Meeting Notice

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I-680 Sunol Smart Carpool Lane Joint Powers Authority

Monday, September 9, 2013, 9:30-10:30 a.m.
1111 Broadway, Suite 800
Oakland, CA 94607

Mission Statement

The mission of the Alameda County Transportation Commission (Alameda CTC) is to plan, fund and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County.

Public Comments

Public comments are limited to 3 minutes. Items not on the agenda are covered during the Public Comment section of the meeting, and items specific to an agenda item are covered during that agenda item discussion. If you wish to make a comment, fill out a speaker card, hand it to the clerk of the Commission, and wait until the chair calls your name. When you are summoned, come to the microphone and give your name and comment.

Reminder

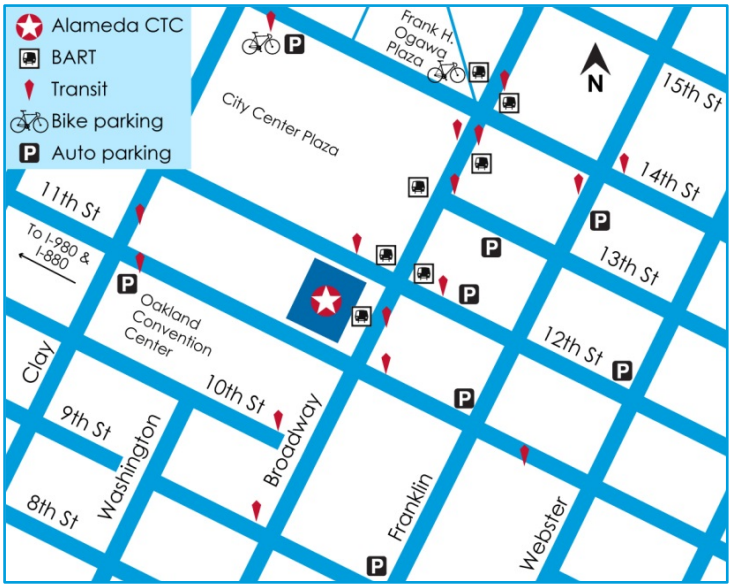
Please turn off your cell phones during the meeting. Please do not wear scented products so individuals with environmental sensitivities may attend the meeting.

Glossary of Acronyms

A glossary that includes frequently used acronyms is available on the Alameda CTC website at www.AlamedaCTC.org/app_pages/view/8081.

Location Map

Alameda CTC
1111 Broadway, Suite 800
Oakland, CA 94607



Alameda CTC is accessible by multiple transportation modes. The office is conveniently located near the 12th Street/City Center BART station and many AC Transit bus lines. Bicycle parking is available on the street and in the BART station as well as in electronic lockers at 14th Street and Broadway near Frank Ogawa Plaza (requires purchase of key card from bikelink.org).

Garage parking is located beneath City Center, accessible via entrances on 14th Street between 1300 Clay Street and 505 14th Street buildings, or via 11th Street just past Clay Street.
To plan your trip to Alameda CTC visit www.511.org.

Accessibility

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Meeting Schedule

The Alameda CTC meeting calendar lists all public meetings and is available at www.AlamedaCTC.org/events/upcoming/now.

Paperless Policy

On March 28, 2013, the Alameda CTC Commission approved the implementation of paperless meeting packet distribution. Hard copies are available by request only. Agendas and all accompanying staff reports are available electronically on the Alameda CTC website at www.AlamedaCTC.org/events/month/now.

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I-680 Sunol SMART Carpool Lane Joint Powers Authority Meeting Agenda Monday, September 9, 2013, 9:30 a.m.

1111 Broadway, Suite 800, Oakland, CA 94607 • PH: (510) 208-7400 • www.AlamedaCTC.org

Chair: Bill Harrison, Alameda CTC
Vice Chair: Mayor Jerry Thorne, City of Pleasanton
Commissioners/Members: Scott Haggerty, Gail Price (Santa Clara Valley Transportation Authority), Tim Sbranti
Staff Liaison: Stewart D. Ng
Executive Director: Arthur L. Dao
Clerk: Vanessa Lee

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1.	**Pledge of Allegiance**		
2.	**Roll Call**		
3.	**Public Comment**		
4.	**Consent Calendar**		
4.1.	July 8, 2013 I-680 Sunol SMART Carpool Lane JPA Meeting Minutes	1	A
4.2.	I-680 Southbound Express Lane (PN 710.5): Monthly Operations Update	3	I
4.3.	I-680 Northbound Express Lane (PN 721.0): Monthly Status Update	17	I
5.	**Committee Member Reports (Verbal)**		
6.	**Staff Reports (Verbal)**		
A.	**Joint Meeting with I-580 Express Lane Policy Committee**		
A.1	Convene meeting with I-580 Express Lane Policy Committee		
A.2	Roll Call to Confirm Quorum		
A.3	I-580 Express Lane Projects Workshop: Concept of Operations Review	23	I
A.5	Recess Joint Meeting		
7.	**Adjournment**		

Next Meeting: October 14, 2013

All items on the agenda are subject to action and/or change by the Commission.

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1. **Pledge of Allegiance**

2. **Roll Call**
   A roll call was conducted and a quorum was confirmed.

3. **Public Comment**
   There were no public comments.

4. **Consent Calendar**
   4.1. June 10, 2013 I-680 Sunol SMART Carpool Lane JPA Meeting Minutes
   4.2. I-680 Southbound Express Lane (PN 710.5): Monthly Operations Update
   4.3. I-680 Northbound Express Lane (PN 721.0): Monthly Status Update

   Haggerty/ Thorne
   Commissioner Haggerty motioned to approve the consent calendar. Commissioner Thorne seconded the motion. The motion passed unanimously.

5. **Committee Member Reports (Verbal)**
   There were no committee member reports.

6. **Staff Reports (Verbal)**

A. Joint Meeting with I-580 Express Lane Policy Committee
A.1 Convene meeting with I-580 Express Lane Policy Committee
A.2 Roll Call to Confirm Quorum
A.3 I-580 Express Lane Projects Workshop: Concept of Operations Review
Art Dao introduced the I-580 Express Lane Projects team. Kanda Raj reviewed the project purpose, the benefits it would bring to the I-580 Corridor, which continues to be rated as one of the most congested corridor in the Bay Area, and the infrastructure design. The overview highlighted policy, outreach and agency coordination. Kanda also reviewed the design and implementation of electronic toll collection system and enforcement, including automated toll violation enforcement.

Ramsey Hissen covered design and infrastructure including near continuous access, project limits and access configuration, zone tolling and pricing strategy, how the prices will be published on dynamic message signage, and toll gantry locations and spacing. Tess Lengyel discussed policy and legislation specifically regarding a toll ordinance for enacting automated toll violation enforcement and legislation needs for requiring all express lane users to carry transponders, including the HOV users. She reviewed public outreach and education strategies to communicate the project benefits, ways to access and use the facility, new technologies and the physical changes ahead.

Commissioner Haggerty inquired whether the staff had studied the effect of converting the second express lane to a general purposes lane, in the vicinity of Vasco Road in the eastbound direction. Ramsey stated that staff had studied the transition and traffic flow and had also worked with Caltrans when completed a traffic analysis. Art Dao also stated that staff had considered lane balancing concepts and reviewed maximum cost benefits in relation to operational needs of the corridor. Staff agreed to review the geometric changes and provide additional information in an upcoming workshop.

Commissioner Harrison wanted to know the design changes staff is proposing, in light of recent copper theft. Ramsey stated that staff has looked into various security mechanisms to deter theft, including welding and burying the pull boxes to limit access.

Commissioner Haggerty requested more detail on the express lane communications system. Kanda stated that similar to the I-680 Express Lane operations, all field data from the I-580 project will be hosted in one place, the toll data center from where it could be distributed to others, including BATA for processing toll transactions. Commissioner Haggerty requested staff not to turn over the system operation responsibilities to BATA prior to conversations at the Commissioners' level.

Commissioner Miley express his doubts regarding the effectiveness of the express lanes and encouraged staff to make sure that the project will address traffic congestion.

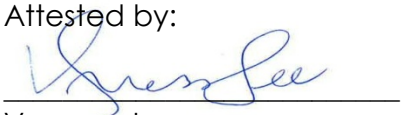
This Item was for information only.

8. Adjournment/ Next Meeting

The meeting adjourned at [insert time]. The next meeting is:

Date/Time: Monday, July 8, 2013 @10:30 a.m.
Location: Alameda CTC Offices, 1111 Broadway, Suite 800, Oakland, CA 94607

Attested by:



Vanessa Lee,
Clerk of the Commission

DATE:	August 26, 2013
SUBJECT:	I-680 Southbound Express Lane (PN 710.5): Monthly Operations Update
RECOMMENDATION:	Receive a monthly operations update on the I-680 Southbound Express Lane.

Summary

The purpose of this item is to provide the JPA Board with the July 2013 Monthly Operations Update of the express lane facility. This item is for information only.

Our review of daily trip and revenue reports indicates that the express lane facility had a strong performance during the month of July 2013 when compared to similar time period in 2012 (data indicates there was an increase in trips, although with a lower average peak toll rate). While comparing the performance matrices, it is noted that the average daily number of toll paying trips has increased by 22 percent. This indicates that more and more solo drivers have chosen to leave the general purposes lanes and use the express lane to experience the travel reliability and time savings. While it appears that traffic congestion has returned to the corridor with upward economic activities noted in Silicon Valley, the average travel speed in the express lane continues to remain at or above the posted speed limit.

Background

The I-680 Southbound Express Lane opened to traffic in September 2010 and is the first operational express lane facility in Northern California; it is one of a few in the nation to have a shared toll and non-toll facility. The express lane facility spans over 14 miles from State Highway 84, near Pleasanton, to State Highway 237 in the City of Milpitas, and admits toll-paying solo drivers in addition to carpoolers (who use the lane at no cost). The express lane optimizes capacity, reduces congestion and increases travel time reliability within the 14 mile corridor. Since the opening of the express lane facility, over 1,367,370 solo drivers have reached their destinations by traveling at speeds that are typically 7-10 miles per hour faster (several segments within the 14 mile corridor experience speeds over 15 miles per hour faster) than which motorists experience in the general purpose lanes, during peak commute hour.

Tolls are collected via FasTrak® transponders that are read by automated vehicle identification readers mounted on overhead gantries. Currently, the I-680 Express Lane includes five FasTrak® readers: one at each toll zone (at Andrade, Washington and Mission), and two at stand-alone enforcement zones (south of Vargas and south of Scott Creek). Readers at the toll zones are linked to the Toll Data Center (TDC). The accounts of vehicles passing through with valid FasTrak® transponders are charged the appropriate toll for the length of their trip, based on the toll rates published via dynamic message signs. Toll rates are calculated by a computerized real-time dynamic pricing model. The enforcement zone readers are not linked to the TDC and are used to aid CHP enforcement by determining if a vehicle has a valid FasTrak® transponder.

Constructed within the restricted right-of-way, the facility has no physical barrier between the General Purpose Lanes and the Express Lane, but is separated by a double white stripe. The Alameda CTC, acting as the managing agency for the JPA, accepted the final system from the System Integrator on April 30, 2012. The express lane has since moved into the full operation and maintenance phase.

The July 2013 operational update (daily/monthly trip, travel time and revenue information) is included as Attachment A.

Fiscal Impact: There is no fiscal impact.

Attachments

A. I-680 Southbound Express Lane July 2013 Operations Update

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

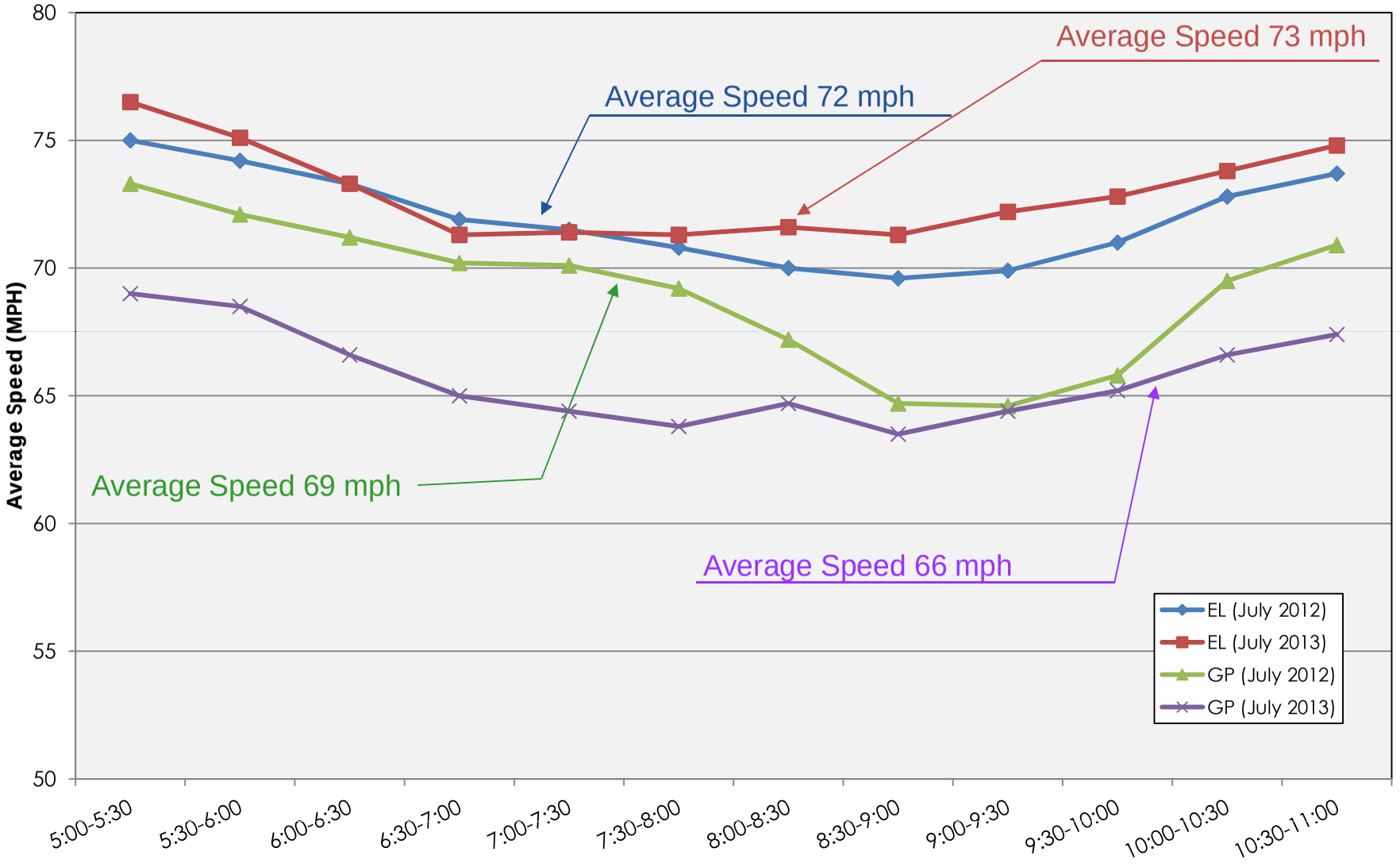
Arun Goel, Express Lane Operations

Year Over Year Comparison by Month

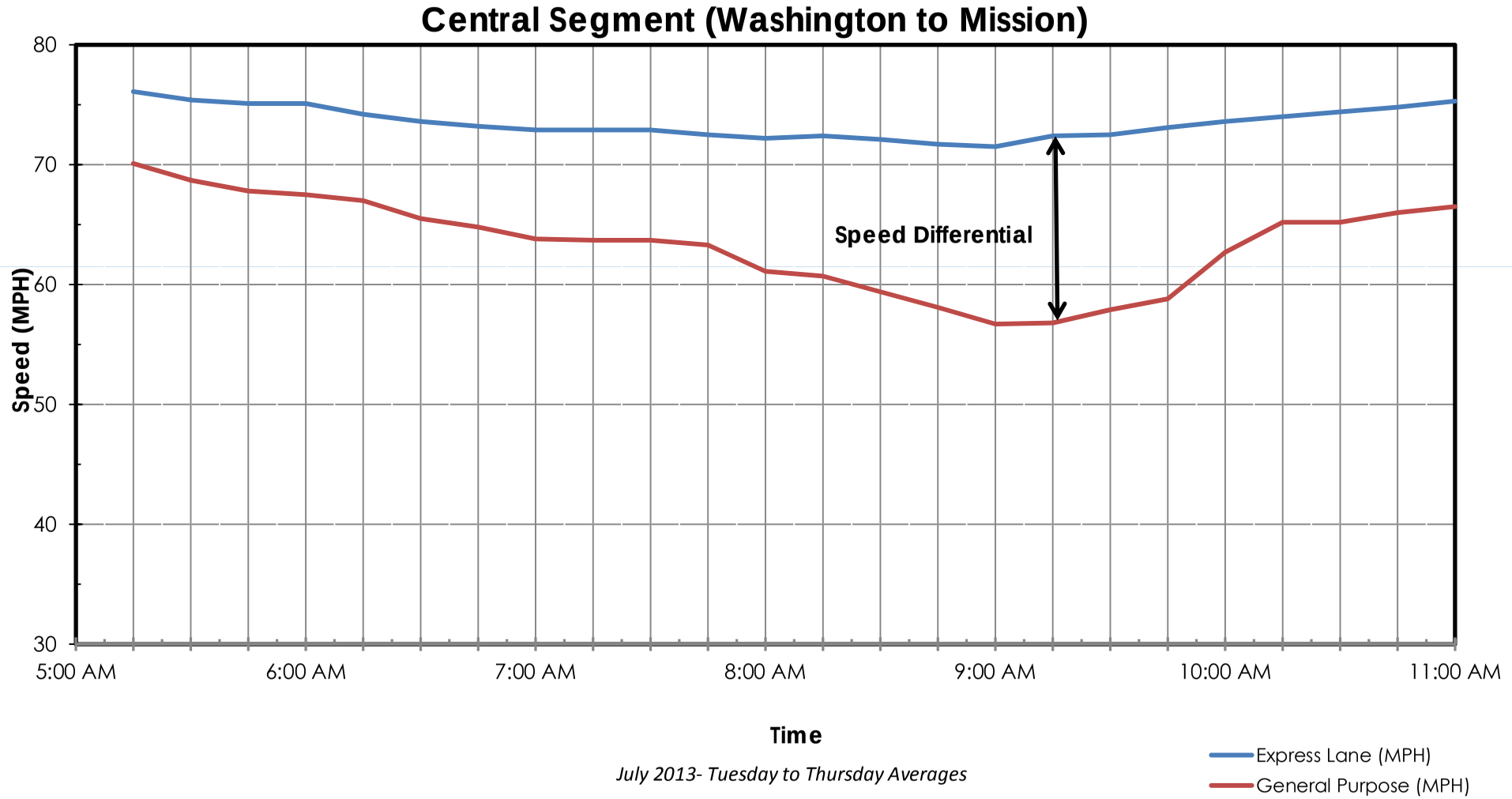
	July 2012	July 2013
Average Daily Toll Paying Trips	1,908 vehicles	**2,333 vehicles**
Average Daily Toll Revenue	$4,163	**$4,202**
Average Peak Period Toll Rate	$2.18	**$1.80**

Average Travel Speed During Morning Commute Hours

(Within 14-mile Express Lane Facility)

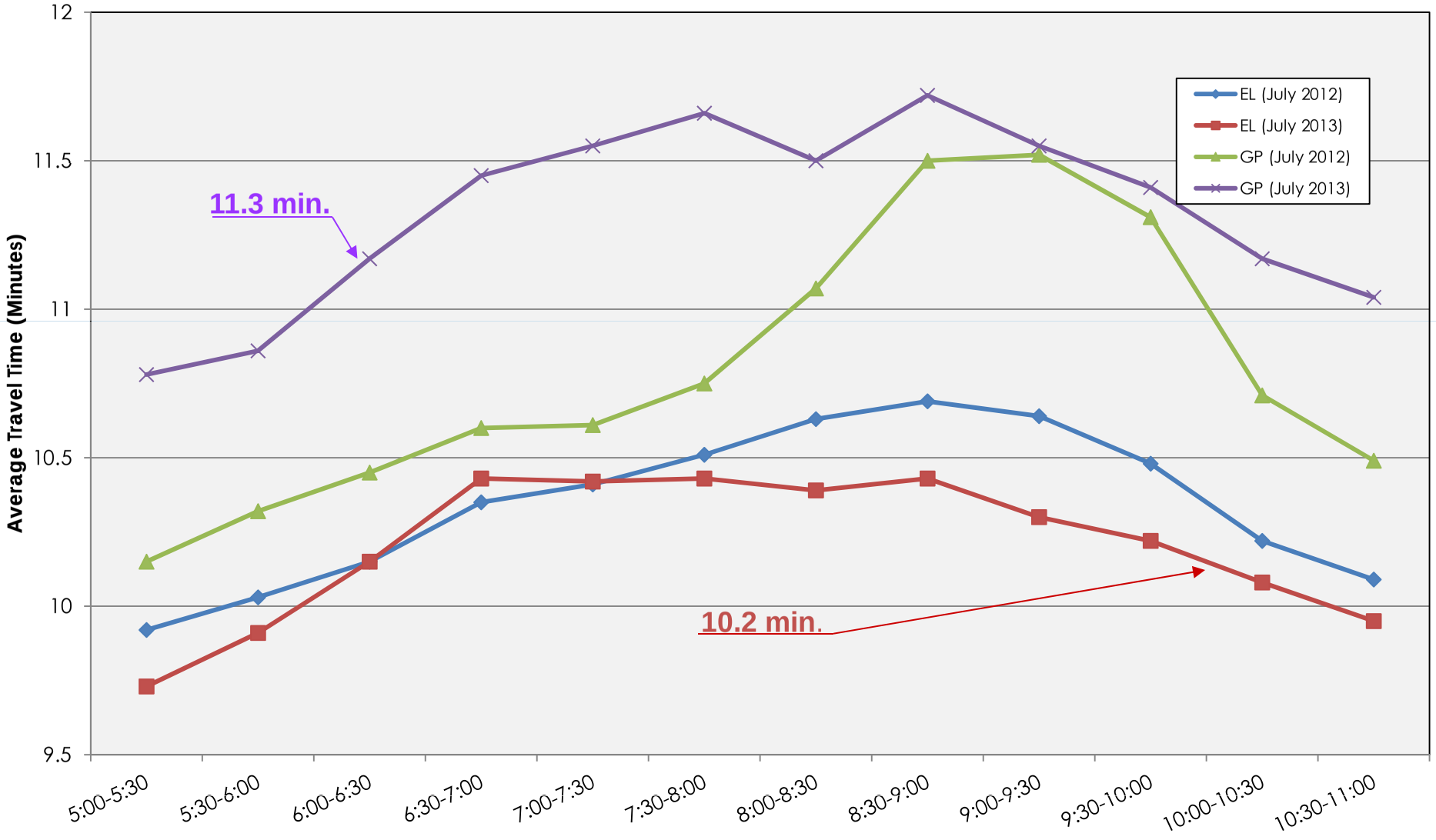


Average Daily Speed Curves During Peak Commute Period (July 2013)



Average Travel Time During Morning Commute Hours

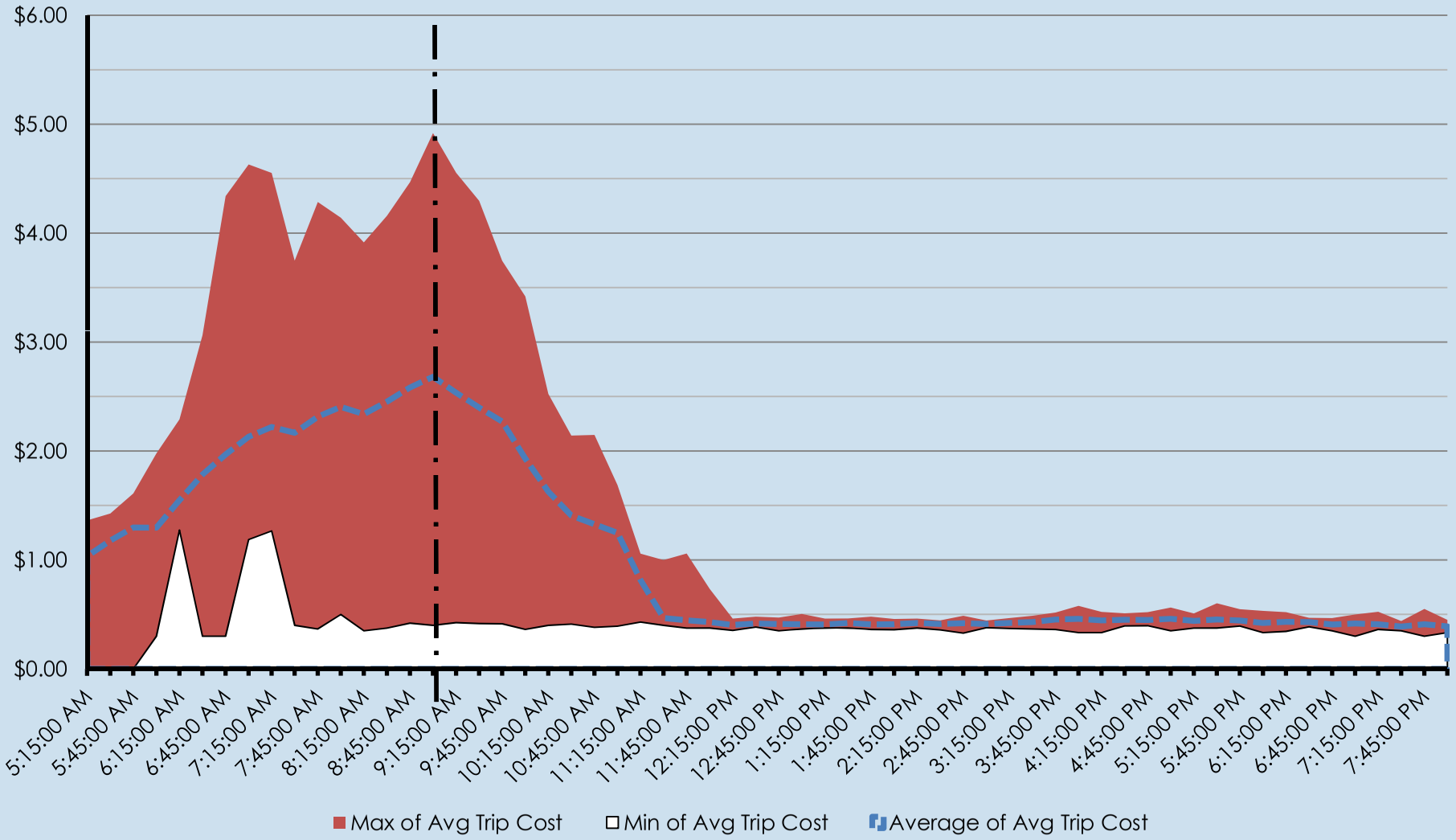
(Within 14-mile Express Lane Facility)



Average Toll Range

July 2013

(5 AM to 8 PM)



Revenue (Actual Gross vs. Forecasted)

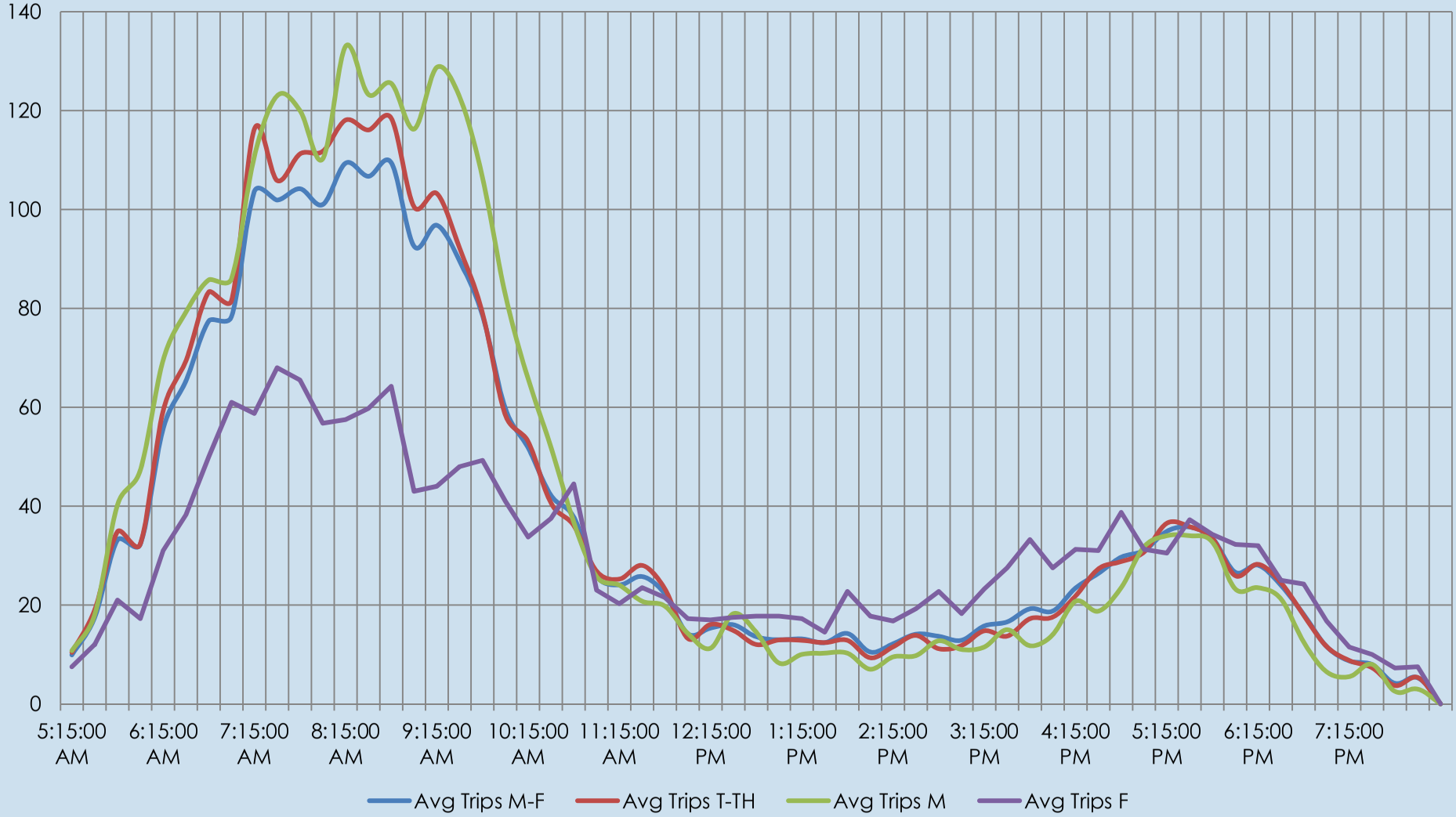
	Revenue in FY 2013/14 (July 2013)
Actual Gross	**$88,240**
Forecasted*	$112,500

** Forecasted revenue for the full FY 13/14 is $1,350,000*

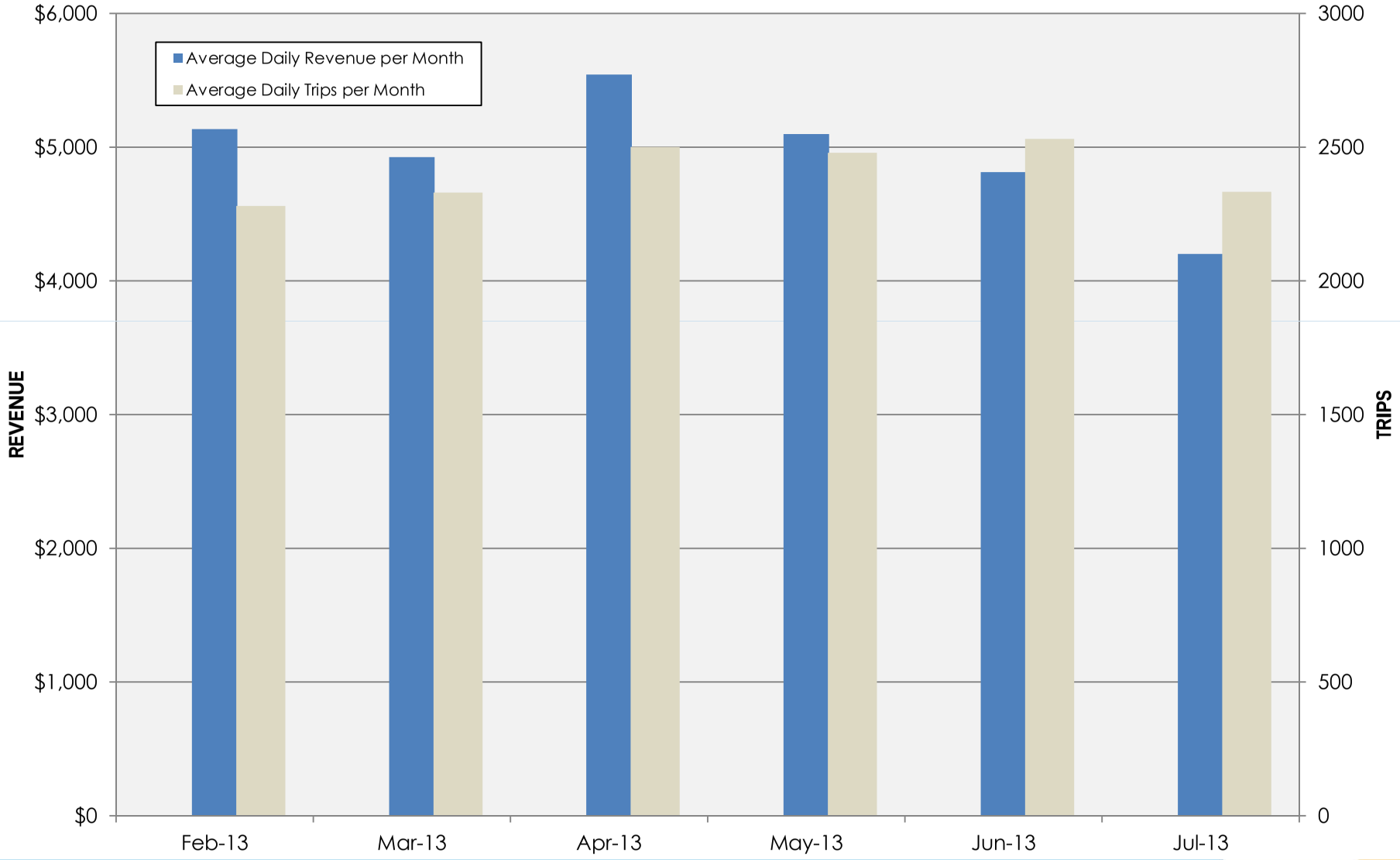
Average Daily Toll Trips

July 2013

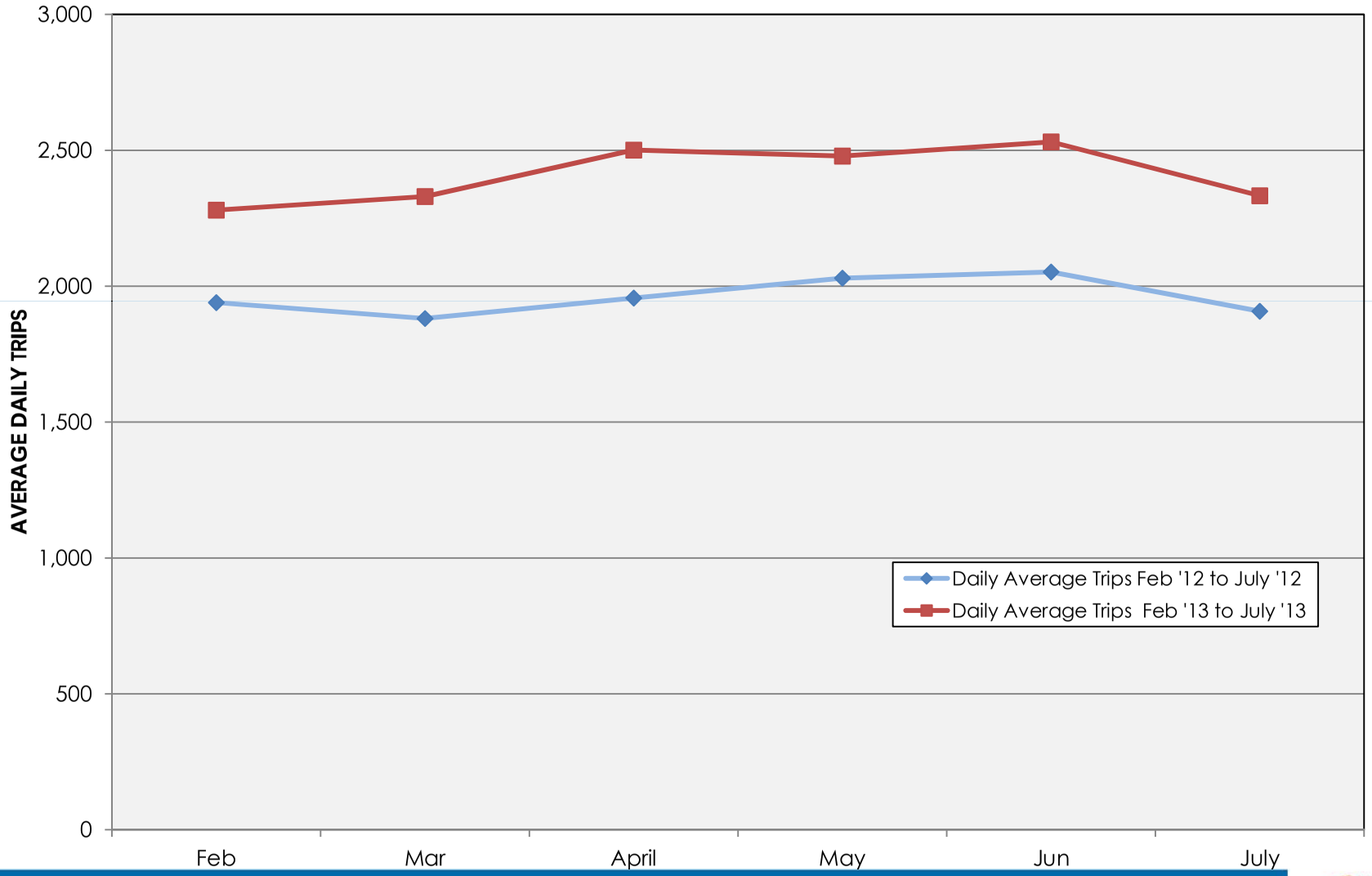
(5 AM to 8 PM)



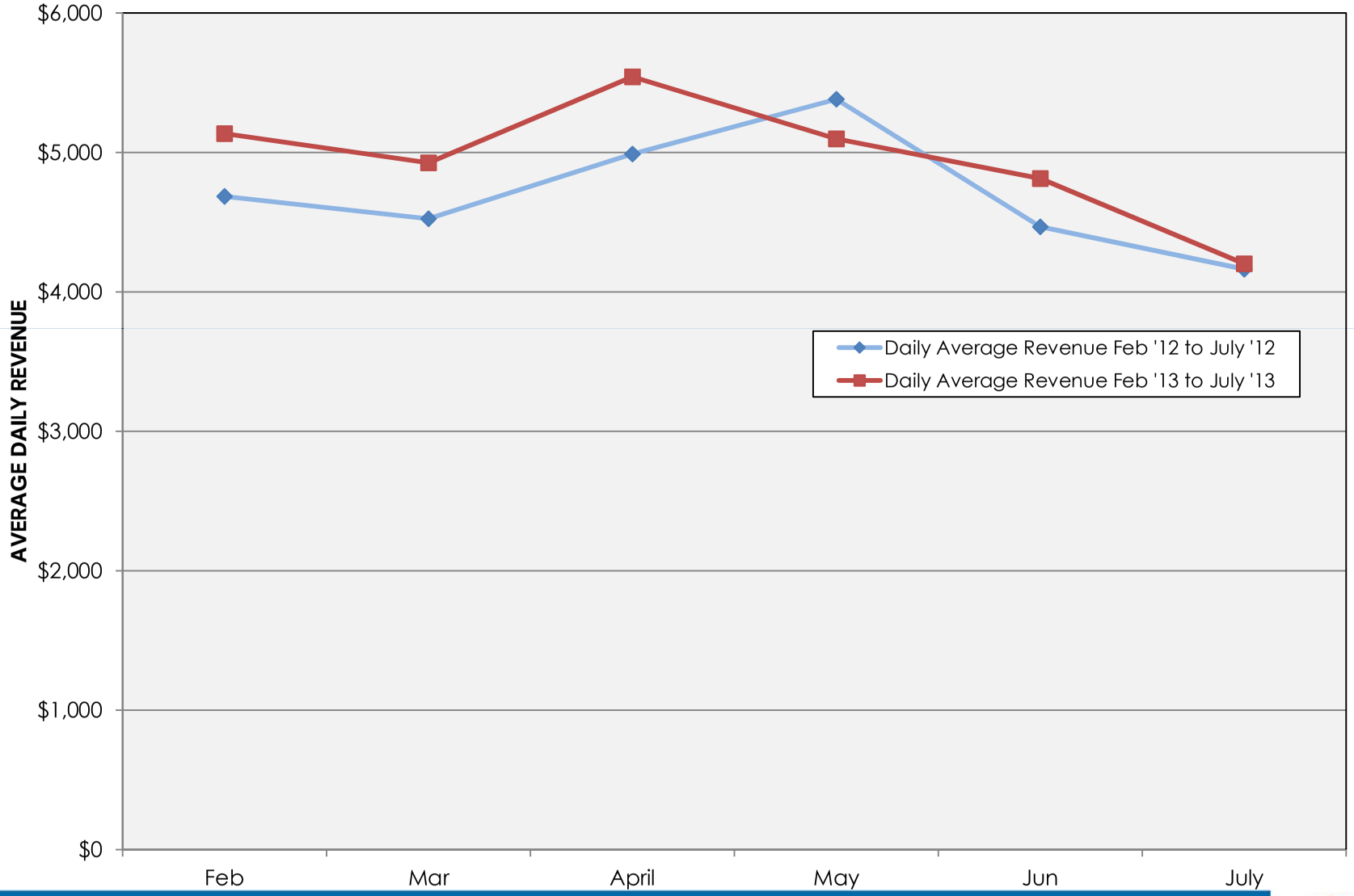
Average Daily Express Lane Revenue & Toll Trip Comparison



Average Daily Express Lane Toll Trips Comparison
(Past 6 months)



Average Daily Express Lane Revenue Comparison
(Past 6 months)




EXPRESS LANE
FasTrak TOLL TO
237 Calaveras $1.25
HOV 2+ NO TOLL
LANE ENDS
MERGE RIGHT
400 FEET
AHEAD
Mission Blvd
Mission Blvd To 880 3/4
Scott Creek Road 3 1/4
Jacklin Road 4 3/4

Questions ?

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DATE:	August 26, 2013
SUBJECT:	I-680 Northbound Express Lane (PN 721.0): Monthly Status Update
RECOMMENDATION:	Receive a monthly status update on the project development activities of the I-680 Northbound Express Lane Project.
FISCAL IMPACT:	There is no fiscal impact.

Summary

The I-680 Northbound Express Lane Project will widen I-680 from SR 237 in Santa Clara County to SR 84 in Alameda County and construct a northbound HOV/Express Lane in the corridor. The purpose of this item is to provide the Board with a monthly status update of project development activities which are either completed or planned for the project. This staff report will briefly review the critical path scope and schedule activities. This item is for information only.

Background

The I-680 Northbound Express Lane Project will widen I-680 from SR 237 in Santa Clara County to SR 84 in Alameda County and construct a northbound HOV/Express Lane in the corridor. The project is intended to provide a number of benefits including: 1) enhanced mobility by reducing traffic congestion; 2) reduced travel time and improved travel reliability; 3) reduced congestion related accidents; thereby enhancing safety. The Express Lane facility will utilize unused HOV lane capacity by offering solo drivers the choice to pay a toll electronically to access the lane, while regular carpool users continue to use the lane at no cost.

In mid-2011, the Alameda CTC embarked on the program to convert an already approved I-680 Northbound High Occupancy Vehicle (HOV) Lane project to a combined I-680 Northbound HOV/Express Lane facility. However, in August 2011, in response to a writ filed by a local city, the Alameda County Superior Court directed Caltrans to vacate the environmental document prepared for the I-680 Northbound HOV Lane Project in its entirety. Given the Court's direction, it was determined by Caltrans and Alameda CTC in late 2011, that a Project Initiation Document and a completely new and higher level of environmental document involving expanded preliminary engineering, traffic analysis, and technical studies, was needed to obtain environmental clearance for the project.

The Project Team continues to make progress towards completing a final environmental document by March 2015. The following is a detailed discussion of major tasks planned for the project in Calendar Year 2013.

Traffic Studies

A Draft Traffic Operational Analysis Report (TOAR) documenting existing traffic conditions analysis, traffic forecasts, and the highway operations analysis has been completed. The team will be using traffic operational analysis to determine project implementation phases, access type and perceived effects on local arterials. This report documents the existing, Year 2020 and Year 2040 traffic conditions for both the "Build" and the "No Build" alternatives. Based on Caltrans and local agency reviews, the final approval of the TOAR is anticipated in September 2013.

Environmental Technical Studies

All environmental technical field surveys are complete. A list of required technical studies is included in Attachment A of this report. Draft technical reports for all of the environmental studies are complete. Several reports have already been approved by Caltrans; those remaining are currently under review. All final reports approvals are expected in September 2013.

Environmental Document

Based on input that the design team received, during the environmental scoping process, traffic studies, geometric design and environmental technical studies, the project team plans to complete an administrative draft environmental document (Admin DED) for review by Alameda CTC and Caltrans staff in September 2013. Alameda CTC will work with Caltrans to complete this task concurrent to completing the environmental technical studies in order to gain time in completing a final project approval. Various cycles of internal agency reviews are expected prior to publishing the DED for public review and comment. Public circulation of the DED and completion of a final document are expected in April 2014 and March 2015, respectively.

Project Approval

The Project Report (PR) process is underway. The Draft PR will document the need for the project and summarize the studies, cost, scope, and overall impact of project alternatives; and its approval is required prior to releasing a DED for public circulation and agency reviews. A Draft PR is planned for completion in April 2014. After the public and agency review process is complete and a preferred alternative is selected by the project development team, the Draft PR will be updated to become the Final PR. Completion of a Final PR indicates Caltrans, FHWA and Alameda CTC approval of the project. Final PR approval for this project is anticipated in March 2015.

Project Implementation Approach

The Project Report and Environmental Document will include studies and analysis for both the full project limits (SR 237 to SR 84) and an initial phase of construction (Auto Mall Parkway to SR 84). The limits for the initial phase of construction are based on preliminary traffic operational analysis results and projected funding availability.

Fiscal Impact: There is no fiscal impact.

Attachments

A. I-680 Northbound Express Lane Tasks Update

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

Gary Sidhu, Project Controls Team

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Attachment A

LIST OF PLANNED PROJECT TASKS/TECHNICAL STUDIES

ID	DELIVERABLE	STATUS
PRELIMINARY ENGINEERING		
1	PSR-PDS	Approved
TRAFFIC STUDIES		
2	Traffic Data Collection	Complete
3	Existing Conditions Assessment	Approved
4	Model Validation	Approved
5	Traffic Forecasts	Approved
6	Preliminary Traffic Operations Sensitivity Analysis	Complete
7	Traffic Operations Analysis	Complete
8	Traffic Operations Analysis Report (TOAR)	Final Draft Complete
9	Traffic & Revenue Study	Complete
ENVIRONMENTAL STUDIES		
10	Public Scoping Report	Approved
11	Biological Field Surveys	Complete
12	Bat Species Study	Approved
13	Jurisdictional Wetlands Report	Approved
14	California Red Legged Frog Study	Approved
15	Special Status Plant Species Study	Approved
16	Natural Environment Study (NES)	Final Draft Complete
17	Biological Assessment	Underway
18	Biological Opinion	
19	Water Quality Assessment	Approved
20	Location Hydraulic Study	Approved
21	Initial Site Assessment	Approved
22	Air Quality PM 2.5 Assessment	Complete
23	Air Quality and Greenhouse Gas Analysis Report	Final Draft Complete
24	Noise Surveys	Complete
25	Noise Impact Report	Final Draft Complete
26	*Noise Abatement Decision Report* (NADR)	Draft Complete
27	Visual Impact Assessment	Final Draft Complete
28	Community Impact Assessment	Final Draft Complete
29	APE Mapping	Final Draft Complete
30	Archaeological Survey Report (ASR)	Final Draft Complete
31	Historic Architectural History/Built Resources Report (HRER)	Final Draft

ID	DELIVERABLE	STATUS
		Complete
32	Historic Property Survey Report (HPSR)	Draft Complete
33	Paleontological Identification and Evaluation Report	Approved
34	Preliminary Geological Assessment	Approved
ENVIRONMENTAL DOCUMENT		
35	Project Description	Complete
36	1st Admin DEIR/EA	Underway
37	2nd Admin DEIR/EA	
38	3rd Admin DEIR/EA	
39	DEIR/EA	
40	1st Draft FEIR/EA	
41	2nd Draft FEIR/EA	
42	3rd Draft FEIR/EA	
43	FEIR/EA	
PROJECT APPROVAL		
44	Geometric Design	Underway
45	Roadway Plans	Draft Complete
46	Traffic Safety Assessment	Draft Complete
47	Fact Sheets (Mandatory and Advisory)	Underway
48	Value Analysis Study	Complete
49	Storm Water Data Report	Draft Complete
50	Pavement Life Cycle Cost Analysis	Draft Complete
51	Hydromodification Assessment Report (included in Item 19)	Approved
52	Utility Coordination	Underway
53	R/W Engineering	Underway
54	Advance Planning Study - Bridges	Underway
55	Advance Planning Study - Special Retaining Walls	Underway
56	Preliminary Foundation Report	Draft Complete
57	Preliminary Geotechnical Report	Draft Complete
58	Encroachment Policy Variance Request (Utilities)	Underway
59	Structures Aesthetics Guidelines	Draft Complete
60	Conceptual Landscape Plan	Underway
61	Cost Estimate	Underway
62	Draft Project Report	Underway
63	Project Report	

DATE:	August 26, 2013
SUBJECT:	I-580 Express Lane Projects Workshop: Concept of Operations Review
RECOMMENDATION:	Provide input on key concepts that define the development of the I-580 Express Lanes.

Summary

Development and implementation of the I-580 Express Lanes ("Project") is underway 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 Project will expand commuter choices and maximize efficiency of this highly congested corridor by employing new technologies, such as dynamic pricing. The Project is ahead of most other regional express lanes under development in the Bay Area (in the I-80, I-680, I-880, SR 237 and US 101/SR 85 corridors), as part of an overall 550-mile express lane network.

Several design, operations, enforcement and educational decisions must be made to ensure consistency with other Bay Area express lanes. This would facilitate the Public's understanding, acceptance, and utilization of express lanes within the regional network. Staff is implementing series of workshops with the Commissioners to inform design and operational decisions and seek input on key policy issues. In the July 8th workshop, staff provided an overview of overarching design and policy issues. The September workshop will focus on the following:

- Automated toll violation enforcement and related toll ordinance and legislation needs
- Federal MAP-21 (Moving Ahead for Progress in the 21st Century) requirements for toll operation
- Draft Caltrans Deputy Directive No. 43, policy guidelines for managed lane implementation
- Public outreach strategies, and
- Responses to inquiries by Commissioners at the July workshop.

This memo is an informational item that describes each discussion items in detail.

Background

The I-580 corridor has consistently been rated as one of the top three congested freeway segments within the San Francisco Bay Area region. As the next step in strategic investments in this corridor, the Alameda CTC is implementing express lanes in both the east and westbound directions. The express lanes will include the implementation of an Electronic Toll System (ETS) to collect revenue generated by single-occupant users of the express lanes.

The express lane concept is an innovative transportation solution that utilizes technology to optimize the existing corridor capacity to provide traffic congestion relief.

Express lanes provide the following benefits:

- Expands travel choices by allowing solo drivers to use the underutilized capacity in the High Occupancy Vehicle (HOV) lane for a fee when time saving is of value,
- Optimizes the existing corridor capacity and improves efficiency of the corridor,
- Provides travel reliability, and
- Creates a revenue source to pay for future corridor improvements, including closing gaps in the HOV network, transit investments and other improvements to increase connectivity.

The draft Concept of Operations plan developed for the Project is consistent with industry protocols and describes implementation of new and improved technologies to address congestion relief. Because the express lane implementation is still a relatively new concept, staff began providing periodic updates to the I-580 Policy Committee about the key concepts, beginning in November 2012. At the July 2013 I-580 Workshop, staff discussed the overarching concepts of Project implementation including: express lane access design (near continuous access), toll pricing strategies (zone tolling), system design, including automated toll violation enforcement and associated toll ordinance and legislation needs (for requiring HOV users to carry switchable transponders); operating organizational structure and agency coordination, and planned public education and outreach strategies.

In the upcoming months, staff will provide detailed information on a series of topics and will request feedback from the Commissioners on policy issues to keep project development moving forward. Attachment A includes list of planned focused topics for discussion at the September and October 2013 meetings.

At the September 2013 meeting, staff will provide responses to Commissioners' inquiries from the July workshop and include focused discussions on the toll violation enforcement, associated toll ordinance and legislation needs, MAP-21 and Caltrans Deputy Directive-43 requirements, planned public education and outreach strategies, and address Commissioners inquiries. This staff memorandum includes the following topics:

- Design and Infrastructure
- Operations and Enforcement
- Policy and Legislation
- Public Education and Outreach
- Agency Coordination

1. Design and Infrastructure

Design of express lanes: In the July Workshop staff described why a near continuous (aka more open) access configuration is suitable for implementation on I-580, highlighting that within the Project limits the interchange densities are high, entrance ramps are closely spaced and the majority of those ramps are carrying large volumes of express lane eligible vehicles. See Attachment B for the Project limits and access configuration.

The locations of the single and dual-lane express lanes and types of access configuration were chosen based on traffic operational analyses conducted for the Project. The traffic demand volumes require dual-lane express lanes from Fallon Road to Vasco Road. Traffic analyses indicate that significant volume of traffic continue to exit at Vasco Road and, therefore, only a single lane express lane is warranted east of the Vasco Road interchange.

Regarding the Commissioners' comment: "has the staff studied the effect of converting the second express lane to a general purposes lane, in the vicinity of Vasco Road in the eastbound direction," staff reengaged discussions with Caltrans on traffic operations and validated that the lane configuration as currently proposed would adequately address the traffic demand and/or the traffic operational requirements. However, the staff will continue their discussions with Caltrans and provide additional details at the September workshop. In addition, staff will also provide information about Caltrans truck scale improvement project at the meeting.

Design of tolling equipment: As explained in the July Workshop, zone tolling will be implemented to support the near continuous access design implementation. Several travel zones were created within the corridor, where a flat fee will be charged for travel within a zone, based on real-time value pricing concept. Within each zone, overhead toll gantries will be placed at approximately ¾ mile intervals, which will be essential to effectively read FasTrak® transponders.

As explained in July 2013, the Dynamic Message Signs (DMSs) are expected to display two rates: the first rate is for travel within the current or immediately downstream zone and the second rate is for travel to a major destination within the corridor (determined to be the end of the line in this I-580 Corridor).

2. Operations and Enforcement

Near continuous access lanes could result in revenue leakage if not properly enforced. As discussed in July 2013, staff communicated with other toll operators in the country and actively sought cost effective solutions, and included an automated violation enforcement system for implementation on the Project. This system will include a violation enforcement system (VES) that employs license plate recognition (LPR) capabilities, (i.e. cameras which are capable of capturing the license plate images when vehicles fail to carry valid transponders). HOV users also will have to carry a transponder, as explained in subsequent sections.

The primary components of the LPR subsystem are a camera, a light source, and an image processor. Cameras and lights will be mounted on the toll gantry directly above the express lanes to capture the rear license plate for each vehicle. When a toll transponder is not read and recorded, a vehicle detector installed at the toll gantry will trigger the mechanism to capture the vehicle license plate. All images, including those that cannot successfully be processed by optical character recognition (OCR) software, will be compiled in corresponding transaction records, which ultimately will be sent to the customer service center for processing.

3. Policy and Legislation

HOV Degradation

On July 6, 2012, the Moving Ahead for Progress in 21st Century (MAP-21) was signed into law and requires state agencies to ensure that HOV facilities do not degrade when allowing other vehicles onto the HOV lane as either HOV eligible (such as the clean air vehicles) or toll paying vehicles. As outlined in Title 23 United States Code Section 166 (d)(2)(A)&(B), a minimum average operating speed of 45 mph shall be maintained for at least 90 percent of the time, over a consecutive 180-day period during the morning or evening weekday peak hour periods (or both). If the facility is degraded, certain performance monitoring, evaluation and reporting requirements will have to be met, in addition to implementing corrective action within 180 days after the facility is deemed degraded.

The dynamic pricing tool that is in development for the I-580 Express Lane facility will ensure that a minimum average speed of 45 mph is maintained during the hours of operations. If the average speeds reach below 45 mph, the dynamic model will switch the lane mode to "HOV Only" in order to prevent the toll paying users access to the lane. Caltrans may have to address the degradation issue if the facility is deemed degraded by applying one or more of the corrective actions listed below:

- Increase enforcement
- Increase Freeway Service Patrol

- Improve detection to support performance, monitoring, evaluation and annual reporting
- Implement integrated corridor management operations, including ramp metering
- Improve facility geometric/operational issues
- Convert HOV to HOV/express lane
- Add HOV/Express Lane capacity
- Add general purposes lane capacity
- Increase occupancy requirements, and
- Convert HOV/express lane to general purposes lane (last resort)

FHWA MAP-21 Interoperability

Section 1512 (b) of the federal MAP-21 requires that all toll facilities on federal-aid highways implement technologies or business practices that provide for the interoperability of electronic toll collection programs no later than July 6, 2016. This means that a transponder issued by a toll operator shall meet national operability and/or shall be read by any toll readers located on federal-aid highways throughout the United States (US). California Toll Operators Committee (CTOC), in cooperation with International Bridge, Tunnel and Turnpike Association (IBTTA), has requested Congress' leniency with the deadline for implementation.

The Project will install multi-protocol toll readers in order to read and process a toll transponder, issued by any agency in the US. Alameda CTC express lanes utilize the transponders that have been issued by Bay Area Toll Authority (BATA). Staff is working closely with CTOC and BATA to ensure that the readers to be installed on I-580 are capable of reading transponders that meet the national interoperability requirements.

Toll Ordinance

In order to assess toll violation penalties, a "Toll Ordinance" will have to be adopted under the purview of Vehicle Code Section 40250 that allows local authority including a joint powers authority, to enact such ordinance. Staff continues to explore options for addressing how the Alameda CTC will issue violation notices.

In April 2012, Los Angeles County Metropolitan Transportation Authority (LA Metro) adopted a toll ordinance for similar purposes that included:

- Lane usage requirements,
- Liability for failure to pay,
- Penalties and delinquent fees, and
- Violation processing and associated administrative processes.

HOV/occupancy violations will be processed pursuant to current Streets and Highway Code requirements, regardless of how it is administered. Since a reliable technology has yet to be developed for an automated vehicle occupancy count, manual enforcement will initially be employed on I-580 to deter occupancy violations.

Legislation needs

To facilitate the automated violation enforcement system and to distinguish between the HOV, toll paying and toll evading vehicles, each traveler in the express lanes will be required to carry a transponder. Per these requirements, the express lane technology can easily single out the toll violators. In addition, the requirements will reduce the volume of license plate imaging that would otherwise have to be processed through the OCR process. On the I-85 Express Lane in Atlanta and the I-10 and I-110 Express Lanes in Los Angeles, all vehicles are required to carry transponders.

With switchable transponders, the HOV users will have the ability to self-declare the number of occupants in the vehicle by setting the occupant count as "1," "2," or "3." The toll readers will be equipped to recognize this feature and assess the fees, based on the adopted toll policy/business rules. Currently, the HOV users are allowed to travel for free in the express lane facilities. Current HOV eligibility on I-580 is two or more (2+). Other regional agencies are contemplating employing switchable transponders when they open other Bay Area Express Lane network projects. See sample picture of switchable transponder in Attachment C.

The Vehicle Code section 149.5 (b) stipulates that unrestricted access to the Alameda County express lanes by HOV vehicles shall be available at all times. Therefore, legislative efforts are necessary to clarify the Vehicle Code and require HOV users to carry transponders while accessing the express lane facility. LA Metro and other toll operators in the region will have to pursue similar legislation in order to enforce the toll transponder requirement for all users. Staff has been coordinating with other entities to collectively pursue legislation. Additional information will be provided at the meeting.

Caltrans Deputy Directive No. 43

In June 2013, Caltrans circulated a draft Deputy Directive No.43 (DD-43) for local agency review that was prepared for managed lane facilities. The following are the main comments prepared by staff and sent to Caltrans:

- Oversight costs should be at no cost to the locals
- The intent of Caltrans's plan to seek new authority for managed lanes and any impact that may have on current authority, including the authority in Alameda County through the approval of Assembly Bill (AB) 2032.
- Revenue sharing and funding for the maintenance and operation of adjacent general purposes lanes.

Caltrans is expected to incorporate the comments received to date and issue a final DD-43 by October 2013. Staff will share the DD-43 and provide additional information once the deputy directive is complete.

4. Public Education and Outreach

As described in the July 2013 Workshop, staff is working towards completing a public education and marketing plan by the end of this calendar year, utilizing an existing consultant contract. Goals of the plan are to: advance education of the Project benefits, provide information on how to use or access the new facility and on-going public education to support the use and understanding of this new commute choice. Targeted audiences will include: HOV users, current FasTrak® users and other potential express lane users, communities along the corridor, businesses, elected officials and stakeholders in east Alameda and San Joaquin Counties.

The I-580 Express Lanes and associated physical and technological features such as the continuous access, zone-based dynamic toll pricing, toll messaging, FasTrak® requirements, toll evasion violation processes, and customer service center operations are relatively new to commuters, and, therefore, will require early customer education and marketing strategies. Staff expects to release a request for proposal in late 2013/early 2014 and select a consultant team for implementing the public education marketing strategies. Implementation of the public education and marketing strategies are expected to commence in July 2014, well in advance of the planned opening of the facility in the fall of 2015, and extend at minimum six months beyond the opening date. Staff is working with other regional entities to effectively coordinate public information message materials and efforts.

5. Agency Coordination

Staff has been coordinating the project development efforts with other congestion management agencies such as the Santa Clara Valley Transportation Authority (VTA), Contra Costa Transportation Authority (CCTA) and the Solano Transportation Authority (STA); the MTC/BATA and collaborating with the California Toll Operators Committee (CTOC), California Department of Transportation (Caltrans), and FHWA. In addition, staff routinely communicates with other toll operators such as the LA Metro, Orange County Transportation Authority (OCTA) and the Minnesota Department of Transportation to share information and validate concepts developed for the project.

Fiscal Impact: There is no fiscal impact.

Attachments

A: List of Express Lane items for discussion in upcoming meetings

B: Project limits and access configuration

C: Automated violation enforcement: Pictures of VES system and switchable transponder

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

Kanda Raj, Project Controls Team

A: List of Express Lane items for discussion in upcoming meetings

I580 PC/I680 Sunol JPA Meeting Date	**List of Items**
July 8, 2013 (Completed)	1. Design and Infrastructure a. Lane Design for Access b. Equipment and lane design to support pricing strategies and messaging 2. Operations and Enforcement: Concept of Operations, including Enforcement 3. Policy Overview: Legislation and Ordinance 4. Public Education and Marketing Strategies 5. Agency Coordination
September 9, 2013	1. Design and Infrastructure (Responses to inquiries) 2. Operations and Enforcement (Focused discussion on enforcement) 3. Policy and Legislation a. HOV Degradation b. FHWA MAP-21 Interoperability c. Toll Ordinance d. Legislation {clean up Vehicle Code 149.5(b)} e. Caltrans Deputy Directive-43 4. Public Education and Marketing Strategies 5. Agency Coordination
October 14, 2013	1. Operations a. Revenue Study Results b. HOV Eligibility (2+, 3+, etc.) c. Hours of Operation 2. Policy: Tolling Polices and Business Rules 3. Environmental Justice 4. Public Education and Marketing Strategies

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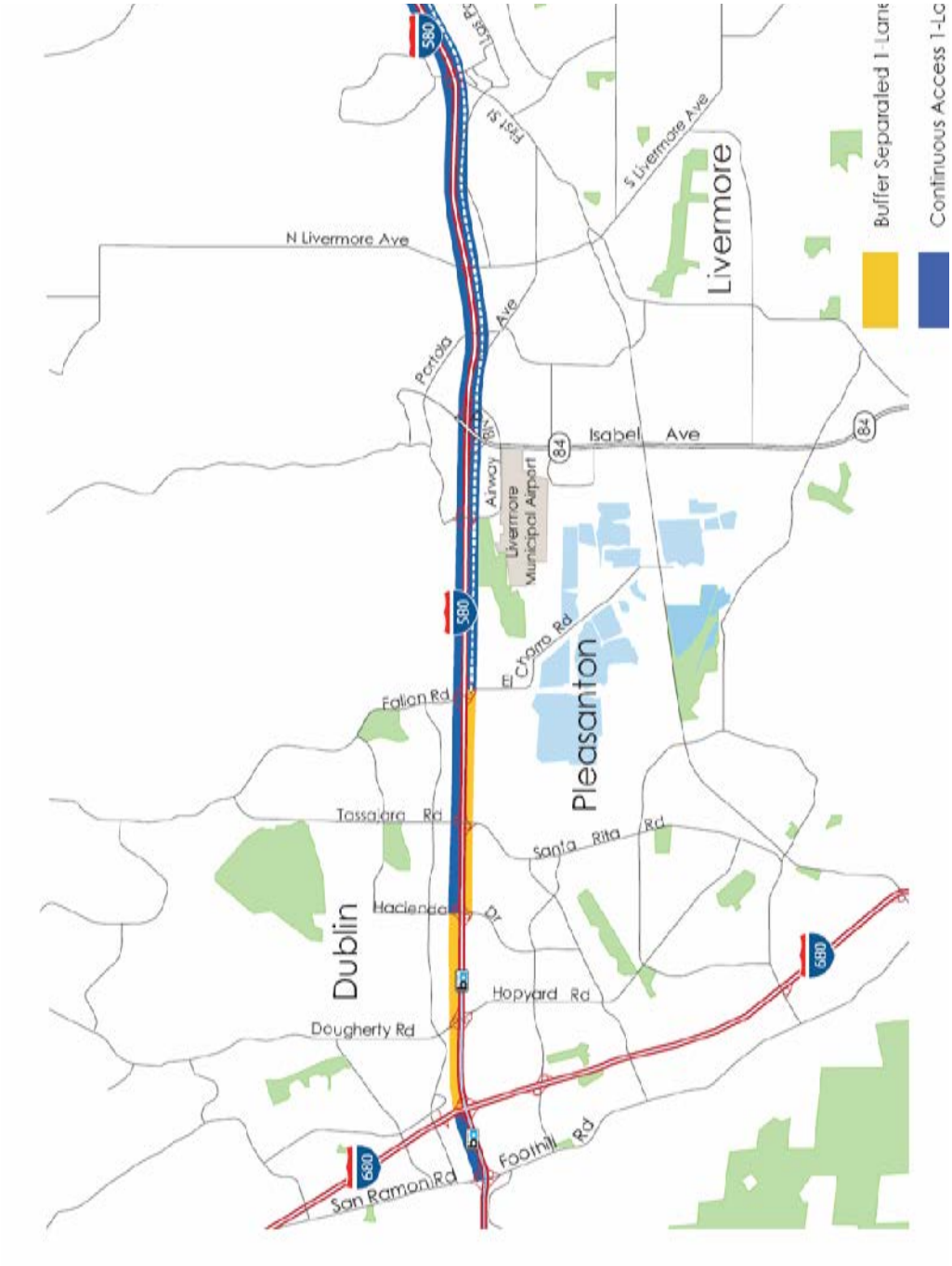
B: I-580 Project Limits and Access Configuration



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C: Automated violation enforcement: Pictures of VES system and switchable transponder

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