

SUNOL SMART CARPOOL LANE  
JOINT POWERS AUTHORITY



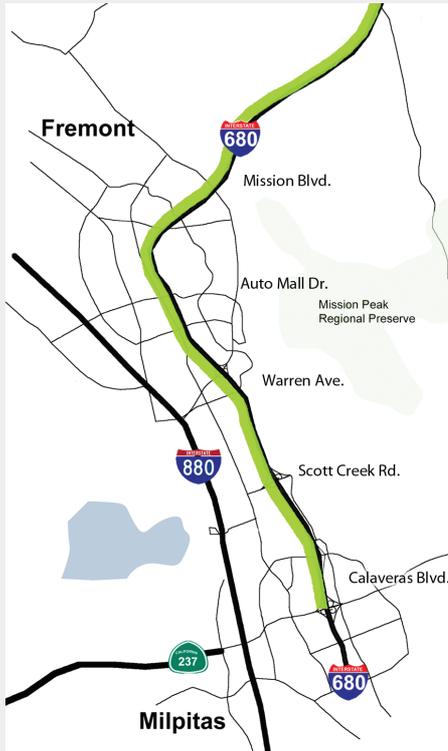
2015/16

# I-680 Sunol Southbound Express Lane Annual Report



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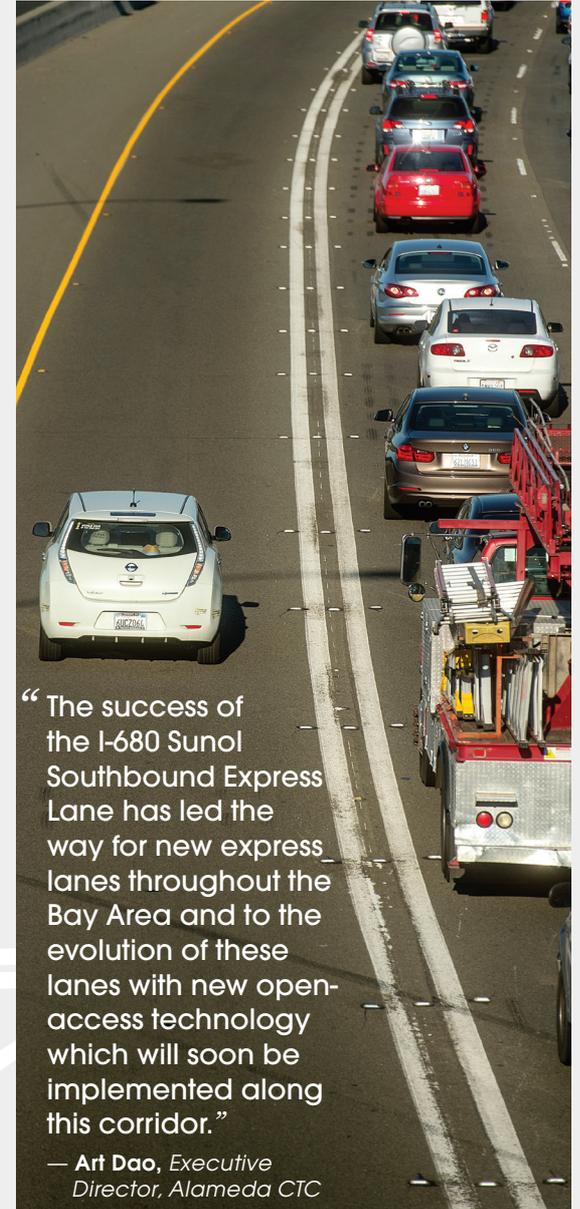
# Message from the Chair

September 20, 2016 marked the six-year anniversary of the first express lane opening in Northern California. Since opening, more than 3.5 million solo drivers have chosen to use the I-680 Sunol Southbound Express Lane, reaching their destinations at speeds generally 10-15 mph faster than the general purpose lanes. During fiscal year 2016, more than 815,000 vehicles that would have used the general purpose lanes paid a toll to use the express lane, reducing congestion within the corridor while maintaining reliability within the high-occupancy vehicle (HOV) lane.

The next step in the evolution of the corridor is the implementation of the I-680 Sunol Northbound Express Lane parallel to the existing southbound express lane along the Sunol Grade,

and conversion of the existing I-680 Sunol Southbound Express Lane to a continuous access system. Construction of these projects is slated to begin in late 2017.

— **Mayor Jerry Thorne, Chair**  
*City of Pleasanton*



“The success of the I-680 Sunol Southbound Express Lane has led the way for new express lanes throughout the Bay Area and to the evolution of these lanes with new open-access technology which will soon be implemented along this corridor.”

— **Art Dao, Executive Director, Alameda CTC**

# The I-680 Sunol Southbound Express Lane

Since it opened in September 2010 as Northern California's first express lane facility, more than 3.5 million solo drivers have chosen to get to their destination faster by using the I-680 Sunol Southbound Express Lane. Located on a 14-mile stretch of southbound Interstate 680 from Highway 84 south of Pleasanton to Highway 237 in Milpitas, the express lane was designed to manage growing traffic congestion on I-680 and to provide people with a new commute choice between the East Bay and Silicon Valley. It is governed by the Sunol Smart Carpool Lane Joint Powers Authority (Sunol JPA).

The I-680 Sunol Southbound Express Lane operates Monday through Friday from 5 a.m. to 8 p.m. The operation is fully electronic, with no tollbooths, so customers do not need to slow down or stop to pay. Solo drivers who want to use the lane need a FasTrak® toll tag (a standard tag or the new Flex tag that became



available in mid-2015). Each time drivers use the express lane, the toll amount is deducted from their FasTrak account balance. Carpools, motorcycles, transit vehicles, and permitted zero- and low-emission vehicles with HOV-eligible stickers may use the express lane for free without a toll tag, with a standard FasTrak stored in its mylar bag, or with a FasTrak Flex toll tag set to 2 or 3+.

During fiscal year FY2015-16, more than 815,000 toll payers used the express lane and paid an average toll of \$2.47 per trip. An estimated 27 percent of all express lane users this year were toll-paying. Access to the lane by toll-paying users is regulated to ensure reliable travel times for carpool lane users; express lane drivers enjoyed average speeds 10-15 mph faster than speeds in general purpose lanes in the most congested segment of the corridor, during the morning commute.

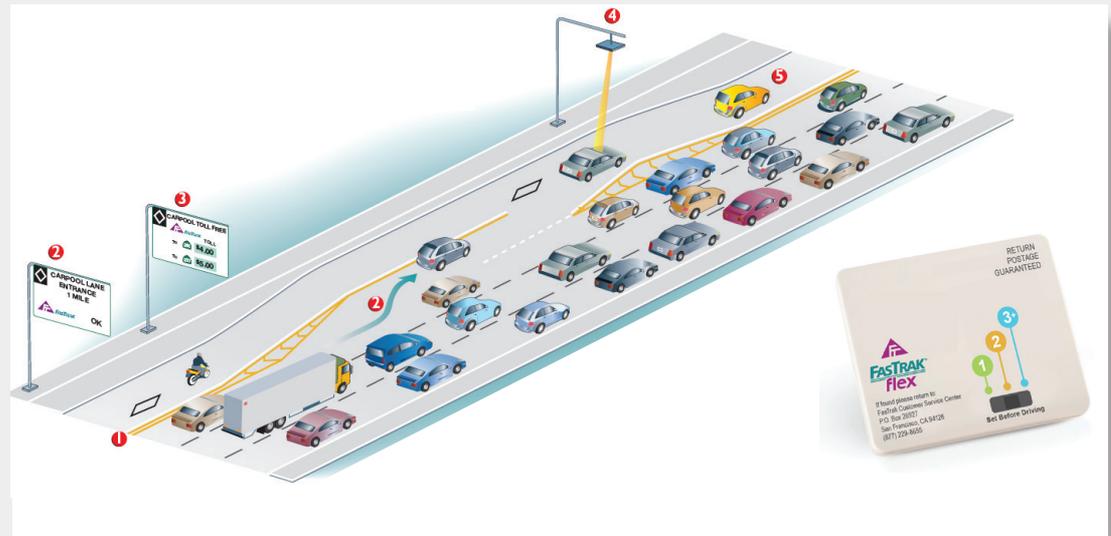


# Express Lane Basics

**Dynamic Pricing:** The I-680 Sunol Southbound Express Lane was one of the first managed lanes in the nation to deploy a full dynamic pricing. Dynamic pricing means that tolls vary based on real-time traffic conditions in the corridor.



The I-680 Sunol Southbound Express Lane is part of the major commute route connecting the Tri-Valley Area (Dublin, Livermore and Pleasanton) in Alameda County with South Bay cities in Santa Clara County and Silicon Valley businesses.



Posted toll rates are evaluated and modified as needed every three minutes based on congestion levels; toll rates increase when congestion is heavier and decrease when traffic is lighter. The goal is to keep the express lane operating at a reliable level of service. In FY2015-16, tolls on the I-680 Sunol Express Lane ranged from \$0.30 to a maximum of \$7.50 with an average morning commute toll (5-11 a.m.) to travel the entire corridor of \$3.51.

**Three entry and three exit points:** The I-680 Sunol Southbound Express Lane has three entry points and three exit points. One half-mile before each access point, an overhead electronic

sign displays the current toll rate. Solo drivers choose to pay the current toll to use the express lane or use the general purpose lanes for free. The current limited-access configuration will be modified to a continuous-access design, similar to I-580 Express Lanes, in conjunction with the upcoming I-680 Sunol Northbound Express Lane project.

**Toll Enforcement:** Express lane tolls are collected via FasTrak® toll tags, which are required for any solo driver to use the lane. The California Highway Patrol (CHP) provides toll enforcement to prevent access and toll violations. In FY2015-16, CHP issued more than 900 citations for HOV violations.

# Express Lane Performance

The express lane corridor has seen increased traffic in all lanes over the past several years. In FY2015-16, approximately 14 percent of all vehicles in the corridor used the express lane. Use of the express lane is increasing faster than use of the general purpose lane. In FY2015-16, the average daily volume increases for the general purpose and express lanes were approximately 1 percent and 11 percent, respectively, compared to FY2014-15.

Even with annual increases in usage, the express lane continues to function with excellent service levels. This is due, in part, to the dynamic pricing that helps keep congestion in the express lane at a manageable level. Moreover, general purpose lane users benefit from having over four percent of traffic that would otherwise be in the general purpose lanes instead use the express lane as toll-paying solo drivers.

The following Figures 1 – 3 help to answer key questions relating to the existing I-680 Sunol Southbound Express Lane:

- *Does the express lane provide any benefit?*
- *Where are corridor users going?*
- *How much does it cost to use the express lane?*

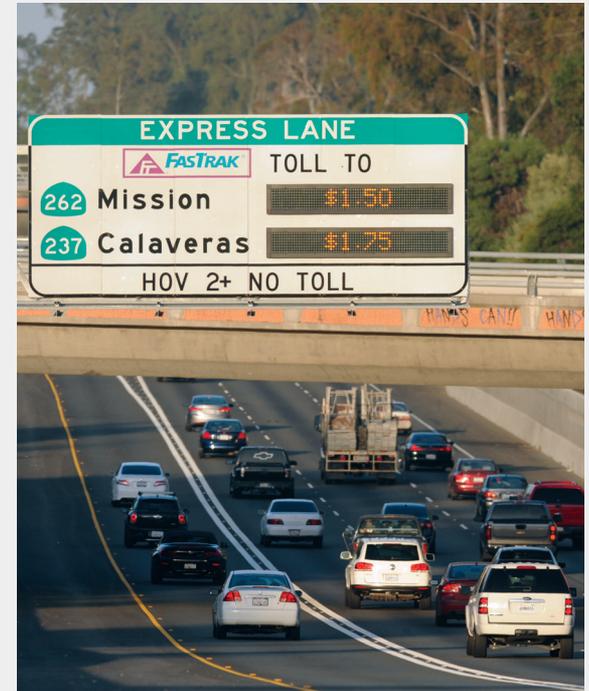


Figure 1

### Heat Maps - Monitoring Express Lane Benefits

These heat maps are a graphical representation of the overall condition of the corridor, showing the average speeds and Level of Service along the express lane corridor and throughout the day for both the express and general purpose lanes. The scale bar at the bottom indicates the meaning of the color variations in the map.

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). The ideal goal of any express lane is to maintain speeds of at least 45 mph and LOS C or better even during peak commute hours.

These maps show the benefits that express lane users experience. Average speeds in the express lane ranged from 55 to 70 mph during the morning commute hours (5 am to 11 am) with lower speeds occurring in the vicinity of Sheridan Road and Auto Mall Parkway; average speeds throughout the rest of the day exceeded 70 mph. The express lane operated at LOS C or better at all times, with LOS C occurring in the peak hour in between Washington Boulevard and Auto Mall Parkway. By comparison, the general purpose lanes experienced average speeds as low as 40 mph and LOS D for much longer periods of time and throughout a greater portion of the corridor.

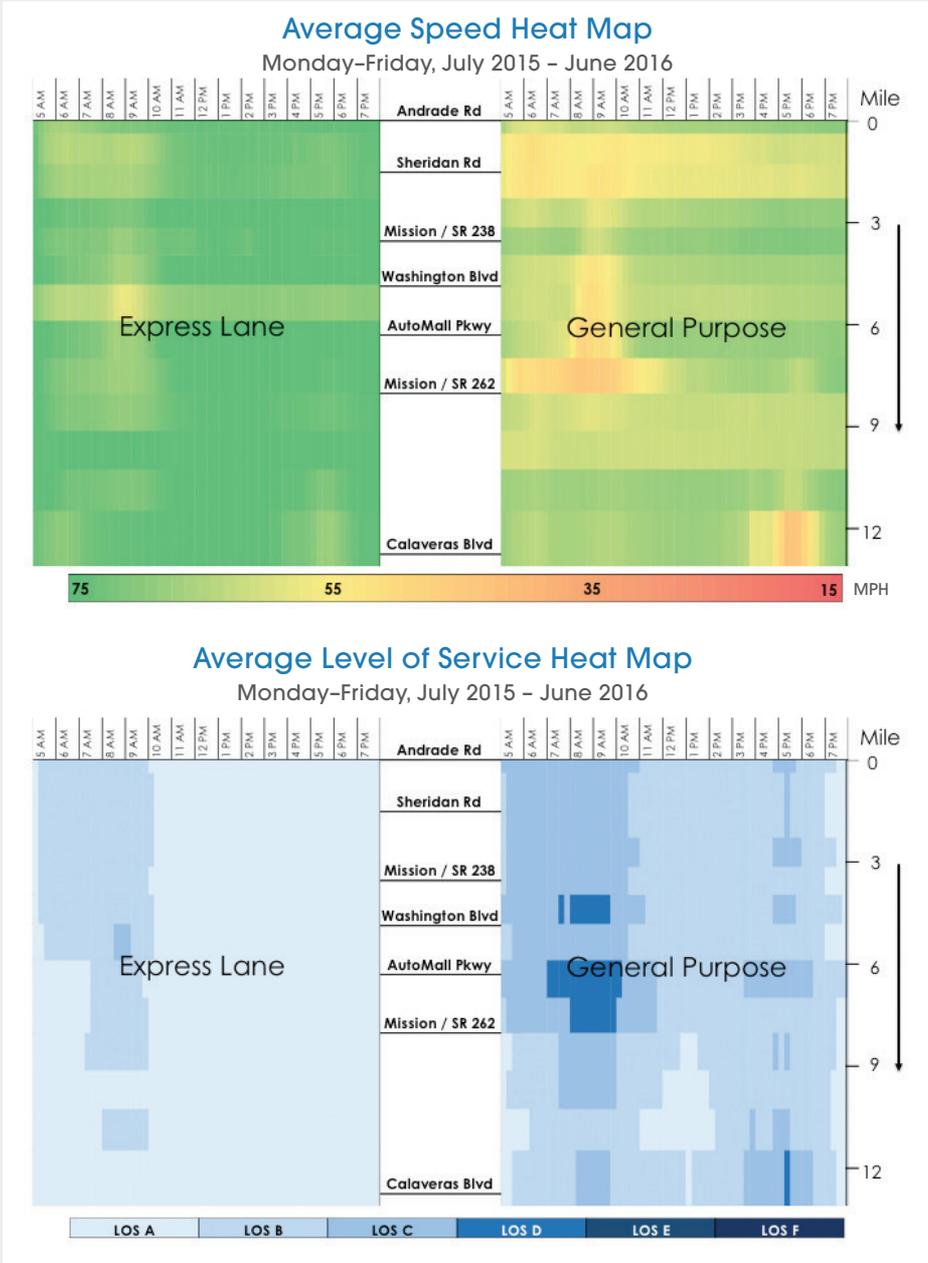


Figure 2

### Destination Chart – Evaluating Express Lane Usage (FY2015-16)

Nearly 45 percent of toll users within the corridor travel the entire length from Andrade Road to Calaveras Boulevard, and over 65 percent originate at the first entrance, Andrade Road. Nearly 95 percent travel the segment between Washington Boulevard and Mission Boulevard, making it the most utilized, and generally most congested, segment within the corridor.

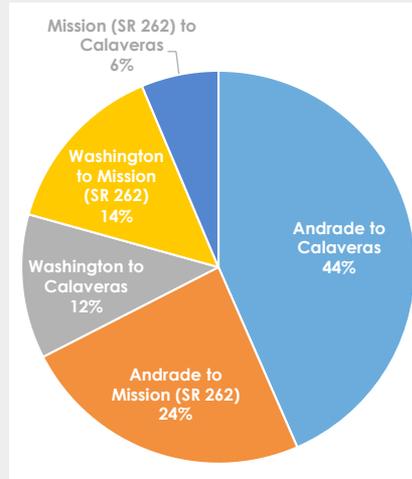
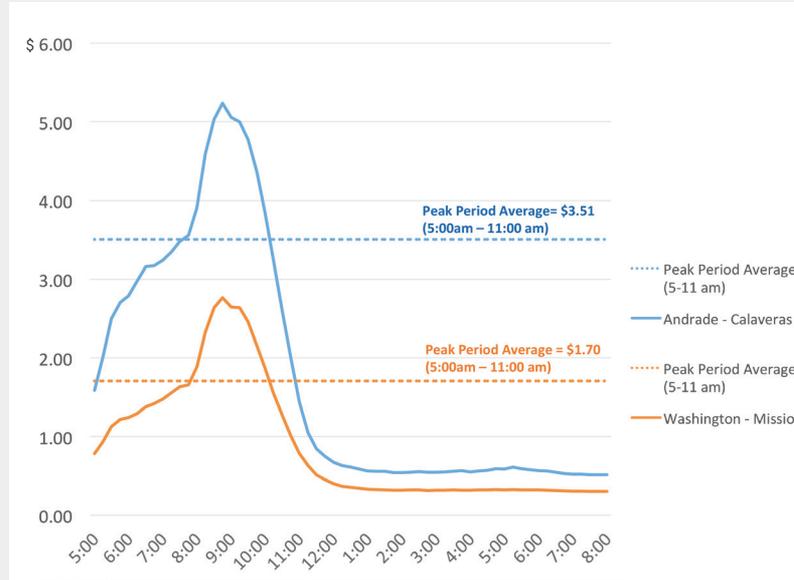


Figure 3

### Toll Rates – Keeping Express Lanes Flowing

In FY2015-16, toll rates ranged from \$0.30 minimum to a set maximum value of \$7.50. The average peak-period posted toll rate to travel the entire corridor was \$4.30, and to travel just the central segment from Washington Boulevard to Mission Boulevard (SR 262) was \$2.15. The maximum potential toll rate of \$7.50 was reached on 107 of the 262 revenue operating days, which is 40 percent of days. Due to increased congestion driving tolls higher, the minimum and maximum tolls will be increased for the first time since opening in 2010. In 2017, tolls will range from \$0.50 to \$9.00.



# Financial Information, Fiscal Year 2015-16

When the Sunol JPA was formed in 2010, it agreed to reinvest the net revenues derived from the express lanes directly back into the project corridor. Toll revenues are used to first pay for operating and maintaining the I-680 Sunol Southbound Express Lane, and then to fund additional transportation projects in the corridor such as the future express lane project on northbound I-680 or transit operations along the corridor, including express bus and other transit service. In 2016, the Sunol JPA adopted an expenditure plan for future net revenues.

- Total net position increased by \$0.28 million or 6.5 percent from \$4.27 million to \$4.54 million as of June 30, 2016 compared to

June 30, 2015. This increase is mostly due to an increase in cash related to toll revenues collected. Capital assets, net of accumulated depreciation, comprised \$1.81 million or 39.8 percent of the total net position at June 30, 2016.

- For the year ended June 30, 2016, cash and cash equivalents increased by \$0.74 million or 28.0 percent from \$2.66 million to \$3.40 million. This increase is mostly attributed to an increase in toll and grant revenue collections over fiscal year 2015.
- Operating revenue was \$2.16 million during fiscal year 2016, an increase of \$0.23 million or 11.7 percent over fiscal year 2015.

- The Authority's total operating expenses were \$1.87 million during fiscal year 2016, an increase of \$0.20 million or 12.1 percent from fiscal year 2015. This increase in operations and maintenance expenses over the prior fiscal year is mostly due to a rate increase on the main consultant contract. Operating expenses of \$1.73 million for fiscal year 2016 were primarily comprised of program operations and maintenance costs.



# The Future: I-680 Sunol Northbound Express Lane

The I-680 Sunol Express Lanes are part of the growing Bay Area Express Lanes Network. On completion in 2035, the Bay Area will have 550 miles of express lanes operated by the Metropolitan Transportation Commission (MTC), Santa Clara Valley Transportation Authority (VTA) and Alameda CTC. These agencies, as well as the Contra Costa Transportation Authority and the Solano Transportation Authority, are working together to convert existing carpool lanes into express lanes and to close gaps in the carpool network. Construction of the Sunol JPA's I-680 Sunol Northbound Express Lane from

Mission Boulevard (SR 262) to Vallecitos Road (SR 84) is expected to begin in late 2017. The existing southbound lane will concurrently be converted from a restricted access to a continuous access facility, allowing for more users to take advantage of the express lane benefits.

For more information about the I-680 Express Lane and future express lane projects, visit [AlamedaCTC.org/ExpressLanes](http://AlamedaCTC.org/ExpressLanes).

Visit [ExpressLanes.511.org](http://ExpressLanes.511.org) for more information about the envisioned regionwide express lane network.



## Sunol Smart Carpool Lane Joint Powers Authority

The Sunol Smart Carpool Lane Joint Powers Authority (Sunol JPA) is an independent joint powers authority created to operate the I-680 Express Lane. Its board of directors consists of five elected officials, four voting members from Alameda County and one voting member from Santa Clara County. Voting rights were determined based on each county's share of road miles within the corridor (approximately one-fifth of corridor miles are within Santa Clara County).

The Sunol JPA meets monthly, and meetings are open to the public. Meeting agendas and minutes are posted on the Alameda CTC website at [AlamedaCTC.org/events/upcoming/calendar](http://AlamedaCTC.org/events/upcoming/calendar).

## Partnerships

The Alameda County Transportation Commission, the California Department of Transportation and the California Highway Patrol provide services to the Sunol JPA contractually. For toll collection, the Sunol JPA has long term agreements with the Bay Area Toll Authority to use its FasTrak<sup>®</sup> electronic toll-collection system for operation, maintenance, enforcement and toll collection associated with the I-680 Sunol Express Lanes.

## 2016 Sunol JPA Members

**Chair:** Jerry Thorne, City of Pleasanton Mayor, Alameda CTC Commissioner

**Vice Chair:** Bill Harrison, City of Fremont Mayor, Alameda CTC Commissioner

### Members:

Jason Baker, City of Campbell Mayor, VTA Board Member

Scott Haggerty: Alameda County Supervisor, District 1, Alameda CTC Commissioner

David Haubert: City of Dublin Mayor, Alameda CTC Commissioner

### Staff Liaison:

Arthur L. Dao, Alameda CTC Executive Director

Liz Rutman, Express Lanes Operations and Maintenance Manager



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