal air quality standards, the State of California must adopt a new State Implementation Plan (SIP) that demonstrates conformity with the federal standards. SACOG anticipates that a Rate-of-Progress<sup>2</sup> SIP will be pursued to demonstrate conformity. The following steps will take place to develop and gain approval of a new SIP, and for the region to come back into conformity with federal air quality standards:

- SACOG works with the five regional air quality management boards to coordinate the selection of projects to be included in the SIP. These air quality management boards consist of Sacramento Metropolitan AQMD, Feather River AQMD; Yolo-Solano AQMD; Placer County AQMD; and El Dorado County AQMD.
- The Draft SIP and associated Draft EIR are published, and each goes through a public review period and hearing.
- The California Air Resources Board (CARB) submits the proposed SIP plans and motor vehicle emissions budget (MVEB) to EPA to begin processing.
- The Final EIR for the SIP is published.
- The Draft SIP and Final EIR are adopted by the five air quality management districts.
- CARB then approves the SIP
- The U.S. Environmental Protection Agency (EPA) finds the SIP/MVEB adequate.
- SACOG approves the regular MTP/MTIP.
- FHWA approves the SACOG conformity finding.

SACOG anticipates a new SIP in 2005. The next regular MTP update, to be adopted in 2005, will use this updated SIP as its basis for air quality conformity determinations. The new SIP will allow the next MTP to include non-exempt as well as exempt projects in the Sacramento air basin, including the Sheldon Road/SR 99 Interchange Improvement Project.

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<sup>2</sup> A Rate of Progress Plan will demonstrate how the air districts' efforts will meet emission reduction targets during the early years of implementing the 8-hour standard (through 2008). The ROP Plan will show a 3% per year emission reduction in volatile organic compounds (or the NO<sub>x</sub> equivalent) for 6 years. This plan may include new control measures. If allowed by EPA, the plan may establish a new MVEB, prior to the end of 2005.

### IMPACTS

#### **No Build Alternative**

Under the No Build alternative, the proposed project to improve and widen the existing interchange would not take place and air quality impacts associated with the construction of the project would not occur. The existing traffic LOS in the interchange area operates at an unacceptable LOS and is expected to worsen over the next several years as traffic increases due to planned and expected growth. Worsening traffic LOS would contribute to worsening air quality in the project area as a result of increased traffic congestion through the interchange.

#### **Build Alternatives (2A and 3A) Impacts**

##### Regional Air Pollution Emissions

Because O<sub>3</sub> precursors are regional pollutants, the proposed action must be evaluated under the transportation conformity requirements described above. An affirmative regional conformity determination must be made before the proposed action can proceed. Such a determination is not required if the proposed action is described in the approved MTP and the TIP and has not been altered in design concept or scope. While the previous MTP that included the Sheldon Road/SR 99 Interchange project was determined to be out of conformity with federal standards in October 2004, SACOG is currently working to develop a new MTP that will be included in the new SIP, which will conform with federal air quality standards, as described above. The Sheldon Road/SR 99 Interchange Project will be included in the next conforming MTP and SIP, which will demonstrate adequate reductions in regional pollutants.

The impact of the project alternatives on regional air quality was evaluated qualitatively. The effect of the project on average vehicle speed and delay was evaluated in light of the emission/speed relationships for vehicles. Regional pollutants considered were ozone precursors (Reactive Organic Gases and Nitrogen Oxides) and Particulate Matter. The proposed project would relieve congestion and reduce delay. A change in average vehicle speed would have a subtle effect on vehicle emissions for regional pollutant such as Reactive Organic Gases (ROG), Nitrogen Oxides (NO<sub>x</sub>) and Particulate Matter (PM<sub>10</sub>). An increase in average vehicle speed generally reduces slightly emissions of ROG, increases slightly emissions of NO<sub>x</sub> and has no effect on emissions of PM<sub>10</sub>. This effect on emissions would generally only occur during peak traffic hours. The likely magnitude of these changes would be a few pounds per day.

Additionally, the project, under both build alternatives, would contribute to reductions in regional air pollution emissions by improving facilities for bicyclists and pedestrians above existing conditions.

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### Local Carbon Monoxide Impacts

This air quality analysis utilizes the *Transportation Project-Level Carbon Monoxide Protocol*, dated December 1997, prepared by the Institute of Transportation Studies, University of California at Davis. Impacts to air quality would be the same for both Alternative 2A and 3A.

In carbon monoxide (CO) non-attainment and maintenance areas, project sponsors also need to demonstrate that projects will not result in a localized violation of CO standards, or increase the frequency of existing violations. Elk Grove is within an attainment area for CO.

The *Transportation Project-Level Carbon Monoxide Protocol* recognizes signalized surface street intersections as having a high potential to expose the public to elevated concentrations of CO. Levels of CO are known to be directly related to traffic volumes and levels of congestion. Based on the traffic volume and LOS analysis for future operation of signalized intersections, four intersections (Sheldon Road/Lewis Stein, Sheldon SR 99 SB, Sheldon SR 99 NB, and Sheldon/E. Stockton) were selected for analysis as worst-case intersections.

The *Transportation Project-Level Carbon Monoxide Protocol* includes a screening procedure that can provide conservative estimates of CO without having to run models such as EMFAC and CALINE4. This screening procedure was based on EMFAC7G emission rates. Since the EPA has now approved EMFAC2002 as the current emissions model for conformity determinations, use of the screening procedure is no longer acceptable for CO modeling studies after June 30, 2003.

The results predicted worst-case CO concentration for future conditions with the project alternatives are shown in **Table 2.2.5-3**. The concentrations in **Table 2.2.5-3** are for worst-case locations under theoretical worst-case meteorological conditions. Concentrations at greater distances from the roadway and at locations not near signalized intersections would be substantially lower.

The analysis of CO impacts included in **Table 2.2.5-3** demonstrates that the project meets all of the federal and state ambient air quality standards. Impacts to air quality do not change between Alternatives 2A and 3A.

**TABLE 2.2.5-3**  
**PROJECTED 1-HOUR AND 8-HOUR WORST-CASE CARBON MONOXIDE CONCENTRATIONS AT WORST-CASE SIGNALIZED INTERSECTIONS, IN PARTS PER MILLION INTERSECTIONS WOULD BE SUBSTANTIALLY LOWER.**

Intersection	Alternative 2A				Alternative 3A			
	Year 2005		Year 2025		Year 2005		Year 2025	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Sheldon/ Lewis Stein	5.9	4.0	4.4	3.0	6.1	4.1	4.5	3.1
Sheldon/ SR 99 SB	6.1	4.1	4.4	3.0	6.2	4.2	4.5	3.1
Sheldon/ SR 99 NB	6.7	4.5	4.7	3.2	6.7	4.5	4.7	3.2
Sheldon/ E. Stockton	6.5	4.4	4.4	3.0	6.5	4.4	4.4	3.0
Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

Implementation of the project would not generate carbon monoxide concentrations above the federal and state ambient air quality standards. Impacts to air quality do not change between Alternatives 2A and 3A.

Local PM<sub>10</sub> Impacts

In federal PM<sub>10</sub> non-attainment areas, a PM<sub>10</sub> hotspot analysis is required unless a project is exempt from all conformity analysis requirements.

Currently, only a qualitative hotspot analysis is required. Federal conformity regulations state "EPA will be releasing technical guidance on how to use existing modeling tools to perform PM<sub>10</sub> hotspot analysis. The requirements will not take effect until the Federal Register has announced availability of this guidance." (40 CFR Parts 51 and 93, Prologue Section V.K.; Federal Register, August 15, 1997.) In September 2001 EPA released national guidance for performing qualitative PM<sub>10</sub> hotspot analysis for conformity purposes, but has yet to release guidance for quantitative analyses. When this guidance becomes available a quantified PM<sub>10</sub> microscale analysis may or may not be needed as an addendum to the air quality study for this project.

The project is located in a moderate, non-attainment area for the national ambient standard for PM<sub>10</sub>. The closest monitor sites for PM<sub>10</sub> are located in Sacramento-Stockton Boulevard and Sacramento-T Street monitoring sites. **Table 2.2.5-4** summarizes PM<sub>10</sub> air quality data for the latest three (3) year period from these monitoring sites.

A qualitative analysis of the potential for creation of a PM<sub>10</sub> hotspot was based on California Department of Transportation's *Interim PM<sub>10</sub> Qualitative Hot-Spot Guidance* dated January 11, 2002.

**TABLE 2.2.5-4  
PM<sub>10</sub> AIR QUALITY DATA FOR THE NEAREST MONITORING SITES**

Year	Sacramento-Stockton Blvd		Sacramento-T Street	
	Maximum (ug/m <sup>3</sup> )	Days over National Standard	Maximum (ug/m <sup>3</sup> )	Days over National Standard
2000	86.0	0	64.0	0
2001	58.0	0	89.0	0
2002	85.0	0	77.0	0

No violations of the PM<sub>10</sub> national standard have been recorded at either of the nearest monitoring stations, and monitored concentrations are well below the national standard. During the three-year period 2000-2002 the annual maximum concentrations at these two locations reached from 39% to 59% of the federal 24-hour standard.

Studies conducted at U.C. Davis at representative intersections within Sacramento County have found that project-level PM<sub>10</sub> impacts begin to dissipate a short distance downwind of the

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project.<sup>4</sup> These studies document that unless background conditions already contribute to concentrations that exceed or are close to the national standard, traffic impacts will be negligible. Based on the above, there is no reason to believe that this project would contribute to a PM<sub>10</sub> hotspot that would cause or contribute to violations of the National Ambient Air Quality Standard (NAAQS).

The qualitative analysis of the project's potential to create new PM<sub>10</sub> hotspots indicates the project would conform to the PM<sub>10</sub> SIP. Additionally, this project would not contribute to a PM<sub>10</sub> hotspot that would cause or contribute to violations of the National Ambient Air Quality Standard (NAAQS).

### *Construction Impacts*

**Impact 2.2.5-1** The proposed project would generate air pollutants during construction. Trucks and construction equipment emit hydrocarbons, oxides of nitrogen, carbon monoxide, and particulates. Most pollution would consist of wind-blown dust generated by excavation, grading, hauling and various other activities. The impacts from the above activities would vary from day to day as construction progresses. The special provisions and standard specifications would include requirements to minimize or eliminate dust through the application of BMPs and water or dust palliatives.

### MITIGATION MEASURES

**MM 2.2.5-1a** The City of Elk Grove shall submit to the SMAQMD a construction emission/dust control plan and receive approval before groundbreaking. Construction of the proposed project is required to comply with all applicable SMAQMD rules and regulations, specifically Rule 403 regarding fugitive dust, Rule 442 regarding architectural coatings, and Rule 453 regarding asphalt paving. In accordance with the recommendations of the SMAQMD, the City of Elk Grove shall also implement the following measures to reduce temporary construction emissions:

**MM 2.2.5-1b** As recommended by the SMAQMD (2003), the City shall implement the following measures (where feasible) to reduce NO<sub>x</sub> and visible emissions from heavy-duty diesel equipment.

- (1) The City shall provide a plan for approval by the SMAQMD demonstrating that the heavy duty [ $> 50$  horsepower (hp)], off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide

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<sup>4</sup> Asbaugh et. al.; Final Report: Traffic Generated PM<sub>10</sub> Hot Spots; UCD-ITS-RR-96-17; 1996.

<sup>5</sup> Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at the time of construction. The project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp that will be used an aggregate of 40 or more hours during any portion of the project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours before subject heavy-duty off-road equipment is used, the City shall provide the SMAQMD with the anticipated construction timeline including start date, and the name and phone number of the project manager and onsite foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine profit technology, after-treatment products, and/or such options as become available.<sup>6</sup>

- (2) The City shall ensure that emissions from off-road, diesel-powered equipment used on the project site do not exceed 40 percent opacity for more than three (3) minutes in any one (1) hour. Any equipment found to exceed 40 percent opacity (or Ringlemann 2.0) shall be repaired immediately, and the SMAQMD shall be notified of non-compliant equipment within 48 hours of identification. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of the construction project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly survey shall include the quantity and type of vehicles surveyed, as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supercede other SMAQMD or state rules and regulations.

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<sup>6</sup> Both Caltrans (Department) and FHWA cannot concur with any mitigation measures that require the contractor to use a construction fleet emitting 20% lower emissions than the average fleet at the time of construction. In view of the Department's obligation under the California Public Contract Code, if this mitigation measures were included as a requirement of the contract, the Department would be unable to advertise, award, and administer the contract for this project. The Department recognizes that the project sponsor, as lead agency, has the right to make it's own determinations regarding the use of this protocol and the mitigation measures designed to reduce potentially significant impacts. On the other hand, as a responsible agency, the Department must make an independent judgment regarding the adequacy of the lead agency's EIR to support issuance of the Department's encroachment permit authorizing work on the state highway system.

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- (3) The city's primary contractor shall be responsible for ensuring that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.

### MM 2.2.5-1c

As recommended by the SMAQMD (1994b), the City shall reduce fugitive dust emissions, in compliance with Rule 403, by implementing the measures listed below.

- (1) All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover.
- (2) All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant.
- (3) When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 15 cm (six [6] inches) of freeboard space from the top of the container.
- (4) All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring.
- (5) After material is added to or removed from the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant.
- (6) Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.
- (7) Wheel washers shall be installed for all trucks and equipment exiting unpaved areas or wheels shall be washed to remove accumulated dirt before such vehicles leave the site.
- (8) Sandbags or other erosion control measure shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than one (1) percent.
- (9) The extent of the areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.

### CEQA FINDINGS

Under CEQA, a transportation project would be deemed to have a significant effect if the project violates any California ambient air quality standard, contributes substantially to an existing or projected air quality violation, or exposes sensitive receptors to substantial pollutant concentrations. Additionally, SMAQMD has developed regional thresholds of significance for construction of projects. The threshold level is 38.5 kilograms (85 pounds) per day for NO<sub>x</sub>.

#### **Carbon Monoxide**

The proposed project would improve traffic congestion and reduce delays. Implementation of the project would not generate carbon monoxide concentrations above the federal and state ambient air quality standards. Therefore, local carbon monoxide impacts are anticipated to be **less than significant**.

#### **PM<sub>10</sub>**

The proposed project would improve traffic congestion and reduce delays. Implementation of the project would not contribute to a PM<sub>10</sub> hotspot that would cause or contribute to violations of the National Ambient Air Quality Standard. Therefore, PM<sub>10</sub> impacts are anticipated to be **less than significant**.

#### **Construction Impacts**

Heavy earthmoving equipment necessary during construction would generate air pollutants including NO<sub>x</sub>, CO and PM<sub>10</sub>. Although temporary, construction air quality impacts are considered **potentially significant**. Implementation of mitigation measures MM 2.2.5-1a, MM 2.2.5-1b, and 2.2.5-1c would reduce the potential for harm to a **less than significant impact**.