Project Assessment Form for $PM_{2.5}$ Interagency Consultation

Project Title: I-580 Westbound Express Lane Project

Project Summary for Air Quality Conformity Task Force Meeting: 2/28/13

Description

- The project would convert the proposed single HOV lane on westbound I-580 in Dublin, Pleasanton, and Livermore in Alameda County to a single express lane.
- The express lane project would use the HOV lane striping and require no roadway expansion, placement of additional pavement, or acquisition of right-of-way.
- Consultation with the Bay Area Air Quality Conformity Task Force for the HOV lane project was completed in February 2012.
- The express lane would improve overall operations on westbound I-580 compared to the HOV lane.

Background

- The NEPA Categorical Exclusion is scheduled for approval on 5/3/13.
- Seeking determination from Air Quality Conformity Task Force by 3/24/13.
- Expedient NEPA clearance will allow for consolidated construction of HOV/express lane traffic operation systems, resulting in substantial cost savings.

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- The single express lane would not allow for a significant increase in diesel vehicles. The majority of diesel trucks are restricted from using HOV lanes, even for passing, by California Vehicle Code Section 21655(b).
- The estimated increase compared with the No Build condition is 4.3% in 2015 and 6.9% in 2035. This does not constitute a significant increase under 40 CFR 93.123(b)(1).

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?—Not Applicable

(iii) New bus and rail terminals and transfer points?—Not Applicable

(iv) Expanded bus and rail terminals and transfer points?—Not Applicable

(v) Affects areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation?

- There is no state implementation plan for $PM_{2.5}$, 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)).
- The project area is not included in the Bay Area Air Quality Management District's Community Air Risk Evaluation program, which identifies Bay Area communities that are disproportionately impacted by emissions from transportation and stationary sources.

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RTIP ID# *(required)* 230665

TIP ID# *(required)* ALA090004

Air Quality Conformity Task Force Consideration Date
2/28/13

Project Description *(clearly describe project)*

The California Department of Transportation (Department), in cooperation with the Alameda County Transportation Commission (Alameda CTC), proposes to convert the proposed single High Occupancy Vehicle (HOV) lane on westbound Interstate 580 (I-580) to a single express lane. The express lane would be restricted to HOVs (which include automobiles with two or more persons, buses, and motorcycles) and vehicles that pay a toll. The project limits are from west of the Greenville Road undercrossing (PM 7.8) to just east of the San Ramon Road/Foothill Road overcrossing (PM 21.5) in eastern Alameda County. The total length of the project is approximately 13.7 miles (see Figure 1).

The proposed express lane would not require any roadway expansion, placement of additional pavement, or acquisition of right-of-way. The express lane would use the same striping and alignment as the HOV lane. Tolling equipment and signage would be installed, and trenching along the outside edge of pavement would occur for installation of conduits.

Construction of the westbound HOV lane and conversion to an express lane will be simultaneous, to allow the facility to open to traffic as an express lane. Consultation with the Bay Area Air Quality Conformity Task Force was completed in February 2012 for the westbound HOV lane project (TIP ID ALA070018; FMS ID 185.00). As part of consultation, the HOV lane project was found to reduce $PM_{2.5}$ emissions in both 2015 and 2035. The express lane would improve the overall level of service compared with the HOV lane (No Build condition) and is expected to further reduce $PM_{2.5}$ emissions.

Type of Project: Change to existing State highway

County	**Narrative Location/Route & Postmiles** On westbound Interstate 580 from east of Greenville Road to Foothill Road/San Ramon Road (Post Miles 21.5 to 7.8) **Caltrans Projects – EA#** 2G4900
Alameda	

Lead Agency: Alameda County Transportation Commission

Contact Person	**Phone#**	**Fax#**	**Email**
Gary Sidhu	510-208-7421	510-836-2185	gsidhu@alamedactc.org

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

X	**Categorical Exclusion (NEPA)**	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	**Section 6004 – Categorical Exemption**	X	**Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	12/12	8/11	1/13	2014
End	5/13	12/13	12/13	2015

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

The conversion of the HOV lane to an express lane will maximize the efficiency of the HOV lane and help reduce congestion in the mixed-flow lanes. In addition, it will provide users safe and reliable trip times and offer an alternative way to generate revenue for future transportation and transit improvements in the I-580 corridor.

The project is needed to address congestion within the I-580 corridor, which serves the local developed communities of Dublin, Pleasanton and Livermore as well as the Central Valley region.

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

The project area is in the cities of Dublin, Pleasanton, and Livermore in Alameda County (see Figure 2). I-580 in the project limits is bordered by commercial, industrial, open space, and residential land uses. The project would not change land uses in any way that would result in additional diesel truck traffic to or from the study area.

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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)*

The 2008 Alameda Countywide Travel Demand Model developed by the Alameda County Congestion Management Agency was used to develop the future volume forecasts. The land use and socio-demographic data were taken from Association of Bay Area Governments (ABAG) projections.

Traffic volumes for the peak period along the freeway mainline and ramps were derived based on Caltrans 24-hour traffic volumes. Vehicle fleet composition (HOV vehicles and heavy trucks) was collected from the Caltrans website, I-580 Westbound HOV Lane Project Traffic Operations Technical Memorandum, I-580/I-680 Interchange Traffic Operations Study, and the Central County Freeway Study. Additional traffic data to determine the vehicle fleet composition were collected as part of this study.

Occupancy counts were collected by URS during 2009. Travel time runs for the a.m. and p.m. peak period conducted in Year 2006 were provided by ACTC. Additional travel time runs for the a.m., mid-day and p.m. peak periods were conducted in 2009 to supplement the travel time runs provided by ACTC. In addition, travel time runs from other studies conducted along the study corridor were collected. Queue length field observations were made during the a.m. and p.m. peak periods.

Based on the Caltrans *2006 Annual Average Daily Truck Traffic on the California State Highway System,* 10 percent of the total traffic on this corridor is truck traffic. Truck percentages vary between 8 and 12 percent within the study area. For the purpose of this traffic operational analysis, an average of 10 percent was used, to correspond with truck volumes at the truck scales located between the Vasco Road and Greenville Road interchanges in the westbound direction.

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

No Build and Build Total LOS, 2015 Westbound, AM Peak Hour Only

I-580 WB Freeway Segments	NO BUILD	BUILD
East of North Flynn Rd	C	C
Isabel Ave to Airway Blvd	C	C
Dougherty Rd to I-680	F	F
West of San Ramon Rd	B	**A**

Note: Level of service is shown is for entire freeway in the westbound direction. Improved LOS with the project is shown in **boldface**.

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

I-580 WB Freeway Segments	NO BUILD		BUILD	
	Total AADT	Truck AADT	Total AADT	Truck AADT
East of North Flynn Rd	90,671	9,067	90,671	9,067
Isabel Ave to Airway Blvd	93,771	9,377	99,600	9,960
Dougherty Rd to I-680	105,871	10,587	111,343	11,134
West of San Ramon Rd	84,629	8,463	90,114	9,011

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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

No Build and Build Total LOS, 2035 Westbound, AM Peak Hour Only

I-580 WB Freeway Segments	NO BUILD	BUILD
East of North Flynn Rd	D	D
Isabel Ave to Airway Blvd	D	**C**
Dougherty Rd to I-680	F	F
West of San Ramon Rd	B	C

Note: Level of service is shown is for entire freeway in the westbound direction. Improved LOS with the project is shown in **boldface**.

No Build and Build Total AADT and Truck AADT, 2035 Westbound

I-580 WB Freeway Segments	NO BUILD		BUILD	
	Total AADT	Truck AADT	Total AADT	Truck AADT
East of North Flynn Rd	120,000	12,000	120,000	12,000
Isabel Ave to Airway Blvd	116,743	11,674	125,043	12,504
Dougherty Rd to I-680	152,686	15,269	166,200	16,620
West of San Ramon Rd	113,243	11,324	126,771	12,677

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Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
NA

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
NA

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
NA

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
NA

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

The project would not have adverse traffic redistribution effects or result in changes in diesel truck travel patterns.

Buses and transit providers would be able to use the express lane for free. The project would not affect BART, which currently runs within the I-580 median in the western part of the project corridor.

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

The proposed project is not a Project of Air Quality Concern.

1. According to the Federal Highway Administration $PM_{2.5}$ FAQs, which were coordinated with EPA:

> Would any nonexempt project on a facility with 125,000 AADT and 8% diesel trucks be a "project of air quality concern," or would only a project that significantly increased the number of diesel vehicles on such a facility be a "project of air quality concern?"
>
> As discussed in the examples in the preamble to the March 10, 2006 rule (71 FR 12491), **40 CFR 93.123(b)(1)(i) should be interpreted as applying only to projects that would involve a significant increase in the number of diesel transit busses and diesel trucks on an existing highway facility** *[Emphasis added]*. The example of 125,000 AADT and 8% diesel trucks is intended for new facilities, not as an example of a "significant increase." This is consistent with 93.123(b)(1)(iv) which defines projects of air quality concern based on a significant increase the number of diesel vehicles due to terminal or transfer project expansion. A "significant increase" in the number of diesel transit busses and diesel trucks under either 40 CFR 93.123(b)(1)(ii) or (iv) would need to be determined through interagency consultation. (http://www.fhwa.dot.gov/environment/air_quality/conformity/reference/faqs/pm25faqs.cfm)

Westbound I-580 in the project limits is an <u>existing roadway</u> that contains segments with <u>existing AADT and truck percentages</u> that are over 125,000 AADT and 8% or more diesel truck traffic. The proposed single express lane project would allow for only a nominal increase in diesel truck traffic, as some non-diesel vehicles move from the general purpose lanes to the express lane. Neither the HOV lane nor the express lane can be used by diesel trucks, even for passing (California Vehicle Code Section 21655(b)).

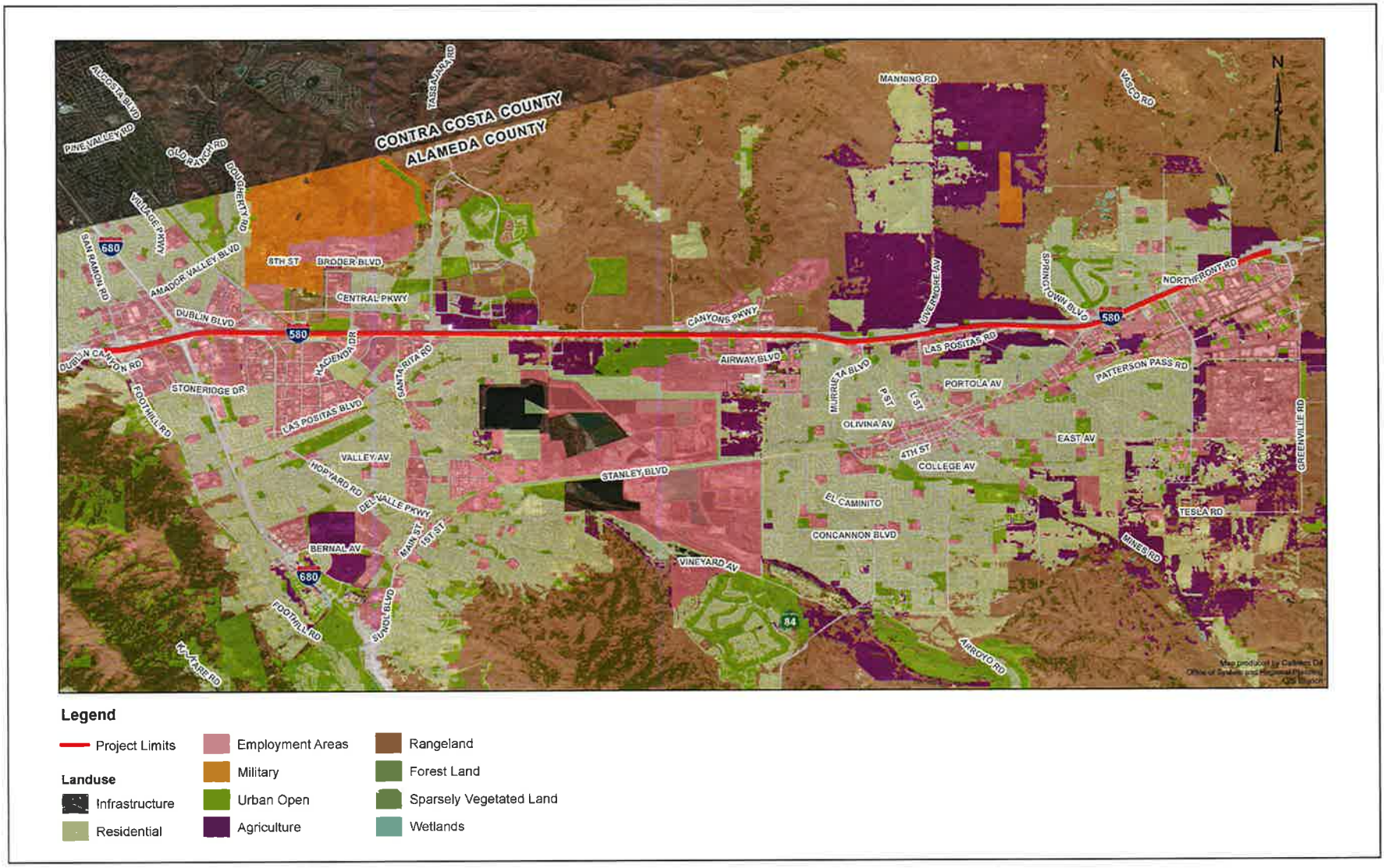
AADT data for the 2015 and 2035 Build conditions show an average truck percentage increase of 4.3% and 6.9%, respectively, compared with No Build conditions. This does not constitute a significant increase under 40 CFR 93.123(b)(1).

2. In February 2012, Alameda CTC provided the Air Quality Conformity Task Force with a qualitative Hot Spot Analysis for the I-580 Westbound HOV Lane in the generally same project limits on I-580. The Hot Spot Analysis demonstrated that the HOV lane would reduce $PM_{2.5}$ emissions in both 2015 and 2035 because of travel time savings, decreased delay times, and improvements in average network speed when compared to the No Build Alternative.

The proposed express lane would allow for only a nominal increase in diesel truck traffic compared with the HOV lane, as some non-diesel vehicles move from the general purpose lanes to the express lane. As demonstrated in the LOS data for 2015 and 2035 Build conditions, the express lane would improve the overall level of service compared with the HOV lane (No Build condition). Therefore, the proposed project is expected to further reduce $PM_{2.5}$ emissions compared with No Build.

3. The Bay Area levels of $PM_{2.5}$ were just over the national 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$ based on data for the three-year cycle 2006-2008. This triggered the requirement for the Bay Area to prepare a SIP submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that Bay Area PM levels currently meet the standard. On October 29, 2012, EPA issued a proposed a clean data determination rule-making to determine that the Bay Area now attains the 24-hour $PM_{2.5}$ national standard. Once this determination is finalized, the SIP requirements that pertain to developing a plan will be suspended. As there is no plan for $PM_{2.5}$, there are no areas formally identified as areas of concern. However, the Bay Area Air Quality Management District (BAAQMD) has developed the Community Air Risk Evaluation (CARE) program to identify Bay Area communities that are disproportionately impacted by emissions from transportation and stationary sources. The CARE program has identified six disproportionately impacted communities: Concord; Richmond/San Pablo; western Alameda County; San Jose; Redwood City/East Palo Alto; and eastern San Francisco. The location of this project is not in one of these identified CARE communities. Therefore, this area is not an area identified by the BAAQMD as an area of potential air quality concern.

Figure 1. Project Area



Legend

- Project Limits

Landuse

- Infrastructure
- Residential
- Employment Areas
- Military
- Urban Open
- Agriculture
- Rangeland
- Forest Land
- Sparsely Vegetated Land
- Wetlands

Figure 2. Project Area Land Uses