

Annual Report FY2012-2013

# The I-680 Southbound Express Lane CHOICE • RELIABILITY • IMPROVED PERFORMANCE





The I-680 Express Lane gives solo drivers the choice to pay a toll for access into the HOV lane, while carpool lane users continue to enjoy the benefits of sharing rides at no cost.



# Message from the Chair



September 20, 2013 marked the three-year anniversary of the opening of the first express lane in Northern California. The 14 mile I-680 Express Lane over the Sunol Grade was created to give drivers more reliability in their travel time by helping to manage congestion, and to improve throughput within the corridor - and has been successful since day one.

Ongoing monitoring shows that the average travel speed in the express lane is 10-15 mph faster than in the general

purpose lanes during peak commute, and a more than 20 mph speed differential has been observed in the most congested segment, in the vicinity of Washington Boulevard. Thousands of solo drivers have switched to the express lane to take advantage of this time savings. Additionally, the express lane has significantly improved performance in the general purpose lane, reducing the back-up queue by nearly 4.5 miles during peak congestion.

This first express lane facility in the Bay Area is part of a larger express lane network envisioned throughout the region, and I am pleased that the success of the I-680 southbound express lane provides evidence that increasing the efficiency of our existing infrastructure improves travel reliability and travel times.

Together with our partners, the Alameda County Transportation Commission (Alameda CTC) and the Santa Clara Valley Transportation Authority (VTA), we are employing the latest technology to expand choices for the residents, commuters and businesses of the East Bay, for increased reliability and improved performance of our roads.

> -Bill Harrison, Chair Sunol Smart Carpool Lane Joint Powers Authority

"We can no longer build our way out of congestion. Express lane technology enables us to make our existing roadways more efficient improving our quality of life *by reducing the amount of time* people are stuck in traffic."

> -Scott Haggerty, JPA Chair 2010-2012



"With our economy continuing to recover and traffic congestion increasing, the benefits of the express lanes are even more significant than before."

-Jerry Thorne, JPA Vice Chair

## The I-680 Southbound Express Lane

Since it opened to traffic in September 2010 as Northern California's first high occupancy toll (HOT) or Express Lane facility, more than 1.3 million solo drivers have chosen to get to their destination faster by using the I-680 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 and was funded with state, federal, and local funds, including Alameda County's voterapproved local sales tax, Measure B.

The I-680 Express Lane Project launched a new era of congestion relief for drivers in Northern California, giving solo drivers the choice to pay a toll for access into the HOV lane, when there is excess capacity. Carpool lane users continue to enjoy the benefits of sharing rides at no cost – and can enjoy the benefits of the express lane since access to the lane is regulated to ensure reliable travel times. Usage of the toll lane has increased steadily since its inception, and it has seen a nearly 58% increase in the number of monthly toll-paying users from 2010 to 2013. During fiscal year 2012-13 the Express Lane was used by more than 565,000 toll payers, with an average peak hour (5am-11am) toll of \$2.35 per trip and non-peak (11am-8pm) toll of \$0.45.

# I-680 Express Lane Key Milestones



• • 1990s • • Sunol Grade

becomes one of the top three most congested commute corridors in the Bay Area.

Solutions on Sunol Coalition forms to address congestion issues.

2001 •

New I-680 Southbound auxiliary lane opens.



2002

New 14-mile I-680 Southbound HOV lane opens.

·2004 ·

State Legislature authorizes two pilot express lanes in Northern California: I-680 Southbound was the first to open.

• 2008 • •

I-680 Southbound Express Lane construction begins.



2009

Preimplementation traffic study is completed.

2010 • •

I-680 Southbound Express Lane opens.



**2012** 

1-680 Southbound Express Lane celebrates two years of operation.

2013

1 millionth solo driver uses Express Lane; Postimplementation traffic study submitted to State Legislature.





## History

The I-680 corridor between Pleasanton and Milpitas, known as the Sunol Grade, in eastern Alameda County, is a 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. In 1998, a group of elected officials, agencies, and businesses formed the Solutions on Sunol (SOS) Coalition to address congestion within the corridor, which was one of the top three most-congested corridors in the Bay Area. A transportation systems management report identified the need for operational improvements in both directions of Interstate 680 along the Sunol Grade. By the end of 2002, a 14-mile southbound HOV lane opened between Route 84 and Route 237 as a first step to manage congestion.

Studies were then conducted to see whether the southbound HOV lane could be converted to a high-occupancy toll (HOT), or express, lane facility. Express lanes offer the option to better utilize the existing HOV lane capacity, giving solo drivers the option to pay a toll to use the express lane and avoid congestion. This reduces



congestion in general-purpose lanes, thus improving overall corridor performance.

After the successful implementation of express lanes in Southern California, the state legislature passed Assembly Bill 2032 (AB 2032) in 2004 that authorized the Alameda County Transportation Commission to conduct, operate and administer a value-pricing program (express lane) within two corridors in Alameda County, including the Sunol Grade Corridor.



Conversion of the I-680 southbound HOV lane into an express lane began in 2008. Construction included widening the roadway to accommodate a new two-foot buffer separating the lane from the general purpose lanes, installing electronic toll collection

equipment, repaving the entire roadway, and adding soundwalls in locations as identified through noise studies.

The I-680 Southbound Express Lane sparked the initiation of a regionwide express lane network that will include 550 miles of express lanes in the San Francisco Bay Area in coming years.

This \$41 million express lane project was funded with federal, state and local funds, including \$19.7 million from Measure B, Alameda County's local transportation sales tax measure approved by 81.5% of voters in 2000.



### How Does it Work?

#### **Dynamic Pricing and Electronic Tolling**

The I-680 Southbound Express Lane is one of the first in the nation to deploy a full dynamic pricing system, which ensures a consistent and reliable travel time in the lane. Dynamic pricing means that tolls vary based on real-time traffic conditions in the corridor - increasing when congestion is heavier and decreasing when traffic is lighter. The goal is to keep the express lane operating at a reliable level of service, which requires a minimum speed of 45 mph.

Carpools, motorcycles, transit vehicles and permitted zero- and lowemission vehicles use the Express Lane for free.



Tolls on the I-680 Express Lane have ranged from \$0.30 during off-peak hours to a maximum of \$7.50 during the most congested commute days, with an average peak hour toll during 2013 of \$2.35. Tolls are calculated every three minutes.

The I-680 Express Lane operates Monday through Friday from 5 a.m. to 8 p.m. Solo drivers who want to use the lane need a FasTrak<sup>®</sup> transponder.

Each time drivers choose to use the express lane, the toll amount is deducted from their FasTrak account balance. The operation is fully electronic, with no tollbooths or tollgates, so customers do not need to slow down or stop to pay.

There are three entry points and three exit points. One half-mile before each entry point, an overhead electronic sign displays the current toll being assessed. Solo drivers have a choice to pay the current toll to use the express lane. The amount a driver pays is the price that was displayed at their entry point, even if toll rates change while they are in the express lane. Carpools with two or more people, vanpools, motorcylces and transit buses always use the lane for free, as do permitted zero- and low-emission vehicles. To avoid being charged a toll, carpool drivers need to place their FasTrak transponder in a mylar bag that is

provided by FasTrak.



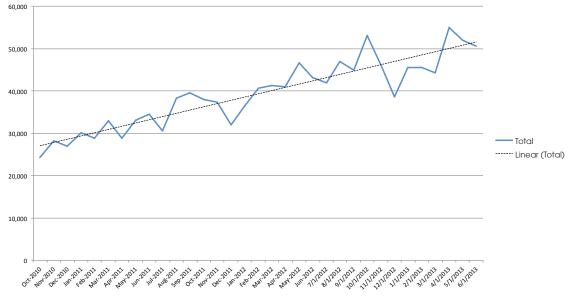
The HOT lane operation is fully electronic, with no tollbooths or tollgates, so customers do not need to slow down or stop to pay. To avoid being charged a toll, carpool drivers need to place their FasTrak® transponders in a mylar bag.



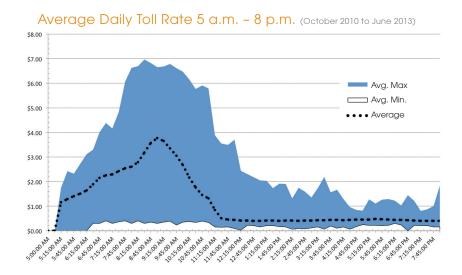
Since 2010 more than 1.3 million solo drivers have used the express lane. The lane has experienced a nearly 58% increase in monthly toll-paying users from 2010 to 2013.

## Corridor Revenue and Investments

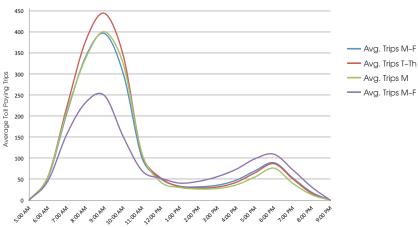
When the Sunol Smart Carpool Lane JPA was formed, the Authority agreed to reinvest the net revenues derived from the express lanes directly back into the project corridor. Toll revenues are used first to pay for operating and maintaining the I-680 Express Lane; and then will be used to fund other transportation projects or transit operations along the corridor, including express bus and other transit service. Planned improvements include an express lane project on the northbound I-680.



Total Express Lane Revenue Trips

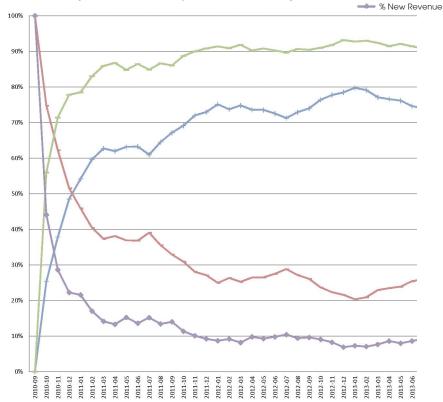






#### New and Repeat Toll-Paying Express Lane Users (based on transponder statistics)





80% of total Fastrak transponder users on I-680 are repeat users. These repeat express lane users represent about 90% of revenues generated.

Alameda CTC is working closely with the California Toll **Operators Committee** and other regional agencies to evaluate additional emerging technology that could provide automated toll violation enforcement options in order to reduce violation rates.

### Toll Enforcement

Express Lane tolls are collected via FasTrak® transponders, which are required for any solo driver to use the lane. The California Highway Patrol (CHP) provides toll enforcement on the I-680 Express Lane, employing both the normal patrols provided on other Bay Area freeways as well as extra officers contracted for additional enforcement to prevent access and toll violations. The I-680 Express Lane has FasTrak® readers at five locations; Three at each toll zone and two at

stand-alone enforcement zones.

The enforcement zone readers are used only as an aid to the CHP enforcement, by determining if a vehicle has a valid FasTrak® transponder.

The facility has a two-foot buffer stripe separating the general purpose and express lanes; crossing the double lanes to enter the I-680 Express Lanes is a moving

violation. Additional violations include avoiding the toll readers, straddling double white lines, and travelling in the toll lane without working FasTrak® transponders.

# The Future: A Regional Express Lane Network

The I-680 Southbound Express Lane is part of the 550-mile Bay Area Express Lane Network, which is envisioned to provide increased travel reliability and efficiency, and to improve connectivity throughout the region.

Upon completion in 2035, the Bay Area will have 550 miles of express lanes operated by the Metropolitan Transportation Commission (MTC), 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.

It is anticipated that Alameda CTC and VTA will operate a total of 280 miles of express lanes. Alameda CTC's lanes include the existing southbound I-680 express lane, the express lanes now under construction along both directions of I-580 in eastern Alameda County, and a future express lane in the northbound direction of the I-680 over the Sunol Grade. VTA operates the SR 237 Express Lanes in Milpitas and will add express lanes on U.S. 101 and Route 85 in Santa Clara County, as well as expand express lane miles on Route 237.

MTC plans to operate 270 miles of express 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.

The legislation that authorized the I-680 Express Lanes, California Assembly Bill 2032, required a post-implementation traffic study to evaluate the operational benefits of the express lane. The study was completed in summer 2013, and results are available at www.AlamedaCTC.org/ ExpressLanes.

#### Chair:

Bill Harrison, Mayor, City of Fremont, Alameda CTC

#### Vice Chair:

Jerry Thorne, Mayor, City of Pleasanton, Alameda CTC

#### Members:

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

Gail Price, Councilmember, City of Palo Alto, Santa Clara VTA

Tim Sbranti, Mayor, City of Dublin, Alameda CTC

#### Executive Director:

**Arthur L. Dao,** Alameda CTC

#### Staff Liaison:

Stewart D. Ng, Deputy Director of Projects and Programming, Alameda CTC

http://www.AlamedaCTC.org/ ExpressLanes

# Sunol Smart Carpool Lane JPA

The Sunol Smart Carpool Lane Joint Powers Authority 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 Authority meets monthly, and meetings are open to the public. Meeting agendas and minutes are posted at www.AlamedaCTC.org.



# **Partnerships**

The Alameda County Transportation Commission, Caltrans and the California Highway Patrol provide services to the Authority contractually. For toll collection, the Authority has an agreement with the Bay Area Toll Authority to use its FasTrak® electronic toll-collection system.

## Financial Information, Fiscal Year 2012-2013

Toll revenues received on the I-680 Southbound Express Lane are utilized to pay for operations and maintenance of the express lane. Currently revenues do not exceed operating costs and the express lane is subsidized by grant funding for the I-680 Southbound HOT Lane Project. When the express lane becomes sustainable and revenues exceed operations and maintenance costs, net revenues will be reinvested in the project corridor. The Sunol Smart Carpool Lane JPA Board will determine how to reinvest these funds. An Expenditure Plan will be adopted biennially and revenues may be used for the construction of HOV facilities including the I-680 Northbound Sunol Smart Carpool Lane project, or for transit services (funds are eligible for capital and operations) that directly serve this corridor.

In FY2012-13 toll paying trips totaled approximately 565,000. The average peak time toll was \$2.35, reaching a high of \$7.50 and the average non-peak time toll (Monday-Friday) was \$0.45.

- Total net assets decreased by \$304,000 or 7.1% from \$4.3 million to \$4 million as of June 30, 2013 compared to June 30, 2012. This decrease is largely related to capital asset depreciation. Capital assets comprised \$2.4 million or 59% of the total net assets at June 30, 2013.
- As of June 30, 2013, cash and cash equivalents increased by \$0.5 million or 32.1% from \$1.6 million to \$2.1 million. This change can be attributed to \$0.5 million of expenses which were accrued but not yet paid as of June 30, 2013.
- Toll revenue was \$1.3 million during fiscal year 2013, an increase of \$228,000 or 21% over the period of July 1, 2011 through June 30, 2012.
- During fiscal year 2013, the total facility operations and maintenance expenses were \$2 million, paid for by \$1.37 million in toll funds and \$0.63 million in I-680 Southbound Express Lane Project grant funds.



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