



BAY AREA EXPRESS LANES



MTC Express Lanes Quarterly Report 3rd Quarter, July - September, 2020

Submitted: January 2021



METROPOLITAN
TRANSPORTATION
COMMISSION

TABLE OF CONTENTS

I.	Program Highlights	1
II.	Program Overview.....	3
	A. Program Description	3
	B. Operating Authority	4
	C. MTC Express Lane Project Funding.....	5
III.	Capital Delivery	6
	A. Schedule	6
	B. Capital Costs	7
	C. Change Management.....	8
	D. Risk Management Plan.....	8
	E. Active Capital Project Summaries.....	11
IV.	Operations	20
	Appendices.....	A-1
	A. Express Lanes Overview	A-2
	B. Completed Capital Project Summaries	A-5
	C. I-680 Contra Costa Express Lanes Operations Report.....	A-7

I. PROGRAM HIGHLIGHTS

The purpose of this report is to summarize the progress of delivering Metropolitan Transportation Commission (MTC) Express Lanes. The report covers the third quarter of 2020, July 1 to September 30.

The California Transportation Commission (CTC) approved MTC’s application to implement and operate its 270-mile express lane network on October 27, 2011. Soon thereafter, work began to environmentally clear the first phase of express lane conversion projects and produce a Concept of Operations describing how the Express Lanes will operate. 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	3 rd Quarter 2020 Highlights	Current Activities
<p>I-880 Alameda (ALA-880) San Leandro to Milpitas <i>Hegenberger Road/Lewelling Boulevard to Dixon Landing Road</i></p>	<ul style="list-style-type: none"> Final signing and pavement marking civil work to transition the HOV lanes to express lanes was completed in August and September. Until tolling begins, the lanes will function as HOV 2+ only lanes. The toll system integrator finished equipment installation in August 2020 and toll system testing in September 2020. In August 2020, the Regional Operations Center contractor hired one new operator to assist with I-880 operations. 	<ul style="list-style-type: none"> On October 2, 2020, BAIFA began tolling on the I-880 Express Lanes. The construction team started the final Caltrans inspection and close out process for the BAIFA construction activities. Remaining work includes installation of fiber laterals, which will continue through January 2021. Staff is coordinating with AT&T to establish a second communication path from the southern hub at Dixon Landing Road to host datacenters. Work is scheduled to be completed in October.
<p>I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek to San Ramon <i>Livorna Road/Rudgear Road to Alcosta Boulevard</i></p>	<ul style="list-style-type: none"> See Appendix C for performance highlights. 	<ul style="list-style-type: none"> Project complete; see Appendix B for archived summary.
<p>I-680 Contra Costa Northern Segment Southbound (CC-680 North SB) Martinez to Walnut Creek <i>Marina Vista Boulevard to Rudgear Road/SR 242</i></p>	<ul style="list-style-type: none"> The civil contractor completed highway widening activities in August and the new southbound lane capacity opened to HOV 2+ traffic on August 24, 2020. 	<ul style="list-style-type: none"> Punchlist work continues and the civil contractor will complete the replacement planting work in October. The toll system integrator is conducting final walk-throughs with the civil contractor and started installing the roadside tolling equipment in July 2020. The toll system integrator accidentally damaged backhaul fiber when preparing for fiber splicing, and is addressing the problem.
<p>I-80 Solano (SOL-80) Fairfield to Vacaville <i>Red Top Road to I-505</i></p>	<ul style="list-style-type: none"> No highlights to report. 	<ul style="list-style-type: none"> The California Transportation Commission awarded \$123 million of Senate Bill 1 competitive funds to the project in November 2020. The project funding plan is now complete, subject to the availability of \$85 million of Regional Measure 3 Express Lane Program pending litigation. Staff will work with the Solano Transportation Authority to prepare for construction.

Project Development & Construction	3 rd Quarter 2020 Highlights	Current Activities
<p>Program Management</p>	<ul style="list-style-type: none"> • Staff coordinated with Caltrans, CHP and the Valley Transportation Authority, which operates the SR-237 Express Lanes, on public information strategies for opening the I-880 Express Lanes. • Staff worked with the Contra Costa Transportation Authority and Caltrans to prepare and execute an opening and public messaging strategy for new lane capacity on I-680 North Southbound. • BAIFA amended its Toll Facility Ordinance to establish tolling rules for I-680 North Southbound in September 2020. 	<ul style="list-style-type: none"> • Staff continues customer education strategies for the I-880 Express Lanes, which began in August 2020. • Staff are developing customer education materials and strategies for the start of tolling on I-680 North Southbound in spring 2021. • Staff continues to develop a work plan, schedule and budget to pilot a means-based toll discount for low-income drivers on BAIFA's express lanes. • The MTC Operations Committee awarded contracts to two vendors for pilots to improve occupancy enforcement: a roadside camera system and a smartphone app system. The smartphone app award was contested by the runner-up; the Commission upheld the award in October 2020. • In October 2020, BAIFA approved a cooperative agreement with the Alameda County Transportation Commission to manage the operations of its I-580 and I-680 Sunol Express Lanes effective July 1, 2021; staff will prepare to assume this role.
<p>Toll System</p>	<ul style="list-style-type: none"> • In July 2020, the toll system integrator launched the trip building software upgrade to improve system efficiencies and the lane-transaction filter to allow for I-880 testing in the live Host system. • In September 2020, staff finished negotiations with the toll system integrator on streamlining performance monitoring activities. The terms reduce maintenance costs for future BAIFA corridors. 	<ul style="list-style-type: none"> • The toll system integrator is fine-tuning the toll system in preparation for I-880 operational acceptance .

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), the Sunol Smart Corridors Joint Powers Authority (Sunol JPA), and the San Mateo County Express Lanes Joint Powers Authority (San Mateo JPA).

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. In addition, MTC will operate 45 miles of new and converted lanes on US-101 in San Mateo County for the San Mateo JPA, and perform certain operations activities on the I-580 and I-680 express lanes in Alameda County for the Alameda County Transportation Commission.

Appendix B includes an overview of how express lanes operate.



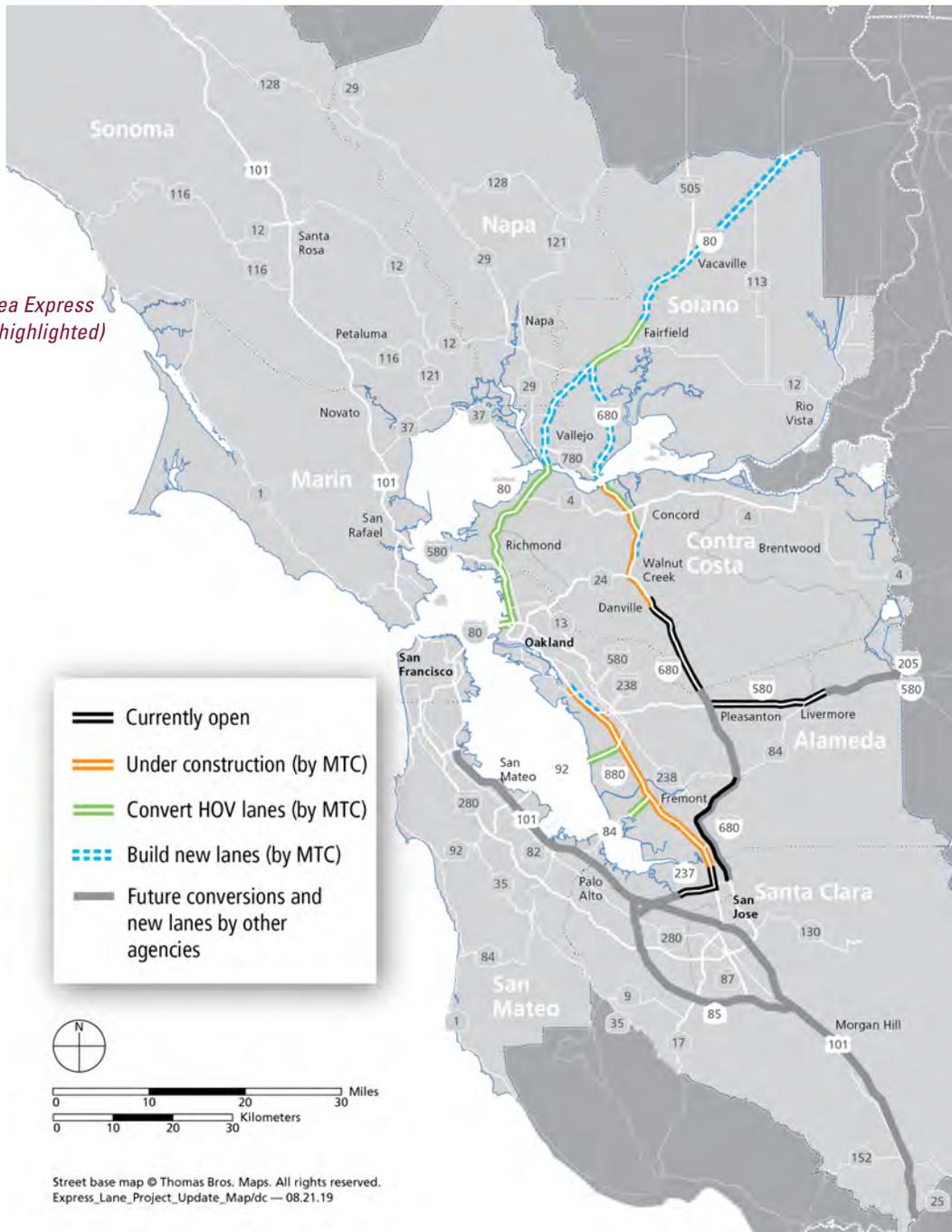
Map of Authorized Bay Area Express Lanes Network

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. BAIFA will also operate the toll system on US-101 in San Mateo County under contract to San Mateo County transportation agencies, which are responsible for project delivery, operational policy and use of revenue.

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

Authorized Bay Area Express Lanes (MTC lanes highlighted)



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	●	●	●
					<i>Project completed 2017</i>		
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
I-880 Alameda (ALA-880) San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	Spring 2019	Fall 2020	●	13
I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	Fall 2016	Fall 2017 Actual	●	A-5
I-680 Contra Costa Northern Segment Southbound (CC-680 North SB) Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear Rd.</i>	Fall 2018	Mid-2021	●	16

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) program-wide 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. MTC's Finance Section reports financial information to BAIFA about one quarter in arrears, which does not fit with the production timeline for the Quarterly Report. As a result, the expended-as-of amounts shown below represent the unaudited amount of BATA Express Lane funds expended through the previously reported quarter; percent complete amounts are reported through the previously reported quarter for consistency. The confidence level assessment reflects potential risks to each project budget; for more information, see Section III.D Risk Management Plan.

Project ⁽¹⁾	Total Cost Estimate ⁽²⁾	Cost Estimate, Funded Phases ⁽³⁾	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds ⁽⁴⁾			Percent Complete as of 6/30/20 ⁽⁵⁾	Confidence Level ⁽⁶⁾
					July 2018 Amendment	Sept. 2018 Amendment	Expended as of 6/30/20		
NEAR-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS									
<i>Costs shown in millions of escalated dollars</i>									
I-880 Alameda	139.1	139.1			135.5	139.1	116.7	95%	●
I-680 Contra Costa Southern Segment	54.0	54.0			55.6	54.0	52.5	99%	●
I-680 Contra Costa Northern Segment Southbound ⁽⁷⁾	127.4	127.4	19.4	54.3	51.3	53.6	33.8	75%	●
I-80 Solano	274.9	32.5	14.4		19.0	18.1	11.7	20%	●
Centralized Toll System	32.4	32.4			33.6	32.4	23.6	90%	●
Program Planning, Coordination & Management	28.4	28.4			28.4	28.4	22.8	85%	●
Program Contingency	6.1	6.1			5.1	2.9			●
Capitalized Start-up O&M	16.0	16.0			16.0	16.0	4.9		●
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 ⁽⁸⁾	390.0	21.5	1.5	20.0				5%	
Centralized & Program Costs & Start-Up O&M - Gap Closures & Future Conversions	TBD								
TOTALS	1,280.3	463.1	40.3	74.3	345.2	345.2	266.8	82%	

⁽¹⁾ Other Gap Closure and Extension projects not shown: ALA-880 extension northbound from Lewelling to Hegenberger; SOL-80 gap closure from Carquinez Bridge to Red Top Road; SOL-80 extension east of I-505; SOL-680 gap closure from Benicia to Cordelia

⁽²⁾ Total Cost Estimate represents current estimated cost to complete each project.

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

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

⁽⁵⁾ 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.

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

⁽⁷⁾ 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).

⁽⁸⁾ 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. An increase in budget for the I-80 Solano Express Lanes from \$228.2 million to \$274.9 million, as previously reported in the first quarter of 2020, was officially documented in the third quarter. The updated cost reflects a construction start date in 2021 and therefore includes three years of escalation for construction and support costs. The revised cost estimate also reflects design and construction costs associated with Caltrans’ new standard for taller median barriers and to incorporate current materials costs. Looking ahead, staff plans to document a new forecast opening for the I-680 Northern Segment, which will change officially from fall 2021 to mid-2021, with confidence level green. The opening date is earlier because the civil contractor completed construction ahead of schedule, allowing the toll system integrator to advance toll system installation and testing. That said, some risks have been realized on the toll system side precluding an earlier opening. The mid-2021 forecast opening date is reflected in this report.

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 September 30, 2020, the risk exposure stands at \$3.0 million, which is lower than the \$4.7 million reported last quarter. Overall, cost and schedule risks associated with the I-880 corridor have been lowered as the I-880 Express Lanes approach their October opening, and I-680 North construction has been completed ahead of schedule. It should be noted, however, that the team continues to track scheduling impacts regarding toll system installation and testing, backhaul communications issues, and the potential for

adverse impacts related to COVID-19 and California’s wildfire season.

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 is in line with the risk exposure of \$3.0 million. 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:

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

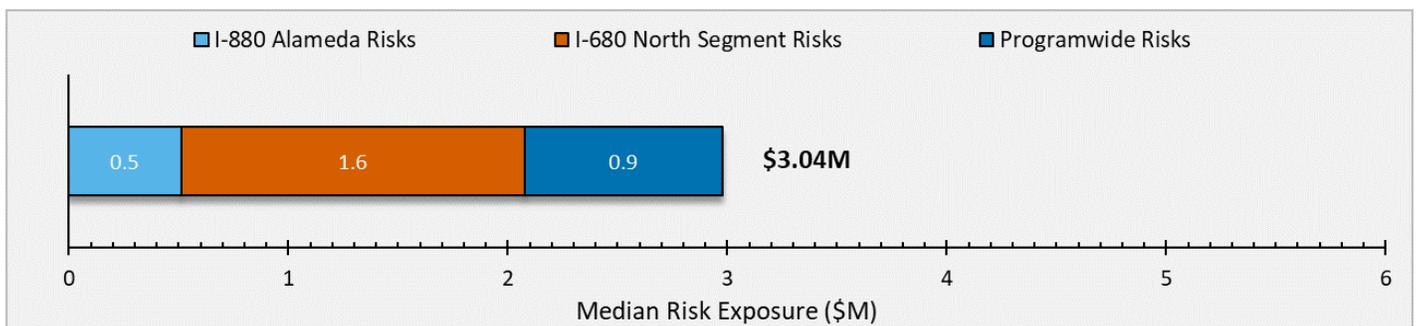


Chart #1 shows the contribution of each project’s risks toward the total program risk exposure. Risk exposure is calculated using Monte Carlo simulation.

I-880 Alameda

- In the first quarter of 2020, BAIFA found project construction to be an essential government function based on Governor Newsom's identification of critical infrastructure sectors, allowing construction to continue in compliance with Alameda County public health directives. To date, the COVID-19 public health crisis has had little impact on the completion of the I-880 corridor. MTC will continue to track this risk, but the likelihood of it impacting the schedule has been significantly lowered.
- Risks regarding a delay in AT&T communication network connections are ongoing. MTC continues to work with AT&T to run fiber while utilizing wireless communications as a mitigation measure. The risk is still being monitored closely by MTC staff.
- A number of risks regarding Caltrans concurrence on the I-880 transition plan and the vendor's delivery of LED brick panels for pricing signs have been retired, reducing the calculated cost of risk exposure.
- This quarter, MTC has been involved in a claim from the contractor in regard to concrete work that did not follow required specifications. This new risk has been added to the program risk register.
- The most significant schedule risk at this time concerns complications with the toll system integrator's installation and testing sequences, as well as the condition of the existing Backhaul trunkline from SR-24 to the Benicia Toll Plaza. MTC has set up a meeting with the toll system integrator to discuss staff resources. The opening date has been revised since splicing into the Backhaul and VTMS installation are parallel, critical path activities that could affect testing sequences; this risk has not been fully realized and is being tracked by MTC. Regarding the Backhaul, damage found during testing has been replaced and is undergoing further testing.
- A risk regarding the delivery and installation of LED panels for pricing signs is still being tracked. Until these panels are installed, the potential for schedule impacts remains, and may require a temporary panel for opening.
- A new risk concerns a homeless encampment near one of the construction sites. The area will need to be accessed by the contractor for future work activities. The team is working through the appropriate channels to resolve this issue and track any potential schedule impacts.

I-680 Contra Costa Northern Segment Southbound

- The team is tracking potential impacts of the public health crisis on the completion of the I-680 corridor. At this time, the project is ahead of schedule and work has progressed without significant impacts. Given future unknowns, the risk will be monitored closely over the coming months.

Programwide Risks

- Given that both 880 and 680 will soon be in operation, the risk of underground toll system communications and power conflicts with other corridor construction projects is now considered a programwide risk. The mitigation measures remain the same: ensure as-built and GIS files are properly documented in the project closeout phases so that future projects can properly identify and locate BAIFA's existing underground assets.

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

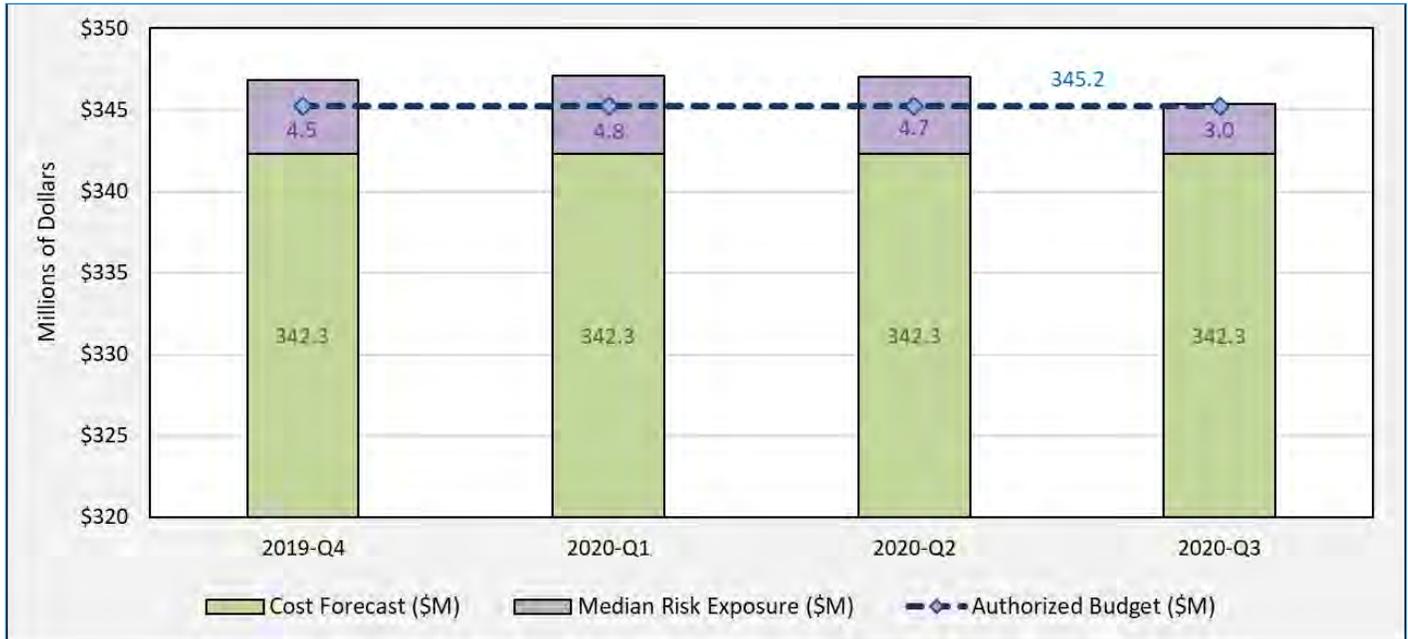


Chart #2 shows the program cost forecast and risk exposure as compared to the authorized program budget.

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 million 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 toll setting 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 coordinated with Caltrans, CHP and the Valley Transportation Authority, which operates the SR-237 Express Lanes, on public information strategies for opening the I-880 Express Lanes.

- Staff worked with the Contra Costa Transportation Authority and Caltrans to prepare and execute an opening and public messaging strategy for new HOV lane capacity on I-680 North Southbound.
- BAIFA amended its Toll Facility Ordinance to establish tolling rules for I-680 North Southbound in September 2020.

Current Program Management Activities

- Staff continues customer education strategies for the I-880 Express Lanes, which began in August 2020.
- Staff are developing customer education materials and strategies for the start of tolling on I-680 North Southbound in spring 2021.
- Staff continues to develop a work plan, schedule and budget to pilot a means-based toll discount for low-income drivers on BAIFA's express lanes.
- The MTC Operations Committee awarded contracts to two vendors for pilots to improve occupancy enforcement: a roadside camera system and a smartphone app system. The smartphone app award was contested by the runner-up; the Commission upheld the award in October 2020.
- In October 2020, BAIFA approved a cooperative agreement with the Alameda County Transportation Commission to manage the operations of its I-580 and I-680 Sunol Express Lanes effective July 1, 2021; staff will prepare to assume this role.

Toll System Highlights and Progress

- The toll system integrator contract was awarded in June 2014.
- Buildout of the Regional Operations Center was finished in March 2017.
- The toll system went live to the public on October 9, 2017.
- 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.
- The I-680 Southern Segment Operations Test concluded in April 2019. Operations testing is a system acceptance test. The Operations & Maintenance (O&M) phase, which includes a one-year warranty period, began in May 2019.
- The toll system integrator went live with lane-side equipment software to finalize the 6C enhancements. The system began tolling 6C tags on October 8, 2019.
- In March 2020, the express lane Host system began sharing toll rate information with MTC's 511 Traveler Information System.
- In June 2020, the toll system integrator began manual image review for low-confidence license plate images to improve trip building.
- In July 2020, the toll system integrator launched the trip building software upgrade to improve system efficiencies and the lane-transaction filter to allow for I-880 testing in the live Host system.

Current Toll System Activities

- The toll system integrator is fine-tuning the toll system in preparation for I-880 operational acceptance.



Close-up of toll system equipment under sign (enforcement beacons, reader antennae and laser trigger)

Photos courtesy of Noah Berger



Overhead hours of operation sign and toll system equipment on the I-680 Express Lanes



Overhead pricing sign on the I-680 Express Lanes

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

Fall 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 was 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 houses were held in March 2015.
- Preliminary engineering report and environmental document were completed in October 2016.
- 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.
- MTC's express lanes scope of work 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 completed its technical review to determine I-880 hours of operation (5am to 8pm, Monday through Friday) and high occupancy vehicle threshold (3 or more persons) in fall 2018.
- Caltrans finalized the design of fiber laterals to connect its freeway management equipment to the communications backhaul in December 2018. Construction work commenced on the Caltrans fiber laterals in October 2019.
- In March 2019, the civil contractor successfully removed two existing overhead sign bridge structures at the SR-92 interchange and installed two new ones.
- The backhaul contractor connected the backhaul corridor hubs to the toll system host and operations datacenters in Martinez, Oakland and San Francisco in October 2019. The toll system integrator approved the I-880 backhaul fiber in November 2019.



- All PG&E service connections are complete.
- In June 2020, the civil contractor completed new restricted access striping on the corridor and installed some signage. A public information campaign explained the changes.
- Final signing and pavement marking civil work to transition the HOV lanes to express lanes was completed in August and September. Until tolling begins, the lanes will function as HOV 2+ only lanes.
- The toll system integrator finished equipment installation in August 2020 and toll system testing in September 2020.
- At strategic points in the project timeline, staff performed outreach and education about I-880 design, construction and proposed operations including with members of low-income communities (2012); corridor city staff (2015 & 2019); and corridor elected officials (2017, 2019 & 2020).

Current Project Activities

- Civil construction work is 98% complete as of September 2020. Remaining work includes installation of fiber laterals to connect Caltrans’ freeway management equipment to the communications backhaul, which will continue through January 2021.
- The construction team started the final Caltrans inspection and close out process for the BAIFA construction activities.
- On October 2, 2020, BAIFA began tolling on the I-880 Express Lanes.
- Staff is coordinating with AT&T to establish a second communication path from the southern hub at Dixon Landing Road to host datacenters. Work is scheduled to be completed in October.

Project Schedule by Phase



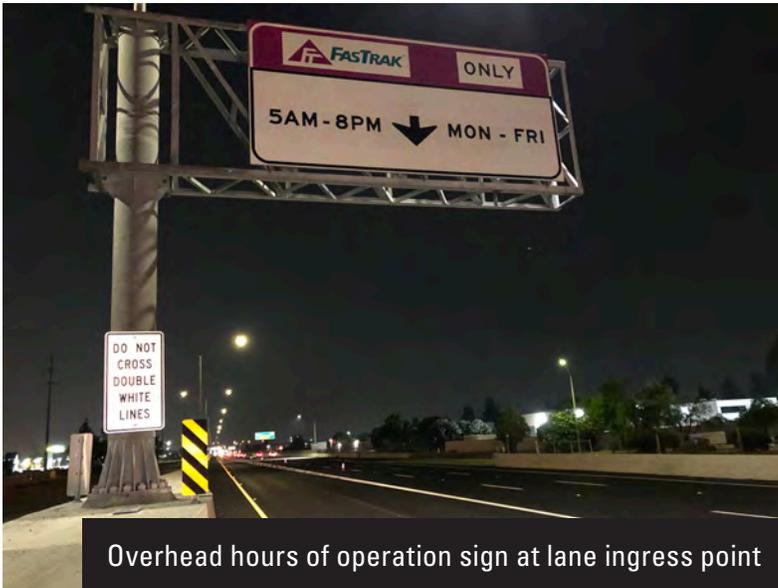
Project Cost

Total Cost Estimate ⁽¹⁾	Cost Estimate, Funded Phases ⁽²⁾	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds ⁽³⁾			Percent Complete as of 6/30/20 ⁽⁴⁾
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 6/30/20	
139.1	139.1			135.5	139.1	116.7	95%

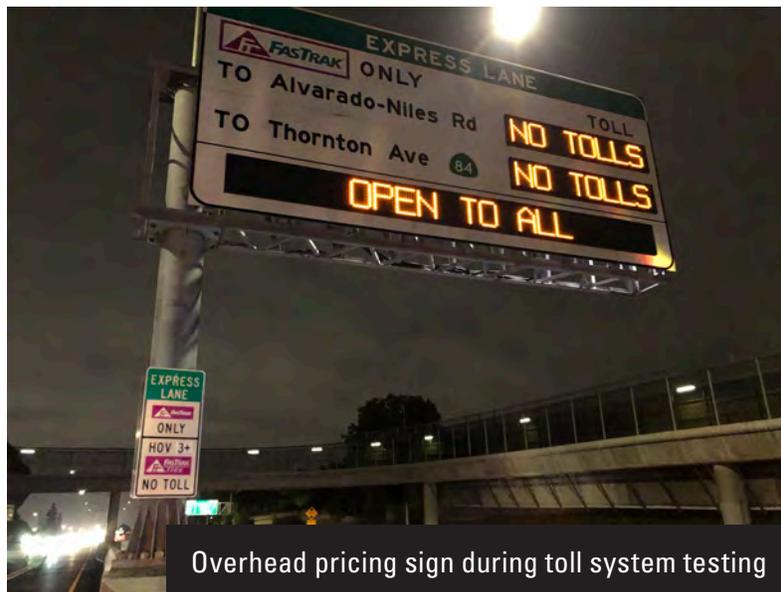
The cost estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

Costs shown in millions of escalated dollars.

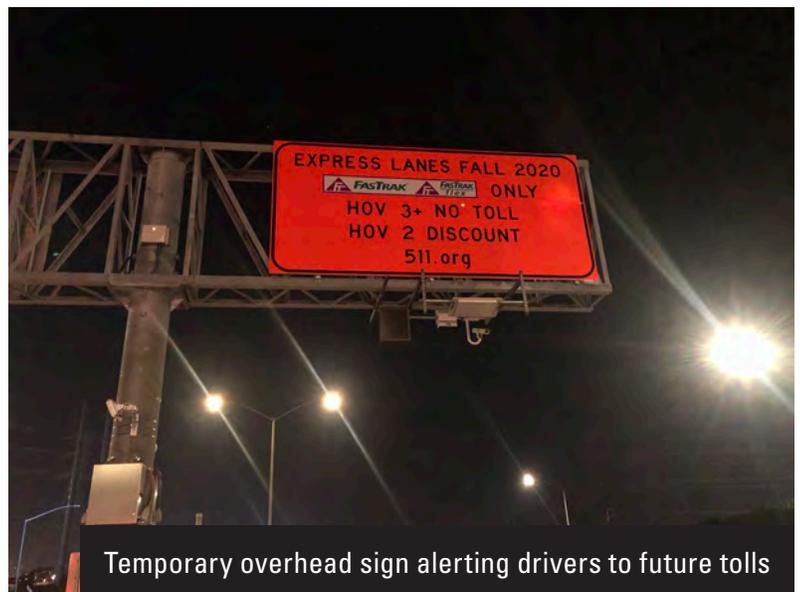
(1) Total Cost Estimate represents current estimated cost to complete each project.
 (2) Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.
 (3) BAIFA Express Lane Funds represent the funds that have been allocated from the BAIFA budget.
 (4) Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.



Overhead hours of operation sign at lane ingress point



Overhead pricing sign during toll system testing



Temporary overhead sign alerting drivers to future tolls

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

Mid-2021

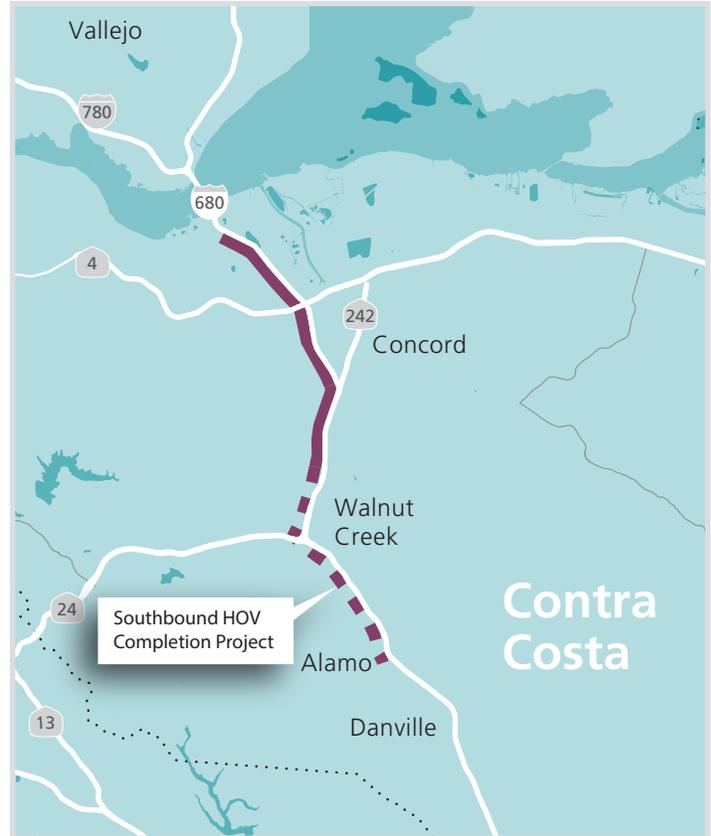
Project Description

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 signed the environmental document in December 2016 and approved the Project Report in August 2017. Caltrans completed a revalidation in September 2017.
- 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.
- In December 2018, the toll system integrator contract was extended to June 2023 to include I-680 North SB.
- In May 2019, the backhaul contractor successfully rerouted the backhaul fiber between SR-24 and Livorna Road in Walnut Creek to allow for lane widening, and the toll system integrator participated in switching the live toll equipment from the old to the new fiber.
- In June 2019, CCTA and Caltrans executed an amendment to incorporate Caltrans oversight of landscape work and the first year of plant establishment into their cooperative agreement.
- In September 2019, BAIFA and Caltrans executed a cooperative agreement for Caltrans to review and approve the toll system design package, issue an encroachment permit and review site installation (as needed).
- Caltrans concurred with the replacement planting design in February 2020.
- Caltrans issued the encroachment permit for toll system installation in April 2020.
- In the second quarter of 2020, the project team developed a strategy to open the new lane capacity between North Main Street and Rudgear Road as an HOV 2+ lane prior to tolling.
- The civil contractor completed highway widening activities in August and the new southbound lane capacity opened to HOV 2+ traffic on August 24, 2020.



Current Project Activities

- Punchlist work continues and the civil contractor will complete the replacement planting work in October.
- The toll system integrator is conducting final walk-throughs with the civil contractor and started installing the roadside tolling equipment in July 2020.
- BAIFA’s contractor fixed a backhaul fiber break that had caused schedule delays to the toll system integrator. Unfortunately, the toll system integrator then damaged the backhaul fiber when preparing for fiber splicing. The integrator is addressing the problem and is actively working to make up lost time.

Project Schedule by Phase



Project Cost

Total Cost Estimate ⁽¹⁾	Cost Estimate, Funded Phases ⁽²⁾	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds ⁽³⁾			Percent Complete ⁽⁴⁾ as of 6/30/20 ⁽⁴⁾
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 6/30/20	
127.4	127.4	19.4	54.3	51.3	53.6	33.8	75%

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

Costs shown in millions of escalated dollars.

⁽¹⁾ Total Cost Estimate represents current estimated cost to complete each project.
⁽²⁾ Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.
⁽³⁾ BAIFA Express Lane Funds represent the funds that have been allocated from the BAIFA budget.
⁽⁴⁾ Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-80 Solano (SOL-80)

Fairfield to Vacaville

Red Top Road to I-505

Total Cost Estimate

\$274.9 million

Scheduled Open Date

2024, 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.

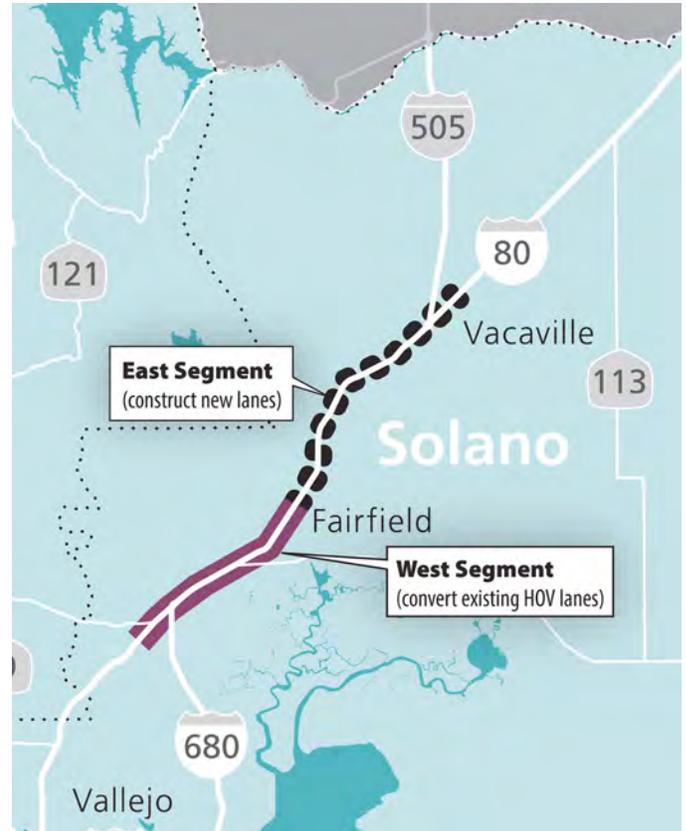
The project will also construct new eastbound and westbound lanes between Air Base Parkway and I-505 in Vacaville. In this section, the highway will be widened along with the installation of express lane striping, signage and equipment. The project will result in 36 miles of express lanes on I-80 in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

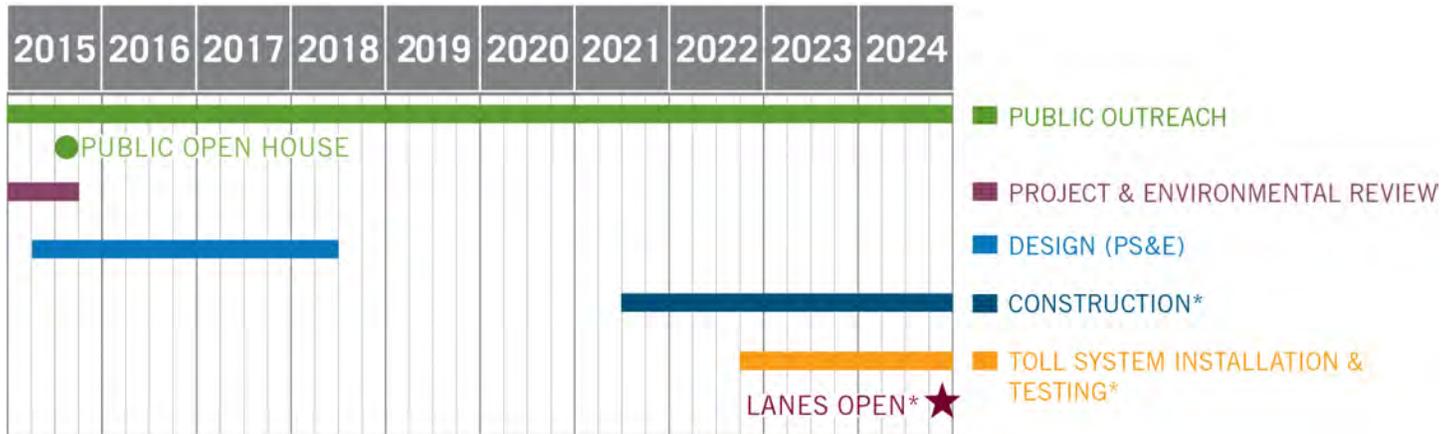
- A public open house was held in August 2015.
- The preliminary engineering report and environmental document were completed in December 2015.
- The final design document was approved by Caltrans in March 2018.
- The project reached the Ready-to-List milestone in April 2018.
- Caltrans submitted this project for a Federal INFRA grant in March 2019, but it was not selected by the US Department of Transportation.



Current Project Activities

- The California Transportation Commission awarded \$123 million of Senate Bill 1 competitive funds to the project in November 2020. The project funding plan is now complete, subject to the availability of \$85 million of Regional Measure 3 Express Lane Program funds pending litigation. Staff will work with the Solano Transportation Authority to prepare for construction.

Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Total Cost Estimate ⁽¹⁾	Cost Estimate, Funded Phases ⁽²⁾	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds ⁽³⁾			Percent Complete as of 6/30/20 ⁽⁴⁾
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 6/30/20	
274.9	32.5	14.4		19.0	18.1	11.7	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.

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

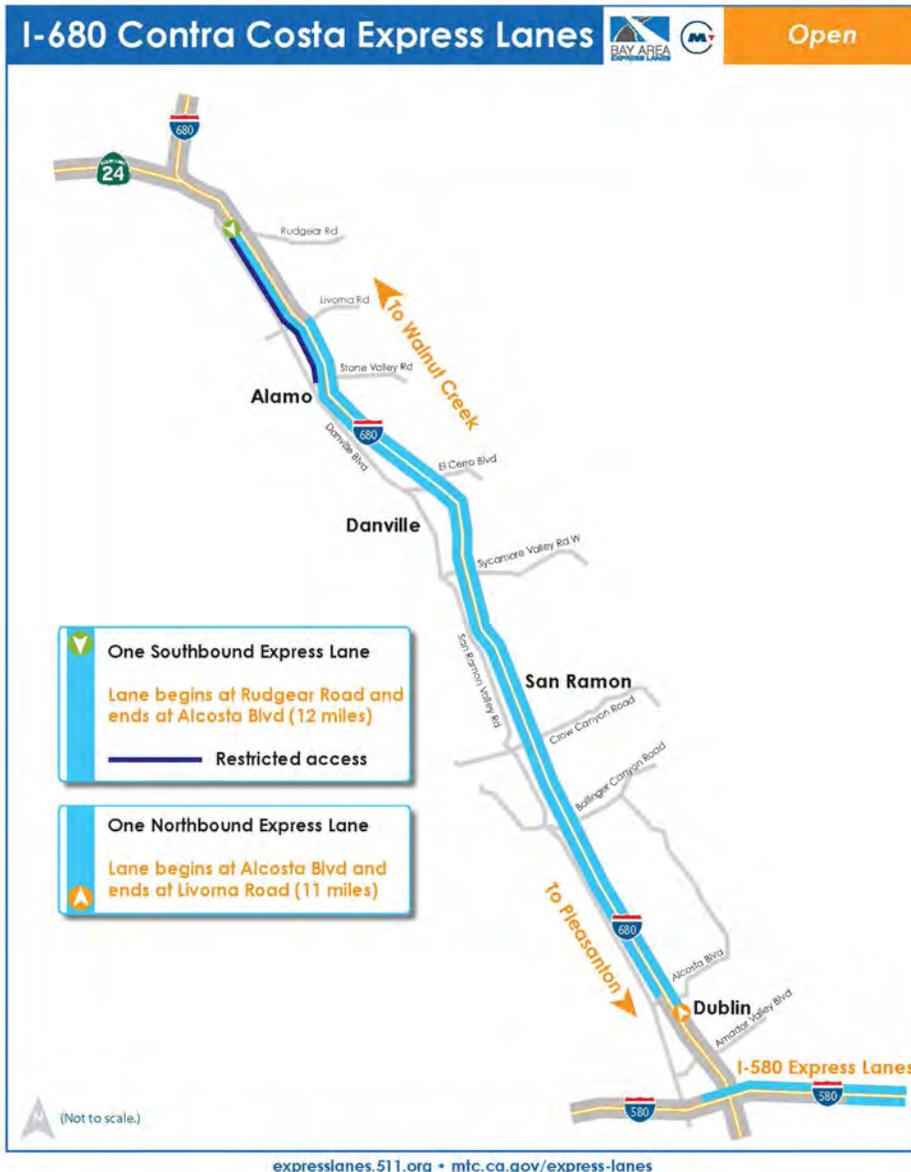
IV. OPERATIONS

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

APPENDICES

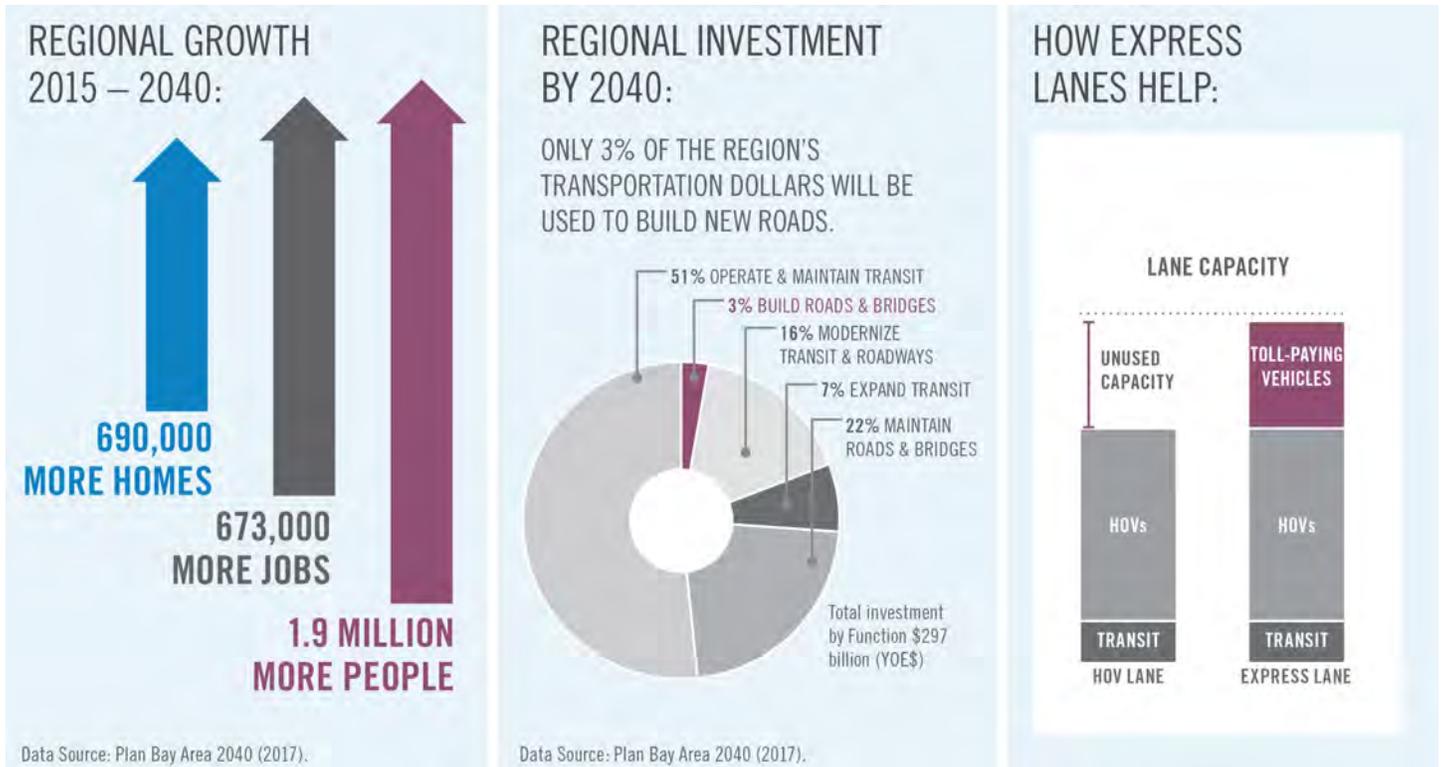
APPENDIX A

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,

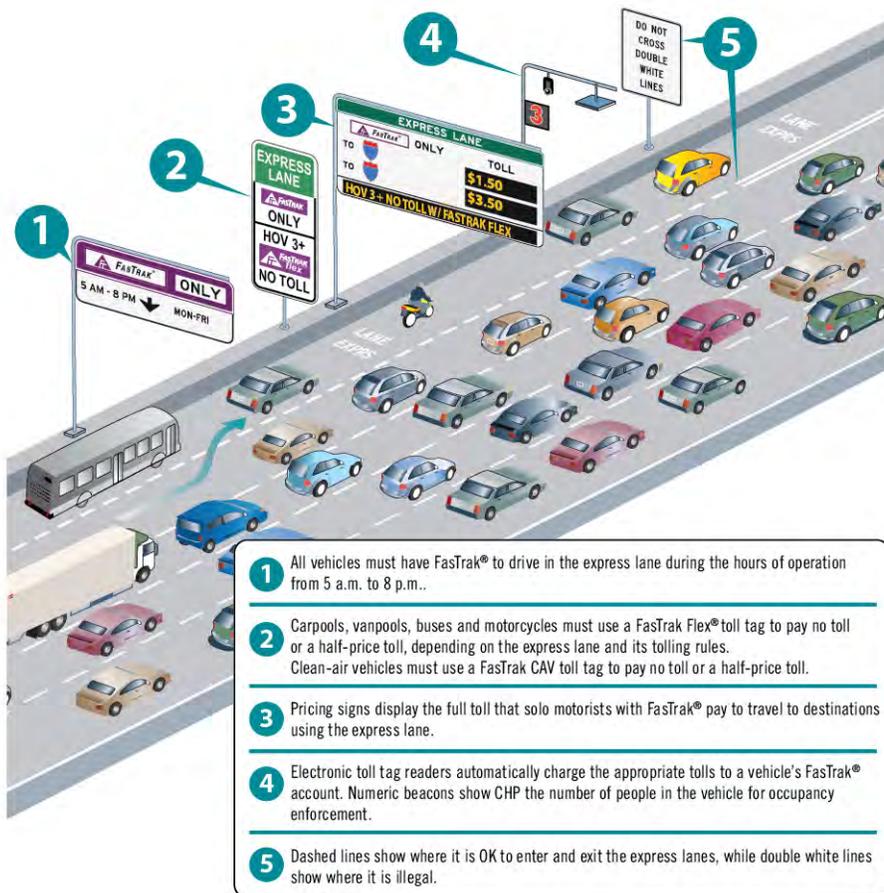
B) improving operations in existing HOV lanes through better carpool enforcement and strategies to prevent lane slowdowns, and C) filling gaps in the HOV lane system to encourage more carpooling.



2. How Express Lanes Work

MTC Express Lanes give everyone with FasTrak® the option for a more reliable and faster trip than regular highway lanes. Overhead electronic pricing signs display toll rates, which may change every few minutes with traffic. Tolls are collected electronically, the same as on Bay Area toll bridges.

Solo motorists pay tolls with either a standard FasTrak® toll tag or a FasTrak Flex® toll tag set to “1” person. Carpools, vanpools and buses must use a FasTrak Flex® toll tag set to “2” or “3+” people to pay no toll or a half-price toll, depending on the express lane and its tolling rules. Motorcycles must use a FasTrak Flex toll tag set to “3+” people to pay no toll. Effective when the I-880 Express Lanes open, qualifying clean air vehicles (CAV) must use a FasTrak CAV toll tag set to the number of people in the vehicle to pay no toll or a half-price toll. Drivers should always set the switch before driving.



- 1 All vehicles must have FasTrak® to drive in the express lane during the hours of operation from 5 a.m. to 8 p.m..
- 2 Carpools, vanpools, buses and motorcycles must use a FasTrak Flex® toll tag to pay no toll or a half-price toll, depending on the express lane and its tolling rules. Clean-air vehicles must use a FasTrak CAV toll tag to pay no toll or a half-price toll.
- 3 Pricing signs display the full toll that solo motorists with FasTrak® pay to travel to destinations using the express lane.
- 4 Electronic toll tag readers automatically charge the appropriate tolls to a vehicle's FasTrak® account. Numeric beacons show CHP the number of people in the vehicle for occupancy enforcement.
- 5 Dashed lines show where it is OK to enter and exit the express lanes, while double white lines show where it is illegal.

The figure to the left explains how to use Bay Area Express Lanes. MTC Express Lanes will be “open” access to the extent possible, meaning drivers will enter and exit the express lanes similar to how they enter and exit HOV lanes today. Areas prone to excessive weaving or other safety concerns may have access restrictions to control entry and exit at these locations. Signage and lane striping will identify these entry and exit locations. Limiting 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

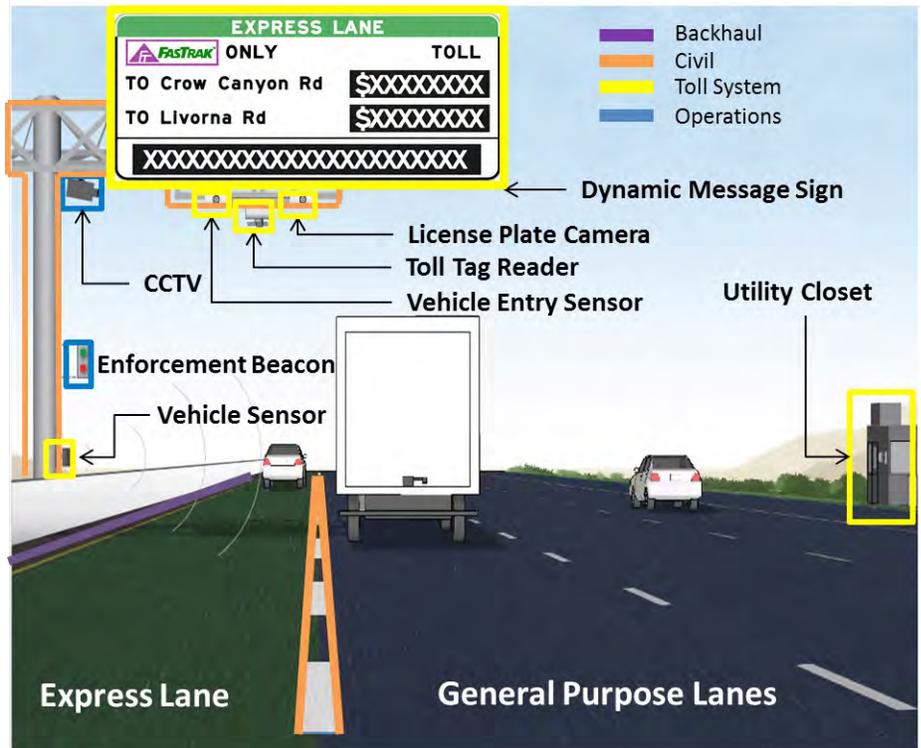
The toll system consists of two components, the in-lane system and the back-end "host" system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, 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 has been established in the Bay Area Metrocenter building in San Francisco where operators 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® 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.

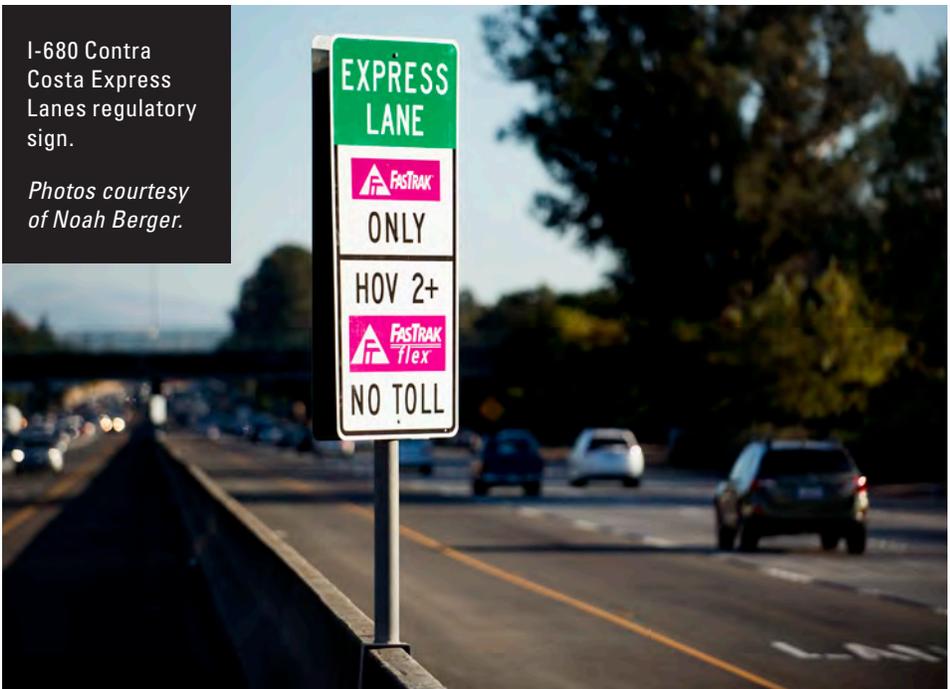
Project Highlights and Progress

- 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.

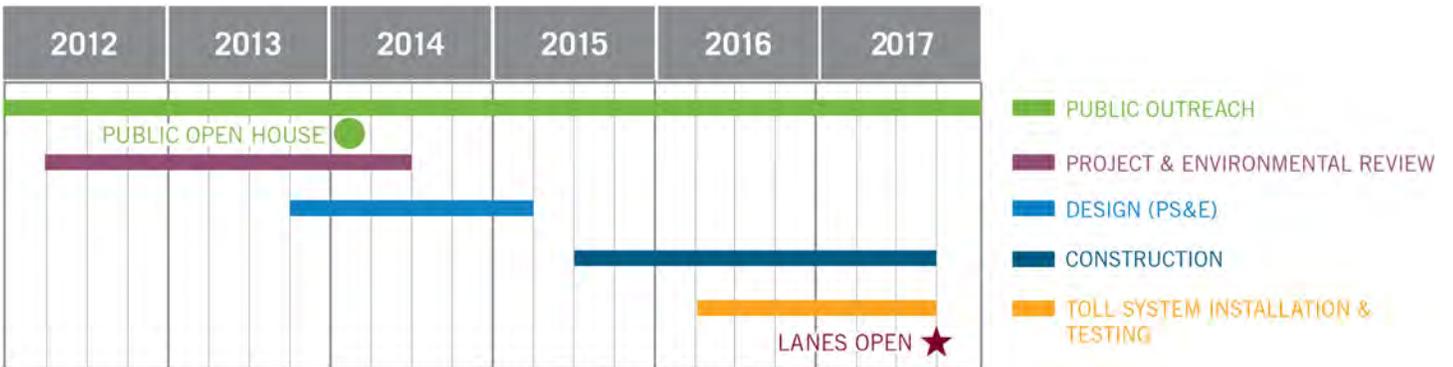


Current Project Activities

- 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.



Project Schedule by Phase



Project Cost

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

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

Costs shown in millions of escalated dollars.

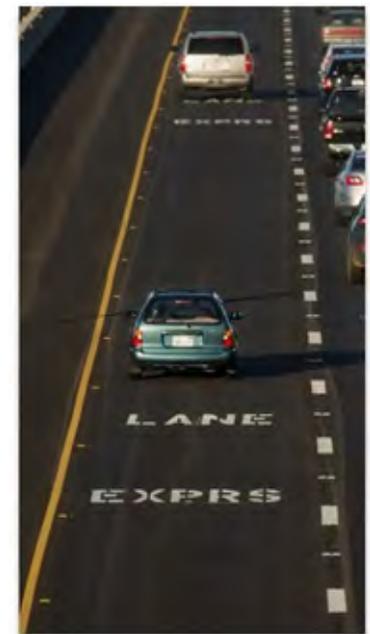
(1) Program estimate represents current estimated cost to complete each project.
 (2) Cost forecast represents current estimated cost to complete phases that are funded for each project.
 (3) BAIFA Express Lane Funds represent the funds that have been allocated from the BAIFA budget.
 (4) Physical percent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

APPENDIX C

I-680 Contra Costa Express Lanes Operations Report

Note: Due to COVID-19 shelter-in-place restrictions, toll operations ceased in mid-March and resumed on June 1, 2020.

I-680 Contra Costa Express Lanes Performance 3rd Quarter 2020: July - September



METROPOLITAN TRANSPORTATION COMMISSION

Bay Area Infrastructure Financing Authority

Submitted January 2021

Rules of the Road

- Hours: 5 a.m. to 8 p.m. Monday - Friday
- FasTrak[®] required
- Carpools (2+), eligible clean-air vehicles* & motorcycles travel toll-free with FasTrak Flex[®]
*Half-price tolls for eligible clean-air-vehicles start Q4 2020.



Summary of Performance Highlights

- Over 21.3 million trips have been taken in the I-680 Contra Costa express lanes since their October 2017 opening. In Q3 2020, 921,000 express lane trips were recorded, up from 225,000 in Q2 2020 when toll operations were suspended for 2 months due to COVID-19. Q3 2020 trips were down 55% from Q3 2019 due to lighter traffic during the COVID-19 pandemic.

- In Q3 2020, average daily trips were 14,164, down from a historical average of 30,000.

- In Q3 2020, the share of toll-free trips taken in carpools and clean air vehicles ranged from 31% to 41% per month. 31% is the lowest share ever recorded, likely due to reduced carpooling during COVID-19.

- In Q3 2020, the share of vehicles without a FasTrak® toll tag or account (toll violators) ranged from 9% to 16% per month. Prior to this quarter, the highest violation rate was 9% - reached in four prior months. The high violation rate could be due to decreased traffic and reduced CHP presence in the corridor during COVID-19, making drivers less concerned about highway rules.

- Due to COVID-19 reduced travel, peak-hour average corridor speeds were up 12 - 15 mph in the general purpose lanes and up 12 - 13 mph in the express lanes compared to the averages since the lanes opened.

- The average historical speed differential between the express lanes and the general purpose lanes is 10 mph northbound and 11 mph southbound. In Q3 2020, the average differentials were 8 mph northbound and 10 mph southbound.

- At the most congested locations in the corridor, express lanes speeds were maintained at 45 mph or better 94% and 97% of the days in the quarter northbound and southbound, respectively. The slow speeds occurred when incidents were present. In Q3 2019 express lanes speeds stayed above 45 mph on 46% and 52% of the days in the quarter northbound and southbound, respectively. The improvement is due to COVID-19-induced lighter traffic.

- The average express lane speeds at the northbound and southbound slowest locations was 70 mph compared to 43 mph a year ago.

- Monthly average tolls paid ranged from \$1.70 to \$2.10 in the northbound p.m. peak. Due to reduced work travel during COVID-19 tolls did not exhibit an a.m. peak in either direction of travel. Compared to Q3 2019, average tolls paid in the peak hours were about \$4 lower.

- Despite low traffic, tolls to travel the whole corridor reached \$10 in the northbound direction when incidents were present. Fewer than 1% of tolled trips paid that price. Of the tolled trips, 96% were \$2 or less. In Q3 2019, 65% of tolled trips were \$2 or less and 4% of tolled trips paid the highest posted toll.

- CHP made 631 enforcement contacts in Q3 2020, 14% of which resulted in HOV occupancy citations. BAIFA requested 50% fewer enforcement hours in Q3 2020 than Q3 2019 due to COVID-19-related traffic decreases, and CHP filled 76% of the hours. From Q3 2019, enforcement hours, contacts, and HOV occupancy citations fell 58%, 40% and 81%, respectively.

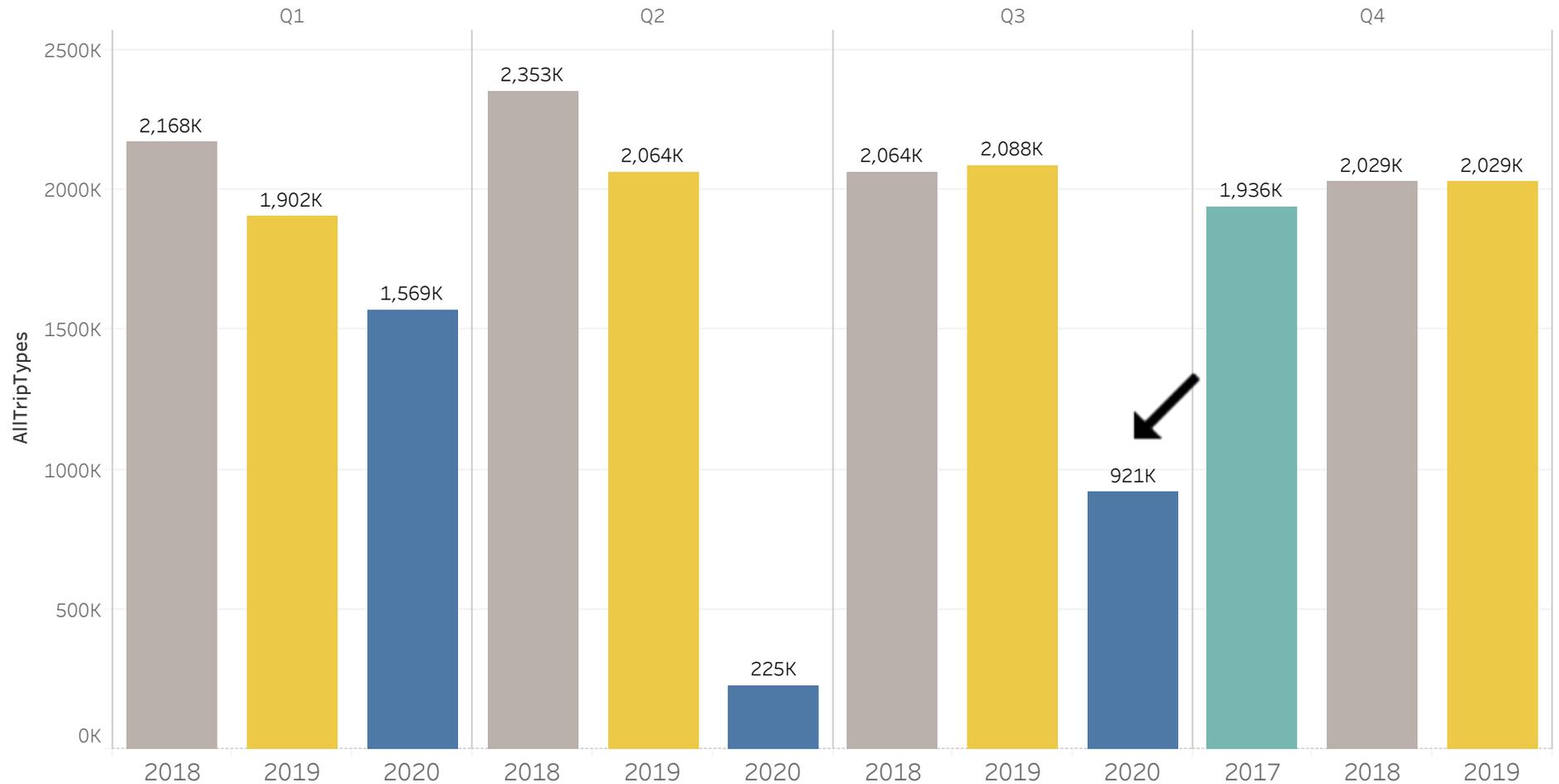
- Q3 2020 toll revenues fell 82% from Q3 2019 due to a 56% decline in paid trips as well as a decline in average toll paid per trip.



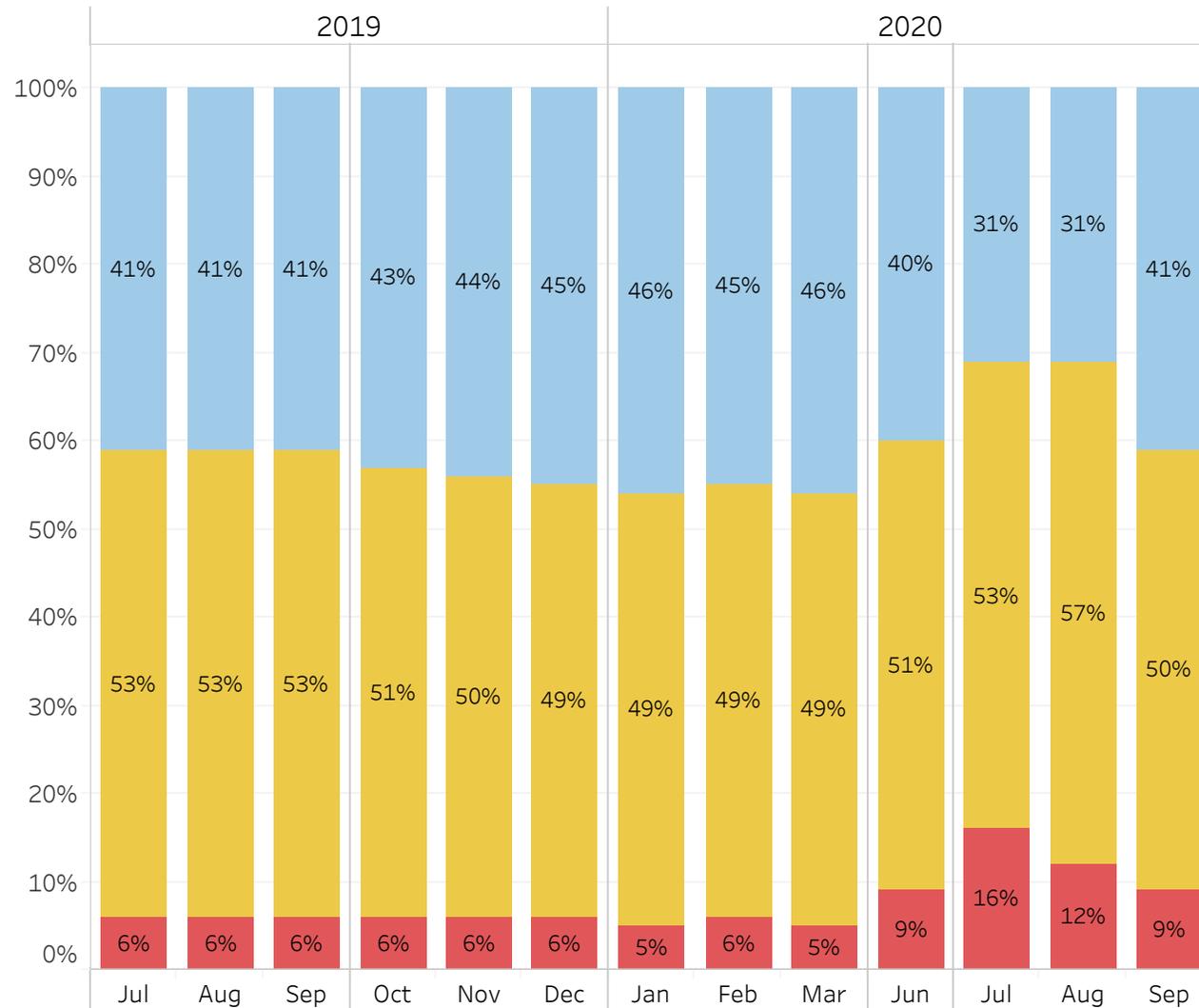
Express Lane Trips

In Q3 2020, 921,000 express lane were recorded, up over 300% from Q2 2020 when toll operations were suspended for 2 months due to COVID-19. Q3 2020 trips were down 56% from Q3 2019, due to lighter traffic during the COVID-19 pandemic.

Average daily trips in Q3 2020 were 14,164, down from a historical average of 30,000.



Express Lane Trip Types



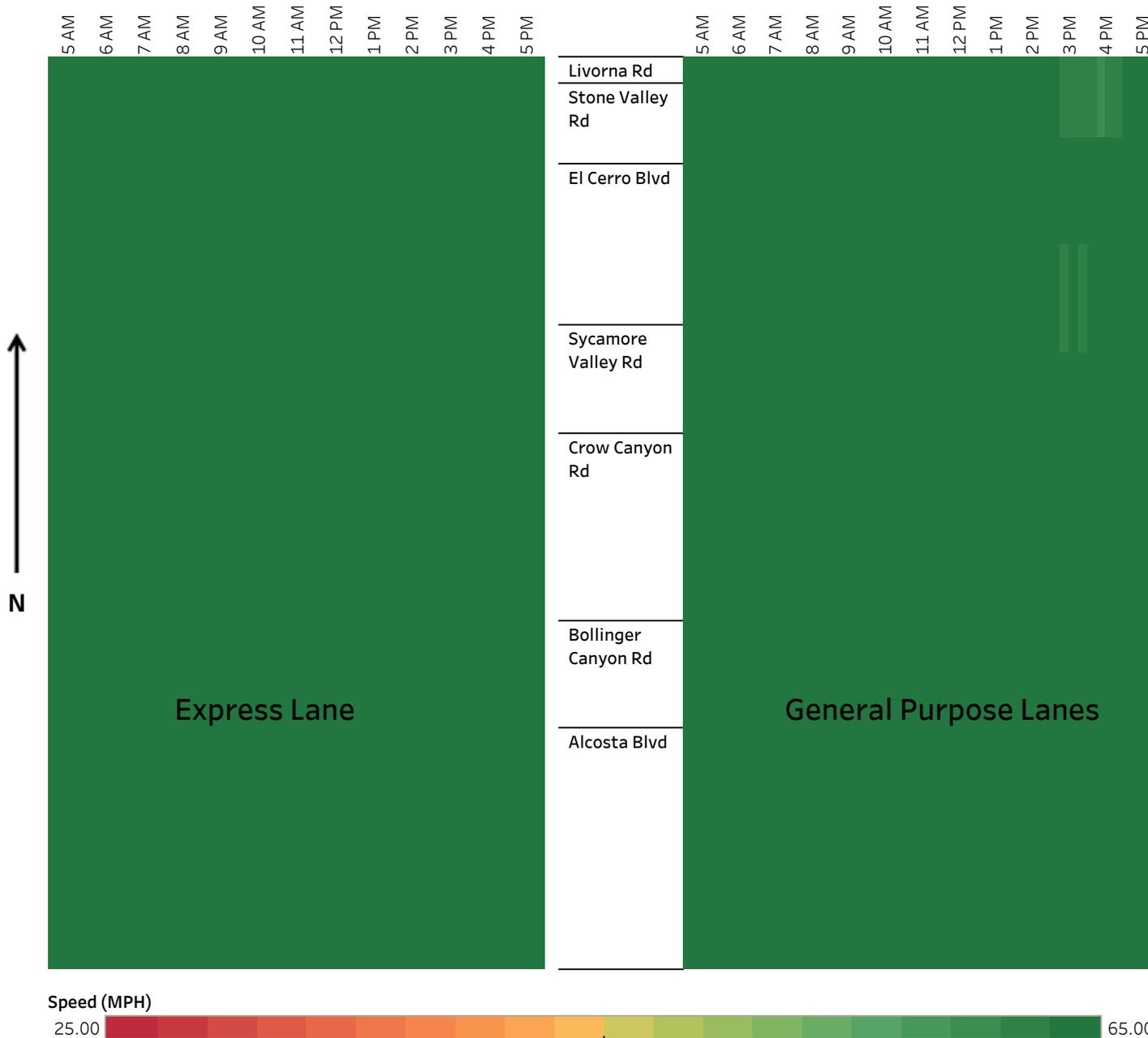
- The share of toll-free trips taken in carpools, clean air vehicles, etc. ranged from 31% to 41% per month in Q3 2020. 31% is the lowest share ever recorded, likely due to reduced carpooling during COVID-19.

- The share of vehicles without a FasTrak® toll tag or account (toll violators) ranged from 9% to 16% per month in Q3 2020. Prior to this quarter, the highest violation rate previously recorded was 9% which was reached in four prior months. The high rate of violations could be due to decreased traffic and reduced CHP presence in the corridor during COVID, both of which could make drivers less concerned about highway rules.

■ % Toll Free Trips (Carpool & Clean Air Vehicle)
■ Toll-Paying Trips %
■ Violators

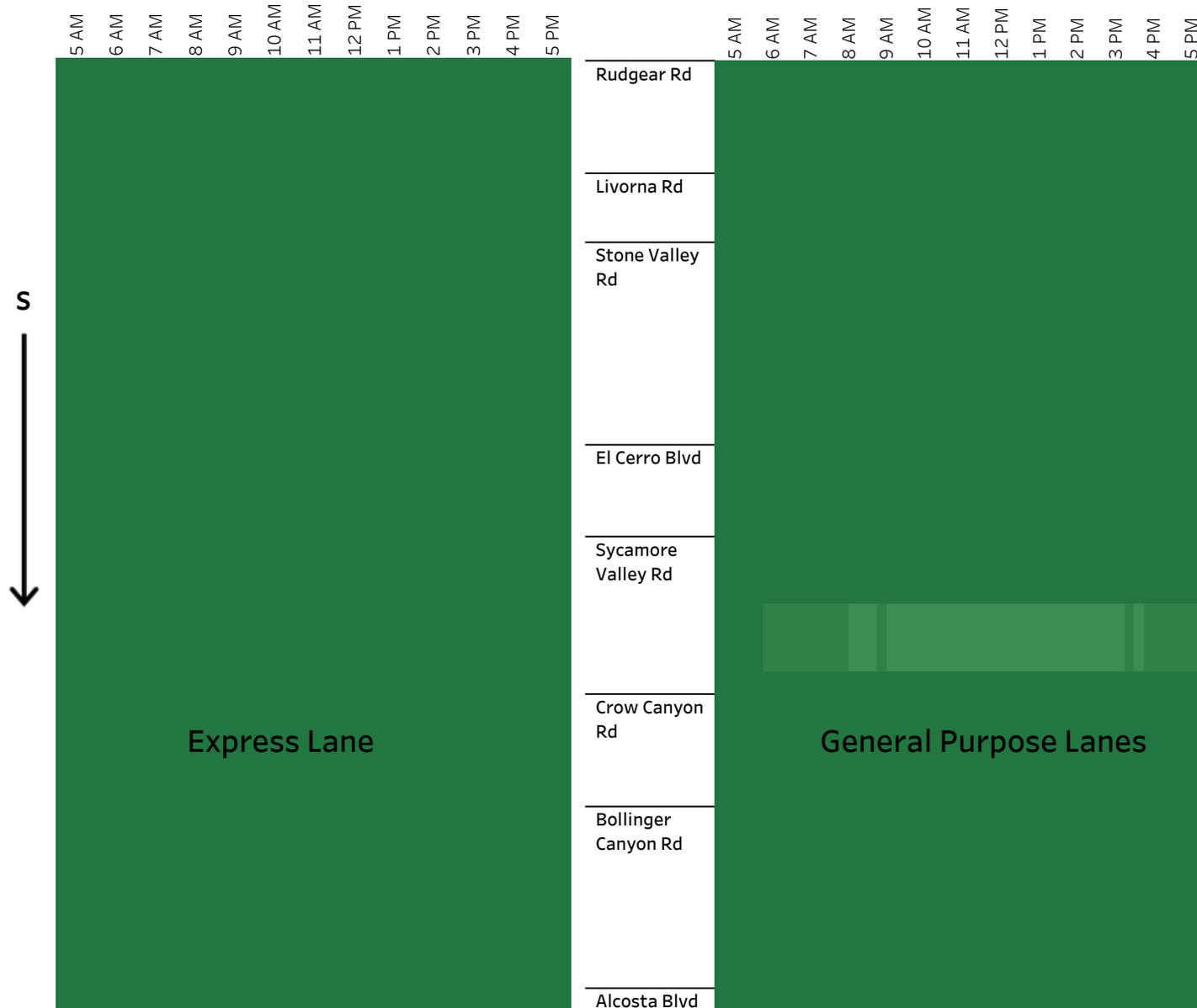
Percentages of SOVs and HOVs are based on toll tag settings read by the toll system.

Northbound Speeds by Location & Time



In Q3 2020, northbound average speeds during the day for the length of the corridor in both the express lanes and the general purpose lanes were 65 mph or better.

Southbound Speeds by Location & Time



In Q3 2020, southbound average speeds during the day for the length of the corridor in both the express lanes and the general purpose lanes were 65 mph or better.

Speed (MPH)



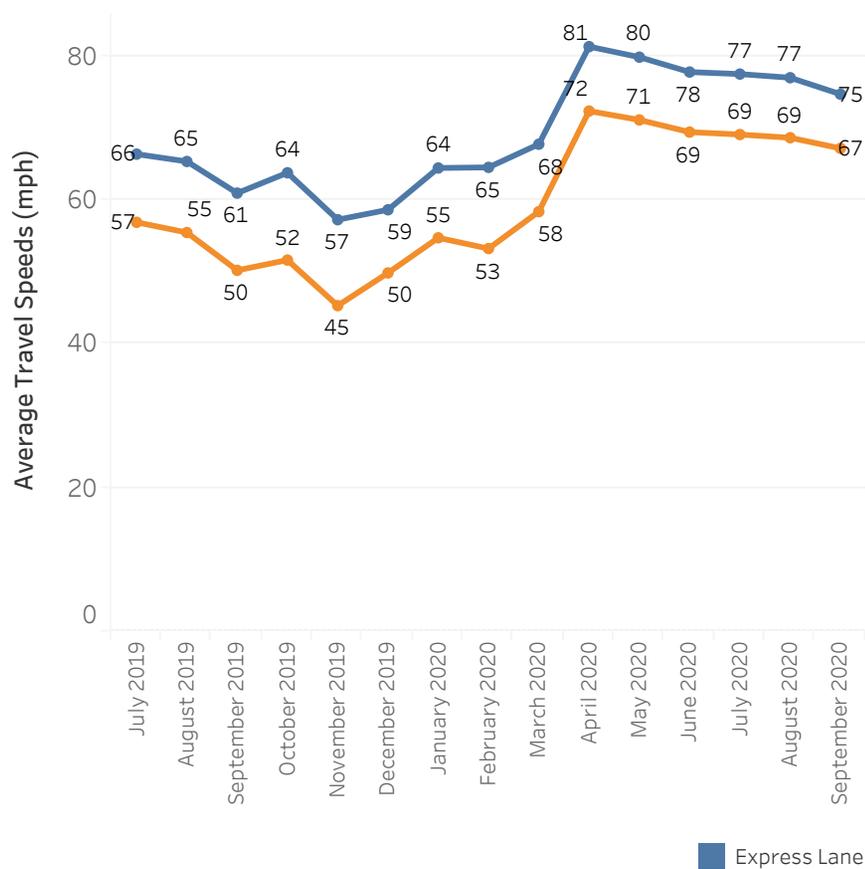
Peak Hour Average Corridor Speeds

The graphs below show average speeds in the general purpose and express lanes in the peak hour (northbound 5 - 6 p.m. and southbound 8 - 9 a.m).

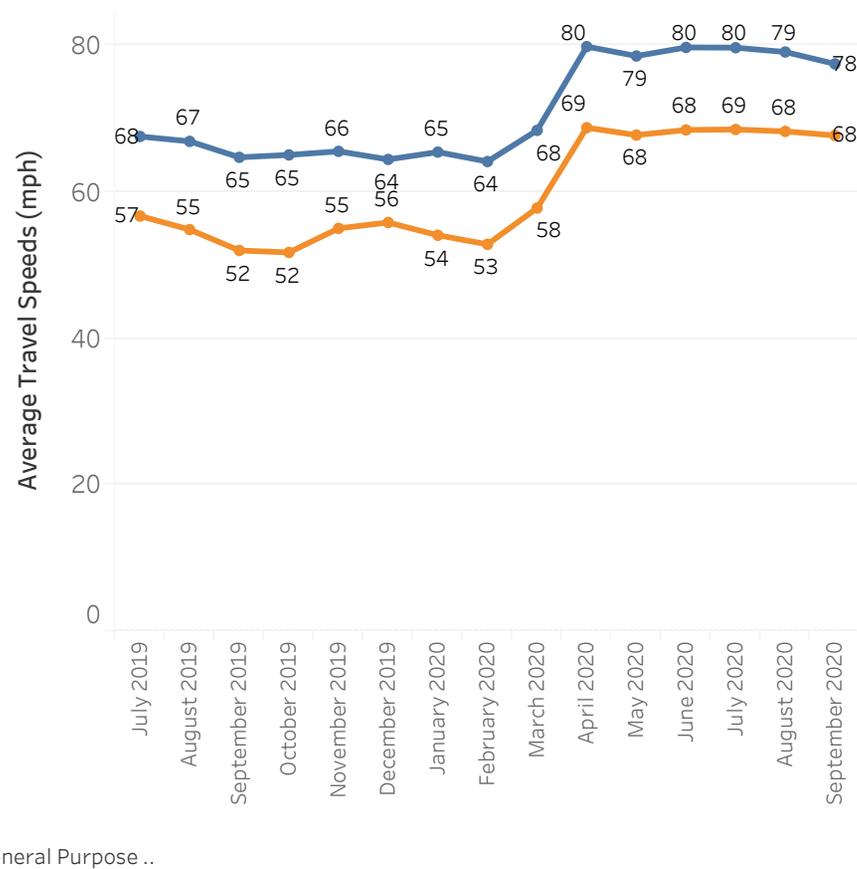
In Q3 2020, peak-hour general purpose lane average speeds increased to 68 mph northbound and southbound from their historical averages of 53 mph northbound and 55 mph southbound. Peak-hour express lane average speeds increased to 76 mph northbound and 78 mph southbound from their historical averages of 63 mph northbound and 66 mph southbound.

The average historical speed differential between the express lanes and the general purpose lanes is 10 mph northbound and 11 mph southbound. In Q3 2020, the average differentials were 8 mph northbound and 10 mph southbound.

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



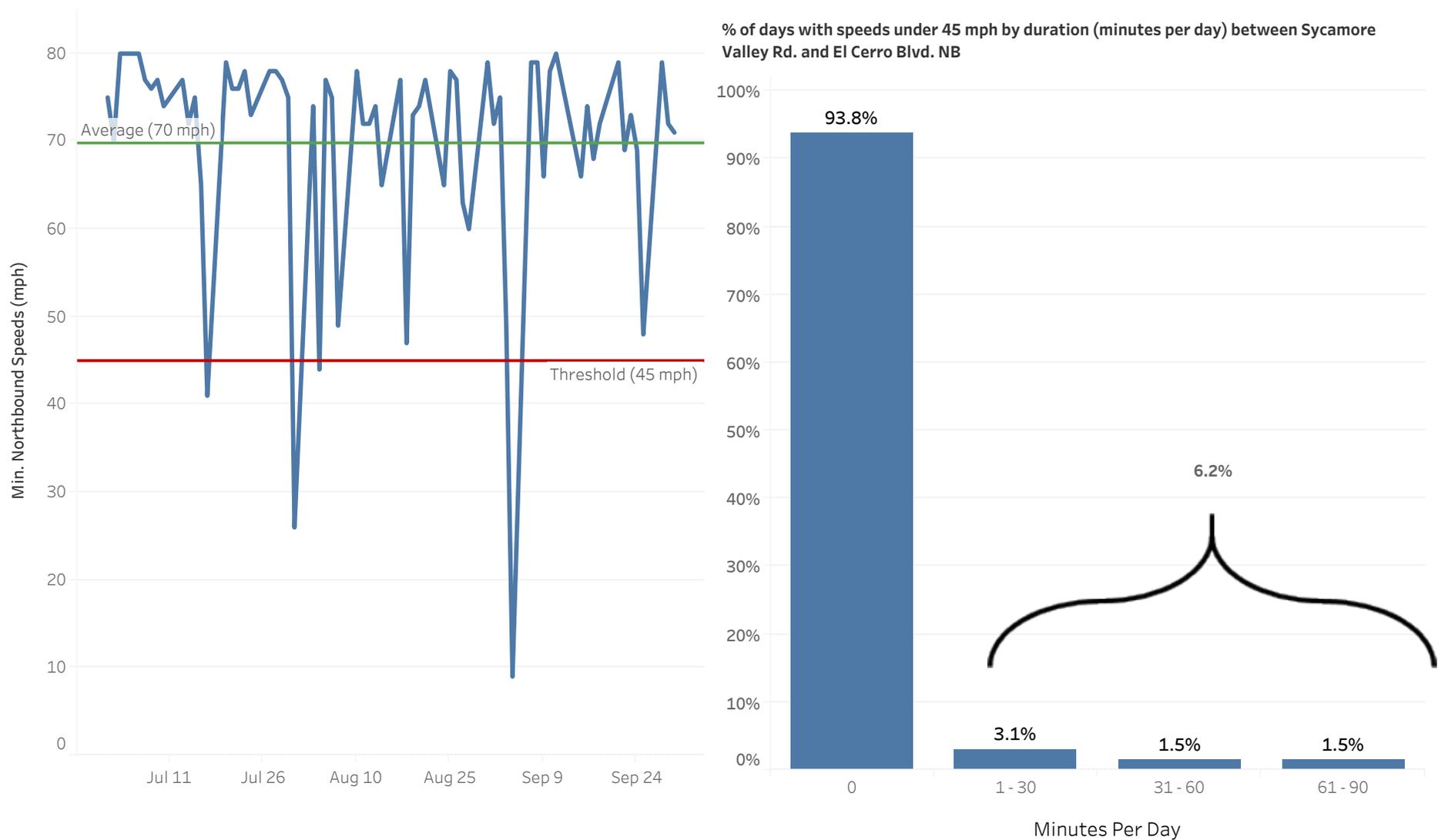
Southbound A.M. Peak Hour (8 - 9am) - Corridor



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.

Lowest NB Exp Lane Speed - near El Cerro

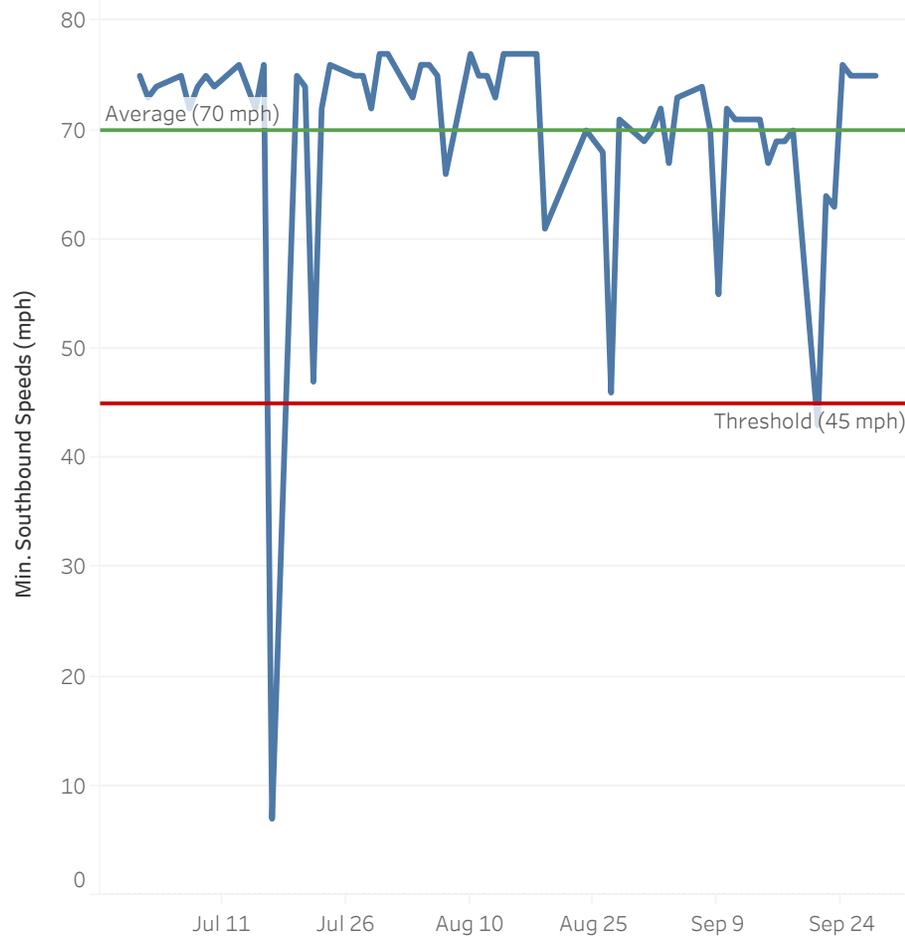
Northbound express lane traffic speeds are typically slowest between Sycamore Valley Rd. and El Cerro Blvd. With lighter traffic due to COVID-19, the lowest daily speed at this location averaged 70 mph and fell below 45 mph on just 6.1% of days in the quarter due to traffic incidents. On half those days, the slow speeds lasted 1 to 30 minutes. On the other half, the slow speeds lasted 31 to 90 minutes.



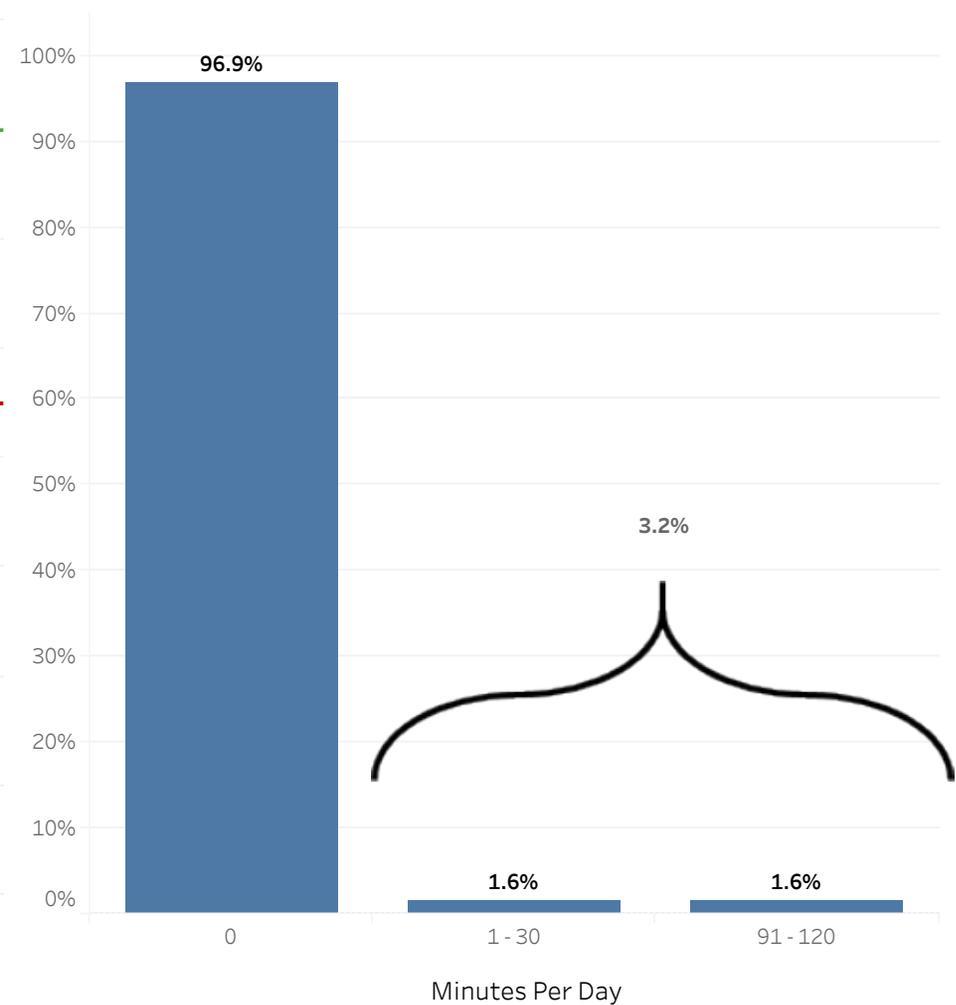
Lowest SB Exp Lane Speed - near Livorna

Southbound express lane traffic speeds are typically slowest between Rudgear Rd. and Livorna Rd. With lighter traffic due to COVID-19, the lowest daily speed at this location averaged 70 mph and fell below 45 mph on just 3.2% of days in the quarter due to traffic incidents. On half of those days, the speed decline lasted 1 to 30 minutes. On the other half, it lasted 91 and 120 minutes.

SBMinSp



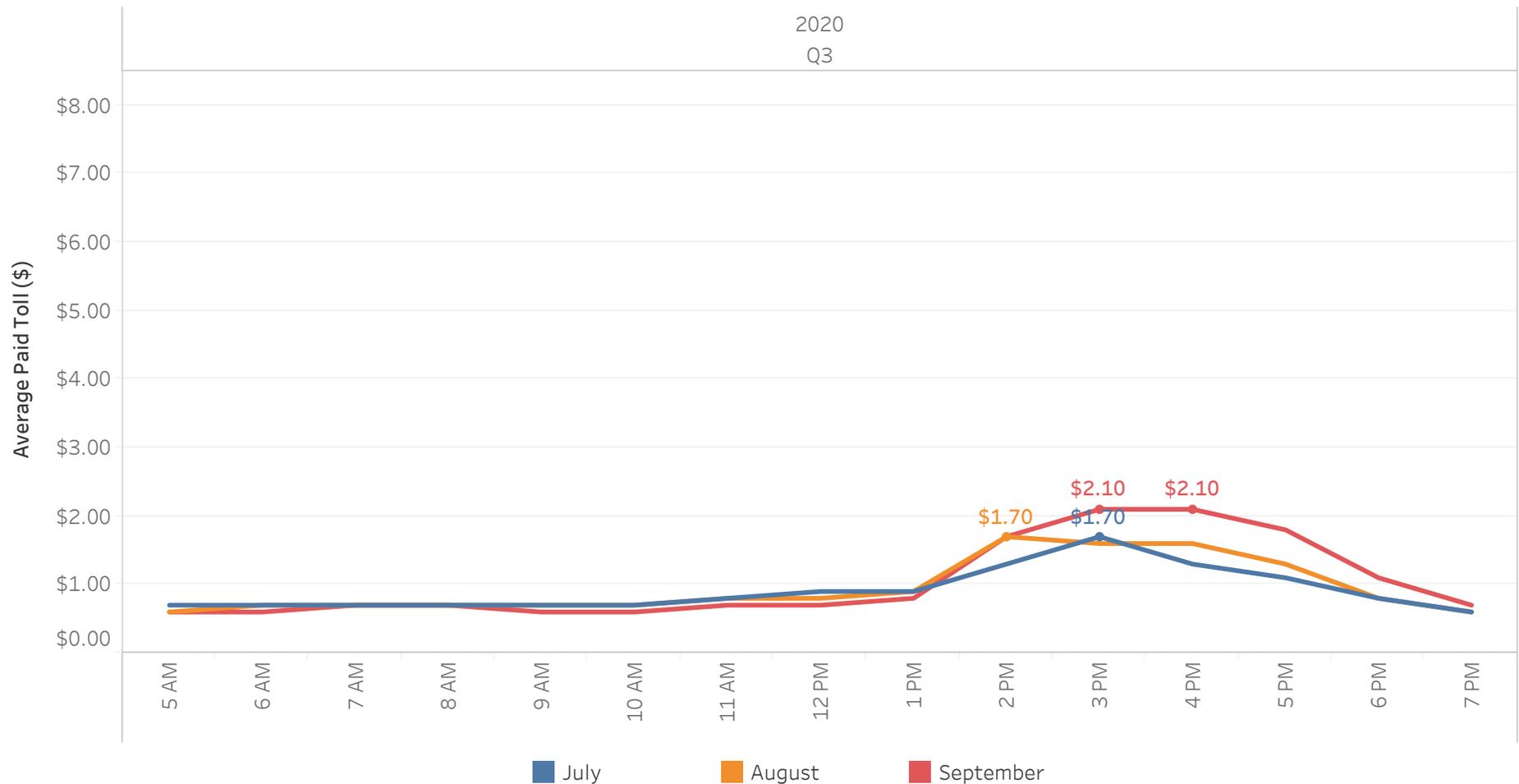
% of days with speeds under 45 mph by duration (minutes per day) between Rudgear Rd. and Livorna Rd. SB



Northbound Tolls

The tolls drivers pay depend on traffic conditions and the distances traveled. Lower traffic volumes on northbound I-680 due to COVID-19 resulted in low tolls in Q3 2020. Q3 2020 average tolls paid northbound peaked at \$2.10 in the 3 to 4 p.m. hour in September.

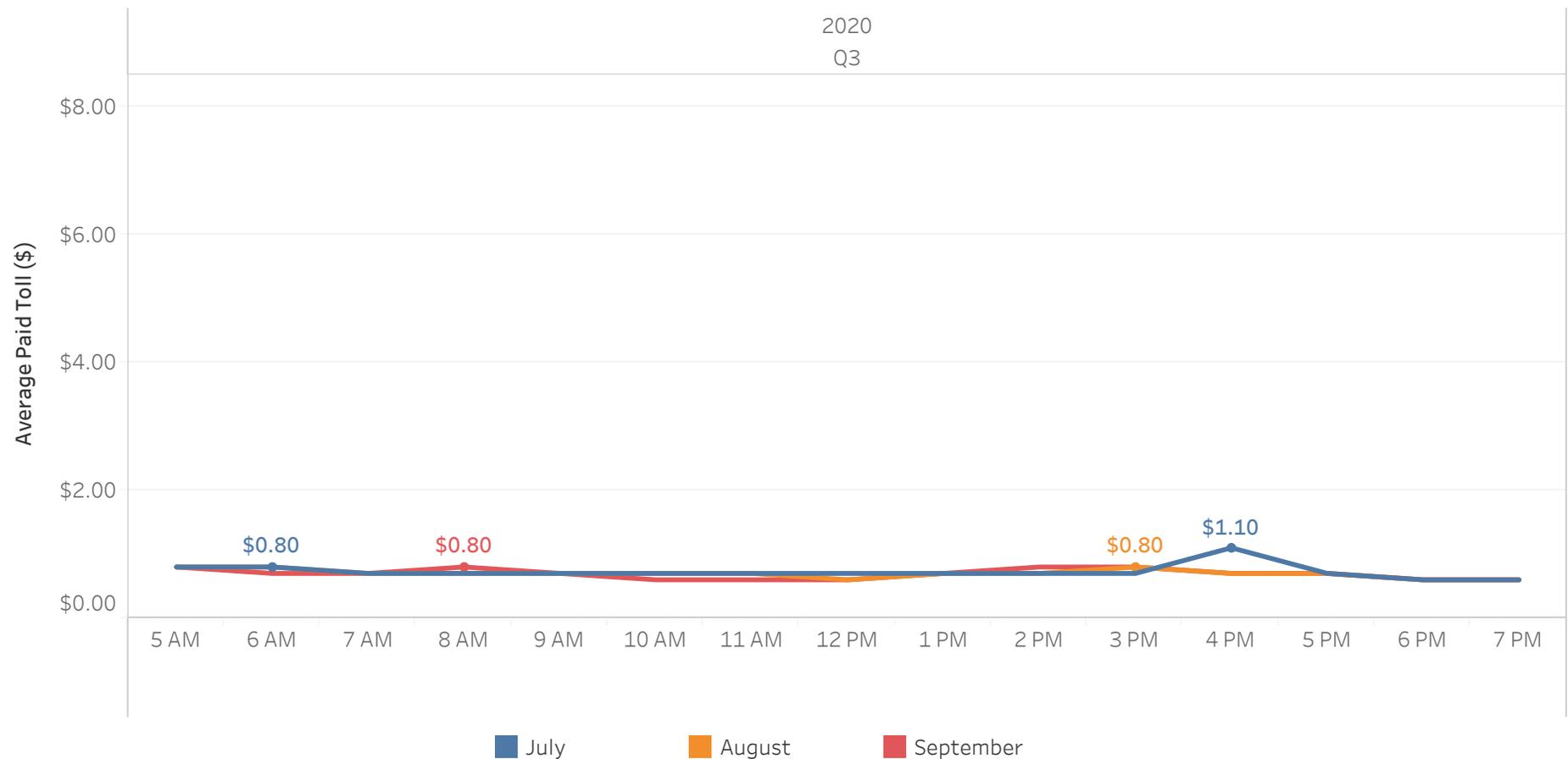
Mid-day, between 10 a.m. and 2 p.m. northbound drivers paid an average of \$0.90. Despite generally low traffic volumes, tolls paid to travel the entire corridor northbound reached a high of \$10.00 on five days in the quarter due to traffic incidents.



Southbound Tolls

The tolls drivers pay depend on traffic conditions and the distances traveled. Lower traffic volumes on southbound I-680 due to COVID-19 resulted in low tolls in Q3 2020. Q3 2020 average tolls paid southbound peaked at \$1.10 in the 5 to 6 p.m. hour in July.

Mid-day, between 10 a.m. and 2 p.m., when traffic is lighter, southbound drivers paid an average of \$0.80. Despite generally low traffic volumes, the posted toll to travel the entire corridor southbound reached a high of \$8.75 due to traffic incidents.



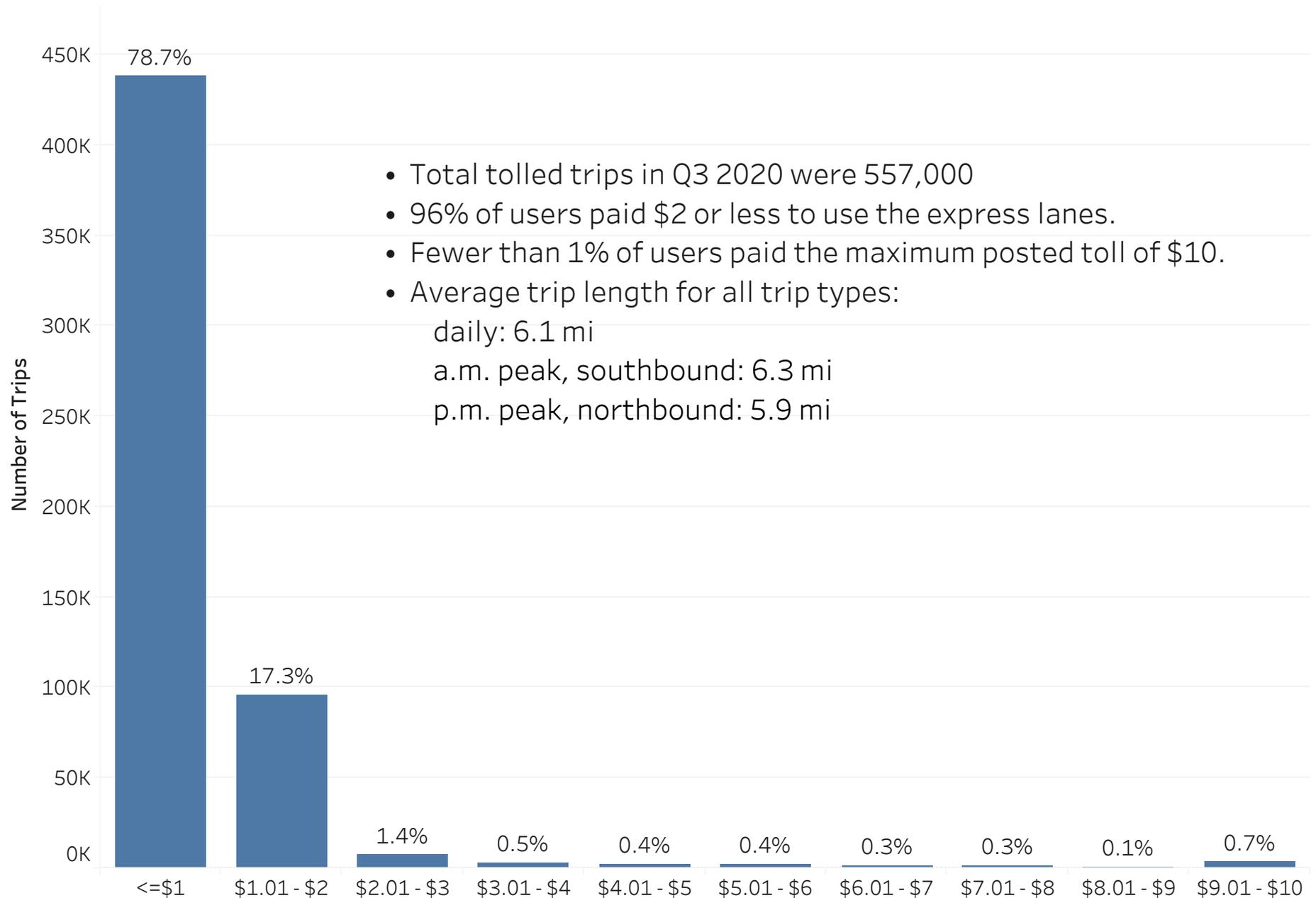
Quarterly Average Tolls Paid - Year Over Year

Q3 2020 average tolls paid northbound peaked at \$1.80 in the 3 to 4 p.m. hour, much lower than their \$5.50 peak in Q3 2019.

Typically, the southbound peak period occurs in the a.m. This was not observed in Q3 2020 due to reduced commuting during COVID-19. The Q3 2020 southbound a.m. peak toll was \$0.70 compared to \$4.70 in Q3 2019.



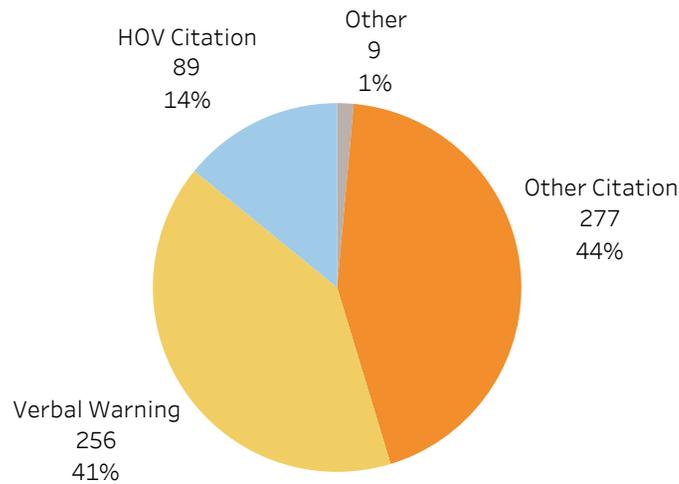
Toll Distribution



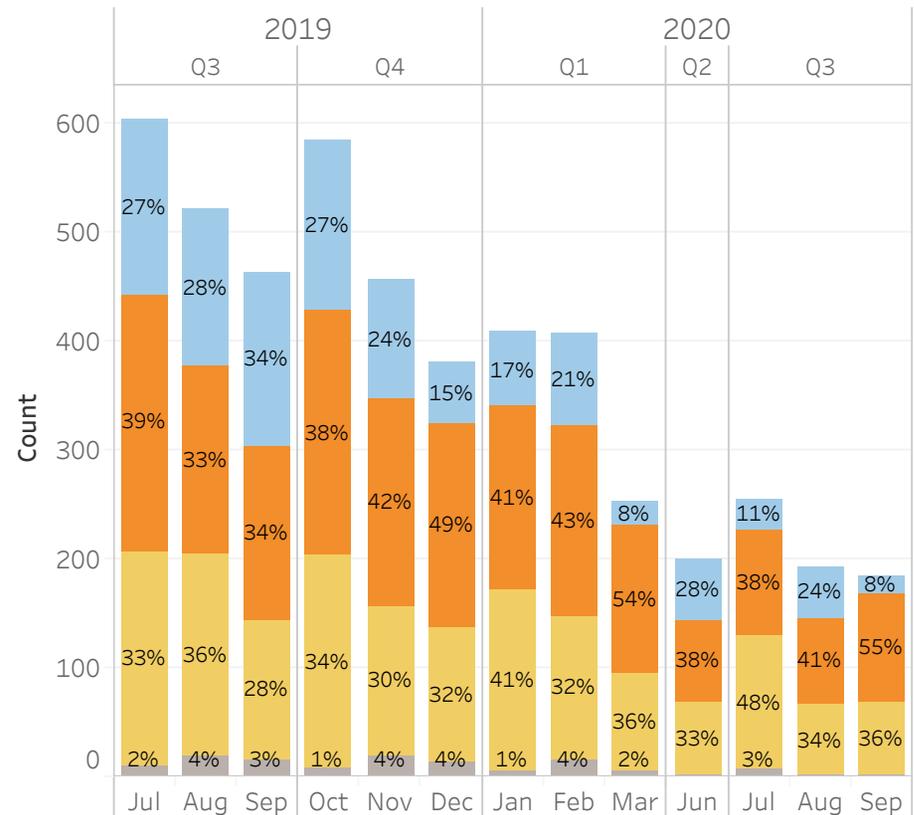
CHP Enforcement

CHP made 631 enforcement contacts in Q3 2020, 14% of which resulted HOV occupancy citations. BAIFA requested 50% fewer enforcement hours in Q3 2020 than Q3 2019 due to COVID-19-related traffic decreases, and CHP filled 76% of the hours. From Q3 2019, enforcement hours, contacts, and HOV occupancy citations fell 58%, 40% and 81%, respectively.

Total Enforcement Contacts (Q3 2020)

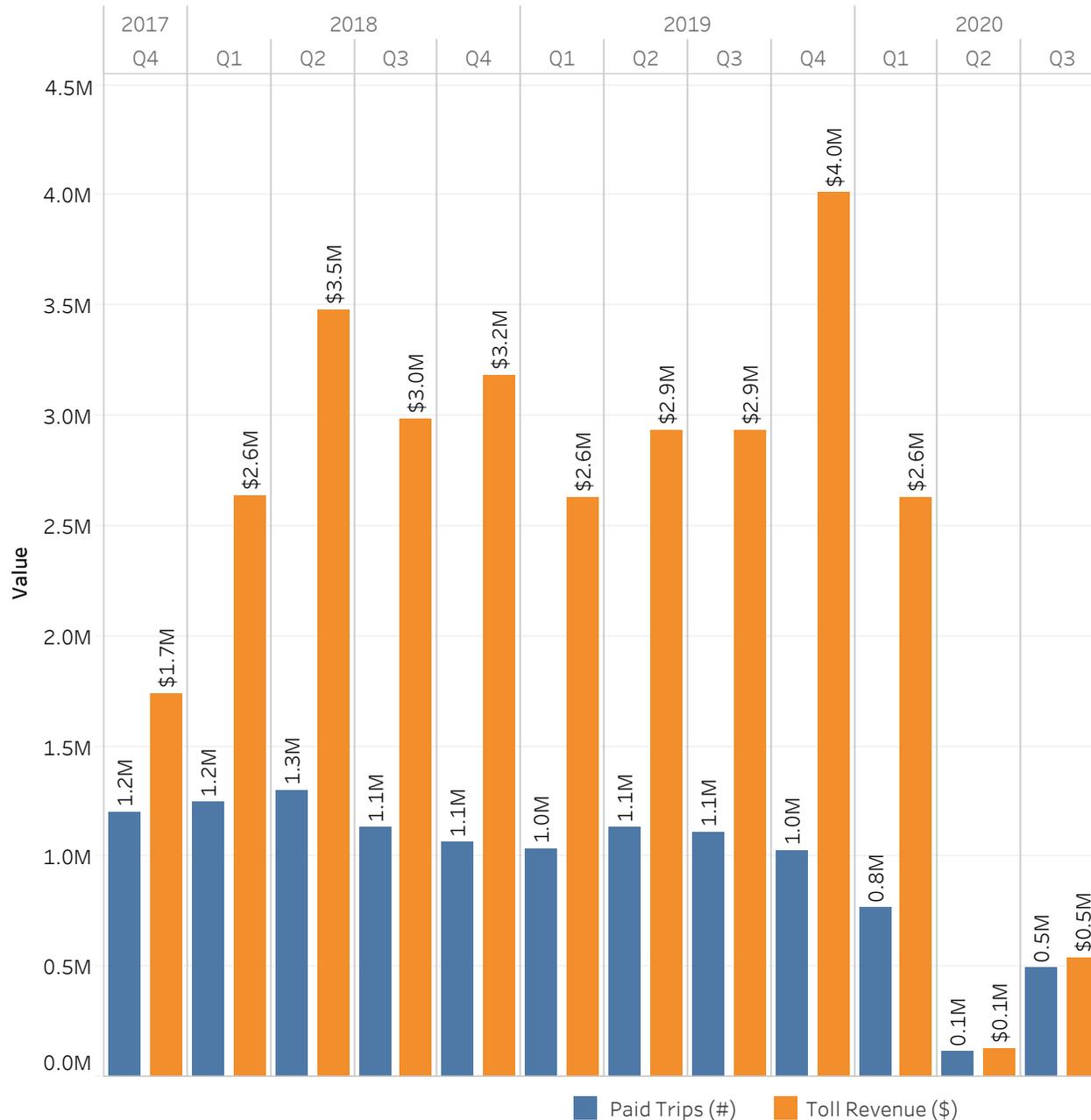


Total Enforcement Contacts



■ HOV Citation
 ■ Other Citation
 ■ Verbal Warning
 ■ Other

Express Lane Toll Revenue & Paid Trips



- Toll revenue represents tolls collected and does not include violation fees. Quarterly revenue reflects the date revenue was recorded in MTC's financial system, which can lag from the time the trip was made.
- Q3 2020 toll revenue fell 82% from Q3 2019 due to a 56% decline in paid trips as well as a decline in average toll paid per trip.
- Q3 2020 toll revenue was up over 300% from Q2 2020 when toll operations were suspended for 2 months due to COVID-19.

For more information, go to: mtc.ca.gov/express-lanes

