



I-580 Express Lane Policy Committee Meeting Agenda Monday, July 8, 2019, 10:00 a.m.

Committee Chair: Nate Miley, Alameda County, District 4 Executive Director: Arthur L. Dao
Vice Chair: David Haubert, City of Dublin Staff Liaison: [Elizabeth Rutman](#)
Members: Scott Haggerty, John Marchand, Clerk of the Commission: [Vanessa Lee](#)
 Jerry Thorne
Ex-Officio: Richard Valle, Pauline Cutter

1. Call to Order/Pledge of Allegiance

2. Roll Call

3. Public Comment

4. Consent Calendar

Page/Action

4.1. [Approve May 13, 2019 I-580 Express Lane PC Meeting Minutes](#) 1 A

5. Regular Matters

5.1. [I-580 Express Lanes \(PN 1373.002\): Monthly Operations Update](#) 3 I

5.2. [I-580 Toll System Upgrade Project \(PN 1486.002, State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project \(PN 1386.000\), I-680 Express Lanes Project \(PN 1369.000\), I-580 Express Lane Operations \(1373.002\), and I-680 Express Lane Operations \(1408.000\): Approval of Professional Services Agreement A19-0009 and Approval of Amendment No. 2 to Professional Services Agreement A17-0001 with Kapsch TrafficCom USA, Inc.](#) 13 A

6. Committee Member Reports

7. Staff Reports

8. Adjournment

Next Meeting: Monday, September 9, 2019

Notes:

- All items on the agenda are subject to action and/or change by the Commission.
- To comment on an item not on the agenda (3-minute limit), submit a speaker card to the clerk.
- Call 510.208.7450 (Voice) or 1.800.855.7100 (TTY) five days in advance to request a sign-language interpreter.
- If information is needed in another language, contact 510.208.7400. Hard copies available only by request.
- Call 510.208.7400 48 hours in advance to request accommodation or assistance at this meeting.
- Meeting agendas and staff reports are available on the [website calendar](#).
- Alameda CTC is located near 12th St. Oakland City Center BART station and AC Transit bus lines. [Directions and parking information](#) are available online.

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Alameda CTC Schedule of Upcoming Meetings for July 2019 through December 2019

Commission Chair

Supervisor Richard Valle, District 2

Commission Vice Chair

Mayor Pauline Cutter,
City of San Leandro

AC Transit

Board Vice President Elsa Ortiz

Alameda County

Supervisor Scott Haggerty, District 1
Supervisor Wilma Chan, District 3
Supervisor Nate Miley, District 4
Supervisor Keith Carson, District 5

BART

Vice President Rebecca Saltzman

City of Alameda

Mayor Marilyn Ezzy Ashcraft

City of Albany

Mayor Rochelle Nason

City of Berkeley

Mayor Jesse Arreguin

City of Dublin

Mayor David Haubert

City of Emeryville

Councilmember John Bauters

City of Fremont

Mayor Lily Mei

City of Hayward

Mayor Barbara Halliday

City of Livermore

Mayor John Marchand

City of Newark

Councilmember Luis Freitas

City of Oakland

Councilmember At-Large
Rebecca Kaplan
Councilmember Sheng Thao

City of Piedmont

Mayor Robert McBain

City of Pleasanton

Mayor Jerry Thorne

City of Union City

Mayor Carol Dutra-Vernaci

Executive Director

Arthur L. Dao

Commission and Committee Meetings

Time	Description	Date
2:00 p.m.	Alameda CTC Commission Meeting	July 25, 2019 September 26, 2019 October 24, 2019 December 5, 2019
9:00 a.m.	Finance and Administration Committee (FAC)	September 9, 2019 October 14, 2019
9:30 a.m.	I-680 Sunol Smart Carpool Lane Joint Powers Authority (I-680 JPA)	November 18, 2019
10:00 a.m.	I-580 Express Lane Policy Committee (I-580 PC)	
10:30 a.m.	Planning, Policy and Legislation Committee (PPLC)	
12:00 p.m.	Programs and Projects Committee (PPC)	

Advisory Committee Meetings

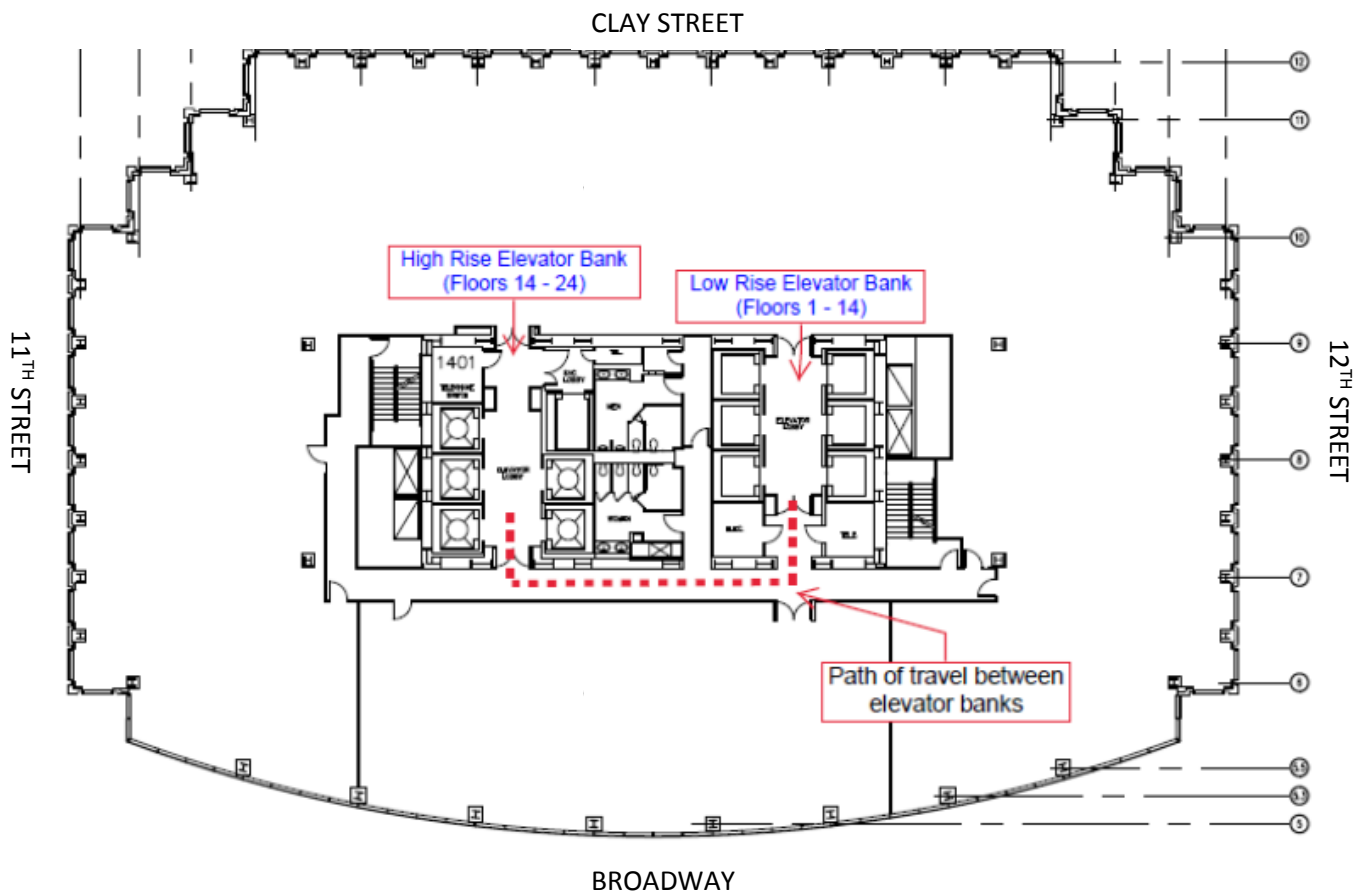
1:30 p.m.	Alameda County Technical Advisory Committee (ACTAC)	September 5, 2019 October 10, 2019 November 7, 2019
5:30 p.m.	Bicycle and Pedestrian Advisory Committee (BPAC)	September 5, 2019 November 21, 2019
9:30 a.m.	Paratransit Technical Advisory Committee (ParaTAC)	September 10, 2019
1:30 p.m.	Paratransit Advisory and Planning Committee (PAPCO)	September 23, 2019
5:30 p.m.	Independent Watchdog Committee (IWC)	November 18, 2019

All meetings are held at Alameda CTC offices located at 1111 Broadway, Suite 800, Oakland, CA 94607. Meeting materials, directions and parking information are all available on the [Alameda CTC website](http://www.AlamedaCTC.org).

1111 Broadway: Construction Notice - Building Access Changes

Alameda CTC's building offices at 1111 Broadway is undergoing significant construction work. In order to ensure smooth operations and access to the building for our public meetings, please be aware of the following changes:

- The **Broadway Street entrance is now CLOSED.** No access will be permitted from the Broadway entrances. Access to the building will only be available through the rear lobby (Clay St. / Zen Garden side).
- ADA access from 12th St. will remain open. The accessibility ramp on Broadway plaza will also remain in place through the duration of construction.
- Alameda CTC's offices on the 8th floor will continue to have open elevator access to any member of the public. Please follow the path of travel to the low rise elevator bank. If you require assistance accessing the floor, building security will be happy to escort any tenant employees or guests as needed.



Accessibility

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I-580 Express Lane Policy Committee Meeting Minutes Monday, March 11, 2019, 10:00 a.m.

4.1

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1. Call to Order/Pledge of Allegiance

2. Roll Call

A roll call was conducted. All members were present with the exception of Commissioner Marchand.

Subsequent to the roll call

Commissioner Marchand arrived during item 5.1.

3. Public Comment

There were no public comments.

4. Consent Calendar

4.1. Approve the March 11, 2019 I-580 Express Lane PC meeting minutes.

Commissioner Haggerty moved to approve consent calendar. Commissioner Haubert seconded the motion. The motion passed with the following votes:

Yes: Cutter, Haggerty, Haubert, Miley, Thorne, Valle

No: None

Abstain: None

Absent: Marchand

5. Regular Matters

5.1. I-580 Express Lanes: Monthly Operations Status Update

Ashley Tam presented the I-580 Express Lanes monthly operations update. The update covered average trips by month, user trip breakdown, corridor speed and density heat maps for both directions of travel, and historical toll rates. She concluded by reviewing estimated gross toll revenues versus forecasted operating budget.

Commissioner Marchand wanted to know the average fine amount for CHP enforcement. Liz Rutman stated that the agency does not capture that data as revenue from fees and penalties do not come to the agency.

Commissioner Cutter wanted to know if the new temporary paper license plate requirement has helped lowered violations. Commissioner Haggerty added that the it was a bill written to help identify violators.

This item was for information only.

6. Committee Member Reports

There were no committee reports.

7. Staff Reports

There were no staff reports.

8. Adjournment/ Next Meeting

The next meeting is:

Date/Time: Monday, June 10, 2019 at 10:00a.m.

Location: Alameda CTC Offices, 1111 Broadway, Suite 800, Oakland, CA 94607



Memorandum

5.1

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DATE: July 1, 2019

TO: I-580 Express Lane Policy Committee

FROM: Ashley Tam, Associate Transportation Engineer
Liz Rutman, Director of Express Lanes Implementation and Operations

SUBJECT: I-580 Express Lanes (PN 1373.002): Monthly Operation Update

Recommendation

This item is to provide the Commission with an update on the operation of the I-580 Express Lanes. This item is for information only.

Summary

The Alameda CTC is the project sponsor of the I-580 Express Lanes, located in the Tri-Valley corridor through the cities of Dublin, Pleasanton, and Livermore, which opened to traffic on February 19th and 22nd of 2016. See Attachment A for express lane operation limits.

The April/May 2019 operations report indicates that the express lane facility continues to provide travel time savings and travel reliability throughout the day. Express lane users typically experienced higher speeds and lesser average lane densities than the general purpose lanes, resulting in a more comfortable drive and travel time savings for express lane users.

Background

The I-580 Express Lanes, extending from Hacienda Drive to Greenville Road in the eastbound direction and from Greenville Road to the I-680 Interchange in the westbound direction, were opened to traffic on February 19th and 22nd of 2016 in the eastbound and westbound directions, respectively. Motorists using the I-580 Express Lanes facility benefit from travel time savings and travel reliability as the express lanes optimize the corridor capacity by providing a new choice to drivers. Single occupancy vehicles (SOVs) may choose to pay a toll and travel within the express lanes, while carpools, clean-air vehicles, motorcycles, and transit vehicles enjoy the benefits of toll-free travel in the express lanes.

An All Electronic Toll (AET) collection method has been employed to collect tolls. Toll rates are calculated based on real-time traffic conditions (speed and volume) in express and

general purpose lanes and can change as frequently as every three minutes. California Highway Patrol (CHP) officers provide enforcement services and the California Department of Transportation (Caltrans) provides roadway maintenance services through reimbursable service agreements.

April/May 2019 Operations Update:

Approximately 739,000 and 738,000 express lane trips were recorded during operational hours in April and May, respectively, which is an average of approximately 33,600 daily trips. Table 1 presents the breakdown of trips based on toll classification and direction of travel. Pursuant to the Commission-adopted "Ordinance for Administration of Tolls and Enforcement of Toll Violations for the I-580 Express Lanes," if a vehicle uses the express lanes without a valid FasTrak® toll tag then the license plate read by the Electronic Tolling System is used to assess a toll either by means of an existing FasTrak account to which the license plate is registered or by issuing a notice of toll evasion violation to the registered vehicle owner. Approximately 75 percent of all trips by users without a toll tag are assessed tolls via FasTrak account.

Table 1. Express Lane Trips by Type and Direction

Trip Classification		Percent of Trips ¹
		April/May
By Type	HOV-eligible with FasTrak flex tag	48%
	SOV with FasTrak standard or flex tag	33%
	No valid toll tag in vehicle	19%
By Direction	Westbound	44%
	Eastbound	56%

1. Excludes "trips" by users that had no toll tag and either no license plate or one that could not be read by the Electronic Tolling System with sufficient accuracy that a toll could be assessed.

Express lane users typically experience higher speeds and lesser lane densities than the general purpose lanes. Lane density is measured by the number of vehicles per mile per lane and reported as Level of Service (LOS). LOS is a measure of freeway performance based on vehicle maneuverability and driver comfort levels, graded on a scale of A (best) through F (worst).

Attachment B presents the speed and density heat maps for the I-580 corridor during revenue hours for the six-month period from October 2018 – March 2019. These heat maps are a graphical representation of the overall condition of the corridor, showing the average speeds and densities along the express lane corridor and throughout the day for both the express and general purpose lanes, and are used to evaluate whether the express lanes are meeting both federal and state performance standards. During these six months, the average speeds at each traffic sensor location in the westbound express lane ranged from 50 to over 70 mph during the morning commute hours (5 am to 11 am) with the lower speeds occurring between Isabel Avenue and Santa Rita Road. The

express lane operated at LOS C or better at most times, with a 30-minute period of LOS D experienced near Fallon Road in the morning commutes. By comparison, the general purpose lanes experienced average speeds as low as 45 mph and LOS D throughout longer sections of the corridor. During the evening commute, a small period of westbound reverse-commute congestion between Hacienda Road and San Ramon Road is observed from 4 pm to 6 pm, though the express lane continued to operate at LOS B or better during this time. Outside of the commute hours, westbound express lane users experience average speeds of 65 mph or higher and average LOS A.

In the eastbound direction, average express lane speeds from October 2018 through March 2019 ranged from 20 to 70 mph during the evening commute hours (2 pm – 7 pm) with the lowest speeds occurring at the eastern terminus of the express lanes, between Vasco Road and Greenville Road. Average express lane speeds throughout the rest of the day exceeded 65 mph. Most of the express lane corridor operates at LOS C or better during the evening commute hours, with limited sections of degraded LOS at the western end of the express lanes between 3 pm and 5:30 pm and at the eastern terminus between 3 pm and 7 pm. The express lanes averaged LOS B or better throughout the rest of the day in all locations. By comparison, the general purpose lanes experienced lower speeds and degraded levels of services for longer periods of time than the express lanes during the evening commute hours.

Table 2 presents the maximum posted toll rates to travel the entire corridor in each direction in April and May 2019, along with the average toll assessed to toll-paying users.

Table 2. Toll Rate Data

Month	Direction	Maximum Posted Toll (Travel Entire Corridor)	Average Assessed ¹ Toll (All Toll Trips)
April/ May	Westbound	\$13.00 (4 of 44 days)	\$2.69
	Eastbound	\$12.00 (25 of 44 days)	\$3.44

¹ Assessed toll is the toll rate applied to non-toll-free trips and reflects potential revenue generated by the trip. Not all potential revenue results in actual revenue received.

Through May of Fiscal Year 2018-19, the I-580 Express Lanes recorded over 7.8 million total trips. Total gross revenues received include \$12.2 million in toll revenues and \$2.5 million in violation fees and penalties; the pro-rated forecast operating budget is \$5.1 million.

Fiscal Impact: There is no fiscal impact associated with the requested action.

Attachments:

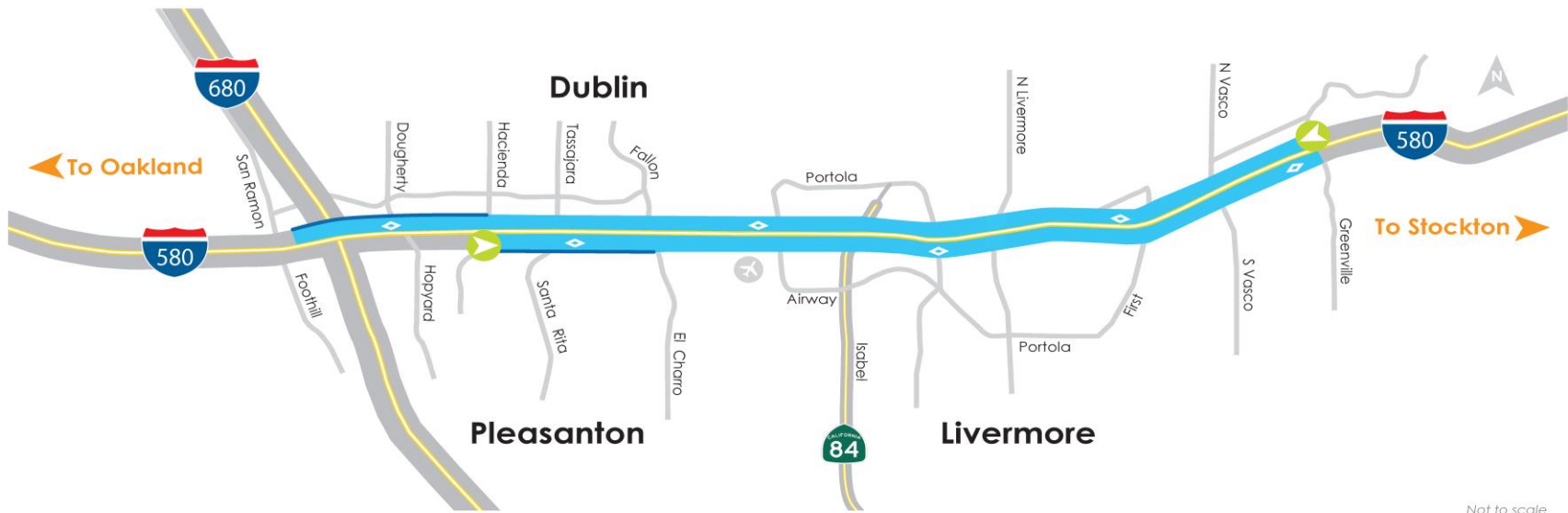
- A. I-580 Express Lanes Location Map
- B. I-580 Corridor Express Lanes Heat Maps October 2018 – March 2019

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I-580 Express Lanes Location Map

5.1A



Not to scale



Two Eastbound Express Lanes

Lanes begin at Hacienda

No entry/exit from eastbound express lanes from Hacienda to Fallon / El Charro.

Please note: For access to Santa Rita Road, do not enter express lanes.



One Westbound Express Lane

Lane begins at Greenville

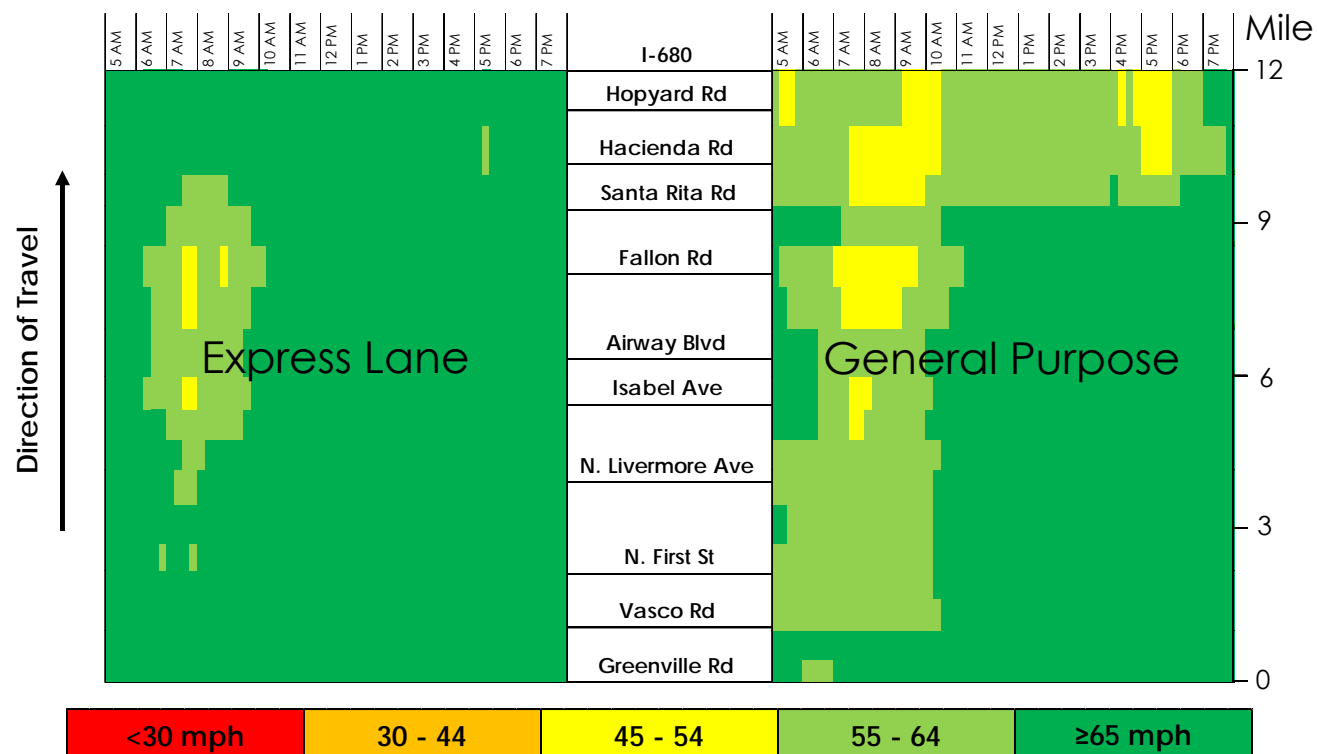
No entry/exit from westbound express lane from Hacienda to end.

Please note: For access to I-680 or Dougherty, exit express lane before Hacienda.

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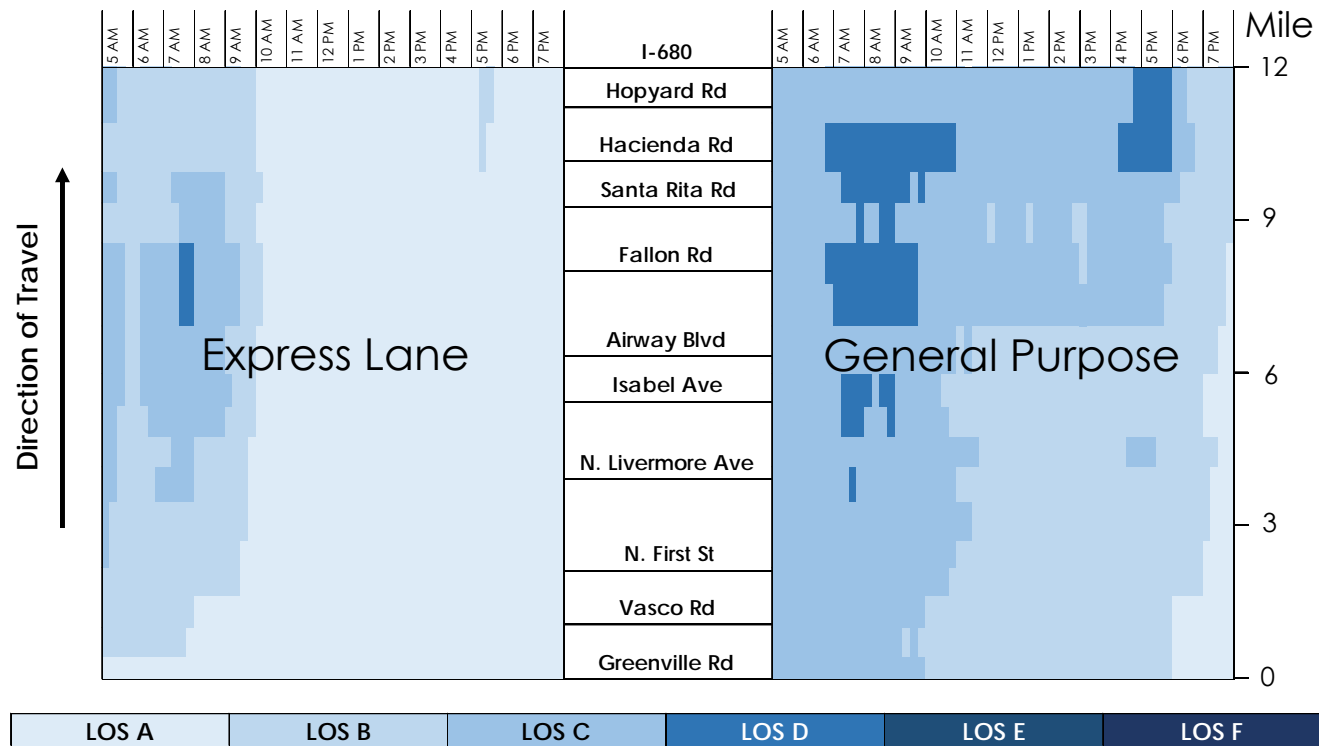
Westbound I-580 Corridor Speed Heat Maps

Monday-Friday, October 2018 – March 2019



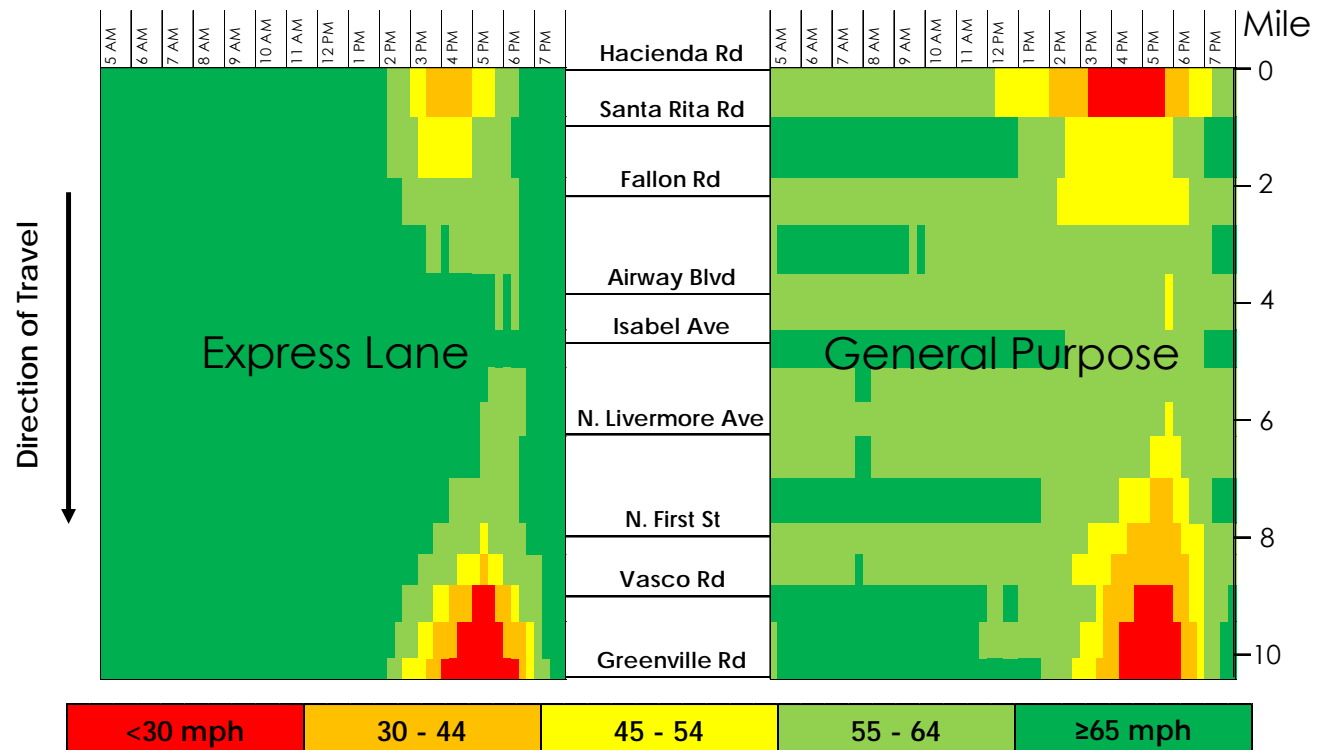
Westbound I-580 Corridor Density Heat Maps

Monday-Friday, October 2018 – March 2019



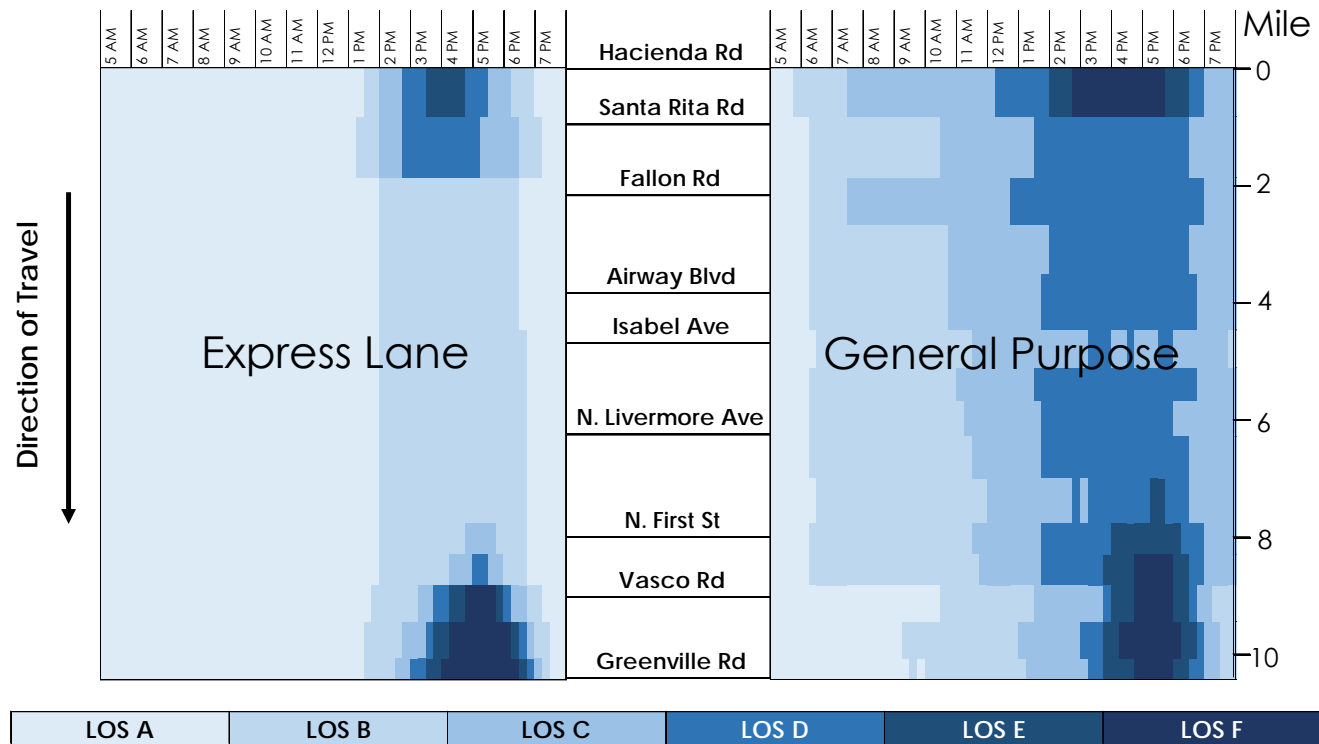
Eastbound I-580 Corridor Speed Heat Maps

Monday-Friday, October 2018 – March 2019



Eastbound I-580 Corridor Density Heat Maps

Monday-Friday, October 2018 – March 2019





Memorandum

5.2

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DATE: July 1, 2019

TO: I-580 Express Lane Policy Committee

FROM: Liz Rutman, Director of Express Lanes Implementation and Operations

SUBJECT: I-580 Toll System Upgrade Project (PN 1486.002), State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project (PN 1386.000), I-680 Express Lanes Project (PN 1369.000), I-580 Express Lane Operations (1373.002), and I-680 Express Lane Operations (1408.000): Approval of Professional Services Agreement A19-0009 and Approval of Amendment No. 2 to Professional Services Agreement A17-0001 with Kapsch TrafficCom USA, Inc.

Recommendation

- It is recommended that the Commission authorize the Executive Director to:
1. Execute Professional Services Agreement A19-0009 with Kapsch TrafficCom USA, Inc. (Kapsch) for Electronic Toll System Integration Services for the I-580 and I-680 Express Lane programs for a not-to-exceed amount of \$60 million.
 2. Execute Amendment No. 2 to Agreement A17-0001 with Kapsch for Electronic Toll System Integration Services for the I-680 Express Lanes.

Summary

The Alameda CTC operates and maintains both the I-580 Express Lanes and the I-680 Sunol Southbound Express Lane, the latter on behalf of the Sunol Smart Carpool Lane Joint Powers Authority. In March 2018, the Commission approved the release of a request for proposals (RFP) for Electronic Toll System Integrator (ETSI) Services for the I-580 Express Lanes and future express lane corridors and authorized the Executive Director to negotiate a Professional Services Agreement for ETSI Services with the top ranked firm so that the I-580 Express Lanes toll system could be upgraded with enhanced vehicle detection and identification. RFP 18-0017 was released on April 20, 2018 and three responsive proposals were received by the proposal due date of August 1, 2018. At the conclusion of the proposal evaluation process, Alameda CTC selected Kapsch as the top-ranked firm.

Under Agreement A17-0001, Kapsch is already under contract with Alameda CTC to deliver the new I-680 Express Lanes toll system. Agreement A17-0001 includes a one year warranty period for operations & maintenance (O&M) services and an option for an additional three years of O&M services, but those services are not fully scoped in the agreement and do not include any performance metrics. Staff recommends that O&M services for the I-680 Express Lanes be included in the new Agreement A19-0009, which is before you, to ensure consistent performance requirements and streamline the oversight of the Kapsch team. For greatest clarity, staff recommends formally amending the existing Agreement A17-0001 to eliminate the warranty period and optional O&M Services from the scope of work.

In addition to the I-580 Express Lanes Toll System Upgrade, staff recommends including in this new Agreement A19-0009 the extension of the I-680 Express Lanes associated with the State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project. This project is currently in final design and ETSI input is required to ensure the toll system needs are accommodated during design. This task falls within the RFP scope element of future express lanes.

After a thorough review of the submitted cost proposal and comparison to Alameda CTC's independent cost estimate, Alameda CTC negotiated Agreement A19-0009 with Kapsch and has determined that the negotiated not-to-exceed amount of \$60,000,000 is fair, reasonable, and justifiable to both the Alameda CTC and the consultant. The scope of work includes implementation of a new I-580 Express Lanes toll system, extension of the I-680 Express Lanes associated with the State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project, image review services for both the I-580 and I-680 express lanes, and full turnkey O&M services for both the I-580 and I-680 express lanes. This agreement is for a base term of 9 years with an option to extend for up to 4 additional years.

This Agreement will be funded from a combination of I-580 and I-680 Express Lane Toll Revenue funds, as well as State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project funds.

Background

The I-580 Express Lanes, extending from Hacienda Drive to Greenville Road in the eastbound direction and from Greenville Road to the I-580/I-680 Interchange in the westbound direction, were opened to traffic in February 2016. Motorists using the I-580 Express Lanes facility benefit from travel time savings and travel reliability compared to those in the general purpose lanes. An All Electronic Toll (AET) collection method has been employed to collect tolls.

The I-580 Express Lanes toll system, which was competitively procured in 2009 and put into revenue service in February 2016, now lacks technological advances in vehicle detection and identification that would increase both enforcement and toll revenues. For example, the current toll system requires a 100% license plate match in order to associate images captured for the same vehicle at different toll gantries when no toll tag is detected. The toll system proposed by Kapsch matches images using the license plate either in full or by a nearness of match when based on partial plate interpretation, transaction times, and a

match of other vehicle characteristics such as vehicle shape, size, and color. This results in rejection of fewer images and thus increased revenue. In addition, manual image review was suspended for the current toll system in May 2017 after Commissioners questioned the \$1 million per year cost, and staff's evaluation of the benefit/cost analysis confirmed Commissioners' concerns when it showed that the cost exceeded potential revenues to be gained from such efforts. With today's current system, without manual image review, the transaction is discarded if the system cannot read the image with sufficient confidence in the result, and if the vehicle does not have a toll tag. Revenue leakage due to these deficiencies in the current toll system is estimated at over \$600,000 per year.

In March 2018, the Commission approved the release an RFP for ETSI Services for the I-580 Express Lanes and future express lane corridors and authorize the Executive Director to negotiate a Professional Services Agreement for ETSI Services with the top ranked firm. The RFP was released on April 20, 2018. A mandatory pre-proposal meeting was held on May 9, 2018, and was attended by six (6) firms with interest in being the prime contractor. By the proposal due date, August 1, 2018, Alameda CTC received responsive proposals from the following three firms:

- Conduent State & Local Solutions, Inc.
- emovis technologies US, Inc.
- Kapsch TrafficCom North America (a.k.a. Kapsch TrafficCom USA, Inc.)

An independent selection panel comprised of representatives from the Metropolitan Transportation Commission, Santa Clara Valley Transportation Authority, and Alameda CTC reviewed the proposals submitted. All three firms were invited to provide demonstrations of their toll systems on October 17, 2018; interviews were conducted for all three firms on October 19, 2018. At the conclusion of the evaluation process, Alameda CTC selected Kapsch as the top-ranked firm.

Alameda CTC has negotiated with Kapsch to solidify the scope of work for Agreement A19-0009 and reached concurrence on a not-to-exceed amount of \$60 million. In addition to the implementation of a new I-580 Express Lanes toll system and providing O&M services for eight (8) years, the scope of work includes several other items described in the following paragraphs.

In June 2016, the Commission authorized the execution of Professional Services Agreement A17-0001 with Kapsch for ETSI Services for the I-680 Express Lanes Project for a not-to-exceed amount of \$15 million. The scope of work includes implementation of the new I-680 Express lanes toll system, one year of warranty period of O&M services, and an option for an additional three years of O&M services. Revenue services for the new toll system are expected to begin in late 2020. However, the O&M services are not fully scoped in the agreement and do not include any performance metrics. Staff recommends that the I-680 Express Lanes follow current industry contracting practices, which are included in the new Agreement A19-0009 for the I-580 Express Lanes, and eliminate the warranty period and initiates turnkey O&M services for the I-680 Express Lanes upon completion of the Operational Acceptance Test, which is when the agency accepts that the toll system is fully operational.

However, rather than amend the existing Agreement with A17-0001 to incorporate a more refined O&M scope and associated budget, staff recommends that O&M services for the I-680 Express Lanes be incorporated into the new Agreement A19-0009, ensuring consistent performance requirements for both corridors. For greatest clarity, staff recommends formally amending the Agreement A17-0001 to eliminate the Warranty Period and Optional O&M Services from the scope of work.

In addition, with the selection of Kapsch for the I-580 Express Lanes, staff recommends that the I-580 and I-680 toll systems utilize a single (joint) Host System design, which will reduce design costs as well as long-term O&M costs. Host System O&M services are performed in parallel with the roadway O&M services for each corridor, and O&M costs for the joint host system will be funded equally by I-580 and I-680 toll revenues.

Along with O&M services, Kapsch will perform image review services for both the I-580 and I-680 express lanes, with services beginning as each new toll system begins revenue operations. This includes provision of automated optical character recognition for license plates as well as any required manual image review needed to process toll transactions accurately and meet all required performance metrics. Staff has evaluated the cost proposal for image review services and determined that the revenue gained by adding manual image review services is greater than the costs and thus recommends approving the service as part of the contract.

Finally, staff recommends including in Agreement A19-0009 the extension of the I-680 Express Lanes associated with the State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project. This project is currently in final design and ETSI input is required to ensure the toll system needs are accommodated during design. The construction is expected to be completed in 2023. As the Electronic Toll System Integrator for the I-680 Express Lanes, the extension should be incorporated into the I-680 toll system currently being developed by Kapsch. This task falls within the RFP scope element of future express lanes.

Levine Act Statement: The Kapsch team did not report a conflict in accordance with the Levine Act.

Fiscal Impact: The fiscal impact for approving this item includes \$3 million in previously allocated Measure BB funds for subsequent expenditure. This amount is included in the State Route 84 Widening and State Route 84/Interstate 680 Interchange Improvements Project funding plan and sufficient budget has been included in the proposed FY 2019-2020 Capital Program Budget. In addition, this action will authorize the encumbrance of \$57 million in I-580 and I-680 Express Lane Toll Revenues to be utilized over the next 13 years. Adequate funding has been included in the Alameda CTC budget adopted for FY 2018-2019 and additional funding will be included in subsequent Alameda CTC and Sunol JPA subsequent fiscal year budgets as needed.