BAY AREA EXPRESS LANES

MTC Express Lanes Quarterly Report
2nd Quarter 2015

Submitted: September 23, 2015

BAIFA
BAY AREA INFRASTRUCTURE FINANCING AUTHORITY

METROPOLITAN TRANSPORTATION COMMISSION

TABLE OF CONTENTS

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 second quarter of 2015, April 1 to June 30.

The California Transportation Commission (CTC) approved the 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 2016.

Project Development & Construction	2nd Quarter 2015 Highlights	Current Activities
I-880 Alameda (ALA-880) San Leandro to Milpitas *Hegenberger Road/Lewelling Boulevard to Dixon Landing Road*	• Preliminary engineering circulated at Caltrans for review and comment in May. • 100% structure foundation design submitted to Caltrans for inclusion in the Department's Median Barrier Replacement Contract in June.	• Finalizing the environmental studies for environmental clearance. • Responding to Caltrans comments and preparing final preliminary engineering for approval. • Preparing 65% civil, lane-side toll system and backhaul design submittals for Caltrans review.
I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek to San Ramon *Livorna Road/Rudgear Road to Alcosta Boulevard*	• Final civil design completed in April. • 95% backhaul design submitted in May. • 95% lane-side toll system design submitted to Caltrans in June. • Civil construction contract awarded in June.	• Construction scheduled to begin in August. • Final lane-side toll system design to be submitted in August, approval anticipated in September. • Final backhaul design to be submitted in July, approval anticipated in September.
I-680 Contra Costa Northern Segment Southbound Conversion (CC-680 North) Benicia to Walnut Creek *Marina Vista Boulevard to Rudgear Road/SR 242*	• Lane access configuration agreed upon with Caltrans and the Contra Costa Transportation Authority. • Coordinated design to create facilities that work alone upon the Southern Segment opening and together when the Northern Segment opens several years later.	• Environmental studies are progressing. • Advanced preliminary design has been initiated with agreement on the access configuration.
I-80 Solano West (SOL-80 West) Fairfield *Red Top Road to Air Base Parkway* and I-80 Solano East (SOL-80 East) Fairfield to Vacaville *Air Base Parkway to I-505*		• Draft environmental document to be released in July. • Public forum hearing scheduled for August. • Preparation of the final environmental document. • Preliminary civil design ongoing.
Centralized Toll System	• Draft toll system host and software design approved in June.	

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.

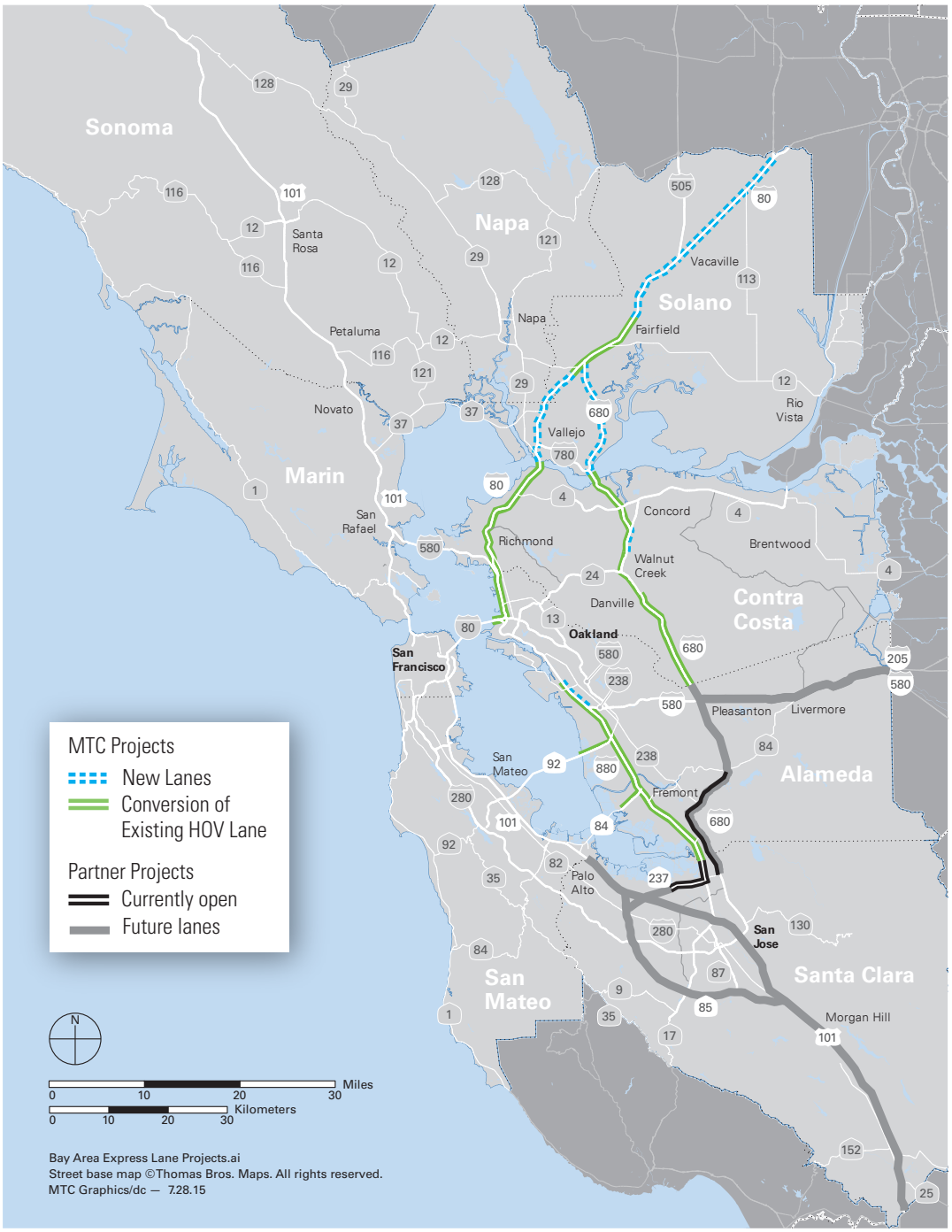
Appendix B includes an overview of how express lanes work.

Map of Bay Area Express Lane Network

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.

With adoption of Plan Bay Area in 2013, MTC agreed to study the benefits and impacts of changing general purpose lanes to express lanes to inform implementation of the network. 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)

D. MTC Express Lane Project Funding

The approved funding strategy is to use existing funding to open as much of MTC's 270-mile network as possible while seeking opportunities to get additional projects "shelf-ready" should additional funding become available for construction. This strategy includes phasing some gap closure projects concurrently with the implementation of adjacent conversion projects.

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	San Leandro to Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Walnut Creek to San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	●	●	●
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Benicia to Walnut Creek *Marina Vista Blvd. to Rudgear RD./SR 242*	●	●	●
SOL	80	I-80 Solano West	Fairfield *Red Top Rd. to Air Base Pkwy.*	●	●	○
GAP CLOSURE OPPORTUNITY PROJECTS						
CC	680	I-680 Northern Segment Southbound Conversion	Martinez to Walnut Creek *Benicia Bridge to Rudgear Road*	●	●	●
CC	680	I-680 North Northbound Extension	Walnut Creek to Concord North Main Street to SR 242	○	○	○
SOL	80	I-80 Solano East	Fairfield to Vacaville Air Base Parkway 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	Scheduled Opening	Confidence Level	Detail Page
I-880 Alameda (ALA-880) San Leandro to Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	Spring 2019	●	13
I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek to San Ramon, *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	Fall 2016	●	15
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North) Benicia to Walnut Creek *Marina Vista Blvd. to Rudgear RD./SR 242*	Fall 2018	●	17

KEY

- ● Minimal risk to schedule.
- ● Identified potential project risks that could significantly impact scheduled opening.
- ● Known project impacts with forthcoming changes to scheduled opening.

IV. PROGRAM COST SUMMARY

A. Conversions and Gap Closure Opportunity Projects

The cost summary below shows: 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 programwide costs for funded projects, including planning and design, and implementation of centralized elements of the backhaul network and toll system. The cost forecast 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.

County	Route	Project[1]	Geographical Limits	Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete[3]
				Costs shown in thousands of escalated dollars				
NEAR TERM CONVERSIONS								
ALA	880	I-880 Alameda	San Leandro to Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	77,779		77,779	4,394	8%
CC	680	I-680 Contra Costa Southern Segment	Walnut Creek to San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	48,939		48,939	9,197	20%
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear Rd.*	36,099	3,812	32,288	243	5%
SOL	80	I-80 Solano West	Fairfield *Red Top Rd. to Air Base Pkwy.*	43,941	6,504	2,852	108	8%
Centralized Toll System				36,207		36,207	2,511	15%
Program Planning, Coordination & Management				28,437		28,437	15,392	35%
Program Contingency				50,000		40,000		
Capitalized Start-up O&M				16,000		16,000		
GAP CLOSURE OPPORTUNITY PROJECTS								
CC	680	I-680 Northern Segment Southbound Conversion[2]	Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear Road*	19,000		19,000		0%
CC	680	I-680 North Northbound Extension	Walnut Creek to Concord *North Main Street to SR 242*	57,287				0%
SOL	80	I-80 Solano East	Fairfield to Vacaville *Air Base Parkway to I-505*	135,484	8,696	16,114		8%
FUTURE CONVERSIONS								
ALA/ CC	80 92 84	I-80 and Westbound Bridge Approaches	Cummings Skyway to Bay Bridge San Mateo Bridge Westbound Approach Dumbarton Bridge Westbound Approach	110,884	5,000	692		1%
CC	680	I-680 Northern Segment - Northbound Conversion	Walnut Creek to Martinez *North Main St. to Marina Vista Blvd.*	14,575	1,511			5%
Total				**674,632**	**25,522**	**318,309**	**31,845**	**11%**

(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-680 gap closure.

(2) Cost shown is BAIFA's contribution toward shortfall. Total project cost is $85 million. Other funds include Measure J ($37 million), Regional Measure 2 ($13 million), State Transportation Improvement Program (STIP) ($16 million).

(3) Physical percent completes shown are 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.

B. Change Management

The change management process implemented on the MTC Express Lanes Program provides for a mechanism to capture the changes in the program that have an impact on the approved baselines and attempts to make the change management process an integral part of the planning, design and delivery processes. All the changes to the program are recorded in the change log and distributed to the team on a bi-weekly basis.

The major changes to the MTC Express Lanes Program recorded through the change management process during the 2nd quarter of 2015 are as follows:

- Change ID 0015: A contract change order was executed to increase budget for Transcore by $100,000 in order to provide support services for toll systems planning and to provide input to the design team for developing the 65% civil design plans on the I-680 Contra Costa Northern Segment. The scope of work to provide these services was not included in the original contract. Funds for this change were drawn from the approved contract contingency.
- Change ID 0016: A task order amendment for $890,000 was executed to the Toll System Manager contract (Atkins) for additional design support services in conjunction with the backhaul Invitation for Bid. Funds for this change were drawn from the approved contract contingency.
- Change ID 0018: Due to space constraints at the Caltrans District 4 building, a programwide change was approved to move the toll operations center into the new regional operations center in the MTC building currently under construction at Beale Street. It is anticipated that the toll operations center will be ready by May 2016. The backup location for the MTC Express Lanes toll operations center will be hosted at Caltrans District in the Traveler Information Center.

C. Risk Management Plan

Risk management for MTC's Express Lanes Program is a straight forward process of identifying and mitigating risks to minimize potential adverse impacts on the program's costs and schedule. Risk is managed at both the program and contract level and responsibility is assigned to the level best positioned to manage the identified risk.

The program contingency is compared and tracked on a monthly basis with a risk-assessed contingency derived from the program risk register. The figure below shows the change in the mean risk-assessed contingency as the identified risks are mitigated and/or reduced as the project progresses. As of June 30, 2015, the mean risk-assessed contingency stands at $46.5 million against the $40 million in approved program contingency.

The top contributors to this risk-assessed contingency along with the planned/ongoing mitigations are as follows:

I-880 Alameda

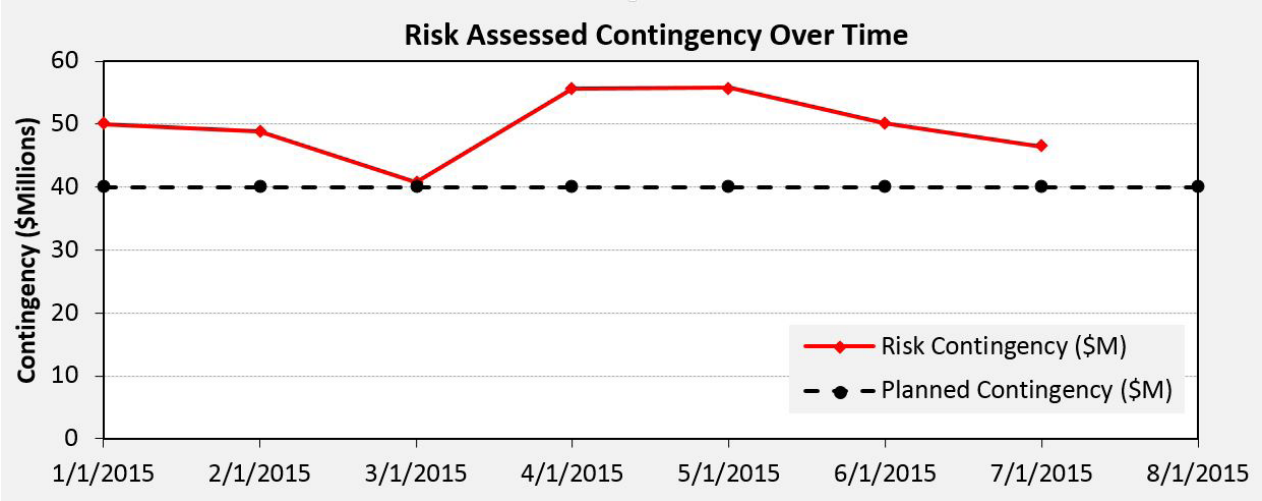
- Delays to completion of the civil contract on the I-880 corridor due to sequencing conflicts with I-880 median barrier work or other contractors may result in schedule slip which could lead to cost escalation and delays in opening. This risk will be mitigated by staging these contracts to reduce the delay to the extent possible and the needs/requirements for each contract will be thoroughly coordinated.
- The costs to construct and implement the I-880 corridor may significantly exceed the available contingency identified to cover such costs. The current estimate at completion is approximately $25 million above the budget. Mitigations are underway and the program team is working on completing the preliminary engineering cost estimate and the final median barrier design estimate, and will then determine ways to cut costs.

I-680 Contra Costa Southern Segment

- Delays in starting the backhaul construction contract for the I-680 corridor will impact both civil and lane-side toll system integration contractors. The project team is coordinating closely on the schedule and is prepared to assess options for sequencing work should there be further delays in the backhaul contract.

Programwide

- Costs may escalate at higher than projected levels resulting in increased costs for design or construction.
- Delays arising on the critical and near-critical paths would result in an unanticipated increase in costs for MTC Express Lanes Program delivery and the current budget contingency may have not accounted for all schedule related cost impacts. The program team is quantifying cost impacts of risks at program/corridor/contract levels and tracking against program contingency.
- Recommendations of regional policy change from the managed lanes implementation plan (e.g., change in HOV occupancy or hours policy) may cause changes to design or operational policy and may impact scheduled opening dates. In addition, changes could result in increased costs for analysis, toll system design, signage or operations. The program team is monitoring decisions on I-580 hours of operation and exploring potential impacts to MTC's Express Lanes.



PROJECT SUMMARY SHEETS

Centralized Toll System & Program Management, Planning and Regional Coordination

Total Estimated Cost

$36.2 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 Fall of 2016.

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

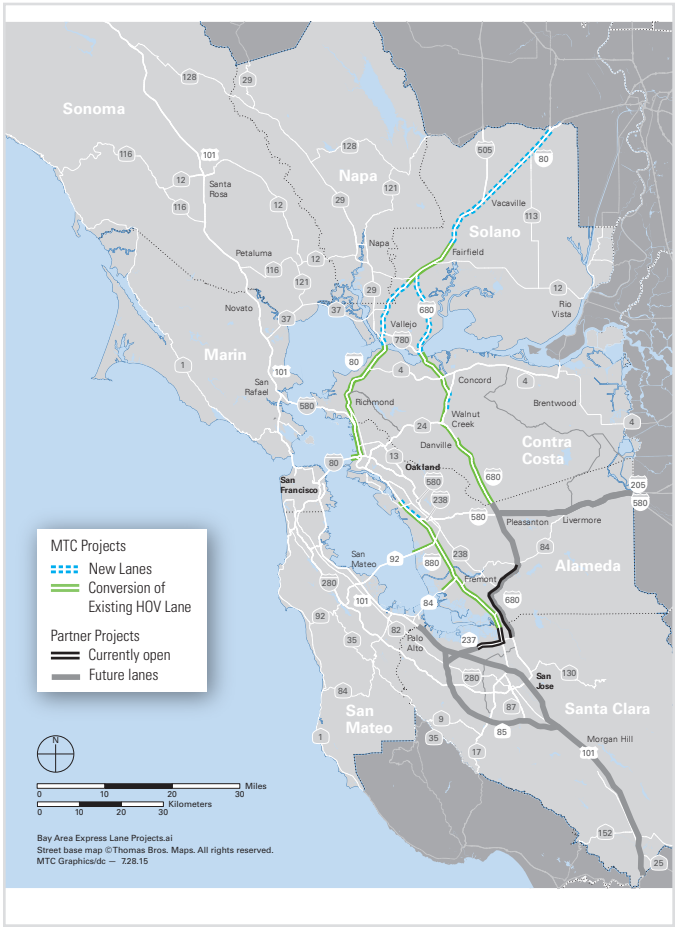
Project Description

This work involves designing and implementing the centralized toll system and backhaul communications network elements. The centralized toll system includes the hardware and software for dynamic toll setting and trip building, integration with the FasTrak® Regional Customer Service Center, and toll system spare parts. The centralized backhaul system includes communications hubs, leased line services and fiber that complete the network between the toll system host at the Benicia Bridge toll plaza and the toll operations center at 375 Beale Street.

Additional work involves tasks that apply to the entire MTC Express Lanes Program such as: 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

- BAIFA approved the Express Lane Program Expenditure Plan in June.
- Draft toll system host and software design approved in June.



Current Project Activities

- Toll system host and software design will be complete Summer 2015.
- A procurement for toll operations staffing will be issued in Fall 2015.
- Plans are underway for build out of express lanes elements of the 375 Beale Operations Center.
- Development of operating procedures is underway.
- Research is underway to inform staff recommendations for a toll ordinance and violations policies to be adopted in 2016.

I-880 Alameda (ALA-880) – San Leandro to Milpitas

Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

Total Estimated Cost

$77.8 million

Scheduled Open Date

Spring 2019

Project Description

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

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.

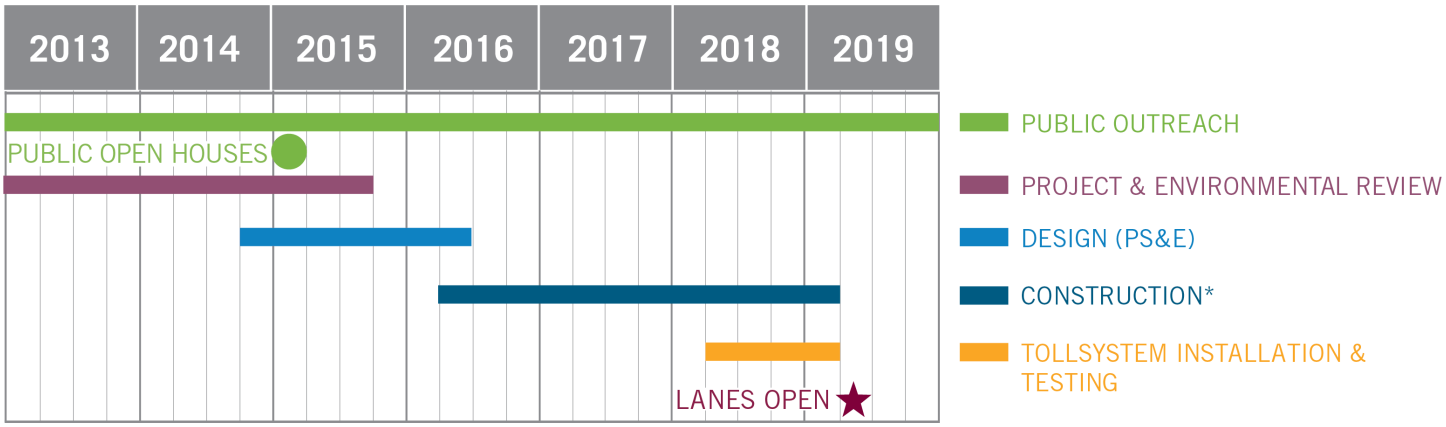
Project Highlights and Progress

- Preliminary engineering circulated at Caltrans for review and comment in May.
- 100% structure foundation design submitted to Caltrans for inclusion in the Department's Median Barrier Replacement Contract in June.

Current Project Activities

- Finalizing the environmental studies for environmental clearance.
- Responding to Caltrans comments and preparing final preliminary engineering for approval.
- Preparing 65% civil design submittal for Caltrans review.
- Preparing 65% toll system design submittal for Caltrans review.
- Preparing 65% backhaul design submittal for Caltrans review.

Project Schedule by Phase



*Includes I-880 median barrier improvements.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
77,779		77,779	4,394	8%

Costs shown in thousands of escalated dollars.

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

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

Livorna Road/Rudgear Road to Alcosta Boulevard

Total Estimated Cost

$48.9 million

Scheduled Open Date

Fall 2016

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. The express lanes will allow continuous access like the existing carpool lanes.

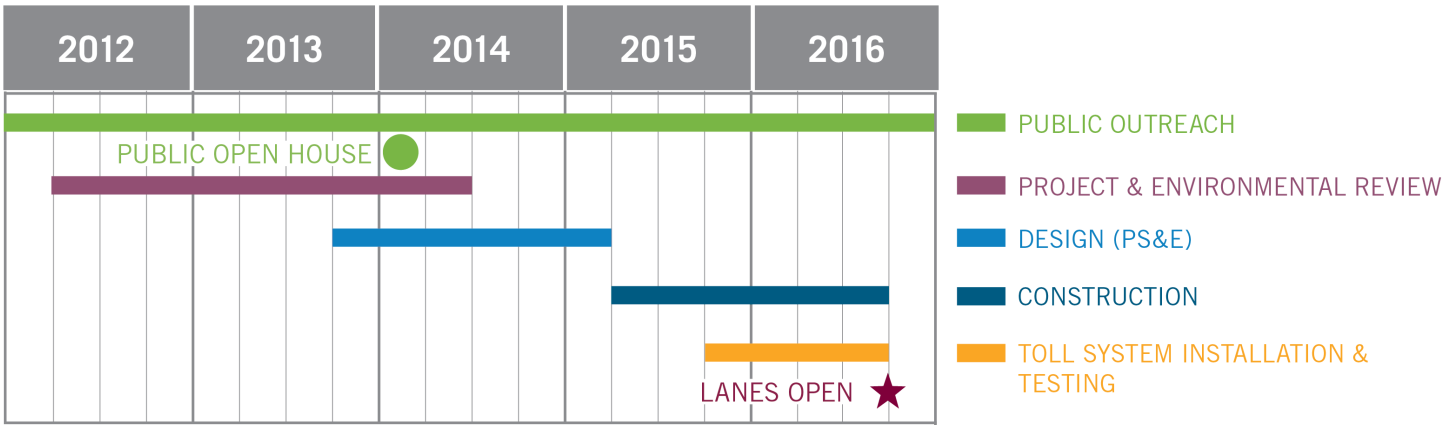
Project Highlights and Progress

- Environmental document approved in August.
- Final preliminary engineering approved in August.
- Final design completed in April.
- 95% backhaul design submitted in May.
- 95% lane-side toll system design submitted to Caltrans in June.

Current Project Activities

- Advertisement and award to be completed in July.
- Construction scheduled to begin in August.
- Final lane-side toll system design to be submitted in August, approval anticipated in September.
- Final backhaul design to be submitted in July, approval anticipated in September.

Project Schedule by Phase



Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
48,939		48,939	9,197	20%

Costs shown in thousands of escalated dollars.

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

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

Benicia Bridge to Rudgear Road

Total Estimated Cost

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

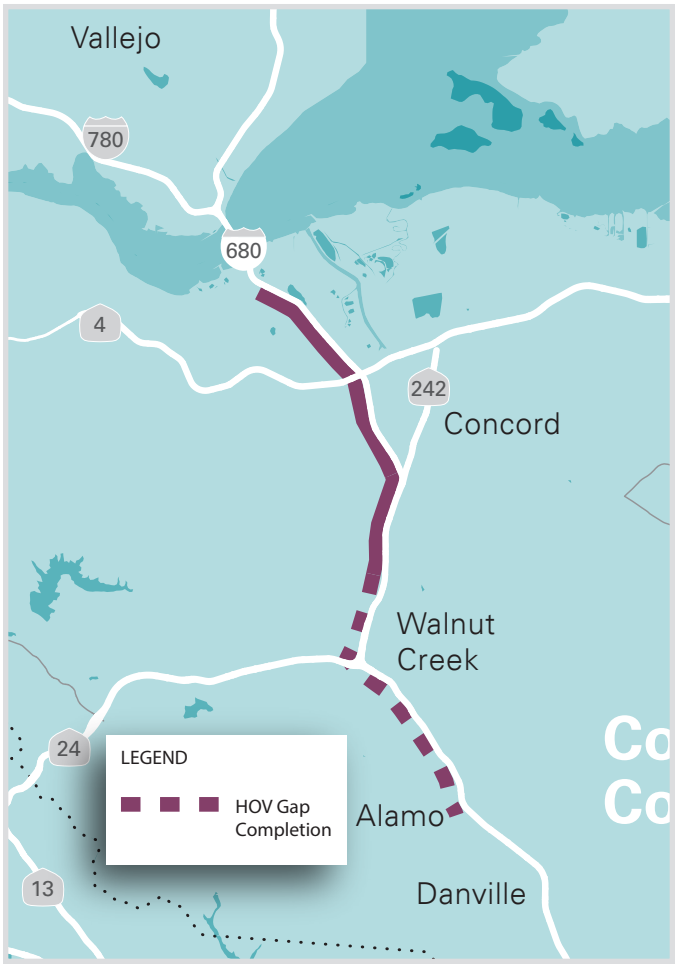
Scheduled Open Date

End of 2018

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.



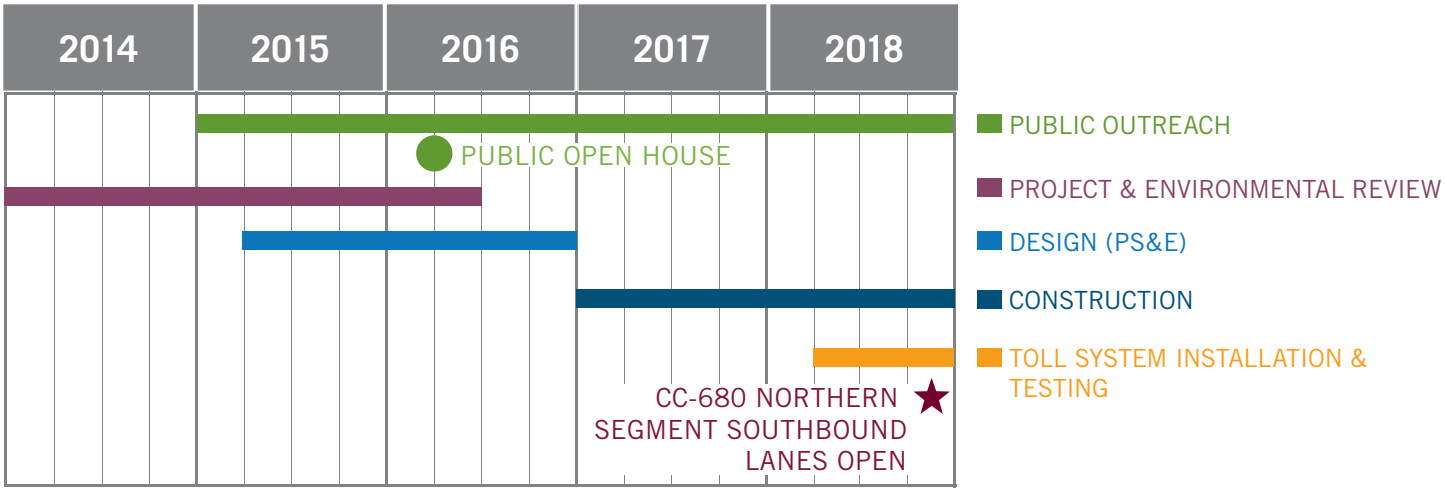
Project Highlights and Progress

- Project scoping approved on September 11, 2014.
- Lane access configuration agreed upon with Caltrans and CCTA on May 28, 2015.
- Coordinated design to create facilities that work alone upon the southern segment opening and together when the northern segment opens several years later.

Current Project Activities

- Environmental studies are progressing.
- Advanced preliminary engineering has been initiated with agreement on the access configuration.

Project Schedule by Phase



Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
36,099	3,812	32,288	243	5%

Costs shown in thousands of escalated dollars.

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

I-80 Solano West (SOL-80 West) – Fairfield

Red Top Road to Air Base Parkway

Total Estimated Cost

$43.9 million

Scheduled Open Date

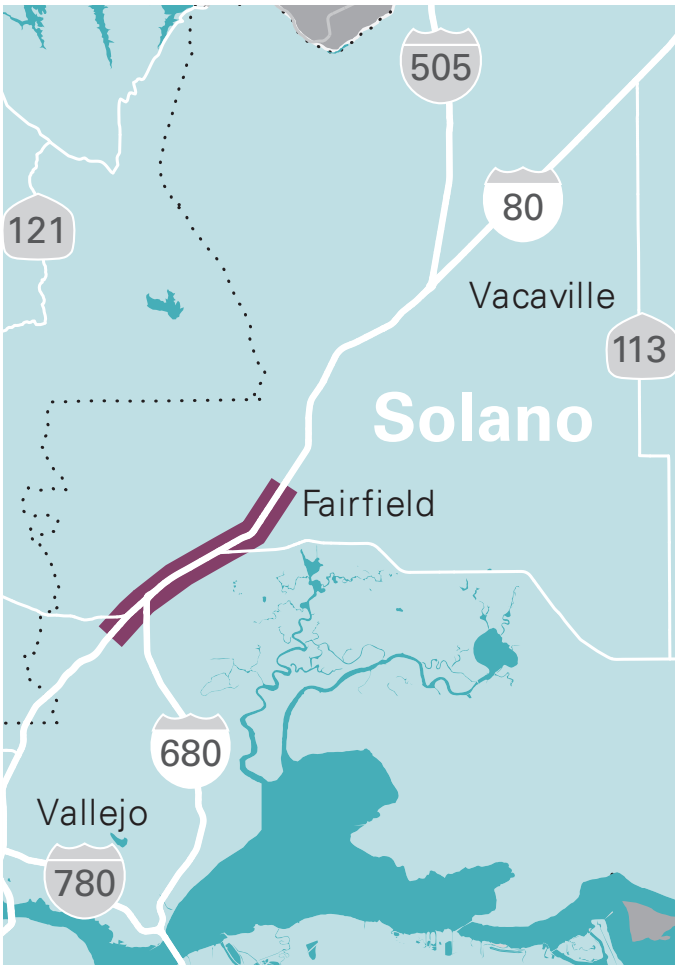
TBD

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, resulting in 18 miles of express lanes. Conversion work includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic-monitoring video cameras.

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

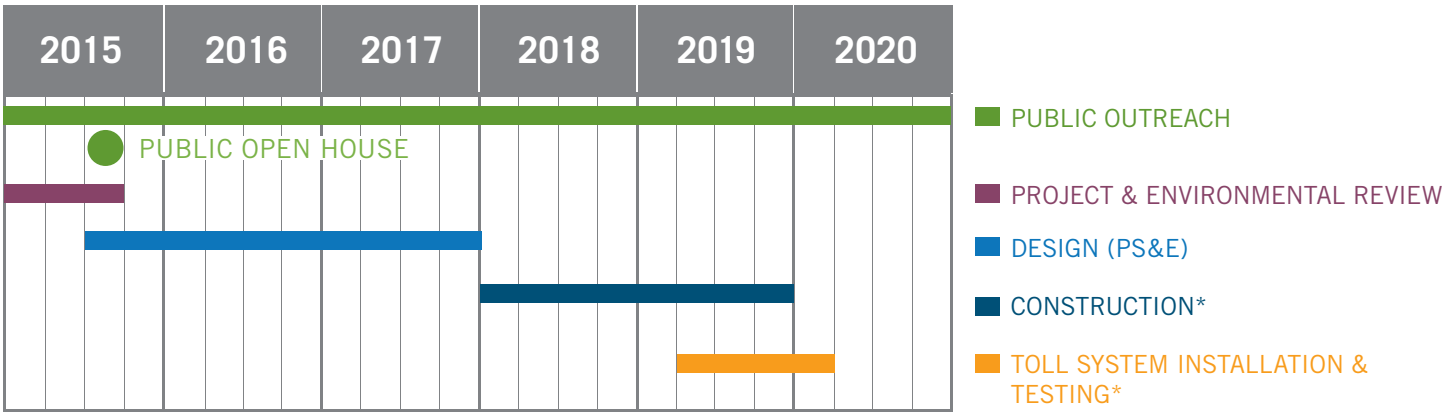
Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.



Current Project Activities

- Draft environmental document to be released in July.
- Public open forum hearing scheduled for August.
- Preparation of the final environmental document.
- Preliminary civil design.

Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
43,941	6,504	2,852	108	8%

Costs shown in thousands of escalated dollars.

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

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

Air Base Parkway to I-505

Total Estimated Cost

$135.5 million

Scheduled Open Date

TBD

Project Description

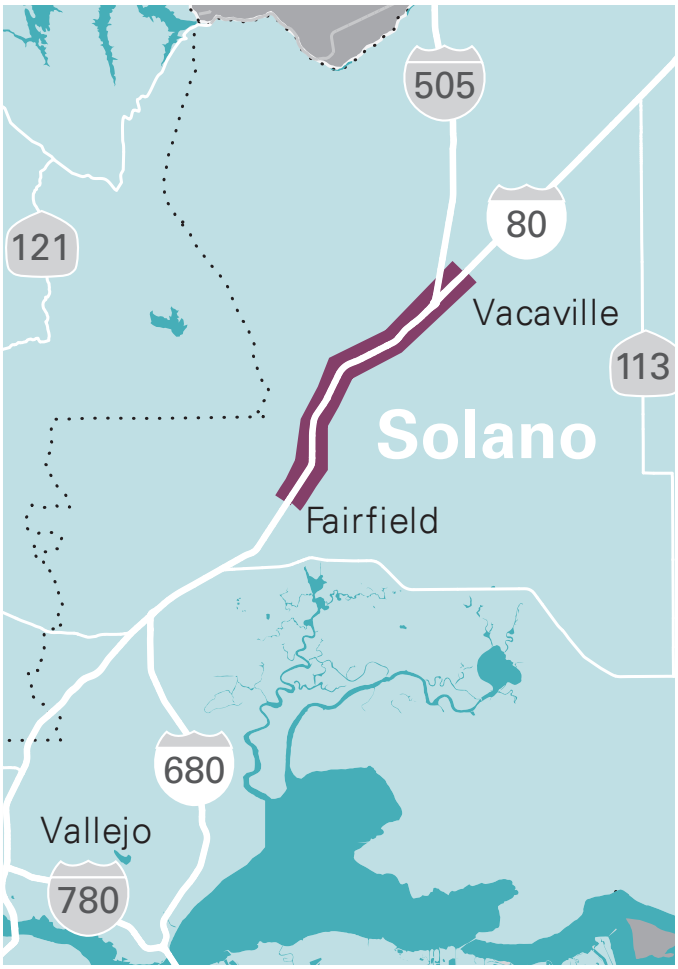
This project will construct new eastbound and westbound express lanes from Air Base Parkway to I-505, for 18 miles of new express lanes. The highway will be widened and express lane striping, signage and equipment will be installed.

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

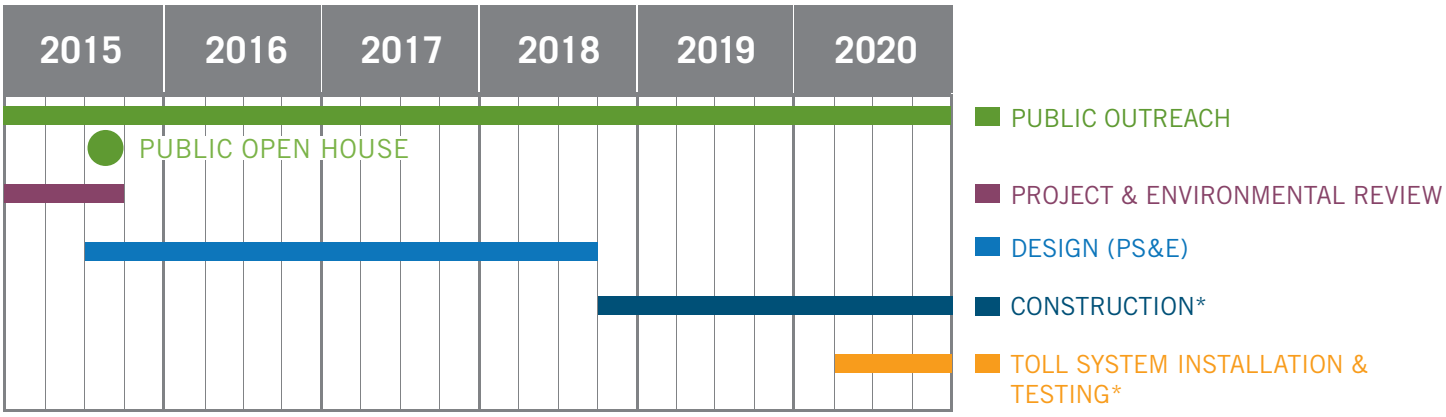
Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.

Current Project Activities

- Draft environmental document to be released in July.
- Public open forum hearing scheduled for August.
- Preparation of the final environmental document.
- Preliminary civil design.



Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
135,484	8,696	16,114	0	8%

Costs shown in thousands of escalated dollars.

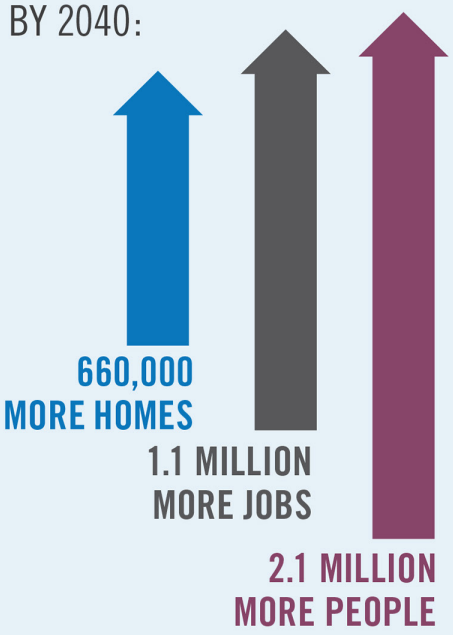
The total cost for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

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.

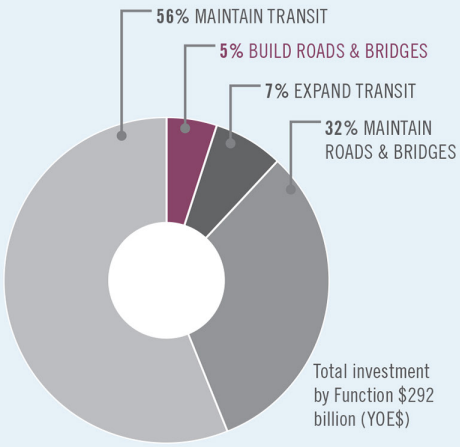
REGIONAL GROWTH BY 2040:



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

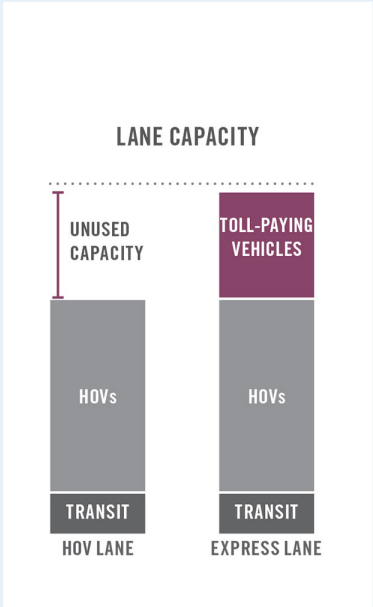
REGIONAL INVESTMENT BY 2040:

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:

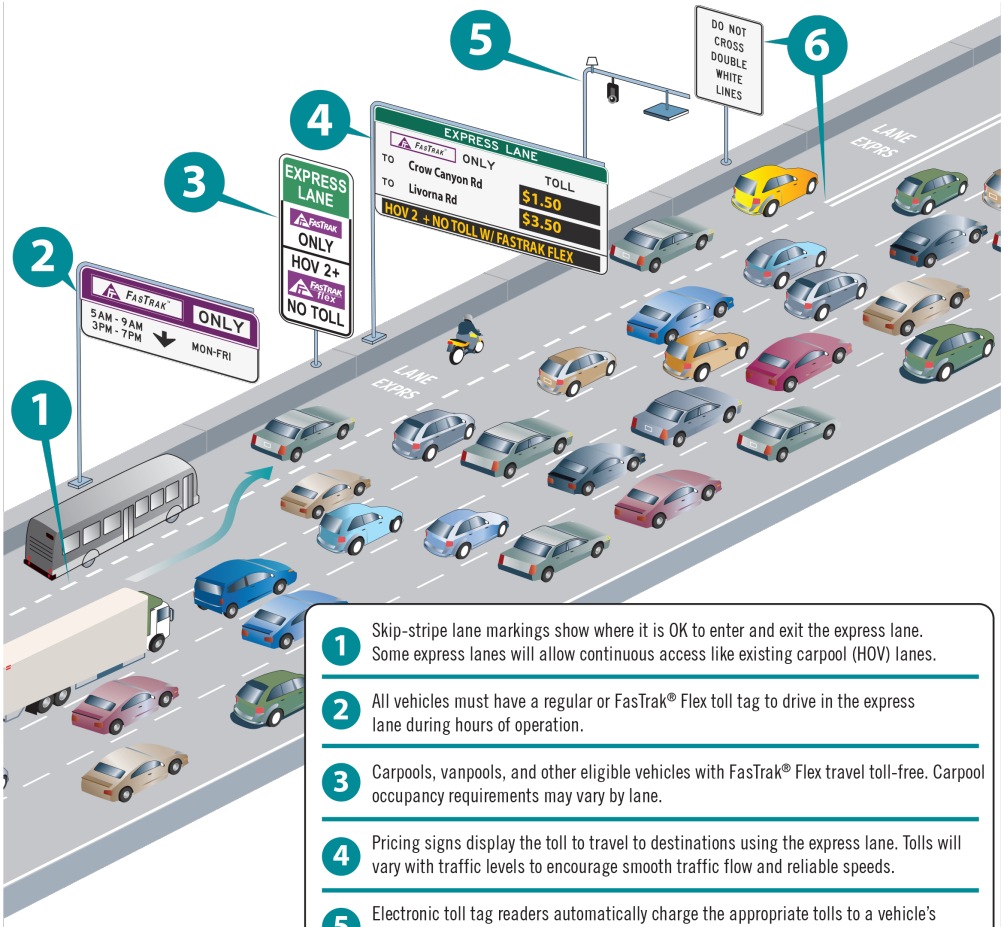


B. How Express Lanes Work

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.

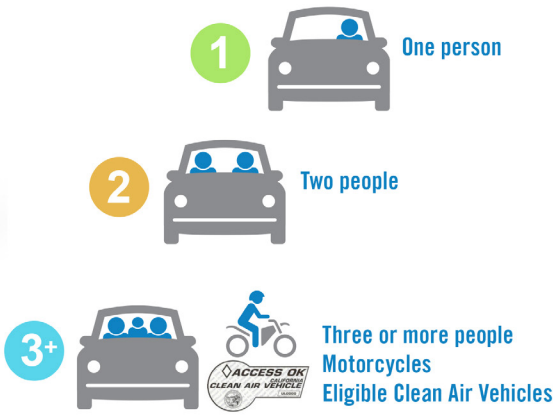


1. Skip-stripe lane markings show where it is OK to enter and exit the express lane. Some express lanes will allow continuous access like existing carpool (HOV) lanes.
2. All vehicles must have a regular or FasTrak® Flex toll tag to drive in the express lane during hours of operation.
3. Carpools, vanpools, and other eligible vehicles with FasTrak® Flex travel toll-free. Carpool occupancy requirements may vary by 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 the appropriate tolls to a vehicle's FasTrak® account. Like at Bay Area bridges, license plate cameras prevent cheating and support enforcement.
6. Solid double-stripe lane markings show where it is illegal to enter and exit the express lane. It is illegal to cross the solid double-stripe lines at any time. These access limitations improve traffic flow.

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 the work necessary to widen the highway to include additional 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 their equipment. In addition, the civil contractor will construct the infrastructure necessary to connect the toll system power and communications connections.

Toll Systems

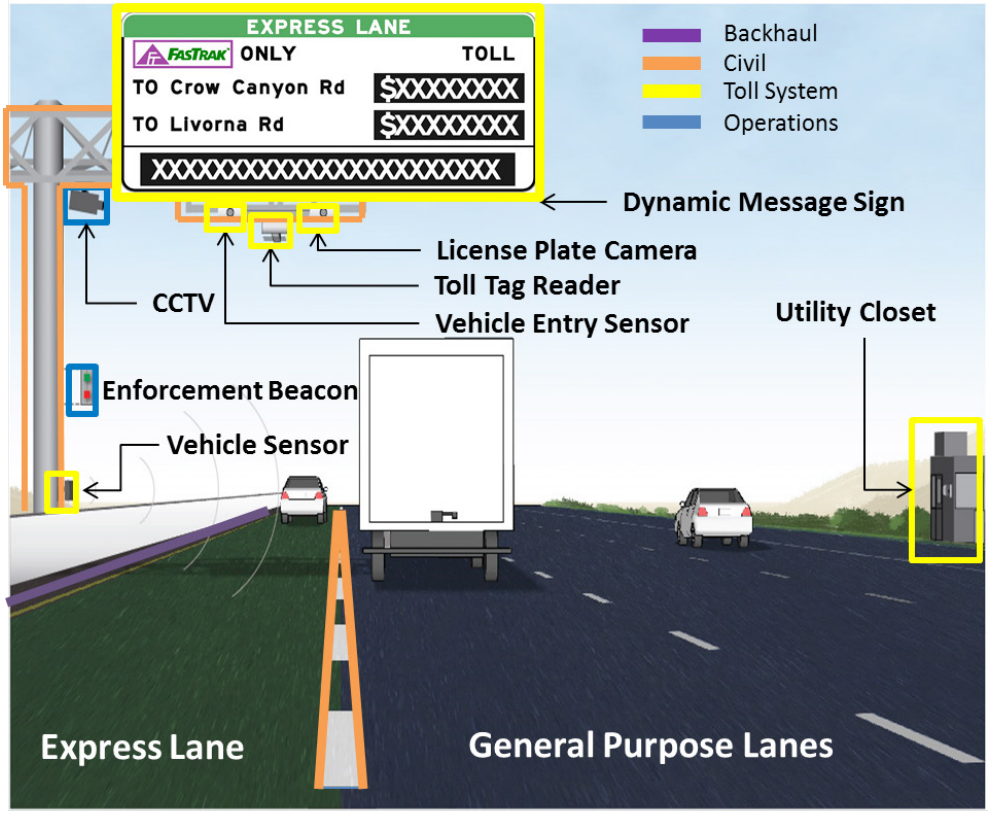
The toll system consists of two components, the in-lane systems and the back-end "host" system. The lane systems consist of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system,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