

## Meeting Agenda

### Bay Area Infrastructure Financing Authority

#### Authority Members:

*Jake Mackenzie, Chair Amy R. Worth, Vice Chair*

*Federal D. Glover, Scott Haggerty, James P. Spering  
Non-Voting Member: Tony Tavares*

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Wednesday, February 27, 2019

1:40 PM

Board Room - 1st Floor

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\*\*\* PLEASE NOTE MEETING DATE AND TIME \*\*\*

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

#### 1. Roll Call / Confirm Quorum

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

#### 2. Consent Calendar

- 2a. [19-0061](#) Minutes of the January 23, 2019 meeting
- Action: Authority Approval
- Attachments: [2a\\_01-23-2019\\_BAIFA\\_Draft\\_Minutes.pdf](#)
- 2b. [19-0060](#) Second Quarter BAIFA Operating Financial Statement - December 2018
- Action: Information
- Presenter: Brian Mayhew
- Attachments: [2b\\_2nd Qtr BAIFA Financial Statements FY19.pdf](#)
- 2c. [19-0059](#) BAIFA Resolution No. 17, Revised - FY 2018-19 Express Lanes Program Operating Budget Revision
- Action: Authority Approval
- Presenter: Brian Mayhew
- Attachments: [2c\\_BAIFA Res. 17 FY18-19 Op Budget Amend.pdf](#)

**2d.**     [19-0063](#)     Express Lanes Program Quarterly Report - 4th Quarter 2018

**Action:**             Information

**Presenter:**        Lisa Klein

**Attachments:**     [2d\\_EL Report Q4 2018.pdf](#)

**3. Approval**

**3a.**     [19-0064](#)     BAIFA Role in San Mateo 101 Express Lanes

A recommendation to approve an approach in which BAIFA would provide the toll system and day-to-day operations for the San Mateo 101 Express Lanes, under contract to San Mateo agencies.

**Action:**             Authority Approval

**Presenter:**        Andrew Fremier

**Attachments:**     [3a\\_San Mateo 101.pdf](#)

**4. Public Comment / Other Business**

**5. Adjournment / Next Meeting**

**The next meeting of the Bay Area Infrastructure Financing Authority will be held on March 27, 2019 at 9:40 a.m. in the Board Room at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.**

**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](http://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 Título 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.

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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)

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**File #:** 19-0061      **Version:** 1      **Name:**

**Type:** Minutes      **Status:** Consent

**File created:** 1/14/2019      **In control:** Bay Area Infrastructure Financing Authority

**On agenda:** 2/27/2019      **Final action:**

**Title:** Minutes of the January 23, 2019 meeting

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [2a\\_01-23-2019\\_BAIFA\\_Draft\\_Minutes.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Minutes of the January 23, 2019 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:*

*Jake Mackenzie, Chair Amy R. Worth, Vice Chair*

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

*Non-Voting Member: Tony Tavares*

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Wednesday, January 23, 2019

9:35 AM

Board Room - 1st Floor

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#### Call Meeting to Order

#### 1. Roll Call/Confirm Quorum

**Present:** 5 - Commissioner Glover, Commissioner Haggerty, Chair Mackenzie, Commissioner Spering and Vice Chair Worth

Non-Voting Member Present: Tony Tavares

#### 2. Consent Calendar

Approval of the Consent Calendar

**Upon the motion by Commissioner Spering and the second by Vice Chair Worth, the Consent Calendar was unanimously approved by the following vote:**

**Aye:** 5 - Commissioner Glover, Commissioner Haggerty, Chair Mackenzie, Commissioner Spering and Vice Chair Worth

**2a.** [18-1057](#) Minutes of the November 28, 2018 meeting

**Action:** Authority Approval

#### 3. Information

**3a.** [19-0049](#) BAIFA Role in San Mateo 101 Express Lanes

An overview of the San Mateo 101 Express Lanes project and potential roles for BAIFA.

**Action:** Information

**Presenter:** Andrew Fremier

Roland Lebrun was called to speak.

#### 4. Public Comment / Other Business

[19-0067](#)

Correspondence Received

#### 5. Adjournment / Next Meeting

The next meeting of the Bay Area Infrastructure Financing Authority will be held on February 27, 2019 at 9:40 a.m. in the Board Room at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.



# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

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**File #:** 19-0060      **Version:** 1      **Name:**

**Type:** Report      **Status:** Consent

**File created:** 1/14/2019      **In control:** Bay Area Infrastructure Financing Authority

**On agenda:** 2/27/2019      **Final action:**

**Title:** Second Quarter BAIFA Operating Financial Statement - December 2018

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [2b\\_2nd Qtr BAIFA Financial Statements FY19.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Second Quarter BAIFA Operating Financial Statement - December 2018

**Presenter:**  
Brian Mayhew

**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](http://www.mtc.ca.gov)

## *Memorandum*

TO: Bay Area Infrastructure Financing Authority

DATE: February 15, 2019

FR: Executive Director

W.I.: 6861

RE: Second Quarter BAIFA Operating Financial Statement – December 2018

Attached is the BAIFA operating financial statement for the second quarter ending on December 31, 2018.

Total revenue reported in the first six months is \$7.2 million or 61% of the approved budget. With little historical information for the I-680 Express Lanes operation, staff is being cautious when developing the revenue budget. As a result, actual revenue may trend higher than the budget in this fiscal year.

Total expense of \$2 million is 17% of the approved budget. Maintenance expense will pick up later in the year after we complete the toll system acceptance testing and the toll system transition to the operations and maintenance phase. Also, vendors were behind on their billing as of the end of the second quarter. Therefore, the expense is expected to ramp up in the second half of the fiscal year. The total encumbrance balance of \$5.7 million is 58% of the remaining budget balance.

If you have any questions about this report, please contact Brian Mayhew at (415) 778-6730.

  
\_\_\_\_\_  
Steve Heminger

SH:se  
Attachment

**BAIFA Operating Budget  
As of December 2018**

	FY 2018-19	Actual	Curent Budget Balance	% of Budget	Year		YTD Total
	Budget	YTD	Over/(Under)	(col 2/1)	Expired	Encumbrances	(Enc+YTD)
<b>Revenue:</b>							
1 General Toll Revenue	9,300,000	6,171,171	(3,128,829)	66.4%	50.0%	0	6,171,171
2 Violation Revenue	1,700,000	892,785	(807,215)	52.5%	50.0%	0	892,785
3 Interest Revenue	0	108,123	108,123	100.0%	50.0%	0	108,123
4 Other Revenue	0	14,462	14,462	200.0%	50.0%	0	14,462
5 Transfer in from Reserve	848,580	0	(848,580)	0.0%	50.0%	0	0
<b>Total Revenue</b>	<b>11,848,580</b>	<b>7,186,541</b>	<b>(4,662,039)</b>	<b>60.7%</b>	<b>50.0%</b>	<b>0</b>	<b>7,186,541</b>
<b>Expense:</b>							
<b>FasTrak Operations and Maintenance</b>							
1 RCSC Operations	2,555,000	407,163	(2,147,837)	15.9%	50.0%	1,114,837	1,522,000
2 Banking/Credit Card Fees	445,000	189,476	(255,524)	42.6%	50.0%	255,524	445,000
3 BATA Finanical Services	225,000	112,440	(112,560)	50.0%	50.0%	112,560	225,000
4 Collections/DMV Expenses	87,000	0	(87,000)	0.0%	50.0%	0	0
FasTrak O&M Subtotal	3,312,000	709,079	(2,602,921)	21.4%	50.0%	1,482,921	2,192,000
<b>Express Lanes Administration</b>							
5 Salaries, Benefits & Overhead	1,333,500	500,883	(832,617)	37.6%	50.0%	0	500,883
6 Professional/Consultant Service	572,000	50,725	(521,275)	8.9%	50.0%	487,560	538,285
7 Audit/Accounting	195,163	69,489	(125,674)	35.6%	50.0%	4,700	74,189
8 Insurance	53,000	12,193	(40,807)	23.0%	50.0%	0	12,193
9 Other	50,000	0	(50,000)	0.0%	50.0%	0	0
Express Lanes Admin Subtotal	2,203,663	633,290	(1,570,373)	28.7%	50.0%	492,260	1,125,550
<b>Express Lanes &amp; Backhaul Operations and Maintenance</b>							
10 Operating Center	725,000	49,204	(675,796)	6.8%	50.0%	675,137	724,341
11 California Highway Patrol Enforcement	724,417	284,997	(439,420)	39.3%	50.0%	259,421	544,418
12 Roadway Maintenance	1,649,000	336,182	(1,312,818)	20.4%	50.0%	987,230	1,323,412
13 Toll System Operations & Maintenance	2,885,000	0	(2,885,000)	0.0%	50.0%	1,745,715	1,745,715
14 Caltrans Express Lanes Operations & Maintenance	300,000	0	(300,000)	0.0%	50.0%	0	0
15 Utility Service	48,000	10,956	(37,044)	22.8%	50.0%	37,044	48,000
Express Lanes and Backhaul O&M Subtotal	6,331,417	681,339	(5,650,078)	10.8%	50.0%	3,704,547	4,385,886
<b>Total Expense</b>	<b>11,847,080</b>	<b>2,023,708</b>	<b>(9,823,372)</b>	<b>17.1%</b>	<b>50.0%</b>	<b>5,679,728</b>	<b>7,703,436</b>
<b>Operating Surplus (Shortfall)</b>	<b>1,500</b>	<b>5,162,833</b>					



# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

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**File #:** 19-0059      **Version:** 1      **Name:**

**Type:** Report      **Status:** Consent

**File created:** 1/14/2019      **In control:** Bay Area Infrastructure Financing Authority

**On agenda:** 2/23/2019      **Final action:**

**Title:** BAIFA Resolution No. 17, Revised - FY 2018-19 Express Lanes Program Operating Budget Revision

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [2c\\_BAIFA Res. 17 FY18-19 Op Budget Amend.pdf](#)

Date	Ver.	Action By	Action	Result
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### Subject:

BAIFA Resolution No. 17, Revised - FY 2018-19 Express Lanes Program Operating Budget Revision

### Presenter:

Brian Mayhew

### Recommended Action:

Authority Approval



Bay Area Infrastructure Financing Authority  
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## *Memorandum*

TO: Bay Area Infrastructure Financing Authority

DATE: February 15, 2019

FR: Executive Director

W.I.: 6861

RE: BAIFA Resolution No. 17, Revised - FY 2018-19 Express Lanes Program Operating Budget Revision

Staff requests an amendment to the BAIFA Express Lanes Program Operating Budget (BAIFA Resolution No. 17, Revised) to transfer \$2.9 million back to the Express Lane Capital Program.

In FY 2017-18, Express Lanes Capital Program transferred \$2.9 million to the Operating Program to cover potential operating shortfall. As we ended that fiscal year with a net operating surplus of \$7.9 million, staff recommends transferring the \$2.9 million back to the Capital Program.

In addition, the operating budget has been augmented by approximately \$849,000 in carryover encumbrances for contracts executed in FY 2017-18 with work continuing in FY 2018-19.

A \$3.8 million transfer in from reserve will cover both the transfer out and the carryover encumbrance.

These changes are shown in Attachment A of the resolution.

### **Recommendation**

Staff recommends approval of BAIFA Resolution No. 17, Revised, the BAIFA Operating Budget for FY 2018-19.

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Steve Heminger

SH:bm  
Attachment

Date: June 27, 2018  
W.I.: 6860  
Referred By: BAIFA  
Revised: 02/27/19-BAIFA

BAIFA Resolution No. 17, Revised

This resolution approves the Express Lanes Program Operating Budget for FY 2018-19 for the Bay Area Infrastructure Financing Authority (BAIFA).

This resolution was revised on February 27, 2019 to update Attachment A, FY 2018-19 Operating Budget.

Further discussion of the FY 2018-19 Express Lanes Program Operating Budget is contained in the Executive Director's Memoranda to BAIFA dated June 13, 2018 and February 13, 2019.



Date: June 27, 2018  
W.I.: 6860  
Referred By: BAIFA

Re: Bay Area Infrastructure Financing Authority's Operating Budget for FY 2018-19

BAY AREA INFRASTRUCTURE FINANCING AUTHORITY  
RESOLUTION NO. 17

WHEREAS, the Metropolitan Transportation Commission ("MTC") and the Bay Area Toll Authority ("BATA") have executed a joint exercise of powers agreement dated as of August 1, 2006, as amended, which created and established the Bay Area Infrastructure Financing Authority ("BAIFA"); and

WHEREAS, BAIFA staff has prepared a budget setting forth the anticipated revenues and expenditures of BAIFA for FY 2018-19; now, therefore, be it

RESOLVED, that BAIFA approves the FY 2018-19 Operating Budget prepared in accordance to generally accepted accounting principles attached hereto as Attachment A and incorporated herein as though set forth in full to be effective July 1, 2018, in the amounts and for the purposes listed therein; and be it further

RESOLVED, that the Executive Director or designee may approve adjustments among line items in the BAIFA operating budget for FY 2018-19, provided that there shall be no increase in the overall operating budget without prior approval of BAIFA; and, be it further

RESOLVED, that the Executive Director or designee shall submit written requests to BAIFA for approval of funds to contract for applicable consultant and professional services; and, be it further

RESOLVED, that BAIFA's Executive Director and the Chief Financial Officer are authorized to carry over all contracts and funds properly budgeted in the prior year for which expenditures were budgeted and encumbered which will take place in FY 2018-19; and be it further

RESOLVED, that the Executive Director and Chief Financial Officer are authorized to utilize generally available cash as an advance for project cash flow purposes provided the advanced is repaid from project funds by the close of the fiscal year; and be it further

RESOLVED, that the BAIFA staff shall furnish BAIFA with at a minimum, a quarterly financial report to reflect budgeted and actual income, expenditures, obligations for professional and consultant services and such other information and data as may be requested by BAIFA.

BAY AREA INFRASTRUCTURE FINANCING  
AUTHORITY

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Jake Mackenzie, Chair

The above resolution was entered into by  
the Bay Area Infrastructure Financing Authority  
at a regular meeting of the Board held in San Francisco,  
California on June 27, 2018.

Date: June 27, 2018  
W.I.: 6860  
Referred By: BAIFA  
Revised: 02/27/19-BAIFA

Attachment A  
BAIFA Resolution No. 17

FY 2018-19 BAIFA Express Lanes Program Operating Budget



# ATTACHMENT A

## BAY AREA INFRASTRUCTURE FINANCING AUTHORITY

### OPERATING BUDGET FY 2018-19

BAIFA Resolution No. 17  
 Date: 6/27/2018  
 W.I.: 6861  
 Revised: 02/27/19-BAIFA

#### OPERATING REVENUE-EXPENSE SUMMARY

	APPROVED BUDGET FY 2018-19	AMENDMENT FY 2018-19	Change % Inc./.(Dec.)	Change \$ Inc./.(Dec.)
General Toll Revenue	\$ 9,300,000	\$ 9,300,000	0.0%	0
Violation Revenue	\$ 1,700,000	\$ 1,700,000	0.0%	0
<b>Total Operating Revenue</b>	<b>\$ 11,000,000</b>	<b>\$ 11,000,000</b>	0.0%	0
<b>Total Operating Expense</b>	<b>\$ 10,998,500</b>	<b>\$ 11,847,080</b>	7.7%	848,580
<b>Total Transfer Out</b>	<b>\$ -</b>	<b>\$ 2,915,000</b>	N/A	2,915,000
<b>Total Transfer In from Reserve</b>	<b>\$ -</b>	<b>\$ 3,763,580</b>	N/A	3,763,580
<b>Total Operating Surplus (Shortfall)</b>	<b>\$ 1,500</b>	<b>\$ 1,500</b>	N/A	0

#### REVENUE DETAIL BUDGET FY 2018-19

	APPROVED BUDGET FY 2018-19	AMENDMENT FY 2018-19	Change % Inc./.(Dec.)	Change \$ Inc./.(Dec.)
<b>General Toll Revenue (subtotal)</b>	<b>\$ 9,300,000</b>	<b>\$ 9,300,000</b>	0.0%	0
CC-680 Toll Revenue	\$ 9,300,000	\$ 9,300,000	0.0%	0
<b>Violation Revenue (subtotal)</b>	<b>\$ 1,700,000</b>	<b>\$ 1,700,000</b>	0.0%	0
Violations Revenue	\$ 1,700,000	\$ 1,700,000	0.0%	0
<b>Total Operating Revenue</b>	<b>\$ 11,000,000</b>	<b>\$ 11,000,000</b>	0.0%	0

<p align="center"><b>EXPENSE DETAIL</b></p> <p align="center"><b>BUDGET FY 2018-19</b></p>
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APPROVED BUDGET FY 2018-19	AMENDMENT FY 2018-19	Change % Inc./ (Dec.)	Change \$ Inc./ (Dec.)
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<b>Operating Expense</b>
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<b>FasTrak Operations and Maintenance (Subtotal)</b>	<b>\$ 3,312,000</b>	<b>\$ 3,312,000</b>	0.0%	0
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RCSC Operations	\$ 2,555,000	\$ 2,555,000	0.0%	0	L1
Banking/Credit Card Fees	445,000	445,000	0.0%	0	L2
BATA Financial Services	225,000	225,000	0.0%	0	L3
Collections/DMV Expenses	87,000	87,000	0.0%	0	L4

<b>Express Lanes Operations and Maintenance (Subtotal)</b>	<b>\$ 5,158,000</b>	<b>\$ 5,663,417</b>	9.8%	505,417
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Express Lane Toll Operators	\$ 725,000	\$ 725,000	0.0%	0	L5
California Highway Patrol Enforcement	500,000	724,417	44.9%	224,417	L6
Roadway Maintenance	700,000	981,000	40.1%	281,000	L7
Toll System Operations & Maintenance	2,885,000	2,885,000	0.0%	0	L8
Caltrans Express Lanes Operations & Maintenance	300,000	300,000	0.0%	0	L9
Utility Service	48,000	48,000	0.0%	0	L10

<b>Backhaul Operations and Maintenance (Subtotal)</b>	<b>\$ 649,000</b>	<b>\$ 668,000</b>	2.9%	19,000
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Roadway Maintenance	\$ 649,000	\$ 668,000	2.9%	19,000	L11
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<b>Express Lanes Operations and Maintenance Total</b>	<b>\$ 9,119,000</b>	<b>\$ 9,643,417</b>	5.8%	524,417
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<b>Express Lanes Administration (Subtotal)</b>	<b>\$ 1,879,500</b>	<b>\$ 2,203,663</b>	17.2%	324,163
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Salaries and Benefits	\$ 888,500	\$ 888,500	0.0%	0	L12
Professional/Consultant Service	322,000	572,000	77.6%	250,000	L13
Overhead	445,000	445,000	0.0%	0	L14
Audit/Accounting	121,000	195,163	61.3%	74,163	L15
Insurance	53,000	53,000	0.0%	0	L16
Other	50,000	50,000	0.0%	0	L17

<b>Total Operating Expense</b>	<b>\$ 10,998,500</b>	<b>\$ 11,847,080</b>	7.7%	848,580
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<b>Transfer To Capital Program</b>	<b>\$ -</b>	<b>\$ 2,915,000</b>	N/A	2,915,000
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<b>Total Operating Expense and Transfer</b>	<b>\$ 10,998,500</b>	<b>\$ 14,762,080</b>	N/A	3,763,580
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# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

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**File #:** 19-0063      **Version:** 1      **Name:**

**Type:** Report      **Status:** Consent

**File created:** 1/15/2019      **In control:** Bay Area Infrastructure Financing Authority

**On agenda:** 2/27/2019      **Final action:**

**Title:** Express Lanes Program Quarterly Report - 4th Quarter 2018

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [2d\\_EL\\_Report\\_Q4\\_2018.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Express Lanes Program Quarterly Report - 4th Quarter 2018

**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: February 15, 2019

FR: Executive Director

W. I. 6840

RE: Express Lanes Program Quarterly Report – 4<sup>th</sup> Quarter 2018

MTC issues Express Lanes Program reports quarterly. The report summarizes major developments, project schedules and risks, and compares forecast costs with BAIFA's Express Lanes Program Expenditure Plan as well as the operational performance of BAIFA's open express lanes. The attached report covers the fourth quarter of 2018, October 1 to December 31.

**I-680 Contra Costa Southern Segment Operations** – Highlights of fourth quarter performance include: (see *Appendix C* for more detail)

- Express lane trips were lighter in November and December due to the holidays. Still, over 2 million trips were made, with an average of 30,000 trips per day in December.
- Of all trips, 43% were declared as carpools, while only 4% had no FasTrak<sup>®</sup> account.
- For December peak period trips, express lane users traveled on average 8 to 9 miles per hour faster than neighboring lanes, slightly less than other months in the quarter.
- Peak period tolls paid remained fairly consistent. In December, the average toll paid in the northbound p.m. peak period was \$6.50. In the southbound a.m. peak period, it was \$5.80. In the middle of the day, the average toll paid was less than \$1.00.
- The highest posted toll to travel the entire corridor in each direction was \$8.50.
- CHP worked 91% of requested enforcement hours, and made 1,777 enforcement stops.

**Express Lanes Capital Delivery** – Project activity for the fourth quarter is highlighted below (see *Section I. Program Highlights* and *Section III. Capital Delivery* for more detail).

- **I-880 Alameda** – Installation of fiber and network communication hubs is complete. Installation of civil infrastructure, electric service connections and tolling equipment, construction of a retaining wall, and widening of the freeway continues. Two existing sign bridges will be replaced this spring, requiring some night time full closures of I-880. The project is projected to open in early 2020.
- **I-680 Contra Costa Northern Segment Southbound** – The civil contractor continues demolition of the median barrier, and is about to begin foundation work for overhead signs and new median barrier. Electrical services work is also underway. The project is projected to open in fall 2021.
- **I-80 Solano** – In March, Caltrans will apply for a Federal Infrastructure For Rebuilding America grant for this project, which is shelf-ready should construction funds become available.

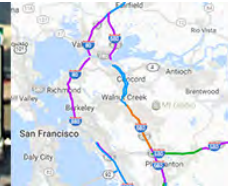
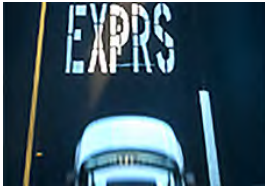
  
 Steve Heminger

SH:lk  
 Attachments





# BAY AREA EXPRESS LANES



## MTC Express Lanes Quarterly Report 4<sup>th</sup> Quarter, October - December, 2018

Submitted: February 2019

**BAIFA**  
BAY AREA INFRASTRUCTURE  
FINANCING AUTHORITY



METROPOLITAN  
TRANSPORTATION  
COMMISSION



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# 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 fourth quarter of 2018, October 1 to December 31.

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. The first of MTC's express lanes opened in October 2017 on I-680 in Contra Costa County. Several additional projects are at varying stages of development.

Project Development & Construction	4 <sup>th</sup> Quarter 2018 Highlights	Current Activities
<b>I-880 Alameda (ALA-880)</b> San Leandro to Milpitas <i>Hegenberger Road/Lewelling Boulevard to Dixon Landing Road</i>	<ul style="list-style-type: none"> <li>Caltrans finalized the design of fiber laterals to connect its freeway management equipment to the communications backhaul.</li> <li>The toll system integrator continued installation of roadside cabinets and electrical in the southern portion of I-880 and prepared equipment for installation in the median.</li> <li>The contractor completed installation of Backhaul fiber for the entire express lane corridor and of network hubs connecting field equipment to data centers in San Francisco, Martinez and Oakland.</li> <li>Staff kept residents and stakeholders in the I-880 corridor informed about express lane construction.</li> </ul>	<ul style="list-style-type: none"> <li>The express lane civil contractor continues to install civil infrastructure and PG&amp;E service connections from SR-92 to Hegenberger Rd.</li> <li>The express lanes civil contractor continues to install a retaining wall in the freeway shoulder near Hacienda Ave. in Hayward and perform lane widening work to add access lanes into restricted sections of the express lanes.</li> <li>The express lanes civil contractor will remove two existing overhead sign bridge structures at the SR-92 interchange and install two new ones.</li> <li>The toll system integrator continues equipment installation from Dixon Landing Rd. to SR-92, and will start equipment installation from SR-92 to Hegenberger Rd.</li> <li>The toll system integrator will install new, numeric HOV occupancy beacons on I-880 to support CHP enforcement of occupancy violations.</li> <li>Monthly construction notices and ramp closure/detour notices continue to be sent. Staff is also preparing customer education materials and outreach strategies in advance of lane opening.</li> </ul>
<b>I-680 Contra Costa Southern Segment (CC-680 South)</b> Walnut Creek to San Ramon <i>Livorna Road/Rudgear Road to Alcosta Boulevard</i>	<ul style="list-style-type: none"> <li>See Appendix C for second quarter performance data.</li> </ul>	<ul style="list-style-type: none"> <li>Project complete; see Appendix B for archived summary.</li> </ul>

Project Development & Construction	4 <sup>th</sup> Quarter 2018 Highlights	Current Activities
<b>I-680 Contra Costa Northern Segment Southbound (CC-680 North SB)</b>  Martinez to Walnut Creek <i>Marina Vista Boulevard to Rudgear Road/SR 242</i>	<ul style="list-style-type: none"> <li>Construction started October 1, 2018, and a ground-breaking event was held October 3, 2018.</li> <li>The civil contractor completed demolition of the median barrier between the Benicia-Martinez Bridge and SR-242 in December 2018.</li> </ul>	<ul style="list-style-type: none"> <li>The civil contractor will begin foundation work for overhead sign structures and new median barrier between the Benicia-Martinez Bridge and SR-242. The civil contractor continues demolition of the median barrier between SR-24 and Rudgear Rd., and will start construction of its replacement. The civil contractor continues electrical services work at various corridor locations.</li> <li>The replacement planting design continues to be updated to incorporate public feedback.</li> <li>Staff continues to negotiate a contract change order for the backhaul contractor to reroute in-use backhaul fiber in Walnut Creek prior to lane widening. The toll system integrator will coordinate with the civil and backhaul contractors during the re-routing of the backhaul fiber.</li> </ul>
<b>I-80 Solano (SOL-80)</b>  Fairfield to Vacaville <i>Red Top Road to I-505</i>	<ul style="list-style-type: none"> <li>No significant activity occurred since the project reached the Ready-to-List milestone in April 2018.</li> </ul>	<ul style="list-style-type: none"> <li>The project is shelf-ready should construction funds become available.</li> <li>Caltrans will submit this project for a Federal INFRA grant due in March 2019.</li> <li>MTC and STA staff continue to explore other potential funding sources.</li> </ul>
<b>Program Management</b>	<ul style="list-style-type: none"> <li>Staff presented to local transportation stakeholder groups about I-680 Contra Costa Express Lanes performance.</li> <li>Staff developed plans with other express lane operator staff to explain to stakeholders and the public about toll policy changes related to clean air vehicle and carpool occupancy requirements, subject to future BAIFA discussion and approval.</li> </ul>	<ul style="list-style-type: none"> <li>Staff is planning a 'proof of concept' to show how camera-based vehicle occupancy detection systems can be used to identify violators in a tolling environment.</li> <li>Staff released a Request For Information (RFI) in January 2019 to learn about smartphone app-based systems for vehicle occupancy declaration and verification.</li> <li>Staff continues to coordinate with other public agency staff on the possibility of the future US-101 express lanes in San Mateo County being operated by BAIFA.</li> <li>Staff is beginning to draft proposed changes to the Toll Ordinance in anticipation of I-880 opening, with an HOV-3 occupancy requirement, and clean air vehicle tolling.</li> </ul>
<b>Toll System</b>	<ul style="list-style-type: none"> <li>In October 2018, CHP began using the web-based toll tag look-up tool to enforce HOV occupancy in the express lane.</li> <li>In December 2018, the toll system integrator contract was extended to June 2023 to include the I-680 Northern Segment. The change removed the I-80 Solano express lanes from the contract. It will be added back when construction funding is secured.</li> </ul>	<ul style="list-style-type: none"> <li>The toll system integrator and the FasTrak® back office are testing an updated regional interface control document to enable the two systems to communicate and share 6C compliant data.</li> <li>Staff continues to work with the toll system integrator to address system bugs and to prepare for I-680 Southern Segment Operations Testing in February 2019.</li> </ul>

## II. PROGRAM OVERVIEW

### A. Program Description

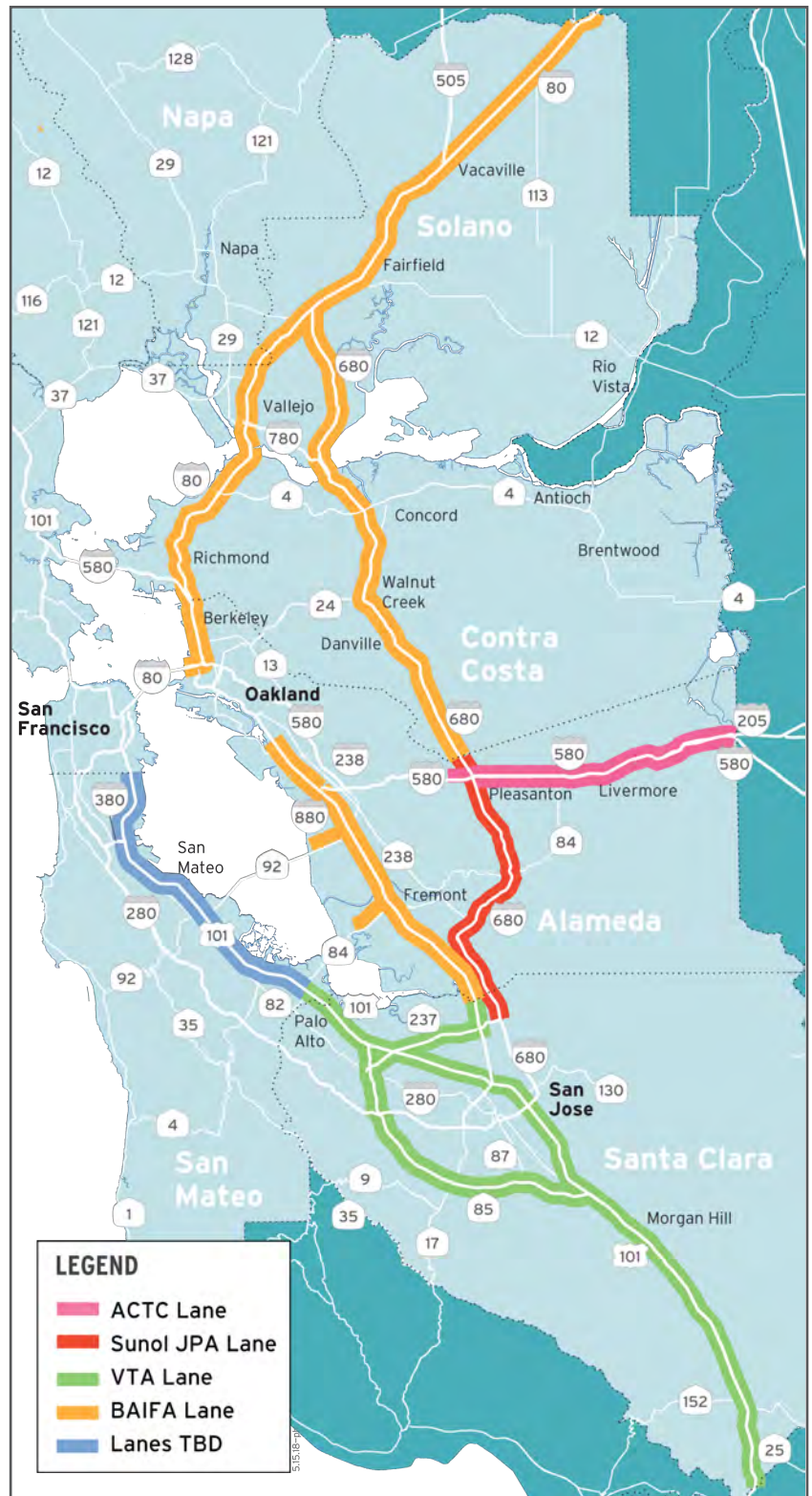
MTC and partner agencies are implementing a regional network of express lanes called Bay Area Express Lanes. Upon completion, Bay Area Express Lanes will comprise 600 miles of express lanes operated by MTC, the Valley Transportation Authority (VTA), the Alameda County Transportation Commission (Alameda CTC) and the Sunol Smart Corridors Joint Powers Authority (Sunol JPA), and potentially by San Mateo County transportation agencies.

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.

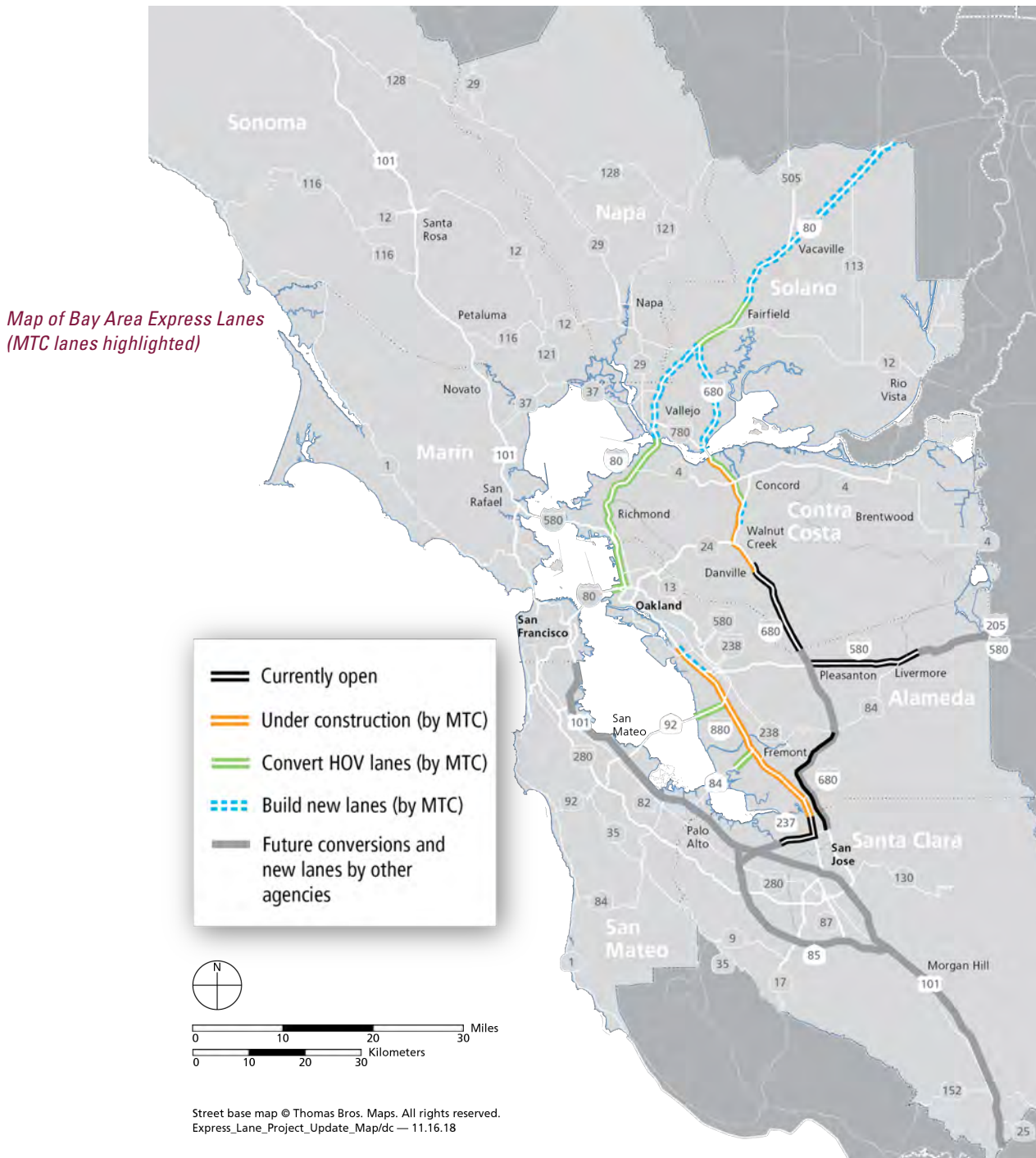


Map of Bay Area Express Lane Network

## 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.





## C. MTC Express Lane Project Funding

MTC is using existing funding to convert existing HOV lanes to express lanes and to conduct environmental studies and design 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	Miles	Environmental	Design	Construction
NEAR-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS							
ALA	880	I-880 Alameda	Between San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	51	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	23	●	●	●
CC	680	I-680 Contra Costa Northern Segment Southbound	Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear Rd.</i>	11	●	●	●
SOL	80	I-80 Solano	Fairfield to Vacaville <i>Red Top Rd. to I-505</i>	36	●	●	○
MID-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS							
ALA/ CC	80	I-80 and Westbound Approaches to the Bay Bridge	Between Crockett and Bay Bridge <i>Cummings Skyway to Bay Bridge; I-80, I-580, I-880 and West Grand approaches to Bay Bridge</i>	44	◐	○	○
ALA/ SM	84	Dumbarton Bridge Western Approach	Fremont/Newark <i>I-880 to Dumbarton Bridge</i>	3	●	○	○
ALA/ SM	92	San Mateo Bridge Westbound Approach	Hayward <i>I-880 to San Mateo Bridge</i>	3	●	○	○
CC	680	I-680 Contra Costa Northbound Express Lane Completion	Walnut Creek to Benicia <i>North Main St. to Marina Vista Blvd.</i>	9	○	○	○

### KEY




● Funded   ◐ Partially Funded   ○ Unfunded

ALA = Alameda,   CC = Contra Costa,   SM = San Mateo,   SOL = Solano




## III. CAPITAL DELIVERY

### A. Schedule

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

Project	Baseline Opening	Forecast Opening	Confidence Level	Detail Page
<b>I-880 Alameda (ALA-880)</b> San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	Spring 2019	Spring 2020		15
<b>I-680 Contra Costa Southern Segment (CC-680 South)</b> Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	Fall 2016	Fall 2017 Actual		A-5
<b>I-680 Contra Costa Northern Segment Southbound (CC-680 North SB)</b> Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear Rd.</i>	Fall 2018	Fall 2021		19

#### KEY

-  Within schedule shown.
-  Identified potential risks that may significantly impact schedule if not mitigated. See *Section III.D Risk Management Plan* for further discussion of schedule risk.
-  Known impact to schedule, changes forthcoming.

## B. Capital Costs

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 total 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 westbound approaches to the San Mateo and Dumbarton Bridges. The expended-as-of amounts shown represent the amount of BATA Express Lane funds expended through December 31, 2018. The confidence level assessment reflects potential risks to each project budget; for more information, see Section III.D Risk Management Plan.

Project <sup>(1)</sup>	Total Cost Estimate <sup>(2)</sup>	Cost Estimate, Funded Phases <sup>(3)</sup>	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BATA Express Lane Funds <sup>(4)</sup>			Percent Complete <sup>(5)</sup>	Confidence Level <sup>(6)</sup>
					July 2018 Amendment	Sept. 2018 Amendment	Expended as of 12/31/18		
NEAR-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS									
Costs shown in millions of escalated dollars									
I-880 Alameda	139.1	139.1			135.5	139.1	84.7	65%	<div></div>
I-680 Contra Costa Southern Segment	54.0	54.0			55.6	54.0	52.3	98%	<div></div>
I-680 Contra Costa Northern Segment Southbound <sup>(7)</sup>	127.4	127.4	19.4	54.3	51.3	53.6	6.1	25%	<div></div>
I-80 Solano	228.2	33.3	15.2		19.0	18.1	11.2	20%	<div></div>
Centralized Toll System	32.4	32.4			33.6	32.4	20.0	75%	<div></div>
Program Planning, Coordination & Management	28.4	28.4			28.4	28.4	19.4	80%	<div></div>
Program Contingency	6.1	6.1			5.1	2.9			<div></div>
Capitalized Start-up O&M	16.0	16.0			16.0	16.0	4.8		<div></div>
MID-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS									
I-80 Alameda/Contra Costa and Westbound approaches to the Bay Bridge (I-80, I-580, I-880, West Grand)	193.0	5.0	5.0						
Dumbarton Bridge Westbound Approach (SR-84)	9.0	0.3			0.3	0.3	0.3	5%	
San Mateo Bridge Westbound Approach (SR-92)	10.0	0.4			0.4	0.4	0.4	5%	
I-680 Contra Costa Northbound Express Lane Completion <sup>(8)</sup>	390.0	21.5	1.5	20.0				5%	
Centralized & Program Costs & Start-Up O&M - Gap Closures & Future Conversions	TBD								
TOTALS	1,233.6	463.9	41.1	74.3	345.2	345.2	199.0	60%	

<sup>(1)</sup> 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 from Benicia to Cordelia

<sup>(2)</sup> Total Cost Estimate represents current estimated cost to complete each project.

<sup>(3)</sup> Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

<sup>(5)</sup> 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 Southbound and I-80 Solano.

<sup>(6)</sup> ● = Within budget, ● = identified potential risks that may significantly exceed budget if not mitigated, ● = Known impacts to budget - changes forthcoming.

<sup>(7)</sup> Cost represents the total for HOV Completion and Conversion to Express Lanes. Other funds committed to the HOV Completion portion include Measure J (\$38.7M) and STIP (\$15.6M).

<sup>(8)</sup> Represents completion of HOV lane through Walnut Creek to SR-242 and conversion of existing HOV lane north of SR-242, which were previously listed separately.



## C. Change Management

The change management process captures the changes in the program that have an impact on the approved scope, schedule and budget baselines. There were no changes to the MTC Express Lanes Program budget in the fourth quarter.

## D. 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 manage each risk. Risks managed at the contract level are associated with contingency funding authorized by BAIFA for specific contracts. Risks managed at the program level would draw upon the program contingency line item in the Express Lanes Expenditure Plan. Staff regularly review the risk exposure and mitigation plans at both the contract and program level.

Chart #1 shows the median risk exposure for the program-level risks using Monte Carlo analysis. As of December 31, 2018, the risk exposure stands at \$5.9 million, which is higher than the \$5.6 million reported last quarter. This increase is due to new risk related to Caltrans-driven changes to toll system work as well as the potential for BAIFA to request installation of Vehicle Occupancy Detection (VOD) cameras on the I-880 corridor.

Chart #2 tracks the program's cost forecast and risk exposure as compared to the authorized program budget. Consistent with the amendment to the Expenditure Plan that was adopted on September 26, 2018, the amount of BATA Express Lane Funds allocated to specific express lanes projects is \$342.3 million, plus program contingency, for a total authorized budget of \$345.2 million.

The current program contingency of \$2.9 million would fall short if the risk exposure of \$5.9 million were to be realized. While there are few individual risks with major cost impacts, there

are many risks with minor cost impacts, resulting in an overall significant risk exposure. Staff remains diligent in managing cost and risk while seeking new funding opportunities.

The top contributors to the program-level risk exposure and the associated mitigation strategies are as follows:

### I-880 Alameda

- The most significant risk that could affect cost relates to the location of a pricing sign on I-880 southbound in a restricted access portion of the express lane. The team is evaluating the need to relocate signage and the cost associated with design change and construction. More broadly, the project team is evaluating toll system integrator design changes for their impact on sign, reader and equipment placement, and to ensure any changes are sequenced with civil work now, avoiding the need to re-mobilize the civil contractor later.
- Another risk to cost relates to Caltrans requiring BAIFA and other express lanes operators to change the agreed-upon approach to segment pricing, affecting the toll system, pricing signs and public information. MTC staff is coordinating with express lanes operators to educate Caltrans staff about its position and set the expectation that I-880 proceeds based on its approved plans and permits.
- The most significant risk that could affect schedule relates to a Caltrans-managed repaving project in the corridor.

Chart #1: Median Risk Exposure (\$M)

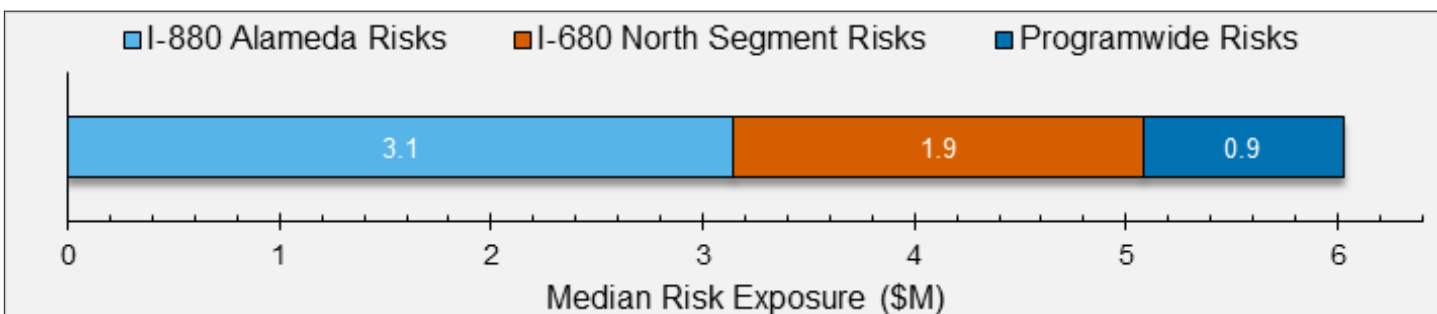


Chart #1 shows the contribution of each project's risks toward the total program risk exposure. Risk exposure is calculated using Monte Carlo simulation.

Coordination issues with the project may delay completion of express lanes and impact the open-to-traffic date. Now that the repaving work is underway, MTC staff continues to work with Caltrans to coordinate construction activities and minimize lane closures. MTC staff may ask Caltrans for permission to stripe the express lanes in late summer 2019 including changes in access configuration even though they would operate as HOV lanes until tolling starts. Additional schedule risks could result from delays in hook-ups to the AT&T communication network for the Backhaul, delays in installation of power drops by PG&E and delays in handoff of backhaul infrastructure affecting completion of backhaul network integration. Staff is actively monitoring these risks.

### I-680 Contra Costa Northern Segment Southbound

- The most significant risk that could affect schedule relates to a Caltrans-managed safety project in the corridor. Coordination with the project may delay completion of express lanes work and impact the open-to-traffic date. MTC and Caltrans staff continue to look for ways to coordinate the construction sequence that would reduce the overall schedule. Additional schedule risks are being actively monitored, including potential delay to civil

contract delivery caused by unanticipated field conditions, contract specifications, weather and PG&E utility connections.

- The most significant risks that could affect cost relate to the increased cost of review and oversight by Caltrans and unforeseen difficulties in relocating a fiber backhaul in Walnut Creek. The project team is actively tracking oversight costs and adjusting construction plans as required.

### 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 2019. This requires tuning toll tag readers for the I-680 Contra Costa Southern Segment and making sure that the toll system and FasTrak<sup>®</sup> back office communicate and process 6C transactions correctly, and thus may have cost impacts for MTC's Express Lanes. This risk is being managed by participating in the development plan of the transition from Title 21 compliant toll technology to 6C compliant toll technology.

Chart #2: Program Cost Forecast and Risk Exposure vs. Authorized Budget (\$M)

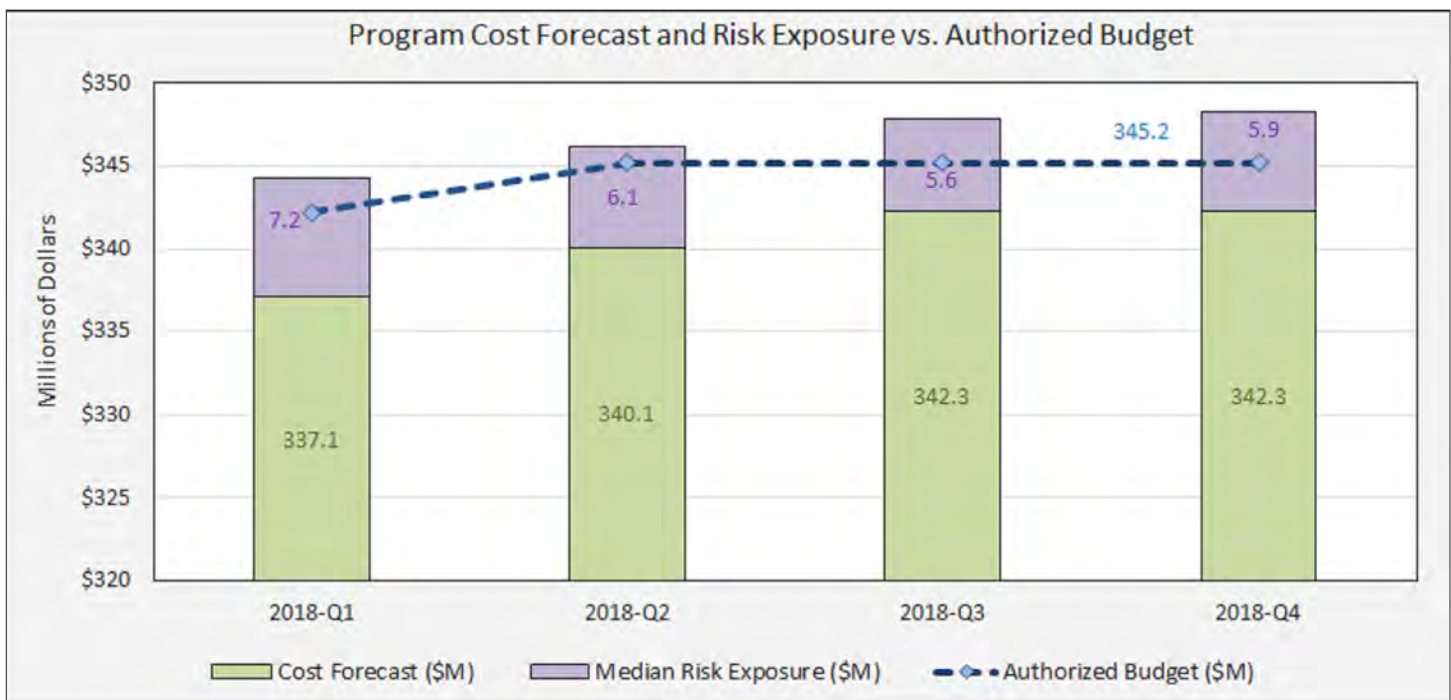


Chart #2 shows the program cost forecast and risk exposure as compared to the authorized program budget.

## E. Active Capital Project Summaries

### Centralized Functions

#### Toll System and Program Management, Planning and Regional Coordination

##### Total Estimated Cost

\$32.4 million for the Centralized Toll System  
\$28.4 for Program Planning, Coordination and Management

##### Schedule

Centralized Toll System was ready for the opening of the I-680 Contra Costa Southern Segment on October 9, 2017.

Program Planning, Coordination and 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 express lanes, as well as the backhaul communications network components, such as fiber optic cable and leased line services, that transport toll data from MTC lanes to host and toll operations data centers. Centralized toll system work includes designing and implementing the hardware and software for dynamic tollsetting and trip building, integration with the FasTrak® 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 Regional Operations Center and developing operating procedures; planning for future express lanes; and coordinating with partner agencies to offer a seamless experience for drivers.

##### Program Management Highlights and Progress

- Staff continued to coordinate with other public agency staff on the possibility of the future US-101 express lanes in San Mateo County being owned and operated by BAIFA.
- Staff completed a pilot of camera-based vehicle occupancy detection systems to learn about the strengths and weaknesses of the technology.

##### Current Program Management Activities

- Staff is planning a 'proof of concept' to show how camera-based vehicle occupancy detection systems can be used to identify violators in a tolling environment and charge them the toll they should have paid.
- Staff released a Request For Information (RFI) in January 2019 to learn about smartphone app-based systems for vehicle occupancy declaration and verification. Staff will share RFI findings with MTC's Operations Committee prior to making a decision to procure and pilot the technology.
- Staff continues to coordinate with other public agency staff on the possibility of the future US-101 express lanes in San Mateo County being operated by BAIFA.
- Staff is beginning to draft proposed changes to the Toll Ordinance in anticipation of I-880 opening, with an HOV-3 occupancy requirement, and clean air vehicle tolling.

## Toll System Highlights and Progress

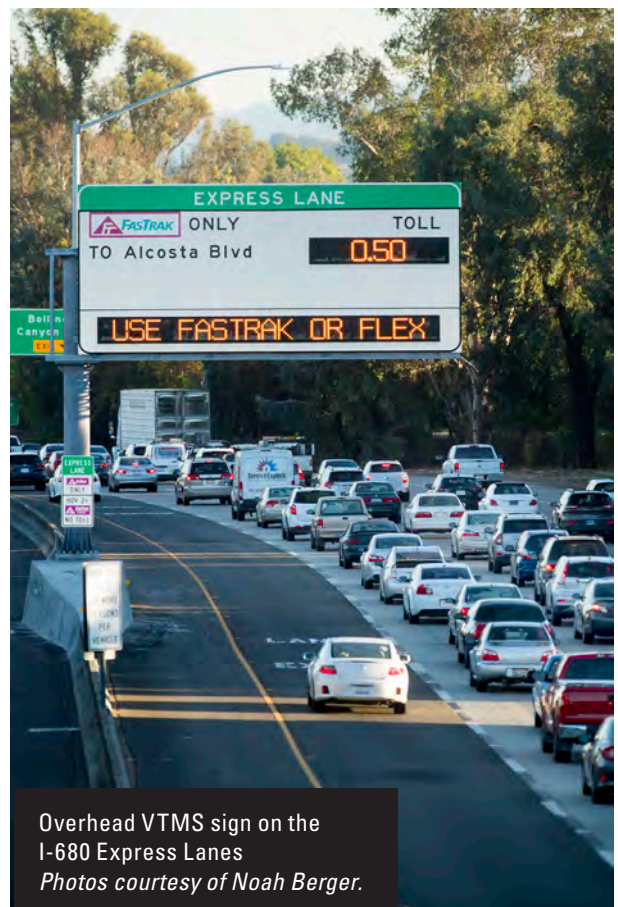
- The construction contract for the backhaul communications network for the host data centers and I-680 Contra Costa Southern Segment was awarded in December 2015.
- The toll operations staffing contract was awarded in March 2016.
- Final toll system host and software design was approved in March 2016, and Factory Acceptance Testing of hardware and software was held in June 2016.
- Primary toll system host hardware was installed at the Benicia-Martinez Bridge toll plaza in November 2016 and communications were established with the field equipment. Back-up operations hardware was also installed at the Traveler Information Center (TIC) located at Caltrans District 4 in Oakland.
- Buildout of the Regional Operations Center was finished in March 2017.
- The integrator completed the formal First Zone Test, which was the first field test to compile live lane transactions into a single trip, in May 2017 and the Communications End-to-End Testing for the toll systems communications network in June 2017.
- The toll system began using the full backhaul network as of June 2017.
- The integrator completed Corridor Testing, which fully tested the entire toll and communications system, in August 2017 and finished installing and commissioned all field equipment in September 2017.
- The integrator and the FasTrak® Customer Service Center completed Production Readiness Testing of the data exchange in September 2017.
- The toll system went live to the public on October 9, 2017.
- In May 2018, the integrator completed the Disaster Recovery Test to demonstrate the failover process to a redundant toll system is functional.
- In October 2018, CHP began using the web-based toll tag look-up tool to enforce HOV occupancy in the express lane.
- In December 2018, the toll system integrator contract was extended to June 2023 to include the I-680 Northern Segment. The change removed the I-80 Solano express lanes from the contract. It will be added back when construction funding is secured.

## Current Toll System Activities

- The toll system integrator and the FasTrak® back office are testing an updated regional interface control document to enable the two systems to communicate and share 6C compliant data. The goals are for the toll system to read 6C toll tags, create trips and send them to the back office for processing by spring 2019 and to allow for discount tolling of clean air vehicles by the launch of I-880.
- Staff continues to work with the toll system integrator to address system bugs and to prepare for I-680 Southern Segment Operations Testing in February 2019.



Closed-circuit television (CCTV) camera.  
*Photos courtesy of Noah Berger.*



Overhead VTMS sign on the I-680 Express Lanes  
*Photos courtesy of Noah Berger.*



# I-880 Alameda (ALA-880)

## Oakland to Milpitas

### Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

#### Total Cost Estimate

\$139.1 million

#### Scheduled Open Date

Spring 2020

#### 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 express lanes.

The conversion involves lane striping and installing sign structures, signs, FasTrak® toll tag readers, traffic monitoring video cameras, lighting, a data communications network and California Highway Patrol observation areas. The highway is also being widened in three locations to accommodate merge lanes into and out of the express lanes. 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 pavement resurfacing project, both led by Caltrans. The median barrier reconstruction project installed foundations and other infrastructure required for the express lanes for a large portion of the corridor.

#### Project Highlights and Progress

- Public open house was held in March 2015.
- Preliminary engineering report and environmental document were completed in October 2016.
- Caltrans approved the mid-day hours of operation assessment in December 2016.
- Caltrans issued the encroachment permit for the civil construction contract in June 2017.
- The express lanes civil contractor began construction in September 2017.
- Caltrans approved the toll system design and issued the encroachment permit for the toll system integrator in March 2018.
- Civil infrastructure installation and PG&E service connections from Dixon Landing Rd. to SR-92 were completed as of October 2018.
- MTC's express lanes scope of work to be delivered through Caltrans' median barrier contract was completed in the second quarter of 2018, including barrier demolition, express lane sign structure foundations and light foundations.
- Caltrans finalized the design of fiber laterals to connect its freeway management equipment to the communications backhaul in December 2018. Installation will be added to the express lane civil construction contract as a change order.
- The toll system integrator continued installation of toll system roadside cabinets and electrical in the southern portion of I-880 in the fourth quarter of 2018 and prepared equipment for median barrier installation.



- The contractor completed installation of Backhaul fiber for the entire express lane corridor and network hubs connecting field equipment to data centers in San Francisco, Martinez and Oakland in December 2018.
- Staff kept residents and stakeholders in the I-880 corridor informed about express lane construction.

## Current Project Activities

- The express lane civil contractor will continue work on civil infrastructure installation and PG&E service connections from SR-92 to Hegenberger Rd., which is 80% complete.
- The express lanes civil contractor will continue to install a retaining wall in the freeway shoulder near Hacienda Ave. in Hayward and perform lane widening work to add access lanes into restricted sections of the express lanes.
- The express lanes civil contractor will remove two existing overhead sign bridge structures at the SR-92 interchange and install two new ones in the second quarter of 2019. The work requires full closure of I-880 southbound. Closure will occur over several nights. Detour plans have been approved by Caltrans and the City of Hayward. Advanced notification will be provided to the public.
- The toll system integrator will continue equipment installation from Dixon Landing Rd. to SR-92, which is 25% complete, and will start equipment installation from SR-92 to Hegenberger Rd. in February 2019. Toll system equipment installation is expected to be complete in fall 2019.
- The toll system integrator will install new, numeric HOV occupancy beacons on I-880 to support CHP enforcement of occupancy violations.
- Monthly construction notices and ramp closure/detour notices continue to be sent. Staff is also preparing customer education materials and outreach strategies in advance of lane opening.

## Project Schedule by Phase



\*Includes I-880 median barrier improvements.

## Project Cost

Total Cost Estimate <sup>(1)</sup>	Cost Estimate, Funded Phases <sup>(2)</sup>	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BATA Express Lane Funds <sup>(3)</sup>			Percent Complete <sup>(4)</sup>
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 12/31/18	
139.1	139.1			135.5	139.1	84.7	65%

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

Costs shown in millions of escalated dollars.

<sup>(1)</sup> Total Cost Estimate represents current estimated cost to complete each project.

<sup>(2)</sup> Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

<sup>(4)</sup> Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

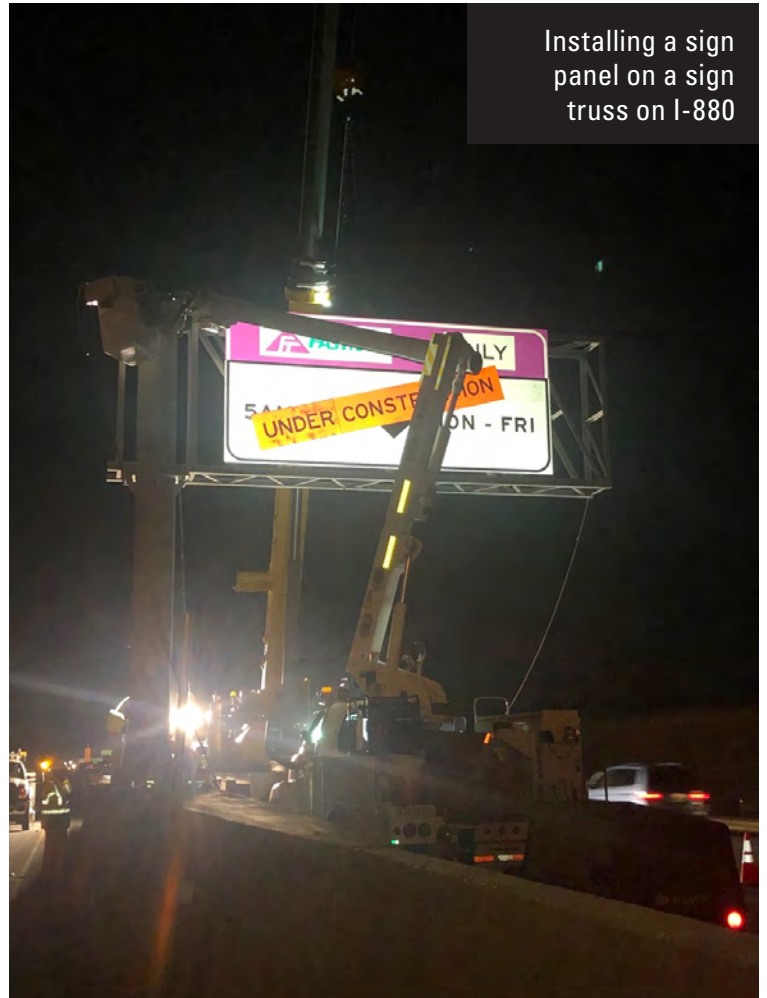
Setting an overhead signpost on I-880



Setting a sign truss on a sign post on I-880



Installing a sign panel on a sign truss on I-880



## I-680 Northern Segment Southbound (CC-680 North SB)

### Martinez to Walnut Creek

#### Benicia Bridge to Rudgear Road

#### Total Cost Estimate

\$127.4 million (\$53.6 million to be funded by BAIFA)

#### Scheduled Open Date

Fall 2021

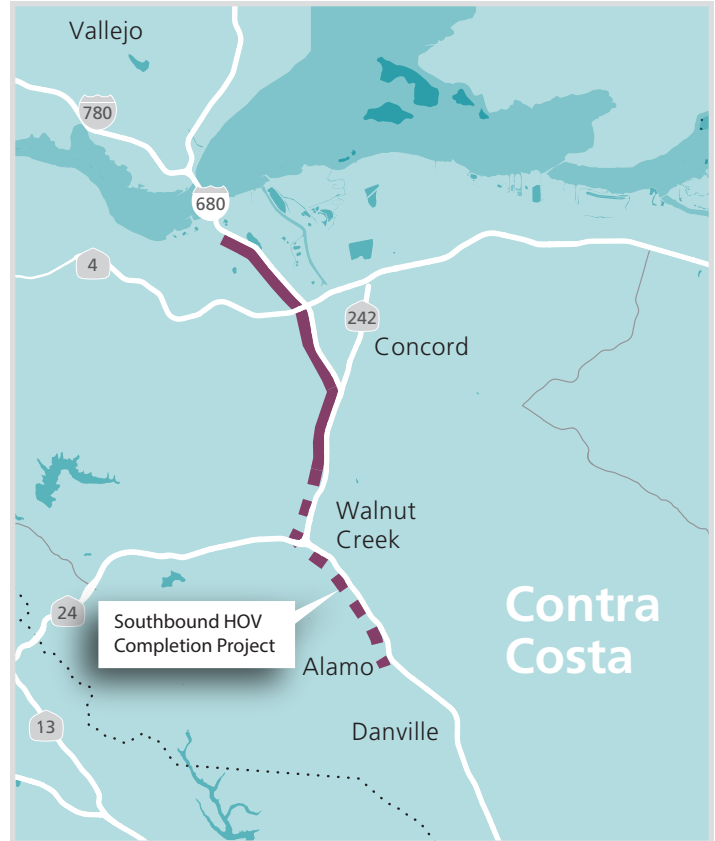
#### Project Description

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, and agreed with the mid-day hours of operation analysis in early 2017.
- Caltrans signed the environmental document in December 2016 and approved the Project Report in August 2017.
- Project staff met with the Walnut Creek Mayor and city staff in May 2017 to review the construction plan and impacts.
- Environmental revalidation was completed in September 2017. The Office of U.S. Fish and Wildlife Service provided concurrence that the project is not likely to adversely affect any known federally listed species.
- A contract to remove trees along southbound I-680 in Walnut Creek between South Main Street and Livorna Road was awarded in October 2017, and work was completed in December 2017.
- All utility relocations were completed as of August 2018.
- Construction started October 1, 2018, and a ground-breaking event was held October 3, 2018.
- The civil contractor completed demolition of the median



barrier between the Benicia-Martinez Bridge and SR-242 in December 2018.

- In December 2018, the toll system integrator contract was extended to June 2023 to include the I-680 Northern Segment.

#### Current Project Activities

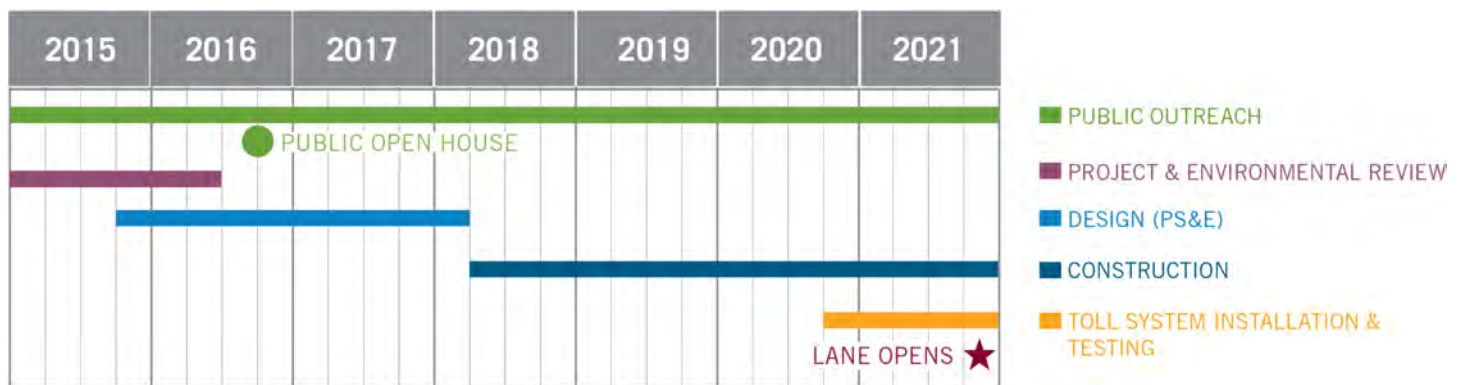
- The civil contractor is set to begin foundation work for overhead sign structures and new median barrier between the Benicia-Martinez Bridge and SR-242. The civil contractor continues demolition of the median barrier between SR-24 and Rudgear Rd., and will start construction of its replacement. The civil contractor continues electrical services work at various corridor locations.
- The replacement planting design continues to be updated to incorporate public feedback.



## Current Project Activities (continued)

- Staff continues to negotiate a contract change order for the backhaul contractor to reroute in-use backhaul fiber in Walnut Creek prior to lane widening. Reroute of fiber will be completed near the start of construction in early 2019.
- The toll system integrator will coordinate with the civil and backhaul contractors during the re-routing of the backhaul fiber. The integrator will disconnect and reconnect live I-680 Southern Segment toll equipment from the old to the new fiber with no planned disruption to toll operations.
- The toll system integrator is preparing to submit for encroachment permits from Caltrans. Concurrently, Caltrans is preparing the construction Cooperative Agreement with BAIFA for Caltrans' oversight services of the toll system integrator contract.

## Project Schedule by Phase



## Project Cost

Total Cost Estimate <sup>(1)</sup>	Cost Estimate, Funded Phases <sup>(2)</sup>	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BATA Express Lane Funds <sup>(3)</sup>			Percent Complete <sup>(4)</sup>
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 12/31/18	
127.4	127.4	19.4	54.3	51.3	53.6	6.1	25%

Costs shown in millions of escalated dollars.

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

<sup>(1)</sup> Total Cost Estimate represents current estimated cost to complete each project.

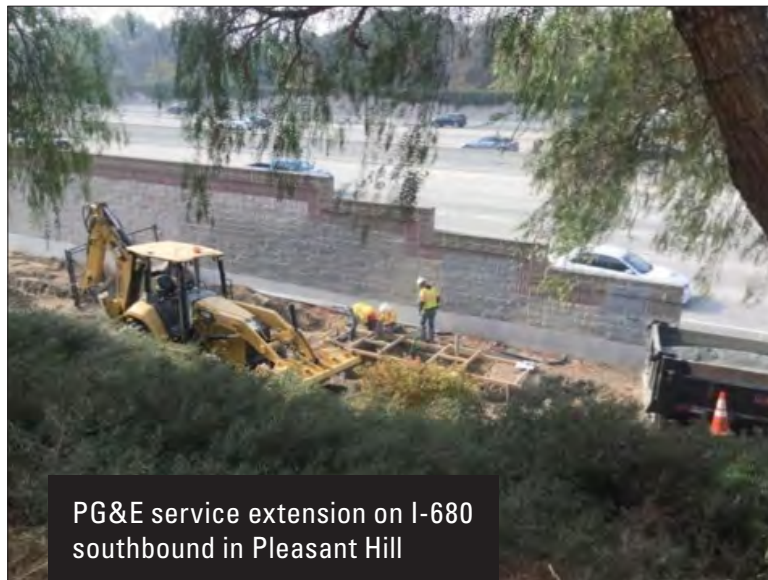
<sup>(2)</sup> Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

<sup>(4)</sup> Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.



Concrete barrier demolition on I-680 in Walnut Creek



PG&E service extension on I-680 southbound in Pleasant Hill



PG&E service extension on I-680 southbound in Concord

## I-80 Solano (SOL-80)

### Fairfield to Vacaville

#### Red Top Road to I-505

#### Total Cost Estimate

\$228.2 million

#### Scheduled Open Date

End of 2021, subject to funding

#### 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.

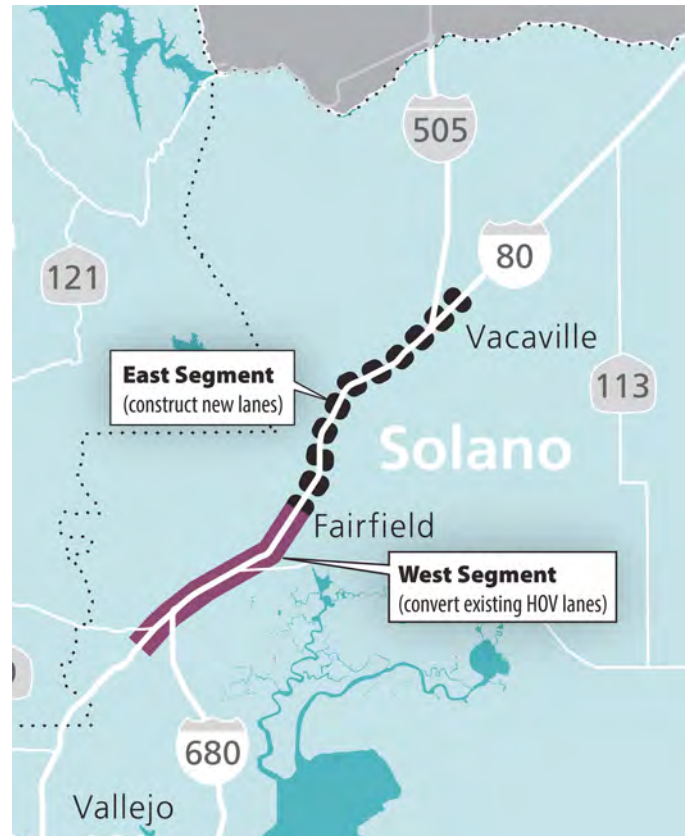
The project will also construct new eastbound and westbound lanes between Air Base Parkway and I-505 in Vacaville. In this section, the highway will be widened along with the installation of express lane striping, signage and equipment. The project will result in 36 miles of express lanes on I-80 in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

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

Caltrans will advertise and award the construction contract, and a blended Caltrans/STA team will administer construction. MTC will install toll and communications equipment and will operate the express lanes.

#### Project Highlights and Progress

- A public open house was held in August 2015.
- The preliminary engineering report and environmental document were completed in December 2015.
- The final design document was approved by Caltrans in March 2018.
- The project reached the Ready-to-List milestone in April 2018.



#### Current Project Activities

- The project is shelf-ready should construction funds become available.
- Caltrans will submit this project for a Federal INFRA grant due in March 2019.
- MTC and STA staff continue to explore other potential funding sources.

## Project Schedule by Phase



\* Funding for these activities is not yet secured.

## Project Cost

Total Cost Estimate <sup>(1)</sup>	Cost Estimate, Funded Phases <sup>(2)</sup>	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BATA Express Lane Funds <sup>(3)</sup>			Percent Complete <sup>(4)</sup>
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 12/31/18	
228.2	33.3	15.2		19.0	18.1	11.2	20%

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

Costs shown in millions of escalated dollars.

<sup>(1)</sup> Total Cost Estimate represents current estimated cost to complete each project.

<sup>(2)</sup> Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

<sup>(4)</sup> Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.



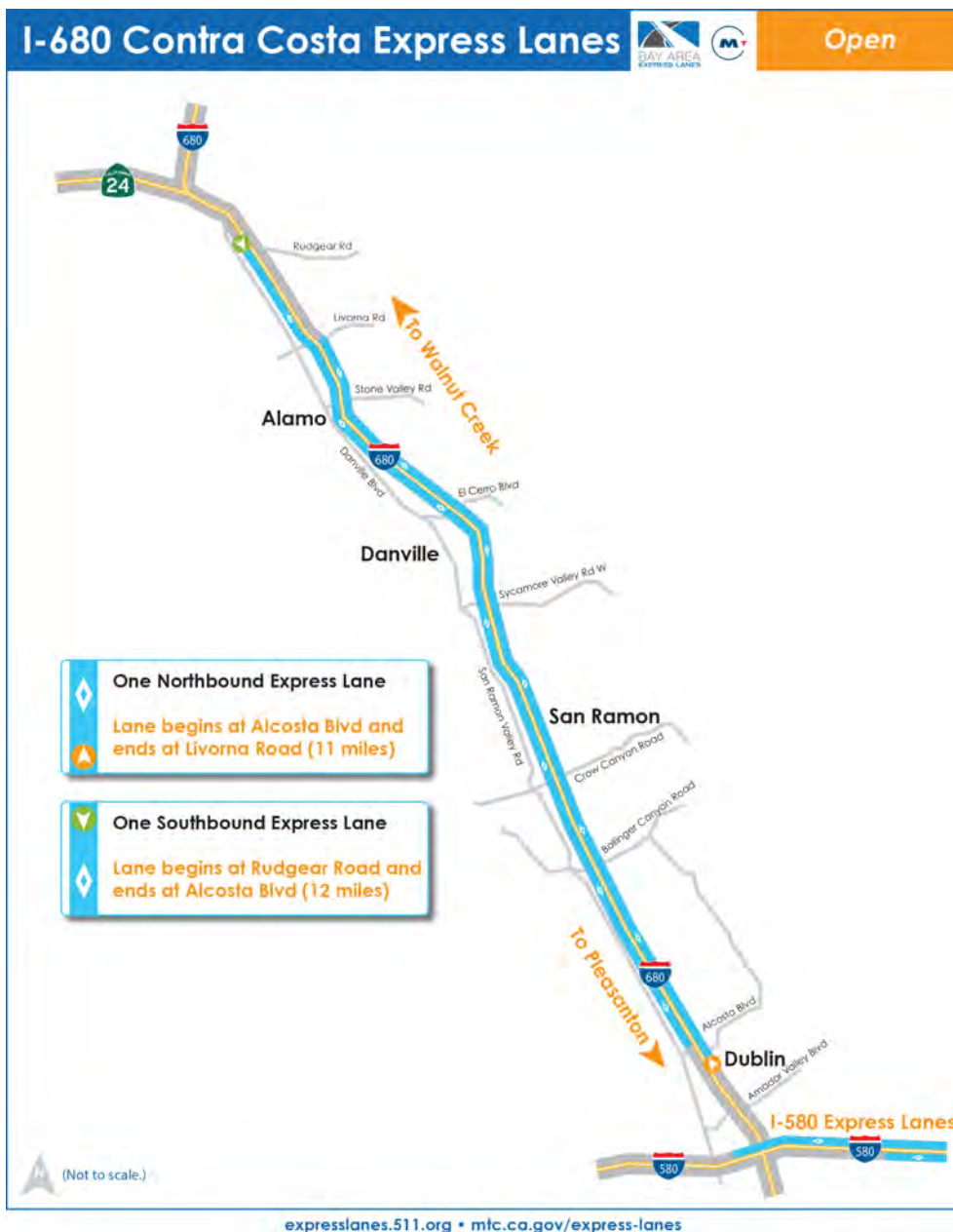
## IV. OPERATIONS

### I-680 Contra Costa Express Lanes

The I-680 Contra Costa Express Lanes opened October 9, 2017. The lanes run 11 miles northbound from Alcosta Boulevard to Livorna Road and 12 miles southbound from Rudgear Road to Alcosta Boulevard. Regional Operations Center staff monitor equipment and lane performance, make toll rate adjustments, and coordinate with the California Highway Patrol (CHP) and Caltrans on incident management. The FasTrak® Customer Service Center issues toll tags, handles toll invoicing and collections, and provides customer service. Toll tag and vehicle occupancy requirements are enforced automatically by the

toll system and manually by the CHP under contract to BAIFA. A 'backhaul' fiber network and supplemental leased-line services offer fast and secure transfer of tolling data. Roadway maintenance is also funded by the express lanes. Program and contractor staff perform public outreach and education, track and report on program performance and analyze traffic, and support operations in other ways as needed. Operating revenue and expenses are reported quarterly to BAIFA.

See **Appendix C** for a summary of this quarter's express lanes performance.



### Rules of the Road

- Hours are Monday through Friday, 5 a.m. – 8 p.m.
- Tolls change based on traffic congestion; there is no maximum toll
- All vehicles in the express lane must use a FasTrak® or FasTrak Flex® toll tag
- Carpools of 2 or more people, eligible clean air vehicles, motorcycles and transit buses travel toll-free with a properly set FasTrak Flex® toll tag
- Learn more at [expresslanes.511.org](http://expresslanes.511.org)

# APPENDICES

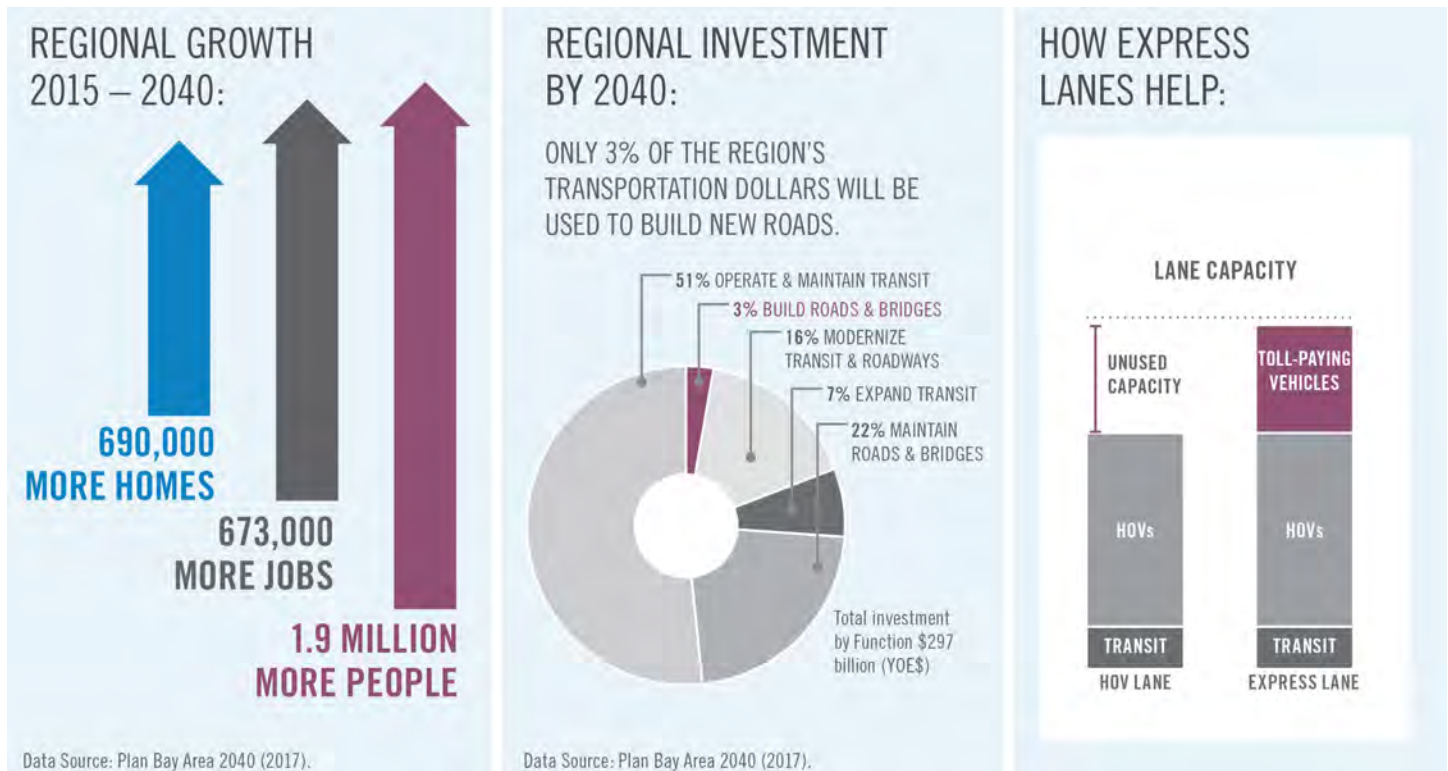
# APPENDIX A

## Express Lanes Overview

### 1. Why Express Lanes?

The Bay Area lacks the necessary transportation funding and land to build enough transportation capacity to keep up with regional growth. Bay Area Express Lanes maximize use of our highways by A) filling any empty space in existing HOV lanes,

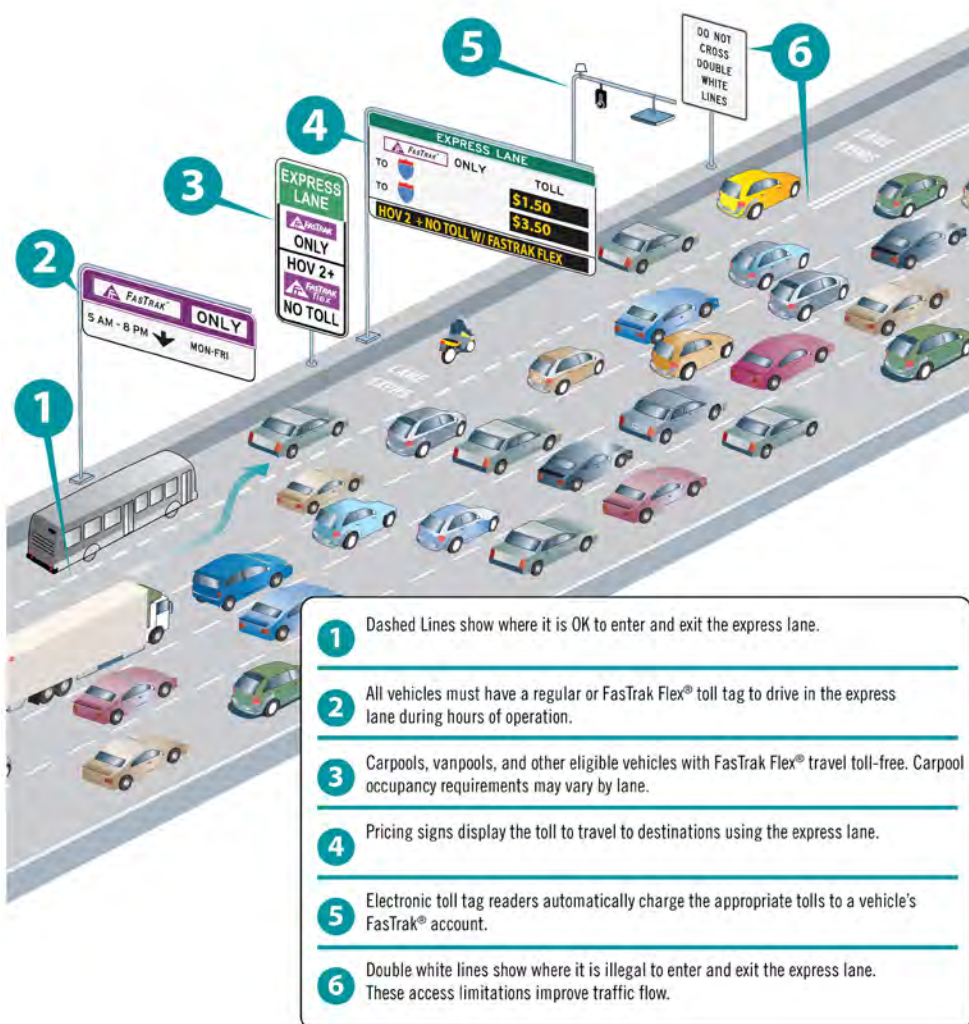
B) improving operations in existing HOV lanes through better carpool enforcement and strategies to prevent lane slowdowns, and C) filling gaps in the HOV lane system to encourage more carpooling.



## 2. How Express Lanes Work

MTC Express Lanes are 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.

On MTC Express Lanes, carpools, qualifying clean-air vehicles and other toll-exempt vehicles must use a FasTrak Flex® toll tag set to “2” or “3+” to travel toll-free. Solo drivers pay to use the lanes with either a standard FasTrak® toll tag or a FasTrak Flex® toll tag set to “1.” Drivers should move the switch before driving.



The figure to the left explains how to use Bay Area Express Lanes. MTC Express Lanes will be mostly “open” access, meaning drivers will enter and exit the express lanes similar to how they enter and exit HOV lanes today. Areas in locations prone to excessive weaving or with safety issues will have limited access to restrict entry and exit at these locations. Signage and lane striping will identify the limited entry and exit locations. Limited access is a way to improve travel speeds in express lanes.



### 3. 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

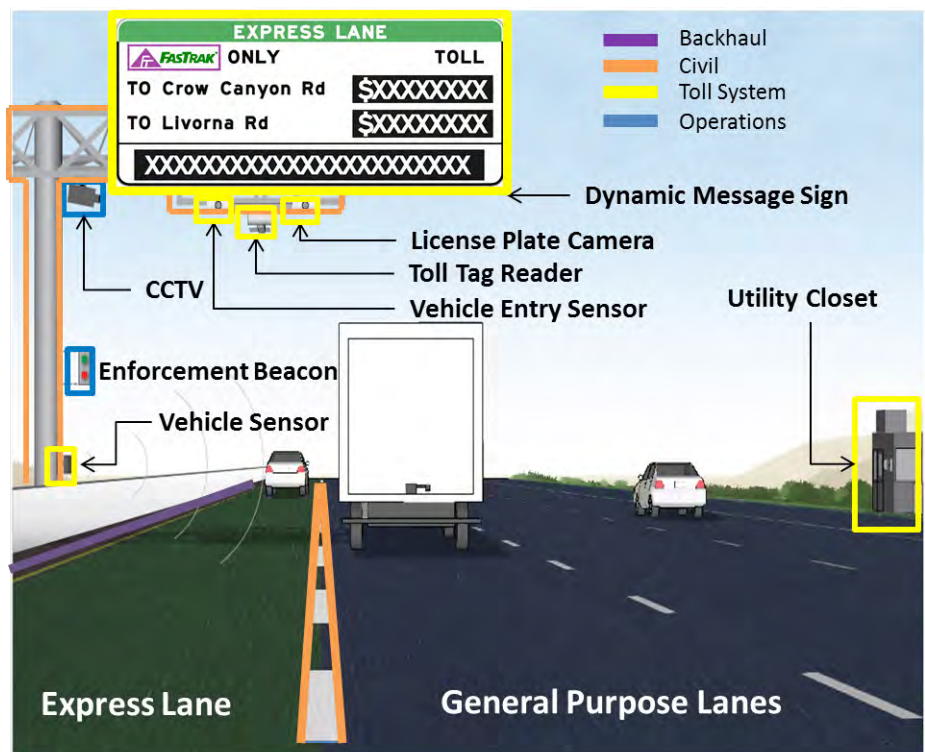
The toll system consists of two components, the in-lane system and the back-end “host” system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, 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 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 ongoing maintenance. An express lanes Regional Operations Center will be established in the Bay Area Metrocenter 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

## APPENDIX B

### Completed Capital Project Summaries

#### I-680 Contra Costa Southern Segment (CC-680 South)

##### Walnut Creek to San Ramon

##### Livorna Road/Rudgear Road to Alcosta Boulevard

##### Total Program Estimate

\$55.6 million

##### Open Date

Fall 2017

##### 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<sup>®</sup> 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 for both the backhaul communication network and the toll system were completed in December 2015.
- Final roadway design was completed in April 2015. Civil construction was completed in May 2017.
- Backhaul contractor completed installation of 26 miles of fiber optic cable in June 2017.
- Corridor Testing was completed in August 2017.
- Toll system equipment and software was finalized and tested in September 2017.
- Backhaul operations and maintenance started in October 2017.
- The toll system went live to the public on October 9, 2017.

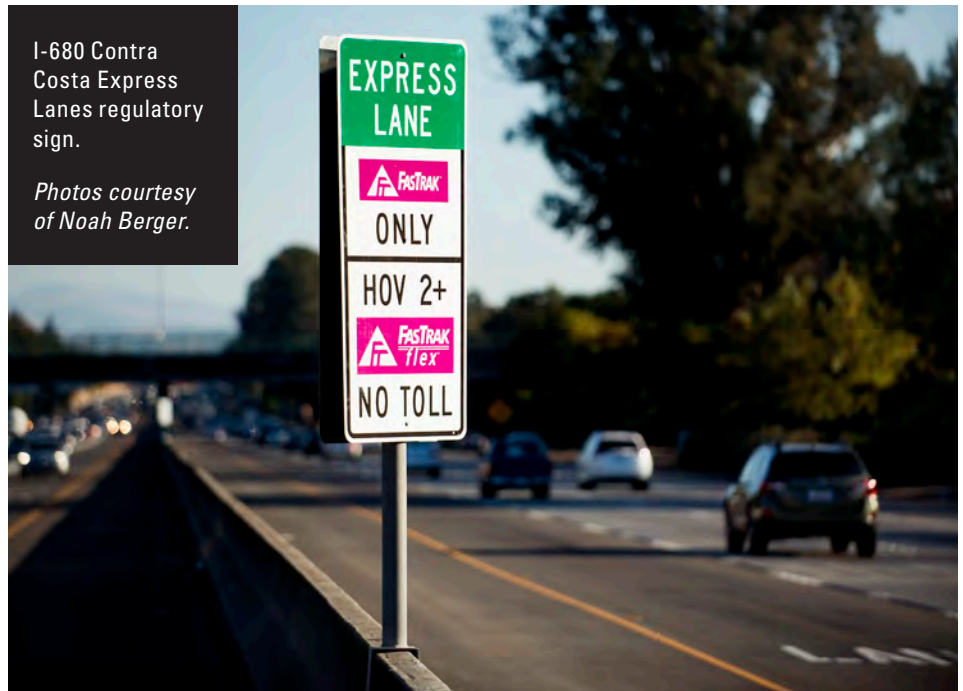


## Current Project Activities

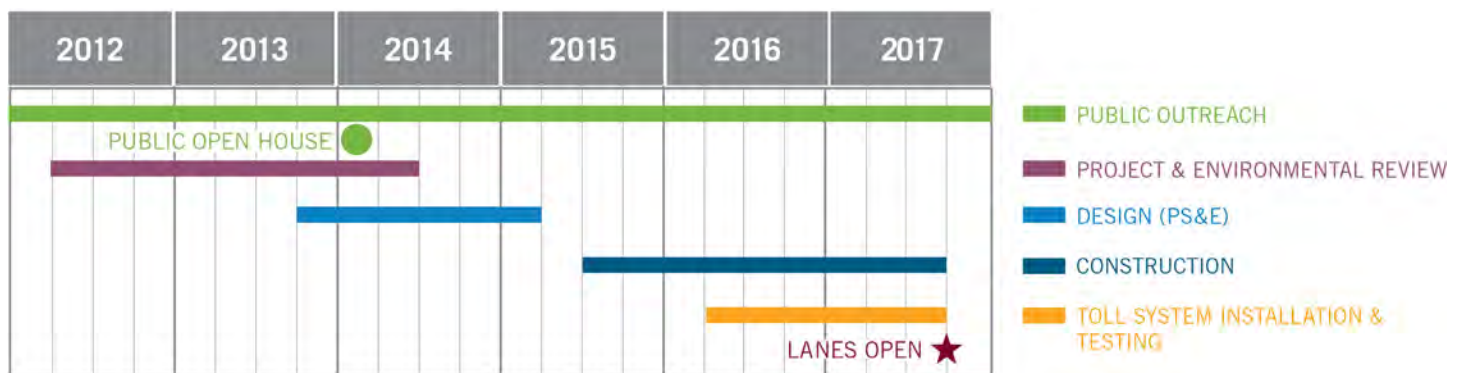
- The integrator is fine tuning field equipment and addressing punch list items in preparation for Operations Testing in summer of 2018. This test verifies the toll system meets all specifications and leads to the maintenance phase of operations.
- The Backhaul contractor completed project 'as-built' documentation and is performing ongoing operations of the communications network.
- Beginning in this Quarterly Report, since civil construction is complete and the express lanes are open, this capital project will be archived in Appendix B and no further updates will be made to the project summary.

I-680 Contra Costa Express Lanes regulatory sign.

*Photos courtesy of Noah Berger.*



## Project Schedule by Phase



## Project Cost

Program Estimate <sup>(1)</sup>	Cost Forecast <sup>(2)</sup>	Regional Measure 2 Funds (allocated)	BATA Express Lane Funds <sup>(3)</sup>			Physical % Complete <sup>(4)</sup>
			Dec. 2015 Amendment	June 2017 Amendment	Expended through 3/31/18	
55.6	55.6		55.6	55.6	49.7	98%

Costs shown in millions of escalated dollars.

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

<sup>(1)</sup> Program estimate represents current estimated cost to complete each project.

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

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

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

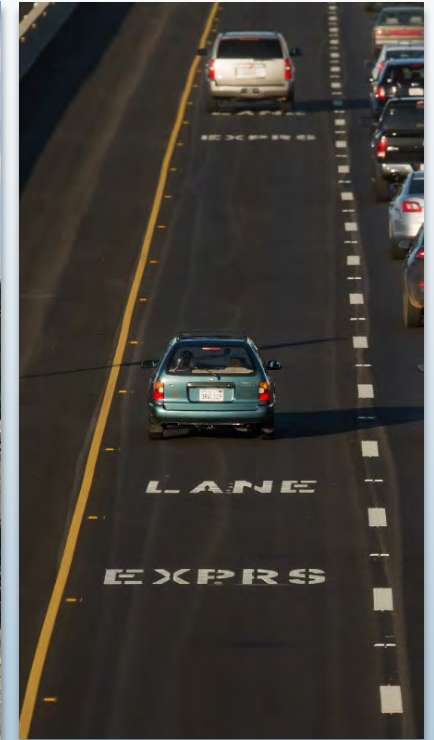
## APPENDIX C

### I-680 Contra Costa Express Lanes Operations Report



# I-680 Contra Costa Express Lanes Performance

## 4<sup>th</sup> Quarter, October – December 2018



Bay Area Infrastructure Financing Authority

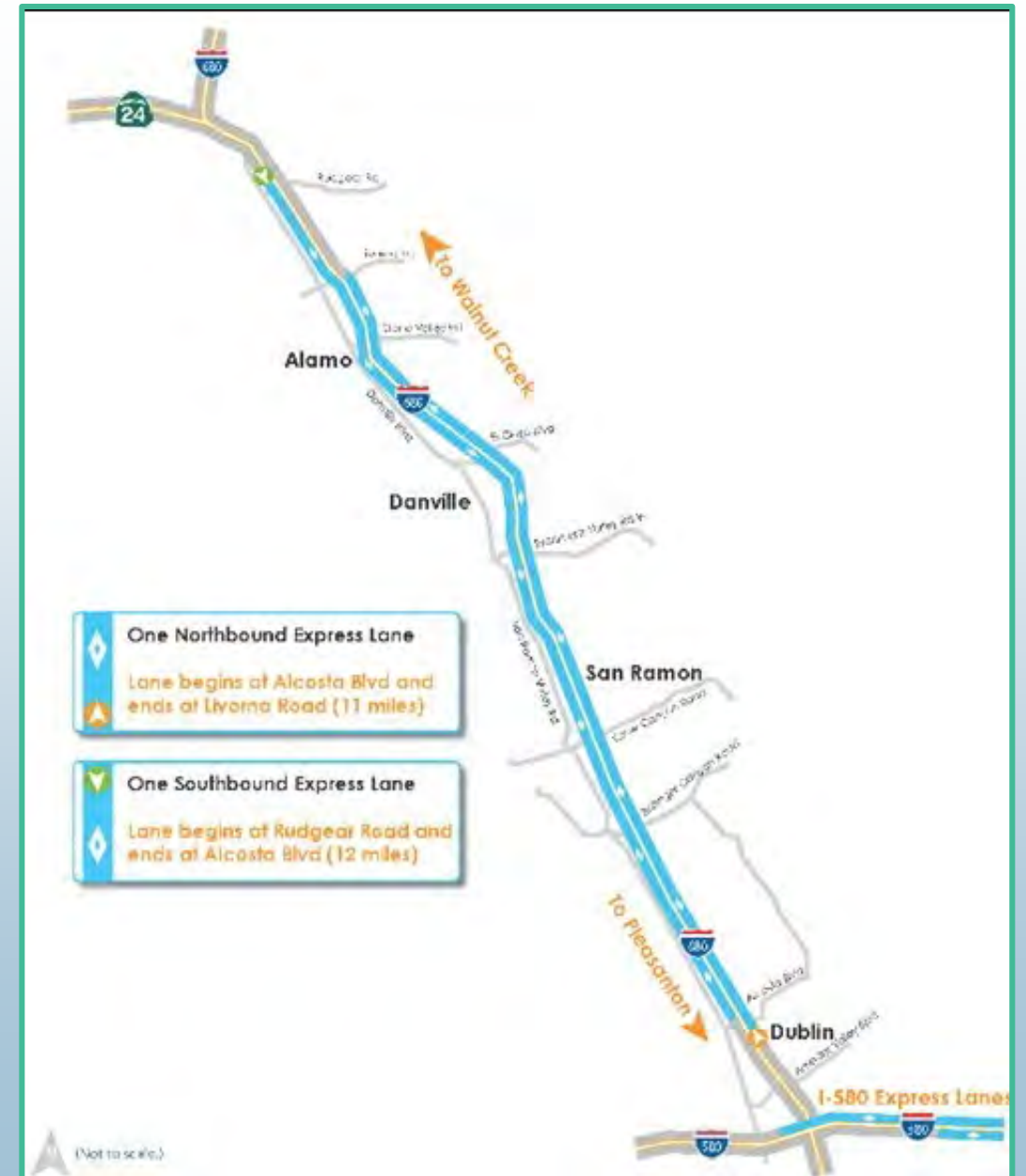
Submitted: February 2019



METROPOLITAN TRANSPORTATION COMMISSION

# Rules of the Road

- Hours: 5 a.m. to 8 p.m. Monday-Friday
- FasTrak<sup>®</sup> required
- Carpools (2+), clean-air vehicles & motorcycles toll-free with FasTrak Flex<sup>®</sup>





# Summary of Performance Highlights



- There were over 2 million trips in the express lanes from October through December 2018, with an average of 30,000 trips per day in December. Trips were lighter in November and December due to the holidays.
- In December, 43% of trips were by vehicles declared as carpools. Vehicles without FasTrak<sup>®</sup> accounts represented 4% of all trips.
- In the peak periods, express lane users were able to travel at speeds that were 8 to 9 miles per hour faster than the general purpose lanes in December, on average.
- Peak period tolls paid remained almost the same over the quarter. In December, the average toll paid in the northbound p.m. peak period was \$6.50. In the southbound a.m. peak period it was \$5.80. In the middle of the day, it was less than \$1.00. The toll amounts paid in this quarter decreased compared to last quarter due to lighter holiday traffic.
- The highest posted toll to travel the entire corridor during the quarter was \$8.50, which was reached in the a.m. and p.m. peak periods in both directions.

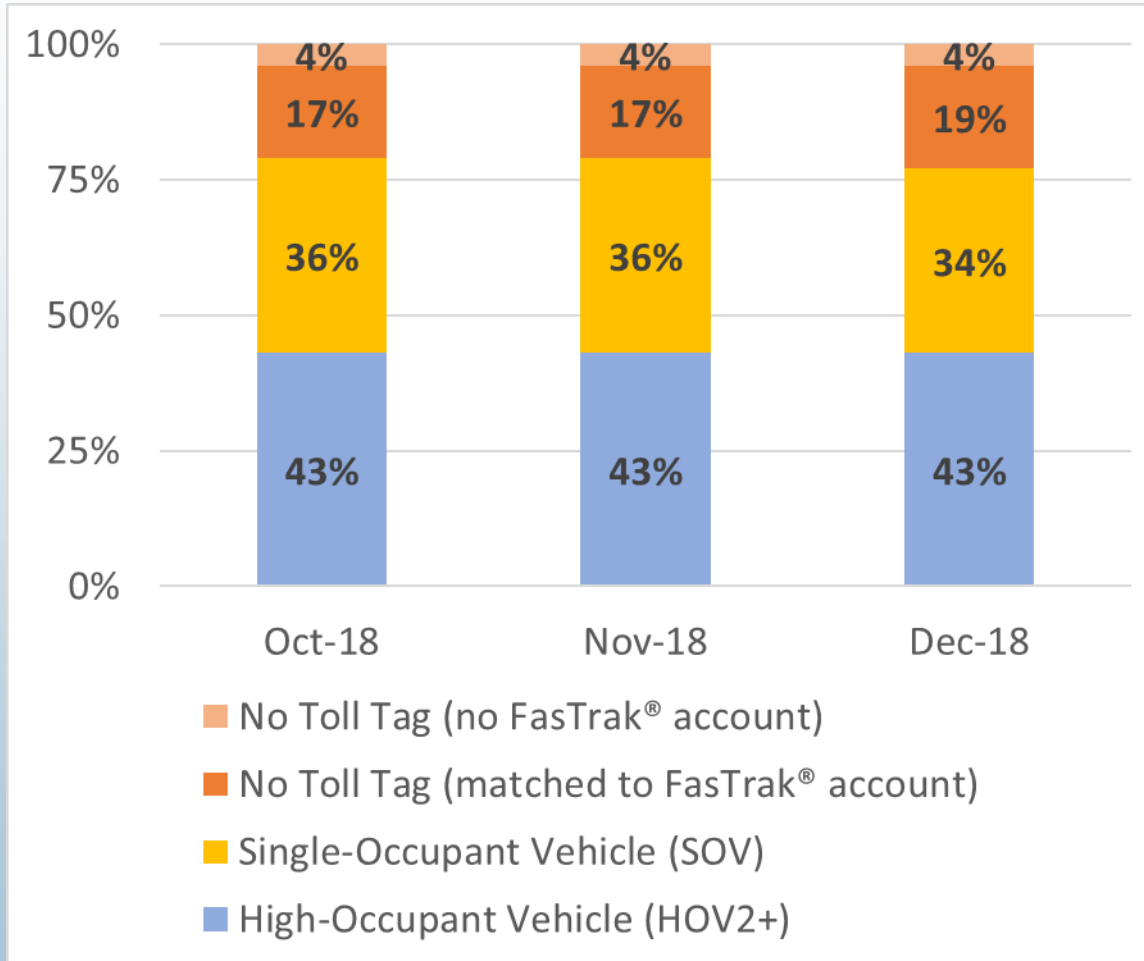
# Express Lane Trips

In total, there were over 2 million trips taken in the express lanes between October and December 2018. Average daily trips varied from 33,000 in October to 30,000 in December.



*Includes toll-free trips, tolled trips and violation trips taken during express lane hours.*

# Express Lane Trip Types



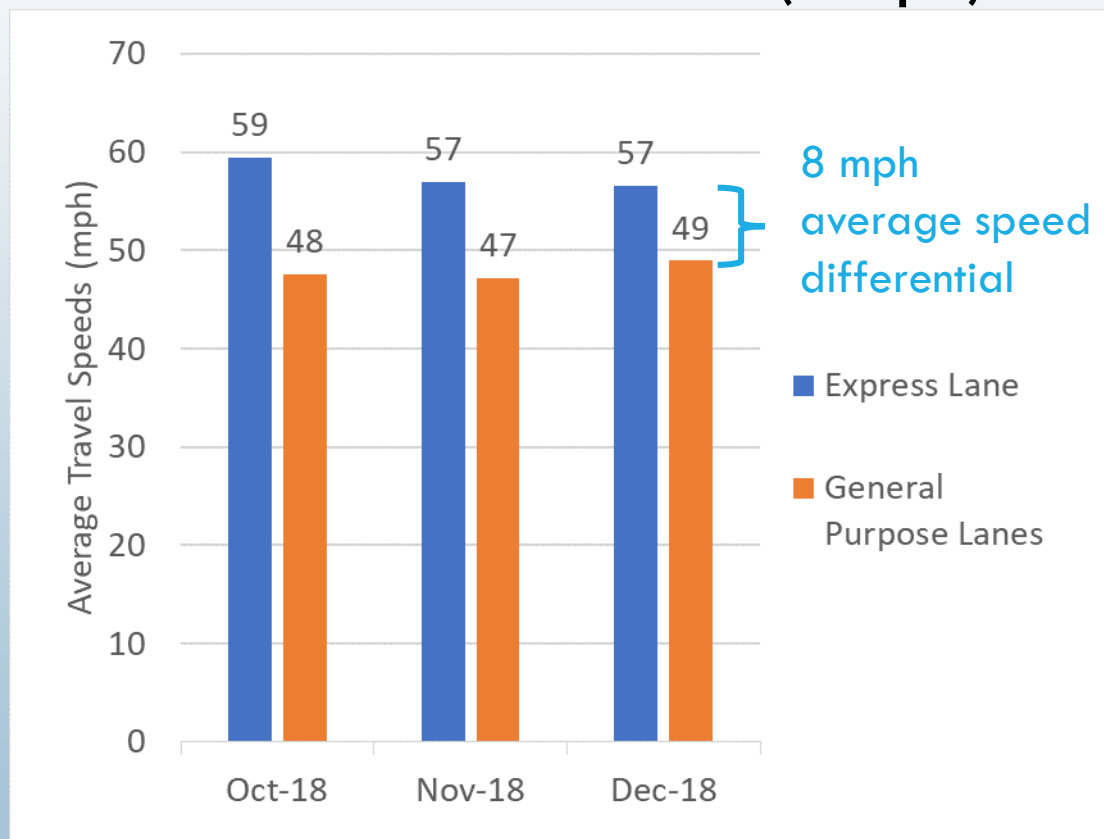
- The share of vehicles declared as carpools, including clean air vehicles eligible to use the lanes toll-free, held steady at 43%.
- Paying customers represented 53% of all users. This includes single occupant vehicles and users with no toll tag that were matched to a FasTrak® account.
- This quarter, 4% of trips were by users without a FasTrak® account (violators).

*Percentages of SOVs and HOVs are based on toll tag settings detected by the toll system.*

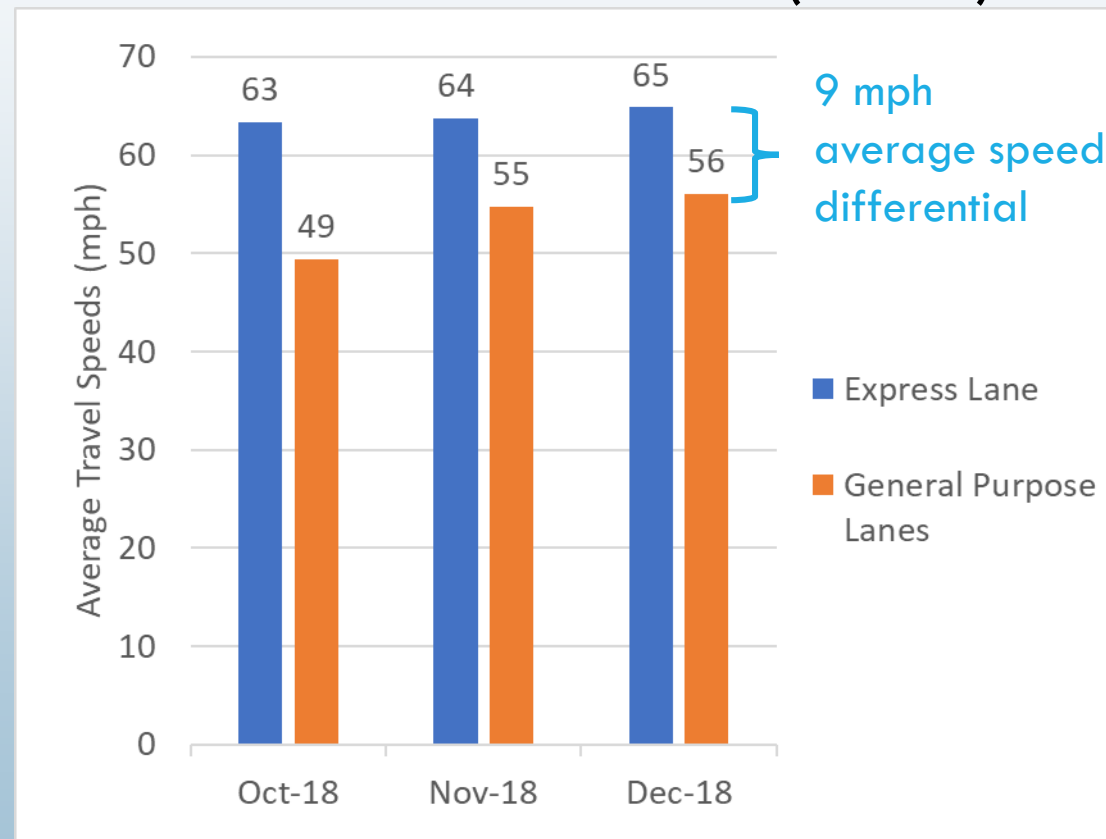
# Traffic Speeds

Speeds in the express lanes were an average of 8 to 14 miles faster than those in the general purpose lanes.

**Northbound P.M. Peak Hour (5 - 6pm)**



**Southbound A.M. Peak Hour (8 - 9am)**

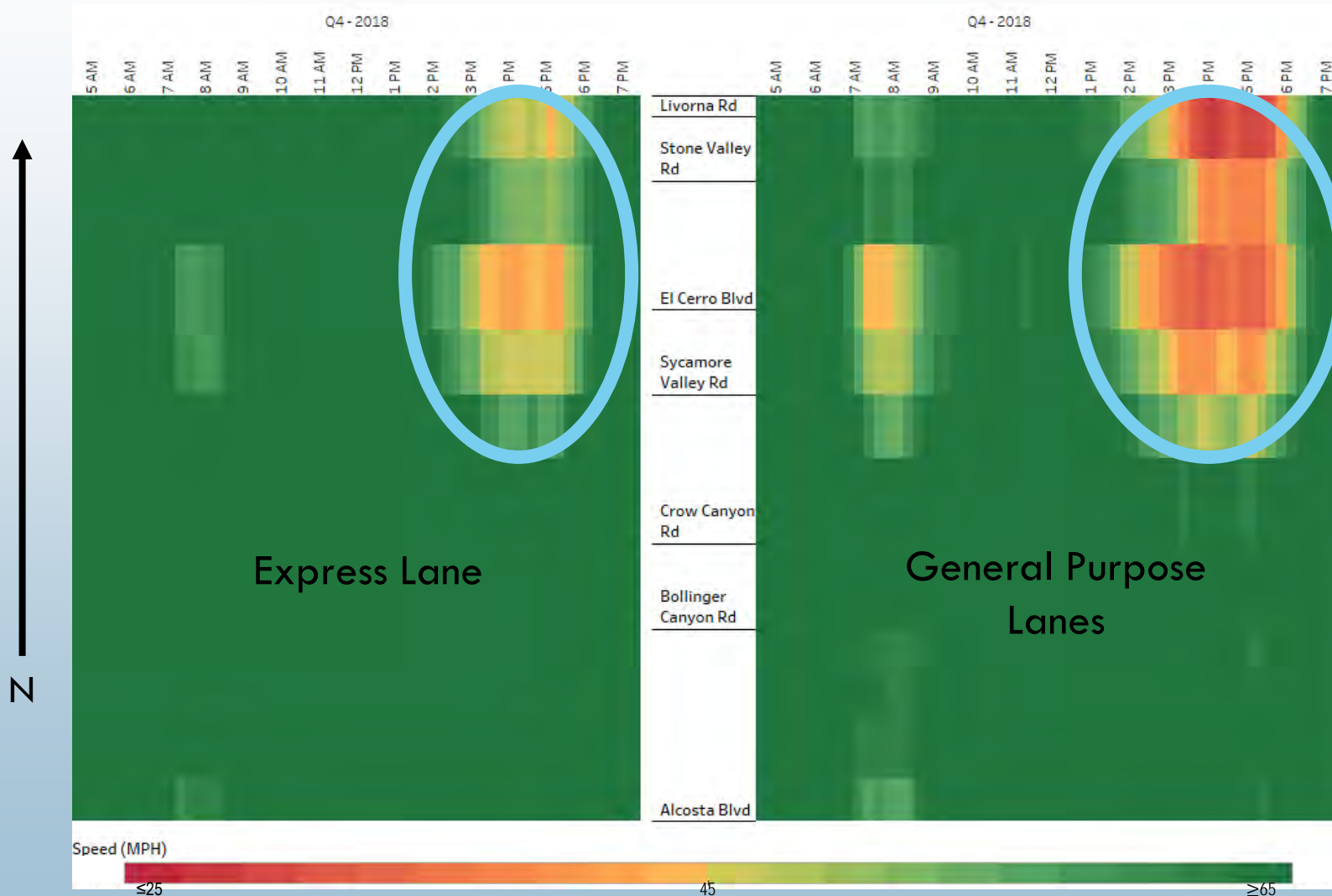


*Speeds are averaged over the distance of the express lane. Peak hours are defined as the hours with lowest average corridor speeds across all lanes.*



# Northbound Corridor Speeds

(October 1 – December 31)



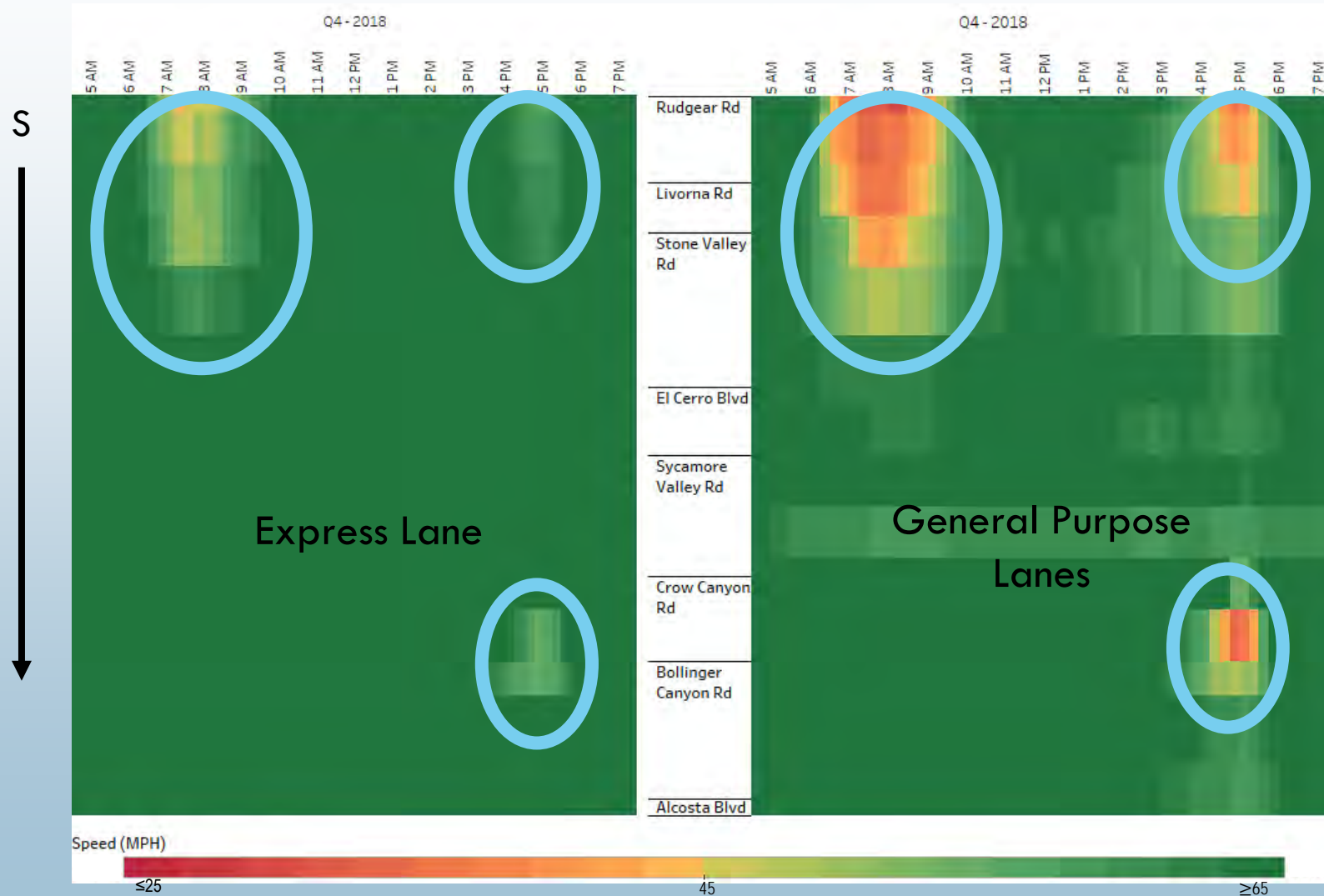
Congestion originating north of the express lane regularly caused the slowdowns shown in the general purpose lanes in the p.m. peak period.

In the congested areas circled at left, express lane users were able to travel faster than vehicles in the general purpose lanes during the peak hour by an average of 11 mph in October, 10 mph in November, and 8 mph in December.

Traffic flowed well in all lanes during the middle of the day, 10 a.m. to 1 p.m.

# Southbound Corridor Speeds

(October 1 – December 31)



As shown in the congested areas circled on the right, slowdowns regularly occurred in the general purpose lanes between Rudgear Rd. and El Cerro Blvd. in both the a.m. and p.m. peak periods, and between Crow Canyon Rd. and Bollinger Canyon Rd. in the p.m. peak.

As shown on the left, express lane users were able to travel faster than vehicles in the general purpose lanes during the peak hour by an average of 14 mph in October, 9 mph in November, and 9 mph in December.



# Northbound Tolls

(October 1 – December 31)

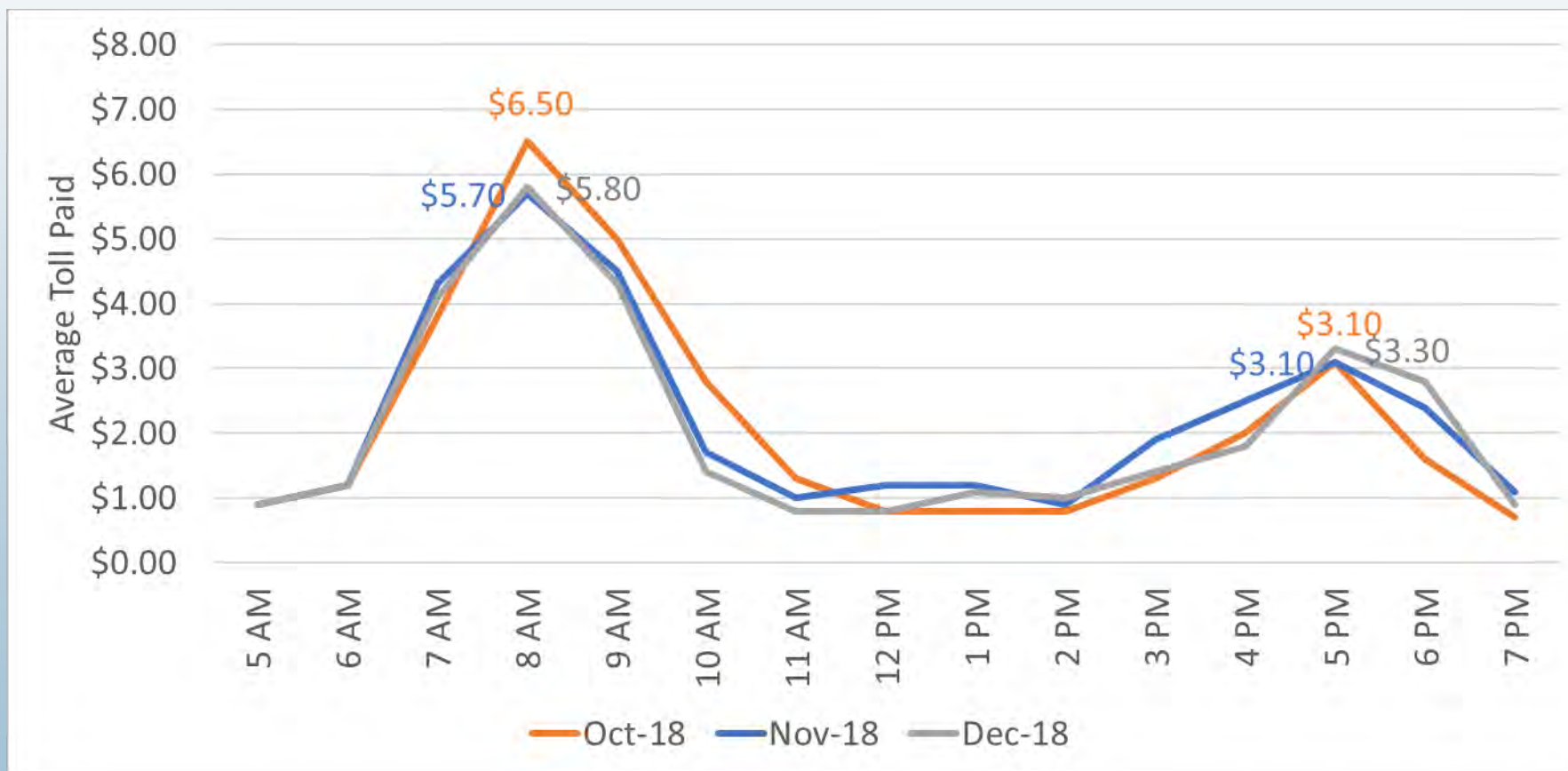
The graph below shows the average toll paid by time of day for the northbound direction. The highest toll posted to travel the entire corridor was \$8.50.



# Southbound Tolls

(October 1 – December 31)

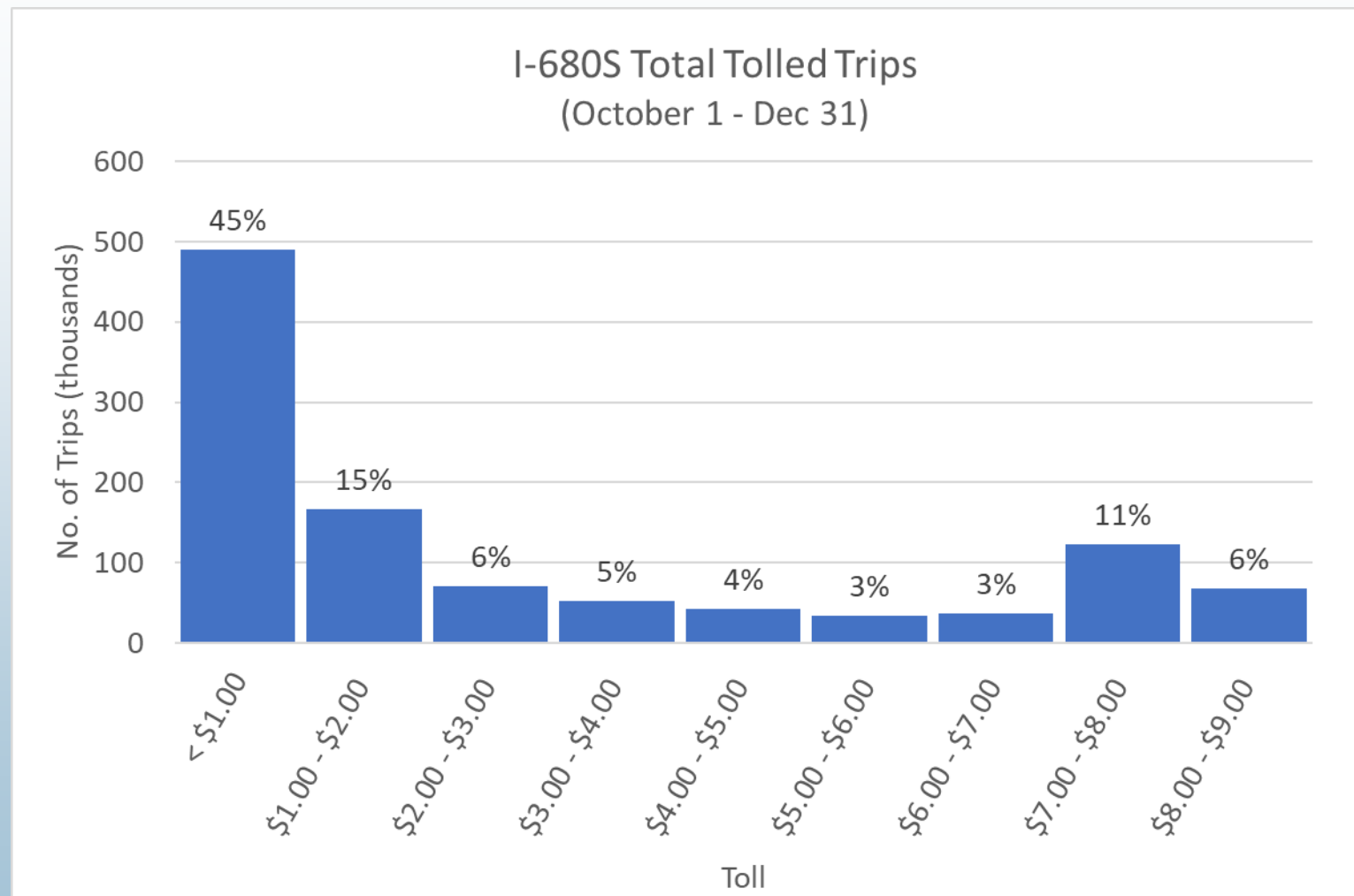
The graph below shows the average toll paid by time of day for the southbound direction. The highest toll posted to travel the entire corridor was \$8.50.



# Trip Length & Toll Distribution

(October 1 – December 31)

- 60% of users paid \$2 or less.
- Only 6% of users paid the highest posted toll.
- Average trip length for all trip types:  
 daily: 5.6 mi  
 a.m. peak, southbound: 6.6 mi  
 p.m. peak, northbound: 6.3 mi



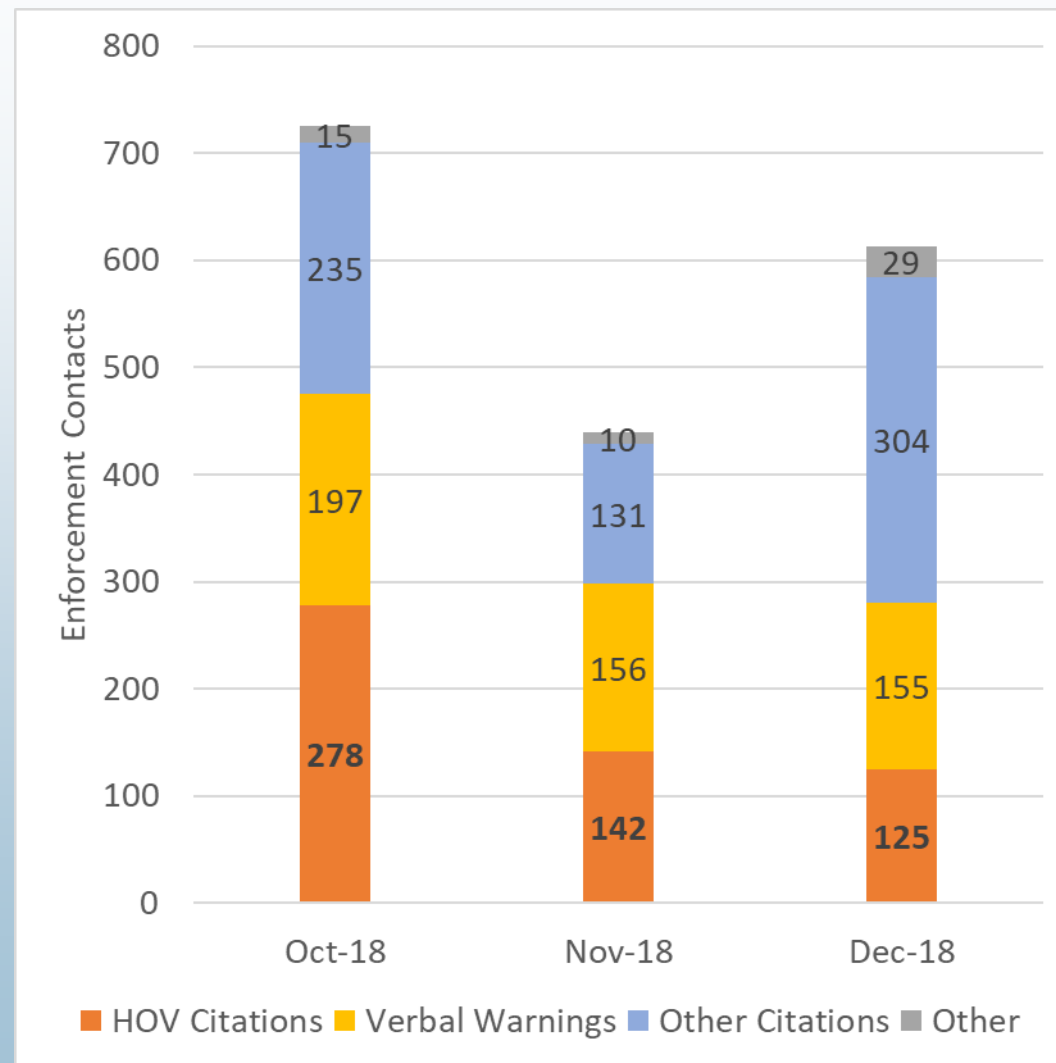
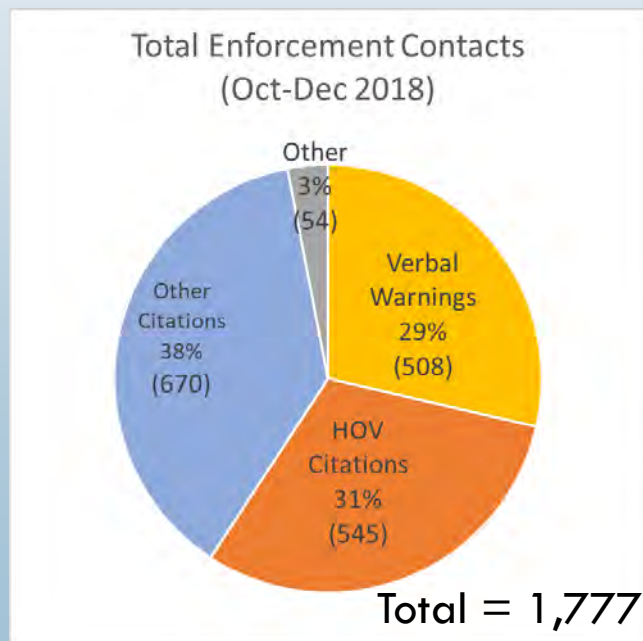
N = 1,083,056 tolled trips



# CHP Enforcement

(October 1 – December 31)

- CHP made 1,777 enforcement contacts, 31% of which resulted in citations for HOV occupancy violations.
- CHP filled 91% of 1,280 requested hours of enforcement.



For more information, go to: [mtc.ca.gov/express-lanes](https://mtc.ca.gov/express-lanes)





## Legislation Details (With Text)

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<b>File #:</b>	19-0064	<b>Version:</b>	1	<b>Name:</b>	
<b>Type:</b>	Report	<b>Status:</b>		Authority Approval	
<b>File created:</b>	1/15/2019	<b>In control:</b>		Bay Area Infrastructure Financing Authority	
<b>On agenda:</b>	2/23/2019	<b>Final action:</b>			
<b>Title:</b>	BAIFA Role in San Mateo 101 Express Lanes				

A recommendation to approve an approach in which BAIFA would provide the toll system and day-to-day operations for the San Mateo 101 Express Lanes, under contract to San Mateo agencies.

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [3a\\_San Mateo 101.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

BAIFA Role in San Mateo 101 Express Lanes

*A recommendation to approve an approach in which BAIFA would provide the toll system and day-to-day operations for the San Mateo 101 Express Lanes, under contract to San Mateo agencies.*

**Presenter:**

Andrew Fremier

**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](http://www.mtc.ca.gov)

## *Memorandum*

TO: Bay Area Infrastructure Financing Authority

DATE: February 15, 2019

FR: Executive Director

W.I.: 6840

RE: BAIFA Role in San Mateo 101 Express Lanes

In early February, San Mateo City/County Council of Governments (C/CAG) and San Mateo County Transportation Authority (SMCTA) voted to pursue an arrangement whereby the San Mateo agencies would own the San Mateo 101 Express Lanes and contract with BAIFA for the operation of the lanes. Staff recommends the Authority formally approve this arrangement and direct staff to work with C/CAG and SMCTA to take steps necessary to put this arrangement in place.

### **Background**

The San Mateo 101 Express Lanes, shown in Attachment 1, will run between I-380 and the Santa Clara County line. MTC was a partner in early studies that demonstrated the benefits of an express lane over an HOV lane. The project partners, state, regional and local agencies, and private businesses, have secured \$500 million in funding, including \$200 million from the Senate Bill 1 Solutions for Congested Corridors Program and \$95 million in Bay Area Toll Authority Bridge Toll revenue.

In January, staff provided an overview of the deliberations within San Mateo County about governance of the San Mateo 101 Express Lanes and potential roles for BAIFA. The focus of the deliberations was on ownership of the tolling equipment, signage and operations; Caltrans is the owner of the state highway on which express lanes operate. (More detail on the options may be found in the January Staff report attached to this memorandum – Attachment 2.) Authority members supported the proposed arrangement, in which BAIFA would operate the express lanes under contract with the two San Mateo agencies, and said they would like to see commitments by the agencies to: (1) work with other express lane owners toward consistent toll policy and (2) evaluate joining BAIFA at a later date so all parties would be at the same table for setting policy, thus facilitating a single set of rules for travelers. On January 25, 2019 the Ad Hoc Committee composed of SMCTA and C/CAG representatives endorsed the proposed approach, which provides San Mateo authority over policy and revenue decisions while establishing a partnership with BAIFA to operate the express lanes. As such, it bridges the divergent December actions in which SMCTA voted to retain ownership of the lanes and C/CAG voted to join BAIFA. The Ad Hoc Committee members recommended this approach to the full C/CAG and SMCTA boards.

Based on these discussions, staffs of the various agencies have summarized roles, responsibilities and terms associated with the proposed arrangement.

### **C/CAG and SMCTA will**

- Set toll policy, enforce toll violations and work with other Bay Area toll operators toward regionally consistent policies that allow seamless travel.
- Develop and implement a plan for the expenditure of toll revenue.
- Assume liability for the express lanes, and provide funding for the routine maintenance, operation, rehabilitation and replacement of express lanes infrastructure.

- Be responsible for securing funding, loans or financing for any future improvements or extensions of the express lanes.

#### BAIFA will

- Contract for the design, installation and testing of the toll system.
- Manage, through staff and contracts, all aspects of the day-to-day operation of the facility including real-time monitoring of the lanes, CHP enforcement and routine maintenance.
- Provide regular reports to C/CAG and SMCTA on express lane performance.

#### Terms

- The contract for operations would be for a set term, likely six years, with a requirement that no later than a year prior to the end of the term, the parties will evaluate whether San Mateo should join BAIFA or whether to extend or terminate the contract.
- Consistent with the SB1 application, MTC's financial contribution to construction of the project is \$95 million. Cost overruns will be covered by SMCTA and C/CAG in partnership with MTC.
- C/CAG and SMCTA will cover the costs of application to the California Transportation Commission to secure express lane authority.
- C/CAG and SMCTA will compensate BAIFA for the work described above, including BAIFA's staff time.

The proposed approach is consistent with BAIFA's main objectives: improving mobility in the corridor, and achieving consistency of express lanes operations for the region's drivers. At the same time, this approach limits BAIFA's risk since C/CAG and SMCTA would retain risks associated with ownership (e.g., cost overruns, revenue risk and liability).

#### Next Steps

SMCTA and C/CAG voted on the approach on February 7 and February 14, respectively. Staff recommends BAIFA approve the approach and direct staff to work with C/CAG and SMCTA to take steps necessary to put this arrangement in place. These steps include:

- 1) C/CAG, SMCTA and BAIFA staff will partner to secure authority for the San Mateo 101 Express Lanes from the California Transportation Commission.
- 2) C/CAG and SMCTA will form a joint powers authority.
- 3) BAIFA will enter into an agreement with the joint powers authority. Staff will return to BAIFA at a later date to seek approval to enter into the agreement.



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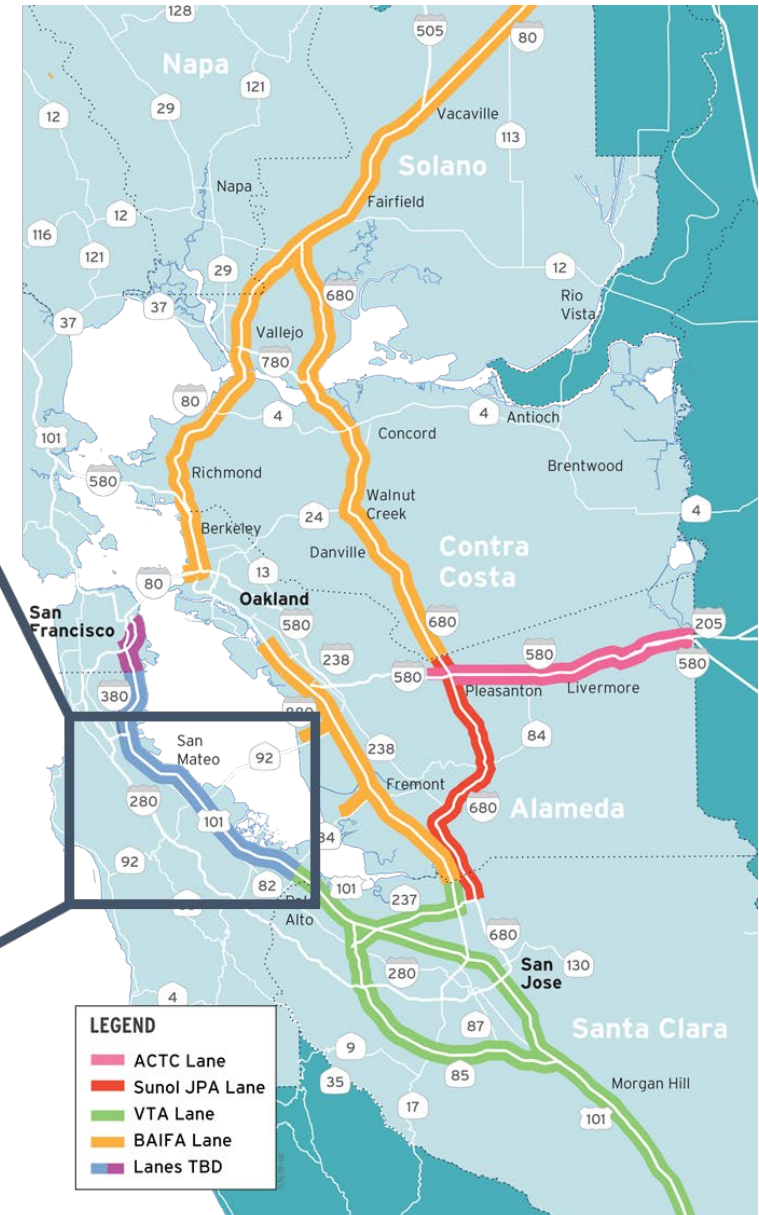
Steve Heminger

SH:lk  
Attachment

Attachment 1  
San Mateo 101 Express Lanes



Construction underway in 2019  
Scheduled to open in 2022







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](http://www.mtc.ca.gov)

## *Memorandum*

TO: Bay Area Infrastructure Financing Authority

DATE: January 16, 2019

FR: Executive Director

W.I.: 6840

RE: BAIFA Role in San Mateo 101 Express Lanes

The San Mateo City/County Council of Governments (C/CAG) and San Mateo Transportation Authority (SMTA) are working together to implement express lanes on US 101. Fundamental decisions yet to be made include who will own and operate the San Mateo 101 Express Lanes, and what role the Bay Area Infrastructure Financing Authority (BAIFA) could play, if any. Under state law, BATA collects all toll revenue from the state-owned bridges and the region's express lanes. Options for BAIFA involvement include:

- 1) Transferring ownership and operation of the corridor to BAIFA and expanding BAIFA to include San Mateo County, or
- 2) Designating a San Mateo County entity that would own the express lanes and contract for development and operation of the toll system with either
  - a) Valley Transportation Authority (VTA), or
  - b) BAIFA.

The San Mateo agencies need to make this decision imminently because the toll operator will need to negotiate a contract amendment with its existing toll system integrator and provide key input on the final design, which is now underway. At your January meeting, staff will provide an overview of the possible roles for BAIFA. Primary considerations for BAIFA include: ability to improve mobility in the corridor; consistency of express lanes operations for the region's drivers; and risk to BAIFA.

### **Background**

The San Mateo 101 Express Lanes will run between I-380 and the Santa Clara County line where they will adjoin the US 101/Route 85 Express Lane Connector now under construction by VTA. MTC was a partner in early studies that demonstrated the benefits of an express lane over an HOV lane. State, regional and local agencies, as well as private businesses in the corridor, have partnered to secure \$500 million to fund the project. In an acknowledgement its regional mobility benefits, the project has secured significant funding (\$200 million) from the Senate Bill 1 Solutions for Congested Corridors Program. In addition, the Bay Area Toll Authority has committed \$95 million in regional toll revenue.

In November and December 2018, SMTA and C/CAG staff presented their boards with two options for ownership and operation of the express lanes. SMTA voted to pursue the option wherein a yet-to-be-determined San Mateo County entity would own the lanes and contract with VTA for operations (Option 2a above). C/CAG voted to pursue negotiations with BAIFA to integrate the corridor and county into BAIFA, which would own and operate the lanes (Option 1) subject to certain conditions, which are described in more detail below. As a result of the split decision, the two agencies have formed an ad hoc committee to develop a common approach for approval by SMTA and C/CAG in early February. The ad hoc committee first met on January 2, 2019 and will meet again on January 25, 2019.

At the January 2 meeting ad hoc committee meeting, a member asked about a new option, in which ownership would reside with a San Mateo County entity that would contract with BAIFA for operations. BAIFA and San Mateo staff have begun exploring this new Option 2b and vetting it with BAIFA and the ad hoc committee.

## Overview of Options Involving BAIFA

### Option 1: BAIFA Owns & Operates San Mateo 101 Express Lanes

Under this option, San Mateo 101 would become another BAIFA corridor, just like I-680, I-880 and I-80. BAIFA's board would be modified to add the MTC Commissioner from San Mateo County. BAIFA would be fully responsible for the policy, gross and net revenue, costs and daily operations of the San Mateo 101 Express Lanes. BAIFA would also assume responsibility for revenue risk, future bond financing and liability. In addition, C/CAG's approval of this option set forth four conditions. BAIFA staff feel three of the four are reasonable and could be met: BAIFA would front \$50 million for construction to be paid back with future express lane toll revenue; BAIFA would describe how it would approach prioritizing extension of the lanes north of I-380; and BAIFA would allow San Mateo County to determine the use of any net toll revenue. The fourth condition is that BAIFA would cover all construction costs overruns. This poses an unreasonable risk to BAIFA since BAIFA would not be in a position to manage construction costs beyond those associated with the toll system integrator, which is BAIFA's contractor.

This option is less attractive for some in San Mateo County who fear loss of influence over toll policies that they believe will affect net revenue or who seek specificity now on policies that BAIFA has not yet adopted. Examples include the calculation and distribution of net toll revenue and accounting for future bond financing revenue and costs.


### Option 2b: San Mateo Owns the Express Lanes and Contracts with BAIFA for Operations

Under this option, San Mateo agencies would form an entity to assume ownership of the express lanes. This agency would have responsibility for toll policy as well as gross and net revenue. Revenue risk, any future bonding and liability would accrue to the owner rather than to BAIFA. The agency would contract with BAIFA, for a set term, for the toll system and the daily operation of the express lanes, including real-time monitoring of the lanes, enforcement and routine maintenance. BAIFA would provide these services through its existing contracts. The conditions under Option 1 do not apply in this case, and there would be no change to the BAIFA board.

While BAIFA and San Mateo staff are still fleshing out the details of this newly identified option, BAIFA staff believe this option poses significantly less risk to BAIFA while still allowing BAIFA to bring tools to the table to mobility in the corridor. Furthermore, staff believe this option could address STMA's concerns about Option 1 while offering the features appreciated by C/CAG. This option also provides an easier pathway if San Mateo should wish to join BAIFA in the future because it will not require a transition of the toll system or daily operations.

Both options require that BAIFA apply to the California Transportation Commission for authority for the San Mateo 101 Express Lanes, as the original application for BAIFA's network did not include this corridor.

We would appreciate any direction or guidance from the Authority in assisting San Mateo County through this governance debate.

  
\_\_\_\_\_  
Steve Heminger

SH:lk





# BAIFA Options for San Mateo 101 Express Lanes

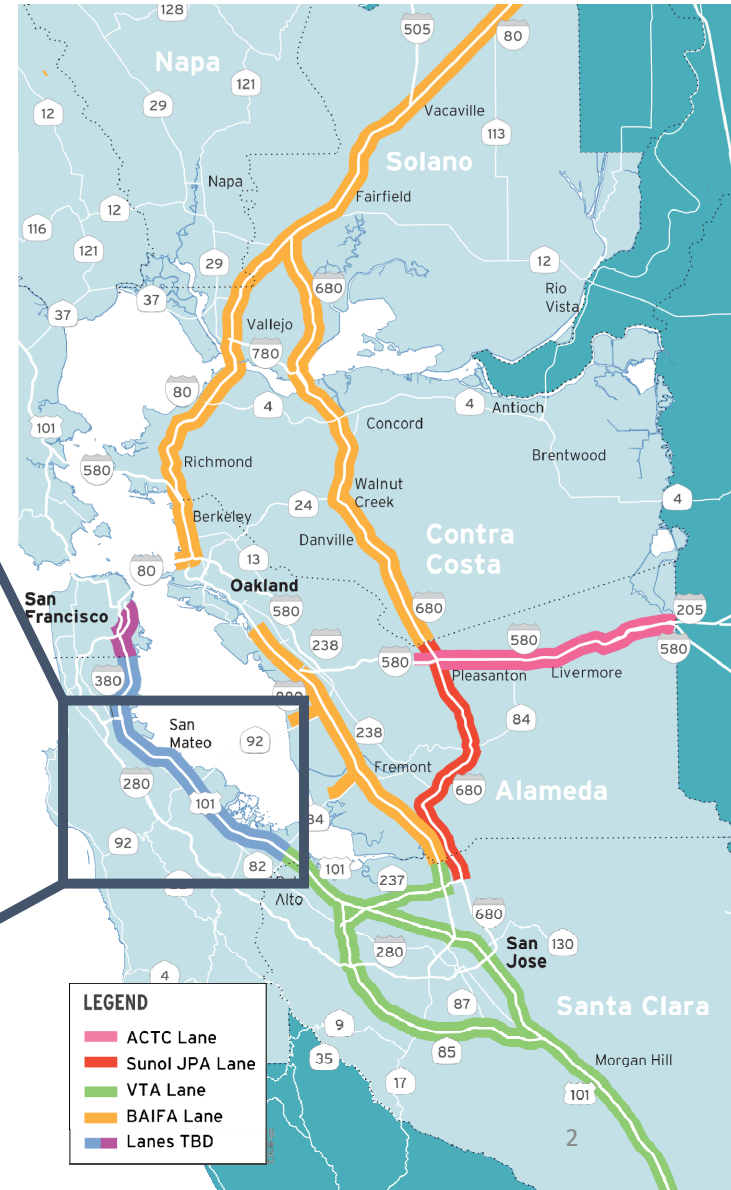
Bay Area Infrastructure Financing Authority  
January 23, 2019



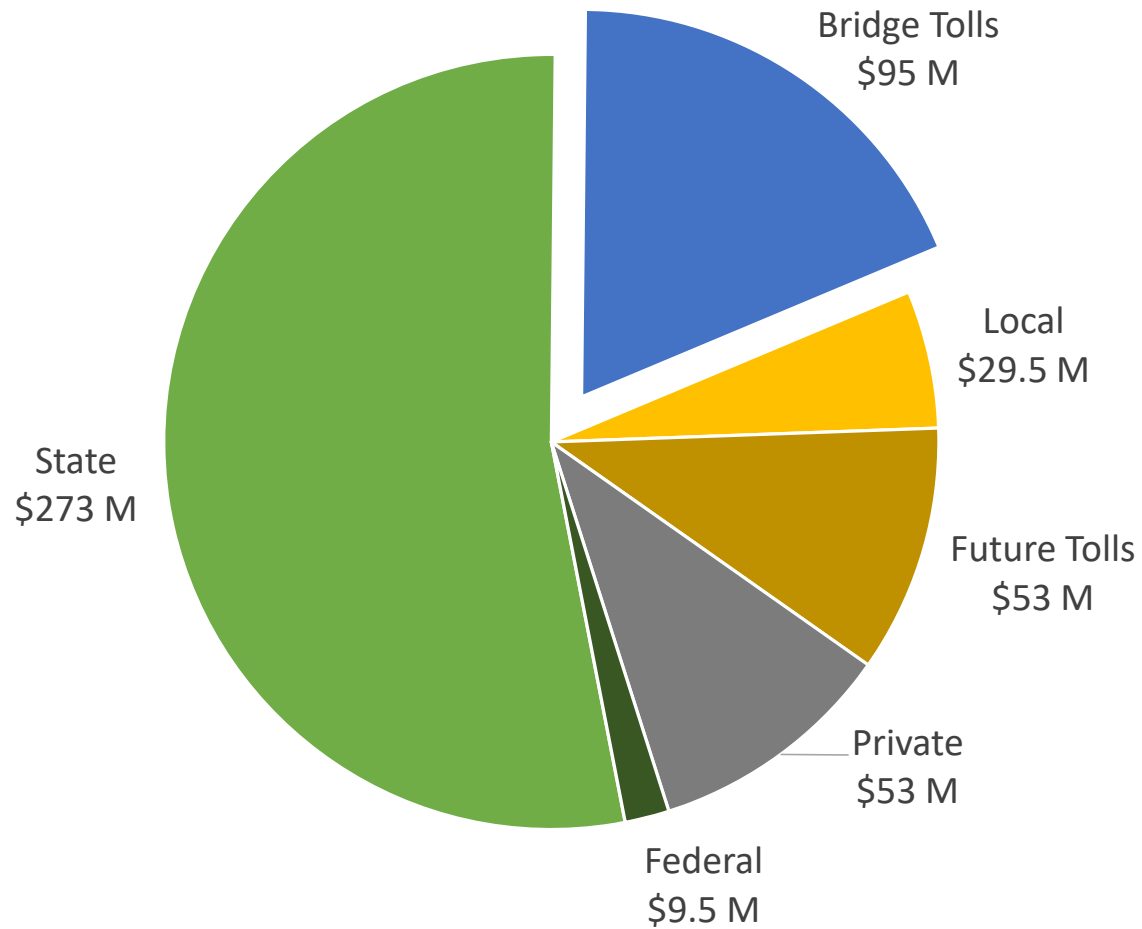
# San Mateo 101 Express Lanes



**Construction underway in 2019**  
**Scheduled to open in 2022**



# San Mateo 101 Express Lanes Funding Plan



# Options Presented to C/CAG and SMTA by San Mateo Staff

## 1. **BAIFA Owns & Operates** - Transfer ownership, provided BAIFA agrees to

- Provide up front funding (\$50M) to be paid back with future toll revenue
- Cover all cost overruns
- Commit to how it would prioritize extension north of I-380
- San Mateo will have sole discretion over net revenue

BAIFA membership would be modified to add the commissioner San Mateo County.

## 2. **San Mateo Owns and Contracts for Operations**

- a) with VTA
- b) NEW OPTION - with BAIFA

San Mateo agencies would need to define a governance structure for owning the lanes.



# Toll Policies Similar Under Both BAIFA Options



## HOV Occupancy



## Tolling objective

Max Throughput (price for 45 mph)  
vs.  
Max Revenue (price for higher speeds -  
fewer users & higher tolls)



## Discounts

HOV-2, clean air vehicles



## Hours of operation

VTA	Alameda CTC	BAIFA (Option 1)	San Mateo (Option 2b)
Set by Caltrans HOV-3 in the ring around the bay (101, 880, 237) HOV-2 elsewhere			
Max throughput	Max throughput	Max throughput	Max throughput?
50%	50%	50%	50%?
Set by Caltrans 5 AM – 8 PM for all lanes (SR-237 changes forthcoming)			



# Revenue Similar Under Both Options

Based on estimates provided at November 16, 2018 workshop

	1. BAIFA Owns & Operates	2b. San Mateo Owns & BAIFA Operates Under Contract
Gross revenue	\$29 - \$39 M	\$29 - \$39 M
Less debt service	TBD	TBD
Less O&M	\$18 M	\$18 M
Less reserves for operations, rehab and replacement (R&R)	\$2 M	\$2 M
Net revenue	\$10 - 20 M	\$10 - 20 M

\* Examples of improvements include: toll system upgrades for interoperability, occupancy detection systems, striping or signage improvements.

# HOV and Express Lane Hours of Operation

County -Route	Direction	Facility Type	HOV Occupancy Requirement	Existing Hours	
				AM	PM
State Bridges (7)	One Way	HOV	2+ & 3+	5-10	3-7
Golden Gate Bridge	SB	HOV	3+	5-9	4-6
ALA/CC-80	BOTH	HOV	3+	5-10	3-7
ALA-580	BOTH	Express Lane	2+	5 AM – 8 PM	
ALA/SCL-680	SB	Express Lane	2+	5 AM – 8 PM	
ALA-880	BOTH	Express Lane	3+	5 AM – 8 PM	
SCL-880	BOTH	HOV	2+	5-9	3-7
CC-04	WB	HOV	2+	5-9	-
CC-04	EB	HOV	2+	-	3-7
CC-680	BOTH	Express Lane	2+	5 AM – 8 PM	
MRN-101	SB	HOV	2+	6:30-8:30	-
MRN-101	NB	HOV	2+	-	4:30-7
SCL-85	BOTH	HOV	2+	5-9	3-7
SCL-87	BOTH	HOV	2+	5-9	3-7
SCL-101	BOTH	HOV	2+	5-9	3-7
SCL-237	BOTH	HOV	2+	5-9	3-7
SCL-880/237	BOTH	Express Lane	3+	5 AM – 8 PM	
SCL-280	BOTH	HOV	2+	5-9	3-7
SF-Sterling Ramp	EB	HOV	3+	-	3:30-7
SM-101	BOTH	Express Lane	3+	5 AM – 8 PM	
SOL-80	BOTH	HOV	2+	5-10	3-7
SON-101	BOTH	HOV	2+	7-9	3-6:30

## Express Lane

Existing
Future

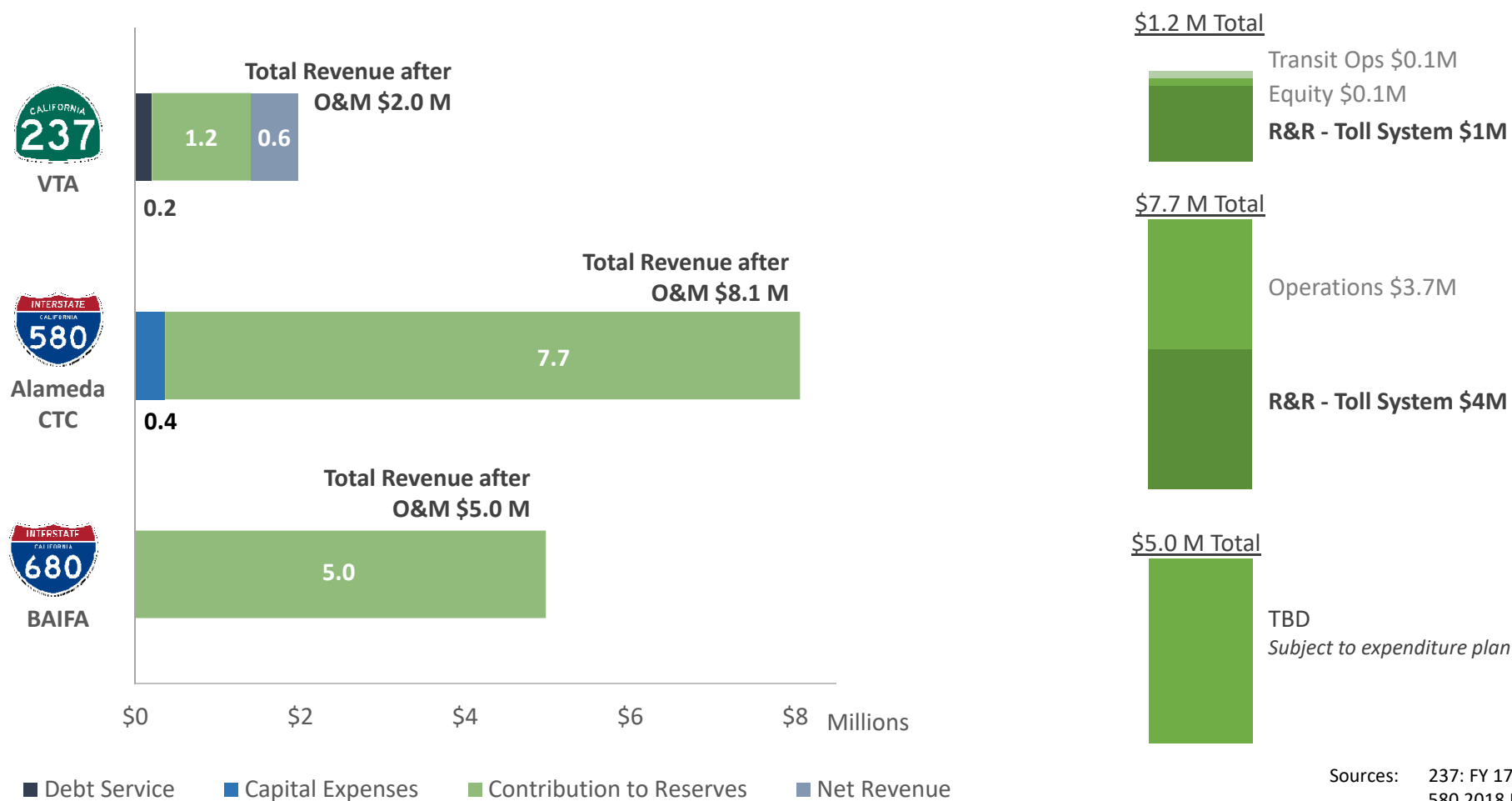
# Costs Similar Under Both Options

Based on San Mateo November 16, 2018 workshop material\*

	1. BAIFA Owns & Operates	2b. San Mateo Owns & BAIFA Operates Under Contract
Customer Service Center (BATA costs for processing transactions and violations)	\$8.0	\$8.0
Annual Operations Staffing Costs	\$0.7	\$1.2
Annual Operations Contractor O&M Costs	\$2.9	\$2.9
Annual Roadway Maintenance Costs	\$2.6	\$2.6
Annual Contribution to Future Rehabilitation and Reserves	\$2.0	\$2.0
Annual CHP Enforcement in Field	\$1.3	\$1.3
Subtotal	\$17.5	\$18.0
10% Contingency	\$1.7	\$1.8
Total Estimated Annual Operating Costs	\$19.2	\$19.8

\*These are preliminary estimates

# Current Practices Rehab and Reserves ~ \$100k/lane mile



Sources: 237: FY 17/18 Budget  
580 2018 Expenditure Plan  
680 FY 17/18 Actual

# Tolling Experience

## BAIFA



23 miles in operation today  
11 mile extension to open in 2022

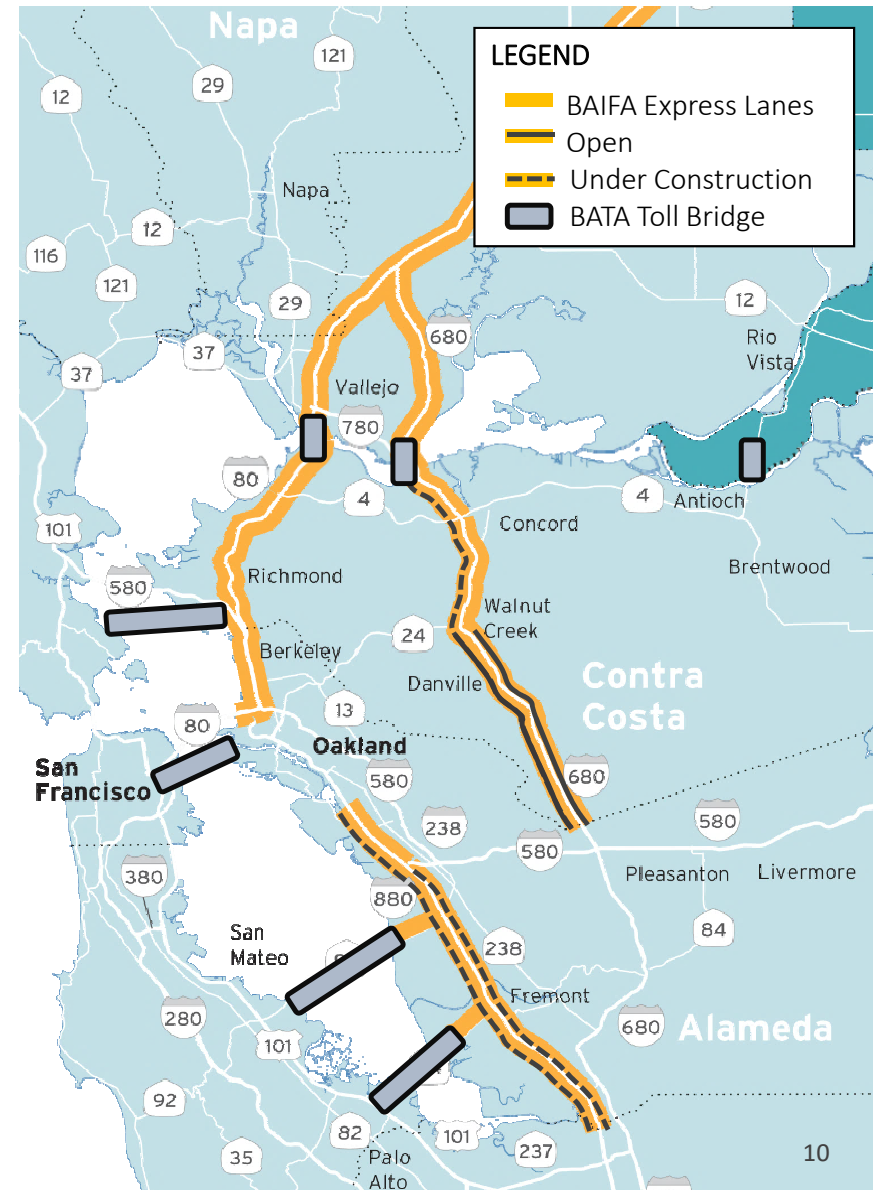


50 miles to open in 2020

## BATA



7 toll bridges  
FasTrak® Customer Service Center





# Regional Investments → Benefits San Mateo Customers

## Move More People



## Create Mobility Hubs



Modernize Existing Ramp Meters:  
Fixed Time of Day → Adaptive Meters



# Serving San Mateo Customers



Since 2009

October 2018 trips

SamTrans

460,000

Caltrain

478,000

**2.7** million accounts, total

**22** partner agencies

**2019** start of Means Based Fare Program



Since 2004

October 2018 trips, westbound 3-7 PM

Dumbarton Br. 126,000









San Mateo Br.

250,000


**2.5** million accounts, total

**5** partner agencies

# BAIFA Options for San Mateo 101- preliminary

		1. BAIFA Owns SM Joins BAIFA	2b. San Mateo Owns BAIFA Operates Under Contract
		BAIFA Membership	No change from current board
General Responsibilities	 Toll policy / ordinance	BAIFA / regional consistency	San Mateo / regional consistency
	 Revenue risk / bond financing	BAIFA	San Mateo
	 Liability	BAIFA	San Mateo
	 Equity program	BAIFA/San Mateo	San Mateo
San Mateo Conditions	 \$50 M for construction (paid back with toll revenue)	BATA	San Mateo
	 Cost overruns	MTC/San Mateo – SB1 appl. BAIFA – Toll system	MTC/San Mateo – SB1 appl.
	 Priority of extension	Next tier – state/reg/local \$	
	 Control over net revenue	San Mateo	

# Timeline and Next Steps

	December 2018	San Mateo TA voted for San Mateo owner/VTA operator (Option 2a) C/CAG voted for BAIFA owner/operator (Option 1) Joint Ad Hoc Committee formed (San Mateo TA and C/CAG)
	January 2, 2019 January 25	Ad Hoc Committee develops recommendation
	February 7 & 14	San Mateo TA and C/CAG actions
	February 27	Report back to BAIFA

## ***If BAIFA Contract Option (2b) Selected***

February – May	BAIFA submits CTC application San Mateo stands up governance body
June – September	BAIFA and San Mateo enter into contract BAIFA amends toll system & operations contracts