



I-580 EXPRESS LANE POLICY ADVISORY COMMITTEE

MEETING NOTICE

Monday, February 11, 2013 9:15 am

(Or immediately following I-680 SSCLJPA meeting)

1333 Broadway, Suite 300, Oakland, California 94612

(See map on last page of agenda)

Commission Chair

Scott Haggerty, Supervisor – District 1

Commission Vice Chair

Rebecca Kaplan, Councilmember

AC Transit

Greg Harper, Director

Alameda County

Supervisors

Richard Valle – District 2

Wilma Chan – District 3

Nate Miley – District 4

Keith Carson – District 5

BART

Thomas Blalock, Director

City of Alameda

Marilyn Ezzy Ashcraft, Vice Mayor

City of Albany

Peggy Thomsen, Mayor

City of Berkeley

Laurie Capitelli, Councilmember

City of Dublin

Tim Sbranti, Mayor

City of Emeryville

Ruth Atkin, Councilmember

City of Fremont

Suzanne Chan, Councilmember

City of Hayward

Marvin Peixoto, Councilmember

City of Livermore

John Marchand, Mayor

City of Newark

Luis Freitas, Councilmember

City of Oakland

Larry Reid, Councilmember

City of Piedmont

John Chiang, Mayor

City of Pleasanton

Jerry Thorne, Mayor

City of San Leandro

Michael Gregory, Vice Mayor

City Of Union City

Carol Dutra-Vernaci, Mayor

Executive Director

Arthur L. Dao

Chair:

John Marchand

Vice Chair:

Nate Miley

Members:

Scott Haggerty

Jerry Thorne

Tim Sbranti

Staff Liaison:

Stewart D. Ng

Executive Director:

Arthur L. Dao

Clerk of the Commission:

Vanessa Lee

AGENDA

*Copies of Individual Agenda Items are Available on the:
Alameda CTC Website -- www.AlamedaCTC.org*

1 ROLL CALL

2 PUBLIC COMMENT

Members of the public may address the Board during “Public Comment” on any item not on the agenda. Public comment on an agenda item will be heard when that item is before the Board. Only matters within the Board’s jurisdictions may be addressed. Anyone wishing to comment should make their desire known by filling out a speaker card and handling it to the Secretary. Please wait until the Chair calls your name. Walk to the microphone when called; give your name, and your comments. Please be brief and limit comments to the specific subject under discussion. Please limit your comment to three minutes.

3 CONSENT CALENDAR

3A. [Approval of the Minutes of January 14, 2013](#) – Page 1 **A**

4 REGULAR MATTERS

4A. [I-580 Corridor High Occupancy Vehicle \(HOV\) Lane Projects Status Update](#)– Page 3 **I**

4B. [I-580 Express \(HOT\) Lane Projects Status Update](#) – Page 15 **I**

4C. [I-580 Express \(HOT\) Lane System Integration Status Update](#) – Page 25 **I**

5 COMMITTEE MEMBER REPORTS (Verbal)

6 STAFF REPORTS (Verbal)

7 ADJOURNMENT/NEXT MEETING: March 11, 2013

Key: A- Action Item; I – Information Item

- (*) Materials will be distributed at the meeting.
- (#) All items on the agenda are subject to action and/or change by the Board.

PLEASE DO NOT WEAR SCENTED PRODUCTS SO INDIVIDUALS WITH ENVIRONMENTAL SENSITIVITIES MAY ATTEND

*Alameda County Transportation Commission
1333 Broadway, Suites 220 & 300, Oakland, CA 94612
(510) 208-7400 (New Phone Number)
(510) 836-2185 Fax (Suite 220)
(510) 893-6489 Fax (Suite 300)
www.alamedactc.org*



I-580 Express Lane Policy Advisory Committee Meeting
MINUTES OF JANUARY 14, 2013
OAKLAND, CALIFORNIA

The meeting was convened by the Chair, Supervisor Haggerty, at 9:55am

1 ROLL CALL

A quorum was confirmed; Haggerty, Thorne, Marchand and Sbranti were all present.

2 PUBLIC COMMENT

There were no public comments.

3 CONSENT CALENDAR

3A. Approval of Minutes of November 19, 2012

Mayor Marchand motioned to approve this Item. Mayor Thorne seconded the motion. The motion passed 4-0.

4 REGULAR MATTERS

4A. I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects Status Update

Gary Sidhu provided an update on the I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects. Mr. Sidhu gave a brief overview of the Eastbound and Westbound segments and included an update on the construction bids for both contracts.

This item was for information only.

4B. I-580 Express (HOT) Lane Projects Status Update

4C. I-580 Express (HOT) Lane System Integration Status Update

Connie Fremier and Kanda Raj presented a combined update on Item 4B and Item 4C. The update covered the delivery strategy for the I-580 corridor. She provided an update on the status and schedule of the Eastbound and Westbound I-580 HOT Lane Projects. Both projects are currently on a similar project schedule and will be combined into one design package for construction. The completion of the environmental phase for each project has been delayed until July 2013 due to additional work needed to update traffic studies for the “near continuous” access option, however, this will not affect the start of construction in 2014. Opportunities to incorporate HOT project elements via contract change order into the existing HOV lane projects will be explored and implemented where feasible. The update also included a review of “near continuous” access versus limited access, corridor scheduling, and requirements of zone tolling and frequency of toll reader locations, enforcement strategies, benefits and risks of continuous access, and project cost.

The 580 HOT lane projects will be the first in the State to implement the “near continuous” access concept and will be at the forefront of developing the implementation strategy and

details. Staff is coordinating with other agencies in the region to ensure consistency in implementing the “near continuous” access concept. Both MTC and Solano County have HOT lane projects that propose to use the “near continuous” access concept, but have schedules behind the 580 corridor. Staff will present additional info regarding zone tolling and “near continuous” access as details are developed.

These items were presented for information only.

5 COMMITTEE MEMBER REPORTS

There were no committee member reports.

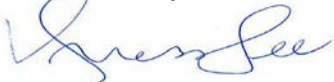
6 STAFF REPORTS

There were no Staff Reports.

7 ADJOURNMENT/NEXT MEETING: February 11, 2013

The meeting adjourned at 10:25am. The next meeting will be February 11, 2013.

Attested by:



Vanessa Lee
Clerk of the Commission



Memorandum

DATE: January 31, 2013

TO: I-580 Express Lane Policy Advisory Committee

FROM: Stewart D. Ng, Deputy Director of Programming and Projects
Stefan Garcia, Project Controls Team

SUBJECT: I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects Status Update

Recommendation

This is an informational item only. No action is required.

Summary

The Alameda CTC is the sponsor for the I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects, which will construct an HOV lane in both the Eastbound and Westbound directions along I-580 from Pleasanton to Livermore. The projects are designed to provide increased capacity, safety and efficiency for commuters and freight along the primary trade corridor connecting the Bay Area with the Central Valley.

As project sponsor, the Alameda CTC has been working in partnership with Caltrans, the Metropolitan Transportation Commission (MTC), Alameda County, and the cities of Livermore, Dublin, and Pleasanton to deliver the projects. The construction contracts are being administered by Caltrans; the current status of each is as follows:

- I-580 Eastbound HOV Lane Project (Segments 1 and 2) is complete and the HOV lane was opened to traffic in 2010. The construction contract for auxiliary lanes (Segment 3) was awarded on November 16, 2012.
- I-580 Westbound HOV Lane Project will be constructed in two separate construction contracts: an eastern segment from Greenville Road to Isabel Avenue and a western segment from Isabel Avenue to Foothill/San Ramon Road. The construction contract for the western segment was awarded on October 29, 2012 and the construction contract for the eastern segment was awarded on November 20, 2012.

Attached for the Committee's review, are the monthly status reports for both the I-580 Eastbound HOV Lane Project and the I-580 Westbound HOV Lane Project; each report covers activities through January 31, 2013.

Discussion

I-580 Eastbound HOV Lane

The I-580 Eastbound HOV Lane Project is comprised of three segments:

- Segment 1 and 2 provided one HOV lane in the eastbound direction from Greenville Road to Hacienda Drive. Construction was completed in 2010.
- Segment 3 limits span from Hacienda Drive to Greenville Road and will construct eastbound auxiliary (AUX) lanes from Isabel Avenue to First Street in Livermore. In addition, the project will widen the eastbound bridges at Arroyo-Las Positas, pave and stripe all lanes in the eastbound direction from Hacienda Drive to Greenville Road and make other improvements to accommodate conversion of the HOV lane to a double express / high occupancy toll (HOT) lane facility.

Design and right-of-way acquisition work for Segment 3 was completed in May 2012. The bids for this segment were opened on October 5, 2012. The apparent low bidder was OC Jones & Sons with a bid 6.22% below the Engineer's Estimate. The contract was awarded to OC Jones & Sons on November 16, 2012.

The total cost of I-580 Eastbound HOV Lane Project is \$137.1M. The project is funded from a combination of local, state and federal funds. The California Transportation Commission allocated \$21.56M CMIA and \$5M SHOPP funds for Segment 3 at their May 2012 meeting. Both CMIA and SHOPP allocations were adjusted to reflect the bid savings at the contract award. See Attachment A for detailed project funding and financial status.

I-580 Westbound HOV Lane

The I-580 Westbound HOV Lane Project will provide a westbound HOV lane from the Greenville Overcrossing in Livermore to the San Ramon / Foothill Road overcrossing in Dublin / Pleasanton. The project will also provide an auxiliary lane from Vasco Road to First Street; First Street to North Livermore; North Livermore to Isabel Avenue; and from Airway Blvd to Fallon Road and will rehabilitate the existing pavement. The widening of the Arroyo Las Positas Creek Bridges has been included in Segment 3 of Eastbound HOV Lane Project in order to avoid conflict during construction between contractors. The westbound project will be constructed in two separate construction contracts:

- An East Segment from Greenville Road to Isabel Avenue, and
- A West Segment from Isabel Avenue to San Ramon/Foothill Road.

The total cost of the I-580 Westbound HOV Project is \$145.2M. The project is funded from local, state and federal funds. California Transportation Commission allocated \$101.7M CMIA, \$29.4M SHOPP and \$10.0M TCRP funds at their April, May and September 2012 meetings. Both CMIA and SHOPP allocations were adjusted to reflect bid savings at the contract award. See Attachment B for detailed project funding and financial status.

Design and right-of-way acquisition work for both segments was completed in May 2012. The bids for the western segment were opened on August 29, 2012; the apparent low bidder was DeSilva Gates Construction with a bid 23.32% below Engineer's Estimate. The bids for the eastern segment were opened on September 19, 2012; the apparent low bidder was Ghilotti Construction Company with a bid 16.33% below Engineer's Estimate. The west segment contract was awarded October 29, 2012 and the east segment contract was awarded on November 20, 2012.

Benefits

The I-580 Eastbound HOV Project has reduced peak period congestion and delay by providing a new HOV lane for carpooling motorists and transit riders. The I-580 Westbound HOV Project will complement the newly completed eastbound HOV lane and provide similar benefits. The new lane aims to encourage ridesharing and transit use and to reduce the number of single occupant vehicles on the mainline. AUX lanes are designed to improve highway operations by separating vehicle on and off movements on the mainline from the faster moving through traffic lanes. This project will support regional air quality attainment goals by reducing the numbers of automobiles in use and idling in traffic. It will also improve safety for motorists and maintenance workers by providing adequate inside and outside shoulders where possible, allowing a refuge area for disabled vehicles and improving accessibility for the California Highway Patrol (CHP) and emergency and maintenance vehicles.

Fiscal Impact

This is an informational item and there is no fiscal impact.

Attachment(s)

- Attachment A: I-580 Eastbound HOV Lane Project Monthly Status Report
- Attachment B: I-580 Westbound HOV Lane Project Monthly Status Report
- Attachment C: I-580 Corridor HOV Lane Projects – Location Map

This page intentionally left blank

ATTACHMENT A
I-580 Eastbound HOV Lane
Monthly Progress Report
Through January 31, 2013

PROJECT DESCRIPTION

The Eastbound I-580 HOV Lane Project includes three segments: Segment 1, Segment 2 and Segment 3:

- **Segment 1** - HOV lane construction from Greenville Road to Portola Avenue.
- **Segment 2** - HOV lane construction from Portola Avenue to Hacienda Drive.
- **Segment 3** - Auxiliary (AUX) Lane from Hacienda Drive to Greenville Road. Project scope includes:
 - Construction of AUX lanes from Isabel Avenue to First Street;
 - Pavement width necessary for a double high occupancy toll (HOT) lane facility;
 - Final lift of asphalt concrete (AC) pavement and striping for entire eastbound project limits from Hacienda Drive to Portola Avenue;
 - The soundwall that was deleted from the I-580/Isabel Avenue Interchange Project; and,
 - The widening of two bridges at Arroyo Las Positas in the eastbound direction.

CONSTRUCTION STATUS

Segment 1 - The HOV lane from Greenville Road to Portola Avenue was opened to traffic in October 2009. The construction contract of this segment was accepted on February 2, 2010.

Segment 2 - The HOV lane from Hacienda Drive to Portola Avenue was opened to traffic in November 2010. The construction contract was accepted on September 30, 2011.

Segment 3 – The Auxiliary Lane project from Hacienda Drive to Greenville Road was advertised on July 9, 2012 and bids were opened on October 5, 2012. The apparent low bidder was OC Jones & Sons with a bid 6.33% below the Engineer’s Estimate. The contract was awarded to OC Jones & Sons by Caltrans on November 16, 2012. Caltrans is reviewing initial submittals and anticipates the contractor starting field work in April 2013.

SEGMENT 3 ANTICIPATED CONSTRUCTION STAGING & TRAFFIC HANDLING

Construction activities are expected to include both day and night work; final construction staging sequence may change based on contractor’s proposed plans. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes. Due to heavy day time traffic volumes, closing traffic lanes will create considerable traffic delays. For this reason, pavement rehabilitation work can only be done during night time hours. Night work will include setting lane closures and shifting traffic lanes (placement of k-rail and striping work), existing pavement rehabilitation work (crack and seat, slab replacement and overlay) and electrical work. According to the approved lane closure charts by Caltrans, night work will occur

between 9:00 PM and 4:00 AM. Lane closures are expected, but complete freeway closure is not anticipated. Work within the median behind k-rail is expected as the first order of work and will occur during day time hours. In addition, all bridge work is expected to occur during day time hours. In cooperation with Alameda CTC, Caltrans will lead the public outreach effort; which is expected to occur following award of the construction contract.

FUNDING AND FINANCIAL STATUS

The I-580 Eastbound HOV is funded through federal, state and local funds.

I-580 Eastbound AUX Lane Project Funding Plan - Segment 3

Project Phase	Funding Source (\$ x million)						
	CMIA	RM2	TVTC	FED	SHOPP	Meas. B	Total
PA&ED		1.54	0.64				2.18
PS&E		1.38	0.92	0.23		0.07	2.60
ROW		0.20	0.06			0.33	0.59
Construct Cap	17.87	2.20			4.69	6.08	30.84
Construct Sup	2.53	1.12				1.09	4.74
TOTAL	20.40	6.44	1.62	0.23	4.69	7.57	40.95
Total Project Cost: \$40.95 M							

SCHEDULE STATUS

I-580 Eastbound AUX Lane Project Schedule - Segment 3

Project Approval	December 2011 (A)
RTL	May 2012 (A)
CTC Vote	May 2012 (A)
Begin Construction (Award)	November 2012 (A)
End Construction	November 2014 (T)

RECENT ACTIVITIES

Project was awarded on November 16, 2012.

UPCOMING ACTIVITIES

Construction activities are expected to begin April 2013.

ATTACHMENT B
I-580 Westbound HOV Lane
Monthly Progress Report
Through January 31, 2013

PROJECT DESCRIPTION

The Westbound I-580 HOV Lane Project includes three segments: Segment 1, Segment 2 and Segment 3:

- **Segment 1** - East HOV Segment; project limits are Greenville Road to Isabel Avenue.
- **Segment 2** - West HOV Segment; project limits are from Isabel Avenue to San Ramon Road in Dublin.
- **Segment 3** - Eastbound bridge widenings at Arroyo Las Positas Creek. The project scope of this segment has been combined with, and will be delivered as part of, the Segment 3 contract for the Eastbound HOV Lane Project.

CONSTRUCTION STATUS

Segment 1 (East Segment) – This project was advertised on July 16, 2012 and bids were opened on September 19, 2012. The apparent low bidder was Ghilotti Construction Company, Inc. with a bid 16.33% below Engineer's Estimate. The contract was awarded to Ghilotti Construction Company, Inc. by Caltrans on November 20, 2012. Caltrans is reviewing initial submittals and anticipates the contractor starting field work in April 2013.

Segment 2 (West Segment) – This project was advertised on June 25, 2012 and bids were opened on August 29, 2012. The apparent low bidder was DeSilva Gates Construction with a bid 23.32% below Engineer's Estimate. The contract was awarded to DeSilva Gates Construction by Caltrans on October 29, 2012. Caltrans is reviewing initial submittals and anticipates the contractor starting field work in March 2013.

ANTICIPATED CONSTRUCTION STAGING & TRAFFIC HANDLING

Even though final construction staging sequence could change based on contractor's proposed plans, construction activities are expected to include both day and night work. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes. Due to heavy day time traffic, closing traffic lanes will create significant traffic delays. As such pavement rehabilitation work can only be done during night time. Night work will include setting lane closures and shifting traffic lanes (placement of k-rail and striping work), existing pavement rehabilitation work (crack and seat, slab replacement and paving) and electrical work. According to the approved lane closure charts by Caltrans, night work will occur between 9:00 PM and 4:00 AM. Lane closures are expected but complete freeway closure is not anticipated. Work within the median behind k-rail is expected as first order of work and will occur during day time. All bridge work is expected during day time. In cooperation with Alameda CTC, Caltrans will lead the public outreach effort; which is expected to occur following award of the construction contracts.

FUNDING AND FINANCIAL STATUS

The I-580 Westbound HOV Lane Project is funded through federal, state, and local funds available for the I-580 Corridor. The total project cost is \$145.2M. The total programmed (committed) funding from federal, state and local sources is \$45.2M.

I-580 Westbound HOV Lane Project Funding Plan Segment 1 (East Segment)

Project Phase	Funding Source (\$ x million)								Total
	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	TCRP LONP	
PA&ED		4.44							4.44
PS&E		3.23		0.12		0.89	0.54		4.78
ROW		1.37							1.37
Const Cap	35.34		5.92	6.19	13.54	0.96			61.95
Const. Sup	6.52		1.59			2.06		0.24	10.41
Total	41.86	9.04	7.51	6.31	13.54	3.91	0.54	0.24	82.95
Total Project Cost: \$82.95 M									

Segment 2 (West Segment)

Project Phase	Funding Source (\$ x million)							Total
	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	
PA&ED		3.71						3.71
PS&E		2.71		0.10		0.73	0.46	4.00
ROW		1.12						1.12
Const Cap	33.73		2.49		9.61			45.83
Const. Sup	6.75					0.88		7.63
Total	40.48	7.54	2.49	0.10	9.61	1.61	0.46	62.29
Total Project Cost: \$62.29 M								

SCHEDULE STATUS

I-580 Westbound HOV Lane Project Schedule:

Segment 1 (East Segment):

Project Approval	January 2010 (A)
RTL	May 2012 (A)
CTC Vote	May 2012 (A)
Begin Construction (Award)	November 2012 (A)
End Construction	November 2014 (T)

Segment 2 (West Segment):

Project Approval	January 2010 (A)
RTL	April 2012 (A)
CTC Vote	April 2012 (A)
Begin Construction (Award)	October 2012 (A)
End Construction	November 2014 (T)

RECENT ACTIVITIES

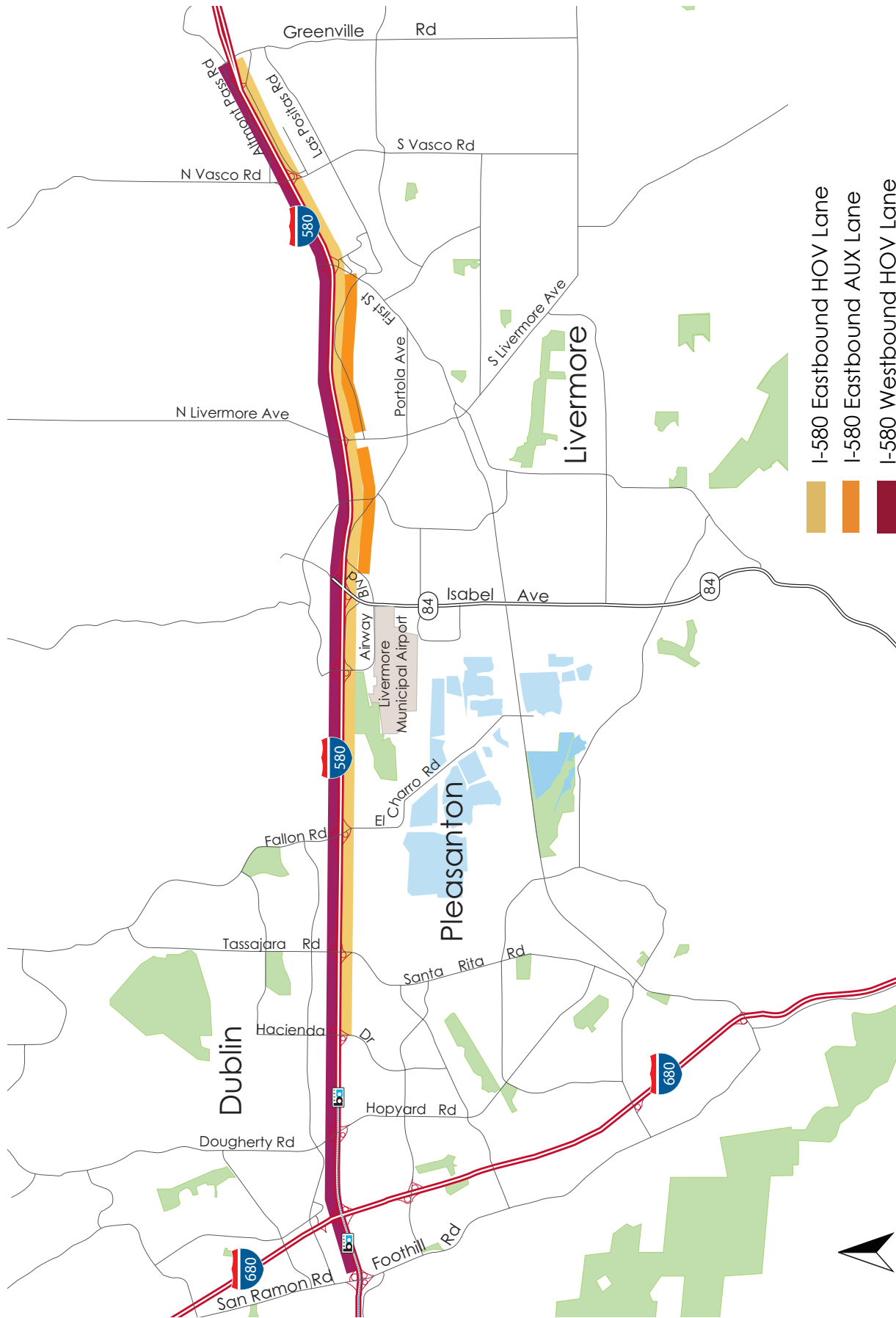
- East Segment: Bids opened on September 19, 2012; construction contract awarded November 20, 2012.
- West Segment: Bids opened on August 29, 2012; construction contract awarded October 29, 2012.

UPCOMING ACTIVITIES

- East Segment: Construction activities expected to start April 2013.
- West Segment: Construction activities expected to start March 2013.

This page intentionally left blank

I-580 Corridor HOV Lane Projects - Location Map



- I-580 Eastbound HOV Lane
- I-580 Eastbound AUX Lane
- I-580 Westbound HOV Lane

Map not to scale, for illustrative purposes only



This page intentionally left blank



Memorandum

DATE: January 31, 2013

TO: I-580 Express Lane Policy Advisory Committee

FROM: Stewart D. Ng, Deputy Director of Programming and Projects
Gary Sidhu, Project Controls Team

SUBJECT: I-580 Express (HOT) Lane Projects Status Update

Recommendation

This is an informational item only. No action is required.

Summary

The Eastbound I-580 Express High Occupancy Toll (HOT) Lane Project will convert the newly constructed eastbound HOV lane, from Hacienda Drive to Greenville Road, to a double express lane facility. The I-580 Westbound Express High Occupancy Toll (HOT) Lane will convert the westbound HOV lane (currently under construction) to a single express lane facility from west of Greenville Road to west of the San Ramon Road/Foothill Road Overcrossing in Dublin/Pleasanton.

Both I-580 express lane projects are currently in the environmental phase which is estimated for completion in July 2013 and are scheduled to start construction immediately after the east and west segments of the I-580 Westbound HOV and I-580 Eastbound Auxiliary lane projects are completed in 2014. These HOV lane projects will widen the freeway to provide the width needed for the express lane projects. The I-580 Eastbound and Westbound Express Lane Projects will construct the necessary infrastructure such as signing, sign gantries for dynamic messaging and toll reading, electrical conduit for connecting power and communication sources, and striping to accommodate the express lanes. The System Integrator contractor will install the required communication equipment and software. The express lane facility will be open for use in 2015.

Progress reports for both the Eastbound I-580 Express (HOT) Lane Project and the Westbound I-580 Express (HOT) Lane Project; which include more information on funding, schedule and project status are attached.

Discussion

Delivery Strategy

A contract amendment to the I-580 Westbound Express (HOT) Lane Project contract (Contract No. A11-0024) with URS Corporation to add design services, perform additional traffic

engineering for “near continuous” access configuration, and for design services during construction was approved at the January 24, 2013 Alameda CTC Commission meeting.

Staff proposes to combine the I-580 Eastbound Express (HOT) and I-580 Westbound Express (HOT) Projects into one construction project. This will save money in bid advertising and construction support costs and minimize potential conflicts with two contractors performing work within the same project limits and median of the highway.

Finally, staff continues to work with Caltrans to add strategic express lane project elements to the existing I-580 Westbound HOV and I-580 Eastbound Auxiliary Lane construction contracts via contract change order, where feasible. The benefit of this approach is to avoid additional traffic disruptions to the traveling public and eliminate and reduce re-work. Work under consideration to include by contract change order includes:

- Sign foundations in median
- Electrical Conduit – across and along I-580
- Striping – stripe to final HOT configuration
- Install K-rail along median at sign locations

“Near Continuous” Access Configuration Status

Staff is currently moving forward with the concept of a “near continuous” access configuration in lieu of “limited” access for the express lanes on the I-580 corridor was presented. The “near continuous” access configuration would eliminate the two foot buffer between the express lane and the general purpose lanes except at “hot spots” or “safety zones” such as between Hacienda and Fallon Road (eastbound) and Fallon Road and I-680 (westbound). The project team is working on refining the traffic operations analysis for a “near continuous” access configuration. This process has required more work and time than originally anticipated; which will result in a delay in completion of the environmental phase of the two projects until approximately July 2013. The construction start date will not be delayed and is scheduled to start in 2014.

In addition, other project revisions are underway to implement the “near continuous” access concept including revisions to the toll systems software, changes to the location of the Dynamic Message Signs (DMS) and toll gantries, updating the Concept and Operations Plan and System Engineering and Management Plan, and analyzing zone tolling requirements.

Fiscal Impact

This is an informational item only and there is no additional fiscal impact.

Attachment(s)

- Attachment A: I-580 Eastbound Express (HOT) Lane Project Monthly Status Report
- Attachment B: I-580 Westbound Express (HOT) Lane Project Monthly Status Report
- Attachment C: I-580 Corridor Express Lane Projects – Location Map

ATTACHMENT A
I-580 Eastbound Express (HOT) Lane Project
Monthly Status Report
Through January 31, 2013

PROJECT DESCRIPTION

The Eastbound I-580 Express or High Occupancy Toll (HOT) Lane Project will convert the newly constructed eastbound HOV lane, from Hacienda Drive to Greenville Road, to a double express lane facility which will include standard shoulder and lane widths where feasible.

PROJECT FUNDING

The I-580 Eastbound Express (HOT) Lane Project is funded through a combination of federal, state, and local funds. Staff has recently reconciled RM2 funding on the I-580 corridor and funding that was previously programmed for this project has been used to fund needs on other projects in the corridor resulting in a funding shortfall of approximately \$4.8M for the construction capital phase of the project for the limited access option. An additional shortfall for the “near continuous” access option is \$5.5M. Alameda CTC staff is working with the Metropolitan Transportation Commission (MTC) to identify funding for this shortfall.

PROJECT DELIVERY STATUS

The environmental phase for this project is underway as follows:

- Environmental studies are complete and the Initial Study and Environmental Assessment (IS/EA) is drafted and ready to circulate pending minor changes to address “near continuous” access alternative and Caltrans approval of the Traffic Operations in March 2013 and Draft Project Report in April 2013. The estimated date of circulation of the draft IS/EA is May/June 2013 (pending approval of Design Exceptions in February 2013). A 30 day public circulation period is required in addition to a public meeting.
- The Draft Project Report is pending approval upon Caltrans approval of Design Exceptions for reduced shoulder width and lane widths and refinement of traffic studies for a “near continuous” access configuration. It is anticipated that the Project Report will be finalized in July 2013.
- Staff continues to work with Caltrans staff to obtain approval of Design Exceptions for reduced inside shoulder width (4’-8’) and reduced lane widths (11’) at locations where right of way is insufficient. Focus meetings with Caltrans have been taking place on a regular basis to address their issues and concerns. The project team has been able to significantly reduce the magnitude of the Design Exceptions by maximizing use of existing right of way including an “near continuous” access approach, however, Caltrans still has not granted approval at all locations. In general, Caltrans appears to be agreeable to the reduced lane widths (11’), however, the reduced inside shoulder width continues to be problematic. The project team continues to work with Caltrans and is meeting on a regular basis to resolve their concerns; however additional project costs may result in order to resolve Caltrans concerns.

- Staff is working to coordinate with the HOV projects (I-580 Westbound HOV - West Segment, I-580 Westbound HOV - East Segment, I-580 Eastbound HOV Segment 3 - Auxiliary Lanes) to add some project express lane elements to the HOV projects via contract change order (CCO). Work under consideration to include by CCO includes:
 - Sign foundations in median
 - Electrical Conduit – across and along I-580
 - Striping – stripe to final HOT configuration
 - Install K-rail along median at sign locations

POTENTIAL ISSUES/RISKS

- Funding – Current shortfall (for limited access design) of \$4.8M.
- Funding – Additional funding shortfall of approximately \$5.5M to convert limited access approach to the “near continuous” access approach
- Approval of design exceptions by Caltrans – if Caltrans does not approve the requested Design Exceptions, it could require additional work to increase inside shoulder width to meet standard (10’) such as constructing retaining walls, reconfiguring interchange ramps, relocating environmental mitigation areas to an offsite location, and/or purchasing additional right of way which would increase the project cost. Depending on the solution, the additional cost range is \$5M-\$50M. Additional right of way would also require additional environmental evaluation which would delay completion of the environmental phase of the project.
- Schedule impacts –additional project delays to the environmental phase due to refinement of traffic analysis for “near continuous” access configuration and final agreement of the Design Exceptions. Staff anticipates working on design details for “near continuous” access (location and number of toll gantries, zone tolling requirements) concurrently with completing the overall civil design to avoid delays to the start of construction which is scheduled to start in 2014.

FUNDING AND FINANCIAL STATUS

I-580 Eastbound Express (HOT) Lane Project Funding Plan (For Limited Access Design)

Project Phase	Funding Source (\$ x million)						
	ARRA	RM2	TVTC	TCRP Deferred	Local (Meas. B)	TBD	
PA&ED		1.32	0.30	0.12			1.74
PS&E		0.18	0.70	1.15			2.03
Sys. Int.	7.50						7.50
ROW			0.20				0.20
Const. Support		0.60	0.18	0.50			1.28
Construct Cap		1.95		2.23		4.82	9.00
O&M					0.18		0.18
TOTAL	7.50	4.05	1.38	4.0	0.18	4.82	21.93
Total Project Cost: \$21.93 M							

See Table in Attachment B for Combined Project – “Near Continuous” Access Funding Plan

SCHEDULE STATUS

I-580 Eastbound Express (HOT) Lane Project Schedule:

Project Approval	July 2013
RTL	December 2013
Begin Construction	2014
End Construction	2015

RECENT ACTIVITIES

- Refining traffic studies for “near continuous” access alternative
- Continuing to work with Caltrans for approval of Design Exceptions for reduced shoulder width and lane widths

UPCOMING ACTIVITIES

- Finalize Design Exceptions – Target date February 2013
- Finalize Traffic study refinements – Target date March 2013
- Finalize Draft Project Report – Target date April 2013
- Circulate the Draft IS/EA for 30 day public comment – working toward May/June 2013 circulation of document; dependent on approval of design exceptions and additional work for conversion to “near continuous” access – A public meeting will be held during the 30 day comment period
- Working toward environmental clearance and project approval by Caltrans and the Federal Highway Administration by July 2013
- Determine items to be added to HOV lane projects via CCO – Target date April 2013

This page intentionally left blank

ATTACHMENT B
I-580 Westbound Express (HOT) Lane
Monthly Status Report
Through December 31, 2012

PROJECT DESCRIPTION

The I-580 Westbound Express or High Occupancy Toll (HOT) Lane Project will convert the planned westbound HOV lane to a single express lane facility on I-580 in Alameda County from west of the Greenville Road Undercrossing in Livermore (PM R8.3) to west of the San Ramon Road/ Foothill Road Overcrossing in Dublin/Pleasanton (PM 21.4), a distance of approximately 13.1 miles.

PROJECT FUNDING

The I-580 Westbound Express (HOT) Lane Project is partially funded through federal and local funds. A shortfall of \$11.1M remains for the limited access option and an additional \$5.5M for the “near continuous” access option (total \$16.6M); Alameda CTC staff are working with the Metropolitan Transportation Commission (MTC) to identify funding for this shortfall.

PROJECT DELIVERY STATUS

The environmental phase for this project is underway as follows:

- Traffic studies are being updated to include an evaluation of the “near continuous” access alternative.
- The environmental document, a Categorical Exemption (CE), is being prepared and environmental studies are underway.
- A Draft Project Report is being prepared.
- This project will require design exceptions, reduced inside shoulder widths and potential lane width reductions (11’). The design exceptions, however, are the same design exceptions previously approved by Caltrans for the I-580 westbound HOV projects. The intent is to request the same design exceptions that Caltrans previously approved. Staff met with Caltrans in December 2012 to present the potential design exceptions and received favorable feed-back.

POTENTIAL ISSUES/RISKS

- Funding – there is a current funding shortfall (for limited access design) of \$11.1M.
- Funding – additional funding shortfall of approximately \$5.5M to implement “near continuous” access alternative.
- Approval of design exceptions by Caltrans – although it appears that Caltrans has provided favorable feedback to the proposed design exceptions, if Caltrans does not approve the requested Design Exceptions, it could require additional work to increase inside shoulder width to meet standard (10’).
- Schedule impacts –There are some delays associated with completing the traffic studies for the “near continuous” access approach. The target date for completion of the environmental phase is currently July 2013. At this time, staff anticipates to work on design details for “near continuous” access (location and number of toll gantries) concurrently with completing the overall civil design to avoid delays to the start of construction which is scheduled for 2014.

FUNDING AND FINANCIAL STATUS

I-580 Westbound Express (HOT) Lane Project Funding Plan (For Limited Access)

Project Phase	Funding Source (\$ x million)				
	Fed	TVTC	TCRP LONP Deferred	TBD*	Total
PA&ED	0.78	0.78			1.56
PS&E	0.19	0.25	1.00		1.44
Sys. Int.			1.00	4.50	5.50
ROW		0.17			0.17
Const. Support		0.90			0.90
Construct Cap		1.30		6.60	7.90
TOTAL	0.97	3.40	2.00	11.10	17.47
Total Project Cost: \$17.47M					

*TBD = funding shortfall

Combined Eastbound and Westbound Project – “near continuous” Access Funding Plan

Project Phase	Combined EB & WB Project –Near Continuous Access (\$ x million)				
	EB HOT Limited Access	WB HOT Limited Access	Sub Total – Limited Access (Combined EB & WB)	Add'l Cost – Near Continuous (Combined EB & WB)	Revised Total
PA&ED	1.74	1.56	3.30	0.00	3.30
PS&E	2.03	1.44	3.47	0.30	3.77
Sys. Int. ¹	7.50	5.50	13.00	4.30	17.30
ROW	0.20	0.17	0.37	0.00	0.37
Const. Support	1.28	0.90	2.18	1.10	3.28
Construct Cap ¹	9.00	7.90	16.90	5.00	21.90
O&M	0.18	-	0.18	0.30	0.48
TOTAL	21.93	17.47	39.40	11.00	50.40
Current Shortfall	5.00	11.1	16.10		
Add'l Cost – Continuous Access				11.00	
Total Revised Shortfall					27.10

Note 1: System integration work will transfer nearly \$5 million in roadway work to Civil- HOT

SCHEDULE STATUS

I-580 Westbound Express (HOT) Lane Project Schedule:

Project Approval	July 2013
RTL	December 2013
Begin Construction	October 2014
End Construction	November 2015

RECENT ACTIVITIES

- Environmental technical studies and completion of traffic studies (including “near continuous” access configuration) are underway
- Draft geometrics and Draft Project Report (including Design Exceptions) are underway

UPCOMING ACTIVITIES

- Complete traffic studies – Target date February 2013
- Draft Design Exceptions – Target date March 2013
- Draft Project Report – Target date April 2013
- Draft Environmental Document (CE) – Target date May 2013
- Final environmental clearance – Target date July 2013

This page intentionally left blank



Memorandum

DATE: January 31, 2013

TO: I-580 Express Lane Policy Advisory Committee

FROM: Stewart D. Ng, Deputy Director of Programming and Projects
Kanda Raj, Project Controls Team

SUBJECT: I-580 Express (HOT) Lanes Systems Integration Status Update

Recommendation

This is an informational item only. No action is required.

Summary

This staff report provides a status update of current and planned project development activities associated with the I-580 (Toll) Systems Integration work; including the implementation of the new “near continuous” (aka “near open”) access express lane operating concept.

As presented in previous meetings, the project staff is preparing a single design package for converting the High Occupancy Vehicle (HOV) Lanes to HOV/Express Lane facility in both directions of I-580. The project limits spans from Hacienda Drive to Greenville Road in the eastbound direction and from Greenville Road to San Ramon Road/ Foothill Road in the westbound direction. The systems integration work is the last component of express lane implementation; which typically follows the express lane civil/roadway infrastructure improvements. For efficiency purposes, the civil/roadway portion of the express lane construction will include the installation of some elements of the systems integration work, such as procuring and installing sign gantries for the dynamic message signs, overhead gantries for the FasTrak® antennas and toll readers (aka “toll zones,” toll collection via transponder reads); constructing barriers for protecting the toll equipment and conduits for providing power and communication connections, and installing poles for CCTV cameras and remote traffic monitoring stations.

The system integration work will involve: tolling hardware design and software development, factory testing of design, equipment and system installation, road geometry and toll system integration, and field testing of the toll equipment and all subsystems, including the interfaces to the BATA Regional Customer Service Center and Caltrans prior to implementing the new

express lanes. As required, the systems integration work will be closely coordinated with the I-580 Express Lane civil/roadway design and construction.

Discussion

The systems integration is a specialized field that focuses on the most recent technologies including software, hardware and traffic detection that will be deployed to optimize the existing corridor capacity in order to effectively manage the current and forecasted traffic in the corridor. The system integrator, however, will continue to own the software while the implementing agency will pay for the use of license to allow for the usage of the toll integrator's software.

In March 2010, the Alameda CTC retained Electronic Transaction Consultants (ETC) Corporation as its Systems Integrator for implementation of the new electronic toll collection system for the I-580 Eastbound Express Lanes facility. ETC's system design progressed based on a limited access configuration, which comprised of a total of five access locations: three exclusive ingress/egress and two combined ingress/egress locations. As discussed at the I-580 PAC meetings in November 2012 and January 2013, the agency and ETC staff have been working towards revising the contract requirements to revise the express lane access configuration from "limited" to a "near continuous" operating concept and include additional tasks for implementing the electronic toll collection system for the westbound I-580 express lane. The civil/roadway work described above will be removed from the systems integration work. With the revisions to the consultant services agreement, ETC would be responsible for the toll system design, development, factory testing, installation, integration, field testing, operations and maintenance for the new I-580 express lanes in both directions of travel.

The "near continuous" concept provides additional access opportunities while reducing the footprint required for implementing a shared express/general purpose lane facility. In addition, it looks and feels almost like an HOV facility and, therefore, would expect to provide driver familiarity.

The following is a detailed discussion of the major activities that are either progressing or planned for in 2013:

Project Geometry and Electronic Toll System Design

As discussed in Agenda Item 4B, the civil/roadway designers have developed geometry for the near continuous express lanes operating concept. Geometric development is an iterative process as it requires close coordination with the operational analysis, and needs to address operational, safety, and enforcement issues. The latest version of the express lanes concept proposes the following:

In the eastbound I-580 direction:

- Buffer separated single-lane HOV/Express Lane will be installed from Hacienda Drive to Fallon Road
- Continuous dual-lane HOV/Express Lane will be installed from Fallon Road to west of Vasco Road
- Continuous single-lane HOV/Express Lane will be installed from west of Vasco Road to Greenville Road

In the westbound I-580 direction:

- Continuous single-lane HOV/Express Lane will be installed from Greenville Road to Hacienda Drive
- A buffer separated single-lane HOV/Express Lane will be installed from Hacienda Drive to the I-580/I-680 Interchange

Additional coordination between the designers and Caltrans is necessary prior to finalizing the project geometry.

On a regular basis, the civil and toll system designers have been coordinating their designs and have determined the preliminary locations of the toll equipment, such as the Dynamic Message Signs (DMS), the toll antennas and readers. Final location of all of the express lanes related equipment will be determined based on Caltrans/Agency approval of project geometry. ETC staff will design the toll system software and hardware based on the identified new toll equipment locations, the power and communication sources, and the revised express lanes access configuration. ETC will also define the power and communication requirements for the electronic toll collection system design and provide this information to the civil/roadway design team for their power/communication design.

Staff has begun negotiating the revised scope, schedule and budget for ETC's system integration work, and is expected to discuss an amendment to the consultant services agreement in an upcoming Alameda CTC Board meeting.

Traffic and Revenue Study

On January 24, 2013 the URS Corporation's consultant services agreement was amended to include a task for revising the toll revenue forecasts in both directions of the I-580 Express Lanes facility, based on post-recession traffic numbers. In addition, the revenue model will incorporate the post-recession socio/economic conditions that have been experienced in the east county communities and the near continuous access concept. Caltrans and the agency staff are currently evaluating the changes made to the current and forecasted traffic numbers.

While the "near continuous" access could potentially generate additional revenue, it might lead to an increase in revenue leakage due to challenges associated with enforcing express lane violations in a "continuous" express lane concept. Project staff is exploring an automated violation enforcement system concept to try and deter system violations, as described in subsequent sections of this memorandum.

Concept of Operations/System Engineering Management & Enforcement Plans

CDM Smith (formerly Wilbur Smith Associates) staff is operating as an extension of agency staff and have previously developed a concept of operations (Con Ops) plan for eastbound I-580 project that defined the toll pricing strategies, software and hardware needs and enforcement concepts. CDM Smith also developed a system engineering management plan (SEMP) for the eastbound I-580 project that outlined the engineering process, the testing process, QA/QC guidelines, toll maintenance and operations requirements, and communication network requirements, etc. A System Enforcement plan needs to be developed by CDM Smith, utilizing

electronic equipment to deter/minimize toll evasion/violation. CDM Smith staff will revise the Con Ops and SEMP to reflect changes described above. A final SEMP will include both the Con Ops and the System Enforcement plan as appendices, which requires FHWA review and approval.

Software and hardware design

ETC will revise the Detailed Design Document (DDD) for the software and hardware development based on deploying a near continuous access express lane system. The designers will also revise the communication network and electrical power needs. ETC staff will then perform a series of factory and field tests and work with the agency staff to validate its hardware and software design, prior to opening the new express lanes facility.

Toll Pricing and Rate Publishing

As discussed in previous meetings, for practical purposes and to curtail toll violation, a zone-based toll pricing scheme likely will be implemented to effectively support the near continuous access configuration. The zone-based toll rates will be displayed to patrons via the DMSs. However, since the near continuous access approach is a new concept and first of its kind to be implemented in California, additional details for pricing and messaging will have to be analyzed and determined during the system design process, prior to finalizing the electronic toll collection and price-setting systems.

Toll Antennas, Readers and Violation Enforcement Subsystem

Closely spaced toll antennas and readers will help facilitate a near continuous access express lane configuration since it will lead to an effective FasTrak® transponder read. It should also support more effective toll violation enforcement. Various local and regional agencies are currently studying the potential effects of placing toll reader gantries at various intervals through the corridor, for example from ½ mile or 1 mile intervals, which is expected to effectively support a near continuous access express lane facility. While evaluating a preliminary project geometry and electronic toll collection system design, staff situated the toll gantries at approximately ¾ mile intervals. Efforts were made by the project design team to combine the tolling gantry and DMS locations at the same locations, for use in both directions of travel.

Since the “near continuous” access will employ an increased number of toll gantries (for readers), it will be difficult to enforce manual toll violation enforcement. Therefore, an automated toll violation enforcement system strategy will have to be designed and deployed to effectively manage the toll violation enforcement. The issues related to customer privacy, toll dispute resolution, customer service and issuance of automated violation tickets will have to be vetted to ensure that it can be implemented within the current California vehicle code and agency requirements. In addition, to enhance system violation detection, additional CCTV cameras and violation enforcement system (VES) cameras (for license plate capture) will need to be designed, developed, integrated into the toll system and installed.

MTC is currently reviewing these options, as documented in its draft Con Ops, prepared for its Tier 1 Express Lane projects. Their Con Ops discussed increased implementation of continuous access within the Bay Area Express Lane Network, automated toll violation enforcement and a requirement that HOV users need to carry either switchable toll transponders or register (license)

as carpool users. LA Metro implemented switchable transponders when it opened its express lanes on I-10 and I-110 in November 2012. To accommodate the customers from the Greater LA Region, the only operating express lane in the Alameda County, the I-680 Southbound Express Lane adjusted its toll system to accommodate switchable transponders. However the I-680 Express Lane does not employ automated violation enforcement. The I-580 Express Lanes likely will accommodate both of these requirements for electronic toll system implementation with near continuous access.

The switchable transponders are new to Bay Area toll customers. Therefore, the robust public education/outreach program that the agency plans to employ, at least a year prior to opening the facility, will have to include additional information about these toll transponders (i.e. where to get them, who needs to use it, how it works, how to reach customer service, etc.).

Furthermore, for consistent customer experience, MTC may follow the Golden Gate Bridge Authority's lead and implement another payment option, payment through pay-by-plate. The SOV users can use the pay-by-plate option by registering their license plates. They will be required to open up accounts to pay via their license plate. Our initial assessment indicates that this payment option is likely to encounter challenges since it will be difficult to distinguish the HOV and SOV users in an open/shared express lane facility, unless all vehicles are required to register as HOV or SOV vehicles. Staff will continue to evaluate, collaborate with other toll operators and report back to the committee whether the I-580 Express Lanes will employ such payment option.

In the near future, staff will develop a work plan that will also include a timeline involving the approval of all toll policies and business operating rules, financial breakeven analysis, and SEMP; development of project delivery and financing strategies, completion of electronic toll system design, and development of a public education/outreach program. The policy matters/business rules will be discussed and adopted by the I-580 PAC and Alameda CTC Board prior to implementing the I-580 Express Lanes.

In summary, even though the "near continuous" access concept provides additional opportunities it is a new concept for implementation in the region. Additional research, education and evaluation are necessary for effective implementation of such concept in all future Alameda County Express Lanes, including the I-580 Express Lanes. Staff is committed to working closely with other likeminded agencies/industry experts to move forward and implement an effective electronic toll collection system strategy to effectively support a near continuous access express lane configuration.

Fiscal Impact

This is an informational item only.

This page intentionally left blank