

Meeting Agenda

Bay Area Infrastructure Financing Authority

Authority Members:

Dave Cortese, Chair Amy R. Worth, Vice Chair

Federal D. Glover, Scott Haggerty, James P. Spering

Non-Voting Member: Bijan Sartipi

Wednesday, November 16, 2016

1:40 PM

Board Room - 1st Floor

This meeting is scheduled to be webcast live on the Metropolitan Transportation Commission's Web site: <http://mtc.ca.gov/whats-happening/meetings> and will take place at 1:40 p.m. or immediately following the 1:35 p.m. Commission meeting.

1. Roll Call/Confirm Quorum

Quorum: A quorum of this Authority shall be a majority of its regular voting members (3).

2. Consent Calendar

- 2a. [15-1881](#) Minutes of the July 27, 2016 meeting
- Action: Authority Approval
- Attachments: [2a 07-27-2016 BAIFA Draft Minutes.pdf](#)
-
- 2b. [15-1965](#) Contract - On-Call Transportation Engineering and Planning Services:
 Alameda I-880 Express Lanes Before and After Evaluation: Kittelson &
 Associates, Inc. (\$455,000)
- Action: Authority Approval
- Presenter: Winnie Chung
- Attachments: [2b Contract Kittelson&Associates.pdf](#)
-
- 2c. [15-1976](#) Agreement - Express Lane Operations and Maintenance Agreement:
 Caltrans (\$215,000)
- Action: Authority Approval
- Presenter: Lisa Klein
- Attachments: [2c Caltrans O&M Agreement.pdf](#)

- 2d. [15-2031](#) Purchase Order - Electric Service for I-680 Express Lanes from Martinez to Walnut Creek: PG&E (\$170,000 plus a \$42,500 contingency)

Action: Authority Approval

Presenter: Brenton Smith

Attachments: [2d_PurchaseOrder_PG&E.pdf](#)

- 2e. [15-1966](#) Contract - Backhaul Fiber Optic Installation within BART Facilities: Phase 3 Communications, Inc. (\$1,000,000)

Action: Authority Approval

Presenter: Mark Dinh

Attachments: [2e_Contract_Phase3Communications.pdf](#)

3. Approval

- 3a. [15-2030](#) Agreement - FasTrak® Services: Bay Area Toll Authority (\$4,800,000)

A request to enter into an agreement with the Bay Area Toll Authority to provide FasTrak® customer services for express lanes and to grant a license for use of express lane tolling equipment purchased with BATA express lane capital funds.

Action: Authority Approval

Presenter: Lisa Klein

Attachments: [3a_BATA-BAIFA Agreement_BAIFA_rev_Klein.pdf](#)

4. Information

- 4a. [15-1880](#) Express Lane Program Quarterly Report - 3rd Quarter 2016

Quarterly progress report for the Express Lane Program.

Action: Information

Presenter: Lisa Klein

Attachments: [4a_Express_Lanes_Q3-2016_Report.pdf](#)

5. Public Comment / Other Business

6. Adjournment / Next Meeting

The next meeting of the Bay Area Infrastructure Financing Authority will be held at a date and time to be duly noticed at the Bay Area Metro Center, 375 Beale Street, San Francisco CA 94105.

Public Comment: The public is encouraged to comment on agenda items at Authority meetings by completing a request-to-speak card (available from staff) and passing it to the Authority secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

Meeting Conduct: If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Authority may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

Record of Meeting: Authority meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site (mtc.ca.gov) for public review for at least one year.

Accessibility and Title VI: MTC provides services/accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Commission matters. For accommodations or translations assistance, please call 415.778.6757 or 415.778.6769 for TDD/TTY. We require three working days' notice to accommodate your request.

可及性和法令第六章: MTC 根據要求向希望來委員會討論有關事宜的殘疾人士及英語有限者提供服務/方便。需要便利設施或翻譯協助者，請致電 415.778.6757 或 415.778.6769 TDD / TTY。我們要求您在三個工作日前告知，以滿足您的要求。

Acceso y el Titulo VI: La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Attachments are sent to Authority members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Authority. Actions recommended by staff are subject to change by the Authority.



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 15-1881 **Version:** 1 **Name:**

Type: Minutes **Status:** Consent

File created: 8/18/2016 **In control:** Bay Area Infrastructure Financing Authority

On agenda: 11/16/2016 **Final action:**

Title: Minutes of the July 27, 2016 meeting

Sponsors:

Indexes:

Code sections:

Attachments: [2a_07-27-2016_BAIFA_Draft_Minutes.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:
Minutes of the July 27, 2016 meeting

Recommended Action:
Authority Approval



Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Meeting Minutes

Bay Area Infrastructure Financing Authority

Authority Members:

Dave Cortese, Chair Amy R. Worth, Vice Chair

Federal D. Glover, Scott Haggerty, James P. Spering

Non-Voting Member: Bijan Sartipi

Wednesday, July 27, 2016

9:30 AM

Board Room - 1st Floor

Call Meeting to Order

1. Roll Call/Confirm Quorum

Present: 5 - Vice Chair Worth, Commissioner Glover, Commissioner Spering, Chairperson Cortese and Commissioner Haggerty

Non-Voting Member Present: Commissioner Sartipi

2. Pledge of Allegiance

3. Compensation Announcement - Secretary

4. Consent Calendar

Approval of the Consent Calendar

Upon the motion by Commissioner Spering and the second by Commissioner Haggerty, the Consent Calendar was unanimously approved by the following vote:

Aye: 5 - Vice Chair Worth, Commissioner Glover, Commissioner Spering, Chairperson Cortese and Commissioner Haggerty

4a. [15-1751](#) Minutes of the June 22, 2016 meeting

Action: Authority Approval

4b. [15-1756](#) BAIFA Resolution No. 13 - Privacy Policy

Action: Authority Approval

Presenter: Jim Macrae

- 4c. [15-1757](#) Contract Amendment - Backhaul Communications Network for I-680 Express Lanes between Walnut Creek and San Ramon: Aegis ITS, Inc. (\$1,050,000 increase in contingency)

Action: Authority Approval

Presenter: Mark Dinh

5. Public Hearing

- 5a. [15-1754](#) Public Hearing: Toll Facility Ordinance for Express Lanes

The second of two public hearings on the proposed Toll Facility Ordinance to establish BAIFA's express lane tolls, a toll collection process and civil penalties for the evasion of those tolls or noncompliance with other policies set forth in the ordinance.

Action: Public Hearing

Presenter: Lisa Klein

Clarence Fischer was called to speak.

6. Authority Approval

- 6a. [15-1755](#) Toll Facility Ordinance for Express Lanes

A recommendation to adopt the proposed Toll Facility Ordinance for Express Lanes.

Action: Authority Approval

Presenter: Lisa Klein

Upon the motion by Commissioner Sperling and the second by Commissioner Haggerty, the Toll Facility Ordinance for Express Lanes was unanimously approved. The motion carried by the following vote:

Aye: 5 - Vice Chair Worth, Commissioner Glover, Commissioner Sperling, Chairperson Cortese and Commissioner Haggerty

- 6b. [15-1753](#) Agreement - Express Lanes Enforcement: California Highway Patrol (\$750,000)

A request to enter into an agreement with the California Highway Patrol (CHP) to provide enforcement for the I-680 Express Lane between Walnut Creek and San Ramon.

Action: Authority Approval

Presenter: Pierce Gould

Upon the motion by Commissioner Worth and the second by Commissioner Spering, the Agreement for Express Lanes Enforcement with California Highway Patrol was unanimously approved. The motion carried the following vote:

Aye: 5 - Vice Chair Worth, Commissioner Glover, Commissioner Spering, Chairperson Cortese and Commissioner Haggerty

7. Public Comment / Other Business

8. Adjournment / Next Meeting

The next meeting of the Bay Area Infrastructure Financing Authority will be held on September 28, 2016 at a time to be duly noticed at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA 94105.

Legislation Details (With Text)

File #: 15-1965 **Version:** 1 **Name:**

Type: Contract **Status:** Consent

File created: 9/23/2016 **In control:** Bay Area Infrastructure Financing Authority

On agenda: 11/16/2016 **Final action:**

Title: Contract - On-Call Transportation Engineering and Planning Services: Alameda I-880 Express Lanes Before and After Evaluation: Kittelson & Associates, Inc. (\$455,000)

Sponsors:

Indexes:

Code sections:

Attachments: [2b Contract Kittelson&Associates.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Contract - On-Call Transportation Engineering and Planning Services: Alameda I-880 Express Lanes Before and After Evaluation: Kittelson & Associates, Inc. (\$455,000)

Presenter:

Winnie Chung

Recommended Action:

Authority Approval



Bay Area Infrastructure Financing Authority
101 8th St., Oakland, CA 94607
TEL 510.817.5700
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WEB www.mtc.ca.gov

Memorandum

TO: BAIFA

DATE: November 7, 2016

FR: Executive Director

W. I. 6844

RE: Contract – On-Call Transportation Engineering and Planning Services: Alameda I-880 Express Lanes Before and After Evaluation: Kittelson & Associates, Inc. (\$455,000)

This memorandum seeks approval from the Authority for a contract with Kittelson & Associates, Inc. (Kittelson) in an amount not to exceed \$455,000 to provide on-call transportation planning services related to before and after evaluations for the I-880 Express Lanes in Alameda County between Oakland and Milpitas.

Background

BAIFA will deliver the I-880 express lanes by converting the existing I-880 high-occupancy vehicle lanes between Oakland and Milpitas in Alameda County to express lanes. Some express lane elements, such as sign structure foundations and median lighting, are already under construction as part of a Caltrans project to replace the median barrier. The remaining elements will be constructed in a separate contract to be advertised by BAIFA in 2017. Staff estimates that the express lanes will open in 2019.

Staff will collect before and after data to measure the impacts of the I-880 Express Lanes. The initial data collection will commence sometime after the median barrier construction contract is complete and will establish baseline conditions, which will later be compared to data collected after the lanes are open and traffic has stabilized. The data to be collected, including travel time/speed, volumes, and vehicle occupancy, will be used to evaluate various performance measures, such as travel time savings and reliability, vehicle/person throughput, level of service, delay, and duration of congestion. After the express lanes become operational, ongoing performance monitoring will be conducted and reported to various stakeholders (e.g., BAIFA commissioners, general public, media, etc.), as well as to the Federal Highway Administration and the California Transportation Commission to meet statutory requirements.

Selection Process

In February 2016, MTC issued a Request for Qualifications to pre-qualify firms to provide on-call transportation engineering and planning services to support various Service Categories, including:

- a) Freeway Active Traffic Management
- b) Travel Demand Management
- c) Connected Vehicles/Autonomous Vehicles and Advanced Technology
- d) Data Analytics and Performance Assessments
- e) Arterial Operations
- f) General Planning

At its June 10, 2016 meeting, the Operations Committee approved a competitively pre-qualified panel of eleven consultants to provide on-call transportation engineering and planning services in the Data Analytics and Performance Assessments service category on an as-needed basis.

On June 28, 2016 MTC invited all eleven pre-qualified consultants to submit a budget, project schedule, and staffing plan to conduct before and after evaluations for the I-880 Express Lanes. MTC received proposals from five firms: Cambridge Systematics, Inc., DKS Associates, Iteris, Inc., Kittelson, and TJKM Consultants. A panel of MTC staff performed a review of the proposals and evaluated the proposals based on each firm's understanding of the project, previous similar experience, written communication, staff resources and reasonableness of costs.


Based upon this evaluation, staff recommends the selection of Kittelson. Kittelson had the most cost-effective proposal that took into account scope areas that could be performed more efficiently, thereby reducing project costs. In addition, Kittelson has the most relevant freeway before and after study experience, was hired to conduct the before and after evaluations for BAIFA's first express lane (i.e., I-680 in Contra Costa County between Walnut Creek and San Ramon), and has demonstrated ability to handle large-scale data collection and analysis efforts. The table below provides the final rankings based upon staff evaluations:

Consultant	Ranking
Kittelson	1
TJKM Consultants	2
Iteris, Inc.	3
DKS Associates	4
Cambridge Systematics, Inc.	5

Attachment A includes a summary of Kittelson and its project team's small business and disadvantaged business enterprise status.

Recommendation

Staff recommends that the Authority authorize the Executive Director or his designee to negotiate and enter into a contract with Kittelson in an amount not to exceed \$455,000 to provide on-call transportation planning services related to before and after evaluations for the Alameda I-880 express lanes project.



Steve Heminger

SH: wc

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Attachment A
Small and Disadvantaged Business Participation

Firm Name	Role on Project	DBE* Firm			SBE** Firm		
		Yes	If Yes, List #	No	Yes	If Yes, List #	No
Kittelson & Associates, Inc. – Prime Contractor	Project Management and Data Analysis			X			X
Metro Traffic Data - Subcontractor	Data Collection			X			X
Quality Counts - Subcontractor	Data Collection			X			X

*Denotes certification by the California Unified Certification Program (CUCP).

**Denotes certification by the State of California.

REQUEST FOR AUTHORITY APPROVAL

Summary of Proposed Contract

Work Item No.: 6844

Contractor: Kittelson & Associates, Inc., Oakland, CA

Work Project Title: Alameda I-880 Express Lanes Before and After Evaluation

Purpose of Project: Measure performance of Alameda I-880 express lanes after implementation and compare with before conditions; report the express lanes performance to various stakeholders.

Brief Scope of Work: Perform before and after evaluations for the I-880 express lanes project in Alameda County. Work includes collecting and analyzing traffic data and documenting the results.

Project Cost Not to Exceed: \$455,000

Funding Source: BATA Express Lanes Capital Project Budget

Fiscal Impact: Funding is included in the Express Lane Capital Project Budget, as adopted in the FY 2016-17 Toll Bridge Program Operating and Capital Budget (BATA Resolution No. 118, Revised).

Motion by Authority: That the Executive Director or his designee is authorized to negotiate and enter into a contract with Kittelson & Associates, Inc. to provide on-call transportation planning services as described above and in the Executive Director's memorandum dated November 7, 2016, and the Chief Financial Officer is directed to set aside funds in the amount of \$455,000 for such contract.

BAIFA:

Dave Cortese, Chair

Approved: Date: November 16, 2016

Legislation Details (With Text)

File #: 15-1976 **Version:** 1 **Name:**

Type: Contract **Status:** Consent

File created: 9/29/2016 **In control:** Bay Area Infrastructure Financing Authority

On agenda: 11/16/2016 **Final action:**

Title: Agreement - Express Lane Operations and Maintenance Agreement: Caltrans (\$215,000)

Sponsors:

Indexes:

Code sections:

Attachments: [2c_Caltrans O&M Agreement.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:
Agreement - Express Lane Operations and Maintenance Agreement: Caltrans (\$215,000)

Presenter:
Lisa Klein

Recommended Action:
Authority Approval



Bay Area Infrastructure Financing Authority
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Memorandum

TO: Bay Area Infrastructure Financing Authority

DATE: November 7, 2016

FR: Executive Director

W. I. 6843

RE: Agreement – Express Lane Operations and Maintenance Agreement: Caltrans (\$215,000)

This memorandum requests Authority approval to enter into an agreement with Caltrans for roadway operations and maintenance services for BAIFA's express lanes. Staff requests an initial amount not to exceed \$215,000 to provide services for the I-680 Express Lanes in Contra Costa County between Walnut Creek and San Ramon for the period through June 30, 2018. Staff will return to BAIFA for approval to add funds for future years and as new express lane corridors open. The next corridor scheduled to open is I-880 in 2019.

Background

The I-680 Express Lane between Walnut Creek and San Ramon is projected to open in the second quarter of 2017. State law requires BAIFA and Caltrans to enter into an agreement defining express lane operational and maintenance roles and responsibilities and providing for reimbursement by BAIFA for the associated costs incurred by Caltrans. Staff's initial estimate is that Caltrans' costs for the I-680 express lane will be approximately \$155,000 per year for: coordination on incident management and daily operations (\$55,000 per year) and routine maintenance of roadway infrastructure (\$100,000 per year). This is an initial estimate for budgeting purposes. Actual costs may be higher or lower, depending on the actual work performed.

Based on an express lane opening date in the second quarter of 2017, the initial budget of \$215,000 provides for 15 months of express lane operations and maintenance through June 30, 2018, with allowance for planning and preparations leading up to opening.

Caltrans maintenance services may include activities such as: maintenance of concrete median barrier, metal beam guardrail, pavement markers and striping; storm drain clean out; landscaping; sweeping; and debris removal. BAIFA also intends to seek Authority approval in the next several months to enter into a contract with a maintenance contractor to provide regular inspection and maintenance services in the event Caltrans does not wish to or is unable to provide full roadway maintenance services. The electronic tolling equipment and backhaul communications network equipment will be maintained by BAIFA through existing contracts with the toll system integrator and backhaul contractor.

Recommendation

Staff recommends that the Authority authorize the Executive Director or his designated representative to negotiate and enter into an agreement with Caltrans for roadway operations and maintenance services for BAIFA's express lanes. Staff requests approval for an initial amount not to exceed \$215,000 to provide services for the I-680 Express Lanes between Walnut Creek and San Ramon for the period through June 30, 2018, subject to the adoption and approval of a FY 2017-18 BAIFA Operating budget. Staff will return to BAIFA for approval to add funds for service in future years and as new express lane corridors open.



Steve Heminger

SH:lk

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REQUEST FOR AUTHORITY APPROVAL

Summary of Proposed Agreement

Work Item No.:	6843
Agency:	Caltrans
Work Project Title:	Express Lanes Operations and Maintenance Services
Purpose of Project:	To reimburse Caltrans for roadway operations and maintenance services for BAIFA's express lanes.
Brief Scope of Work:	Caltrans will coordinate with BAIFA on express lane operations and incident management. Caltrans will perform routine maintenance on express lane roadway infrastructure.
Project Cost Not to Exceed:	\$215,000
Funding Source:	BATA Express Lanes Capital Project Budget: \$60,000 BAIFA operating budget for FY 2017-18, subject to adoption: \$155,000
Fiscal Impact:	Funding in the amount of \$60,000 is included in the Express Lanes Capital Project Budget, as adopted in the FY 2016-17 Toll Bridge Program Operating and Capital Budget (BATA Resolution No. 118, Revised). Funding in the amount of \$155,000 is subject to the adoption of a BAIFA operating budget for FY 2017-18.
Motion by Authority:	That the Executive Director or his designee is authorized to negotiate and enter into an agreement with Caltrans for operations and maintenance services as described above and in the Executive Director's memorandum dated November 7, 2016, and the Chief Financial Officer is directed to set aside funds in the amount of \$215,000, subject to the budgetary approval specified above.
BAIFA:	<hr/> Dave Cortese, Chair
Approved:	Date: November 16, 2016



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 15-2031 **Version:** 1 **Name:**

Type: Contract **Status:** Consent

File created: 10/13/2016 **In control:** Bay Area Infrastructure Financing Authority

On agenda: 11/16/2016 **Final action:**

Title: Purchase Order - Electric Service for I-680 Express Lanes from Martinez to Walnut Creek: PG&E (\$170,000 plus a \$42,500 contingency)

Sponsors:

Indexes:

Code sections:

Attachments: [2d PurchaseOrder PG&E.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Purchase Order - Electric Service for I-680 Express Lanes from Martinez to Walnut Creek: PG&E (\$170,000 plus a \$42,500 contingency)

Presenter:

Brenton Smith

Recommended Action:

Authority Approval



Bay Area Infrastructure Financing Authority
 101 8th St., Oakland, CA 94607
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 WEB www.baifa.ca.gov

Memorandum

TO: BAIFA

DATE: November 7, 2016

FR: Executive Director

W. I. 6844

RE: Purchase Order – Electric Service for I-680 Express Lanes from Martinez to Walnut Creek: PG&E (\$170,000 plus a \$42,500 contingency)

This memorandum requests Authority approval to issue a purchase order to Pacific Gas & Electric (PG&E) to provide electric distribution services for the I-680 Express Lanes in Contra Costa County from Martinez to Walnut Creek in an amount not to exceed \$170,000, plus establish a \$42,500 contingency. These services cannot be procured competitively as PG&E is the only electric utility provider in the area.

Background

The I-680 Express Lanes from Martinez to Walnut Creek, also called the I-680 Northern Segment Express Lanes project (CC-680N), will convert the existing southbound high-occupancy vehicle lanes to express lanes from just south of the Benicia Bridge to North Main Street and provide express lane elements for the new southbound “gap closure” lane between North Main Street and Rudgear Road. The PG&E services will provide power to tolling and communication equipment within the project corridor. This express lane segment requires new electric services in approximately seventeen locations.

This project will be delivered by the Contra Costa County Transportation Authority (CCTA) with funds provided by BAIFA. CCTA’s civil contractor will install a portion of the facilities required for PG&E to establish these services. However, since BAIFA will ultimately operate the lane, BAIFA will contract directly with PG&E to establish electric services.

The total estimated costs for PG&E service agreements is \$170,000. Staff also requests authorization of a \$42,500 contingency for unanticipated conditions that may arise during PG&E’s work. A summary of planned services for the CC-680N project is shown in the table below.

Proposed Electric Services for CC-680N (17 locations):		
	Cost per location	Item Total
Engineering Advances	\$2,500	\$42,500
Service Establishment	\$7,500	\$127,500
Contingency (25%)	\$2,500	\$42,500
Purchase Order Budget	\$12,500	\$212,500

Recommendation

Staff recommends that the Authority authorize the Executive Director or his designee to issue a purchase order for electric services supporting the I-680 North Express Lanes project in an amount not to exceed \$170,000 to PG&E, plus establish a contingency in the amount of \$42,500 to be used at the Executive Director, or his designee's discretion.



Steve Heminger

SH: bs

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REQUEST FOR AUTHORITY APPROVAL

Summary of Purchase Order

Work Item No.: 6845

Contractor: Pacific Gas & Electric (PG&E)

Work Project Title: Electric Service for I-680 Express Lanes in Contra Costa County from Martinez to Walnut Creek

Purpose of Project: To provide power to the tolling system and communication network for the I-680 Express Lane between Martinez and Walnut Creek.

Brief Scope of Work: PG&E will design and build new electric distribution services for the I-680 Express Lane between Martinez and Walnut Creek in Contra Costa County.

Project Cost Not to Exceed: \$170,000, plus a \$42,500 contingency

Funding Source: BATA Express Lanes Capital Project Budget

Fiscal Impact: Funding is included in the Express Lane Capital Project Budget, as adopted in the FY 2016-17 Toll Bridge Program Operating and Capital Budget (BATA Resolution No. 118, Revised).

Motion by Authority: That the Executive Director or his designee is authorized to issue a purchase order not to exceed \$170,000 to PG&E for electric distribution services as described above and in the Executive Director's memorandum dated November 7, 2016, and further that the Executive Director or his designee, is authorized to use contingency funds in the amount of \$42,500 for any unanticipated conditions during the work; and that the Chief Financial Officer is authorized to set aside funds for such purchase order and contingency in the amounts stated herein.

BAIFA:

Dave Cortese, Chair

Approved: Date: November 16, 2016

Legislation Details (With Text)

File #: 15-1966 **Version:** 1 **Name:**

Type: Contract **Status:** Consent

File created: 9/23/2016 **In control:** Bay Area Infrastructure Financing Authority

On agenda: 11/16/2016 **Final action:**

Title: Contract - Backhaul Fiber Optic Installation within BART Facilities: Phase 3 Communications, Inc. (\$1,000,000)

Sponsors:

Indexes:

Code sections:

Attachments: [2e_Contract_Phase3Communications.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Contract - Backhaul Fiber Optic Installation within BART Facilities: Phase 3 Communications, Inc. (\$1,000,000)

Presenter:

Mark Dinh

Recommended Action:

Authority Approval



Bay Area Infrastructure Financing Authority
101 8th St., Oakland, CA 94607
TEL 510.817.5700
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WEB www.mtc.ca.gov

Memorandum

TO: Bay Area Infrastructure Financing Authority

DATE: November 7, 2016

FR: Executive Director

W. I. 6842

RE: Contract – Backhaul Fiber Optic Installation Within BART Facilities: Phase 3 Communications, Inc. (\$1,000,000)

This memorandum requests Authority approval for a sole source contract with Phase 3 Communications, Inc. (Phase 3), in an amount not to exceed \$1,000,000 for the installation of fiber optic cables within Bay Area Rapid Transit (BART) facilities. BAIFA agreed to complete the fiber optic installation as part of a 2015 telecommunications reciprocal use agreement with BART, in which BART also agreed to provide BAIFA with the use of fiber optic strands within its fiber network in the East Bay and San Francisco. BART competitively procured Phase 3 to maintain BART's commercial fiber optic and wireless network in 2014.

Background

Starting in 2014, BAIFA and BART staff entered into discussions on reciprocal use of fiber optic infrastructure installed and maintained by both parties. BAIFA requested the use of unallocated fiber within BART's network to connect its planned express lanes on I-680 and I-880 to datacenters in Martinez, Oakland, and San Francisco. In exchange, BAIFA would provide BART the use of fiber within the I-680 and I-880 express lanes corridors and also fund the installation of two segments of BART fiber. The two segments are from Orinda to Walnut Creek BART stations and Bayfair to West Dublin BART stations. Staff worked with BART and its maintenance contractor to estimate the installation costs, with BART supplying the fiber optic cable, to be \$400,000 per segment. Staff received Authority approval to enter into the agreement with BART in July 2015 and a reciprocal use agreement was executed in December 2015.

BART issued an Invitation to Bid (IFB) in March 31, 2014, for the emergency restoration, preventative maintenance, and non-emergency repair and seismic relocation work of the commercial fiber optic and wireless network (BART Contract No. 6M7220). Phase 3 was awarded the contract in August 2014 and received a two year extension for maintenance in July 2015. Phase 3 is the sole provider of this service for BART and has completed the necessary certification for staff to work within BART facilities, including BART stations and within the railway.

Following the execution of the reciprocal use agreement, BART procured the fiber optic cables required for the two segments to be installed. BAIFA staff has also received updated quotes from Phase 3 for the installation costs and recommends that BAIFA enter into a contract with Phase 3 for the fiber installation at a cost not to exceed \$1,000,000. Phase 3 has entered into

similar contracts with private sector telecommunications providers for installation of fiber within BART's commercial fiber optic network.

Attachment A includes a summary of Phase 3's small business and disadvantaged business enterprise status.

Recommendation

Staff recommends that the Authority authorize the Executive Director or his designated representative to negotiate and enter into a sole source contract with Phase 3 Communications, Inc., in an amount not to exceed \$1,000,000 for the installation of fiber optic cables within BART facilities.



Steve Heminger

SH:md
Attachment

Attachment A

			DBE* Firm			SBE** Firm		
			Yes	If Yes, List #	No	Yes	If Yes, List #	No
Prime Contractor	Firm Name	Role on Project						
	Phase 3 Communications, Inc.	General Contractor	X	034535				X

*Denotes certification by the California Unified Certification Program (CUCP).

**Denotes certification by the State of California.

REQUEST FOR AUTHORITY APPROVAL

Summary of Proposed Contract

Work Item No.: 6842

Contractor: Phase 3 Communications, Inc.

Work Project Title: Fiber optic installation within BART facilities

Purpose of Project: Installation of fiber optic cables within BART facilities as per agreement with BART

Brief Scope of Work: Labor and miscellaneous materials for the installation of fiber optic cables within BART facilities from Orinda to Walnut Creek stations and from Bayfair to West Dublin stations

Project Cost Not to Exceed: \$1,000,000

Funding Source: BATA Express Lanes Capital Project Budget

Fiscal Impact: Funding in the amount of \$1,000,000 is included in the Express Lanes Capital Project Budget, as adopted in the FY 2016-17 Toll Bridge Program Operating and Capital Budget (BATA Resolution No. 118, Revised).

Motion by Authority: That the Executive Director or his designee is authorized to enter into a sole source contract with Phase 3 Communications, Inc., in an amount not to exceed \$1,000,000 for the installation of fiber optic cables within Bay Area Rapid Transit (BART) facilities as described above and in the Executive Director's memorandum dated November 7, 2016, and the Chief Financial Officer is directed to set aside funds in the amount of \$1,000,000 for such contract.

BAIFA:

Dave Cortese, Chair

Approved: Date: November 16, 2016

Legislation Details (With Text)

File #:	15-2030	Version:	1	Name:	
Type:	Contract	Status:		Authority Approval	
File created:	10/13/2016	In control:		Bay Area Infrastructure Financing Authority	
On agenda:	11/16/2016	Final action:			
Title:	Agreement - FasTrak® Services: Bay Area Toll Authority (\$4,800,000)				

A request to enter into an agreement with the Bay Area Toll Authority to provide FasTrak® customer services for express lanes and to grant a license for use of express lane tolling equipment purchased with BATA express lane capital funds.

Sponsors:

Indexes:

Code sections:

Attachments: [3a BATA-BAIFA Agreement BAIFA rev Klein.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Agreement - FasTrak® Services: Bay Area Toll Authority (\$4,800,000)

A request to enter into an agreement with the Bay Area Toll Authority to provide FasTrak® customer services for express lanes and to grant a license for use of express lane tolling equipment purchased with BATA express lane capital funds.

Presenter:

Lisa Klein

Recommended Action:

Authority Approval



Bay Area Infrastructure Financing Authority
 Bay Area Metro Center
 375 Beale Street, Suite 800
 San Francisco, CA 94105
 TEL 415.778.6700
 WEB www.mtc.ca.gov

Memorandum

TO: BAIFA

DATE: November 7, 2016

FR: Executive Director

W. I. 6843

RE: Agreement – FasTrak® Services: Bay Area Toll Authority (\$4,800,000)

Under state law, express lane operators, including BAIFA, must enter into cooperative agreements with the Bay Area Toll Authority (BATA) providing for BATA to operate and manage FasTrak® services for express lanes, which include FasTrak® account management, financial transactions and customer service. This memorandum requests Authority approval to enter into such a cooperative agreement with BATA. Staff requests authorization for an initial amount not to exceed \$4,800,000 for BATA to provide such services for the I-680 Express Lanes in Contra Costa County between Walnut Creek and San Ramon for the period through June 30, 2019. The BATA Oversight Committee will be asked to approve the agreement at its meeting on November 9, 2016.

Background

BAIFA expects to open the first of its express lanes in the second quarter of 2017 on I-680 in Contra Costa County between Walnut Creek and San Ramon. The proposed agreement with BATA is patterned on BATA's agreement with the Alameda County Transportation Commission for express lanes on I-580, which is the most recent of BATA's agreements for the Bay Area express lanes in operation.

Under the agreement, BAIFA will pay BATA for BATA's services in accordance with rate schedules provided by BATA to BAIFA from time to time. BATA will distribute toll tags, provide customer service, process trip records and violations in accordance with BAIFA's Toll Facility Ordinance and BATA procedures, collect tolls and transfer revenue to BAIFA. The initial rate schedule pertains solely to the BAIFA toll facilities on I-680 in Contra Costa County between San Ramon and Walnut Creek, and reflects the same rates for the same services provided for other express lanes. In addition, BATA will provide full financial accounting services for BAIFA since BAIFA does not have its own accounting unit. The estimated charge for all services provided by BATA is \$4.8 million for the period through June 30, 2019; however, actual charges may vary depending on the level of express lane usage. The agreement also licenses BAIFA to use the communications equipment and toll collection hardware and software systems provided by BATA to BAIFA for those toll facilities. The agreement may be terminated at any time by either party, except that it cannot be terminated while BAIFA bonds or other obligations for the BAIFA toll facilities is outstanding. Note that BAIFA has not issued any bonds for the express lane projects underway, which are funded on a pay-as-you-go basis with funds from the BATA Capital Budget.

Recommendation

Staff recommends that the Authority authorize the Executive Director or his designated representative to negotiate and enter into an agreement with BATA for FasTrak® services for the BAIFA express lanes. Staff recommends the Authority authorize an initial amount not to exceed \$4,800,000 to provide services for the I-680 Express Lanes between Walnut Creek and San Ramon for the period through June 30, 2019, subject to the adoption and approval of future BAIFA Operating budgets.



Steve Heminger

SH:lk

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REQUEST FOR AUTHORITY APPROVAL

Summary of Proposed Agreement

Work Item No.: 6843

Agency: Bay Area Toll Authority

Work Project Title: FasTrak® Services

Purpose of Project: BATA will provide FasTrak® services for the BAIFA Express Lanes

Brief Scope of Work: BATA shall distribute toll tags, provide customer service, process trip records and violations, collect tolls and transfer revenue to BAIFA. BATA shall provide financial services to BAIFA. BATA shall grant BAIFA a license to use toll collection equipment and software paid for by BATA.

Project Cost Not to Exceed: \$4,800,000

Funding Source: BATA Express Lanes Capital Project Budget: \$1,200,000
BAIFA operating budget for FY 2017-18, subject to adoption: \$1,800,000
BAIFA operating budget for FY 2018-19, subject to adoption: \$1,800,000

Fiscal Impact: Funding in the amount of \$1,200,000 is included in the Express Lanes Capital Project Budget, as adopted in the FY 2016-17 Toll Bridge Program Operating and Capital Budget (BATA Resolution No. 118, Revised). Funding in the amount of \$1,800,000 is subject to the adoption of a BAIFA operating budget for FY 2017-18. Funding for the balance of \$1,800,000 is subject to the adoption of a BAIFA operating budget for FY 2018-19.

Motion by Authority: That the Executive Director or his designee is authorized to negotiate and enter into an agreement with BATA for FasTrak® services as described above and in the Executive Director's memorandum dated November 7, 2016, and the Chief Financial Officer is directed to set aside funds in the amount of \$4,800,000 for such agreement, subject to annual budgetary approvals as specified above.

BAIFA:

Dave Cortese, Chair

Approved: Date: November 16, 2016

Legislation Details (With Text)

File #: 15-1880 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 8/18/2016 **In control:** Bay Area Infrastructure Financing Authority
On agenda: 11/16/2016 **Final action:**
Title: Express Lane Program Quarterly Report - 3rd Quarter 2016
Quarterly progress report for the Express Lane Program.

Sponsors:

Indexes:

Code sections:

Attachments: [4a Express Lanes Q3-2016 Report.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Express Lane Program Quarterly Report - 3rd Quarter 2016

Quarterly progress report for the Express Lane Program.

Presenter:

Lisa Klein

Recommended Action:

Information



Bay Area Infrastructure Financing Authority
Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
TEL 415.778.6700
WEB www.mtc.ca.gov

Memorandum

TO: BAIFA

DATE: November 7, 2016

FR: Executive Director

W. I. 6840

RE: Express Lane Program Quarterly Report – 3rd Quarter 2016

MTC issues Express Lane Program reports on a quarterly basis. The quarterly report summarizes major developments, project schedules and risks and compares cost forecasts with the Express Lane Program Expenditure Plan approved by BAIFA in June 2015, and amended in December of 2015. The attached report covers the third quarter of 2016, July 1 to September 30. Progress to date, including selected highlights from the third quarter, include:

- Construction is progressing nicely on the I-680 Southern Segment Express Lanes in Contra Costa County between Walnut Creek and San Ramon . Construction of the civil roadway improvements is largely done and work on the backhaul communications network and toll system is well underway. One of the last items of work for the civil contractor will be express lanes striping, which should be completed in November. No supplemental budget allocations for this contract are being requested. The backhaul contractor has installed 50% of the fiber in the corridor and five of the six backhaul sites (corridor hubs and datacenters) are operational. The contractor is currently installing and repairing fiber optic conduit, pull boxes and cables from Walnut Creek to Martinez to connect to the data center at the Benicia Bridge. The toll system integrator has installed approximately 35% of the tolling field equipment. The backhaul and toll system work are, however, both behind schedule due to the poor condition of existing fiber conduit in the corridor; the fiber requires more repair than expected and this is delaying preparations for toll system testing. The project team is developing a recovery schedule to mitigate the delays that may affect the planned opening in the 2nd quarter of 2017. (See Section IV.C. of the attached report.)
- The Caltrans median barrier reconstruction project on I-880 is constructing express lane sign structure foundations and other express lanes improvements in the roadway median. The contractor has now completed 19 of approximately 70 express lane sign structure foundations in the project.
- The cost forecast for the I-880 Express Lane in Alameda County between Oakland and Milpitas has been increased by \$36 million (the revised total is \$114 million). This increase was reported in prior quarterly reports as a risk. With 95% design now complete and \$27 million already committed for the construction of express lane elements in the median barrier reconstruction contract, the likelihood of needing additional budget to complete I-880 has become a reality. The cost increase is associated with new lighting requirements, widening at access locations and signage not anticipated in the original budget.

- Right of way certification of the 880 Express Lanes Project is proving more difficult than anticipated due to delayed design work from PG&E for new power service connections. The project team is working on options to overcome this challenge and secure the certification in time to permit construction to begin in the summer of 2017. This risk will be reflected in the next quarterly report.



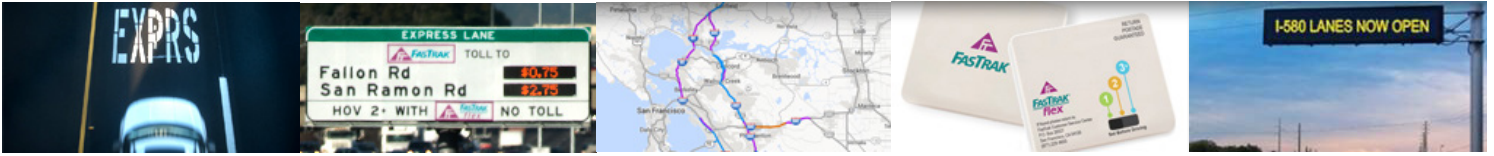
Steve Heminger

SH:lk
Attachment

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BAY AREA EXPRESS LANES



MTC Express Lanes Quarterly Report 3rd Quarter, July - September, 2016

Submitted: November 17, 2016

TABLE OF CONTENTS

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Appendices

Construction is well under way on I-680 in Contra Costa County, the first Bay Area Express Lane project to be planned, built and operated by MTC.



*Violation camera for the toll system.
(See additional construction photographs on pages 17-18)*

I. PROGRAM HIGHLIGHTS

The purpose of this report is to summarize the progress of delivering Metropolitan Transportation Commission (MTC) Express Lanes. The report covers the third quarter of 2016, July 1 to September 30.

The California Transportation Commission (CTC) approved MTC's application to implement and operate its 270-mile express lane network on October 27, 2011. Soon thereafter, work began to environmentally clear the first phase of express lane conversion projects and produce a Concept of Operations describing how the Express Lanes will operate. Currently, there are several projects at varying stages of development with the first project scheduled to open in 2017.

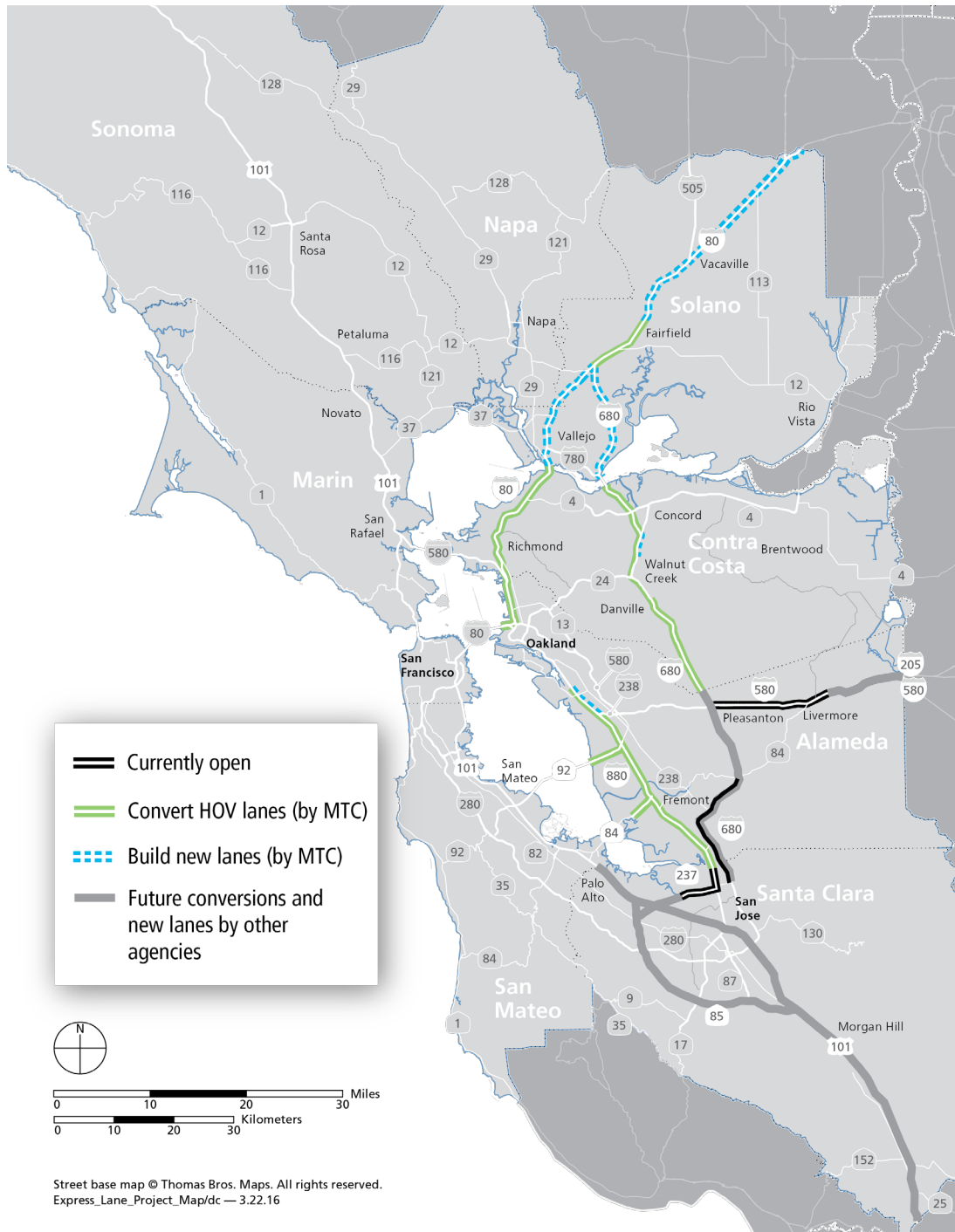
Project Development & Construction	3 rd Quarter 2016 Highlights	Current Activities
I-880 Alameda (ALA-880) Between San Leandro and Milpitas <i>Hegenberger Road/Lewelling Boulevard to Dixon Landing Road</i>	<ul style="list-style-type: none"> Work is approximately 20% complete on the Caltrans median barrier reconstruction project, including construction of express lane sign structure foundations. 95% design comments from Caltrans on the remaining express lane improvements, to be advertised by BAIFA in 2017, were received in September 2016. 	<ul style="list-style-type: none"> The Caltrans median barrier contractor is continuing to demolish median barrier and construct express lane infrastructure in the median. Project team is working with Caltrans to schedule work amidst Caltrans median barrier and recently planned resurfacing contract. 100% design package is being prepared. Cost forecast has been revised and increased by \$36.3 million, as reflected in the Program Cost Summary on page 7 and as described in the Change Management section on page 8.
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon <i>Livorna Road/Rudgear Road to Alcosta Boulevard</i>	<ul style="list-style-type: none"> Civil construction began in August 2015 and is over 95% complete. (See construction photos on pages 17-18.) Toll system equipment installation on the northern half of the project is ongoing. Toll system integrator successfully completed the Factory Acceptance Test and continues software development. Initiated revalidation for visual impacts of design changes. 	<ul style="list-style-type: none"> Installation of backhaul network hubs at Walnut Creek, Dublin and express lanes data centers is on-going. Installation and repair of fiber optic conduit, pull boxes and cables from Walnut Creek to Martinez is continuing. Contractor is continuing to install toll equipment for on-site testing in Fall 2016. Project team is working to mitigate potential slip in the opening date due to delays in installation and preparations for testing. Pavement striping and removal of temporary K-rail are scheduled for Fall 2016.
I-680 Contra Costa Northern Segment Southbound Conversion (CC-680 North) Martinez to Walnut Creek <i>Marina Vista Boulevard to Rudgear Road/SR 242</i>	<ul style="list-style-type: none"> 65% design was submitted to Caltrans for circulation in August 2016. Project staff met with council members from the City of Danville in August 2016 to explain the basis for the access restrictions that will be implemented as part of the project. 	<ul style="list-style-type: none"> Environmental studies are in final review with Caltrans and environmental clearance should be achieved by the end of 2016. MTC and CCTA staff continue to work with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes. An on-line public open house will be held in October and November.

Project Development & Construction	3 rd Quarter 2016 Highlights	Current Activities
I-80 Solano (SOL-80) Fairfield to Vacaville <i>Red Top Road to I-505</i>	<ul style="list-style-type: none"> 35% design comments from Caltrans were received in August 2016. Coordination workshop was held in September with toll system and backhaul design teams to finalize toll and communications equipment locations. 	<ul style="list-style-type: none"> 65% design for west and east segments is in development and will be combined into a single package. Circulation is projected for December 2016.
Centralized Toll System	<ul style="list-style-type: none"> Toll ordinance and the BAIFA Privacy Policy were adopted at the July 2016 BAIFA meeting. Primary toll system host hardware was installed at the Benicia toll plaza. 	<ul style="list-style-type: none"> Toll system integrator is installing the back-up operations center hardware at the Traveler Information Center at Caltrans and will conduct the first field test later in the fourth quarter. Construction contract will be executed in November 2016 and work will commence for the build out of the 375 Beale Operations Center.
Public Information	<ul style="list-style-type: none"> Monthly construction notices were issued to over 1,000 stakeholders about the I-680 Contra Costa Southern Segment and the backhaul network. Staff conducted a survey of commuters who use the I-680 corridor between Walnut Creek and San Ramon in August to gauge perceptions about express lanes and learn what potential users understand about using express lanes. 	<ul style="list-style-type: none"> Staff will complete analysis of the I-680 commuter survey and incorporate findings into the customer outreach and education strategy. Communications and outreach for civil and backhaul construction is on-going.

B. Operating Authority

MTC and the Bay Area Toll Authority (BATA) have formed a joint powers authority to develop and operate MTC Express Lanes. The joint powers authority, known as the Bay Area Infrastructure Financing Authority (BAIFA), is composed primarily of representatives of the three counties where the express lanes are located: Alameda, Contra Costa and Solano. BAIFA is responsible for policy and operational decisions such as toll rates, project phasing and use of revenue.

The map below highlights MTC's portion of Bay Area Express Lanes and shows where lanes will be converted from HOV lanes and where new lanes will be added.



Map of Bay Area Express Lanes (MTC lanes highlighted)

II. PROGRAM OVERVIEW

A. Program Description

MTC and partner agencies are implementing a regional network of express lanes called Bay Area Express Lanes. Upon completion, Bay Area Express Lanes will comprise 550 miles of express lanes operated by MTC, the Valley Transportation Authority (VTA), the Alameda County Transportation Commission (Alameda CTC), and the Sunol Smart Corridors Joint Powers Authority (Sunol JPA) as shown on the map of the Bay Area Express Lane Network.

Primary objectives for Bay Area Express Lanes include:

- Create a seamless network of HOV lanes to encourage carpools, vanpools and express buses;
- Make the best use of HOV lane capacity;
- Provide reliable travel times for solo drivers; and
- Better manage all lanes to keep traffic moving.

MTC's portion of the Bay Area Express Lanes, referred to as MTC Express Lanes, will include 270 miles of express lanes – 150 miles of converted high occupancy vehicle (HOV) lanes and 120 miles of new lanes – on I-80 in Alameda, Contra Costa and Solano Counties, I-880 in Alameda County, I-680 in Contra Costa and Solano counties, and the westbound approaches to the Bay Bridge, San Mateo Bridge and Dumbarton Bridge.

Appendix B includes an overview of how express lanes operate.



Map of Bay Area Express Lane Network

D. MTC Express Lane Project Funding

MTC is using existing funding to convert existing HOV lanes to express lanes and to conduct environmental studies on some gap closure projects, so they are “shelf-ready” should construction funding become available. This will allow MTC to open as much of its 270-mile network as quickly as possible.

The table below lists the projects that comprise MTC Express Lanes according to current funding status.

County	Route	Project	Geographical Limits	Environmental	Design	Construction
NEAR TERM CONVERSIONS						
ALA	880	I-880 Alameda	Between San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	●	●	●
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear Rd.</i>	●	●	●
GAP CLOSURE OPPORTUNITY PROJECTS						
CC	680	I-680 Northern Segment - Northbound Extension	Walnut Creek to Concord <i>North Main St. to SR 242</i>	○	○	○
SOL	80	I-80 Solano	Fairfield to Vacaville <i>Red Top Rd. to I-505</i>	●	●	○
FUTURE CONVERSIONS						
ALA/ CC	80	I-80 and Westbound Bridge Approaches	Cummings Skyway to Bay Bridge San Mateo Bridge Westbound Approach Dumbarton Bridge Westbound Approach	◐	○	○
CC	680	I-680 Northern Segment - Northbound Conversion	Walnut Creek to Benicia <i>North Main St. to the Benicia Bridge</i>	◐	○	○

KEY

● Funded ◐ Partially Funded ○ Unfunded

ALA = Alameda, CC = Contra Costa, SOL = Solano

III. PROGRAM SCHEDULE SUMMARY

The schedule summary below reflects the “open to traffic” dates of the baseline schedule, and the current completion forecast for the projects that are fully funded.

Project	Baseline Opening	Forecast Opening	Confidence Level	Detail Page
I-880 Alameda (ALA-880) Between San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	Spring 2019	Spring 2019	●	12
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	Fall 2016	Spring 2017	●	14
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North) Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear RD./SR 242</i>	Fall 2018	Spring 2020	●	18

KEY

- Within schedule shown.
- Identified potential risks that may significantly impact schedule if not mitigated.
- Known impact to schedule, changes forthcoming.

IV. PROGRAM COST SUMMARY

A. Conversions and Gap Closure Opportunity Projects

The cost summary below shows: 1) the costs of each express lane [corridor or segment] including planning, design and construction of the civil infrastructure, and installation and integration of the backhaul communications and toll system, and 2) programwide costs including planning and design, and implementation of centralized elements of the backhaul network and toll system. The program cost estimate includes the full estimated cost to complete MTC Express Lanes. The approved expenditure plan fully funds the first three projects listed below, the environmental and design phases for the I-80 projects in Solano County, and the environmental phase for the SR 92 and SR 84 projects. The expended-to-date amounts shown represent the amount of BATA Express Lane funds expended through the end of the current quarter.

Project ⁽¹⁾	Program Estimate ⁽²⁾	Cost Forecast ⁽³⁾	BATA Express Lane Funds ⁽⁴⁾			Regional Measure 2 (allocated)	Physical % Complete ⁽⁵⁾	Confidence Level ⁽⁶⁾
			June 2015 Baseline	Dec. 2015 Amendment	Expended To Date			
NEAR TERM CONVERSIONS	Costs shown in millions of escalated dollars							
I-880 Alameda	114.1	114.1	77.8	77.8	19.5		18%	🔴
I-680 Contra Costa Southern Segment	55.6	55.6	48.9	55.6	33.4		65%	🟢
I-680 Contra Costa Northern Segment Southbound Conversion	36.1	36.1	32.3	32.3	0.7	3.8	8%	🟡
Centralized Toll System	33.6	33.6	36.2	33.6	12.8		45%	🟢
Program Planning, Coordination & Management	28.4	28.4	28.4	28.4	12.6		55%	🟢
Program Contingency	50.0	35.9	40.0	35.9	0.0			🔴
Capitalized Start-up O&M	16.0	16.0	16.0	16.0	0.6			🟢
GAP CLOSURE OPPORTUNITY PROJECTS								
I-680 Contra Costa Northern Segment - Southbound HOV Completion ⁽⁷⁾	19.0	19.0	19.0	19.0	0.0		0%	🟢
I-680 Contra Costa Northbound Express Lane Completion (N. Main St. to SR-242)	57.3							
I-80 Solano	179.4	34.2	19.0	19.0	1.7	15.2	12%	🟢
FUTURE CONVERSIONS								
I-80 Alameda/Contra Costa & Westbound Bay, San Mateo & Dumbarton Bridge Approaches	110.9	5.7	0.7	0.7	0.7	5.0	1%	🟢
I-680 Contra Costa Northern Segment - Northbound Conversion	14.6	1.5			0.0	1.5	5%	
Centralized & Program Costs, and Start-Up O&M Gap Closures & Future Conversions	TBD							
TOTALS	715.0	380.1	318.3	318.3	81.9	25.5	27%	

⁽¹⁾ Other gap closure and extension projects not shown: ALA-880 extension northbound from Lewelling to Hegenberger; SOL-80 gap closure from Carquinez Bridge to Red Top Road; SOL-80 extension east of I-505; SOL-80 gap closure

⁽²⁾ Program estimate represents current estimated cost to complete each project.

⁽³⁾ Cost forecast represents current estimated cost to complete phases that are funded for each project.

⁽⁴⁾ BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

⁽⁵⁾ Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds. Projects that have completed milestones using other funds include I-680 Contra Costa Northern Segment, I-80 Solano West and I-80 Solano East.

⁽⁶⁾ ● = within budget, ● = identified potential risks that may significantly exceed budget if not mitigated, ● = known impacts to budget - changes forthcoming.

⁽⁷⁾ Cost shown is BAIFA's contribution toward shortfall. Total project cost is \$85M. Other funds include Measure J (\$37M), RM2 (\$13M), STIP (\$16M)

B. Change Management

The change management process captures the changes in the program that have an impact on the approved baselines.

There are two major changes to the MTC Express Lanes Program this quarter as follows:

- The costs to construct the I-880 corridor are expected to significantly exceed the project budget as reflected in the updated cost forecast, which has been increased by \$36.3 million. This increase was reported in prior quarterly reports as a risk, but with 95% design now complete and \$27.0 million of the increase already committed for the construction of express lane elements in the median barrier reconstruction contract, the likelihood of needing additional budget to complete I-880 has become a reality. The cost increase is associated with new lighting requirements, widening at access locations and signage not anticipated in the original budget. It will be possible to validate the cost forecast when bids are received for the I-880 construction contract in 2017. Staff will present BAIFA a revised budget recommendation at that time, or sooner if needed.

C. Risk Management Plan

MTC manages risk at both the program and contract level by identifying risks that could negatively impact the program's cost and schedule, and assigning responsibility to the person best positioned to develop mitigation strategies and manage each risk.

The collective value of all the risks in the program risk register is tracked on a monthly basis to gauge the program's risk exposure. In 2016, the program began using Monte Carlo simulation to evaluate potential collective impacts of identified risks in the program's capital cost risk register. Prior to 2016, the program tracked the mean risk-assessed contingency, which was a somewhat simplified assessment of risk. Monte Carlo simulation is a computerized technique that uses repeated random sampling from a range of variable inputs (risk probabilities and cost impact ranges) to determine the probability of different cost outcomes. This tool provides a realistic way of estimating uncertainty due to identified risks.

The chart below shows the median risk exposure determined using Monte Carlo analysis. As of September 30, 2016, the risk exposure stands at \$22.1 million, which is significantly lower than the \$59.1 million reported last quarter due to the fact that the risk of I-880 exceeding available budget has materialized into an updated cost forecast and therefore is no longer reflected in the program risk.

The chart on the following page tracks the program's cost forecast and risk exposure as compared to the authorized program budget. As of this quarter, the cost forecast now exceeds the authorized budget by approximately \$0.4 million, which is a result of the transfer of the I-880 risk to a cost forecast. The approved program budget would not be sufficient if the risk exposure of \$22.1 million were to be realized. As mentioned on page 8, staff will return to BAIFA, as needed, to recommend a course of action for the use of program

contingency and other options to supplement the I-880 budget.

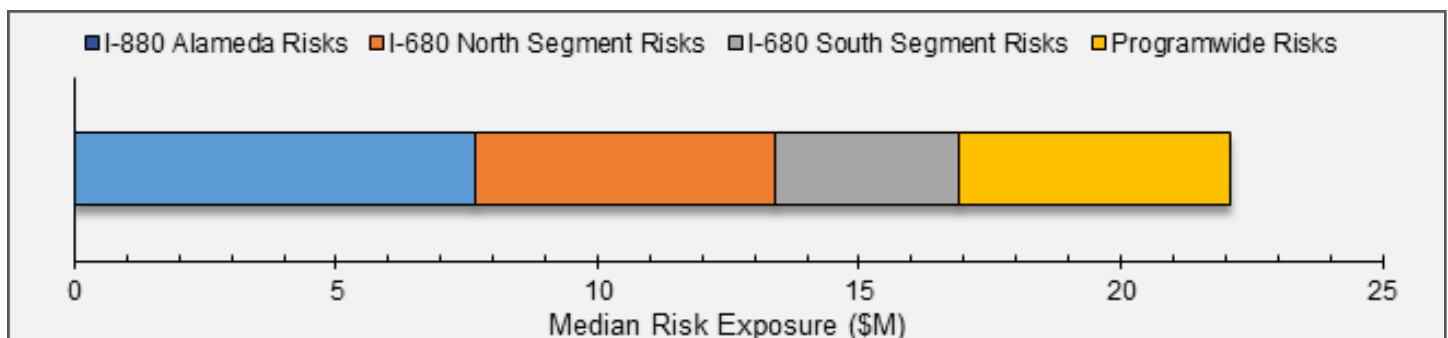
The top contributors to the risk exposure for the express lanes program along with the planned/ongoing mitigations are as follows:

I-880 Alameda

- In three locations, the project must re-stripe all of the freeway lanes to create a transition lane between the express lane and the adjacent general purpose lane. When this is done, the pavement will be scarred in such a way that driver distraction might result. Caltrans has requested that this issue be addressed through pavement resurfacing. This increased scope of work will impact project schedule and cost, but can be mitigated by coordinating with a planned Caltrans resurfacing project that will repave a portion of the scarred pavement. The team is also exploring whether Caltrans would provide all of the required express lanes resurfacing as part of their contract, which should result in bid savings over having the express lanes contractor perform the work.

I-680 Contra Costa Southern Segment

- Delays in backhaul network and toll systems implementation and testing could delay opening of the express lanes. This could result in extended ramp up, during which we could incur costs for power and communications, the Customer Service Center, and civil overhead prior to generating revenue. The project team is actively working with the toll systems contractor to re-sequence work to minimize delays.



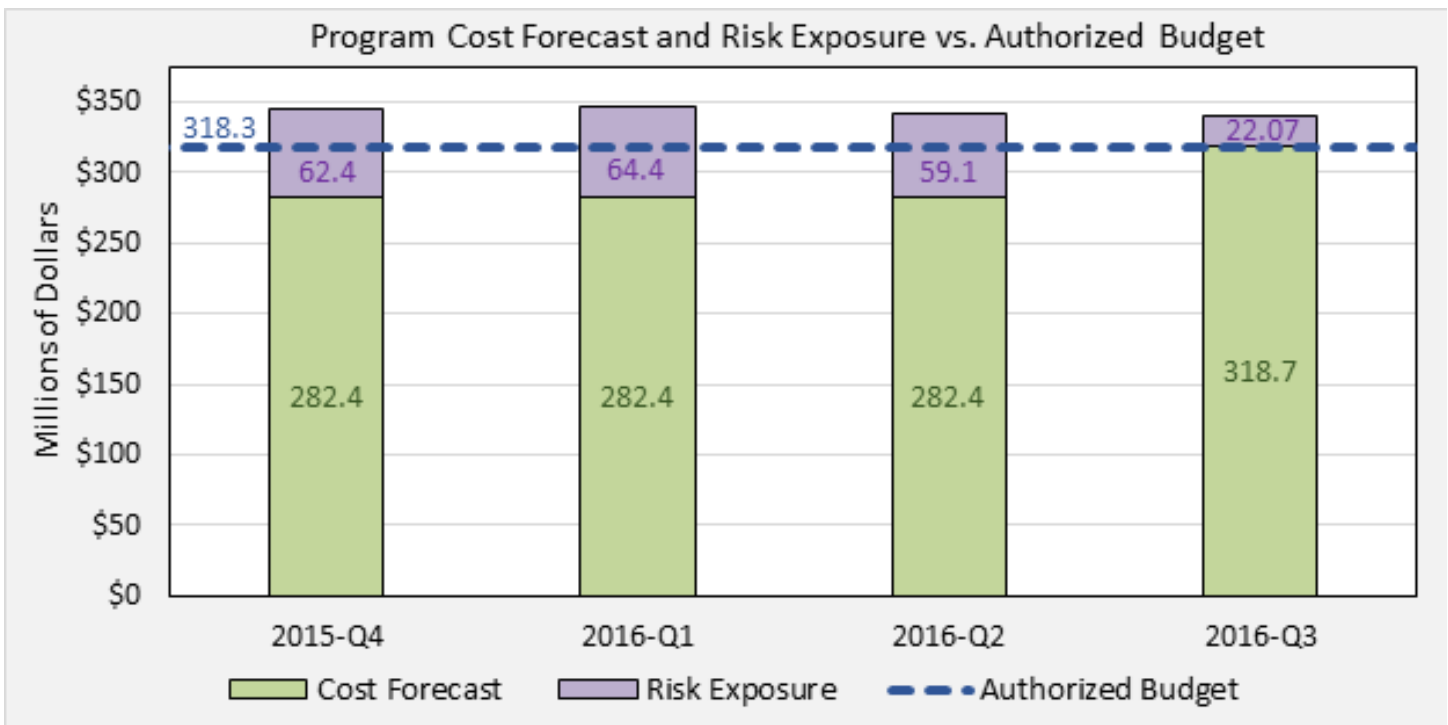
This chart shows the contribution of each project's risks towards the total program risk exposure.

I-680 Contra Costa Northern Segment

- Pavement stripe removal and additional pavement resurfacing may be required for all lanes of the I-680 corridor to eliminate scarring due to existing narrow lanes in the corridor. This increased scope of work may impact project schedule and cost. This risk will be mitigated by thoroughly researching other solutions and coordinating the needs and requirements with Caltrans. The team is currently performing tests in the CC-680S corridor to evaluate ways to avoid pavement damage so that resurfacing costs can be minimized.
- Costs may escalate at higher than projected levels resulting in increased costs for design or construction. The program management team is monitoring the Caltrans Construction Cost Index, ENR Construction Cost Index, and CPI and would adjust estimates if the escalation level is higher than estimated in the program budget.

Programwide Risks

- Potential changes to state or national interoperability requirements may cause changes to design or operational policy that may have cost impacts for MTC's Express Lanes program. The California Toll Operators Committee has a goal that all operators will be able to read and process 6C transactions by spring of 2018. This would require tuning for the I-680 Contra Costa Southern Segment and thus may have cost impacts for MTC's Express Lanes. This risk will be managed by participating in the development plan of



This chart shows the program cost forecast and risk exposure as compared to the authorized program budget.

PROJECT SUMMARY SHEETS

Centralized Functions (e.g. Toll System & Program Management, Planning and Regional Coordination)

Total Estimated Cost

\$33.6 million for the Centralized Toll System
\$28.4 for Program Planning, Coordination & Management

Schedule

Centralized Toll System will be ready with opening of the CC-680 South Project in the Spring of 2017.

Program Planning Coordination & Management is ongoing through the opening of the funded projects.

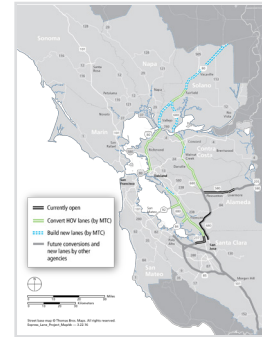
Project Description

The centralized toll system includes the elements of the toll system that are needed to toll all the lanes, as well as the backhaul communications network components that transport toll data from MTC lanes to host and toll operations data centers, including corridor communication hubs. Additional system elements are the fiber optic cables and leased line services to transport data. Centralized toll system work includes designing and implementing the hardware and software for dynamic toll setting and trip building, integration with the FasTrak® Regional Customer Service Center, and acquiring spare parts.

Program management, planning and regional coordination tasks include managing the expenditure plan, cost, schedule and risk; developing the express lane business rules and toll ordinance; conducting customer education and outreach; building out the toll operations center and developing operating procedures; planning for future express lanes; and coordinating with partner agencies to offer a seamless experience for drivers.

Project Highlights and Progress

- Design-Build contract for the 375 Beale Operations Center was awarded in September 2015.
- Construction contract for the communications network of the host data centers and CC-680 South was awarded in December 2015.
- Final toll system host and software design was approved in March 2016.
- Toll operations staffing contract was awarded in March 2016.



- Factory acceptance testing of toll system hardware and software was held in June 2016.
- Toll ordinance and the BAIFA Privacy Policy were adopted at the July 2016 BAIFA meeting.
- Primary toll system host hardware was installed at the Benicia toll plaza.
- Monthly construction notices were issued to over 1,000 stakeholders about the I-680 Contra Costa Southern Segment and the backhaul network.
- Staff conducted a survey of commuters who use the I-680 corridor between Walnut Creek and San Ramon in August to gauge perceptions about express lanes and learn what potential users understand about using express lanes.
- Staff developed the I-680 Customer Education & Outreach Plan to prepare for lane opening.

Current Project Activities

- Toll system integrator is installing the back-up operations center hardware at the Traveler Information Center at Caltrans and will conduct the first field test later in the fourth quarter.
- Construction contract will be executed and work will commence for the build out of the 375 Beale Operations Center.
- Development of operating procedures is underway.
- Staff will complete analysis of the I-680 commuter survey to understand perceptions and inform customer education needs, and incorporate findings into the customer outreach and education strategy.
- Communications and outreach for civil and backhaul construction is on-going.

I-880 Alameda (ALA-880) – between Oakland and Milpitas

Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

Total Program Estimate

\$114.1 million

Scheduled Open Date

Spring 2019

Project Description

The project converts the existing I-880 HOV lanes that run from Hegenberger Road to Dixon Landing Road in the southbound direction and from Dixon Landing Road to Lewelling Boulevard in the northbound direction to an express lane.

The conversion involves lane striping and installing sign gantries, signs, FasTrak[®] toll tag readers, traffic monitoring video cameras and California Highway Patrol observation areas. It will result in 51 express lane miles between Oakland and Milpitas.

The express lanes conversion project is being coordinated with a median barrier reconstruction project and a future pavement resurfacing project, both being led by Caltrans. The median barrier reconstruction project will install foundations and other infrastructure required for the future express lanes construction.



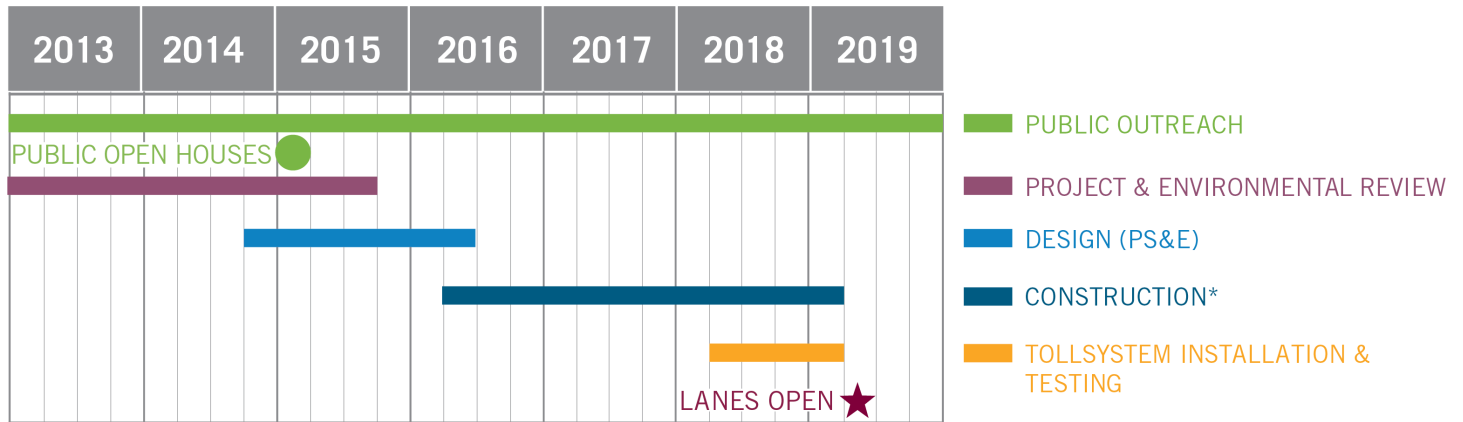
Project Highlights and Progress

- Work is approximately 20% complete on the Caltrans median barrier reconstruction project, including construction of express lane sign structure foundations.
- Public open house was held in March 2015.
- Preliminary engineering report and environmental document were completed in October 2015.
- Caltrans median barrier construction contractor began work in April 2016.
- 95% design comments from Caltrans were received in September 2016.
- Demolition of the existing median barrier and installation of approximately 19 sign foundations from Fremont Boulevard to SR-84 is complete.

Current Project Activities

- Project team is working with Caltrans to schedule work amidst Caltrans median barrier and recently planned resurfacing contract.
- Demolition of the median barrier is progressing between SR-84 and SR-92.
- 100% design package is being prepared.
- MTC and Caltrans are working to coordinate scope, schedules and communications with the public for the median barrier, express lanes and resurfacing projects.
- Cost forecast has been revised and increased by \$36.3 million to \$114.1 million, as reflected in the Project Cost table on page 14 and as described in the Change Management section on page 8.

Project Schedule by Phase



*Includes I-880 median barrier improvements.

Project Cost

Program Estimate ⁽¹⁾	Cost Forecast ⁽²⁾	BATA Express Lane Funds ⁽³⁾			Regional Measure 2 (allocated)	Physical % Complete ⁽⁴⁾
		June 2015 Baseline	Dec 2015 Amendment	Expended To Date		
114.1	114.1	77.8	77.8	19.5		18%

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

Costs shown in thousands of escalated dollars.

- (1) Program estimate represents current estimated cost to complete each project.
- (2) Cost forecast represents current estimated cost to complete phases that are funded for each project.
- (3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.
- (4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-680 Contra Costa Southern Segment (CC-680 South) – between Walnut Creek and San Ramon

Livorna Road/Rudgear Road to Alcosta Boulevard

Total Program Estimate

\$55.6 million

Scheduled Open Date

Spring 2017

The project team is working to mitigate potential slip in the opening date due to delays in installation and preparations for toll system testing.

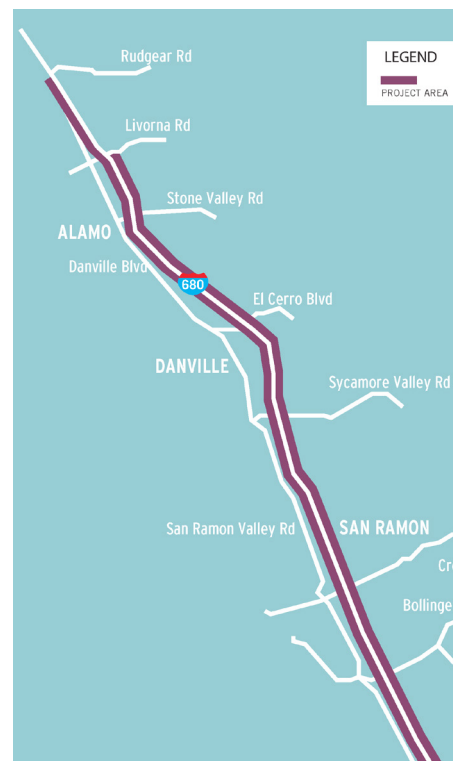
Project Description

The project converts existing HOV lanes to express lanes on I-680 from Rudgear Road to Alcosta Boulevard in the southbound direction and from Alcosta Boulevard to Livorna Road in the northbound direction. It will result in 23 express lane miles through San Ramon, Danville, Alamo and southern Walnut Creek. No widening or additional lanes will be added to the freeway.

This conversion project includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic monitoring video cameras. In addition, the project installs equipment and observation areas to help the California Highway Patrol enforce proper use of the lanes.

Project Highlights and Progress

- Public open house was held in March 2014.
- Preliminary engineering report and environmental document were completed in August 2014.
- Final design was completed in April 2015.
- Final design for both the backhaul communication network and the toll system was completed in December 2015.
- Caltrans encroachment permits for the toll system and backhaul were completed in December 2015.
- Backhaul construction completed fiber optic installation between Walnut Creek and San Ramon in June 2016.
- Civil construction began in August 2015 and is over 95% complete. (See construction photos on pages 17-18.)

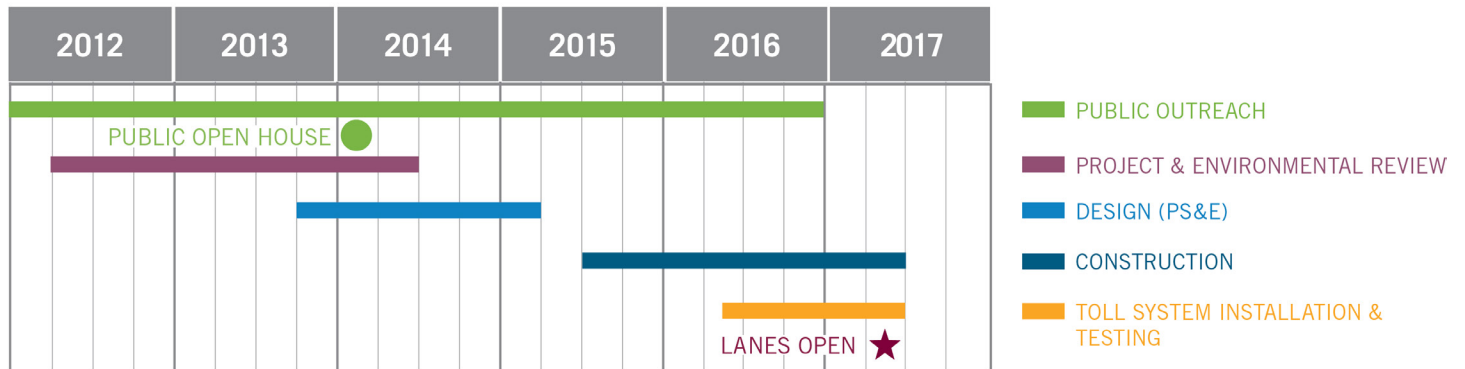


- Toll system equipment installation on the northern half of the project is ongoing.
- Toll system integrator successfully completed the Factory Acceptance Test and continues software development.

Current Project Activities

- Installation of backhaul network hubs at Walnut Creek, Dublin and express lanes data centers is on-going.
- Installation and repair of fiber optic conduit, pull boxes and cables from Walnut Creek to Martinez is continuing.
- Contractor is continuing to install toll equipment for on-site testing in Fall 2016. Project team is working to mitigate potential slip in the opening date due to delays in installation and preparations for testing.
- Staff will finalize the pre-launch customer education strategies in Fall 2016. Communications and outreach for civil and backhaul construction continue.
- Pavement striping and removal of temporary K-rail are scheduled for Fall 2016.

Project Schedule by Phase



Project Cost

Program Estimate ⁽¹⁾	Cost Forecast ⁽²⁾	BATA Express Lane Funds ⁽³⁾			Regional Measure 2 (allocated)	Physical % Complete ⁽⁴⁾
		June 2015 Baseline	Dec 2015 Amendment	Expended To Date		
55.6	55.6	48.9	55.6	33.4		65%

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

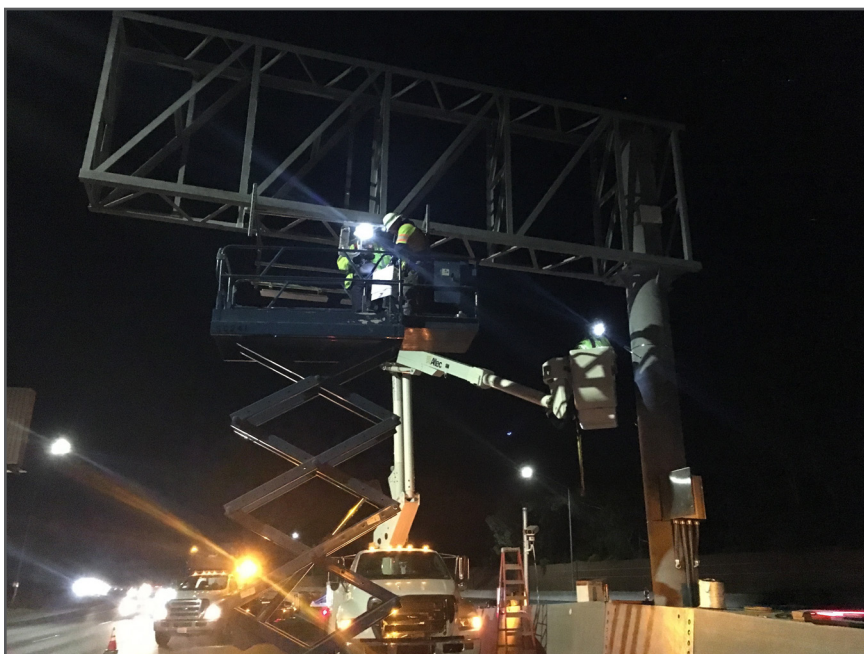
Costs shown in thousands of escalated dollars.

⁽¹⁾ Program estimate represents current estimated cost to complete each project.

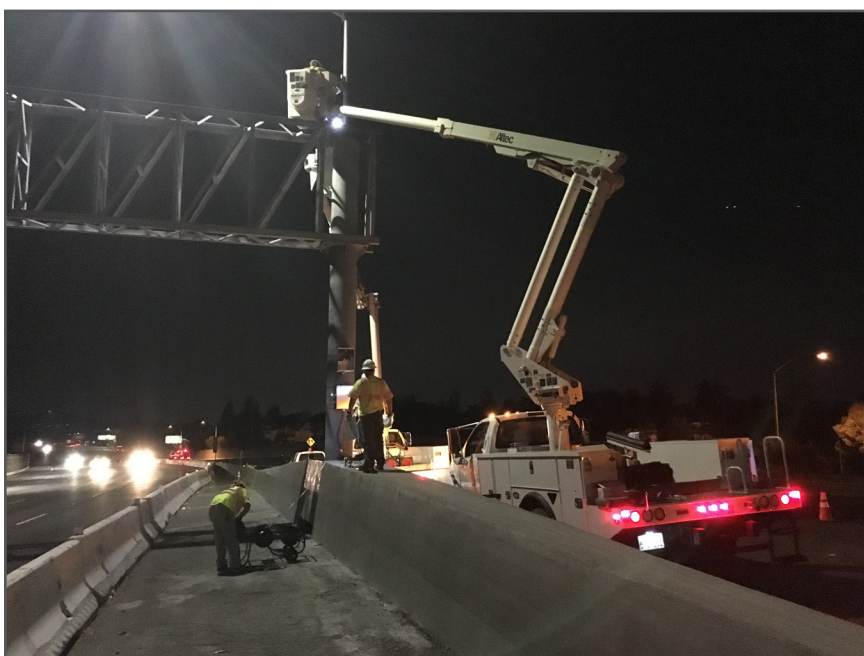
⁽²⁾ Cost forecast represents current estimated cost to complete phases that are funded for each project.

⁽³⁾ BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

⁽⁴⁾ Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

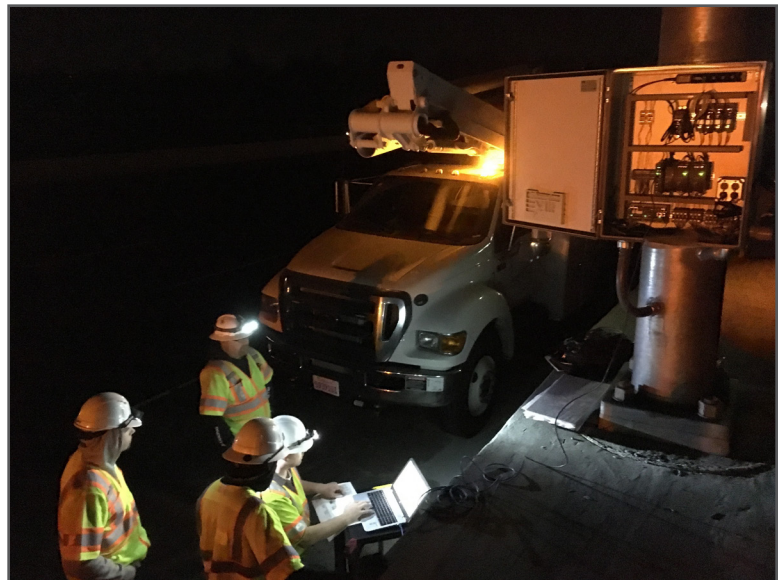


Construction crews work on connecting toll system components in the median on I-680.





Construction crews work on connecting toll system components to Variable Message Sign on I-680.



Construction crews test toll system components.



Violation camera for the toll system.

I-680 Northern Segment Southbound Conversion (CC-680 North) – Martinez to Walnut Creek

Benicia Bridge to Rudgear Road

Total Program Estimate

\$36.1 million (\$32.3 million to be funded by BAIFA)

Scheduled Open Date

Spring 2020

Project Description

The project will convert 11 miles of the existing HOV lane on southbound I-680 from just south of Marina Vista Avenue in Martinez to North Main Street in Walnut Creek into an express lane. It also includes express lane elements for the I-680 Southbound HOV Completion Project. Once complete, I-680 will have a continuous southbound express lane from Martinez to the Alameda County line.

Civil construction will be delivered by the Contra Costa Transportation Authority (CCTA). MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

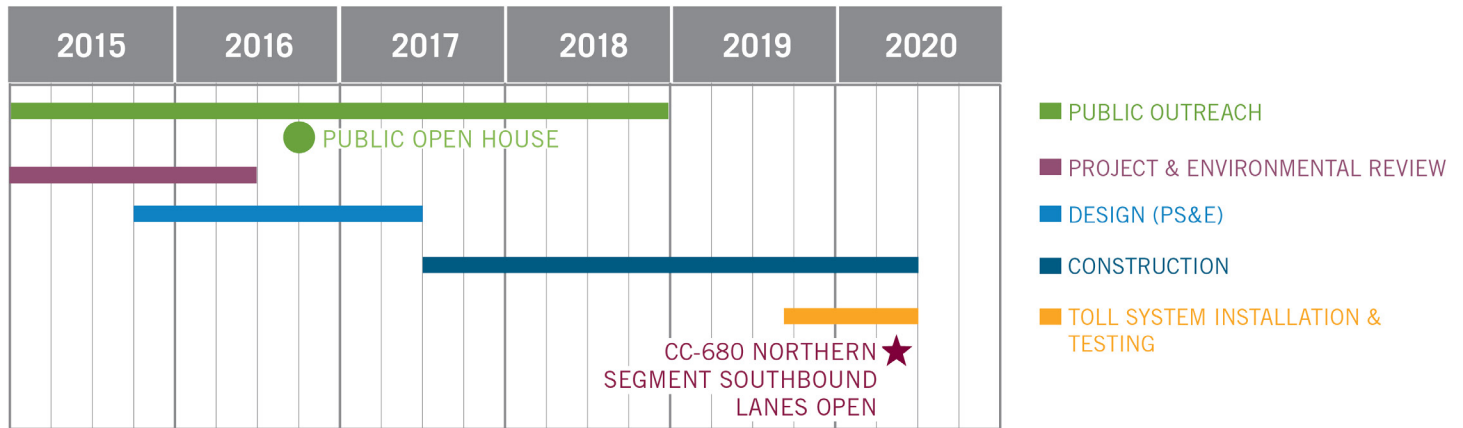
- Caltrans accepted the Traffic Operation Analysis Report in October 2015.
- Department of Fish & Wildlife provided concurrence in April 2016 that the CC-680 North express lanes project is not likely to adversely affect any known federally listed species.
- Project staff met with council members from the City of Danville in August 2016 to explain the basis for the access restrictions that will be implemented as part of the project.
- 65% design was submitted to Caltrans for circulation in August 2016.



Current Project Activities

- Environmental studies are in final review with Caltrans and environmental clearance should be achieved by the end of 2016.
- MTC and CCTA staff continue to work with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes.
- An on-line public open house will be held in October and November.
- Project team has submitted requests for electric service and begun ongoing coordination with PG&E.

Project Schedule by Phase



Project Cost

Program Estimate ⁽¹⁾	Cost Forecast ⁽²⁾	BATA Express Lane Funds ⁽³⁾			Regional Measure 2 (allocated)	Physical % Complete ⁽⁴⁾
		June 2015 Baseline	Dec 2015 Amendment	Expended To Date		
36.1	36.1	32.3	32.3	0.7	3.8	8%

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

Costs shown in thousands of escalated dollars.

- (1) Program estimate represents current estimated cost to complete each project.
- (2) Cost forecast represents current estimated cost to complete phases that are funded for each project.
- (3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.
- (4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-80 Solano (SOL-80) Fairfield to Vacaville

Red Top Road to I-505

Total Program Estimate

\$179.4 million

Scheduled Open Date

TBD

Project Description

This project will convert the existing eastbound and westbound HOV lanes to express lanes between Red Top Road and Air Base Parkway in Fairfield. Conversion work includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic-monitoring video cameras.

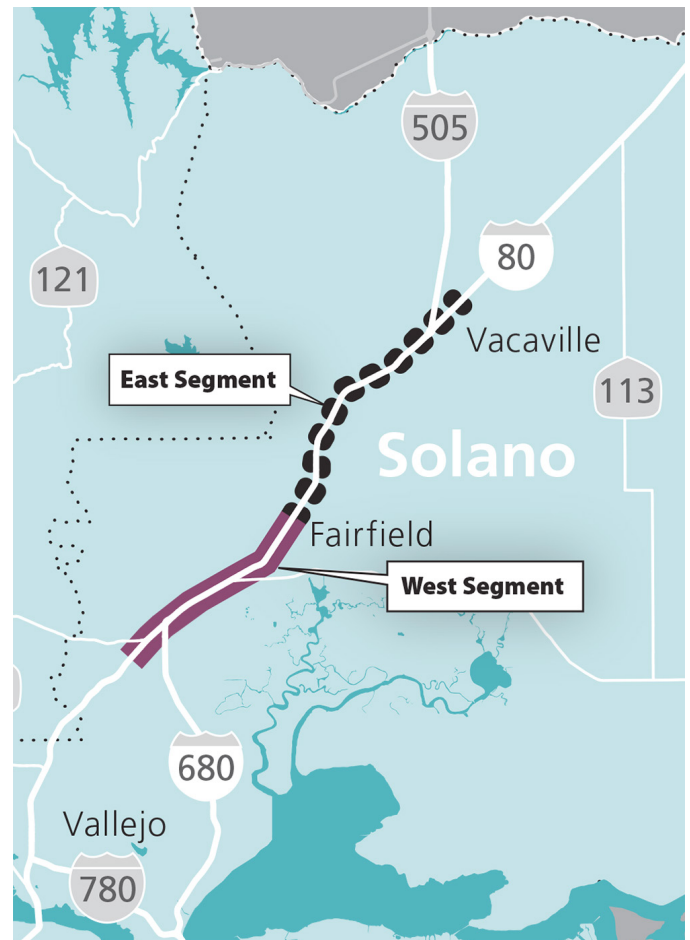
The project will also construct new eastbound and westbound lanes between Air Base Parkway and I-505 in Vacaville. In this section, the highway will be widened along with the installation of express lane striping, signage and equipment. The project will result in 36 miles of express lanes on I-80 in Solano County.

The Solano Transportation Authority (STA) is the lead agency for environmental clearance and civil design.

Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

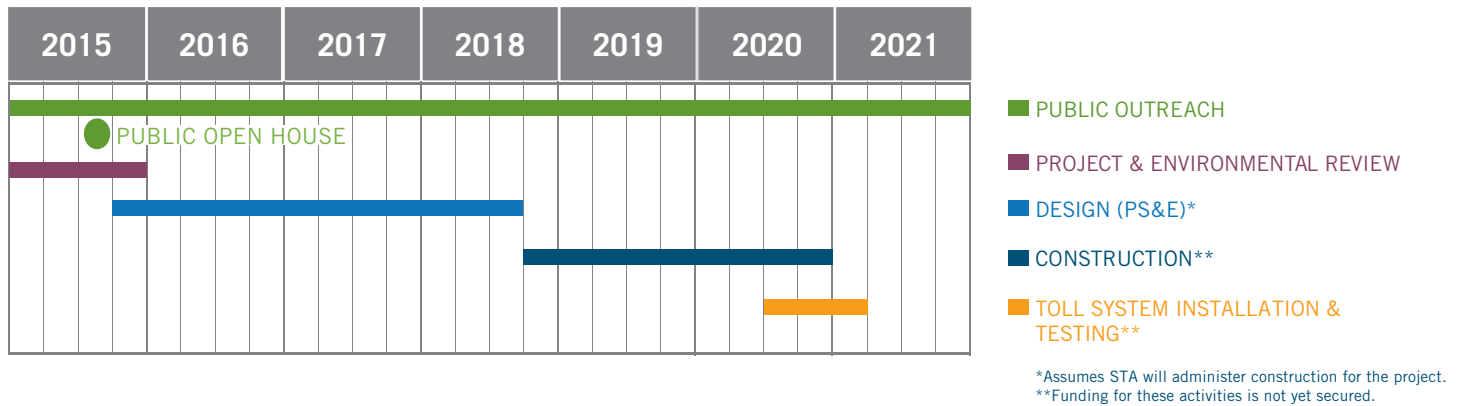
- Public open house was held in August 2015.
- Preliminary engineering report and environmental document were completed in December 2015.
- 35% design comments from Caltrans were received in August 2016.
- Coordination workshop was held in September with toll system and backhaul design teams to finalize toll and communications equipment locations.



Current Project Activities

- 65% design for west and east segments is in development and will be combined into a single package. Circulation is projected for December 2016.

Project Schedule by Phase



Project Cost

Program Estimate ⁽¹⁾	Cost Forecast ⁽²⁾	BATA Express Lane Funds ⁽³⁾			Regional Measure 2 (allocated)	Physical % Complete ⁽⁴⁾
		June 2015 Baseline	Dec 2015 Amendment	Expended To Date		
179.4	34.2	19.0	19.0	1.7	15.2	12%

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

Costs shown in thousands of escalated dollars.

- (1) Program estimate represents current estimated cost to complete each project.
- (2) Cost forecast represents current estimated cost to complete phases that are funded for each project. I-80 Solano is funded through the design phase.
- (3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.
- (4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

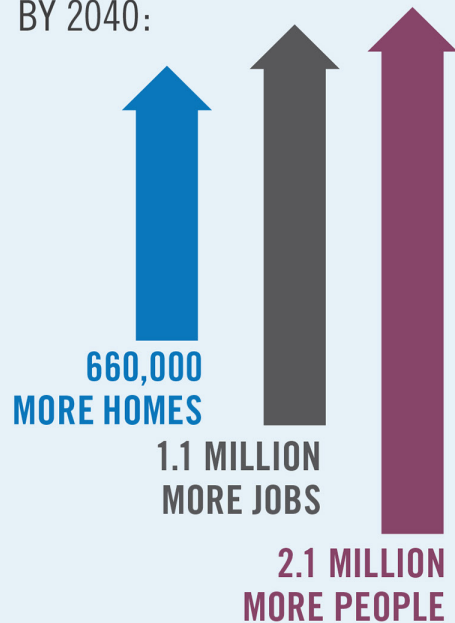
APPENDICES

A. Why Express Lanes?

While regional growth will continue, transportation funding and land are simply not available to build enough new transportation capacity to keep up. Bay Area Express Lanes maximize use of our highways by A) filling any empty space in existing HOV

lanes, B) improving operations in existing HOV lanes through better carpool enforcement and strategies to prevent lane slowdowns, and C) filling gaps in the HOV lane system to encourage more carpooling.

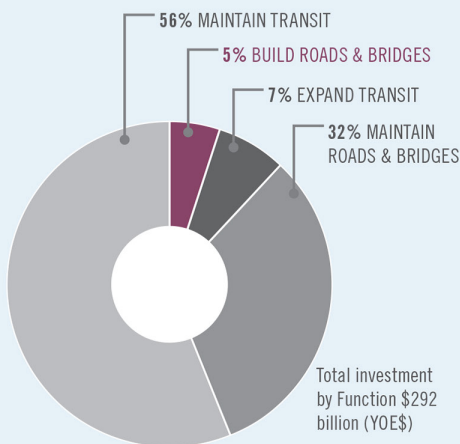
REGIONAL GROWTH BY 2040:



Data Source: Plan Bay Area (2013).
Oakland: Metropolitan Transportation Commission. 30.

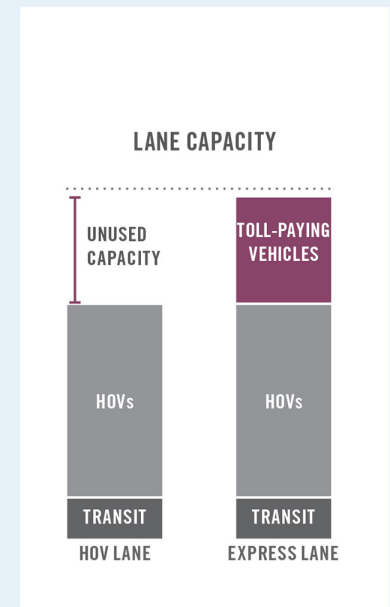
REGIONAL INVESTMENT BY 2040:

ONLY 5% OF THE REGION'S TRANSPORTATION DOLLARS WILL BE USED TO BUILD NEW ROADS.



Data Source: Plan Bay Area (2013).
Oakland: Metropolitan Transportation Commission. 66.

HOW EXPRESS LANES HELP:



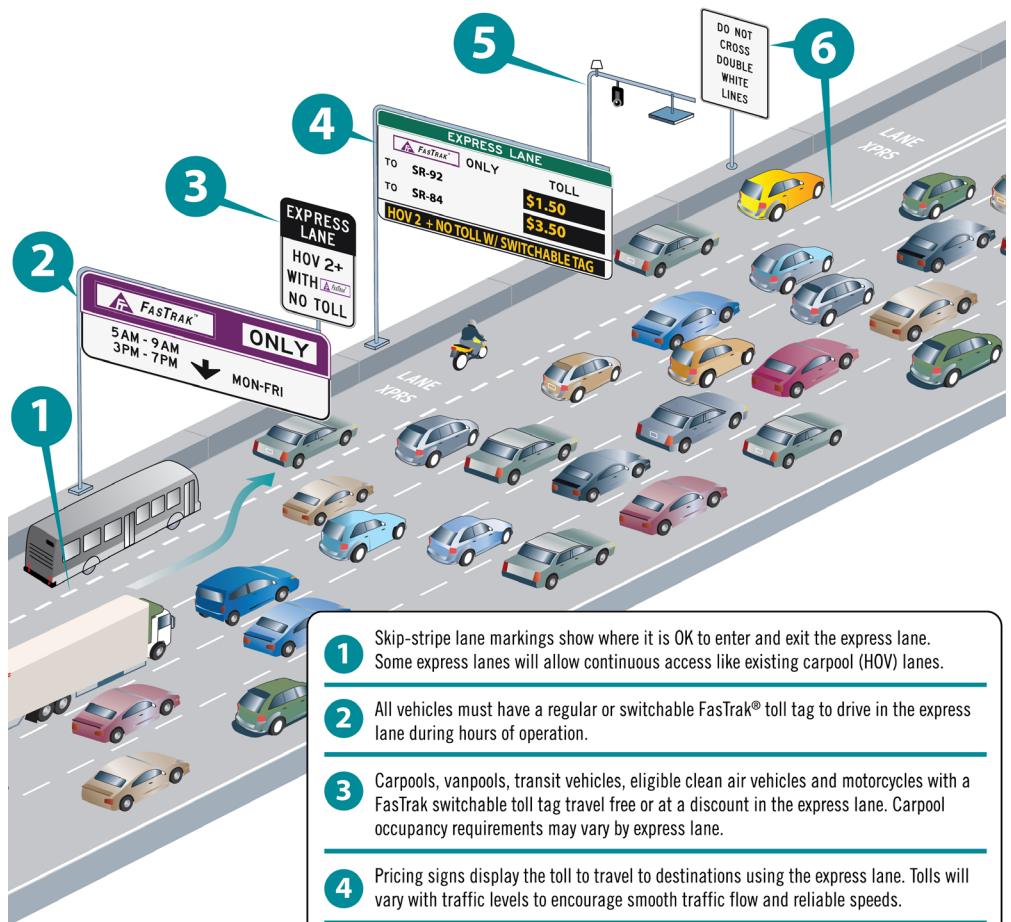
B. How Express Lanes Work

MTC Express Lanes will be free to carpoolers, vanpoolers, motorcycles, eligible clean air vehicles, and transit buses. Solo drivers can choose to pay tolls to use the lanes. Tolls for solo drivers will be collected electronically via FasTrak®, as on Bay Area toll bridges. Overhead electronic pricing signs will display the current toll rates, which will increase as traffic congestion increases and decrease as traffic congestion decreases.

A qualifying toll-free vehicle will need a FasTrak® Flex toll tag properly mounted in the vehicle, and set in the toll-free position. A FasTrak® Flex tag has a switch that can be set to one of three positions indicating that the vehicle has one (1), two (2), or three or more (3+) occupants. When set on 2 or 3+, the tolling equipment knows not to charge that vehicle a toll. When set on 1, tolls will be charged.

The figure to the right gives an overview of how the express lanes signage will direct drivers and explains how the lanes are to be used.

MTC Express Lanes will mostly have “open,” or “continuous” access configurations, meaning drivers will enter and exit the express lanes similar to how they enter and exit the HOV lanes today. Where necessary, due to operational or safety issues, sections of MTC Express Lanes will have

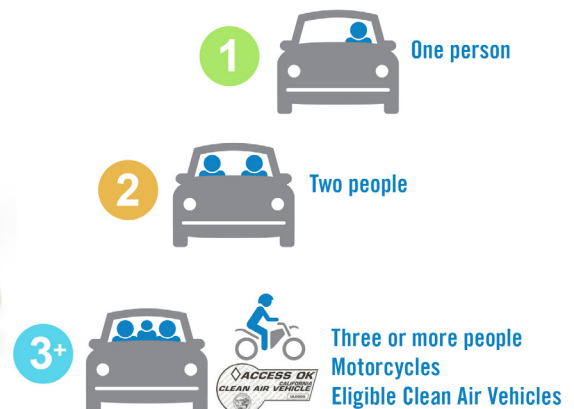


- 1 Skip-stripe lane markings show where it is OK to enter and exit the express lane. Some express lanes will allow continuous access like existing carpool (HOV) lanes.
- 2 All vehicles must have a regular or switchable FasTrak® toll tag to drive in the express lane during hours of operation.
- 3 Carpools, vanpools, transit vehicles, eligible clean air vehicles and motorcycles with a FasTrak switchable toll tag travel free or at a discount in the express lane. Carpool occupancy requirements may vary by express lane.
- 4 Pricing signs display the toll to travel to destinations using the express lane. Tolls will vary with traffic levels to encourage smooth traffic flow and reliable speeds.
- 5 Electronic toll tag readers automatically charge tolls to a vehicle's FasTrak account. Like at Bay Area bridges, license plate cameras prevent cheating and support enforcement.
- 6 Double-stripe lane markings show where it is illegal to enter and exit the express lane. These access limitations support lane safety and operations.

limited access, meaning that entry and exit to/from an express lane is allowed only at certain locations. Where access is limited, special signage and lane striping will indicate entry and exit locations.

FasTrak Flex®

Carpools, vanpools, transit vehicles, eligible clean air vehicles and motorcycles with FasTrak Flex® travel toll-free. Before driving, move the switch to show the number of people in the vehicle. Carpool occupancy requirements may vary by express lane. Solo drivers can use regular FasTrak® or FasTrak Flex® set in the “1” position.



C. System Technology and Elements

MTC Express Lanes are implemented by overlaying communications equipment on new and existing freeway infrastructure. Express lanes implementation requires four discrete elements that are integrated through design, construction and operations, including:

Civil Infrastructure (Highway Modifications)

For lane conversions, the civil infrastructure consists of sign structures, sign panels, lane striping, and conduit work for power and communications. For gap closure and extension projects, the civil infrastructure includes highway widening to add lanes as well as the signage and communications equipment required for conversions.

The civil contractor will put in place the foundations and structures upon which the toll systems contractor will install the toll equipment. In addition, the civil contractor will construct the infrastructure necessary to provide power and communications to the toll system.

Toll System

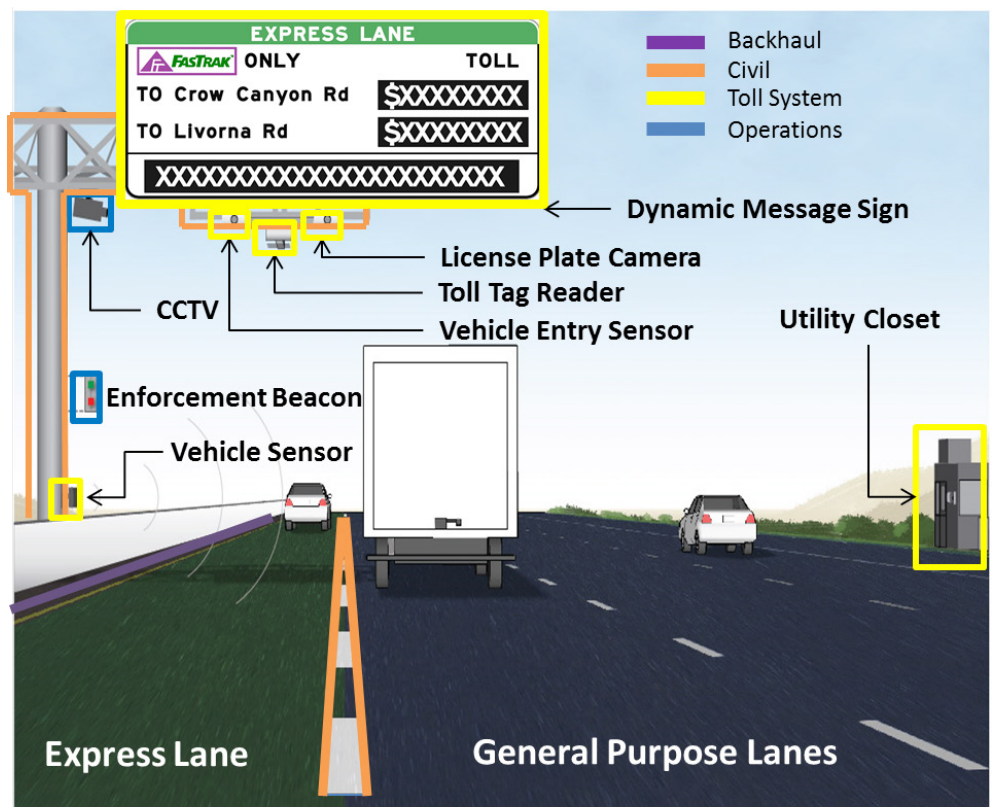
The toll system consists of two components, the in-lane system and the back-end "host" system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, which collects and processes all the data from the highway and sends it to the regional customer service center for billing.

Backhaul Communications Network

The backhaul network is the communication line along which data collected in the lanes is sent to the toll host system, operations center and regional customer service center. The backhaul contractor will install new conduit and communications fiber as well as utilize existing Caltrans, BART and other existing infrastructure to build the network. The backhaul network is being designed with the expectation that it will become part of a broader regional communications network.

Operations

The operations element consists of everything that is needed to successfully operate the express lanes including: an operations center, the regional customer service center, enforcement, public outreach, performance monitoring and on-going maintenance. An express lanes toll operations center will be established in the Regional Agency Headquarters building in San Francisco where operators will actively monitor the condition of the lanes and coordinate with Caltrans and the California Highway Patrol to ensure that the lanes operate efficiently.



For illustrative purposes only