



Meeting Notice

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Executive Director
Arthur L. Dao

I-580 Express Lane Policy Committee

Monday, May 8, 2017, 10:00 a.m.

1111 Broadway, Suite 800
Oakland, CA 94607

Mission Statement

The mission of the Alameda County Transportation Commission (Alameda CTC) is to plan, fund, and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County.

Public Comments

Public comments are limited to 3 minutes. Items not on the agenda are covered during the Public Comment section of the meeting, and items specific to an agenda item are covered during that agenda item discussion. If you wish to make a comment, fill out a speaker card, hand it to the clerk of the Commission, and wait until the chair calls your name. When you are summoned, come to the microphone and give your name and comment.

Recording of Public Meetings

The executive director or designee may designate one or more locations from which members of the public may broadcast, photograph, video record, or tape record open and public meetings without causing a distraction. If the Commission or any committee reasonably finds that noise, illumination, or obstruction of view related to these activities would persistently disrupt the proceedings, these activities must be discontinued or restricted as determined by the Commission or such committee (CA Government Code Sections 54953.5-54953.6).

Reminder

Please turn off your cell phones during the meeting. Please do not wear scented products so individuals with environmental sensitivities may attend the meeting.

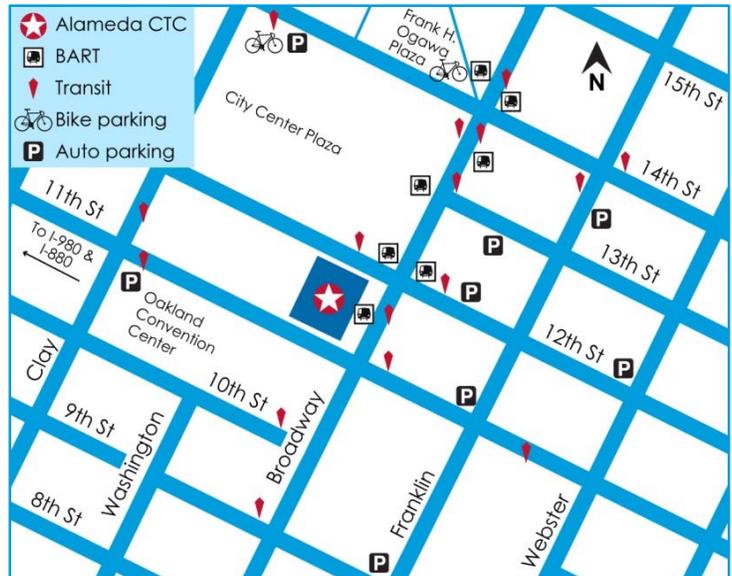
Glossary of Acronyms

A glossary that includes frequently used acronyms is available on the Alameda CTC website at www.AlamedaCTC.org/app_pages/view/8081.

Location Map

 Alameda CTC
1111 Broadway, Suite 800
Oakland, CA 94607

Alameda CTC is accessible by multiple transportation modes. The office is conveniently located near the 12th Street/City Center BART station and many AC Transit bus lines. Bicycle parking is available on the street and in the BART station as well as in electronic lockers at 14th Street and Broadway near Frank Ogawa Plaza (requires purchase of key card from bikelink.org).



Garage parking is located beneath City Center, accessible via entrances on 14th Street between 1300 Clay Street and 505 14th Street buildings, or via 11th Street just past Clay Street. To plan your trip to Alameda CTC visit www.511.org.

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Meeting Schedule

The Alameda CTC meeting calendar lists all public meetings and is available at www.AlamedaCTC.org/events/upcoming/now.

Paperless Policy

On March 28, 2013, the Alameda CTC Commission approved the implementation of paperless meeting packet distribution. Hard copies are available by request only. Agendas and all accompanying staff reports are available electronically on the Alameda CTC website at www.AlamedaCTC.org/events/month/now.

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I-580 Express Lane Policy Committee Meeting Agenda

Monday, May 8, 2017, 10:00 a.m.*

*Or immediately following the I-680 Sunol SMART Carpool Lane Joint Powers Authority meeting

1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

Chair: Mayor John Marchand, City of Livermore
Vice Chair: Supervisor Nate Miley, Alameda County, District 4
Commissioners: Scott Haggerty, David Haubert, Jerry Thorne
Ex-Officio Members: Rebecca Kaplan, Richard Valle
Staff Liaison: Elizabeth Rutman
Executive Director: Arthur L. Dao
Clerk: Vanessa Lee

1. Roll Call

2. Public Comment

3. Consent Calendar

3.1. [Approve the April 10, 2017 I-580 Express Lane PC meeting minutes.](#)

Page A/I

1 A

4. Regular Matters

4.1. [Approve and authorize the Executive Director to execute a Professional Services Agreement with Electronic Transaction Consultants Corporation for a not-to-exceed amount of \\$7,500,000 to provide Operations and Maintenance services for the I-580 Express Lanes.](#)

3 A

4.2. [Status update on the operation of I-580 Express Lanes.](#)

7 I

5. Committee Member Reports

6. Staff Reports

7. Adjournment

Next Meeting: June 12, 2017

All items on the agenda are subject to action and/or change by the Committee.

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I-580 Express Lane Policy Committee Meeting Minutes Monday, April 10, 2017, 10:00 a.m.

3.1

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1. Roll Call

A roll call was conducted. All members were present with the exception of Commissioner Miley and Commissioner Kaplan.

Commissioner Narum was present as an alternate for Commissioner Thorne.

Subsequent to the roll call:

Commissioner Kaplan arrived during Item 4.1

2. Public Comment

There were no public comments.

3. Consent Calendar

3.1. Approve the March 13, 2017 I-580 Express Lane PC Meeting Minutes

Commissioner Haggerty moved to approve the Consent Calendar. Commissioner Valle seconded the motion. The motion passed with the following votes:

Yes: Marchand, Haggerty, Haubert, Narum, Kaplan, Valle

No: None

Abstain: None

Absent: Miley, Kaplan

4. Regular Matters

4.1. Status update on the operation of I-580 Express Lanes

Liz Rutman provided an update on the operation of I-580 Express Lanes for the month of February 2017. She shared information on the corridor performance specifically average daily trips and speed/density data locations. Liz also covered speed and density heat maps, average daily toll rates and data related to toll rates vs traffic near Hacienda Drive. Liz concluded by providing information on toll rate plan adjustments and express lane financials.

This item was for information only.

5. Committee Member Reports

There were no committee reports.

6. Staff Reports

There were no staff reports.

7. Adjournment/ Next Meeting

The next meeting is:

Date/Time: Monday, May 8, 2017 at 10:00 a.m.

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

Attested by:



Vanessa Lee, Clerk of the Commission



Memorandum

4.1

1111 Broadway, Suite 800, Oakland, CA 94607

• PH: (510) 208-7400

• www.AlamedaCTC.org

DATE: May 1, 2017

SUBJECT: I-580 Express Lane Operations (PN 1373002): Approval to execute new Professional Services Agreement with Electronic Transaction Consultants Corporation.

RECOMMENDATION: Approve and authorize the Executive Director to execute a Professional Services Agreement with Electronic Transaction Consultants Corporation for a not-to-exceed amount of \$7,500,000 to provide Operations and Maintenance services for the I-580 Express Lanes.

Summary

Alameda County Transportation Commission (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. The I-580 Express Lanes opened to traffic on February 19 and 22, 2016 in the eastbound and westbound directions, respectively. After an initial one-year warranty period, Alameda CTC accepted the electronic toll system/system integration as complete on February 22, 2017 and fully entered the Operations and Maintenance (O&M) phase of the project.

Electronic Transaction Consultants Corporation (ETCC) is the Toll System Integrator (TSI) and designer of record for the toll system and has performed these services under two separate construction phase contracts; one for eastbound and one for westbound. With the acceptance of the project and closeout of the project underway, upon the expiration of the contracts on June 30, 2017, several options are available to ensure uninterrupted operational support services for the Express Lanes:

1. Procure a new contract for O&M services.
2. Retain ETCC to provide O&M services.

Option 2 has been determined to provide the best value in administration, services, and overall near term O&M cost. Staff recommends option 2 above and that the Commission approve and authorize the Executive Director to execute a Professional Services Agreement with Electronic Transaction Consultants Corporation for a not-to-exceed amount of

\$7,500,000 to provide O&M services for the I-580 Express Lanes for a three-year period from July 1, 2017 – June 30, 2020.

Background

The I-580 Express Lanes, located in the Tri-Valley corridor through the cities of Dublin, Pleasanton, and Livermore, extend from Hacienda Drive to Greenville Road in the eastbound direction and from Greenville Road to San Ramon Road/Foothill Road in the westbound direction and were opened to traffic on February 19 and 22, 2016 in the eastbound and westbound directions, respectively. Motorists using the I-580 Express Lanes facility enjoy travel time savings and travel reliability benefits because the express lanes optimize corridor capacity by providing an alternative choice to drivers. Single occupancy vehicles (SOVs) may choose to pay a toll and travel within the express lanes, while carpool, clean-air vehicles, motorcycles, and transit vehicles enjoy the benefits of toll-free travel in the express lanes. The electronic toll system includes technologies to collect traffic data needed for a dynamically priced tolling system, detect FasTrak® toll tag information, including occupancy declaration for eligible high-occupancy vehicles, and capture images of vehicles and license plates for violation enforcement and enhanced tolling capabilities.

Electronic Transaction Consultants Corporation (ETCC) was selected by Alameda CTC in 2009, under a competitive selection process, to develop and design software and hardware, procure and install toll equipment, provide required interface with BATA, test and open the toll system, and provide warranty period services for the eastbound express lane. In late 2012, a decision was made to design and construct the eastbound and westbound facilities concurrently. In consideration of the cost and schedule for the Express Lanes Project (for both eastbound and westbound directions), the Commission determined at its meeting in July 2013 that it was in the best interest of the Alameda CTC and the Express Lanes Project to utilize ETCC to deliver the westbound facilities in addition to delivering the eastbound project; thus Alameda CTC and ETCC entered into a separate agreement for the westbound toll system implementation. The I-580 Express Lanes opened to traffic on February 19 and 22, 2016 in the eastbound and westbound directions, respectively. After an initial one-year warranty period, Alameda CTC accepted the electronic toll system/system integration as complete on February 22, 2017 and fully entered the Operations and Maintenance (O&M) phase of the project.

With the acceptance of the project and closeout of the project underway, upon the expiration of the contracts on June 30, 2017, staff has considered the following options to ensure uninterrupted operational support services for the Express Lanes:

Option 1: Procure a new contract for these services.

The procurement is estimated to take 4-6 months. In the event a new consultant is selected to provide O&M services, an approximately year-long effort by the new consultant would be required to:

- Develop and customize their toll system software for the I-580 Express Lanes;
- Test the new system to ensure agency toll policies and business rules were incorporated;
- Modify the field equipment as needed for the equipment to work with the new vendor's software; and
- Develop and test the new interface with BATA for toll processing.

While this work is being conducted by the new consultant, ETCC's services would need to be retained to support the current toll system until the new consultant was ready to bring their system online and take over.

This option increases the administration effort and would result in a multi-million dollar up-front investment for a new toll system, increasing the overall cost for O&M services in the near term.

Option 2: Retain ETCC to provide these services and issue one new contract for the I-580 Express Lanes.

Due to the unique requirements of the technology infrastructure associated with express lanes, it is customary in the toll industry for the Toll System Integrator (TSI) to provide some level of O&M support services, at least during the initial years of operations. This is due to the following reasons:

- The TSI develops and customizes the software used by the system for the specific toll corridor to incorporate the agency's toll policies and business rules;
- The TSI has intimate knowledge of the toll system infrastructure – both field and back office – and is best suited to handle system issues that may arise; and
- The code is proprietary and code modifications by anyone other than the TSI are prohibited, thus any changes to tolling policies (such as partial tolls for clean air vehicles) could not be implemented without engaging the TSI of record.

The O&M support services is estimated at \$7,500,000 for three years and includes the following tasks:

Task Item	Estimated Budget
Field Maintenance (24/7 service), including equipment monitoring and replacement	\$1,332,000
Back office and remote support for the software applications and database (24/7 service), including performance monitoring and engineering support	\$1,156,000
Third party software licenses and subscription-based support services	\$264,000

Leased communication services for data transfer between the field equipment and the toll data center in San Francisco	\$562,000
Ad-Hoc Performance and Data Reporting Services	\$353,000
Manual Image Review to support express lane trip building ¹	\$1,000,000
On-Call Services for major field repairs due to accidental damage, system modifications requested to improve system performance, or system changes in response to modifications in tolling policies (such as partial tolling of clean air vehicles) ²	\$843,000
Total:	\$7,500,000

¹ Manual image review is paid per image reviewed.

² On-call services would be issued on a task-order basis.

This option reduces the administration effort and would result in reducing the overall cost for O&M services in the near term.

Staff recommends Option 2 above to retain ETCC's services since the open procurement would result in a multi-million dollar up-front investment for a new toll system. This is not a prudent option at this time given that the current system was recently accepted. It may, however, be considered at a later date.

The proposed new professional services agreement with ETCC will ensure uninterrupted O&M support services necessary for the smooth functioning of the I-580 Express Lanes. Staff negotiated with ETCC to perform the necessary O&M services on an annual basis for each of the next three years.

The I-580 Express Lanes Operations is funded by toll revenues. Consultant O&M Support Services is a standing item in the annual operating budget.

Levine Act Statement: ETCC did not report a conflict in accordance with the Levine Act.

Fiscal Impact: The fiscal impact of approving this item is \$7,500,000. The action will authorize toll revenue funds to be used for subsequent expenditure. Budget has been included in the approved I-580 operations budget for FY 2017-18 and will be included in future fiscal year I-580 operations budgets as appropriate.

Staff Contact

[Liz Rutman](#), Express Lane Operations and Maintenance



DATE: May 1, 2017

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

RECOMMENDATION: Receive a status update on the operation of I-580 Express Lanes

Summary

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

The March 2017 operations report indicates that the new express lane facility continues to provide travel time savings and travel reliability throughout the day. Express lane users experienced average speeds up to 27 mph greater than the average speeds in the general purpose lanes, along with lesser average lane densities than the general purpose lanes, in the most congested segments of the corridor.

Background

The I-580 Express Lanes, extending from Hacienda Drive to Greenville Road in the eastbound direction and from Greenville Road to San Ramon Road/Foothill Road in the westbound direction, were opened to traffic on February 19 and 22, 2016 in the eastbound and westbound directions, respectively. See Attachment A for express lane operation limits. 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 carpool, 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 purposes 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.

March 2017 Operations Update: Over 680,000 express lane trips were recorded during operational hours in March, an average of approximately 29,900 daily trips. Table 1 presents the breakdown of trips based on toll classification and direction of travel; these percentages have remained consistent for the last three months. 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 either 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.

Table 1. Express Lane Trips by Type and Direction for March 2017

Trip Classification		Percent of Trips
By Type	HOV-eligible with FasTrak flex tag	38%
	SOV with FasTrak standard or flex tag	41%
	No valid toll tag	21%
By Direction	Westbound	44%
	Eastbound	56%

Express lane users generally 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). Table 2 summarizes the average speed differentials and LOS at four locations in each of the westbound and eastbound directions during respective commute hours for March. This table provides an overall snapshot of the express lane benefits for the month during commute hours.

Attachment B presents the speed and density heat maps for the I-580 corridor during revenue hours for the six-month period from October 2016 to March 2017. 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 lane is meeting both federal and state performance standards. From October through March, the average speeds in the westbound express lane ranged from 50 to 70 mph during the morning commute hours (5 am to 11 am) with lower speeds occurring between Isabel Avenue and Santa Rita Road. The express lane operated at LOS C or better at all times, with LOS C occurring only for a short period of time in the middle of the corridor (Isabel Avenue to Santa Rita Road) during the morning commute hours. By comparison, the general purpose lanes experienced speeds as low as 35 mph and LOS D

throughout several sections of the corridor. During the evening commute, the westbound lanes experiences a small period of reverse-commute congestion between San Ramon Road and Hacienda Road from 5 pm to 6 pm, though the express lane continues to operate at LOS A or better during this time. Outside of the commute hours, express lane users experience average speeds of 70 mph or higher and average LSO A.

Table 2. Speed Differentials and Level of Service for March 2017

Direction	I-580 in the Vicinity of	Speed Differential Range (mph)	Average Speed Differential (mph)	Average Express Lane LOS	Average General Purpose Lane LOS
Westbound Morning Commute: 5 am – 11 am	North First Street	5 - 8	6	A	C
	North Livermore Ave	2 - 5	4	B	C
	Fallon Road	4 - 11	7	B	C
	Santa Rita Road	10 - 15	12	B	C
Eastbound Evening Commute: 2 pm – 7 pm	Hacienda Road	20 - 27	24	C	E
	Airway Blvd	8 – 11	10	B	C
	North First Street	4 – 9	8	B	C
	Vasco Road	9 - 21	14	B	C

In the eastbound direction, average express lane speeds from October 2016 through March 2017 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 70 mph. Most of the express lane corridor operates at LOS C better during the evening commute hours, with small sections of degraded LOS at the western end of the express lanes between 3 pm and 5 pm and at the eastern terminus between 4 pm and 6 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 LOS F at the western end of the corridor, and speeds and LOS similar to the express lanes but for longer periods of time at the eastern end of the corridor, during the evening commute hours.

Table 3 presents the maximum posted toll rates to travel the entire corridor in each direction, along with the average toll assessed to non-HOV users, for March 2017. In the eastbound direction, the maximum toll of \$9.00 was reached 19 of 23 days. This is due to a change in the toll rate plan made on February 8, 2017 in an effort to improve the traffic flow in the first segment of the eastbound express lane between Hacienda Road and Fallon Road. The primary goal of express lane is to provide speed and travel time reliability to HOV-eligible users, allowing SOVs to pay a toll to use the lanes when such use would

not diminish those benefits. Managing the usage by SOVs is achieved by manipulation of the toll rates, which are dynamically priced, rising and falling with congestion. The eastbound toll rate pricing plan was adjusted to increase the price to enter the express lane at the start of the buffered segment. While the price to enter the express lane system at Hacienda Road increases to \$9.00 on most days, the toll to enter immediately after the buffered section and at the start of the two-lane section near Fallon Road is typically \$5.75 or less.

Table 3. Toll Rate Data for March 2017

Direction	Maximum Posted Toll (Travel Entire Corridor)	Average Assessed ¹ Toll (All Toll Trips)
Westbound	\$8.75 (1 of 23 days)	\$1.93
Eastbound	\$9.00 (19 of 23 days)	\$3.02

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.

During Fiscal Year 2016-17, the I-580 Express Lanes have recorded nearly 5.8 million total trips. Total gross revenues received include over \$7.0 million in toll revenues and \$2.1 million in violation penalties.

A public education advertising campaign targeting I-580 commuters in Alameda and San Joaquin Counties continued through April. The campaign encouraged carpooling on the corridor and emphasized that carpools require a properly mounted FasTrak Flex toll tag and that FasTrak accounts are required of all users of the express lanes. The campaign included announcements during traffic radio reports, social media ads, outdoor bus ads on LAVTA and RTD buses, and gas station pump-top videos. Additional express lane outreach and education continues including via social media and in-app advertising.

Staff is coordinating education and outreach with partner agencies including CCTA, MTC, 511 Contra Costa as well as local TMAs to promote consistent messaging and accessible information about the I-580, I-680 Sunol, and the I-680 Contra Costa County express lanes, which are scheduled to open this summer.

Fiscal Impact: There is no fiscal impact.

Attachments

- A. I-580 Corridor Express Lane Location Map
- B. I-580 Corridor Heat Maps October 2016 – March 2017

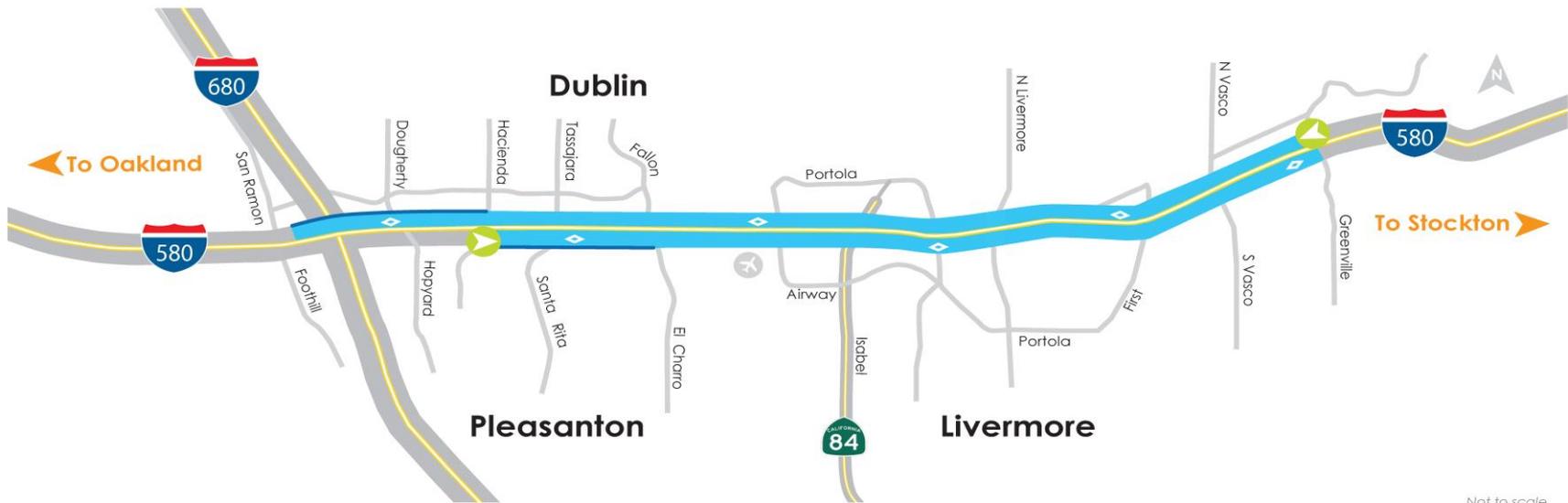
Staff Contact

[Liz Rutman](#), Express Lanes Operation and Maintenance Manager



I-580 Express Lanes Project Location Map

4.2A



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

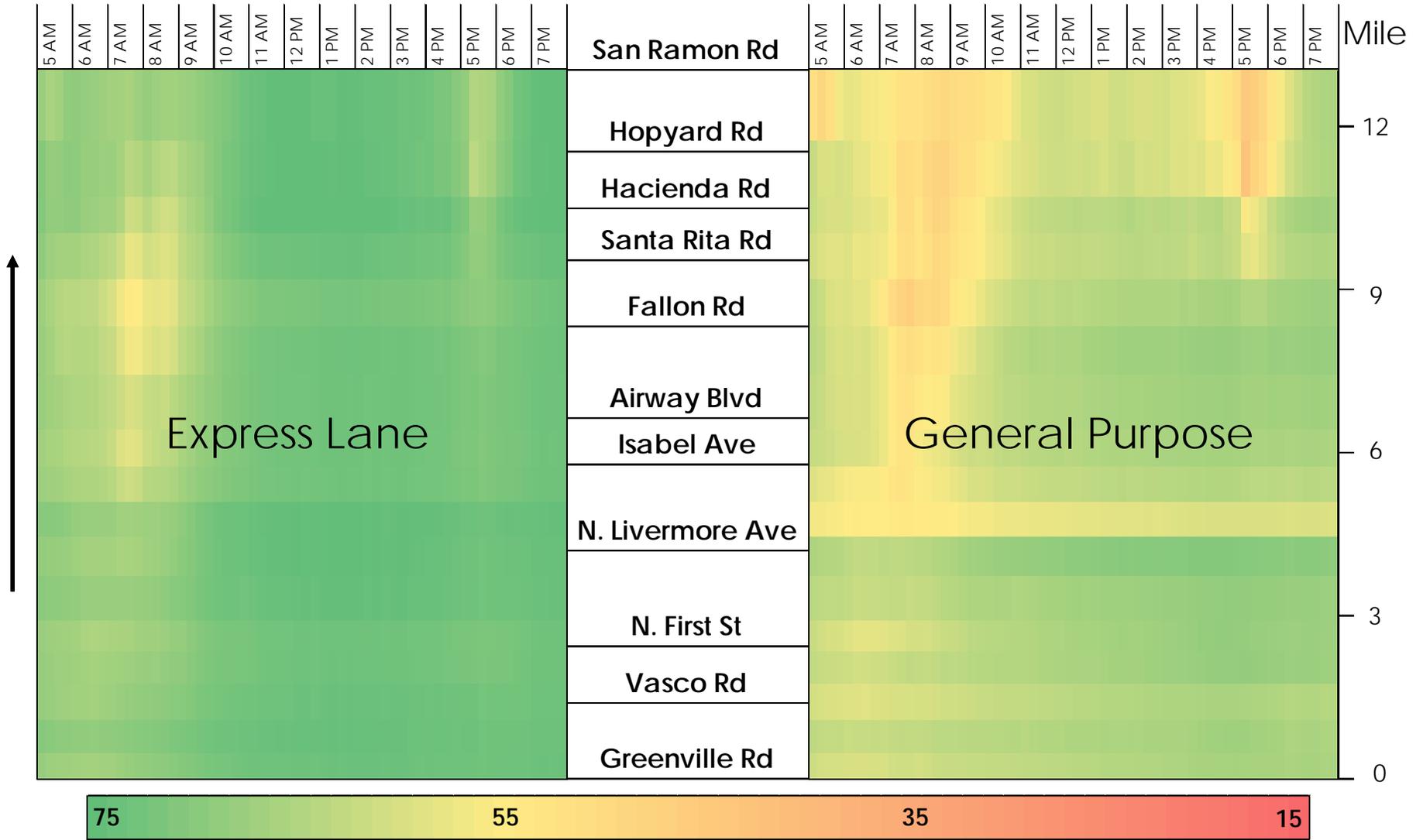
No entry/exit from westbound express lane from Hacienda to end.

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

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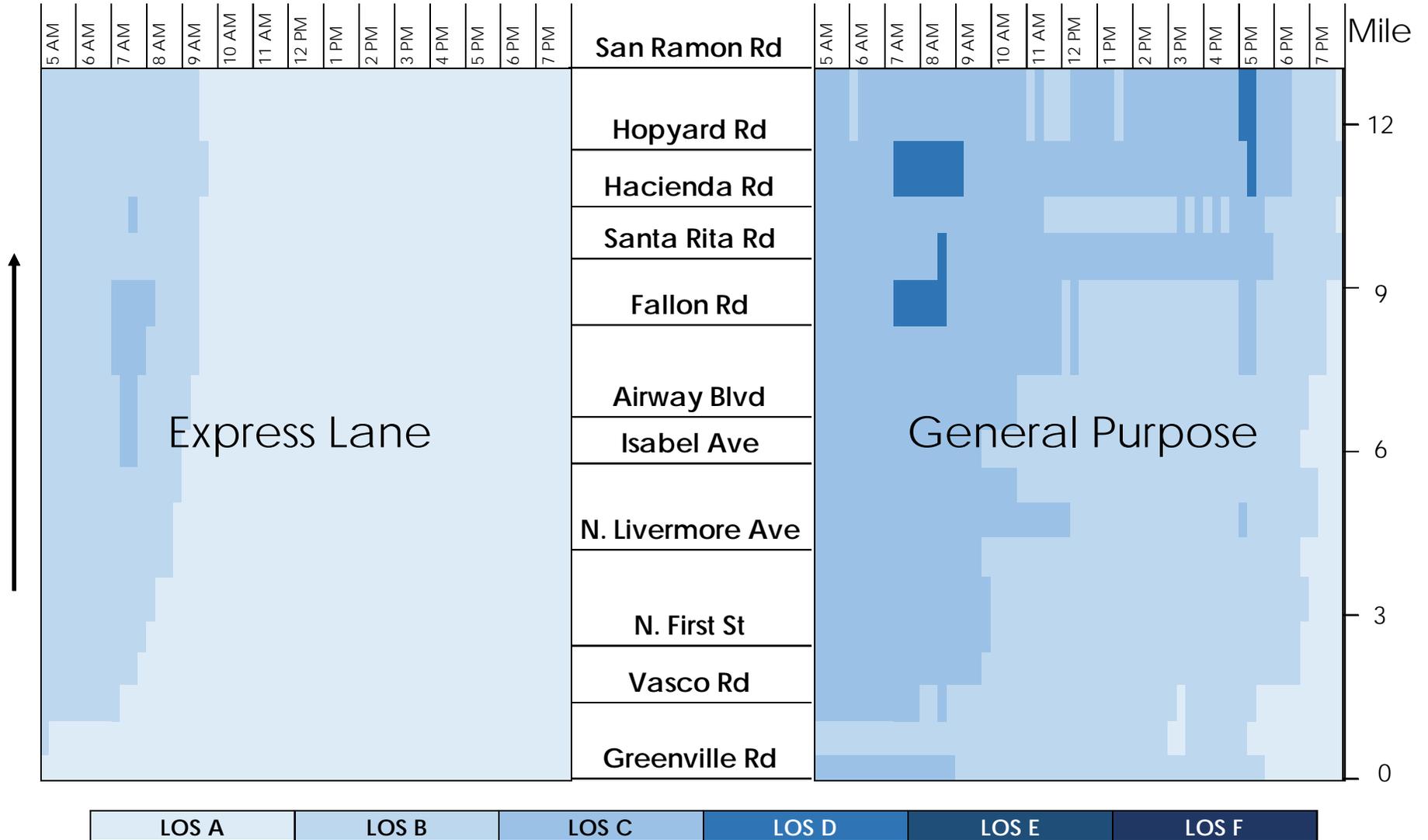
Westbound I-580 Corridor Speed Heat Maps

Monday-Friday, October 2016 – March 2017



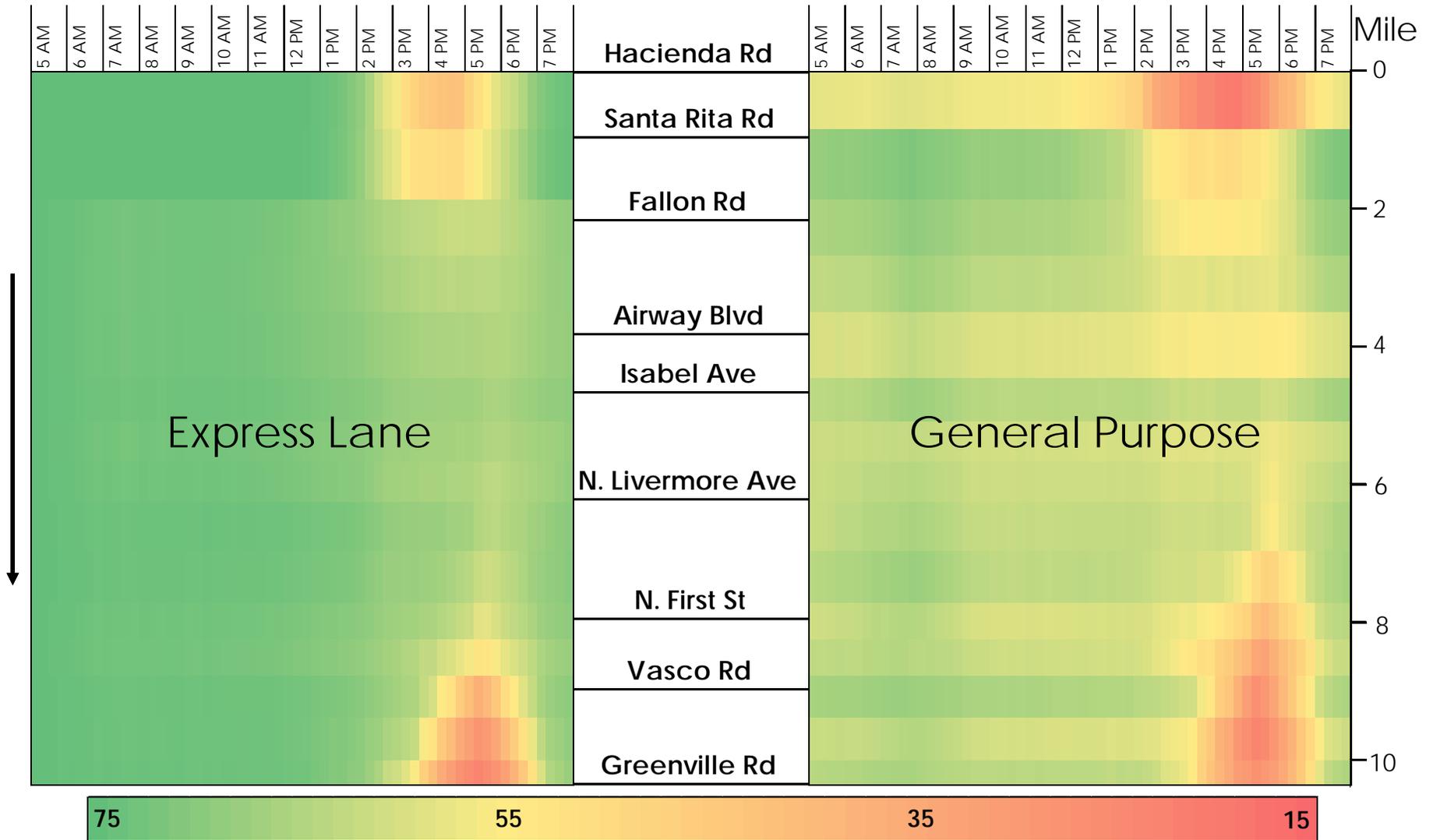
Westbound I-580 Corridor Density Heat Maps

Monday-Friday, October 2016 – March 2017



Eastbound I-580 Corridor Speed Heat Maps

Monday-Friday, October 2016 – March 2017



Eastbound I-580 Corridor Density Heat Maps

Monday-Friday, October 2016 – March 2017

