



Board Report

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REVISED
AD HOC CONGESTION REDUCTION COMMITTEE
JANUARY 20, 2016

SUBJECT: METRO EXPRESSLANES TOLL POLICY

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

ADOPT the **ExpressLanes Toll Policy** as shown in Attachment A.

ISSUE

One of the primary goals of the ExpressLanes program is to provide a safe, reliable, predictable commute for customers of the ExpressLanes. In 2015, during the morning peak period, the northbound I-110 and westbound I-10 ExpressLanes have seen increasing congestion jeopardizing our ability to meet this goal. The ExpressLanes have regularly gone into "HOV Only" mode, whereby they are shut down to toll paying customers, with only those qualifying non-toll paying HOV commuters allowed into the system. The situation is further exacerbated by the fact that zero/low emission vehicles are allowed to remain in the ExpressLanes during "HOV Only" periods contributing to additional congestion.

The "HOV Only" operating mode signals that the ExpressLanes are becoming too congested and conditions are deteriorating below established performance requirements. Demand has exceeded capacity and the current toll maximums do not motivate enough toll paying customers from entering the ExpressLanes. The ExpressLanes operate in the "HOV Only" mode until traffic densities (traffic volume/average travel speed) improve and capacity can be restored. Once capacity is restored, toll paying customers are allowed back into the ExpressLanes.

The policy framework in Attachment A updates policies to operate, maintain and administer the ExpressLanes to ensure program goals are met. The policies of particular importance to attaining the program goals are: Performance Requirements; and Toll Rate Setting.

DISCUSSION

Performance Requirements

Section 166 of Title 23 Code of Federal Regulations, requires that the ExpressLanes operate at 45 miles per hour (or traffic density of 48), 90 percent of the time during peak periods. To ensure compliance with this requirement, staff has outlined mitigation strategies to be deployed should conditions degrade. Allowing increases in toll prices as described below is one strategy. Another strategy that could be implemented in conjunction with pricing, and with concurrence from Caltrans, would be to extend the peak period if conditions outlined in the policy are met. For example congestion is highest on the I-110 during the morning peak period, a change in the peak period to allow peak pricing could be beneficial to smoothing out the demand and extending it over a longer period of time.

Ultimately there is a finite amount of capacity available. Therefore, it is important for staff to have the tools available to manage this capacity to ensure the ExpressLanes are meeting their operational and program goals.

Toll Rate Setting

In July 2009 the Board adopted toll rates for the I-10 and I-110 ExpressLanes. The current minimum toll per mile during off-peak and peak periods is \$0.25 and \$0.35 respectively with the maximum toll per mile set at \$1.40. Approval of this action will allow an increase in the maximum by \$0.10 increments when warranted while reducing the minimum toll to \$0.10 per mile during off-peak hours.

At the time the toll rates were adopted the traffic and tolling models projected, that the probability of people being willing to pay \$1.40 per mile was approximately 1% and that the toll rate would help to balance supply and demand, as both of these corridors are high demand corridors for vanpools, transit and carpools. What we have found over the past year is that the current maximum price of \$1.40 per mile does not appear to be enough of a disincentive for toll paying customers to choose not to enter the ExpressLanes. This impacts the performance of the lanes by increasing congestion and slowing speeds to the point where the lanes revert to "HOV Only" mode and thus, toll paying customers are not allowed to enter the lanes until the speeds pick up and performance improves.

In 2015, the ExpressLanes have been in "HOV Only" mode for 13,038 minutes (217.3 hours) with 11,584 of those minutes on the I-110 and 1,454 minutes on the I-10 which reflects over 10 percent of the AM peak period. The majority of these occurrences are at toll segments 3 (108th Street to Gage Avenue) and 4 (Slauson Avenue to 39th Street) on the northbound I-110, and at segment 4 (I-710 and Garvey Avenue and exits for the I-10 general purpose lanes) on the westbound I-10. The 13,038 total "HOV Only" minutes reflects a 154% increase from 2014.

In addition, traffic volumes on the I-110 and I-10 ExpressLanes continue to grow. Since 2013 there has been an average annual trip growth of 22% on the ExpressLanes with an 18% increase on I-110 and a 25% increase on I-10. In 2015, customers on the I-110 paid an average toll of \$2.55 per trip while those on the I-10 paid \$2.75. The percentage of trips on the I-110 that are charged the maximum fare of \$15.75 is 0.16% of all trips taken, and on the I-10 those who paid the maximum fare of \$15.55 constitutes 0.15% of all trips.

Given the increase in traffic volumes and "HOV Only" minutes, the current maximum price of \$1.40 per mile does not appear to be enough of a disincentive for toll paying customers to choose not to enter the ExpressLanes. Because of the increase in volumes and the "HOV Only" minutes staff is

recommending a methodology as outlined in Attachment A, for an automatic increase of \$0.10 increment to the maximum rate per mile as traffic densities increase per segment on the ExpressLanes to ensure continued reliability of the system and to minimize “HOV Only” occurrences. The incremental increase to the maximum toll rate per segment would only impact those segments that consistently exceed the density threshold and go into “HOV Only” mode. Based on the quarterly review that is part of the rate setting methodology, and the 30-day notification to customers, the maximum toll rate per segment would increase no more than \$0.30 in a calendar year.

The rate setting methodology is a tool that will allow staff to better manage congestion in the ExpressLanes and improve the customer experience by reducing the “HOV Only” minutes. This automatic rate increase is an industry best practice that other experienced tolling agencies such as OCTA (91 ExpressLanes) and SANDAG (I-15 ExpressLanes) utilize to increase their toll pricing when certain conditions are met.

If the Board were to adopt this rate setting policy staff would notify customers 30 days in advance of any price change through the ExpressLanes website, send correspondence via email or mail depending upon customer preferences, and would provide notifications in various print and electronic media outlets. Staff would also add a historic rate table on the ExpressLanes website and provide monthly updates to provide customers with historic time of day pricing for their reference.

Finally, for congestion pricing to be effective, the price needs to be at a rate that is great enough during high congestion times to be a disincentive to entering as a toll-paying customer and an incentive for people to change behavior - travel later/earlier, rideshare or take transit. Based upon staff’s experience to date, the evidence suggests that the current maximum rate is no longer high enough to curb demand in the morning peak period. Given the dynamic nature of the algorithm, pricing will remain the same unless demand requires the additional \$0.10 increase.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an impact on established safety standards.

FINANCIAL IMPACT

This policy would have no impact to the adopted FY16 budget. If this action leads to an increase in revenue, the revenues will be subject to Board adopted guidelines.

ALTERNATIVES CONSIDERED

The request to convert from a constrained toll rate to a market based toll rate comes after staff has exhausted all other measures to reduce the congestion and the recurrence of “HOV Only” in the ExpressLanes. During 2015 staff employed a number of measures to reduce the congestion and the “HOV Only” minutes to improve system performance including toll pricing algorithm adjustments to ensure all toll segments were working together as a system and more predictive of traffic volumes in previous segments; removing the price caps that were placed on each freeway during the peak hours to allow the algorithm to price based on actual congestion; providing more CHP enforcement officers during peak hours; and revising the business rules to reduce the number of violators.

The Board could choose not to approve the market based policy and the \$0.10 incremental increase in the maximum toll rates but that is not recommended as ExpressLanes congestion is increasing thereby limiting our ability to meet system operational goals. This policy provides the requested guidance to enable staff to make adjustments as needed to improve the performance of the ExpressLanes consistent with prior Board directives.

NEXT STEPS

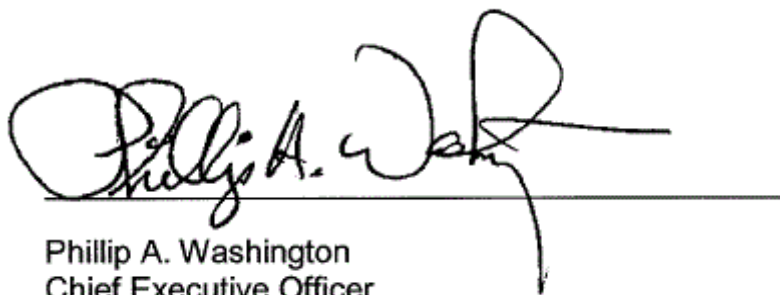
Upon Board approval, staff will take the necessary steps to notify customers of the change and implement the new policies. Staff will periodically update or modify the policies for Board consideration to assure optimal operations of the ExpressLanes and will provide an annual update to the Board regarding any price changes.

ATTACHMENTS

Attachment A - ExpressLanes Toll Policy

Prepared by: Kathy McCune, Deputy Executive Officer, (213) 922-7241
Shahrzad Amiri, Executive Officer, (213) 922-3061

Reviewed by: Stephanie Wiggins, Deputy CEO, (213) 922-1023



Phillip A. Washington
Chief Executive Officer

Los Angeles County Metropolitan Transportation Authority ExpressLanes Toll Policy

Purpose

The policy framework detailed herein establishes policies to operate, maintain, and administer the ExpressLanes to ensure program goals are met. The policies will be used to operate the current Metro ExpressLanes program and any future ExpressLanes facilities in compliance with the program goals and Board direction. This policy framework will be expanded or modified as the ExpressLanes system grows and technology changes.

Program Goals

The following goals are established for the ExpressLanes program. The specific policies that follow derive their authority from these goals, and any future policy decisions should be measured against these goals to ensure compliance with the goals.

- Provide a safe, reliable, predictable commute for customers of the ExpressLanes
- Reinforce LACMTA's ongoing efforts to increase vehicle occupancy rates and transit ridership
- Use dynamic pricing to manage traffic and optimize -people throughput in the corridor
- Provide excellent customer service
- Operate and maintain a self-sustaining ExpressLanes program
- Utilize any surplus toll revenue for corridor improvements and system expansion

Chapter 1: OPERATIONS

Performance Requirements 100.005

In accordance with Section 166 of Title 23, Code of Federal Regulations, the ExpressLanes performance will be monitored to ensure a minimum average operating speed of 45 miles per hour, 90 percent of the time during weekday peak periods.

Mitigation strategies to be deployed, should performance degrade, are as follows:

- (a) Increase the maximum toll charged to vehicles to reduce demand as described in 100.005, up to four times, then implement strategy (b), or (c), as appropriate;
- (b) Extend the peak period hours, as described in 200.015, then implement strategy (a) or (c), as appropriate;
- (c) Discontinue non-HOV vehicle use of ExpressLanes, and implement strategy (a) as appropriate.

Peak period performance will be monitored against ExpressLanes performance requirements. Staff will adjust the peak period to maintain performance standards.

For tolling operations, after four occurrences, within a quarter, of meeting the HOV threshold in a non-peak hour, staff may increase the duration of the peak-period to include the hour. For example, if HOV

Only has occurred four times during the 9:00 am and 10:00 am hour within the past 3 months then the peak period would now be extended to 10:00 AM from 9:00 AM

HOV threshold is defined as:

- (a) System in HOV Only mode;
- (b) Lasting more than 35 minutes; and
- (c) Excludes incidents.

Chapter 2: Toll Rates, Exemptions and Discounts

Toll Rate Setting 200.005

When the ExpressLanes are in operation, the toll rate schedule will be a minimum of \$0.10 per mile during off-peak hours and \$0.35 per mile during peak hours, as defined in policy 200.015. Toll rates will vary based on, traffic density (traffic volumes/travel speeds) and will automatically adjust using a dynamic pricing system. The trip price is determined by multiplying the miles travelled by the rate per mile in each tolling segment at the time of the trip. Staff will monitor toll rates against ExpressLanes performance and adjust the maximum rate per mile to maintain performance standards and ensure the following ExpressLane toll rate goals are met:

- Provide a safe, reliable, predictable commute for customers of the ExpressLanes
- Optimize people throughput in the corridor.

After four occurrences, within a quarter, of meeting the density threshold, staff may increase the maximum price per mile per segment by \$0.10.

Density threshold is defined as:

- Density exceeding 48 (calculated as traffic volume/average travel speed);
- Lasting more than 35 minutes; and
- Excludes incidents.

Toll Exemptions 200.010

Except as provided herein, all vehicles using the ExpressLanes must pay the required toll. Only qualified vehicles may be exempt from paying tolls. The registered owner and operator of the qualified vehicle must comply with the requirements of the agency in order to obtain the exemption. The following vehicles qualify for exemption:

- (a) Mass transit and paratransit as defined in Vehicle Code Section 21655.5;
- (b) Carpools and vanpools, as established for each tolled facility;
- (c) Motorcycles;
- (d) California Highway Patrol;
- (e) Authorized marked emergency vehicles on bona fide emergencies as defined in Vehicle Code Section 23301.5;
- (f) Maintenance vehicles directly involved in maintenance on the ExpressLanes and adjoining bus stations or responding to bus related incidents; and

- (g) Tow trucks authorized by Freeway Service Patrol responding to incidents on the ExpressLanes.

Toll Discounts 200.015

The following classes of vehicles may qualify for a toll discount. The registered owner of the qualified vehicle must comply with the following requirements to obtain the discount:

- (a) Clean Air Vehicles (see transponder requirement under Section 200.020); and
- (b) HOV 2 discount during peak hours, where applicable and indicated by roadway signage.

Staff will implement the toll discounts at a time in the future when operationally feasible.