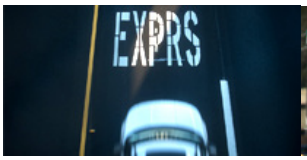
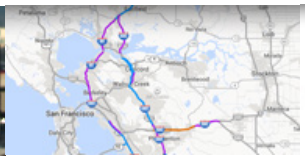
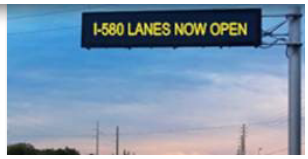
BAY AREA EXPRESS LANES







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

Submitted: November 17, 2016

BAIFA
BAY AREA INFRASTRUCTURE FINANCING AUTHORITY

METROPOLITAN TRANSPORTATION COMMISSION

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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.

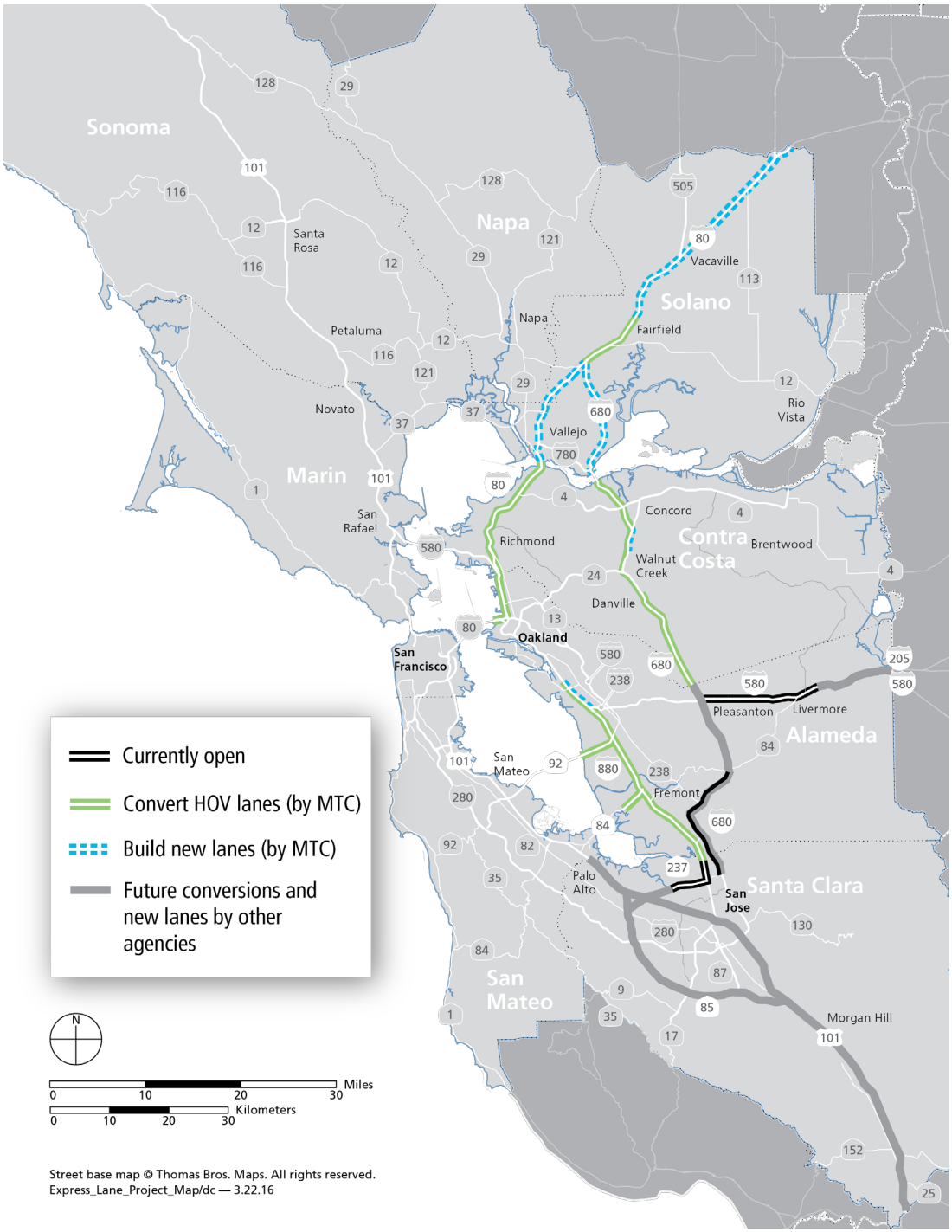
Project Development & Construction	3rd Quarter 2016 Highlights	Current Activities
I-880 Alameda (ALA-880) Between San Leandro and Milpitas *Hegenberger Road/Lewelling Boulevard to Dixon Landing Road*	• Work is approximately 20% complete on the Caltrans median barrier reconstruction project, including 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.	• 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 *Livorna Road/Rudgear Road to Alcosta Boulevard*	• 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.	• 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 *Marina Vista Boulevard to Rudgear Road/SR 242*	• 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.	• 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	3rd Quarter 2016 Highlights	Current Activities
I-80 Solano (SOL-80) Fairfield to Vacaville *Red Top Road to I-505*	• 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.	• 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	• 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.	• 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	• 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 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 *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	●	●	●
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear Rd.*	●	●	●
GAP CLOSURE OPPORTUNITY PROJECTS						
CC	680	I-680 Northern Segment - Northbound Extension	Walnut Creek to Concord *North Main St.to SR 242*	○	○	○
SOL	80	I-80 Solano	Fairfield to Vacaville *Red Top Rd. to I-505*	●	●	○
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 *North Main St. to the Benicia Bridge*	◖	○	○

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 *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	Spring 2019	Spring 2019	●	12
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	Fall 2016	Spring 2017	●	14
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North) Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear RD./SR 242*	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.

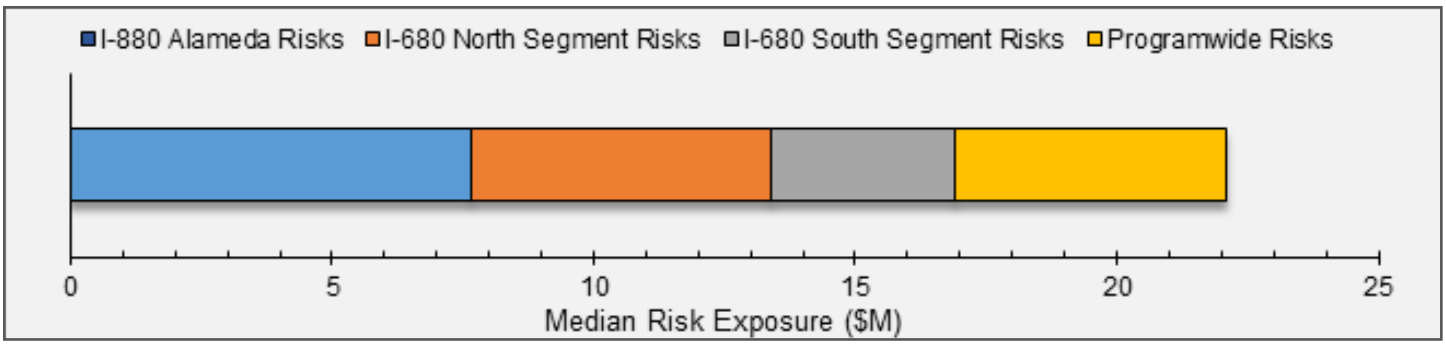
The top contributors to the risk exposure for the express lanes program along with the planned/ongoing mitigations are as follows:

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.



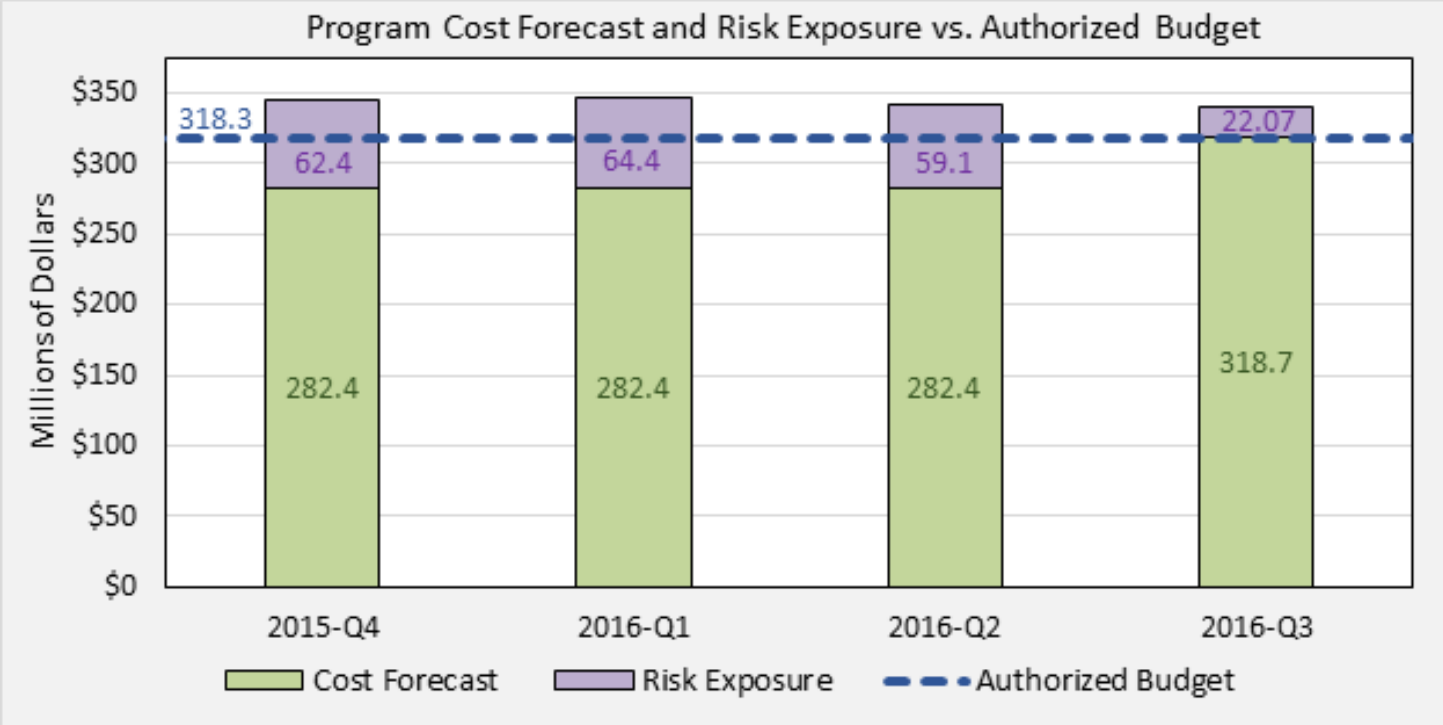
This chart shows the contribution of each project's risks towards the total program risk exposure.

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.

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 the transition from Title 21 compliant toll technology to 6C compliant toll technology.
- 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.



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.

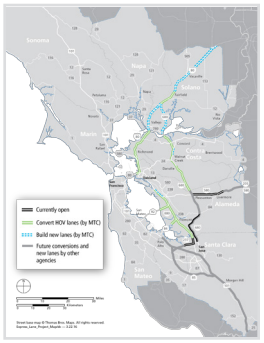
Project Description

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.

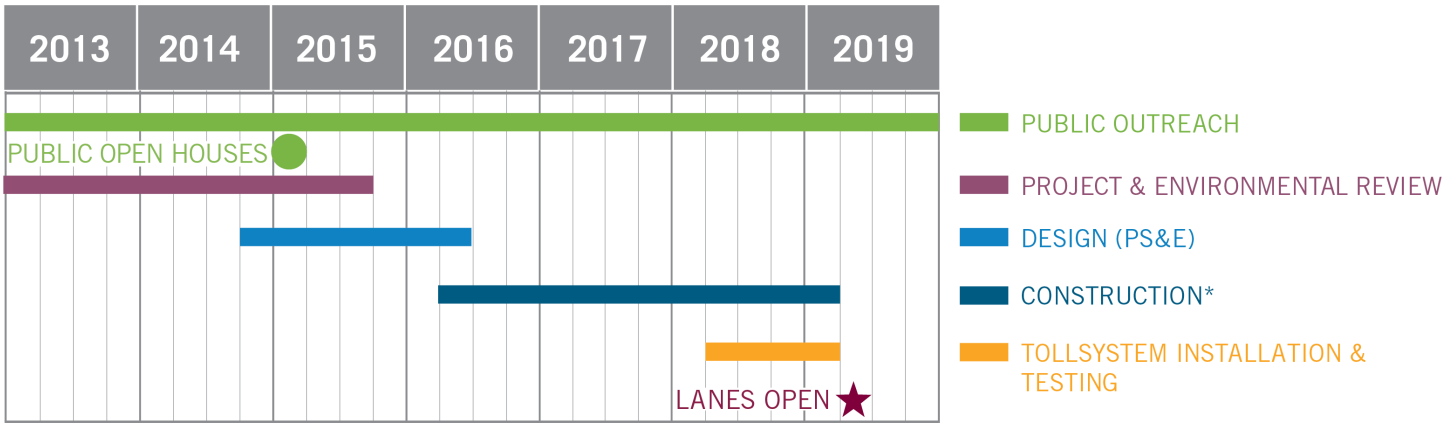
Project Highlights and Progress

- 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

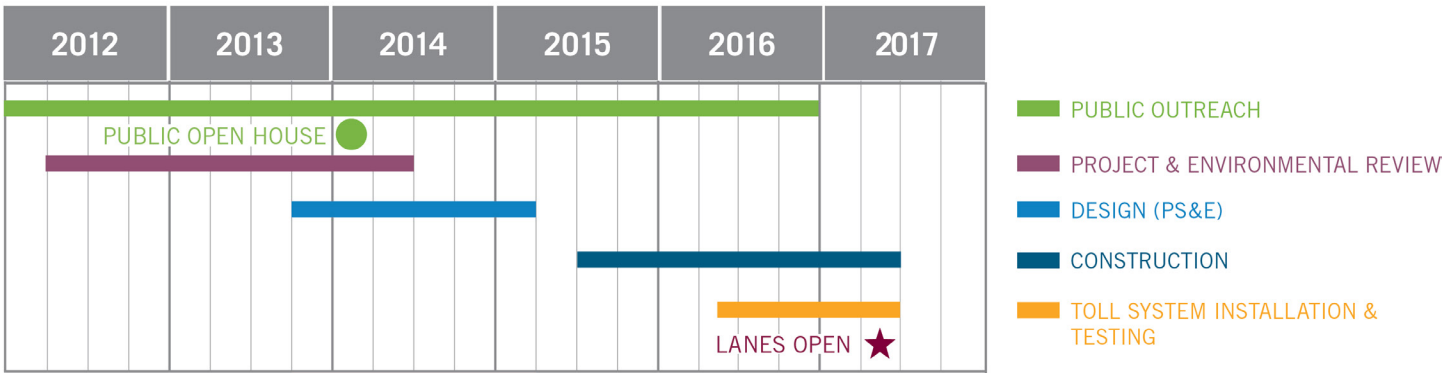
- Public open house was held in March 2014.
- Preliminary engineering report and environmental document were completed in August 2014.
- Final design was completed in April 2015.
- Final design for both the backhaul communication network and the toll system was completed in December 2015.
- Caltrans 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.

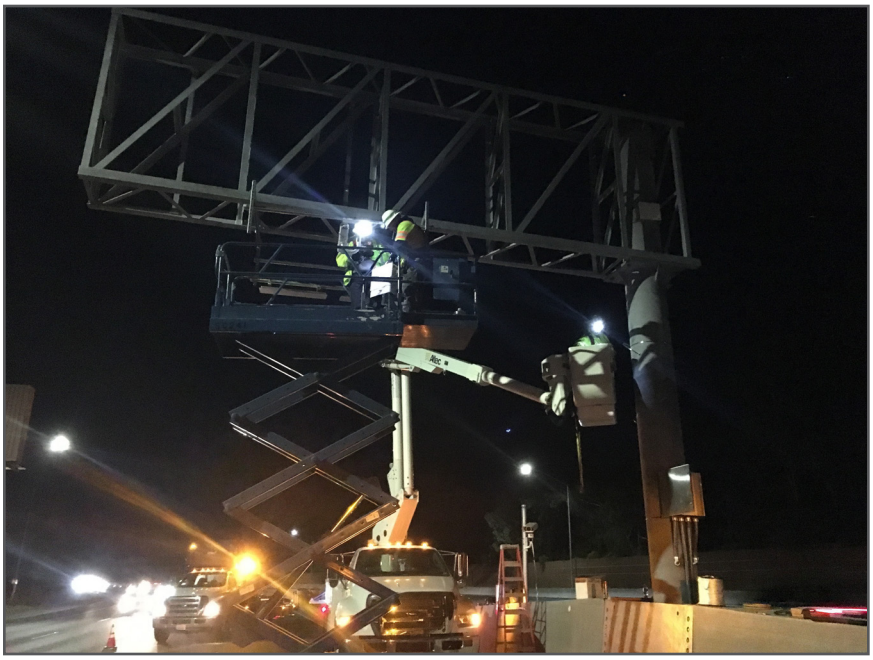
Costs shown in thousands of escalated dollars.

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

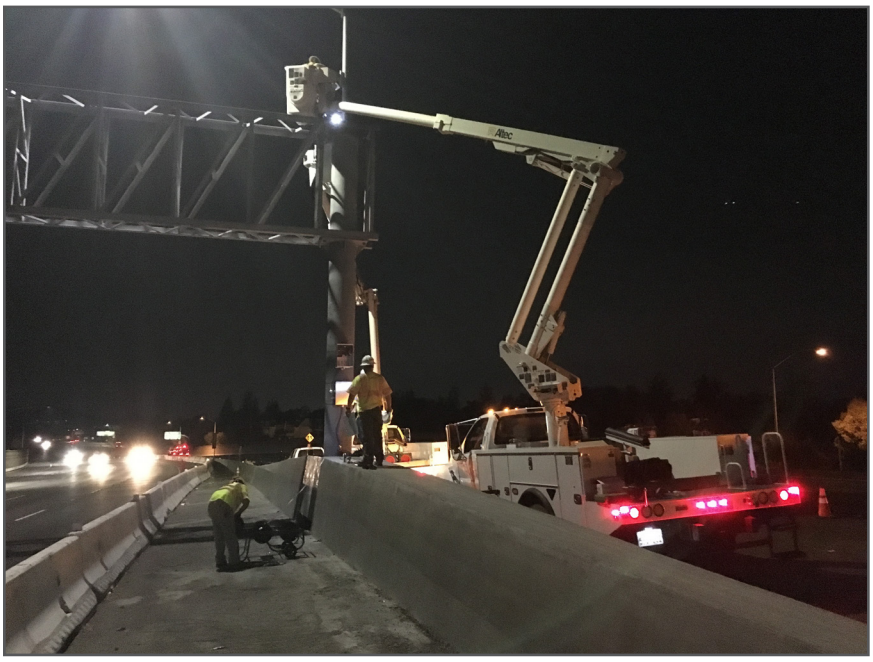
(2) Cost forecast represents current estimated cost to complete phases that are funded for each project.

(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.

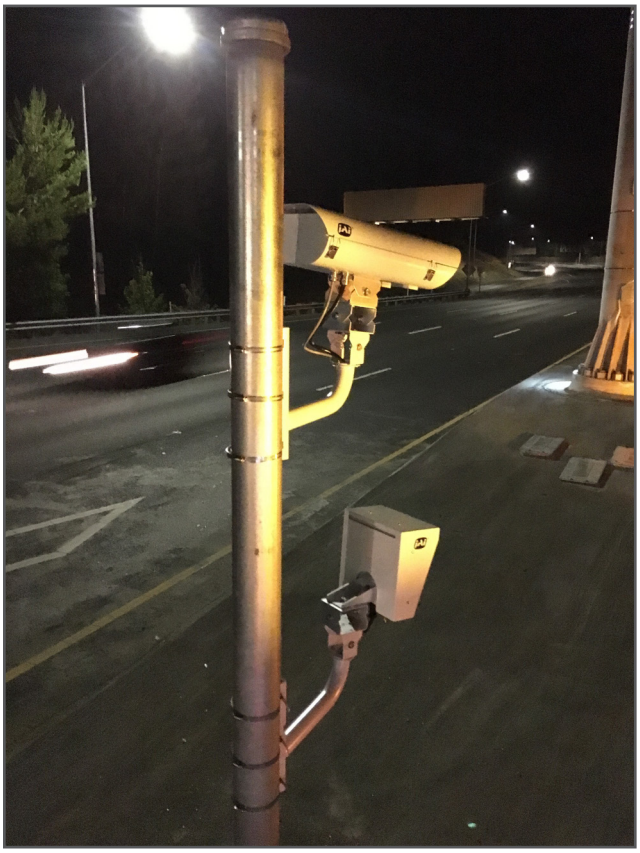


Construction crews work on connecting toll system components in the median on I-680.



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.

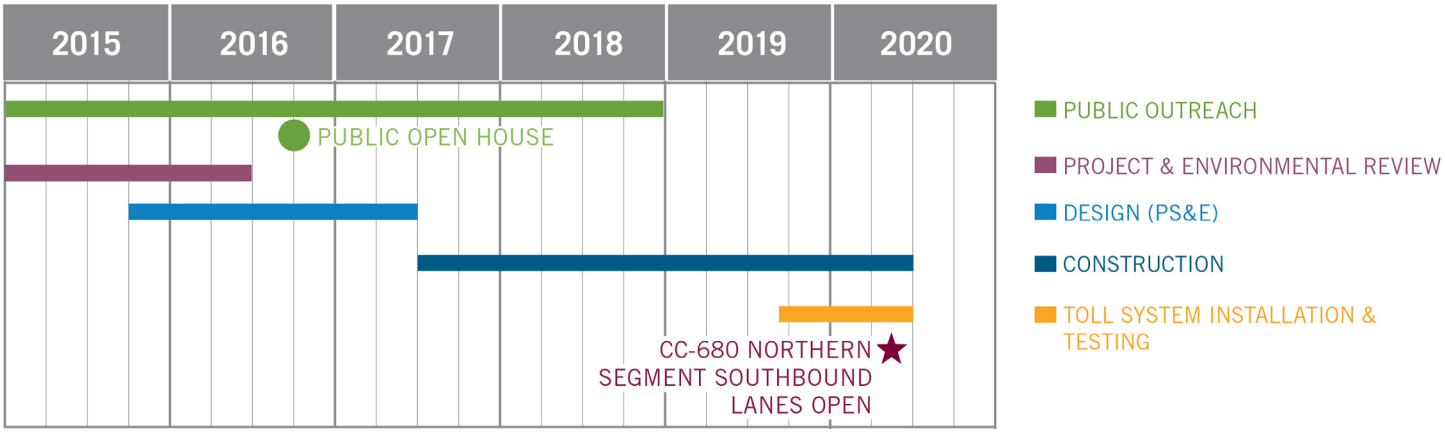
Project Highlights and Progress

- 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.

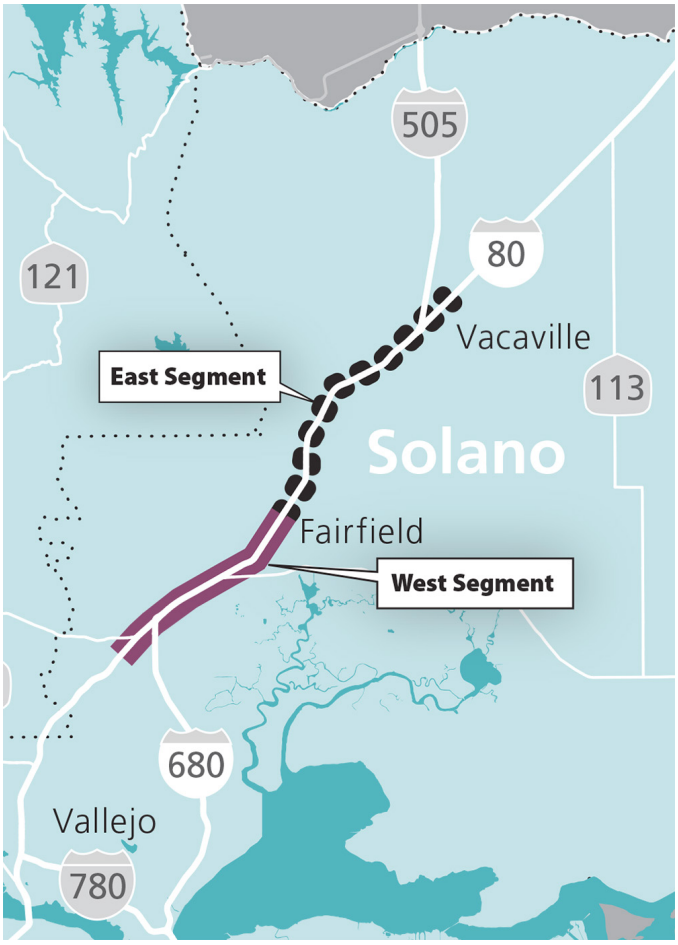
The project will also construct new eastbound and westbound lanes between Air Base Parkway and I-505 in Vacaville. In this section, the highway will be widened along with the installation of express lane striping, signage and equipment. The project will result in 36 miles of express lanes on I-80 in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

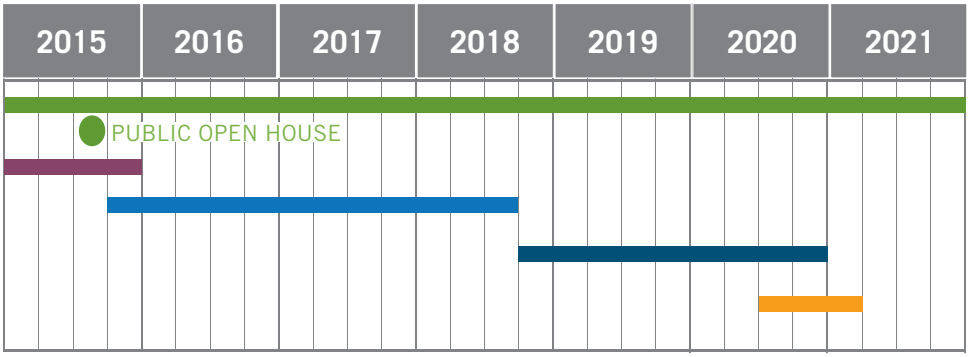
- Public open house was held in August 2015.
- Preliminary engineering report and environmental document were completed in December 2015.
- 35% design comments from Caltrans were received in August 2016.
- Coordination workshop was held in September with toll system and backhaul design teams to finalize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



*Assumes STA will administer construction for the project.
**Funding for these activities is not yet secured.

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.

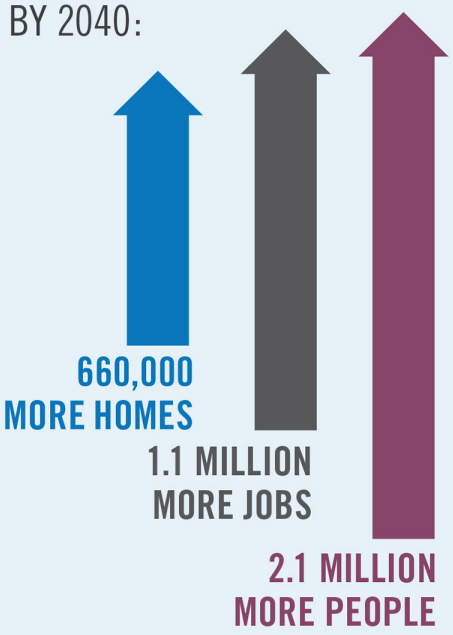
(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

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.

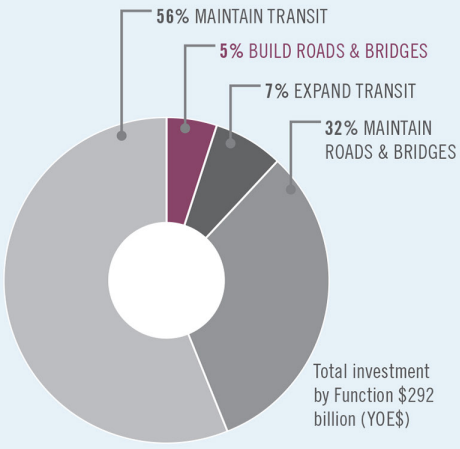
REGIONAL GROWTH BY 2040:



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

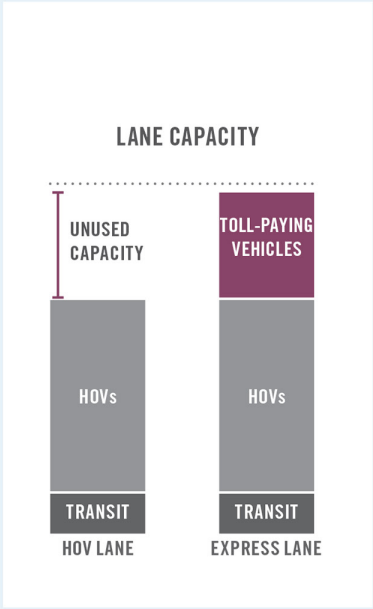
REGIONAL INVESTMENT BY 2040:

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:

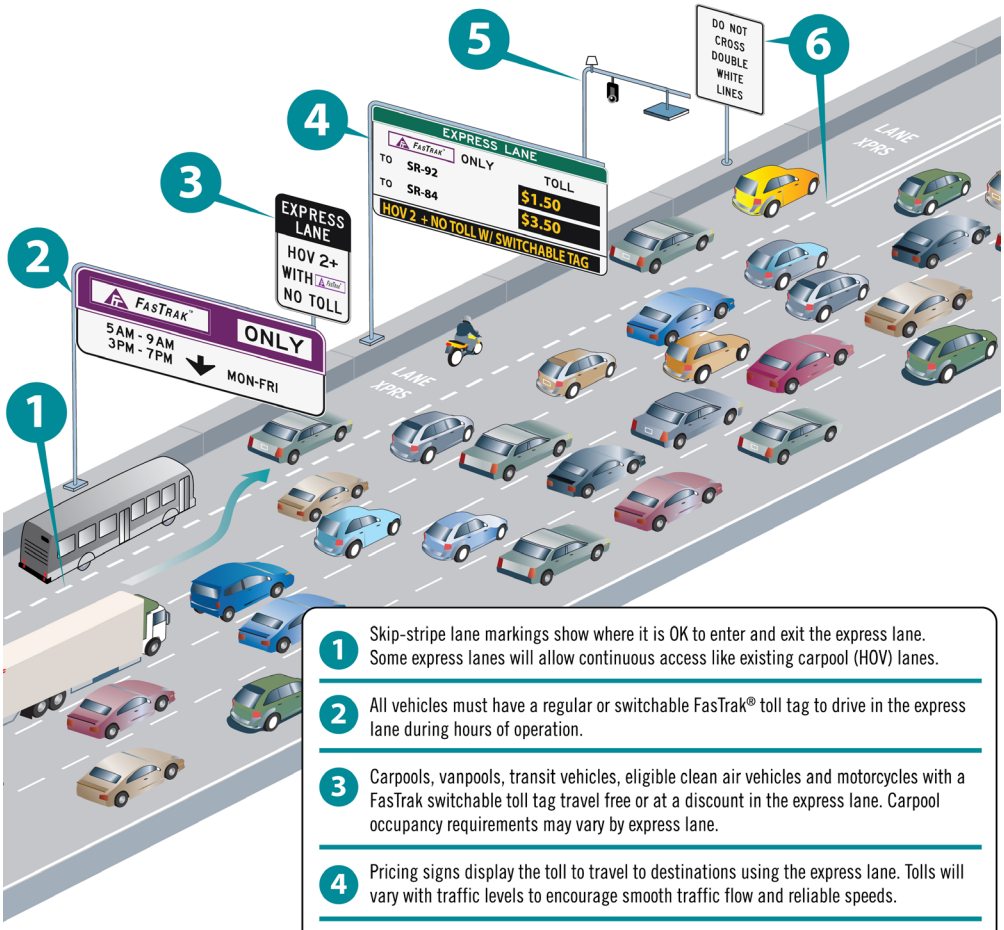


B. How Express Lanes Work

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.

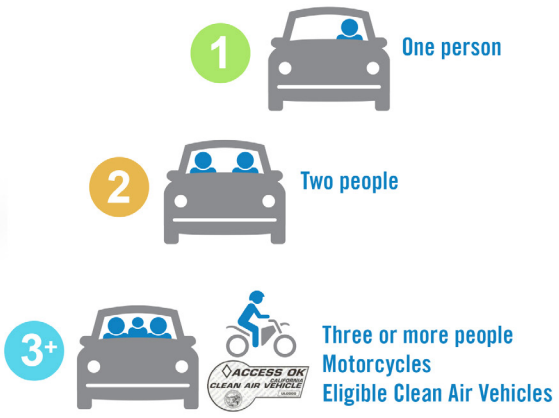


1. Skip-stripe lane markings show where it is OK to enter and exit the express lane. Some express lanes will allow continuous access like existing carpool (HOV) lanes.
2. All vehicles must have a regular or switchable FasTrak® toll tag to drive in the express lane during hours of operation.
3. Carpools, 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.

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 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

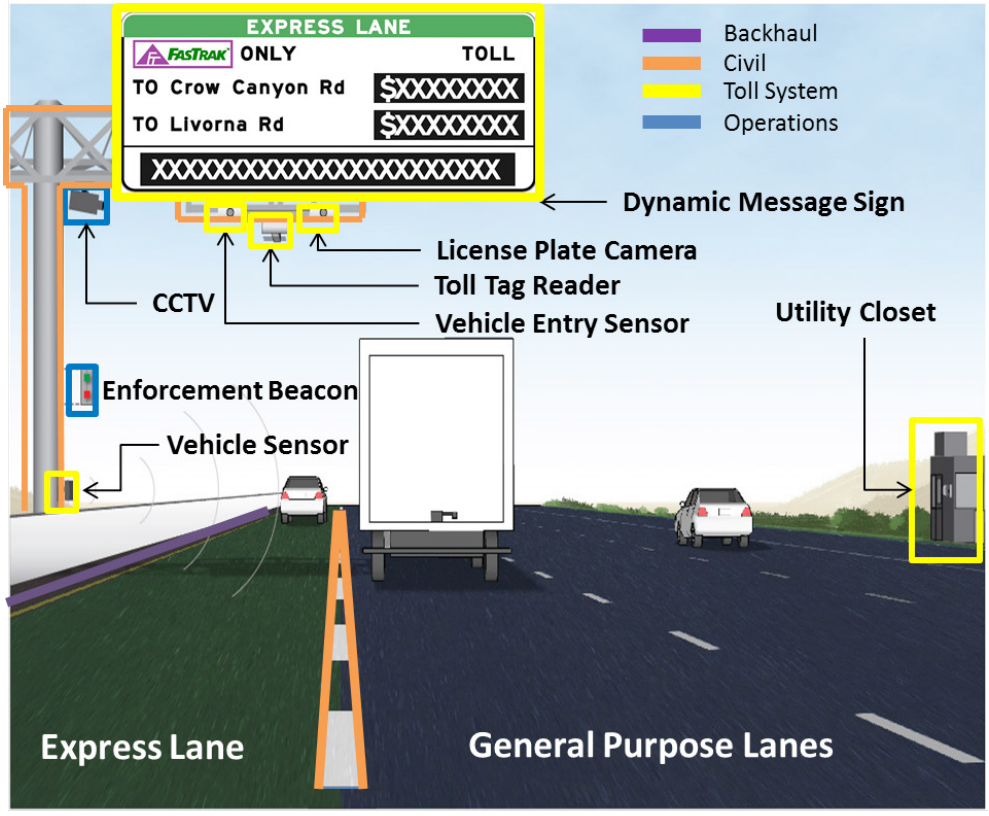
The toll system consists of two components, the in-lane system and the back-end "host" system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, 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