

**Metro**Los Angeles County
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metro.net**AD HOC CONGESTION PRICING COMMITTEE**
July 18, 2012**SUBJECT: EXPRESSLANES RISK MANAGEMENT PLAN UPDATE****ACTION: RECEIVE AND FILE****RECOMMENDATION**

Receive and File the ExpressLanes Risk Management Plan update as identified in Attachments A and B.

RATIONALE

There is risk involved in every capital project. The purpose of the Risk Management Plan (RMP) process is not to eliminate risk, which would be costly and nearly impossible, but to define risk and then to prioritize resources to reduce risk to an acceptable level. Generally, a RMP is developed for capital projects that exceed \$25 million or are defined as a "High Profile Project" by the Federal Transit Administration (FTA) or Federal Highway Administration.

The ExpressLanes Program has unique characteristics due to the aggressive schedule for delivery and the use of design-build-operate-maintain (DBOM) delivery method. While DBOM is a proven method for project delivery, the use of the DBOM approach is the first in Metro's history.

This Report is provided to regularly inform the Board on the status of efforts to monitor key risks for the ExpressLanes Program. The objective is to notify the Board of the potential key risks, their affect on the Program budget and/or schedule, and the mitigation efforts currently underway in order to reduce the probability of their occurrence. This Report covers activity through June 30, 2012.

BACKGROUND

Risk is an uncertain event or condition that, if it occurs, has an effect on at least one aspect of the capital project – budget or schedule. Project Management Leaders have the responsibility to perform structured risk management activities on their projects. Good risk management will at least identify known risks (issues that have not yet

occurred), and then analyze and plan responses to each of the known risks. Key risks and the planned responses should be widely communicated to all stakeholders.

The objectives of risk management are to decrease the probability and impact of *negative* events in the project budget and/or schedule, and increase the probability and impact of *positive* events to the budget and/or schedule. Standard risk management processes include:

- Risk Management Plan - the process of defining how to conduct risk management activities for a project.
- Identify Risks – The process of determining which risks may affect the project and documenting their characteristics.
- Perform Qualitative Analysis – The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
- Plan Risk Responses – The process of developing options and actions to enhance opportunities and to reduce threats to project objectives.
- Monitor and Control Risks – The process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating the risk process throughout the project.



The risk management process is ongoing throughout the project lifecycle.

EXPRESSLANES STATUS

RMPs are deployed regularly in Metro's Transit Project Delivery Division for projects exceeding \$25 million. The Gold Line Eastside Project RMP has been identified as a best practice by the FTA and is used as a model for other major capital projects. The ExpressLanes risk assessment and monitoring efforts are modeled after the Metro Gold Line Eastside Project.

Risk identification and mitigation has been deployed on a daily basis for key components of the ExpressLanes Program since the initiation of preliminary engineering in 2009. The components and current status are:

- I-10 & I-110 ExpressLanes (60% Construction & 20% Testing complete)
- El Monte Transit Center (75% Construction complete)
- Patsaouras Plaza (30% Design complete)

Attachment A identifies nine risk items that have closed during the last three months with no impact to project budget or schedule. Three of the closed risk items relate to the Patsaouras Plaza project completing 30% design.

Attachment B identifies 16 risk items that may result in a negative impact to project cost/schedule over the next three months. Once a risk has been identified, a risk mitigation strategy is implemented until the risk event is closed. NOTE: the Program maintains a Risk Register that addresses all of the phases of the Program from preliminary engineering, design and construction through toll revenue operations. For reporting purposes, Attachment B only covers near term risks for the Program.

NEXT STEPS

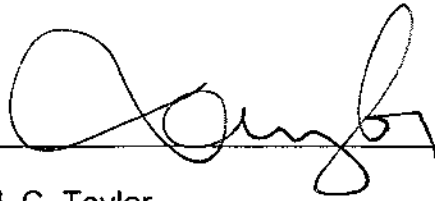
Since risk identification and mitigation is continuous, staff will improve transparency, consistency, and communication of key risks by providing updates on a quarterly basis to the Ad Hoc Congestion Pricing Committee.

ATTACHMENTS

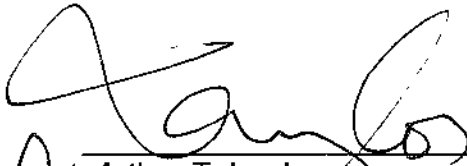
A) Risk Items Closed During the Last 3 Months

B) Active Risk Items for the Next 3 Months

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ATTACHMENT A: RISK ITEMS CLOSED DURING THE LAST 6 MONTHS

Item No.	Risk Event	Risk Category	Risk Potential L/M/H	Risk Mitigation Strategies	Status	Risk Register Ref #
EXPRESSLANES						
1	Software development for dynamic pricing algorithm is slow or delayed	Design	High	Reduce review durations by working closely with software developers; Review a "proven" software solution	CLOSED w/no impact to Project Budget or Schedule	33
2	Switchable Transponders are unavailable or fail to deliver required functionality	Design	Med	Monitor Testing (FAT) and In lane testing; Increase order to ensure transponders in production pipeline	CLOSED w/no impact to Project Budget or Schedule	32
3	Increased traffic from LA Downtown to the entrance of Express Lanes @Alameda	Design	High	PB performed traffic analysis in consultation w/LADOT. Results indicate no significant increase in traffic.	CLOSED w/no impact to Project Budget or Schedule	51
4	Difficulty in replacing the 12 fiber cable with a 72 fiber cable along the I-110 Freeway due to inaccurate information in the contract drawings about existing site conditions	Cons	High	DBOM Contractor at an early state performed site surveys and investigations.	CLOSED w/no impact to Project Budget or Schedule	68
5	Metro to obtain PUC approval for Adams Blvd and S. Flower Expo Line crossing modifications required to add a 2nd turn lane off Adams Blvd off ramp. Failure to obtain PUC approval for the crossing modifications will not allow the 2nd turn lane to be constructed for the Adams Blvd off ramp.	Design	Low	CPUC approved the crossing modification	CLOSED w/no impact to Project Budget or Schedule	82
6	Additional drainage work to be performed on I-110 freeway that is based on recent survey results performed by the DBOM contractor.	Const	High	Metro Board approved Change Order (Jan 2012)	CLOSED w/no impact to Project Budget or Schedule	85
PATSAOURAS PLAZA CONNECTOR						
7	Utility information shown on 30% plans	Design	Med	Constructability Review completed	CLOSED w/no impact to	

	may not be complete or may need additional verification.				Project Budget or Schedule	
8	Location of existing Red Line tunnels may not be accurately depicted on the 30% plans.	Design	Med	Additional Studies Completed	CLOSED w/no impact to Project Budget or Schedule	
9	Delay in approval of Environmental Document by SHPO	Design	Med	Cultural Resource Plan developed by Metro and approved by FTA	CLOSED w/no impact to Project Budget or Schedule	

ATTACHMENT B: ACTIVE RISK ITEMS FOR THE NEXT 6 MONTHS (page 1 of 2)

Item No	Risk Event	Risk Category	Risk Potential L/M/H	Probability of Occurrence %	Risk Mitigation Strategies	Risk Register Ref #
EXPRESSLANES						
1	Unplanned lane closures, freeway closures & interruptions from other existing contracts	Construction	High	95%	Metro Co-op Agreement w/Caltrans establishes schedule & traffic controls during construction	23
2	Re-verified" As-Built information from Caltrans reveals inaccuracies	Construction	High	90%	DBMO Contractor has been performing surveys to confirm "as-built" conditions.	52
3	Ability of the project team to issue timely DBOM contract modifications to maintain project schedule	Construction	Low	10%	Obtained Metro Board approval to maintain sufficient Contract Modification Authority Jan 2012	58
4	Differing site conditions	Construction	High	90%	Metro has identified specific locations for sign structures & conducted a number of borings. DBOM Contractor has performed addtl borings to check ground conditions and has been performing surveys to verify drai impacts on the project.	20
5	Possible delays/site closures due to traffic accidents	Construction	High	90%	Develop site-specific safety & security plans; Use schedule contingencies to alleviate Impacts	26
6	Inadequately functioning interfaces between ExpressLanes & other systems	Toll Technology	High	70%	Metro included broad, but not prohibitive, interpretation of DBOM Contractor's responsibility for interface functionality	31
7	Unplanned "Special Event" affecting access to the work zone	Construction	High	70%	Develop work around plans.	22
8	Delayed design/purchase approvals of long lead items for sign poles & sign structures	Design & Construction	Medium	50%	Metro confirmed capacity of pre-qualified suppliers to handle the order. DBOM Contractor is working closely with the suppliers to obtain materials within schedule	15

ATTACHMENT B: ACTIVE RISK ITEMS FOR THE NEXT 6 MONTHS (page 2 of 2)

Item No.	Risk Event	Risk Category	Risk Potential L/M/H	Probability of Occurrence %	Risk Mitigation Strategies	Risk Register Ref #
EXPRESSLANES						
9	Prescriptive interpretation of performance specifications in contract documents by agency oversight personnel	Construction	Medium	50%	Define roles & responsibilities in Co-op agreement between Metro & Caltrans; Establish clear delineation between performance specifications & prescriptive specifications in contract documents	27
10	Unplanned Utility Impacts	Design & Construction	Medium	30%	DBOM Contractor is required to have a dedicated utility coordinator; Metro has executed agreements with the utility companies. Advance surveys and utility location investigations are being performed DBOM Contractor.	21
11	Unplanned impacts of Caltrans Rehab Project on I-10	Construction	High	90%	Metro Board has approved a schedule Extension; DBOM contract requires close coordination with Caltrans Project. Daily Coordination is taking place between DBOM contractor and Caltrans I-10 rehab Contractor.	18
12	MOUs/Licenses/Permits are delayed	Construction	Low	10%	Continue meeting with all third parties (i.e. LADOT, LABSS) until all agreements are Executed	16
13	Lack of transponder inventory to meet customer demand	Operations	Low	10%	Board approved additional CMA Jan 2012 to ensure flexibility to increase inventory to sufficient levels	
14	Inadequate Incident Management Plan	Operations	High	90%	DBOM Contract requires development of the Incident Management Plan however many of the assets are outside of the control of the Contractor and require close coordination with Caltrans, CHP, and Metro's Freeway Service Patrol Program	
PATSAOURAS PLAZA						
15	Construction Schedule may impact I-10 ExpressLanes performance	Design	Medium	70%	Metro will conduct constructability review	
16	Lack of full closures to Vignes Street ramp are not allowed or limited small windows	Design	High	90%	Metro will seek approval from Caltrans for full closures in Co-op Agreement	