



DATE: June 18, 2020

TO: Alameda County Transportation Commission

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

SUBJECT: Adoption of Modified Business Rules/Toll Policies for the I-580 Express Lanes

Recommendation

It is recommended that the Commission adopt modified business rules and toll policies associated with operation of the I-580 Express Lanes toll system.

Summary

Section 149.5 of California Streets and Highway Code authorizes Alameda CTC, the administrative agency of I-580 Express Lanes, to adopt a fee structure to manage traffic congestion. See Attachment A for the I-580 Express Lanes operating limits. Express Lanes have been implemented throughout the Bay Area, either as conversions of existing high occupancy vehicle (HOV) lanes or by creation of new lanes, for the purpose of:

- Providing travel time savings and travel reliability to express lane users;
- Expanding the regional freeway network for HOVs and buses; and
- Optimizing the corridor capacity by allowing single occupancy vehicles (SOVs) to choose to pay a toll and travel in the express lanes.

The toll policies and associated business rules adopted by the Commission further the achievement of these goals. The Commission approved a set of toll policies and business rules in 2015, and also adopted the I-580 Express Lanes Toll Enforcement Ordinance in 2015. When the I-580 Express Lanes first opened to traffic in February 2016, it was the first express lanes facility in the Bay Area to implement an electronic violation enforcement system and adopt a toll ordinance. Since then, the Bay Area Infrastructure Financing Authority (BAIFA) opened the I-680 Contra Costa Express Lanes and the Santa Clara Valley Transportation Authority (VTA) expanded their SR-237 Express Lanes with comparable technology.

Under current toll policy, vehicles with two or more occupants, motorcycles, transit vehicles, and qualifying clean air vehicles (CAVs) may travel toll-free in the I-580 Express Lanes.

Consensus among Alameda CTC, MTC, Caltrans, and other express lane operators is to pursue toll policy consistency for both existing and new express lanes facilities. To achieve such consistency, as well as improve the general express lanes operations, staff recommends modifying the current I-580 toll policy for qualifying SOV clean air vehicles (CAVs) from toll-free to a 50% discount toll.

Background

First opened in February 2016, the I-580 Express Lanes uses an All Electronic Toll (AET) collection method to collect tolls. Toll pricing is displayed on dynamic message signs (DMS) throughout the corridor; and equipment installed on toll gantries, which are spaced approximately every three-quarters of a mile, detect vehicles in the express lane by FasTrak® toll tags (also known as transponders) and/or license plate capture cameras. Toll policies and associated business rules inform the design and operation of the express lanes.

Caltrans retains its authority to set freeway operations policy, but Alameda CTC has the authority to establish toll policy. Table 1 lists the current I-580 Express Lanes freeway operational policies adopted by Alameda CTC and approved by Caltrans.

Table 1: Freeway Operations Policies

Item	Policy
Access Control	Near-continuous access: Continuous access except where buffer separation is provided based on traffic safety analysis
Hours of Operation	5 am – 8 pm, Monday - Friday
Occupancy Requirement (for toll-free travel)	2 or more persons (HOV 2+)

Toll Policies provide the guidelines for operations. Table 2 provides a summary of adopted I-580 Express Lanes toll policies.

Table 2: Current Toll Policies

Item	Current Policy
Pricing Strategy	Dynamic pricing based on real-time congestion in the corridor updated as frequently as every 3 minutes.
Minimum Toll Rate	\$0.50 (operational minimum unless the Express Lanes are opened for use to all motorists in conjunction with incident management).
Maximum Toll Rate	No policy maximum. The Executive Director is authorized to establish operational maximum toll rates and adjust as needed to optimize corridor throughput, with incremental increases no greater than \$5,

Item	Current Policy
	and shall report back to the Commission when toll rates are revised within the approved parameters.
Toll-Free Users	Carpools, motorcycles, transit vehicles, and clean air vehicles with qualifying DMV decals.
User Requirements	<ol style="list-style-type: none"> 1. Every motorist traveling in the I 580 Express Lanes shall have a properly mounted toll tag (FasTrak or FasTrak Flex®) or a properly-mounted license plate associated with a valid FasTrak Account having a balance sufficient to pay the Toll. 2. To be eligible for HOV toll discounts, HOV customers must have a properly mounted FasTrak Flex toll tag set to either "2" or "3+" in accordance with the actual occupancy of the vehicle. 3. To be eligible for toll-free travel, motorcycles and transit vehicles must be equipped with a properly mounted FasTrak Flex toll tag set to the "3+" position. 4. To be eligible for toll-free travel, SOV vehicles displaying a valid DMV-issued CAV decal for HOV lane usage must either carry a FasTrak Flex toll tag set to the "2" or "3+" position or carry a FasTrak CAV toll tag set to match the number of people in the vehicle. 5. All vehicles traveling in the Express Lanes without toll tags are subject to being charged the Single Occupant Vehicle (SOV) toll and violation penalties, if applicable.
Enforcement	The Commission has adopted a Toll Ordinance to enact toll violation processing/penalties. Motorists who incur a toll and do not have a valid FasTrak account eligible for posting the Trip Transaction at the time of travel will be issued a Violation Notice.
Performance Goals	<p>Federal Requirement: During morning and evening commute hours, or both, maintain 45 MPH or higher in HOV lane for 90% of the time.</p> <p>State requirement: maintain Level of Service C or better at all times, though D is permitted for short periods of time.</p> <p>If goals are not being met even with increases in pricing, express lanes users may be limited to only HOV and HOV-eligible vehicles. When "HOV Only" is displayed on a dynamic message sign it means that solo drivers shall not enter the Express Lane unless they are a motorcycle or clean air vehicles allowed in the HOV lane, as "HOV Eligible Vehicles" per current State laws.</p>

Business Rules inform the specific design of the toll system. Table 3 lists the business rules under which the I-580 Express Lanes currently operate.

Table 3: Current Business Rules

Item	Business Rules
Zone tolling	Flat rate for travel within a single zone.
Locked-in Rates	<p>Customers are locked-in to pay the lesser of the toll rate displayed on the Dynamic Message Sign (DMS) that is directly prior to the customer's first read point <u>or</u> the toll rate previously determined for that DMS within the toll rate safeguard time parameter. The toll rate safeguard provides a defined interval within which the customer has ample opportunity to view the toll rate on the DMS before entering the Express Lanes.</p> <p>The locked-in toll rates will not change if the price goes up or down while the customer is still driving in the Express Lane.</p>
Trip Building	A customer's "Trip" is created from all of the associated toll tag reads and/or license plate images captured at toll gantries.
Rate Assignment	<p>The locked-in toll rate will apply from entry into the Express Lane and include travel through each successive toll zone for that Trip.</p> <p>If a customer exits the Express Lane and decides to get back in after the allowable travel time passes (currently 10 minutes), two separate trips are constructed and the guaranteed price from the initial entry is considered expired.</p> <p>Trips with different switch FasTrak Flex occupancy settings within a single Trip will be assigned the lowest occupancy setting that is detected during that Trip.</p>
Toll Rate during "HOV ONLY" Operation	An SOV that enters the express lane during HOV-Only mode is subject to a \$30 toll and may also be cited by CHP.
Non-Tolling Hours	During non-tolling hours the Express Lanes are available for all vehicles to use toll-free as general purpose lanes and without any occupancy restrictions.
Toll Waiver/Reduction	Executive Director is authorized to plan and execute a toll waiver/reduction plan.

Staff recommends the toll policy regarding CAV discounts be modified to set the toll rate for eligible CAVs to 50% of the full toll. MTC and VTA have already adopted this same partial-tolling policy for CAVs, thus adoption of the same policy for the I-580 Express Lanes would make the corridor regionally consistent with respect to CAV tolling. This policy would be implemented subsequent to adoption of a revised I-580 Express Lanes Toll Ordinance.

Staff also recommends that the I-580 Express Lanes toll zones be modified to consolidate the existing eight eastbound and seven westbound toll zones shown in Attachment B to five eastbound and four westbound toll zones, respectively, as shown in Attachment C, to improve the operational effectiveness of the express lanes. This change would be implemented with the activation of the new toll system host being developed as part of the I-580 Toll System Upgrade Project, which is expected to go live in November 2020.

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

Attachments:

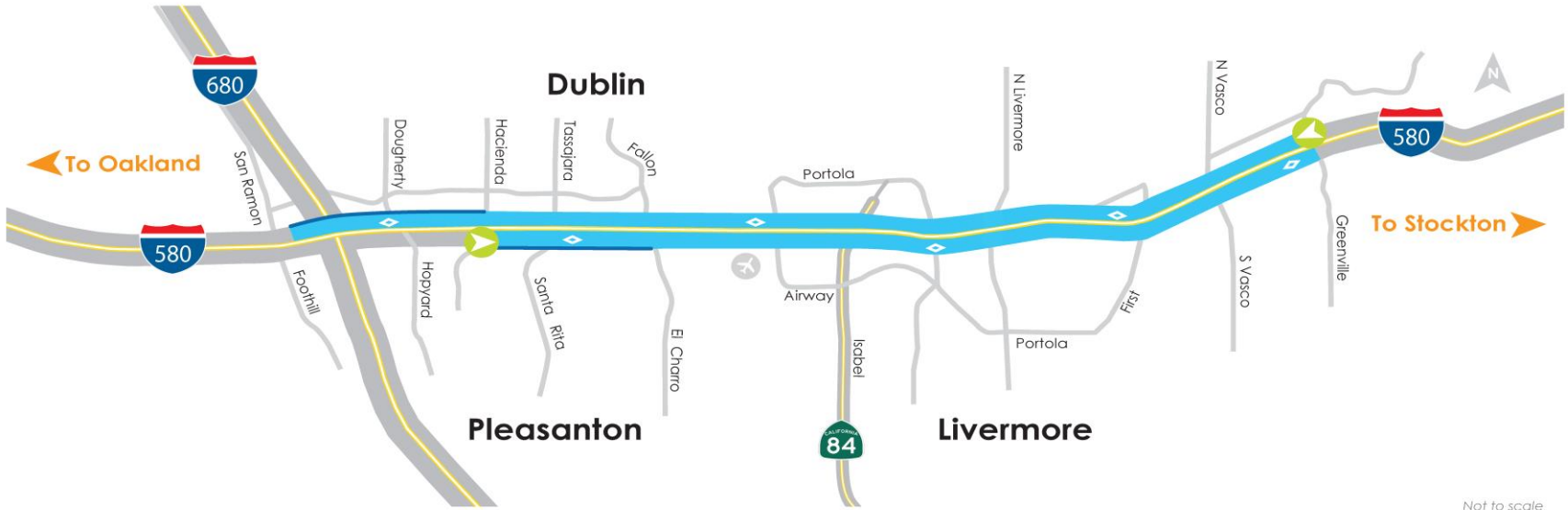
- A. I-580 Express Lanes Location Map
- B. I-580 Express Lanes Current Toll Zones
- C. I-580 Express Lanes Proposed Toll Zones

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I-580 Express Lanes Location Map

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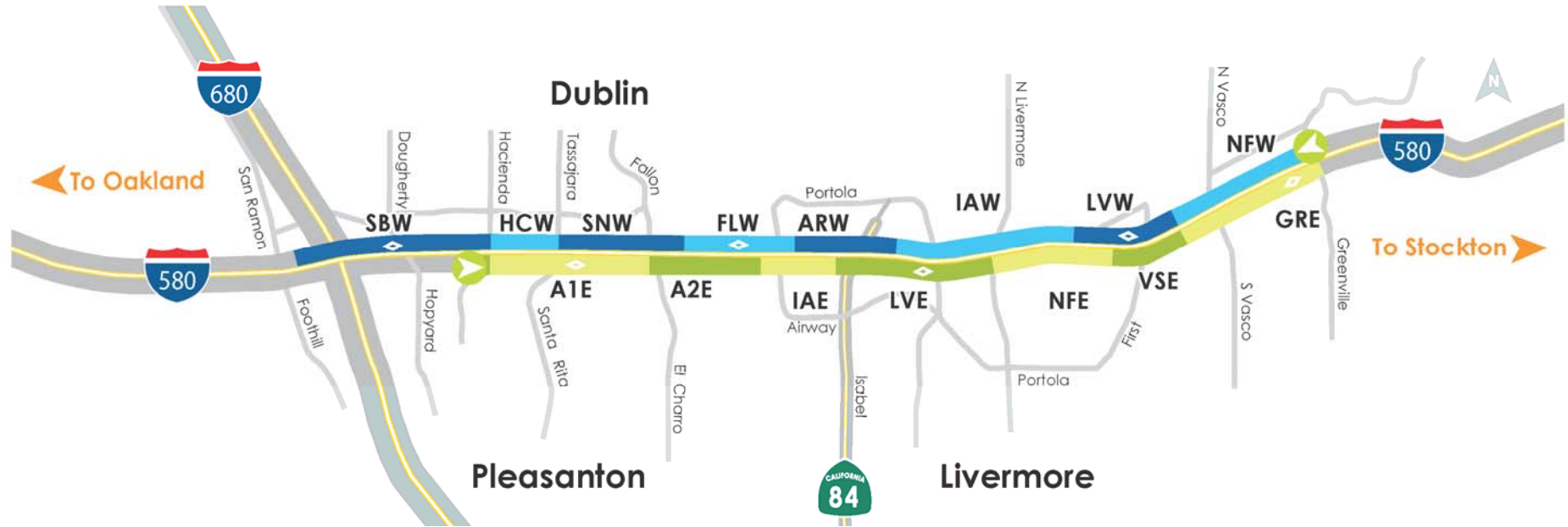
Two Eastbound Express Lanes
Lanes begin at Hacienda
 No entry/exit from eastbound express lanes from Hacienda to Fallon / El Charro.
Please note: For access to Santa Rita Road, do not enter express lanes.

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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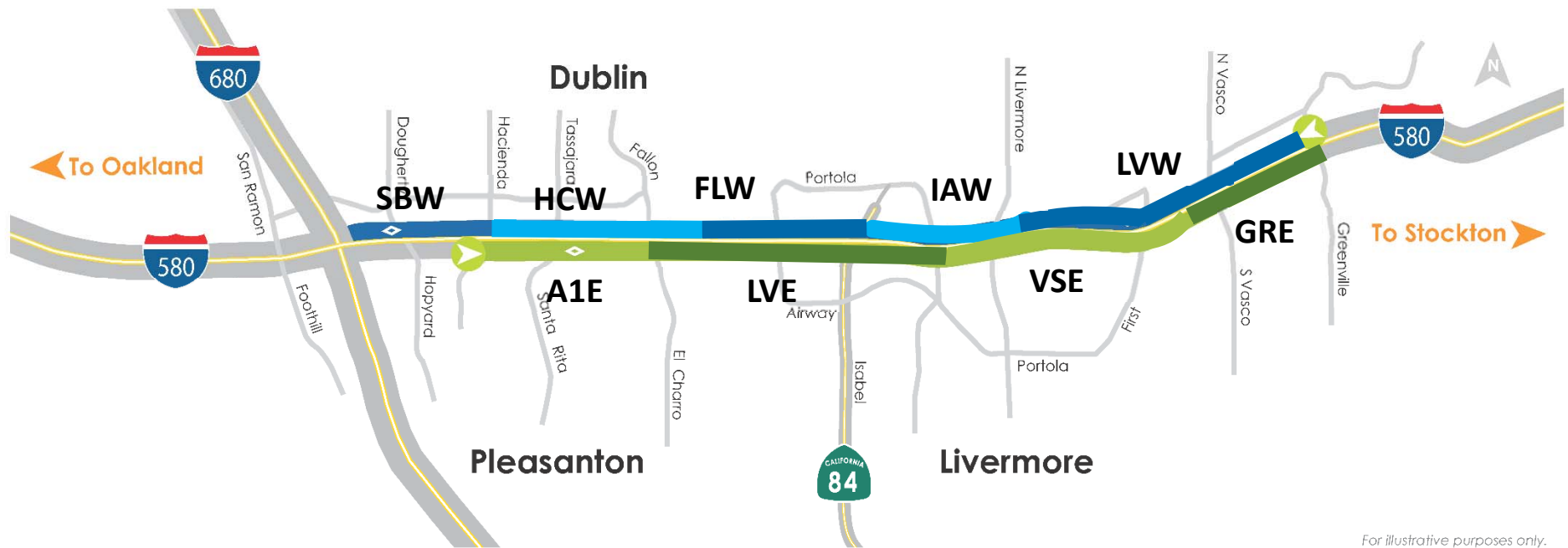
I-580 Express Lanes Existing Toll Zone Map



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I-580 Express Lanes Proposed Toll Zone Map



For illustrative purposes only.

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