

### Project Information

Project Name: **I-580 (TriValley) Corridor - EB HOV/HOT Lanes**  
Sponsor: **Alameda County CMA** TIP ID: **ALA070020** RTP ID: **21116**  
Agency: **Alameda County CMA** Mode: **STATE HIGHWAY** Sub Mode:  
Project Type: **HOV** Trans. System: **STATE HWY** Purpose: **EXPANSION** County: **Alameda**  
Proj. Desc.: **I-580 (TriValley) Corridor: From east of Greenville Road to Hacienda Rd.; Construct Eastbound HOV/HOT lanes (includes auxiliary lanes). Sub-project of TIP ID ALA050006.**  
RTP Title: **Widen I-580 from Foothill Road to Greenville Road in both directions for HOV lanes (includes auxiliary lanes)**

### Step 1: Project Identification

1: Does this project have any federal funding?	<b>Yes</b>
2: Does this project (or any phases of the project) require any federal action (such as federal authorization or approval for funding or environmental review) after December 14, 2010?	<b>Yes</b>
3: Is the project exempt from both regional and project-level air quality conformity under 40 CFR 93.126? Project Type Selected: <b>None Applies</b>	<b>No</b>
4: Is the project exempt from regional air quality conformity under 40 CFR 93.127? Project Type Selected: <b>None Applies</b>	<b>No</b>
5: Is the project exempt from regional air quality conformity under 40 CFR 93.128? Project Type Selected: <b>None Applies</b>	<b>No</b>
6: Does this project meet the definition of a "project of air quality concern" under 40 CFR 93.123(b)(1)? Project Type Selected: <b>None Applies</b>	<b>No</b>

### Dates for Interagency Consultation

Requested Date of Interagency Consultation: **APR-JUN, 2011**  
Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:  
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:

### Dates for PM2.5 Hot-Spot Analysis

Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:  
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:

**Project Assessment Form for PM<sub>2.5</sub> Interagency Consultation**

<b>RTIP ID#</b> <i>(required)</i> 230666 and 230667				
<b>TIP ID#</b> <i>(required)</i> ALA070020				
<b>Air Quality Conformity Task Force Consideration Date</b> 5/26/11				
<b>Project Description</b> <i>(clearly describe project)</i> The California Department of Transportation (Department), in cooperation with the Alameda County Transportation Commission (Alameda CTC), proposes to upgrade the planned Interstate 580 (I-580) eastbound single express lane to a two-lane (double express lane) facility. The project is on I-580 from just west of the Hacienda Drive interchange to just east of the Greenville Road undercrossing in the cities of Dublin, Pleasanton, and Livermore in Alameda County (Post Miles R7.8 to 19.1; see Figure 1, attached). The express lanes would be restricted to High Occupancy Vehicles (HOVs, which include automobiles with two or more persons, buses, and motorcycles) and vehicles that pay a toll. The total length of the project is approximately 11.3 miles.  The proposed facility would not require any roadway expansion, placement of additional pavement, or acquisition of right-of-way. The existing facility would be upgraded to provide double express lanes by eliminating the existing striping, delineating travel lanes, and restriping the roadway. Tolling equipment and signage would be installed, and trenching along the outside edge of pavement would occur for installation of conduits. Figure 2 (attached) shows the conceptual ingress and egress lane configurations.				
<b>Type of Project:</b> Change to existing State highway				
<b>County</b> Alameda	<b>Narrative Location/Route &amp; Postmiles</b> On eastbound Interstate 580, from west of the Hacienda Drive Interchange to east of the Greenville Road Undercrossing (Post Miles R 7.8 to 19.1) Caltrans Projects – EA# <b>04-0G190K</b>			
<b>Lead Agency:</b> Alameda County Transportation Commission				
<b>Contact Person</b> Stephen Haas  Lynn McIntyre	<b>Phone#</b> (510) 208-7427  (510) 874-3149	<b>Fax#</b> (510) 836-2185  (510) 874-3268	<b>Email</b> <a href="mailto:shaas@alameda.ctc.org">shaas@alameda.ctc.org</a> , lynn_mcintyre@urscorp.com	
<b>Federal Action for which Project-Level PM Conformity is Needed</b> <i>(check appropriate box)</i>				
<input type="checkbox"/> <b>Categorical Exclusion (NEPA)</b>	<input checked="" type="checkbox"/> <b>EA or Draft EIS</b>	<input type="checkbox"/> <b>FONSI or Final EIS</b>	<input type="checkbox"/> <b>PS&amp;E or Construction</b>	<input type="checkbox"/> <b>Other</b>
<b>Scheduled Date of Federal Action:</b> November 30, 2011				
<b>NEPA Delegation – Project Type</b> <i>(check appropriate box)</i>				
<input type="checkbox"/> <b>Exempt</b>	<input type="checkbox"/> <b>Section 6004 – Categorical Exemption</b>		<input checked="" type="checkbox"/> <b>Section 6005 – Non-Categorical Exemption</b>	
<b>Current Programming Dates</b> <i>(as appropriate)</i>				
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>	<b>CON</b>
<b>Start</b>	08/2008	11/2011	11/2011	09/2012
<b>End</b>	11/2011	05/2012	05/2012	04/2014

## PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation

### **Project Purpose and Need (Summary):** *(please be brief)*

The purpose of the project is to:

- Provide additional congestion relief through more effective use of existing pavement;
- Provide enhanced operational and safety improvements;
- Expand the available capacity for HOVs;
- Expand the mobility options in this congested corridor; and
- Provide an additional funding source for transportation improvements, including public transit.

The project is needed to provide additional traffic and operating efficiencies and relieve increasing congestion. Most accidents in the corridor are associated with congested conditions; Caltrans traffic data show that 60.3% are rear-end accidents and 37% occur during the afternoon peak period. According to the Traffic Operations Report (URS 2010) for the proposed project, 2030 traffic demand on eastbound I-580 is projected to increase by approximately 38% (1.52% per year) during the AM peak hour and by approximately 39% (1.56% per year) during the PM peak hour compared to existing conditions. MTC travel projections show that commutes to and from the Bay Area will nearly double over the next 20 years, with the largest increases coming from the Central Valley via San Joaquin, Stanislaus, and Merced counties.

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

Project activities are limited to the existing pavement of I-580.

The project area is in the cities of Dublin, Pleasanton, and Livermore in Alameda County. I-580 in the project limits is bordered by commercial, industrial, open space, and residential land uses (see Figure 3, attached). The project would not change land uses in any way that would result in additional diesel truck traffic to or from the study area.

## Project Assessment Form for PM<sub>2.5</sub> Interagency Consultation

**Brief summary of assumptions and methodology used for conducting analysis** *(please keep this concise – specifics may include date of when traffic counts were conducted, studies where truck percentages were derived)*

Demand data were projected using the 2005 Alameda County Travel Demand Model. To reflect the regionwide and nationwide economic downturn and corresponding reduction in travel demands along the study corridor, 2030 conditions and land uses were used to represent the horizon year. This approach was vetted by the Caltrans Traffic Forecasting Group, in lieu of revising the land uses in the Alameda County Travel Demand Model (URS 2010). Existing conditions were based on 24-hour volumes and truck counts collected by Caltrans in 2005 and travel time runs conducted by ACCMA in 2006 and 2007.

The data used to forecast opening year conditions are considered conservative. Trucks are projected to represent 20 percent of average annual daily traffic (AADT) in the project corridor, whereas 2009 Caltrans truck count data indicate truck percentages in the project area range from 8 to 12 percent. Caltrans 2005 traffic counts indicate that AADT for the segment of I-580 east of Greenville Road was 152,000, while the 2009 count for the same segment was 134,000. The forecasted 2015 AADT for the segment east of Greenville Road is 91,790 for the eastbound direction only, which assumes traffic volume increases of 18 percent over 2005 levels and 27 percent over 2009 levels.<sup>1</sup> The data used are therefore more likely to depict a worst-case traffic scenario than use of data from a period of marked economic slowdown.

As Levels of Service are based on traffic density (in this case, vehicles per lane per mile), the use of worst-case traffic volumes would tend to understate improvements in LOS from the project. Improvements in LOS (discussed under Opening Year and Horizon Year) and reductions in delay (discussed under Potential Traffic Redistribution Effects of Congestion Relief) would reduce idling and in turn would reduce overall PM<sub>2.5</sub> emissions.

1. Based on doubling 91,790 to represent AADT for both directions.

**PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation**

**Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

*All data are for I-580 eastbound.*

**No Build and Build LOS, 2015**

Segments	NO BUILD				BUILD <sup>1</sup>			
	AM		PM		AM		PM	
	HOV	Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow <sup>2</sup>	HOV	Mixed Flow <sup>2</sup>
San Ramon Rd. – Interstate 680/580 Interchange	-	F	-	F	-	F	-	F
Interstate 680/580 Interchange – Hopyard Rd./Dougherty Rd.	-	C	-	C	-	<b>B</b>	-	C
Hopyard Road/Dougherty Rd. – Hacienda Dr.	-	E	-	D	-	<b>D</b>	-	E
Hacienda Dr. – Santa Rita Rd./Tassajara Rd.	A	D	A	D	B	D	C	E
Santa Rita Rd./Tassajara Rd. – El Charro Rd./Fallon Rd.	A	D	A	D	B	D	C	D
El Charro Rd./Fallon Rd. – Airway Blvd.	A	D	A	D	B	D	C	D
Airway Blvd. – Isabel Ave.	A	D	A	E	A	<b>C</b>	C	<b>D</b>
Isabel Ave. – Livermore Ave.	A	C	A	D	A	<b>B</b>	B	D
Livermore Ave. – First St.	A	C	A	D	A	C	B	D
First St. – Vasco Rd.	A	D	A	D	A	<b>C</b>	B	E
Vasco Rd. – Greenville Rd.	A	C	A	D	A	C	B	D
East of Greenville Rd.		B	-	C	-	<b>A</b>	-	C

Source: URS 2010

- The project will implement dynamic pricing, where toll rates for single-occupant vehicles will vary based on the level of congestion. Vehicle detection systems will automatically adjust tolls to maintain free-flowing conditions (LOS C/D) in the express lanes.
- Boldfaced** LOS letters indicate improvement in Level of Service compared with the No Build Alternative.

**No Build and Build Total AADT and Truck AADT, 2015**

Segments	NO BUILD		BUILD	
	Total AADT	Truck AADT*	Total AADT	Truck AADT*
Mainline East of Eden Canyon	78,830	15,766	78,830	15,766
Mainline East of San Ramon Road	79,150	15,830	79,100	15,820
Mainline East of Hopyard Road Off	43,010	8,602	42,690	8,538
Mainline East of 680	72,650	14,530	75,850	15,170
Mainline East of Hopyard Road	86,070	17,214	89,930	17,986
Mainline East of Hacienda Drive	82,190	16,438	92,750	18,550
Mainline East of Tassajara Road	90,800	18,160	102,500	20,500
Mainline East of El Charro Road	93,420	18,684	105,120	21,024
Mainline East of Airway Boulevard	90,120	18,024	104,290	20,858
Mainline East of NB Isabel Ave	98,880	19,776	108,880	21,776
Mainline East of Portola Avenue	98,880	19,776	108,880	21,776
Mainline East of Livermore Avenue	90,680	18,136	102,740	20,548
Mainline East of Route 84	94,640	18,928	106,010	21,202
Mainline East of Vasco Road	82,500	16,500	90,720	18,144
Mainline East of Truck Scale	81,970	16,394	90,300	18,060
Mainline East of Greenville Road	91,790	18,358	90,920	18,184

Source: URS 2010

\* The Alameda County Travel Demand Model (ACCOMA 2005) and other studies conducted along the I-580 corridor project that trucks will represent 20 percent of future traffic under both No Build and Build conditions. Current truck percentages in the project area range from 8 to 12 percent (Caltrans 2008).

## Project Assessment Form for PM<sub>2.5</sub> Interagency Consultation

**RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

All data are for I-580 eastbound.

### No Build and Build LOS, 2030

Segments	NO BUILD				BUILD <sup>1</sup>			
	AM		PM		AM		PM	
	HOV	Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow <sup>2</sup>	HOV	Mixed Flow <sup>2</sup>
San Ramon Rd. – Interstate 680/580 Interchange	-	F	-	F	-	F	-	F
Interstate 680/580 Interchange – Hopyard Rd./Dougherty Rd.	-	C	-	F	-	C	-	<b>C</b>
Hopyard Road/Dougherty Rd. – Hacienda Dr.	-	D	-	F	-	D	-	F
Hacienda Dr. – Santa Rita Rd./Tassajara Rd.	A	D	A	F	C	D	C	F
Santa Rita Rd./Tassajara Rd. – El Charro Rd./Fallon Rd.	A	D	A	D	C	D	C	E
El Charro Rd./Fallon Rd. – Airway Blvd.	A	D	A	D	B	D	C	D
Airway Blvd. – Isabel Ave.	A	C	A	F	B	C	C	E
Isabel Ave. – Livermore Ave.	A	C	A	F	B	C	C	<b>D</b>
Livermore Ave. – First St.	A	C	A	F	B	C	C	<b>D</b>
First St. – Vasco Rd.	A	D	A	F	B	<b>C</b>	B	E
Vasco Rd. – Greenville Rd.	A	B	A	F	B	B	B	E
East of Greenville Rd.	-	C	-	C	-	<b>B</b>	-	C

Source: URS 2010

1. The project will implement dynamic pricing, where toll rates for single-occupant vehicles will vary based on the level of congestion. Vehicle detection systems will automatically adjust tolls to maintain free-flowing conditions (LOS C/D) in the express lanes.

2. Boldfaced letters indicate improvement in Level of Service compared with the No Build Alternative.

### No Build and Build Total AADT and Truck AADT, 2030

Segments	NO BUILD		BUILD	
	Total AADT	Truck AADT*	Total AADT	Truck AADT*
Mainline East of Eden Canyon	81,560	16,312	80,130	16,026
Mainline East of San Ramon Road	84,460	16,892	82,490	16,498
Mainline East of Hopyard Road Off	49,230	9,846	47,610	9,522
Mainline East of 680	93,830	18,766	91,460	18,292
Mainline East of Hopyard Road	109,480	21,896	108,960	21,792
Mainline East of Hacienda Drive	100,380	20,076	105,410	21,082
Mainline East of Tassajara Road	104,700	20,940	114,250	22,850
Mainline East of El Charro Road	113,480	22,696	122,410	24,482
Mainline East of Airway Boulevard	113,570	22,714	123,760	24,752
Mainline East of NB Isabel Ave	125,050	25,010	133,980	26,796
Mainline East of Portola Avenue	125,050	25,010	133,980	26,796
Mainline East of Livermore Avenue	113,320	22,664	123,570	24,714
Mainline East of Route 84	112,890	22,578	122,120	24,424
Mainline East of Vasco Road	105,420	21,084	113,250	22,650
Mainline East of Truck Scale	104,750	20,950	112,690	22,538
Mainline East of Greenville Road	122,060	24,412	121,090	24,218

Source: URS 2010

\* The Alameda County Travel Demand Model (ACCMA 2005) and other studies conducted along the I-580 corridor project that trucks will represent 20 percent of future traffic under both No Build and Build conditions. Current truck percentages in the project area range from 8 to 12 percent (Caltrans 2008).

## PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation

**Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**  
Not applicable

**RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**  
Not applicable

**Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses**  
Not applicable

**RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses**  
Not applicable

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

The proposed project would increase capacity for HOVs and allow solo drivers to pay a toll to use HOV lanes during AM and PM peak periods. The project would not result in adverse traffic effects elsewhere in the transportation network.

The traffic analysis (URS 2010) shows that the project would result in the following operational improvements:

2015

- Total travel time would decrease by approximately 3 percent during the AM and PM peak hours;
- Average network speed would increase by approximately 5 percent during the PM peak hour; and
- Total network delay would decrease by approximately 11 percent during the PM peak hour.

2030

- Total travel time would decrease by approximately 3 percent during the AM and 32 percent during the PM peak hour;
- Average network speed would increase by approximately 10 percent during the AM peak hour and approximately 94 percent during the PM peak hour;
- Total network delay would decrease by approximately 18 percent during the AM peak hour and 57 percent during the PM peak hour; and
- Throughput would increase by approximately 17 percent during the PM peak hour.

## Project Assessment Form for PM<sub>2.5</sub> Interagency Consultation

### Comments/Explanation/Details *(please be brief)*

The proposed project is in a nonattainment area for federal PM<sub>2.5</sub> standards. Therefore, according to 40 CFR Part 93, a hotspot analysis is required for conformity purposes. However, the EPA does not require hot spot analyses, qualitative or quantitative, for projects that are not listed in 40 CFR Section 93.123(b)(1) as a project of air quality concern (POAQC). Five types or categories of projects qualify as a POAQC. The following discussion evaluates whether the proposed project falls into any of these five POAQC categories.

The project does not qualify as a POAQC for the following reasons:

1. It is not a new or expanded highway project that would have a significant number of or increase in the number of diesel vehicles (40 CFR Section 93.123(b)(1)(i)).

→ The project would not add capacity for diesel vehicles. I-580 EB in the project limits has four mixed-flow lanes of traffic with auxiliary lanes. The majority of diesel trucks are restricted from using either HOV or HOT lanes, even for passing, by California Vehicle Code Section 21655(b). Caltrans 2009 truck data indicate that 69 to 84 percent of trucks in the project corridor have 5 axles or more and would be subject to this restriction.

→ By increasing the efficiency of unused HOV lane capacity, the project would improve congestion and reduce idling in the mixed-flow lanes that the trucks use.

2. The project does not affect any intersections (40 CFR Section 93.123(b)(1)(ii)).

3. It is not a new bus or rail terminal or transfer point (40 CFR Section 93.123(b)(1)(iii)).

4. It is not an expansion of an existing bus or rail terminal or transfer point (40 CFR Section 93.123(b)(1)(iv)).

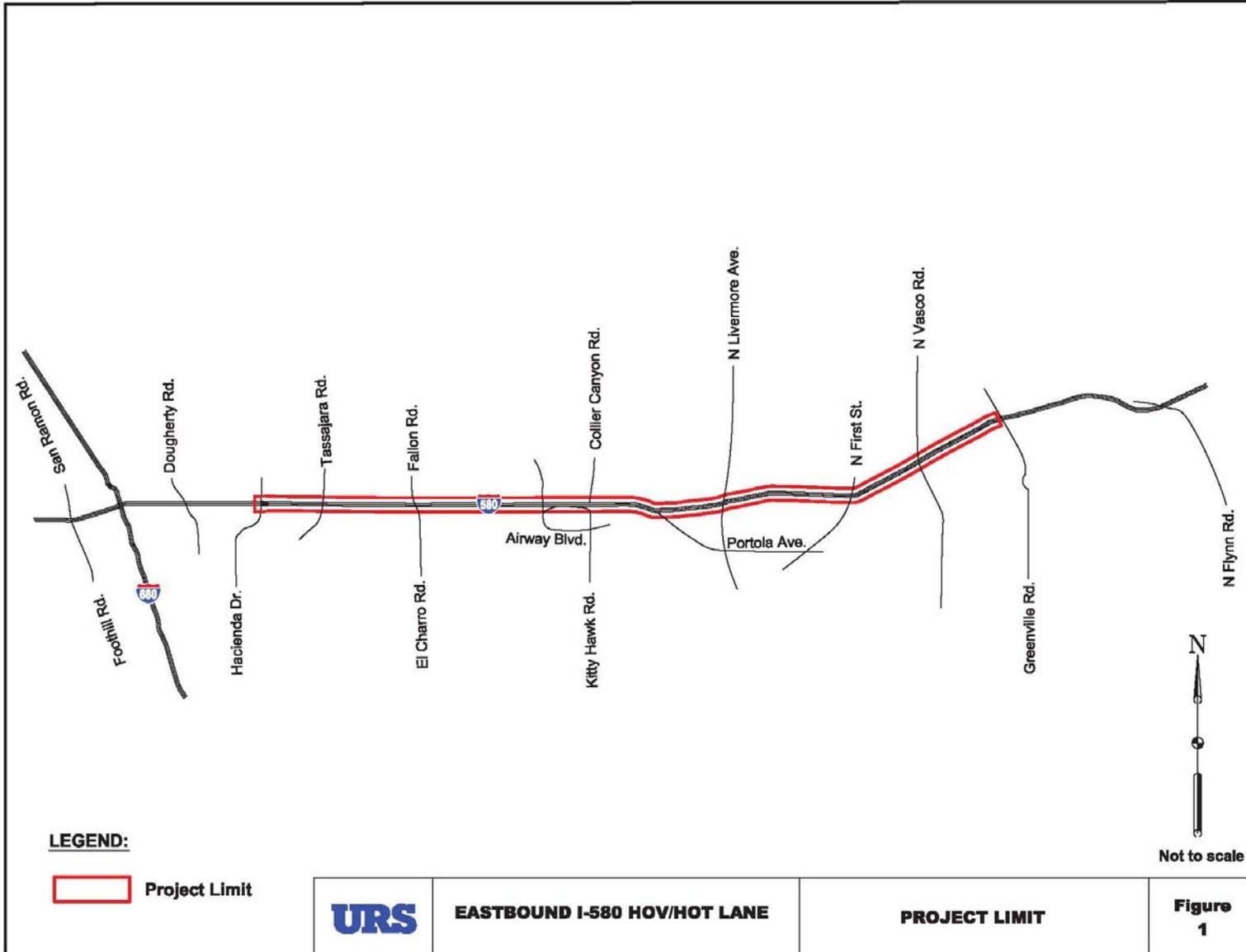
5. There is no state implementation plan for PM<sub>2.5</sub>, and the project area is therefore not identified in an implementation plan as an area of potential violation (40 CFR Section 93.123(b)(1)(v)).

Therefore, the proposed project meets the Clean Air Act requirements and 40 CFR 93.116 without any explicit hotspot analysis. The proposed project would not create a new, or worsen an existing, PM<sub>2.5</sub> violation.

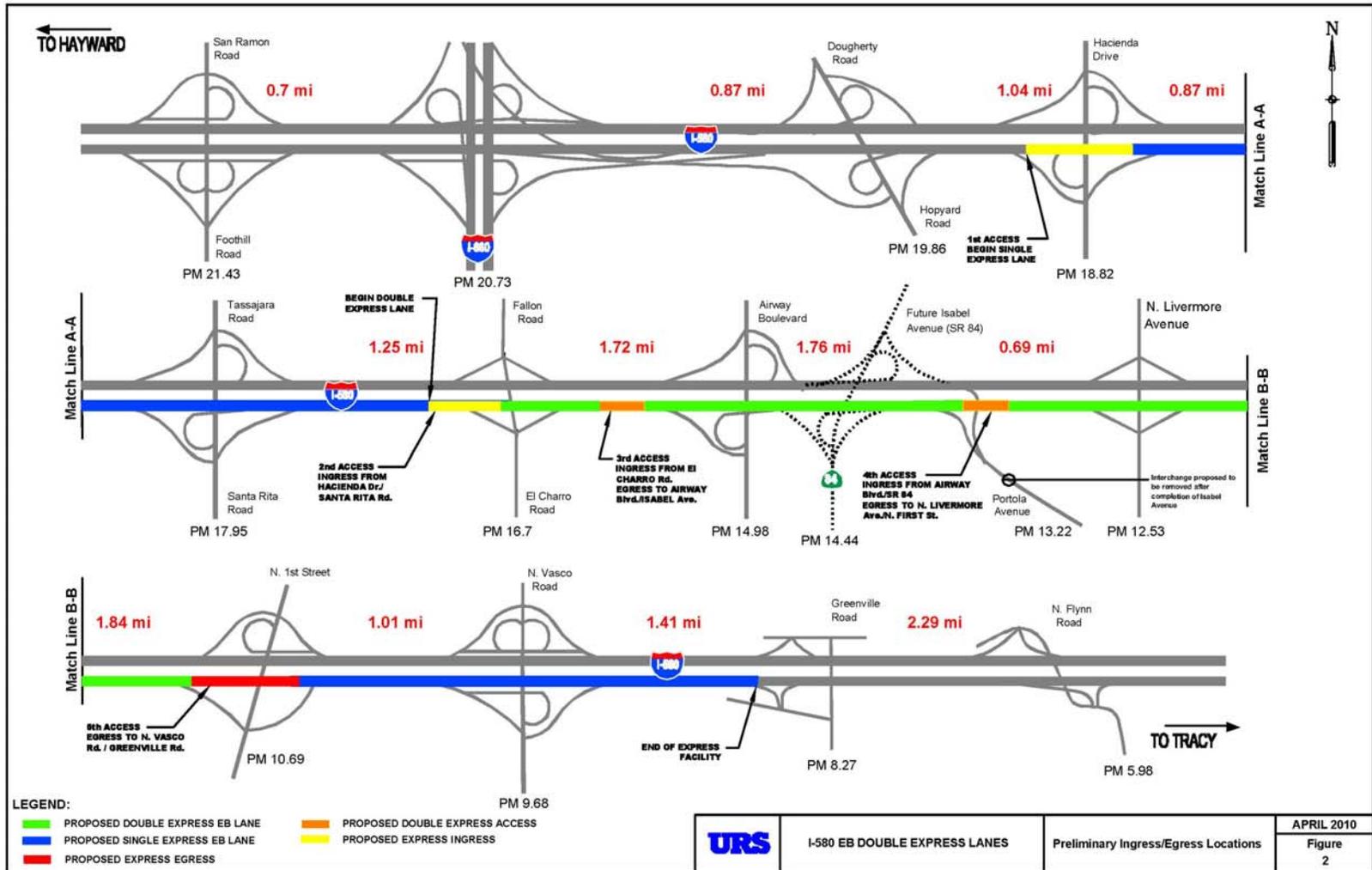
**PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation**

**Attachments**

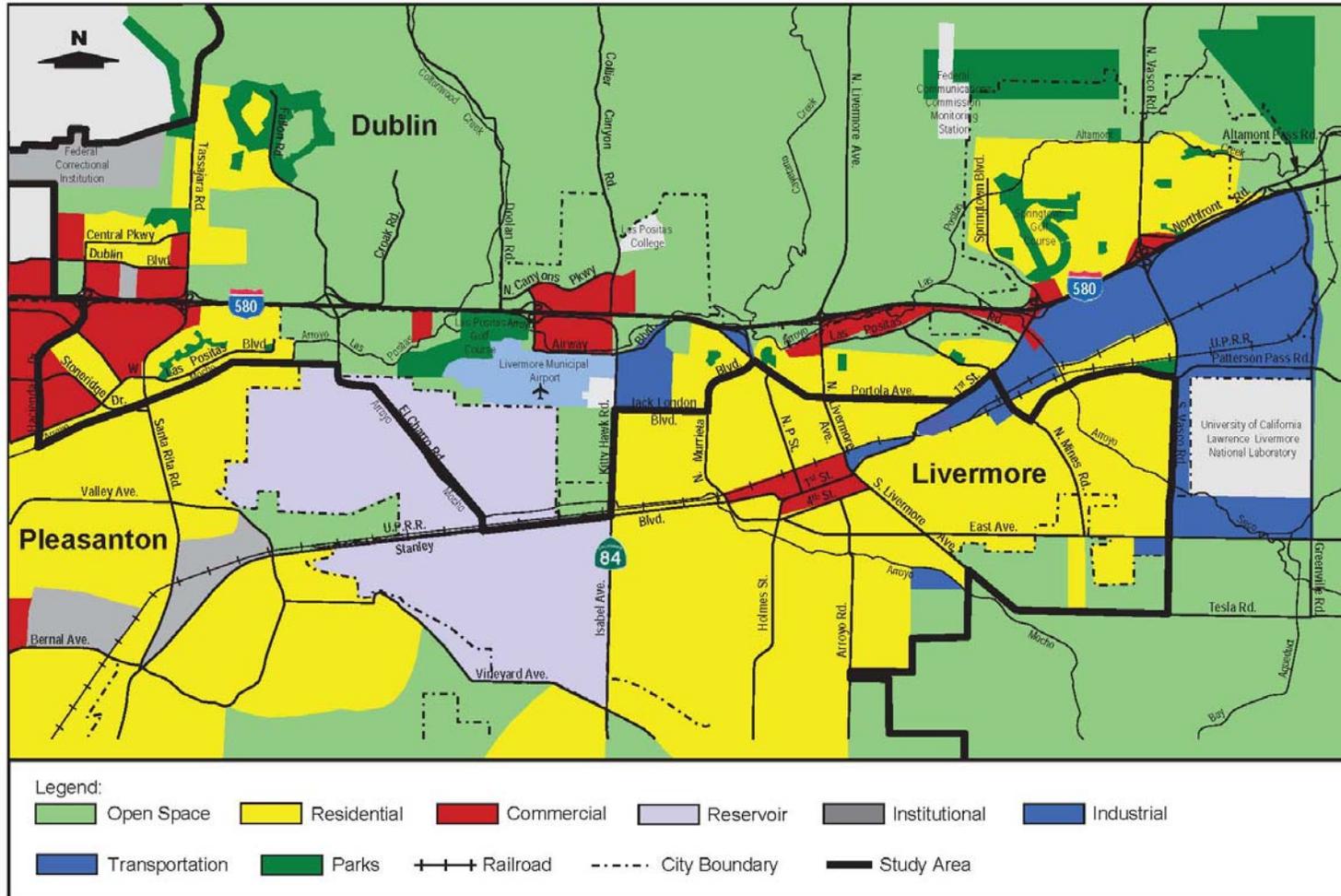
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PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation



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I-580 Eastbound Double Express Lanes Project

EXISTING LAND USES  
Figure 3