

**Metro**Los Angeles County
Metropolitan Transportation AuthorityOne Gateway Plaza
Los Angeles, CA 90012-2952213.922.2000 Tel
metro.net**REGULAR BOARD MEETING
APRIL 24, 2014****SUBJECT: FUTURE OF METRO EXPRESSLANES****ACTION: APPROVE RECOMMENDATIONS****RECOMMENDATIONS**

- A. Receive and File the Metro ExpressLanes Technical Memorandum on Congestion, Tolling, Transit, & Equity Results by the Federal Highway Administration (FHWA), (Attachment A)
- B. Receive and File Public Feedback on the Metro ExpressLanes Demonstration Program received during the public comment period of March 1, 2014 through April 7, 2014, (Attachment B);
- C. Receive and File Metro ExpressLanes Debt Capacity Assessment Report, (Attachment C); and
- D. Authorize the Chief Executive Officer to continue operation of the Metro ExpressLanes.

ISSUE

In partnership with Caltrans, Metro serves as the Lead Agency for 110 and 10 Express Lanes demonstration program. February 23rd, 2014 marked the completion of the federal grant requirement of 12 months of concurrent toll operations of the Metro ExpressLanes. The pilot program converted the existing High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) Lanes on portions of the 110 and 10 freeways. Now that the federal demonstration period is complete, it is time for the Metro Board of Directors to determine whether or not toll operations should continue beyond the current tolling authority expiration date of January 15, 2015.

BACKGROUND

In June 2007, the Metro Board unanimously passed a Motion by Directors Fasana, Antonovich, Katz, and Fleming directing the CEO to work with Caltrans and other agencies to develop a detailed operating plan for implementing congestion pricing in Los Angeles County. Congestion pricing is a strategy to reduce traffic congestion,

improve the reliability of the highway system performance, and generate new revenue sources which can be used to fund transportation improvements.

As traditional transportation revenue sources decline, agencies seek new ways to maximize efficiency from existing facilities and future investments. Los Angeles County has the most extensive system of HOV lanes in the Country with over 539 lane miles. Despite the success of HOV lanes for more than three decades, in the summer of 2007, FHWA notified Caltrans that some HOV lanes (including portions of the 110 and 10 HOV lanes) had become “degraded” – meaning the average travel speed during the peak period fell below 45 mph more than 10% of the time – which requires Caltrans to implement mitigation efforts.¹ Potential mitigation efforts include: increasing the minimum occupancy requirement from “2 or more persons” to “3 or more persons”, eliminating special access by alternative fuel vehicles, widening the freeway to build additional HOV lanes, and converting existing HOV lanes to HOT lanes.

Metro, in partnership with Caltrans, chose to apply for a federal Congestion Reduction Demonstration (CRD) Grant to pilot the variably priced managed lanes strategy on the 110 and 10 corridors with the conversion of the HOV lanes to Express Lanes. In April 2008, the US Department of Transportation (USDOT) entered into an agreement with Metro and Caltrans for an award of \$210.6 million in federal grant funds to implement the Metro ExpressLanes Demonstration Program. Metro ExpressLanes is one of six Urban Partnership projects² competitively selected by USDOT to deploy innovative programs to reduce congestion through the implementation of congestion pricing.

The Program is multi-modal and offers improved transportation options and a choice for drivers of single occupant vehicles (SOV) to pay to travel in the Express Lane. The minimum toll per mile is \$0.25 and the maximum toll per mile is \$1.40. The general purpose lanes are not tolled. Carpools, vanpools, publicly and privately operated buses, and motorcycles travel toll-free. The goal of the Program is to leverage pricing for sustainable change that creates travel time savings, increases trip reliability, creates cost savings, and improves air quality.

Los Angeles County’s first ever HOT lanes opened on November 10, 2012 on the 110 Harbor Freeway, between Adams Blvd and the State Route 91. The second HOT lane opened on February 23, 2013 on the 10 El Monte Freeway, between Alameda St and the 605 freeway.

DISCUSSION

The federal CRD grant requires formal evaluation of the pilot program by an independent firm retained by FHWA. The Technical Memorandum reflects their evaluation (**Attachment A**).³ The summarized results are:

- The LA CRD projects are accomplishing many of their goals and objectives.

¹ The most recent report from Caltrans to FHWA in July 2013 noted that in 2011, only the I-10 was “degraded”.

² The five additional Urban Partners are: Miami, Minneapolis, San Francisco, Seattle, & Atlanta

³ The complete report is available at www.metro.net/projects/expresslanes/public-reports/

- Consistent with other new HOV/HOT conversion projects, the analysis shows degradation in travel times and travel speed performance during the initial deployment period on some portions of the I-10 and I-110. However, consistent with the other sites, the same facilities are showing an upward trend in travel time reductions and increases in speed in later portions of the pilot period.
- Peak hour vehicle throughput in the ExpressLanes increased in the post-deployment period and person throughput decreased in the ExpressLanes based upon limited data samples. However, transit ridership increased by 15% in the post deployment period.
- Transit riders, general purpose lane users, and HOV users who remained in the same user group from the pre-deployment period to the post-deployment period experienced no major change.
- The equity analysis showed that Metro's re-investment of net toll revenues promotes equity.

The baseline for evaluation of the performance of the pilot program, is broken down into three main categories: Congestion Reduction, Sustainability, and Public Acceptance.

CONGESTION REDUCTION

The key metrics include increased travel speeds, reduced travel times, and improved reliability on the Express Lanes without creating an adverse impact on the general purpose lanes; increased transit ridership; and the formation of 100 new vanpools in the corridors.

- Travel times decreased in the morning peak period for the I-10 ExpressLanes and I-10 general purpose lanes in the morning, the most congested time of the day. The general purpose lanes in the evening peak period show an increase of travel time due to the new construction of the HOV lanes in the East Bound direction.
- Travel times increased in the morning peak period for the I-110 ExpressLanes and marginally decreased in the I-110 general purpose lanes. The general purpose lanes in the evening peak period show an increase of travel time, however, the trend shows a continued decline from the initial deployment period.
- Silver Line ridership increased 27% after the new service was added with an additional 15% increase post-tolling.
- Bus travel times on both the I10 and I-110 ExpressLanes improved by 1.5 minutes during the morning peak period.
- Formation of 117 new vanpools surpasses the goal of 100 new vanpools.

The Metro ExpressLanes, as designed, seeks to increase mobility and person throughput through a series of integrated strategies (transportation demand management, transportation systems management, and multimodal capital investments) in on the 110 and 10 freeways. This "bundling of strategies" has been consistently shown to result in more reliable outcomes and greater magnitude of positive change than a single strategy scenario. For example, among Metro Silver Line riders who began taking the bus after tolling started, a little more than a third said the

conversion to ExpressLanes influenced them to take transit (37% on the 110 and 34% on the 10).

SUSTAINABILITY

The key metrics include reduced greenhouse gas emissions, financial sustainability, and social equity considerations to ensure access to the Express Lanes regardless of income. An indicator of reduced greenhouse gas emissions is that average travel speeds during the peak periods remained above 45mph at least 90% of the time during the pilot period. An indicator of financial sustainability is the generation of net toll revenues. Currently, the generation of more than \$18 million of net toll revenues exceeds the initial forecast of \$8-\$10 million. This ensures that the toll operation does not require an ongoing public subsidy. From a social equity perspective, the program has a balanced approach – first, the multi-modal nature of the program provides high quality transit service as an alternative to paying a toll; second, the net toll revenues reinvestment guidelines adopted by the Metro Board in October 2013 promote multi-modal investments (transit, active transportation/system connectivity, highway) which support all user groups by enhancing the quality and quantity of transportation options, reducing congestion, and reducing adverse air quality impacts; and third, Metro's introduction of the first of its kind discount for low income commuters, enrolled more than 4,000 Los Angeles County households in the Equity Plan and issued more than \$100,500 in toll credits through December 2013 and 80% of their trips are toll-free.

PUBLIC ACCEPTANCE OF TOLLING

The key metrics include: the FasTrak® adoption rate, public feedback during the public comment period, and user surveys (HOV and general purpose lane). The FasTrak adoption rate is an indicator of public acceptance because it demonstrates the willingness of motorists to open a FasTrak account with Metro to access the 110 and 10 ExpressLanes. The 259,524 transponders issued by Metro during the pilot period exceeds the FasTrak adoption goal of 100,000 transponders.

As part of evaluating the performance of the pilot program, it is also important to hear directly from the public (Express Lane toll payers, toll-free carpools, and general purpose lane users). The formal public comment period began March 1, 2014 and concluded April 7, 2014. The general public was asked to provide comments via email at expresslanes@metro.net. The public comment period was supplemented with two Corridor Advisory Group Meetings (March 12th & 18th) and seven public hearings (Gardena 3/22, El Monte 3/26, Torrance 3/27, Union Station 3/31, Inglewood 4/3, West Covina 4/5, and South Los Angeles 4/7). The media used to advertise the public comment period/public hearings is listed in **Attachment B**.⁴ A total of 670 public comments were submitted offering either a support (57.5%), oppose (25.1%), or neutral (17.5%) position.

A survey was also conducted of users (both ExpressLanes and general purpose lanes) to determine whether they think the ExpressLanes are a good idea. Results are that

⁴ The entire public comments and transcript comments for the public hearing are available online at <http://www.metro.net/projects/expresslanes/public-reports/>

68% of HOV Users and 37% of Non-HOV Users said “yes” while 32% of HOV Users and 63% of Non-HOV Users said “no”.

LESSONS LEARNED

The nature of any pilot program offers an opportunity to try new ideas and learn from the experience. The results are usually a combination of proving concepts, discovering what does not work, and identifying improvements. Lessons learned pre-launch include:

- Political champions are critical to enabling agencies to explore innovative concepts such as congestion pricing;
- Address social equity issues early in the planning process to mitigate concerns of access to the tolled facility for residents regardless of income;
- Leverage congestion pricing with transit to ensure viable high quality alternatives to traveling alone and paying a toll; and
- Extensive outreach and public education is required when converting an existing carpool lane to an Express Lane because of the different operating rules.

Lessons learned post-launch include:

- Signage needs to have a clear message for motorists to avoid confusion;
- Invest in outstanding customer service to ensure a positive experience with the FasTrak product;
- Enforcement requires multiple strategies to address technology limitations and adapt to motorist behavior;
- A monthly account maintenance fee may be difficult to implement without debt service;
- Continued enhancements to the dynamic pricing algorithm are required to adjust to the growing traffic volumes;
- “2 person carpools” on the 10 Express Lane prefer a discounted toll during the peak period rather than a toll equivalent to the solo driver;
- Increase awareness of low income commuter discounts, carpool incentive programs, and the net toll revenue re-investment policy; and
- The progressive improvement in congestion reduction indicators (people and vehicle throughput) indicate that further improvement can be accomplished through the implementation of additional pricing strategies as well as through ongoing technology and public outreach and education enhancements.

INDUSTRY SUCCESSES

The pilot program has received more than 10 industry awards. In addition, the other toll agencies in the State have been influenced by the pilot program in areas such as:

- Social Equity – San Bernardino Associated Governments recently conducted a Low Income Commuter Assessment patterned after a similar assessment conducted for the Metro ExpressLanes in 2009;
- Transponders for Carpools – Based upon the success of the Metro ExpressLanes, toll agencies in Orange County added the switchable transponder to their inventory and toll agencies in the Bay Area have plans to add the switchable transponder to their toll operation.

DEBT CAPACITY ASSESSMENT

During the current legislative process for the ExpressLanes, Metro may determine that debt issuance backed ExpressLanes toll revenue is an attractive option to pursue (**Attachment C**)⁵. The Debt Capacity Assessment is provided to provide guidance on the extent to which potential future net revenues of the ExpressLanes may be leveraged to issue debt. Under a variety of sensitivity analyses, the debt capacity for a system structure ranges from \$78.7 million to \$205.2 million of tax-exempt, non-recourse toll revenue bonds.

DETERMINATION OF SAFETY IMPACT

The increased level of CHP enforcement and the Freeway Service Patrol, enabled as a result of the ExpressLanes, will continue to provide additional safety benefits to these managed lane facilities.

FINANCIAL IMPACT

Continuation of the toll operations does not require an ongoing public subsidy. The current tolling operation has generated more than \$34 million in gross toll revenues during the pilot period (November 2012 – February 2014). If an extension of tolling authority beyond January 1, 2015 is received and Metro is allowed to bond against the toll revenues, debt capacity estimates range from \$72 million to \$205 million.

ALTERNATIVES CONSIDERED

Staff has considered alternatives such as discontinuing toll operations. This is not recommended since the strategies deployed have resulted in improved travel speeds, increased transit ridership, and generation of new revenues.

The continuation of the toll operations will provide the additional opportunity to try out a number of other pricing, and public education and outreach strategies as well as needed technological enhancements aimed at increased mobility and greater congestion reduction.

NEXT STEPS

Upon approval staff will advocate at the State level for the removal of the current tolling term of January 15, 2015. Staff will develop with Caltrans a schedule of proposed operational changes and report back to the Board for approval.

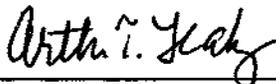
ATTACHMENTS

- A. Metro ExpressLanes Technical Memorandum on Congestion, Tolling, Transit, and Equity Results by FHWA, Executive Summary
- B. Public Feedback on the Metro ExpressLanes Pilot Program (Mar 1 – Apr 7, 2014)
- C. Metro ExpressLanes Debt Capacity Assessment Report, Executive Summary

Prepared by: Stephanie Wiggins, Executive Director, V/CM, 213-922-1023
 Kathy McCune, Director, 213-922-7241

⁵ The complete report is available at www.metro.net/projects/expresslanes/public-reports/


Stephanie Wiggins
Executive Director Vendor Contract
Management


Arthur T. Leahy
Chief Executive Officer

Executive Summary

The Los Angeles Congestion Reduction Demonstration (LA CRD), also known as the ExpressLanes Program is one of six sites funded by the United States Department of Transportation (U.S. DOT) through the Urban Partnership Agreement (UPA) and CRD program to demonstrate congestion pricing and other supporting strategies. This Technical Memorandum on Congestion, Tolling, Transit, and Equity Results presents evaluation findings based on baseline and available post-deployment data. A comprehensive evaluation report for the LA CRD deployment is currently being prepared by the National Evaluation Team and will be completed in the fall of 2014.

The LA CRD (ExpressLanes) Program effort is led by the Los Angeles County Metropolitan Transportation Authority (Metro) in partnership with the California Department of Transportation (Caltrans). The CRD projects are being implemented with the assistance of a number of supporting agencies including the Los Angeles Department of Transportation (LADOT); Gardena Municipal Bus Lines; Torrance Transit; the Southern California Regional Rail Authority (Metrolink); Foothill Transit; and the California Highway Patrol (CHP).

Prior to the ExpressLanes Program, the High Occupancy Vehicle (HOV) lanes on Interstate 10 (I-10) and Interstate 110 (I-110) were experiencing challenges with degradation of the facilities. The original LA CRD proposal for converting the HOV lanes into High Occupancy Toll (HOT) lanes included a plan to increase the occupancy requirement in order to provide excess lane capacity to sell to ineligible drivers. However, existing policies did not allow for changes to the occupancy requirement. Therefore, existing occupancy requirements were used during the pilot period. The LA CRD grant also awarded funding to several complimentary strategies which support enhanced transit, technology and travel demand measures.

Tolling on the I-10 and I-110 corridors provides drivers with the choice of paying to use the HOT lanes or to stay in the general purpose lanes toll-free. This choice may largely depend on the value placed by travelers on the trip. In addition, travelers have another choice - to get out of their vehicles. The LA CRD investments in transit, technology and travel demand measures provide travelers with increased availability to transit, carpools, and vanpools. The purpose of the analysis reported in this document, is to determine whether the LA CRD strategies applied along the I-10 and I-110 corridors and downtown Los Angeles, were successful in four key areas: (1) congestion reduction, (2) improved transit ridership, (3) travel time savings, and the (4) mitigation of potential equity impacts.

The centerpieces of the LA CRD are the ExpressLanes along the I-10 and I-110 freeways.¹ The ExpressLanes were intended to improve overall system performance in the two corridors by permitting toll-paying vehicles that do not meet the carpool occupancy requirements to use remaining HOT lane capacity on the I-10 and I-110 freeways. The I-110 ExpressLanes span 11 miles and include two lanes in each direction of travel from the I-105 to Exposition Blvd. The I-10 ExpressLanes span 14 miles and as part of the demonstration program a second lane was added from I-605 to I-710 (covers

¹ ExpressLanes were created by converting existing high occupancy vehicle (HOV) lanes into HOT lanes along the I-10 (from I-605 to Alameda Street) and along the I-110 (from 182nd Street to Adams Boulevard). In addition, a second HOT lane was created (via restriping; no loss of general purpose lanes occurred) on I-10 from I-605 to I-710.

nine miles). During the demonstration period, all vehicles were required to pay to use the ExpressLanes with the exception of publicly or privately operated transit vehicles, motorcycles, and multiple-occupant private vehicles (three or more occupants on I-10 during peak hours, two or more all other times; two or more occupants on I-110). Upon completion of the demonstration period (effective February 24, 2014), alternative fuel vehicles with white and green California Clean Air Stickers were allowed to travel toll-free irrespective of occupancy with a FasTrak transponder. Tolls range from a minimum \$0.25 per mile to a maximum \$1.40 per mile depending on congestion levels. When travel speeds in the ExpressLanes fall below 45 mph for more than ten minutes, the ExpressLanes have reached capacity. At this point, the lanes revert to HOV lanes and vehicles that do not meet the carpool occupancy requirements are not permitted to "buy" their way into the lanes. Qualifying low income commuters receive a \$25 credit when they set up their account through the Equity Plan.²

The other LA CRD strategies that are being evaluated include transit improvements to increase the frequency of Metro bus rapid transit service through the acquisition of new clean fuel expansion buses and increased service, security upgrades, construction improvements along stations, additional capacity along park-and-ride lots and implementation of transit priority system technology to facilitate ExpressLanes traffic movement where the I-110 enters downtown Los Angeles. Additionally, the intelligent parking management (IPM) ("LA ExpressPark"), a variable and demand-based parking pricing system, is being implemented to reduce traffic congestion, reduce air pollution, and improve transit efficiency by reducing parking search times. Note that this strategy will be discussed in the final report and has not been included in this tech memo. Lastly, ridesharing promotional efforts are being conducted to increase the number of registered vanpools (with a goal of 100 new registered vanpools on the I-10 and I-110 corridors).

Although preliminary, the results described in this report suggest that the LA CRD projects are accomplishing many of their goals and objectives. Consistent with other new HOV/HOT conversion projects, the congestion data analysis shows degradation in travel times and travel speeds performance during the initial deployment period on some portions of the I-10 and I-110. However, consistent with other sites, the same facilities are showing an upward trend in travel time reductions and increases in speed in the later portions of the pilot period. The tolling analysis findings indicate that the number of trips on the ExpressLanes (by all groups) continued to increase over the course of the demonstration period, partially demonstrated by the increase in gross revenue from toll-paying vehicles. The many incentive programs proved to be successful with almost \$13,000 in toll credits issued to Transit Rewards Program account holders and over \$100,000 in toll/transponder credits issued to over 4,000 LA County households enrolled in the Equity Plan. In addition, the ExpressLanes program surpassed several of its goals including; enrolling over 100 new Metro-registered vanpools and issuing over 253,000 transponders by the end of the demonstration period.

Transit analysis findings indicate that Silver Line ridership increased largely due to CRD-funded services. The entire line (both I-110 and I-10) showed a 27 percent increase in monthly boardings after the new service was added with an additional 15 percent increase post-tolling. When surveyed, a third of new riders said they drove alone prior to the increased services and 48 percent of riders agreed that tolling has improved their travel. Additionally, the surveys showed an overall good level of customer satisfaction with transit services. Other LA CRD projects have also proven successful with commuters taking advantage of the increased parking capacity that has been offered. The equity analysis showed that Metro's re-investment of net toll revenues promotes equity. Findings showed that the number of FasTrak accounts and Equity Plans continued to grow throughout the post-

² The Equity Plan defines low income commuters as Los Angeles residents with an annual household income (family of 3) of \$39,060 or less (numbers based on 2013 income levels per the demonstration period).

deployment period and that Equity Plan users made more monthly trips in the ExpressLanes than overall ExpressLanes users. 80 percent of the trips made by Plan users were toll-free. In addition, when surveyed Equity Plan users felt that the credit provided was important in making the decision to get a FasTrak account to use the ExpressLanes. More specific findings are summarized below:

- Congestion Analysis** – The congestion analysis assessed changes in traffic performance on the I-110 and I-10 ExpressLanes and general purpose lanes at the end of the one year demonstration period. Changes in travel times, trip speeds, and peak-hour vehicle and person throughput were included in this analysis.

Travel Time: Caltrans' floating car travel time studies were used to examine how vehicle travel times changed between the pre- and post-deployment evaluation periods. These studies were performed during the Spring, Summer, and Fall of 2012 and 2013.

I-10 Travel Time: The results showed the I-10 ExpressLanes experiencing a 2 minute reduction in travel times during both the morning and evening commute periods (as shown in Table ES-1). Travel times in the general purpose lanes also declined by approximately 2 minutes during the morning commute, but increased by over 4 minutes during the evening commute in the post deployment period.

Table ES-1. Changes in Travel Time After CRD Improvements (in mins).

Facility	Peak Period (Direction)	Express Lanes	General Purpose Lanes
I-10	Morning (WB)	-2.19	-1.89
	Afternoon (EB)	-2.00	4.31
I-110	Morning (NB)	1.89	-0.02
	Afternoon (SB)	0.11	1.67

Source: Caltrans

I-110 Travel Time: The results also showed that travel times in the I-110 ExpressLanes increased by approximately 2 minutes during the morning commute but remained near their pre-deployment levels in the evening commute. Morning commute travel times on the I-110 general purpose lanes remained close to pre-deployment levels. Travel times in the evening commute period in the southbound direction on I-110 remained close to pre-deployment levels, increasing by only 0.11-minutes on the ExpressLanes and by approximately 1.7 minutes in the general purpose lanes.

Travel Speed: The National Evaluation Team also examined changes in average travel speeds in the

Average Trip Speeds – I-10																
Morning Commute Period (a.m.) – Westbound																
Year	General Purpose Lanes								ExpressLanes							
	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30
Pre-Deployment	NA	59	45						NA	64	60	57	48	40	53	52
Post-Deployment	NA	55	39						NA	62	62	61	60	58	58	59

Average Trip Speeds – I-110																
Afternoon Commute Period (p.m.) – Eastbound																
Year	General Purpose Lanes								ExpressLanes							
	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30
Pre-Deployment								36	45	44	41	49	47	49	49	51
Post-Deployment								35	54	50	48	47	48	49	53	59

Source: Texas Transportation Institute based on data provided by Caltrans

Average Trip Speeds – I-110																
Morning Commute Period (a.m.) – Northbound																
Year	General Purpose Lanes								ExpressLanes							
	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30
Pre-Deployment	NA	62	40						NA	63	65	57	50	44	53	59
Post-Deployment	NA	55	35						NA	64	59	49	37	47	47	45

Average Trip Speeds – I-110																
Afternoon Commute Period (p.m.) – Southbound																
Year	General Purpose Lanes								ExpressLanes							
	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30
Pre-Deployment	45	40	38	34	35	35	34	35	65	62	63	62	64	59	58	62
Post-Deployment	38	37	36	34				35	66	63	65	63	60	60	59	62

Source: Texas Transportation Institute based on data provided by Caltrans

ExpressLanes and general purpose lanes between the pre-and post-deployment period.

I-10 Travel Speed: Prior to the LA CRD improvements, ExpressLanes and general purpose lanes trip speeds averaged approximately 53 mph and 31 mph, respectively, in the westbound direction on I-10 during the morning commute. Following full deployment of the LA CRD improvements, average trip speeds on the general purpose lanes remained at 31 mph, while average trip speeds in the ExpressLanes increased above 55 mph. For the evening commute, trip speeds on I-10 in all lanes showed a slight improvement over pre-deployment levels.

I-110 Travel Speed: The analysis also found that average trip speeds in the general purpose lanes during the morning commute on I-110 decreased in the post-deployment period. The analysis showed that in the pre-deployment period, the ExpressLanes operated with average trip speed of less than 45 mph from 7:30 to 8:00 a.m. In the post-deployment period, average trip speeds in the I-110 ExpressLanes operating near or below 45 mph from 6:30 a.m. to 9:00 a.m. In the evening commute, the ExpressLanes on I-110 continued to operate with relatively faster trip speeds compared to the general purpose lanes.

Throughput: The National Evaluation Team also examined the change in peak hour vehicle and passenger throughput in the post-deployment period. Caltrans vehicle occupancy counts provided a limited set of data from which to investigate peak-hour vehicle and person-throughput.

Table ES-2. Change in Total Peak-Hour Vehicle Throughput.

Peak Period	Location	Total Peak-Hour Vehicle Throughput			
		Pre-Deploy ment	Post-Deploy ment	Change	% Change
I-10					
AM (WB)	Warwick	8598	7452	-1146	-13.3
	Jackson	5817	7125	1308	22.5
PM (EB)	Warwick	6759	6594	-165	-2.4
	Jackson	7752	7558	-194	-2.5
I-110					
AM (NB)	Adams	8522	9209	687	-2.6
	Stauson	8182	8115	-67	-0.8
PM (SB)	Stauson	8639	9262	623	7.2

Source: Caltrans

Table ES-3. Change in Total Peak-Hour Person Throughput.

Peak Period	Location	Total Peak-Hour Person Throughput			
		Pre-Deploy ment	Post-Deploy ment	Change	% Change
I-10					
AM (WB)	Warwick	13148	10621	-2527	-19.2
	Jackson	11006	10170	-838	-7.6
PM (EB)	Warwick	10467	10394	-73	-0.7
	Jackson	10728	11387	659	6.1
I-110					
AM (NB)	Adams	12410	12082	-328	-2.6
	Stauson	12256	10737	-1519	-12.4
PM (SB)	Stauson	13135	13111	-24	-0.2

Source: Caltrans

Vehicle Throughput: From on the limited data samples available to the evaluation team, the analysis showed that total peak hour vehicle throughput remained relatively constant or increased slightly in both the I-10 and I-110 corridors in the post-deployment period. The analysis found that on both the I-110 and I-10 peak hour vehicle throughput in the ExpressLanes increased in the post-deployment period.

Person Throughput: Also using the Caltrans vehicle occupancy counts, the National Evaluation Team also examined changes in peak hour person throughput between the two evaluation periods. The preliminary findings for this analysis showed that person throughput on I-110 in the northbound direction during the morning peak hour decreased by 12.4 percent in the post-deployment period. This reduction correlates with the reduction in vehicle travel times and trips speeds observed on I-110 for the morning commute. The data also showed that for the I-10, total peak period person throughput declined in the morning commute, but increased in the evening commute. It should be noted that during the evaluation study, I-10 was under construction, which may have caused some users to change how they used the facility. Additional analyses will be performed in the final report to explore better data sources for capturing the changes in vehicle and person throughput experienced in these corridors due to the CRD improvements.

- **Tolling Analysis** – The tolling analysis examined the expansion and conversion of the existing HOV lanes on the I-110 and I-10 corridors into HOT lanes. Information on the use of the I-110 ExpressLanes from November 2012 through December 2013 and the I-10 ExpressLanes from February 2013 through December 2013 is presented. Enforcement, toll transactions, toll rates, and toll revenues on the ExpressLanes are also discussed. A total of 204,155 accounts were opened during the 19-month period from July 2012 to January 2014, with 253,139 transponders issued, surpassing the goal of 100,000 active transponders by the end of the demonstration period.

The I-110 and I-10 ExpressLanes use FasTrak, an electronic toll data collection system allowing drivers to travel through designated FasTrak-only lanes without stopping. Individuals must have a switchable FasTrak transponder to travel as a toll-free carpool in the I-110 and I-10 ExpressLanes. Motorists set the transponder switch to the position corresponding with the number of occupants (1, 2, or 3+) before entering the lanes. The number of trips on the ExpressLanes by all groups – self-declaring toll-free HOV2s/HOV3s, toll-paying HOV2s and SOVs, as well as vanpools, buses, motorcycles, and other exempt vehicles – increased over the course of the demonstration. The results indicate that the ExpressLanes are providing choices to travelers in the I-110 and I-10 corridors.

The Equity Plan, the Carpool Loyalty Program, the Transit Rewards Program, and the Vanpool Program provide additional incentives and benefits to ExpressLanes carpoolers, bus riders, and vanpoolers. As of the end of December 2013, a total of 4,329 Los Angeles County households were enrolled in the Equity Plan, accounting for \$108,225 in toll/transponder credits. The Carpool Loyalty Program automatically enters ExpressLanes FasTrak account holders using the lanes as a carpooler into monthly drawings for gift cards. During the demonstration period, 520 gift cards were issued. The Transit Rewards Program allows frequent bus riders using their registered TAP card to earn a \$5 toll credit by taking 32 one-way trips during the peak hours on the I-110 and I-10 ExpressLanes. During the demonstration period,

5,782 accounts were enrolled in the program, earning \$12,870 in toll credits. A total of 117 vanpools using either or both the I-110 and I-10 ExpressLanes, were established from July 2012 through February 2014, surpassing the goal of 100 new vanpools.

Both electronic and manual visual enforcement are used on the I-110 and I-10 ExpressLanes. The FasTrak system records vehicles without an active transponder. After the initial 60- days of operation on the I-110 ExpressLanes and the I-10 ExpressLanes, when a grace period was in effect and no violation penalties were assessed, the violation rates on both facilities during the AM peak hour peak direction of travel ranged from 6 percent-to-7 percent. A combination of electronic monitoring and visual enforcement is used to address violations of the self-declared occupancy requirements by CHP officers providing extra enforcement on the I-10 and I-110 ExpressLanes during the morning and afternoon peak periods. During the demonstration period, the monthly number of verbal warnings on the I-110 ExpressLanes ranged from 57-to-133, with the monthly number of citations ranging from 108-to-201. On the I-10 ExpressLanes, the monthly number of verbal warnings ranged from 77-to-164, and the number of citations ranged from 113-to-226. The differences in the manual occupancy counts conducted by Caltrans and the self-reporting FasTrak transponder data are being examined in more detail by Caltrans and Metro.

The gross revenue from toll-paying vehicles not meeting the carpool occupancy requirements using the I-110 and I-10 ExpressLanes for the 14-month period from November 2012 through December 2013 reflects the changes in use of the ExpressLanes. Total gross revenues for the 14-month period were \$16,157,700 on the I-110 ExpressLanes and \$7,234,593 on the I-10 ExpressLanes, for an overall total of \$23,392,293. These figures do not include revenue from toll violations, violation penalties, and other fees.

- **Transit Analysis** – The transit analysis evaluated the impact transit enhancements funded through the LA CRD Program had on ridership and whether it facilitated a mode shift to transit contributing to congestion mitigation. The analysis for this technical memo includes data from June 2010 to November 2013.

Analysis shows that bus travel times on both the I-10 and I-110 ExpressLanes improved by 1.5 minutes during the morning peak period. Since activation of the transit priority system (TPS) on Figueroa Street, bus travel times improved by 0.2 minutes and on Flower Street, travel times improved from 0.1 minutes post-TPS. The changes are small enough that it is not likely to have been noticeable to riders.

CRD funds were also used to enhance the service frequency of the Silver Line well before the start of tolls on I-110 and I-10. A significant finding of the transit analysis is that the enhanced service resulted in a mode shift which included a significant increase in Silver Line ridership. There was a 27 percent increase in monthly boardings on the Silver Line after the new service was added and another 15 percent increase after tolls were implemented, for the entire line (both I-110 and I-10). When restricting the analysis to just the I-110 portion of the Silver Line, which is where the new service was added, the results are even more dramatic. Average daily ridership in the morning peak period increased 52 percent after the new service and 29 percent after tolls. In the afternoon peak period, it increased 41 percent after the new service and 25 percent after the tolls were implemented.

The municipal transit operators introduced their new service close to the opening of the ExpressLanes. Therefore, it is difficult to distinguish how much of the increase in ridership on their routes was due to the new service and how much was due to the introduction of tolling. The Silver Streak, operated by Foothill Transit on I-10, saw a 59 percent increase in morning peak period ridership after tolling and a 15 percent increase in the afternoon peak period. The Route 699, also operated by Foothill Transit, saw morning peak period ridership drop by 13 percent but afternoon peak period ridership increase by 54 percent. The drop in morning riders may be due to shifting to the Silver Streak for the morning commute. Peak period ridership on the Gardena Transit Line 2, which is a feeder service into the Silver Line, increased 3 percent in the morning and 12 percent in the afternoon. At the time of this report, ridership data was not available for the Torrance Line 4 but will be included in the final report.

As a result of investments in park-n-ride lot expansions, at the Pomona Metrolink Station, more commuters are taking advantage of the increased parking capacity. In March 2010, prior to the expansion, all 230 spaces were occupied. In March 2013, 347 out of 372 spaces were occupied (93%). More commuters are taking advantage of the increased capacity at the El Monte Station too. In March 2011, 1,099 of the 1,105 spaces were occupied (99%). In March 2013, 1,146 of the 1,419 spaces were occupied (81%). At the lots in the I-110 corridor, the total number of occupied spaces increased 13 percent from 810 in March 2012 to 913 in March 2013. The lots at Harbor Gateway Station and Harbor Freeway Station were the two greatest sources of additional parked cars.

The evaluation included three surveys of Silver Line riders (2011, 2012, and 2013). A significant positive finding from the last survey (2013) was that about a third of the new riders said they used to drive alone. There were some changes in customer satisfaction that were statistically significant. On the I-110, there were statistically significant improvements in the customer satisfaction ratings for frequency of service and hours of service but also statistically significant decreases in the customer satisfaction ratings related to parking availability and availability of seats. The latter two may have been caused by the increase in ridership. On the I-10, there were statistically significant decreases in the customer satisfaction ratings for travel time, ability to connect to other services, and overall satisfaction. However, in all three categories, the ratings still fell within the range of "Good". Among Silver Line riders who began taking the bus after tolling started, a little more than a third said the ExpressLanes conversion influenced them to take transit (37% on the I-110 and 34% on the I-10). A majority of riders report that their travel times have gotten shorter since tolling began (65% on the I-110 and 56% on the I-10). In both corridors, 48 percent agreed that tolling the I-110 and I-10 ExpressLanes has improved their travel. Another 34 percent were neutral. In regards to the issue of equity, slightly more than half agreed that the tolls on I-110 and I-10 are unfair to people on limited incomes. In the I-110 corridor, it was 54 percent. In the I-10 corridor, it was 55 percent. About a third of the respondents were neutral.

- **Equity Analysis** – This analysis examined potential equity concerns associated with the ExpressLanes projects. It assessed whether the positive or negative effects of the ExpressLanes fell disproportionately on different user groups, as well as different geographic areas. When examining available findings to date, transit riders, general purpose lane users, and HOV users who remained in the same user group from the pre-deployment period to the post-deployment period experienced no major change.

Results from the Metro Equity Plan Survey showed that the credit from the Equity Plan was important for over 82 percent of the respondents in making the decision to get a FasTrak account to use the ExpressLanes. Data on FasTrak accounts, Equity Plans, and the number of tolled and HOV 2+ trips on the I-110 and I-10 ExpressLanes showed that the number of FasTrak accounts and Equity Plans continued to grow throughout the post-deployment period. The analysis showed that users with an Equity Plan made more monthly trips in the ExpressLanes than overall ExpressLanes users, averaging 12.2 trips per month versus 10.6 trips per month for all users. However, over 80 percent of trips taken by users with Equity Plans were toll-free trips (HOV 3+ on the I-10 during peak periods, and HOV 2+ on the I-10 for non-peak periods and the I-110 at all times). Overall, Equity Plans accounted for only 1.2 percent of tolled trips on the I-10 and I-110 ExpressLanes, but 3.8 percent of free trips. Finally, single-occupant vehicles that used the ExpressLanes from November 2012 to December 2013 paid an average toll of \$2.33, while a single occupant vehicle with an Equity Plan paid an average toll of \$1.92 in that same period.

When examining the spatial distribution of FasTrak accounts by zip code throughout the LA Metro area, it reveals that higher percentages of Equity Plan accounts tend to correspond with areas having low median household incomes and high rates of poverty. In many cases, the areas with higher percentages of equity plans are in a lower income area where fewer individuals obtained a FasTrak account.

Metro's policy for reinvestment of the ExpressLanes net toll revenues for diverse and multimodal projects promotes a positive, equitable impact. Equity across geographic areas is promoted by re-investing toll revenue only within the corridor from which the revenue was collected. Investments for pedestrian, transit, vanpool, and fare subsidy programs support equity for low-income users in the corridors. Highway improvements will likewise support drivers that utilize the ExpressLanes. Multimodal investments support all user groups within the corridors by enhancing the quality and quantity of transportation options available and reducing congestion in the corridors to further improve the travel experience. Further, multimodal investments also reduce adverse air quality impacts in the corridor, thereby promoting environmental equity. In conclusion, given the information presented above, the Metro policy for re-investment of net toll revenues appears promotes equity.

This technical memorandum focused on four of the eleven analysis areas that will be included in the final report due out in fall 2014. When evaluating these analysis areas, the team is aware that the effectiveness of the LA CRD strategies may be affected by exogenous factors. These factors include unemployment rates, gasoline prices, atypical travel conditions, and non-CRD transportation system changes. The final report will include a comprehensive analysis of the impact of these external factors. The National Evaluation Team found that, thus far, throughout the evaluation period gasoline prices have experienced minor fluctuations with a slight upward trend in cost and a slow decreasing trend in the unemployment rate for the LA metro area. In the final report, the changes in gasoline prices and unemployment rates will be overlaid against travel (i.e., traffic volumes, VMT) to see if both the travel data and the gas prices and unemployment rates follow similar trends. In addition, since the post-deployment period ended, the National Evaluation team began collecting data for the remaining two exogenous factors for assessing their impact on the LA CRD projects in the final report.

The LA CRD Program strategies were intended to improve overall system performance across the I-10 and I-110 corridors using tolling, transit, technology and travel demand management strategies. Although preliminary, the results described in this report suggest that many of the strategies deployed

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are accomplishing their goals and objectives. There remain areas where adjustments are warranted in an effort to improve performance. While the one year demonstration period recently ended, there are many policy related strategies that are yet to be considered for addressing the trends that have been identified through the data analysis on the two facilities. Over time, the local partners will work closely together to consider policies to apply to the ExpressLanes to further enhance performance.

PUBLIC HEARING ADS

Advertising of the public comment period and public hearings occurred as follows:

WEB

Metro ExpressLanes Project website

- Information in English/Spanish/Mandarin
- Live: www.metro.net/expresslanes
- Live (page on hearings): www.metro.net/projects/expresslanes/public-meetings/

Metro ExpressLanes E-commerce website

- Latest News box: Brief information in with link to Project page
- Information in English/Spanish
- Live: www.metroexpresslanes.net

Metro website

- Home page promo banner pointing to page with details about meetings
- Live: www.metro.net

Toll Grant Application website

- Live: www.metro.net/tollgrant

Social Media

- Series of Facebook and twitter posts

E-blast

- Stakeholders
- Silver Line, El Monte Station GovDelivery databases
- Information in 3 languages (English/Spanish/Mandarin)
- 197k+ Xerox customer database with emails on file

PRINT

Print Ads (Black and White)

- 17 Pubs (LA Times, LADT News, Eastern Group, SGV Tribune, Pasadena Star News, Whittier Daily News, Torrance Daily Breeze, Beach Reporter, Easy Reader, Gardena Valley News, LA Sentinel, La Opinion, Rafu Shimpo, World Journal News, Sing Tao, Korea Times)
- 5 languages (English/Spanish/Mandarin/Korean/Japanese)
- 110 and 10 corridor reach

Public Hearing TK1 Brochure

- English/Spanish distributed at events, Div 9 and 18 buses
- English/Mandarin distributed at events

Flyer distributed at Express Lane Walk-In Centers (El Monte & Gardena)

- 8.5x11 version (English/Spanish/Mandarin)

The entire public comments and transcript from the public hearings are available online at www.metro.net/projects/expresslanes/public-reports/.



Section I – Executive Summary

Executive Summary

Overview

This Debt Capacity Assessment (Assessment) examines two of Los Angeles County Metropolitan Transportation Authority's (Metro) most recent and innovative highway projects – the ExpressLanes on Interstate 10 (I-10) and Interstate 110 (I-110). During the current legislative process for the ExpressLanes, Metro may determine that debt issuance backed by ExpressLanes toll revenues is an attractive option to pursue. This Assessment provides guidance on the extent to which the potential future net revenues of the ExpressLanes may be leveraged to issue debt. The debt proceeds can be used to strengthen the transportation network in these crucial corridors to improve mobility for years to come.

The Assessment is based on the existing ExpressLanes toll policy, together with an assumed extension of the statutory tolling authority, and elimination of the statutory prohibition against issuing bonds secured by ExpressLanes toll revenues.

Assuming current market rates, the consultant team projected that the I-10 ExpressLanes could generate \$28.6 million of estimated debt capacity and the I-110 ExpressLanes could generate \$100.1 million of estimated debt capacity. Under a variety of sensitivity analyses, the debt capacity for a system structure ranges from \$78.7 million to \$205.2 million of tax-exempt, non-recourse toll road revenue bonds.

Project Background

In 2007, the United States Department of Transportation (U.S. DOT) announced the Congestion Reduction Demonstration Program (CRDP). After a nationwide competition for funds, U.S. DOT awarded a \$210.6 million CRDP grant to Metro and the California Department of Transportation (Caltrans). Metro allocated another \$80 million as a local match requirement to the project, resulting in a total budget of \$290.6 million.

In 2008, the State Legislature passed SB 1422 to allow Metro and Caltrans to operate a congestion pricing and transit development demonstration program. Under this program, the high-occupancy vehicle (HOV) lanes on portions of the I-10 and I-110 in Los Angeles County were converted to high-occupancy toll (HOT) lanes whereby single-occupant vehicles (SOVs) may access the HOT lane for a fee. In 2010, the State Legislature passed AB 1224, which extends the tolling authority on the ExpressLanes to January 15, 2015.

The I-110 ExpressLanes began tolling on November 10, 2012. The I-10 ExpressLanes began tolling on February 23, 2013. The ExpressLanes mobility goal is to maintain traffic at average free flow speeds of 45 mph based on an algorithm-based, congestion pricing model.

Objectives of the Debt Capacity Assessment

In preparation of requesting an extension of the tolling period from the State Legislature and removing the limitation on issuing debt backed by the ExpressLanes toll revenues, the consultant team has prepared the Assessment to inform Metro of the potential range of debt that the ExpressLanes may be able to support.

Furthermore, the Assessment meets several different policy-making and planning objectives.

The primary policy-making objective of the Assessment is to inform Metro of the potential long-term non-recourse financing capacity inherent in the ExpressLanes. In particular, the Assessment examines the net revenues and resulting debt capacity if Metro obtained an extension of the tolling authority beyond January 2015 and obtained the ability to issue tax-exempt non-recourse debt secured by ExpressLanes toll revenues. The Assessment examines multiple scenarios – those that affect net revenues available for debt service, the term of any such tolling extension, and the structure of potential transactions, as well as other variables – to help inform Metro regarding the impact of these variables on the total financing capacity of the ExpressLanes.

The Assessment supports Metro’s planning needs by providing insights as to how the financial and operational management of the ExpressLanes may contribute to Metro’s overall mobility objectives, particularly in the area of congestion management.

Methodology

The Assessment utilizes a confluence of factors ranging from the general credit factors related to express lanes debt transactions to the expected ExpressLanes net revenues available to pay debt service. The Assessment is organized around qualitative and quantitative factors that together provide a comprehensive evaluation of the potential debt capacity of the ExpressLanes.

Qualitative Analysis

Credit Factors

The Assessment is focused on the relevant factors used by rating agencies and investors to evaluate toll roads and especially express lanes projects such as the ExpressLanes. The key factors explored in the Assessment include:

- Express Lanes ≠ Toll Roads
- Asset Structure and Essentiality
- Regulatory Considerations
- Toll Policy
- Traffic & Revenue Forecast
- Transaction Structure

Prior Comparable Transactions

There are only a handful of express lanes projects that have issued non-recourse debt supported by toll revenues. These prior transactions include two California projects on State Route 91 sponsored by two different public agencies (i.e., Orange County Transportation Authority (OCTA) and Riverside County Transportation Commission (RCTC)) as well as public-private partnership (P3) projects (e.g., North Tarrant Express (Texas), 495 Express Lanes (Virginia)). The key financial parameters that were utilized by these precedent express lanes projects served to guide the Assessment of the ExpressLanes’ debt capacity.

Current Market Sounding

Express lanes have radically different operating characteristics and financial structures than monopolistic toll road facilities in general and these characteristics are even more distinct when the express lanes are financed by non-recourse debt. Due to the limited universe of non-recourse express lanes debt transactions, the consultant team surveyed market participants (investment banks, rating agencies, and institutional investors) who have prior express lanes experience to provide relevant insights. The market

sounding exercise also confirmed certain financing assumptions (e.g., minimum debt service coverage ratio (DSCR) or annual net revenues divided by debt service for express lanes debt transactions) and provided context regarding the current market perceptions of non-recourse express lanes debt transactions.

Quantitative Analysis

Financing Assumptions

The financing assumptions incorporate the unique characteristics of Metro's ExpressLanes program. These factors, which are examined individually and in combination include, but are not limited to, the following:

- Metro toll policy approved July 23, 2009.
- Credit structure (e.g., system vs. stand-alone)
- Interest rates
- Liquidity reserves (e.g., debt service reserve fund, O&M reserve)
- Other financing terms

ExpressLanes Data

The information and data sources used in preparing the Assessment have been obtained from certain key sources, primarily the ExpressLanes Toll Policy, the Concept of Operations for the ExpressLanes, as well as actual and projected revenues and expenses for the ExpressLanes.

Debt Capacity Assessment

Utilizing various financing assumptions vetted during the market sounding phase, together with the components of net revenues for each ExpressLanes Project, the consultant team created financial models to examine the potential debt capacity for the ExpressLanes. Net revenues are the basis from which debt service coverage calculations are made. Using Metro's Toll Policy, current market rates, and a minimum DSCR of 1.75x, the consultant team projected that the I-10 ExpressLanes could generate \$28.6 million of estimated debt capacity and the I-110 ExpressLanes could generate \$100.1 million of estimated debt capacity.

In addition to evaluating the ExpressLanes individually, the consultant team also looked at a system structure where the pledged revenues would be aggregated but the excess net revenues and debt service would be allocated proportionally by facility using current Metro cost accounting.

Based on System Structure (\$ millions)		
Sensitivity	Debt Capacity	Change from Base Case
Base Case	\$140.8	
GPTR		
- 25% GPTR	\$202.8	\$62.0
- 25% GPTR	\$78.7	(\$62.0)
Leakage		
2.5% of GPTR	\$147.0	\$6.2
10% of GPTR	\$128.3	(\$12.4)
Non-Toll Revenue		
35% of GPTR	\$161.8	\$21.0
10% of GPTR	\$99.7	(\$41.0)
O&M		
45% of GPTR	\$189.9	\$49.1
70% of GPTR	\$115.4	(\$25.3)
DSCR		
1.5x	\$150.1	\$9.4
2.0x	\$112.6	(\$28.2)
Interest Rate		
- 50 bps	\$149.3	\$8.6
+ 150 bps	\$119.3	(\$21.5)
Debt Term		
25 Year	\$146.6	\$5.9
40 Year	\$149.5	\$8.8
Debt Structure		
Ascending CIBs	\$155.5	\$14.8
Ascending CABs 25%	\$157.4	\$16.7
TIFIA		
With TIFIA	\$205.2	\$64.5

The market sounding exercise informed the consultant team that market participants prefer an express lanes system over a stand-alone express lanes debt transaction due to the diversification of revenue streams inherent in a system. Consequently, key financing assumptions may be more attractive for a system credit; for example, a lower DSCR may be able to be employed in a system credit. If the system is assumed to have a slightly lower DSCR of 1.60x, the system would generate \$140.8 million, \$12.1 million more than the sum of the two individual, stand-alone debt capacity estimates.

The sensitivity analyses in the table above adjusted the following variables to examine more conservative and more favorable outcomes.

- Gross Potential Toll Revenues (GPTRs)
- Leakage
- Non-Toll Revenues
- Operations & Maintenance (O&M) Costs
- Debt Service Coverage Ratio
- Interest Rates
- Debt Term/Final Maturity
- Debt Service Structure

Under a variety of sensitivity analyses, the debt capacity for a system structure ranges from \$78.7 million to \$205.2 million of tax-exempt, non-recourse toll road revenue bonds.

Future Considerations

The consultant team also outlined future considerations for Metro were the Board to decide that issuing tax-exempt non-recourse bonds backed by ExpressLanes toll revenues is an attractive option. The future considerations are summarized below:

- During the legislative process for the ExpressLanes, Metro should propose the following:
 - Extend the tolling period *at least* 35 years to January 15, 2050 (to facilitate a 30 year debt issue in the near term)
 - Remove the limitation on debt backed by the ExpressLanes toll net revenues
 - Continue the policy that Metro is the only agency to determine the expenditure of toll revenues by detailing an expenditure plan for the excess net revenues in the ExpressLanes corridors
- Metro should review existing ExpressLanes toll policy and revise in order to facilitate debt issuance
- Metro will need to procure consultants with experience in express lanes traffic forecasting to develop a new investment grade traffic & revenue (T&R) forecast, which will be required for debt issuance
- Metro will need to protect the ExpressLanes excess net revenues from any potential encumbrances by other parties, which could significantly reduce debt capacity of the ExpressLanes