



Regional Planning Partnership

March 18, 2009

PM₁₀ Qualitative Analysis Elk Grove Boulevard On-ramp Loop Project

Issue: Would the Elk Grove Boulevard On-ramp Loop Project create a significant enough impact from particulate matter (PM₁₀) emissions to find it to be a “project of air quality concern” (POAQC) which would require a qualitative hot spot analysis under Federal guidance.

Recommendation: That the Partnership, in its air quality conformity consultation role and using the criteria discussed below, make the finding that the Elk Grove Boulevard On-ramp Loop Project does not require a qualitative PM₁₀ hot spot analysis (i.e., the project is not a project of air quality concern).

Discussion: Projects in Sacramento County a non-attainment area for PM₁₀- that are non-exempt from regional emissions analysis may require a qualitative hot spot analysis if they meet certain criteria associated with specific types of projects. The guidance issued by EPA and FHWA requires qualitative hot spot analysis for the five following types of projects:

- I. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;
- II. Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those 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;
- III. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- IV. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
- V. Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{2.5} or PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

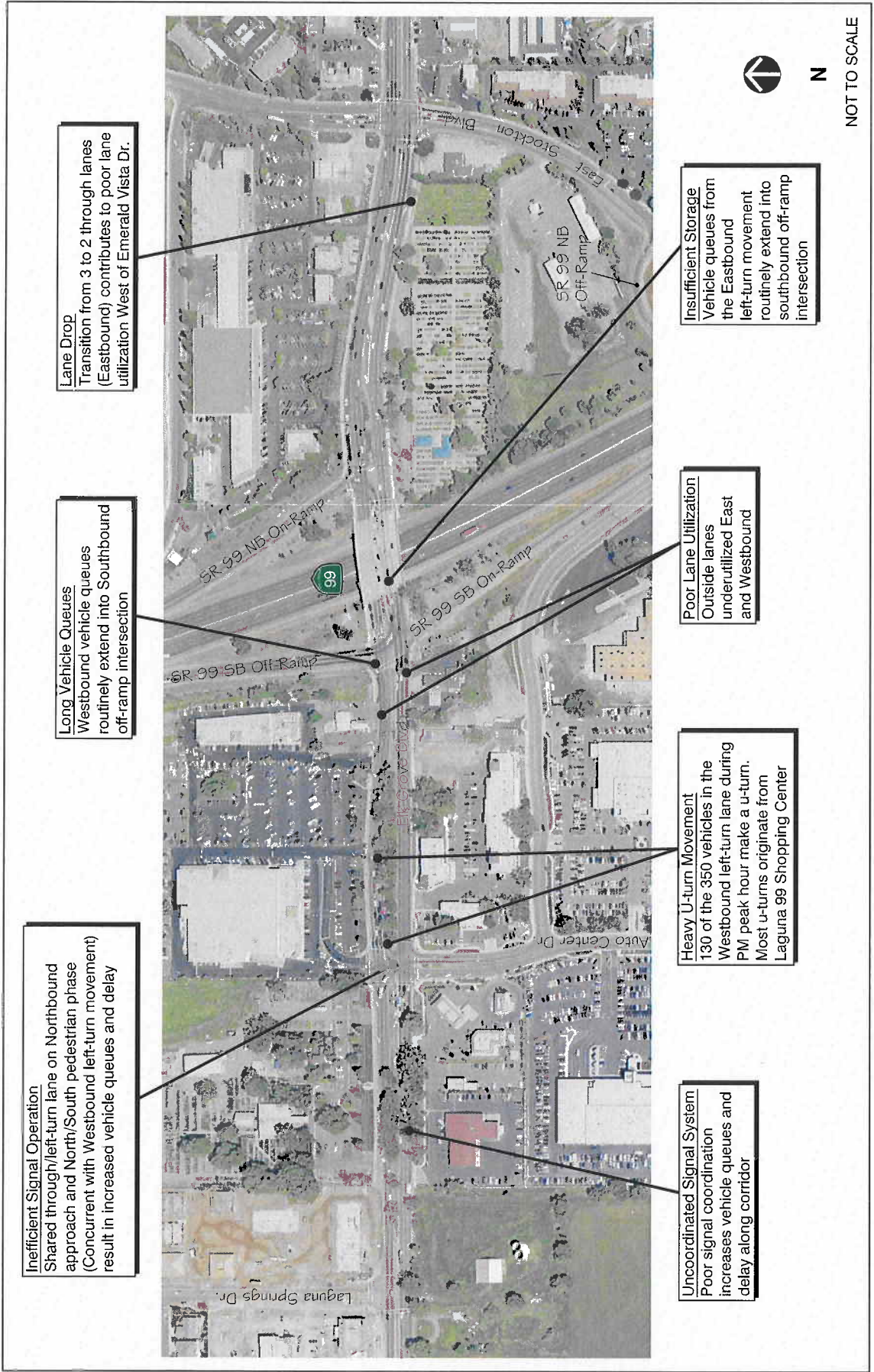
The project in question proposed modifying the existing Elk Grove Boulevard/SR 99 interchange by eliminating the traffic signal at the existing northbound on-ramp and eliminating the left turn from eastbound Elk Grove Boulevard to the northbound on-ramp, and providing a new northbound hook on-ramp from East Stockton Boulevard to northbound SR 99.

This project does not meet any of the criteria for a Project of Air Quality Concern as described in the EPA Final Rule of 3/10/06 and the EPA Guidance of 3/29/06.

Gwen Owens, Senior Engineer (City of Elk Grove), Jed McLaughlin, Environmental Planner (City of Elk Grove), and Melissa Logue, Environmental Planner (PMC) will be at the partnership meeting to discuss this item and answer questions.

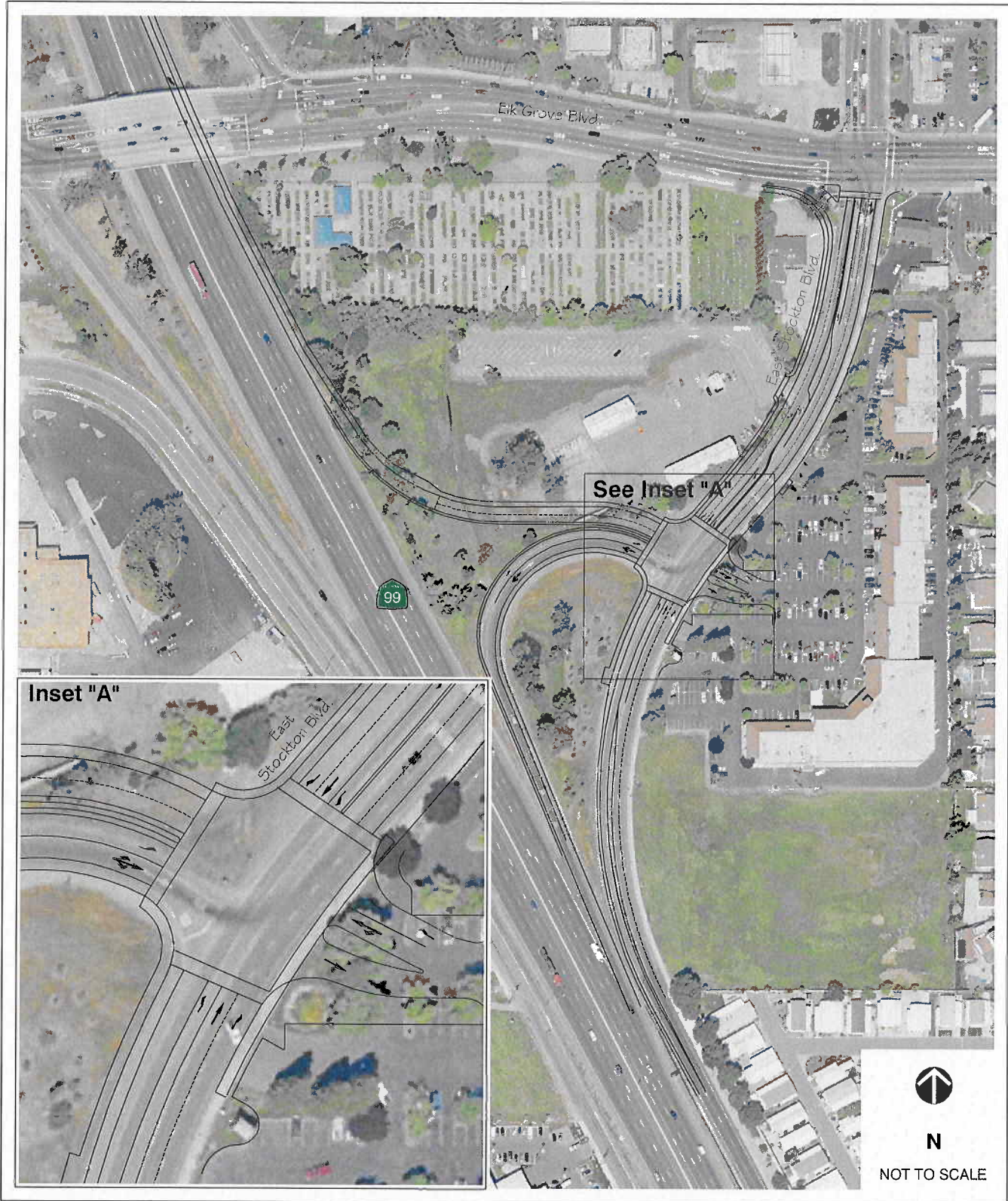
JPC:ef
Attachments

Key Staff: Matt Carpenter, Director of Transportation Planning, (916) 340-6276
Jason P. Crow, Senior Planner, (916) 340-6219



OBSERVED CONDITIONS ALONG ELK GROVE BLVD. - LAGUNA SPRINGS DR. TO EAST STOCKTON BLVD.

FIGURE 3



**Sacramento Area Council of Governments
Appendix 3 Project List**

SACOG ID #		Sacramento County		City of Elk Grove	
SACOG ID #	EA Number	Last Revised	Completion Year	Revenue Source	Fiscal Year
SAC24382	n/a	09-00	2010	FTA 5307	<09
Project Title					
E-tran ADA Operations					
Project Description					
Provides funding assistance to support e-tran's paratransit operation called e-van.					
Federal Project				Total Cost	\$459,000
Exempt Category:				Operating assistance to transit agencies	

SACOG ID #		Sacramento County		City of Elk Grove	
SACOG ID #	EA Number	Last Revised	Completion Year	Revenue Source	Fiscal Year
SAC24116	n/a	09-00	2011	Local - Developer - Transportation Improvement Fee	<09
Project Title					
Elk Grove Blvd / SR 99					
Project Description					
In Elk Grove, at SR 99 and Elk Grove Blvd: Add northbound loop on-ramp to SR 99, remove traffic signal at existing northbound on-ramp, and add second westbound left turn lane to existing southbound on-ramp.					
Regionally Significant				Total Cost	\$6,361,000
Exempt Category:				Operating assistance to transit agencies	

SACOG ID #		Sacramento County		City of Elk Grove	
SACOG ID #	EA Number	Last Revised	Completion Year	Revenue Source	Fiscal Year
SAC24167	n/a	09-00	2009	Local - Developer - Transportation Improvement Fee	<09
Project Title					
Elk Grove Transit Bus Stop Shelters Project					
Project Description					
Transit shelters will be installed throughout the City of Elk Grove, including its Old Town Historic District.					
Federal Project				Total Cost	\$278,675
Exempt Category:				Construction of small passenger shelters and information kiosks	

RTIP ID# <i>(required)</i> SAC24116									
Project Description <i>(clearly describe project)</i>									
<p>The City of Elk Grove, in cooperation with the California Department of Transportation (Caltrans), proposes to modify the existing Elk Grove Boulevard / SR 99 interchange by eliminating the traffic signal on Elk Grove Boulevard at the existing northbound on-ramp and eliminating the left turn from eastbound Elk Grove Boulevard to the northbound on-ramp, and provide a new northbound hook on-ramp from East Stockton Boulevard to northbound SR 99. The proposed project includes the following key elements:</p> <ul style="list-style-type: none"> • Construction of a northbound on-ramp from East Stockton Boulevard with a one-lane merge at SR 99 • Installation of a traffic signal at the East Stockton Boulevard/SR 99 NB Ramps intersection • Increased storage on the SR 99 northbound Off-Ramp • Construction of a second southbound lane on East Stockton Boulevard between Elk Grove Boulevard and the East Stockton Boulevard/SR 99 NB Ramps intersection • Elimination of the Elk Grove Boulevard/NB On-Ramp intersection (i.e., traffic signal) • Increased storage for the westbound left-turn movement at the Elk Grove Boulevard/SB Ramps intersection. • Modification local business access 									
Type of Project <i>(use Table 1 on instruction sheet)</i>									
Reconfigure Existing Interchange									
County	Narrative Location/Route & Postmiles: SR 99 @ Elk Grove Boulevard 80, PM 12.761								
Sacramento	Caltrans Projects – EA# 03-1E410								
Lead Agency: City of Elk Grove									
Contact Person	Phone#	Fax#	Email						
Melissa D. Logue	(916) 231-2241	(916) 361-1574	mlogue@pmcworld.com						
Hot Spot Pollutant of Concern <i>(check one or both)</i>									
		PM2.5	PM10 X						
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>									
<input checked="" type="checkbox"/>	Categorical Exclusion (NEPA)	<input type="checkbox"/>	EA or Draft EIS	<input type="checkbox"/>	FONSI or Final EIS	<input type="checkbox"/>	PS&E or Construction	<input type="checkbox"/>	Other
Scheduled Date of Federal Action:									
Current Programming Dates <i>as appropriate</i>									
	PE/Environmental	ENG	ROW	CON					
Start	<2009	<2009	2009	2009					
End	<2009	<2009	2009	2009					

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

The overall objective of the Elk Grove Boulevard / SR 99 interchange modification project is to reduce congestion on Elk Grove Boulevard through the ramp intersections. Elimination of the traffic signal on Elk Grove Boulevard at the existing northbound on-ramp and the left turn from eastbound Elk Grove Boulevard to the northbound diagonal on-ramp will largely relieve traffic congestion on both eastbound and westbound Elk Grove Boulevard and improve traffic flow.

The SR 99/Elk Grove Boulevard interchange was reconstructed in the mid 1990s as a tight-diamond configuration in all but the southeast quadrant, which has an isolated hook off-ramp onto E. Stockton Boulevard. The tight-diamond configuration uses diagonal on- and off-ramps to provide freeway access. The northbound diagonal off-ramp to Elk Grove Boulevard was not constructed because of the cemetery located in the southeast quadrant of the interchange. With the tight-diamond configuration, eastbound Elk Grove Boulevard to northbound SR 99 and westbound Elk Grove Boulevard to southbound SR 99 on-ramp movements are accommodated through signal-controlled left-turn movements at the north and southbound ramp intersections. However, because of the signal-controlled on-ramp movements and the close spacing between the ramp-terminal intersections (about 455 feet), it has less capacity than more efficient designs. Recognizing these limitations, the SR 99/Elk Grove Boulevard interchange was designed to accommodate the addition of a northbound loop on-ramp, which required shifting the SR 99 mainline west of its original location. With the northbound loop on-ramp, drivers traveling eastbound on Elk Grove Boulevard would access northbound SR 99 by traveling across the overcrossing, making a right-turn onto southbound E. Stockton Boulevard, and making a right-turn onto the northbound on-ramp.

During the PM peak hour, drivers experience unacceptable level of service (LOS) E and F conditions and vehicle queues that routinely exceed available storage, block adjacent intersections, and contribute to vehicle queuing on the southbound off-ramp. This condition is exacerbated by poor lane utilization of the east and westbound outside through lanes on Elk Grove Boulevard. The following conditions contribute to poor lane utilization along the corridor:

- The transitions from three to two through lanes east of Emerald Vista Drive (eastbound)
- The close spacing between the ramp-terminal intersections
- The controlled eastbound Elk Grove Boulevard to northbound SR 99 on-ramp movement
- Inefficient traffic signal coordination

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The project is located in an urbanized area of Elk Grove. Land uses include residential, commercial, office retail, industrial, institutional and park/open space.

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Opening Year:

No Build: LOS, traffic volumes, % and # trucks for the AM & PM peak hour

Build: LOS, traffic volumes, % and # trucks for the AM & PM peak hour

2010 LOS

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2010 No Build	2010 Build	2010 No Build	2010 Build
AM Pk Hr	E	D	F	F
PM Pk Hr	E	E	F	F

2010 Volumes

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2010 No Build	2010 Build	2010 No Build	2010 Build
AM Pk Hr	5843	5843	1910	2822
PM Pk Hr	5886	5886	2080	2891

2010 Truck Volumes (2% Truck Traffic)

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2010 No Build	2010 Build	2010 No Build	2010 Build
AM Pk Hr	117	117	38	56
PM Pk Hr	118	118	42	58

Horizon Year:

No Build: LOS, traffic volumes, % and # trucks for the AM & PM peak hour

Build: LOS, traffic volumes, % and # trucks for the AM & PM peak hour

2030 LOS

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2030 No Build	2030 Build	2030 No Build	2030 Build
AM Pk Hr	E	E	F	F
PM Pk Hr	E	E	F	E

2030 Volumes

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2030 No Build	2030 Build	2030 No Build	2030 Build
AM Pk Hr	6174	6174	2004	3063
PM Pk Hr	6040	6040	2121	3061

2030 Truck Volumes (2% Truck Traffic)

	Elk Grove Blvd / SB SR 99 Ramps		East Stockton Blvd / NB SR 99 Ramps	
	2030 No Build	2030 Build	2030 No Build	2030 Build
AM Pk Hr	123	123	40	61
PM Pk Hr	121	121	42	61

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities*)

With the northbound loop on-ramp, drivers traveling eastbound on Elk Grove Boulevard would access northbound SR 99 by traveling across the overcrossing, making a right-turn onto southbound E. Stockton Boulevard, and making a right-turn onto the northbound on-ramp. The elimination of the traffic signal and left turn on Elk Grove Boulevard, at the northbound on-ramp, will result in

- more stacking for lefts from westbound Elk Grove Boulevard to southbound SR 99 on-ramps,
- better lane utilization for westbound Elk Grove Boulevard traffic, and
- more efficient traffic flows on Elk Grove Boulevard.

Additionally, the second southbound lane on East Stockton Boulevard, from Elk Grove Boulevard to the SR 99 off ramp and the new traffic signal at East Stockton / SR 99 ramps will provide more capacity for the northbound on and off SR 99 ramps.

Comments/Explanation/Details (*attach additional sheets as necessary*)

A project layout map has been attached to this form to illustrate the project design.

This project does not meet any of the criteria for a Project of Air Quality Concern as described in the EPA Final Rule of March 10, 2006 and the EPA Guidance of March 29, 2006 and, thus, a PM₁₀ hot spot analysis is **not** required.