Los Angeles County
Metropolitan Transportation Authority

DECEMBER 2009

Metro ExpressLanes Project

CTC Design-Build Demonstration Application

Metro

Los Angeles County
Metropolitan Transportation Authority

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December 28, 2009

Mr. Andre Boutros
Chief Deputy Director
California Transportation Commission
1120 N Street, Room 2221 (MS-52)
Sacramento, CA 95814

Dear Mr. Boutros:

On behalf of the Los Angeles County Metropolitan Transportation Authority (LACMTA), I am pleased to submit the enclosed LA County ExpressLanes Design-Build application for consideration by the California Transportation Commission (CTC). The application requests the authority, pursuant to Senate Bill 4, Second Extraordinary Session, to utilize the design-build procurement method for the ExpressLanes Project. Consistent with the legislation requirements, LACMTA is submitting the application in cooperation with the California Department of Transportation (Caltrans.)

The ExpressLanes Project reflects a partnership between LACMTA and Caltrans to convert existing High Occupancy Vehicle (HOV) lanes to High Occupancy Toll lanes on portions of I-10 and I-110 in Los Angeles County to demonstrate the viability of congestion pricing as a strategy to relieve traffic on congested freeways and improve productivity of the HOV lanes.

Last year, the CTC played a role in authorizing the ExpressLanes Project through Assembly Bill 1467(Nunez). The action by the CTC lead to approval by the State Legislature of tolling authority for the ExpressLanes Demonstration Project under Senate Bill 1422 (Ridley-Thomas). And earlier this month, the CTC programmed State-Local Partnership Program funds to this highway project that make it eligible to seek the authority to utilize design-build as an implementation strategy.

The ExpressLanes Program is consistent with the Governor's Strategic Growth Plan (SGP). The SGP supports the deployment of demand-management strategies, such as HOT lanes, the building of new capacity, and the increase of public transit ridership – all of which are key elements of the ExpressLanes. The Project is largely funded by a federal demonstration grant which requires a tight timeline for implementation. As a result, a design-build procurement method has been determined as a critical implementation strategy for project success. Full consideration and review of the enclosed application by the Commission is appreciated.

Sincerely,

Douglas R. Failing, P.E.
Executive Director, Highway Program

DESIGN-BUILD DEMONSTRATION PROGRAM
LA COUNTY EXPRESSLANES (CRD PROJECT)

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A: White Paper "Procurement Strategy for the Metro/Caltrans Los Angeles County ExpressLanes Project", Stantec, October 2009
B: ExpressLanes Implementation Schedule
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DESIGN-BUILD DEMONSTRATION PROGRAM
LA COUNTY EXPRESSLANES (CRD PROJECT)

EXECUTIVE SUMMARY

In April 2008, the US Department of Transportation (USDOT) entered into an agreement with the California Department of Transportation (Caltrans) and the Los Angeles County Metropolitan Transportation Authority (Metro). The agreement identifies a $210.6 million Congestion Reduction Demonstration (CRD) federal grant award to convert existing High Occupancy Vehicle (HOV) lanes into dynamically-priced high-occupancy toll (HOT) lanes as an initial congestion pricing pilot project, known as ExpressLanes.

This Demonstration Project is one of six projects[1] competitively selected by USDOT to develop innovative programs to reduce congestion through the implementation of value pricing. A unique element of this Project is the federal grant deadlines related to State Tolling Authority and Revenue Operations. If these requirements are not met, Metro and Caltrans are required to re-pay the $210.6 million grant.

Conversion of the I-10 and I-110 corridor HOV lanes to ExpressLanes must include civil construction elements that ensure sufficient lane capacity and supporting infrastructure is available to provide efficient, safe, and reliable travel options for all ExpressLanes users. The specific roadway improvements include re-striping and widening to create a second HOT lane on I-10 between I-605 and I-710; operational improvements on Adams Blvd at I-110, transition lanes on I-110, and additional signage throughout both corridors. Additionally, the ExpressLanes Project must include a reliable, enforceable, and flexible electronic tolling solution that implements easily understood pricing structures focused on maintaining the desired performance levels for HOV, toll, and transit traffic. Both the physical constraints of the roadway as well as the operational and performance goals of the program must guide the solution that is ultimately implemented.

Over the last year, Metro has evaluated a number of procurement strategies for the ExpressLanes Project, including an industry survey of comparable HOT Projects around the nation. The short timeframe within which the ExpressLanes infrastructure must be designed and constructed has eliminated the option of constructing the civil improvements via design-bid-build. The Design-Build-Operate-Maintain (DBOM) approach (combined Civil and Toll) provides the most schedule efficient and technically sound methodology for construction of the ExpressLanes Project.

The California Transportation Commission designation of the ExpressLanes Project as a design-build demonstration project pursuant to Senate Bill 4, Second Extraordinary Session is critical for release of the DBOM Request for Proposal in February 2010 to accommodate an anticipated award date of October 2010. Metro and Caltrans will seek services from a contractor with specialized expertise in tolling implementation to design, supply, install, operate, and maintain the infrastructure, systems and services required to enable traffic operations and electronic toll collection on the I-10 and I-110 ExpressLanes. The DBOM contract will be evaluated and awarded using a Best Value selection method.

[1] The five additional urban partners are Miami, Minnesota, San Francisco, Seattle, and Atlanta.

BACKGROUND & IMPORTANCE OF PROJECT

In April 2008, the US Department of Transportation (USDOT) entered into an agreement with the California Department of Transportation (Caltrans) and the Los Angeles County Metropolitan Transportation Authority (Metro). The agreement identifies a $210.6 million Congestion Reduction Demonstration (CRD) federal grant award to convert existing carpool lanes into dynamically-priced high-occupancy toll (HOT) lanes as an initial congestion pricing pilot project.

This Demonstration Project is one of six projects[2] competitively selected by USDOT to develop innovative programs to reduce congestion through the implementation of value pricing. A unique element of this Project is the federal grant deadline related to State Tolling Authority and Revenue Operations. If these requirements are not met, Metro and Caltrans are required to re-pay the $210.6 million grant.

In July 2008, the California Transportation Commission (CTC) adopted an eligibility finding for the HOT lanes project pursuant to AB1467 (Nunez). As a result of the CTC action, Metro was able to obtain state tolling authority for the Los Angeles County CRD demonstration project, known as ExpressLanes, on I-10 and I-110 through SB1422 (Ridley-Thomas).

Need

Los Angeles and traffic congestion have long been synonymous with each other. Most people who live and work in Los Angeles County are likely to agree that congestion has reached the point of undermining the very economic activity and quality of life that had been the essence of the region's appeal. The Texas Transportation Institute annual nationwide study confirms the negative impact of local traffic congestion, ranking for the 19th time the Los Angles County-Orange County area No. 1 in the country for traffic congestion in 2009. Los Angeles is the worst ranked city in the country for gridlock with the average driver spending an extra 70 hours in traffic because of congestion. [3] The amount of delay equals almost nine workdays and is 26 hours more than in 1982.

To mitigate the growing congestion, Los Angeles County area transportation agencies have adopted a wide range of transportation system management and travel demand measures, including one of the nation's most extensive High Occupancy Vehicle (HOV) networks with approximately 380 lane miles of HOV facilities. However, even this extensive transportation infrastructure system has not been sufficient to accommodate the region's more than 10 million residents and countless additional daily commuters traveling from adjoining counties to jobs in Los Angeles County. Further, the current transportation network does not provide capacity adequate to address the demands of the potential one million additional residents by 2030.

[2] The five additional urban partners are Miami, Minnesota, San Francisco, Seattle, and Atlanta.
[3] Texas Transportation Institute, *The 2007 Urban Mobility Report*, July 2009

Regional Significance

The ExpressLanes Project introduces congestion pricing to Los Angeles County as a demonstration project in two corridors as a yet untapped transportation strategy and is included in Metro's 30-year 2009 adopted Long Range Transportation Plan and the adopted Regional Transportation Plan for the Southern California Association of Governments.

A significant portion of the Los Angeles region's recent and predicted future population growth is concentrated in the San Gabriel Valley, which is now home to more than 2 million residents. Although the region is served by six major freeways and four transit agencies, the rapid development has nevertheless resulted in heavy congestion along routes that connect the San Gabriel Valley to downtown Los Angeles, particularly during peak commuting hours. One of these routes, I-10 (from I-605 to Alameda Street), is one of the designated corridors for the ExpressLanes demonstration project.

Existing annual daily traffic (ADT) volumes, for both directions combined, on the I-10 mainline range from approximately 275,000 vehicles per day (vpd) near US-101 interchange, to approximately 257,000 vpd in the vicinity of the I-605 interchange, which results in speeds in the general-purpose lanes reduced to less than 20 mph during the peak hours in both directions, reflecting chronic congestion in the corridor.[4] (These ADT volumes do not include HOV traffic on the El Monte Busway). Vehicle occupancy among carpools on the HOV facility is approximately 4.5 persons per vehicle in the westbound direction and approximately 3.8 persons per vehicle in the eastbound direction indicating higher levels of carpooling during the morning commute into downtown Los Angeles.[5] This freeway was selected due to both high levels of congestion and the presence of existing HOV lanes that could be converted into dynamically-priced HOT lanes.

The I-110 freeway, commonly referred to as the Harbor Freeway, connects San Pedro, near the ports of Los Angeles and Long Beach, to downtown Los Angeles at the junction of US-101 and serves as one of the principal north-south freeway routes directly serving downtown Los Angeles. The portion of the Harbor Freeway from Adams Boulevard to 182nd Street is the other designated corridor for the ExpressLanes Project.

Existing ADT volumes, for both directions combined, ranges from approximately 240,000 vpd, near SR-91, to approximately 335,000 vpd, in the vicinity of Florence Avenue, which results in speeds in the general-purpose lanes reduced to less than 20 mph during certain peak hours in both directions.[6] Vehicle occupancy on the HOV facility is approximately 2.4 persons per vehicle, compared to about 1.1 persons per vehicle in the mainline lanes, for both northbound and southbound directions.[7] This freeway was selected due to the Harbor Transitway, an 11-mile grade separated bus and HOV two-lane facility that runs in the median of I-110 from Adams Blvd to the Artesia Transit Center that could be converted into dynamically-priced HOT lanes.

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[4] *Corridor HOT Concept of Operations: I-10 & I-110 ExpressLanes*, Parsons Brinckerhoff, December 2009

[5] Ibid.

[6] Ibid.

[7] Ibid.

Project Benefits

The Project offers the following benefits:

- Improved operational performance of the corridors by optimizing lane demand and traffic flow in the HOV lanes.
    - Peak demand in the peak direction of travel represents only a small portion of the total HOV lane capacity available throughout the day. Pricing excess capacity in the HOV lanes during off peak times of day (and particularly during the peak shoulder periods) provides the best opportunity to maximize the efficiency of the entire freeway while generating revenues in the ExpressLanes.
    - During these peak periods, it may be possible for over 400 vehicles per hour per lane to enter the existing HOV lanes based on the available capacity helping to reduce congestion in the adjacent general-purpose lanes.[8] Furthermore, utilizing the existing buffer area on I-10 El Monte Busway to provide a second ExpressLane in each direction will help reduce the impact of existing HOV capacity constraints.

- Reduces travel time.
    - The day-to-day variation in travel times is now understood as a separate component of the public's and business sector's frustration with congestion. An important benefit of pricing with the ExpressLanes Project is that it guarantees toll-paying vehicles a reliable trip speed of at least 45 mph.

- Managed traffic congestion through congestion pricing strategies.
    - Congestion pricing in the ExpressLanes will allow non-HOV vehicles to shift from the general-purpose lanes to the ExpressLanes helping to reduce congestion in the general-purpose lanes while maintaining travel speeds and increasing vehicle throughput and person-movement productivity in the ExpressLanes.
    - Dynamic pricing provides the opportunity to "sell-back" some of the additional capacity on an HOV facility to those willing to pay a toll, with the toll rate changing regularly to balance the available lane capacity and traffic demand to ensure a travel speed of at least 45 mph can be maintained.
    - In July 2009, the Metro Board adopted a Toll Policy that establishes:
        - A goal to optimize vehicle throughput at free flow speeds through dynamic pricing;
        - Toll rates at $0.25 minimum per mile to a $1.40 maximum per mile; and
        - A business rule that tolling will shutdown (i.e. no toll users will be permitted to enter the ExpressLanes) when travel speeds fall below 45 mph for more than 10 minutes.

- Improves air quality in the corridors.
    - Localized air pollution is often caused by congested freeways. By shifting idling vehicles into the free-flowing ExpressLanes, emissions of carbon monoxide and particulates will be reduced for those communities adjacent to the corridors;

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[8] Ibid.

- The following table summarizes the anticipated emission reductions[9]

ExpressLanes Corridor	Emissions Reductions (kg/day)*					
	ROG	CO	NO_X	PM_{10}	**$PM_{2.5}$	TOTAL
I-10 HOT	47.22	708.10	203.39	15.23	14.01	973.94
I-110 HOT	1.59	25.67	4.57	4.58	4.21	40.60
HOT Lane Operations	>50	>2.5	>11.5	N/A	N/A	>64

*Calculations exclude reductions from increased transit service.
**$PM_{2.5}$ emissions are a subset of PM_{10} emissions; thus, they are excluded from the emission reduction totals to avoid double counting.

- Reduced greenhouse gas emissions from transportation sources.
  - Carbon dioxide emissions, a greenhouse gas, have been quantified in addition to criteria pollutants and are estimated as follows[10]:

ExpressLanes Corridor	CO_2 Reduction (kg/day)
I-10 HOT	109,387.05
I-110 HOT	9,457.81
HOT Lane Operations	>5,200

- Reduces Incident Response Time
  - In Southern California, non-recurrent congestion is estimated to account for approximately one-half of all freeway congestion. Throughout the day in Los Angeles, for example, accidents are responsible for greater than 60% of the total lane closure time.[11]
  - A UC Davis Institute of Transportation study found that almost 90% of incidents along the I-10 corridor in Los Angeles County were vehicle disablements. The average disablement lasts approximately 23 minutes before it is cleared.
  - The rapid identification and removal of HOT lane incidents will reduce *non-recurrent* congestion, improve HOT lane traffic flow, and reduce travel delay. The strategy Metro will use to manage HOT lane incidents and reduce non-recurrent congestion is dedicated roving tow trucks (i.e. Freeway Service Patrols (FSP)). The average duration of disablements cleared by a roving FSP unit in Los Angeles is 13 minutes.[12]

- Provides a potential means of generating additional revenue for transportation projects in the corridors.
  - The constrained toll analysis for the ExpressLanes forecasts annual gross revenue of $21 million. With an anticipated operations and maintenance estimate of $13 million, approximately $7 million of additional revenue is generated for transit and carpool lane improvements in the corridors.

- Consistent with the Governor's Strategic Growth Plan (SGP).
  - The SGP supports the deployment of demand-management strategies, such as HOT lanes, the building of new capacity, and the increase of public transportation ridership. The ExpressLanes Program is an

[9] *Congestion Reduction Demonstration Project: Congestion Mitigation/Air Quality Analysis*, The Better World Group, January 2009
[10] Ibid.
[11] Ibid.
[12] Ibid.

innovative project that reflects the coordination between the region and the state for a program that will relieve congestion, employ demand management techniques through congestion pricing, generate revenue, improve the Los Angeles region's economy and increase transit ridership.

Performance Measurement

At the conclusion of the one-year demonstration period, the State Tolling Authority requires Metro and Caltrans to report back to the legislature on the performance of the ExpressLanes Project. In addition to the State requirement, the federal grant requires a national evaluation framework that will address the following four questions through the collection of one-year of pre-deployment data and one-year of post deployment data:

1. How much was congestion reduced in the area impacted by the implementation of the tolling, transit, technology, and telecommuting strategies? Potential measures include:
    - Reductions in vehicle trips made during peak/congested periods;
    - Reductions in travel times during peak/congested periods;
    - Reductions in congestion delay during peak/congested periods; and
    - Reductions in the duration of congested periods.
2. What are the associated impacts of implementing congestion reduction strategies? Potential measures include:
    - Increases in facility throughput during peak/congested periods;
    - Increases in transit ridership during peak/congested periods;
    - Modal shifts to transit and carpools/vanpools;
    - Traveler behavior change;
    - Operational impacts on parallel systems/routes;
    - Equity impacts; and
    - Environmental impacts.
3. What are the non-technical success factors with respect to the impacts of outreach, political and community support, and institutional arrangements implemented to manage and guide the implementation?
4. What are the overall costs and benefits of the deployed set of strategies?

PROJECT DESCRIPTION

Scope of the Project

The ExpressLanes Project will convert the existing HOV lanes on I-10 from I-605 to Alameda Street (near Union Station with the facility partially following US-101) and on I-110 from Adams Blvd to 182nd Street (near Artesia Transit Center) to HOT lanes. It would also include re-striping and minor widening of the portion of I-10 from I-605 to I-710 to include a second HOT lane in each direction. Additional roadway improvements for I-110 include re-striping the Adams Blvd off-ramp to accommodate an additional right-turn lane, widening Adams Blvd westbound to add a right-turn lane, re-striping Figueroa Way to accommodate two northbound lanes, and signage of I-105 direct connector ramps for I-110 HOT access.

The improvements result in a total of 48 lane-miles (14.2 centerline miles) of ExpressLanes on I-10 and 36 lane-miles (11.0 centerline miles) of ExpressLanes on I-110. The Project is a comprehensive turn-key toll collection system with field equipment, operations, customer service, and maintenance, including but not limited to:

- Roadside cashless, non-stop electronic toll collection with segment based dynamic pricing capabilities;
- Field infrastructure components for tolling hardware and information signage;
- Roadway improvements as identified above; and
- Toll operations center and back office operations including account establishment and management, transponder distribution and transaction processing, payment/violations processing, interfaces with existing Metro systems, other toll operators, and financial services.

Project Status & Stage of Development

The Project is currently in the environmental and preliminary engineering phase of Project Development. The EIR is anticipated to be complete by April 2010. The Project will be delivered using a Design-Build-Operate-Maintain (DBOM) procurement strategy.

Current Schedule (Design-Bid-Build)

The design-bid-build process is too lengthy to meet the demands of the accelerated schedule as well as the needs of the systems integrator. Certain civil items must be in place for the systems integrator to complete their work. The Baseline Schedule estimates a Revenue Operations date of August 1, 2012.

Project Cost Estimate

PA&ED	$ 800,000
PS&E	$ 4,000,000
CONST	$64,500,000
TOTAL	**$69,300,000**

NOTE: All construction is anticipated in Caltrans ROW. Minor street dedication from City of Alhambra costs are included in Construction estimate.

PROPOSED PROJECT FUNDING PLAN

Component	Funding Source*			
	State (SLPP)	Federal (CMAQ)	Local (PC25)	TOTAL
PA&ED		$708,000	$92,000	$800,000
PS&E			$4,000,000	$4,000,000
CONST	$20,000,000	$24,500,000	$20,000,000	$64,500,000
TOTALS	**$20,000,000**	**$25,208,000**	**$24,092,000**	**$69,300,000**
% of Total	**29%**	**36%**	**35%**	**100%**

*SLPP (State/Local Partnership Program), CMAQ (Congestion Mitigation/Air Quality), PC25 (Proposition C – 25% local sales tax measure)

These funds were committed and programmed by the Metro Board in September 2008 and September 2009. (see *Attachment D*). The CTC programmed the SLPP in December 2009.

WHY THIS PROJECT IS A GOOD DESIGN-BUILD CANDIDATE

Summary of Analysis & Steps Taken to Date

The short timeframe within which the ExpressLanes infrastructure must be designed and constructed creates a scheduling challenge for constructing the civil improvements via design-bid-build. Some of the systems installation and civil construction activities are necessary to occur at the same time in certain locations. These activities will also occur concurrently with other Caltrans projects on the I-10 corridor, including the I-10 Rehabilitation Project and the I-10 HOV Extension Project. Therefore, extensive coordination of such activities and cooperation between the responsible parties will be necessary for the ExpressLanes facilities to be operational within the timeframe identified in the project's federal funding requirements.

Over the last year, Metro has evaluated a number of procurement strategies for the ExpressLanes Project. The results of the analysis are summarized in a White Paper regarding the procurement strategy for the ExpressLanes Project (*see Attachment A*). Entitled "Procurement Strategy for the Metro/Caltrans Los Angeles County ExpressLanes Project", the White Paper considered the following:

- Procurement Strategy – One combined (Civil and Toll) DBOM contract or a separate construction contract for the civil work and a DBOM contract for the tolling systems implementation and operations.
- Delivery Strategy – Traditional D-B-B as opposed to D-B, D-B-M, or DBOM; and
- Regulatory Approvals – Metro and the CTC.

The White Paper reflects an expedited industry survey with the intent of uncovering any fatal flaws related to the various approaches for delivering the HOT Lanes. The White Paper concludes:

methodology and that in the specific environment in which this project is to be delivered, the single procurement, DBOM contracting plan is sound and best responds to the demanding schedule challenges faced by the team. We further found that risks are balanced through minimizing interfaces that Metro would be responsible for managing (most notably the interface between separate Civil and Toll Technology Contractors) and that lessons learned from other agencies suggests that those agencies would prefer not to act as a referee between multiple contractors. Based on the constrained schedule, the complexity of the work to be performed, and the processes inherent within the lead agencies, Stantec recommends that Metro move forward with the single contract DBOM approach to delivering the Project.

Project Characteristics

The ExpressLanes Project requires the conversion of existing High Occupancy Vehicle (HOV) lanes to HOT lanes on I-10 and I-110. In order to implement the HOT aspects of the Project, electronic tolling capability must be introduced into the HOV lanes on both freeways and roadway improvements must be constructed on the freeways in order to improve operational performance of the HOT lanes.

The structures related work for the Project includes the Adams Blvd overcrossing modification and widening, the new pedestrian overcrossing at Adams Blvd, and the new sign structures required for the operations of the ExpressLanes. Both I-10 and I-110 will have new overhead structures to accommodate new static sign panels, variable message signs and tolling points. Some of the new signage will be connected to existing overcrossings and existing sign structures. Intelligent Transportation Systems equipment including CCTV cameras and vehicle detection for traffic monitoring & data collection are needed to support dynamic pricing of the ExpressLanes.

NOTE: This application does not cover the transit supportive elements of the CRD grant. This application only covers the highway portions of the CRD grant.

PROPOSED DESIGN-BUILD PROCUREMENT & IMPLEMENTATION SCHEDULE

The DBOM approach (combined Civil and Toll) provides the most schedule efficient and technically sound methodology for construction of the ExpressLanes Project. Cost efficiencies may be achievable by separation of work types into separate contracts; however the strategy essentially puts Metro in the position of being the Integrator. An established toll authority might undertake such a strategy; however, this Demonstration Project provides the first opportunity for Metro to serve as a toll authority.

In order to implement the toll system, roadway construction is required. Combining roadway construction and toll integration under a single contract has schedule and risk advantages. The disadvantages are related to the complexity of the contractual entity with which Metro will hold a contract. The selected Toll Systems Integrator (TSI) will be required to manage the interfaces they design, and implement the toll system on top of the improved roadway. The same entity will be responsible for intelligent transportation system, back office, and the Customer Service Center.

The proposed implementation schedule is included as *Attachment B*.

DESIGN-BUILD BENEFITS

The advantages associated with the combined DBOM approach are:

1. **Risk Transfer:** The number one risk cited by owners of similar HOT Lanes projects, and also clearly stated within the Federal guidance, is that of "interfaces" between the toll system and the roadway itself. The combined Civil/Toll DBOM approach is the best way to minimize this risk.

   In design-build, the owner sheds most of the design liability and transfers it to the design-build contractor who becomes a single point of responsibility for both design and construction issues.[13] In this case, they will also serve as the key point for the operations and maintenance period of the demonstration project.

2. **Schedule Acceleration:** The schedule advantages of design-build will be fully realized by having the Toll Integrator key personnel either leading or partnering with the Civil Contractor to accomplish the roadway design and construction in the most time efficient fashion. As an example, steel supports that require time for fabrication can be ordered months earlier by a consolidated team.

   Further, the traditional design-bid-build schedule can take a minimum of six to nine months longer than a design-build schedule due to the procurement process and required coordination with existing contractors within the project limits. Any schedule delay incurred to the Project beyond the agreed upon federal deadline would result in forfeit of the $210 million federal grant award.

AWARD TYPE REQUESTED: BEST VALUE

The DBOM contract will be awarded using a Best Value selection method. The Proposer that submits the responsive proposal receiving the highest score using the Best Value evaluation criteria will be selected to deliver the Project.

Justification

The DBOM contract is performance based and the Best Value evaluation approach is a better fit for a performance based contract. While the Best Value selection method can lead to a lengthy negotiation process, the Low-Bid selection method requires detailed evaluation criteria for both the toll and civil components and therefore increases the risk of multiple change orders.

Further, the low-bid system makes no allowances for awarding construction contracts to the best-performing contractors who deliver the highest quality projects. According to the Transportation Research Board (TRB), in all but a few cases, experience levels of the contractor, quality issues, and other criteria are not taken into consideration in

[13] NCHRP Report #561: *Best-Value Procurement Methods for Highway Construction Projects*, Transportation Research Board, 2006

awarding low-bid contracts. Best-value procurement methods allow various elements to be considered in selecting a contractor on the basis of performance. Objective elements include contractor experience with similar projects, completion within schedule, compliance with material and workmanship requirements, timeliness and accuracy of submittals, and record of safety. Subjective elements include effective management of subcontractors, proactive measures to mitigate impacts to adjacent properties and businesses, training and employee development programs, corporate commitment to achieving customer satisfaction, and client relations. These elements not only affect the ultimate performance and overall cost of the completed facility, but also contribute to the efficient execution of the work. Efficiency is very important to contracting authorities that are interested in a high level of public acceptance. Therefore, a procurement process is needed that considers value-related elements in awarding contracts.[14]

What Attributes of this Project Lead to this Decision?

The DBOM Contractor will be responsible to ensure that the infrastructure, services and systems required for the ExpressLanes Project meet all functional, performance and contractual specifications and requirements. Metro and Caltrans will seek services from a TSI contractor with specialized expertise in tolling implementation to design, supply, install, operate, and maintain the infrastructure, systems and services required to enable traffic operations and electronic toll collection on the I-10 and I-110 ExpressLanes.

Best Value reduces overall risk on a performance based contract. According to the TRB, the low-bid procurement system has promoted open competition but is based strictly on the lowest price which provides contractors with an incentive to concentrate on cutting bid prices to the maximum extent possible, even when a higher cost product would be in the owner's best interest. As a result, the low-bid system may not result in the best value for dollars expended or the best performance during and after construction.[15] Since the ExpressLanes are a one-year demonstration project, a period of high quality performance after construction is a critical component of project success.

Proposed Best Value Criteria

Proposals will be reviewed for compliance with all instructions in the Request For Proposal (RFP). Pass/Fail determination will be made to verify that proposals include all items indicated as required in the RFP and all addendums.

Technical proposals will be evaluated on the responsiveness to the functional requirements and Statement of Work. The evaluation committee will review and evaluate the technical proposals and other related contract information submitted determine the extent to which the proposer understands the contract requirements, project scope, and demonstrates its ability to deliver the project in accordance with the intent of the RFP.

The proposed Best Value Criteria is as follows:

<u>General Experience/Qualifications</u>

- The extent & depth of the Proposer's and its team members' experience with developing, designing, and constructing comparable projects, including electronic toll systems installation, testing, and start-up;
- The extent and depth of the Proposer's and its individual team members' experience with operating and maintaining comparable projects;

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[14] Ibid.

[15] Ibid.

- The stability, strength, and likelihood of success of the proposed management structure and team;
- The extent and depth of experience of the management team and key personnel for the Project;
- Demonstration of team's past commitment to quality and client satisfaction;

Project Approach

- Proposal is technically feasible, including a scheduling approach for project development delineating any proposed phasing of the work and important milestone activities, and a coordinated approach to installation, integration, testing and start-up, operation and maintenance of the tolling system;
- The Proposer's understanding of the Project, Metro's needs, and risk associated with the development, design, construction, operation and maintenance of the Project, including toll system installation and integration activities to be undertaken under the Contract;
- Proposal demonstrates the Proposer's commitment of materials, equipment, and qualified personnel resources necessary to develop and operate the Project;
- Proposal demonstrates the Proposer understands the operation and maintenance responsibilities, dependencies, and obligations;
- The efficiency and effectiveness in presenting an approach to integrating Metro into Project development and operation and in structuring the roles and relationships of Metro/Proposer/third parties;

System Integration

- Clear, feasible, appropriate and thorough technical approach to the delivery of systems and services;
- Innovative approach to design, integration and use of software, hardware, equipment and communications;
- Scalability of the system to accommodate an increase in processing volumes, addition of new toll locations, lanes and corridors. The flexibility of the system to adapt to future changes;
- System accuracy, performance, and reliability including ease of maintenance and redundancy;
- Toll Operation Service Center design and approach to meet all performance requirements;

Civil Construction

- Technical ability to complete all design packages in timely and efficient manner;
- Proposers understanding and ability to effectively coordinate design and construction with all involved stakeholders;
- Traffic management approach including minimizing disruption and delays to the traveling public;
- Approach to minimizing interference with existing utilities. Coordination with local utilities to expedite installation of required power;
- Expertise and equipment to perform ExpressLanes civil construction in an efficient and timely manner; and

Cost

- Responsive proposal cost including all options.

CTC GUIDELINE CRITERIA

Project Eligibility
The ExpressLanes Project is eligible for the CTC Design-Build Demonstration Program pursuant to the statutory requirement based upon the December 2009 Commission programming action of State-Local Partnership Program funds from Proposition 1B of 2006.

Project Size
The total design-build contract cost estimate is: $69,300,000.

Geographic Location (South)
The ExpressLanes Project is located in Los Angeles County in the Cities of Los Angeles, Monterey Park, Alhambra, San Gabriel, Rosemead, and El Monte on the HOV lanes of I-10 (from I-605 to Alameda Street) and I-110 (from Adams Boulevard to 182nd Street).

Selection Method (Best Value)
The selection method for the ExpressLanes Project is Best Value.

Programming Document
The programming document is attached as *Appendix C*.

ATTACHMENT A

Executive Summary

In April 2008, the U.S. Department of Transportation (USDOT) entered into an agreement with the California Department of Transportation (Caltrans) and the Los Angeles County Metropolitan Transportation Authority (Metro), designating Los Angeles County as a Congestion Reduction Demonstration (LA CRD) Partner. The agreement identifies an award of a $210.6 million federal grant to convert existing carpool lanes into dynamically-priced high-occupancy toll (HOT) lanes as an initial congestion pricing pilot project with a focus on the I-10 and SR-210 corridors

July 2008, the agreement was amended to shift the focus of the Demonstration Project from the SR-210 corridor to I-110. In November 2008, the agreement was amended to reflect the state tolling authority received by Metro for the Demonstration Project. The program implementation consists of converting existing High-Occupancy-Vehicle (HOV) lanes into HOT lanes along I-10 from Alameda Street (near Union Station) to I-605 and I-110 from 182nd Street (near the Artesia Transit Center) to Adams Boulevard.

Metro Construction/Program Management Division became actively involved in supporting the project in late August 2009. Stantec was engaged by Metro for the project shortly thereafter. The first critical investment in time and resources was focused on preparing the baseline project schedule. As we were integrating information from Caltrans (the lead agency for submitting the EIR and the owner of the I-10 and I-110 Facilities), Metro's Office of Real Property Development and Management, and the Consultant Design Team, it became apparent that a number of mitigation measures would be required in order to achieve a Revenue Operations date (ROD) that would be acceptable to the funding partners.

In a parallel effort, Metro sought information regarding related industry experience in delivering HOT Lanes. In the late spring and summer of 2009, a study was conducted, the results of which led to a decision whereby four Toll Integrator firms were pre-qualified by Metro with the intent that they would partner with Heavy Civil contractors to deliver the HOT Lanes in an integrated fashion. An Alternative Delivery Method was selected; specifically a Design-Build-Operate-Maintain (DBOM) form of contract.

The program has reached the point in time where decisions must be made to finalize the details of the DBOM procurement methodology for the HOT Lanes portion of the overall Express Lanes Program. The key variables to be considered include;

- Procurement Strategy – One combined (Civil and Toll) DBOM contract or a separate contract for the civil work and a DBOM for the Toll Work and operations.
- Delivery Strategy – Traditional as opposed to D-B, D-B-M, or DBOM
- Regulatory Approvals – Metro and the CTC.

At Metro's request, Stantec conducted an expedited industry survey with the intent of uncovering any fatal flaws related to our approach for delivering the HOT Lanes. Recognizing that each Agency had a unique set of circumstances surrounding their approach to implementation, we found that there is no one preferred methodology and that in the specific environment in which this project is to be delivered, the single procurement, DBOM contracting plan is sound and best responds to the demanding schedule challenges faced by the team. We further found that the risks are balanced through minimizing interfaces that Metro would be responsible for managing (most notably the interface between separate Civil and Technology Contractors) and that lessons learned from other agencies suggests that those agencies would prefer not to act as referee between multiple contractors. Based on the constrained schedule, the complexity of the work to be performed, and the processes inherent within the lead agencies, Stantec recommends that Metro move forward with the single contract DBOM approach to delivering the project.

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1.0 Procurement of the "HOT" Capability for Express Lanes

The Congestion Reduction Demonstration (CRD) in Los Angeles on I-10 and I-110 includes the conversion of existing High Occupancy Vehicle (HOV) lanes, commonly called Carpool Lanes, to a combination of HOV and High Occupancy Tolled (HOT) lanes. The project goal is to demonstrate that adjustment of traffic flow with dynamic pricing of new HOT lane users, traffic congestion in the general purpose lanes can be lessened, and congestion in the HOV lanes that occurs during peak periods can also be mitigated. Combined with transit service improvements, an overall reduction in congestion in these corridors will be demonstrated. In order to implement the HOT aspects of the CRD, electronic tolling capability must be introduced into the HOV lanes on both freeways. In this white paper, this HOV to HOV+HOT aspect of the project will be referred to simply as the "Express Lanes" project. This white paper compares the planned Express Lanes procurement strategy with similar strategies on similar projects elsewhere in the US. This white paper provides a mid-course review of the key procurement issues as the construction and implementation phase of the Express Lanes portion of the CRD approaches.

1.1 THE EXISTING PROCUREMENT STRATEGY

Parsons Brinckerhoff, in association with eighteen (18) subconsultants, has been retained to perform the planning and preliminary engineering for the project. To date, PB has produced considerable documentation in support of the Express Lanes, including an August 2008 Concept of Operations (ConOps) document for the I-10, and a similar ConOps for I-110. A procurement strategy is articulated in these ConOps as follows:

"Given that Caltrans owns all Interstate highway infrastructure in Los Angeles County and has the greatest familiarity with the system and expertise in the construction and maintenance of highway facilities, the parties involved in the conversion have expressed agreement that Caltrans should be responsible for any necessary civil construction and maintenance activities."[1]

The discussion continues:

"Given that Metro does not have experience in operating toll facilities, it is likely that Metro would opt to procure the installation of these systems on a design-build-operate-maintain (DBOM) basis, where it would award a combined contract to a private sector ETC designer/operator. With a DBOM procurement, the selected private sector firm would design and build the ETC system and then operate it for a designated period of time in exchange for an agreed upon payment."[2]

As the Express Lanes project proceeded toward a goal of being operational by December 31, 2010, considerations other than traditional roles of the key agencies entered into the discussions regarding procurement strategies, namely, the implication of a procurement

[1] Congestion Pricing Operation Plan, Corridor HOT Concept of Operations: I-10 for Los Angeles County, Parsons Brinckerhoff et.al, August 2008, page 76.
[2] ibid, Page 77.

approach on the schedule. Although the statements in the ConOps are true and logical, and form the basis of the "baseline" plan for procurement today, the question, "Will this procurement strategy result in the most expedient temporal arrival at tolled operation?" or "What gets us there quickest?" needs to be answered. As alternatives are considered, driven by schedule concerns, a follow up question, "What cost and quality impacts might occur if this alternative is adopted?" becomes relevant. The goal of this white paper is to provide information useful to decision makers as they work toward a goal that might be stated as follows:

"Given where we are today, identify the procurement approach that will give us the best schedule result, while still achieving all of the key project objectives, with the least impact on cost and quality."

As the design has progressed, Metro has started to move away from the 2008 procurement plan (Caltrans contracts for roadway work and a Metro contract for Toll Integration) toward a more cohesive approach. As an overall project schedule was developed to reach the December 31, 2010 goal, critical path analyses of the baseline procurement approach revealed problems with the realistic probability of obtaining that end date. Obtaining the necessary approvals required to move forward with Caltrans roadway contracts, coupled with questions regarding the risk of developing "interfaces" between toll equipment and the roadway provisions lead to consideration of combining all the work into a single Metro contract. Metro proceeded to shortlist four Toll Integrators, based upon experience and qualifications. A concept emerged where contractors interested in the roadway work could approach, and team, with one or more of the Integrators; with the ultimate goal of having multiple consolidated DBOM proposals. This single DBOM plan has strengths and weaknesses that will be discussed in Section 4 of this White Paper.

To evaluate the baseline 2008 plan, as recently modified, and to identify any new procurement alternatives for evaluation against the baseline plan, Stantec interviewed (via telephone) several representatives from similar projects, and performed an internet based search of published documentation on other similar HOV to HOT conversion projects. The results of this search are described and tabulated in the following section.

2.0 Procurement Strategies of Select HOV to HOT Conversions

The information in this Section was gathered by conducting both internet research and a few telephone interviews regarding procurement strategies. The telephone interviews were informal and generally followed a series of questions designed to determine the procurement strategy used and the degree of satisfaction with the results achieved, expressed anecdotally in terms of schedule, cost and quality. So as to create an environment where interviewees felt free to share their opinions, the names and associations of those interviewed are not published herein. Stantec has determined that the people interviewed had inside knowledge of the projects, however they were not in all cases the owner's project manager. The unpublished information

from the interviews is presented with the caution that it does not represent the official view of the owning entity, and is likely to reflect some bias based on the interviewee's personal opinions.

2.1 THE TELEPHONE INTERVIEWS: ANECDOTAL DATA

To facilitate gathering information in the most time efficient manner, telephone interviews were conducted with people having knowledge of several similar projects in other states.

Goal of the telephone interviews: Identify by client, what type of delivery method was used (i.e. design – bid - build, design-build, design – build – operate – maintain (DBOM), or other

A list of questions was developed by Stantec in cooperation with Metro to capture information relevant to the Express Lanes project. Depending on the project and flow of the conversation, each interview was different. In general, the following questions were asked of the interviewees over the telephone.

General questions:

What was the procurement approach for the project?

Was the work procured with a separate toll integrator package and a separate civil package, combined, or some other arrangement?

What issues arose from using a one or two package approach? How were they resolved?

What contractors/consultants were involved?

Describe the project schedule?

Was there an issue ordering Sins and sign poles?

How well did the process work?

What would you do differently?

In choosing a delivery method (both in packaging and in contracting approach) what were the pros and cons of each alternative?

Why ultimately did the client choose the methods selected?

Did the clients include operations as part of the base package or was it a separate contract?

2.1.1 I-95/395 Capital Beltway Hot Lanes, Virginia

On the I-95/395 project, Transurban was selected as a concessionaire to design, build, operate and maintain the project for 80 years. They started in 2005 as part of a Public Private Partnership legislative initiative in 2005.

Transurban already operated the Pocahontas Parkway. The base toll system required 18 months to build get into operation with the help of a Toll System Integrator.

As Transurban acts as the owner, they procured the Hot Lanes project much like an agency would. They used a "Best Value" approach, and referred to Utah I-15 as a model for their approach.

The I-95/395 Capital Beltway approach to procurement was as follows: Transurban issued a Request for Information (RFI). They then issued an "Invitation to Negotiate (ITN)" (copied from the Florida DOT's ITN procedures). The ITN contained a functional specification for the desired toll system. They received and ranked the seven responses from Toll Integrators, including prices and costs. They are now negotiating with the number 1 responder. If the negotiations fail, they go to number 2. They considered negotiating simultaneously with more than one to compress schedule, but stayed sequential to avoid changing the advertised process.

The civil construction is performed by Transurban and Fluor. Transurban is a 90% partner of the Concession, with Fluor at 10% (with some minor DBE/WBE participation).

As one of the worlds most experienced toll implementation/operations providers, Transurban will manage the interfaces between the roadway contractors and Toll Integrator.

Roadway construction is scheduled to take 5 years due to the restrictions on closing lanes on the Capital Beltway.

The plan is to start collecting tolls on December 20, 2012 on the first segment.

The reason VDOT took this approach was solely due to the PPP initiative approved by the State legislature.

Similar to the Express Lanes project, they are considering the use of switchable transponders to indicate SOV or HOV declarations.

Transurban's approach accounts for the fact that each toll integrator has its own "footprint" for toll collection. In the preliminary roadway design, they defined a "tolling envelope" as 65 feet. Each TI uses a different style of gantry as reader size, configuration and placement require engineering of vibration control and maintenance preferences, etc.

2.1.2 I-25 Hot Lanes, Denver

The overall contractor was PB. The project was delivered as a design/build project, with all aspects combined into a single contract. Operation is performed by the E-470 Authority in Denver, at which the back office and customer service center (CSC) are staffed by PB.

The combined method minimized the interface risk and lead to all parties working together to produce a better end product. The owner felt that a separate method may have resulted in a less than optimum outcome due to interface disconnects.

The HOT Lanes are reversible and approximately 5 miles long, with both HOV and HOT access provided. Transponders are allowed and license plate readers are used for the VES.

The original HOV construction took place in 1994. The transition of one HOV lane to a HOT lane took place in 2006 / 7. It took about a year to complete.

There was no issue ordering signage and sign poles, mainly because the major infrastructure was already in place for HOV and the additions didn't create a scheduling problem.

The results are great. The sole lesson learned was that dedicated lanes at the tolling site where HOV and HOT are separated should have been physically separated, but sufficient right of way was not available. E-470 has done an excellent job on the toll collection service and revenues have vastly exceeded expectations. Dynamic pricing by time of day is used.

The owners are completely satisfied with this project. They think that HOT/HOV is a very good utilization of the corridor given the limited footprint they have to work with.

There was some delay in the design side of the project, but when the project transitioned to the construction phase, it was completed on time and under budget.

2.1.3 I-95 HOT Lanes, Miami

As part of an Urban Partnership Agreement, the Florida Department of Transportation (FDOT) District 6 in Miami and the Florida Turnpike Enterprise (FTE) partnered to fast track implementation of HOT Lanes on I95 on a very aggressive schedule.

The procurement was separated into two parts, roadway improvements and toll system integration. The two contracts were held by the two different state entities, FDOT for the roadway improvements and ITS provisions, and FTE for the toll system. The project did result in meeting the required federal deadline in the grant agreement, however with only partial functionality and a mixed reception by the public when confusion and accidents occurred during the opening. A second phase was implemented wherein the initial problems were fixed and the project was expanded. The end result is a successful implementation of HOT Lanes, in an area with a high transponder penetration from the outset.

The problems that occurred were partly due to the procurement strategy, in that the designer to the roadway design/build team was relatively inexperienced in toll system design. Signing may have been less than optimal from the motorist's perspective, and the plastic pylons used to create lane separation were inadequately spaced to deter crossovers.

2.2 INTERNET BASED RESEARCH: PUBLISHED DOCUMENATION

In addition to the interviews, internet research was conducted to uncover relevant procurement information in the national industry news.

2.2.1 Houston METRO[3]

Houston METRO will convert five existing HOV corridors to HOT Lanes. TransCore has been selected for contracts reportedly worth $81M. The project includes 52 toll points and some 47 access/egress points on five highways, with occupancy verification for HOVs, and dynamic pricing for HOT users. The design-build contract requires TransCore to begin HOT Lane operations by the end of 2010 and have the whole five highway system operating by the fall of 2011.

One contract is for $38.7M to design, procure and install a High Occupancy Toll (HOT) Lane system in the middle of five radial freeways in the Houston Metro area. The other contract is for five years of operations and maintenance at $8.46M/year for a total of $42.3M.

METRO separated Toll System Integration and roadway modifications by procuring a separate contract for civil construction for $8.94M with ISI Contracting. 80% of the budget is coming from federal grants.

All are single lane and reversible designed for peak period congestion reduction.

Existing toll equipment will be upgraded. All five corridors will include dynamic pricing and be operated with tolls adjusted to manage traffic density and maintain minimum 50mph (80km/hr) speeds and 1500 veh/hr/lane throughput.

Most of the operations costs contracted for will be the back office including accounts, billing, and customer service including a HOT Lane webpage and other outreach. Also included is monitoring of lane operations by video and other sensors, incident management and opening, closing and reversing of lanes.

[3] TOLLROADSnews Online, October 22, 2009. TOLLROADnews is a journalistic venture of Peter Samuel, 102 West Third Street Unit 1, Frederick, MD 21701 USA; (301) 631-1148; email- editor@tollroadsnews.com. Material in this section 2.2.1 is entirely and directly from TOLLROADnews, with some editing to condense the information.

Each access point will divide into an HOV lane and HOT lane. The HOV lane will have a monitoring booth for random visual checks of vehicle to see they have the required number of occupants for the free ride.

2.3 TABULAR SUMMARY

In general, the following questions were asked of the interviewees over the telephone.

Owning entity, and is likely to reflect some bias based on the interviewee's personal opinions.

Project	Location	Owner	Procurement Approach	Details	System Size
I-85 Express Lanes and Back Office Conversion Project	Atlanta	SRTA	System Integrator	Separate contracts: 1. Toll system equipment 2. System Integrator 3. Gantry Installation	250K Transponders, 37 Reader locations
I-95 HOT Lanes	Miami	FDOT	Design/Build	Single FDOT design build contract for everything except readers and transponders, supplied by TransCore under contract to the Florida Turnpike Enterprise	Phase I= NB Miami to Golden Glades, Phase II= North extension to FT Lauderdale and Southbound
I-25 HOT Lanes	Denver	CDOT	Design/Build	Combined contracts for civil and toll.	Approximately 5+ miles in length
I-95/395 HOT Lanes	Washington, D.C.	VDOT	DBOM (PPP)	All improvements provided by a single contractor.	80 year concession.

2.4 LESSONS LEARNED

There is no standard solution to HOV/HOT procurement strategy selection. Where problems have occurred, they tend to be attributable to lack of experience at some fundamental level in a key project role. Schedule pressure is another issue that can dictate a less than optimal procurement strategy. However no project investigated herein was built with an optimal strategy and each involved some compromise from the ideal approach in order to accommodate one of a number of project constraints.

The tolling industry is mature enough that the chance of technical system failure is remote. The number one issue therefore in HOV to HOT lane conversion is the interface between roadway construction and toll system equipment, namely system integration. It could be generalized that combining roadway improvements and toll system integration under an umbrella contract is the most proven way to mitigate the interface risks.

3.0 Federal Guidance on HOV/HOT Procurement

Federal guidance on HOV/HOT lanes conversion procurements is available and relevant to the consideration and selection of a procurement strategy. The applicable Federal Guidance is reprinted as follows in this section[4].

Procurement Options

There are two major elements of the HOT lane system that will be procured: 1) roadway-related work, and 2) the electronic toll collection (ETC) system. For several important reasons, the two elements should not necessarily be procured using the same strategy. Following, is a description of the elements to be delivered and the options for buying out the work.

Roadway Work

Improving the roadway involves civil work such as widening, paving and surfacing, gantry installation and electrical work, including power and communications to the ETC and variable message sign (VMS) equipment. Much of this work lends itself to competitive bidding on a low price basis from qualified bidders. There are two procurement options for roadway work:

Design-Bid-Build. Under this option, the sponsoring agency provides all of the roadway design detail and puts the package out for bid on a low bid basis.

[4] Considerations for High Occupancy Vehicle (HOV) Lane to High Occupancy Toll (HOT) Lane Conversions Guidebook; HNTB & Booz Allen Hamilton; http://ops.fhwa.dot.gov/publications/fhwahop08034/hot3_0.htm, referenced October 23, 2009, United States Department of Transportation, Federal Highway Administration, Office of Operations, Washington, D.C.; reprinted herein as published.

Design-Build. Here, the sponsoring agency develops preliminary designs and then puts the package out for bid to a design-build team. (Note: this procurement option may lend itself to the RFP process discussed in the next bullet in order to facilitate an evaluation of the design/build team's overall design capabilities and concepts).

ETC Systems Work

ETC work involves designing (including developing and integrating), installing and potentially maintaining and operating an ETC system, including software and communications to the lane equipment and critical back office operations. Because the ETC work is highly specialized, it does not lend itself to a selection solely on a low bid basis.

A request for proposal (RFP) is the recommended approach to ensure that the selection of the system integrator considers all critical factors including technical solution, team qualifications and experience and price. As mentioned above, the scope of the ETC procurement can be limited to design and installation of the ETC system or it can cover all aspects of operations as well. There are three basic models to consider in the ETC system integrator procurement:

Design-Build. The System Integrator designs, builds and installs the system and then turns it over to the Sponsor, who then hires a separate entity to maintain the system (or use in-house resources). The Sponsor will also have to a separate agreement with a Customer Service Center (CSC) operator to process the transactions and bill customers and handle violations. The sponsoring agency can obtain these services through a separate RFP or can make an agreement with another agency to "piggyback" on their existing customer service center operations.

Design-Build-Maintain. The System Integrator not only designs, builds and installs the ETC system, but also maintains the system for fixed period of time. Here, the sponsoring agency would again have a separate agreement for CSC operations or could operate the CSC.

Design-Build-Operate-Maintain. The System Integrator is completely responsible for all aspects of HOT lane implementation and operations, including maintenance and CSC operations for an agreed to period of time.

If the sponsoring agency does not have experience maintaining ETC systems, it is recommended that the Sponsor use a design-build-maintain RFP. Whether the sponsor agency also chooses to include CSC operations in the RFP depends on a number of factors such as the availability and cost effectiveness of using an existing CSC of another agency and the desire to separately procure CSC operations through a separate RFP.

Procurement Sequencing

The proper sequencing of roadway infrastructure and ETC procurements is critical to project success. Specifically, it is desirable to have the System Integrator in place prior to the completion of the roadway design package. This will enable the System Integrator to have input

into the placement, type and number of ETC equipment gantries, communications infrastructure requirement, placement and types of equipment cabinets, and roadway issues related to any in-road ETC equipment. This will minimize change orders to both the roadway contract and the ETC contract. As the roadway improvements are constructed, the System Integrator can work with the Sponsoring Agency to complete the system design and development, which typically takes approximately 12 months.

Procurement, Implementation and Construction Issues

A prerequisite to initial and long-term success of a HOT lane implementation is proper management of all stages of project development (from procurement through construction and final testing). The project development process must be viewed as a unified process, with multiple interdependent links. Several key guidelines should be kept in mind while planning the ETC construction process:

A detailed design, implementation and construction schedule should be stated in the RFP. The schedule should be refined prior to notice-to-proceed (NTP) and updated regularly throughout the design and installation process. The schedule must also recognize all of the key design, testing and installation elements and consider coordination with roadway design and construction.

The RFP should require the System Integrator to prepare a transition plan. The transition plan, which will be refined in the design process, should clearly identify a timeline for the construction and transition of the HOV lanes to HOT lanes.

Construction planning, staging and project costs must accommodate maintenance and protection of traffic. Performing work on an existing roadway with live traffic operations is a major challenge, and plans to mitigate the impact of construction on parallel roadway operations must be developed.

The RFP should include rigorous performance standards for the installed equipment and the overall system. It is recommended that the RFP be developed as a performance-based document rather than an equipment specification. The RFP should specify rigorous performance standards, which place the burden of designing a system to meets those requirements squarely on the System Integrator.

Include sufficient time for testing in factory, on-site pre-live and live acceptance testing in the RFP. The system should not be considered complete until a live acceptance test for a period of 30 to 60 consecutive days verifies system operation.

4.0 Procurement Alternatives: Consideration of a Mid-Course Adjustment for the Express Lanes Project

With consideration of the project examples in Section 2 and Federal Guidance in Section 3, this white paper provides information useful for contemplation of a mid-course adjustment to the procurement strategy included in the August 2008 ConOps. This white paper provides information for decision support without deriving a single recommended solution.

The primary driver for this mid-course consideration of procurement alternatives is schedule related.

4.1 EVALUATION OF THE BASELINE STRATEGY

After consideration of the published Federal Guidelines and the information gathered on other projects, the baseline strategy of the Express Lanes project has apparent strengths and weaknesses. The most notable weakness lies in the schedule driven need to design some roadway modifications in advance of adoption of a tolling strategy and final toll system design.

4.2 THE DBOM APPROACH

Given nature of the project being a complex demonstration of congestion reduction, there is a strong proclivity toward a design/build/operate/maintain (DBOM) approach. The DBOM approach provides the most schedule efficient and technically sound methodology for construction of the LA Express Lanes project. Cost efficiencies can be achieved by separation of work types into separate contracts; however the strategy essentially puts the owner in the position of being the Integrator. An established toll authority might undertake such a strategy, based upon the in-house experience developed on previous projects, in order to save costs that could be as high as 10 to 15% of the overall capital implementation.

4.3 THE ROADWAY IMPROVEMENT ASPECT

In order to implement the toll system, roadway construction is required. Combining roadway construction and toll integration under a single contract has schedule and technical advantages. The disadvantages are related to the complexity of the contractual entity with which Metro will hold a contract. The key issue is timing, starting the Toll System Integrator (TSI) on their design at the earliest possible point. Each design by competing TSIs will be different with different gantry configurations. The selected Toll System Integrator must manage the interfaces they design, and implement the toll system on top of the improved roadway. The same entity will be responsible for ITS, back office, and the Customer Service Center (CSC).

Flexibility in contracting to allow the sharing of risks by key contractors is essential to managing costs and fostering competition with multiple proposals. The TSI may not be able to accept full financial responsibility for the value of the civil contracting, which on this project is complex and

expansive. If the TSI is the engineer of record on the design, they will not readily approach Metro with claims and changes if the interfaces with roadway work become problematic. When final design and construction is complete and the system is accepted, the roadway contractor should be allowed a graceful exit from fiduciary obligations during the operational period.

5.0 Conclusions and Recommendations

In parallel to the creation of this report, Stantec has been working to create a project master schedule for the Hot Lanes work that mitigates the perceived risks with a sound procurement strategy. Through the process of integrating information from Caltrans (the lead agency for submitting the EIR and the owner of the I-10 and I-110 Facilities), Metro Office of New Development, and the Consultant Design Team, it became apparent that a number of mitigation measures would be required in order to achieve a Revenue Operations date (ROD) that would be acceptable to the funding partners.

At Metro's request, Stantec conducted an expedited industry survey with the intent of uncovering any fatal flaws related to our approach for delivering the HOT Lanes. Recognizing that each Agency had a unique set of circumstances surrounding their approach to implementation, we found that there is no one preferred methodology and that in the specific environment in which this project is to be delivered, the single procurement, DBOM contracting plan is sound and best responds to the demanding schedule challenges faced by the team. We further found that the risks are balanced through minimizing interfaces that Metro would be responsible for managing (most notably the interface between separate Civil and Technology Contractors) and that lessons learned from other agencies suggests that those agencies would prefer not to act as referee between multiple contractors. Based on the constrained schedule, the complexity of the work to be performed, and the processes inherent within the lead agencies, Stantec recommends that Metro move forward with the single contract DBOM approach to delivering the project.

The advantages associated with the combined DBOM approach are:

1. The number one risk cited by the owners of similar projects, and also clearly stated within the Federal guidance, is that of "interfaces" between the toll system and the roadway itself. The combined Civil/Toll DBOM approach is the best way to minimize this risk.

2. The schedule advantages of design/build will be fully realized by having the Toll Integrator key personnel either leading or partnering to accomplish the roadway design and construction in the most time efficient fashion. As an example, steel supports that require time for fabrication can be ordered more quickly by a consolidated team.

ATTACHMENT B

Congestion Reduction Demonstration Project

Baseline Schedule Development – October 30, 2009 Update

Basis and Assumptions

1.0 Introduction

This document describes the basis and assumptions utilized in the development of the Baseline Master Schedule for Congestion Reduction Demonstration (CRD) project with a Data Date of October 30, 2009. This Master Schedule includes ***all*** the elements identified in the CRD project and it also incorporates summary schedules of some additional projects that are managed by other agencies, but have a potential to impact the completion dates of the CRD project. Assumptions made regarding the interdependencies between those projects are provided in the following sections.

2.0 Important Dates

The 10 elements that form the CRD projects are listed in the table below; including the start and finish dates for the important milestones and activities in each of those schedule elements.

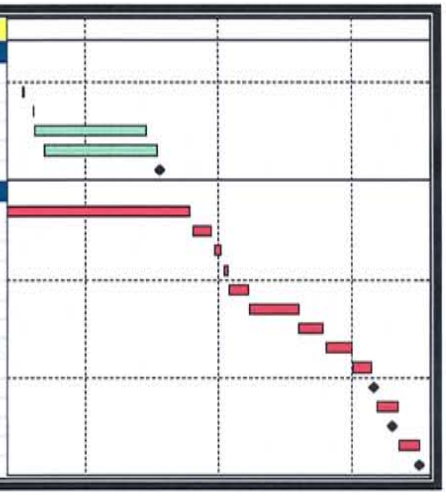
No.		Activity Description	Start Date	Finish Date
1.0	Community Outreach (Ongoing)			Aug 1, 2013
2.0	I-10 & I-110 HOT lanes			
	2.1	EIR Approvals (Caltrans)		Apr 30, 2010
	2.2	Nearly All Elements of Design		Jan 15, 2010
	2.3	DBOM Contract Ready for Advertisement	Feb 1, 2010	
	2.4	Final Addendum		May 21, 2010
	2.5	NTP	Nov 16, 2010	
	2.6	Civil Construction (I-10 & I-110)	Jan 25, 2011	Apr 23, 2012
	2.7	I-10 Rehab Contract (Caltrans)		Dec 13, 2011
3.0	Tolling Implementation (I-10 & I-110)		Nov 16, 2010	Aug 1, 2012
4.0	Transit Service Improvement (Bus Procurement)		Mar 24, 2009	Nov 30, 2010
5.0	Transit Facility Improvements			
	5.1	Union Division	Apr 4, 2006	June 29, 2012
	5.2	Harbor Transitway Improvements	Feb 2, 2009	Mar 30, 2011
	5.3	El Monte Transit Center	Feb 2, 2009	Dec 30, 2011
	5.4	Patsouras Plaza	Feb 2, 2009	Dec 30, 2011
6.0	Metrolink Pomona Station Improvements		May 1, 2009	Dec 31, 2010
7.0	Transit Signal Priority in Downtown (LADOT)		Sept 15, 2009	Nov 1, 2010
8.0	Express Park (LADOT)		Feb 2, 2009	Dec 30, 2010
9.0	Vanpool		Feb 1, 2012	Jul 31, 2013
10.0	CRD Data Collection		Aug 1 , 2011	Jul 31, 2013

3.0 HOT Lanes Project - Critical Elements

a. The schedule assumes that all the necessary approvals for implementing a DBOM contract will be in place before the RFP is advertised.

b. Metro plans to procure the DBOM contract as a "Best Value" contract. It is a nine and half month process, including the period for Metro Board approval. The layout below shows the activities involved in the procurement process in detail.

	DBOM Contract Procurement	201	01-Feb-10	16-Nov-10
	Advertisement Process	79	01-Feb-10	21-May-10
120	Advertise DBOM RFP	1	01-Feb-10	01-Feb-10
110	Preproposal conference	1	16-Feb-10	16-Feb-10
111	Written response to preproposal conference	1	23-Feb-10	23-Feb-10
112	Written Questions from Bidders	56	24-Feb-10	12-May-10
113	Responses to written questions	56	03-Mar-10	19-May-10
114	Final addendum	0		21-May-10
	Proposal Preparation & Evaluation Process	200	02-Feb-10	16-Nov-10
117	Bidders prepare proposals	94	02-Feb-10	11-Jun-10
118	Evaluate & Rank Proposals for Competitive Range	10	14-Jun-10	25-Jun-10
148	Site Surveys of Proposers' Facilities as Necessary	5	28-Jun-10	02-Jul-10
158	Oral Interview	3	05-Jul-10	07-Jul-10
218	Request for Clarifications	10	08-Jul-10	21-Jul-10
358	Negotiate with Proposers in Competitive Range	25	22-Jul-10	25-Aug-10
258	Best Value Final Evaluation	12	26-Aug-10	10-Sep-10
378	Draft and Issue Board Report	14	13-Sep-10	30-Sep-10*
388	Prepare Notice of Intent to Award	10	01-Oct-10	14-Oct-10
368	Notice of Intent to Award	0		15-Oct-10*
204	Protest Period	11	18-Oct-10	01-Nov-10
123	Metro Board Approves Contract Award	0		28-Oct-10*
494	GC Paperwork/Comform Contract	10	02-Nov-10	15-Nov-10
124	Issue NTP	0	16-Nov-10	



c. The layout of the critical activities for I-10 and I-110 HOT Lanes is attached at the end of the document (**Appendix A**). The layout shows that the Critical Path runs through the EIR Approval, Procurement Process, and the Toll Implementation/Testing activities. The I-10 Rehab contract is also on the critical path, because the HOT Lanes schedule assumes that the CIDH foundation work would need to be carried out ***at least one location*** after the I-10 site is vacated by the current contractor (Atkinson). Atkinson's last schedule update shows substantial completion on October 11, 2011, but Metro has been informed by Caltrans that Atchison is currently two months behind schedule. The CRD Master Schedule includes appropriate ties with that delayed completion of Rehab contract to December 13, 2011.

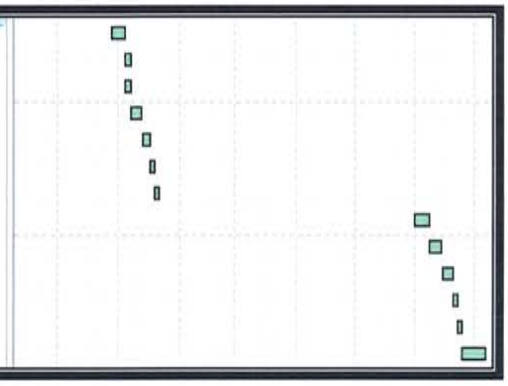
d. The Design Drawings and the Concept of Operation Manual made available to the team at the time of development yielded the number of signs for installation during the project and they included in the following table.

PROJECT SUMMARY	I-10 EB	I-10 WB	I-110 NB	I-110 SB	I-105 EB	I-105 WB	Total
Roadside Pole	0	0	4	0	0	0	4
New Full Span Gantry	11	12	15	20	2	3	63
New Cantilever	3	2	4	10	3	2	24
Roadside Two Post	0	0	0	0	0	0	0
Roadside Single Post	0	0	0	0	1	0	1
Existing Bridge	6	5	6	6	1	1	25
Existing Structure	3	0	3	0	1	1	8
TOTAL	23	19	32	36	8	7	125
NEW							92
CIDH Foundation likely in the median (Other signs may be installed on Bridge or existing structures)	12	12	19	18	1	0	62

e. To mitigate the coordination issues and possible delays in procurement of sign-posts and the signs, the schedule assumes that, the construction of the CIDH foundation scope of work will be carried out ahead of the installation of the post/lattice/signs. Furthermore, the schedule assumes that there is either an existing capacity or that Caltrans would facilitate certification of additional fabricators, so that the schedule will not be impacted by Sign-Post delivery issues.

f. The following layout shows a CIDH foundation and subsequent scope of work ***at a typical location***. The schedule assumes that it would require a single lane closure for up to three weeks for CIDH foundation work. After the post/lattice/sign becomes available, the subsequent installation would be carried out at nighttime and would require double lane closures for up to a three-week period. Seven days of VES/Reader Installation tests would follow the completion at each of those installations. Our consultants have confirmed that these local installation tests can be carried out concurrently by utilizing emulators, well before completion of the Control Center and the schedule reflects those relationships.

Single Lane Closure - Set Temp Barriers	4	28-Dec-10	04-Jan-11
Drill Pole Foundation/Utility Conduits	3	04-Jan-11	07-Jan-11
Horizontal Boring and Installation of Conduits	3	04-Jan-11	07-Jan-11
Sign-Post Foundation - FRP Concrete	3	07-Jan-11	12-Jan-11
Pull Power/Comm Cables & Test	2	13-Jan-11	17-Jan-11
Restripe Affected Areas	2	17-Jan-11	19-Jan-11
Remove Temporary Barrier (Foundation)	2	19-Jan-11	21-Jan-11
Develop Traffic Maintanance Plan (Signs)	5	31-May-11	08-Jun-11
Double Lane Closure - Set Temp Barriers	4	08-Jun-11	14-Jun-11
Erect Sign-Pole/Lattice	3	15-Jun-11	20-Jun-11
Install Sign/Reader/CCTV and Connect	2	20-Jun-11	22-Jun-11
Remove Temporary Barriers (Sign Installation)	2	22-Jun-11	24-Jun-11
VES/Reader Installation Test	7	24-Jun-11	06-Jul-11

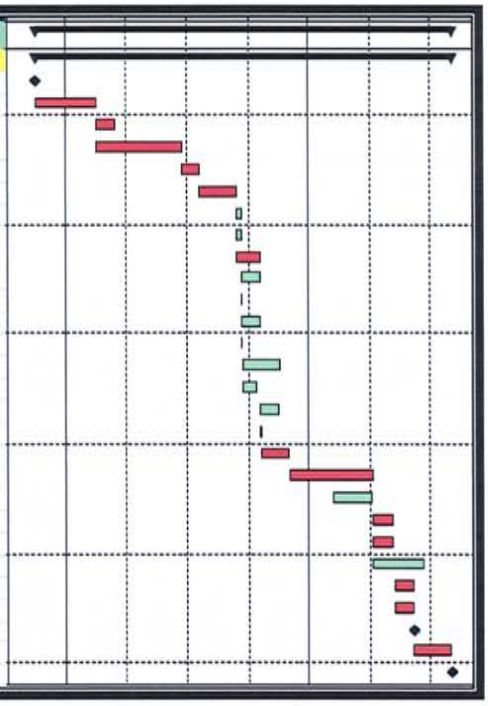


g. In order to reduce the impact of construction on the traffic, and to accelerate the construction of sign-post foundations, the scope of work on the freeways was divided into eight elements on the each side of the freeway. Each location would include at least two CIDH foundations and all the associated civil construction work. Independent crews will operate on each side of the freeway (total of four), which would allow the contractor to hopscotch at different locations to complete the foundations and mitigate any coordination related impact on the ongoing work in the same area. The layout of summary activities attached to the document (**Appendix B**) shows all the elements in the schedule to its lowest WBS.

h. The schedule also includes construction activities for relocation of the center barrier/drain relocation scope of work on I-10 (near I-605 intersection), and the Pedestrian Crossing Bridge and road widening efforts at Adams on I-110.

i. The Critical Path of the HOT Lanes DBOM contract runs through the Toll Implementation design/procurement/test related activities. The following layout shows all the activities related to the Toll Implementation scope of work. The schedule assumes a one month end-to-end testing period for each of the corridors, following installation of the Toll Operation Service Center and two months of integrated test period for the entire system following the corridor-wide testing. Our design consultants have confirmed that those durations are adequate for the testing activities.

Tolling Implementation		429	16-Nov-10	01-Aug-12
HOT Lanes (I-10 and I-110)		429	16-Nov-10	01-Aug-12
127	Design and Deployment Begin - SI	0	16-Nov-10	
128	Initial Design - SI	66	16-Nov-10	15-Feb-11
129	Tolling Preliminary Design Review - SI	20	16-Feb-11	15-Mar-11
130	Finish Design- SI	90	16-Feb-11	21-Jun-11
131	Tolling Critical Design Review	20	22-Jun-11	19-Jul-11
132	Make required changes - SI	40	20-Jul-11	13-Sep-11
133	Factory Acceptance Test Lane Equipment	5	14-Sep-11	20-Sep-11
137	Factory Acceptance Test Back Office	5	14-Sep-11	20-Sep-11
141	Factory Acceptance Test Toll Operation Service Ce...	25	14-Sep-11	18-Oct-11
134	Correct Punch list items - SI	20	21-Sep-11	18-Oct-11
135	Order Production Lane Equipment - SI	1	21-Sep-11	21-Sep-11
138	Correct Punch list items - SI	20	21-Sep-11	18-Oct-11
139	Order Production Back Office Equipment - SI	1	21-Sep-11	21-Sep-11
136	Receipt of Production Lane Equipment - SI	40	22-Sep-11	16-Nov-11
140	Receipt of Production back office Equipment	15	22-Sep-11	12-Oct-11
142	Correct Punch list items - SI	20	19-Oct-11	15-Nov-11
143	Order Production TOSC Equipment	1	19-Oct-11	19-Oct-11
144	Receipt of Production TOSC Equipment	30	20-Oct-11	30-Nov-11
145	Setup CSC	90	01-Dec-11	04-Apr-12
315	Install/Connect/Test Fiber to CSC	40	06-Feb-12	02-Apr-12
151	Installation Test of equipment on I-110 Northbound	22	05-Apr-12	04-May-12
152	Installation Test of equipment on I-110 Southbound	22	05-Apr-12	04-May-12
495	Staff Training	55	05-Apr-12	20-Jun-12
153	Installation Test of equipment on I-10 Eastbound	22	07-May-12	05-Jun-12
154	Installation Test of equipment on I-10 Westbound	22	07-May-12	05-Jun-12
146	Open CSC, distribute Transponders, WEB site ope...	0	06-Jun-12	
155	System Test	40	06-Jun-12	31-Jul-12
156	Open to Tolling	0		01-Aug-12*

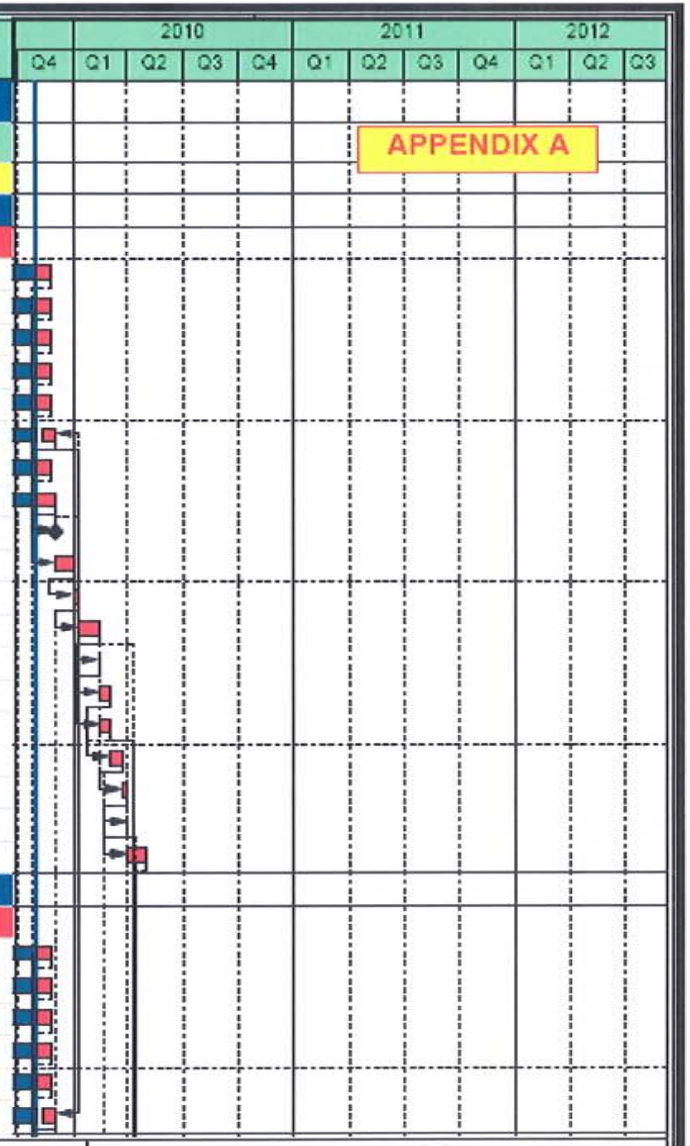


4.0 Conclusion

The Master Schedule includes all the ten elements from the Congestion Reduction Demonstration Project and the completion date ***for all the elements***, including the Data Collection Demonstration period of one year, is scheduled to be completed by **July 31, 2013**. The HOT Lanes construction and the Toll Implementation are scheduled to be ready by **August 1, 2012**.

The narrative in this basis and assumptions document focuses mainly on the delivery of the HOT Lanes element of the program, because the remaining elements of the program are fairly straight-forward and their critical path activities have a float inventory of up to one year. It should also be noted that at the time of this schedule development the preliminary design was still at the pre-30% level and the schedule would continue to be refined with the evolution of the design.

Activity ID	Activity Name	Orig. Dur.	Start	Finish
Congestion Reduction Demonstration Project		792	01-Jul-09 A	01-Aug-12
I-10 & I-110 HOT Lanes		667	01-Jul-09 A	06-Feb-12
EIR Preparation and Approval		226	01-Jul-09 A	30-Apr-10
I-10 Corridor		225	01-Jul-09 A	30-Apr-10
I-10 Hot Lanes		225	01-Jul-09 A	30-Apr-10
220	Traffic	22	01-Jul-09 A	27-Nov-09
221	Air	45	01-Jul-09 A	27-Nov-09
222	Noise	45	01-Jul-09 A	27-Nov-09
226	R/W	45	01-Jul-09 A	27-Nov-09
227	Utilities	45	01-Jul-09 A	27-Nov-09
233	Write Draft Environmental Document and Draft PR Signed (I-10)	45	01-Jul-09 A	02-Dec-09
225	Geotech	45	01-Jul-09 A	27-Nov-09
230	Hydrology	45	01-Jul-09 A	01-Dec-09
232	Finish Studies	0	02-Dec-09	
234	QA/QC of DED (I-10)	22	02-Dec-09	01-Jan-10
235	Sign DED	6	01-Jan-10	11-Jan-10
236	Circulate Document	25	11-Jan-10	15-Feb-10
237	Public Hearings	1	12-Feb-10	15-Feb-10
244	Final AQ Conformity	11	15-Feb-10	02-Mar-10
238	Respond to comments	10	15-Feb-10	01-Mar-10
239	QA/QC 2	15	02-Mar-10	23-Mar-10
240	FED Signed - I-10	5	23-Mar-10	30-Mar-10
241	PA/ED Project Report - I-10	1	30-Mar-10	31-Mar-10
243	CEQA Findings NOD CERT & NEPA FED REG	22	31-Mar-10	30-Apr-10
I-110 Corridor		226	01-Jul-09 A	30-Apr-10
I-110 Hot Lanes		226	01-Jul-09 A	30-Apr-10
250	Traffic	22	01-Jul-09 A	27-Nov-09
441	Air	45	01-Jul-09 A	27-Nov-09
252	Noise	45	01-Jul-09 A	27-Nov-09
246	R/W	45	01-Jul-09 A	27-Nov-09
247	Utilities	45	01-Jul-09 A	27-Nov-09
343	Write Draft Environmental Document and Draft PR Signed I-110	45	01-Jul-09 A	02-Dec-09



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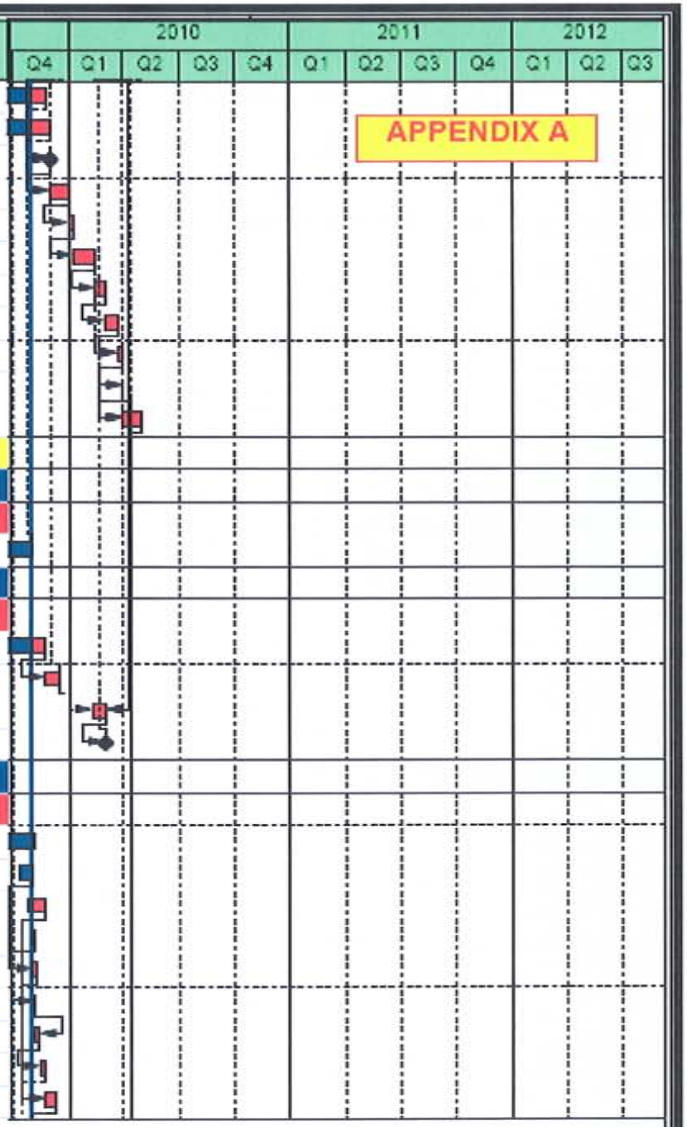
Activity ID	Activity Name	Orig. Dur.	Start	Finish
265	Geotech	45	01-Jul-09 A	27-Nov-09
470	Hydrology	45	01-Jul-09 A	01-Dec-09
342	Finish Studies	0	02-Dec-09	
344	QA/QC of DED (I-110)	22	02-Dec-09	01-Jan-10
355	Sign DED	6	01-Jan-10	11-Jan-10
316	Circulate Document	25	11-Jan-10	15-Feb-10
484	Final AQ Conformity	11	15-Feb-10	02-Mar-10
489	QA/QC 2	15	02-Mar-10	23-Mar-10
490	FED Signed - I-110	6	23-Mar-10	30-Mar-10
251	PA/ED Project Report - I-110	1	30-Mar-10	31-Mar-10
683	CEQA Findings NOD CERT & NEPA FED REG	22	31-Mar-10	30-Apr-10
Design		**143**	**31-Jul-09 A**	**01-Mar-10**
Concept Of Operations		**54**	**08-Aug-09 A**	**02-Nov-09**
HOT Lanes (I-10 and I-110)		**54**	**08-Aug-09 A**	**02-Nov-09**
19	Final Concept of Operations	55	08-Aug-09 A	02-Nov-09
Project Report		**96**	**31-Jul-09 A**	**01-Mar-10**
HOT Lanes (I-10 and I-110)		**96**	**31-Jul-09 A**	**01-Mar-10**
29	Draft Project Report - PB	30	31-Jul-09 A	20-Nov-09
30	Review Draft Project Report - Caltrans and Metro	20	23-Nov-09	18-Dec-09
31	Incorporate Comments to Project Report -PB	15	08-Feb-10	01-Mar-10
32	Delivery of Project Report - PB	0	01-Mar-10	
HOT Lanes Project (I-10 and I-110)		**117**	**03-Aug-09 A**	**21-Jan-10**
Roadways		**108**	**03-Aug-09 A**	**07-Jan-10**
173	30% Drainage Plans and Report	10	03-Aug-09 A	05-Nov-09
167	95% Signing Structures Plans	6	12-Oct-09 A	30-Oct-09
177	Draft Fact Sheets for Design Exceptions	41	23-Oct-09 A	20-Nov-09
365	Metrolink As-built to PB	5	30-Oct-09	05-Nov-09
168	95% Signing Structures Plans Review (CT)	11	02-Nov-09	09-Nov-09
375	Metrolink Mock-up Train Drive	1	06-Nov-09	06-Nov-09
385	PB Design/Installation Submittal	5	06-Nov-09	12-Nov-09
525	Metrolink Respond to PB	5	13-Nov-09	19-Nov-09
178	Draft Fact Sheets Submittal and Review	11	23-Nov-09	08-Dec-09



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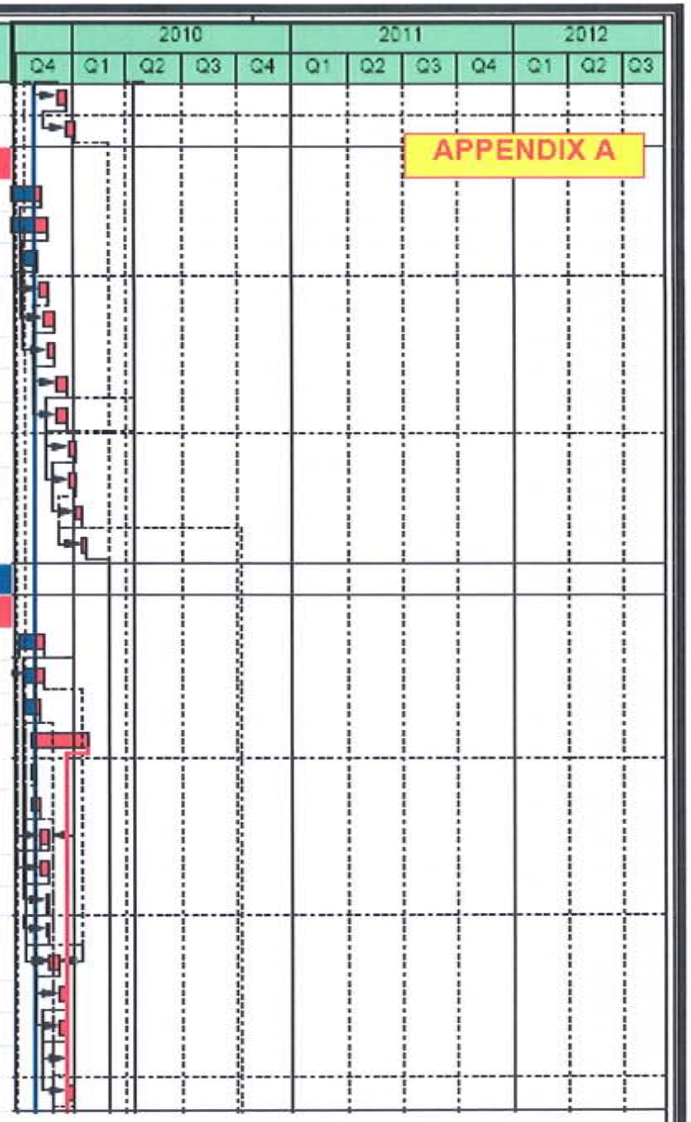
Activity ID	Activity Name	Orig. Dur.	Start	Finish
179	Final Fact Sheets for Design Exceptions	11	08-Dec-09	23-Dec-09
180	Final Fact Sheets Submittal and Review	11	23-Dec-09	07-Jan-10
Structural and Geotechnical		**79**	**25-Sep-09 A**	**21-Jan-10**
188	Geotechnical Field Work (Boring)	47	25-Sep-09 A	12-Nov-09
195	Draft Foundation Report (POC)	55	25-Sep-09 A	19-Nov-09
202	65% Special Sign Design	11	15-Oct-09 A	06-Nov-09
203	65% Special Sign Design Submittal and Review - Caltrans, M...	11	09-Nov-09	24-Nov-09
189	Geotechnical Lab Work (Boring)	15	13-Nov-09	03-Dec-09
196	CT Review - Draft Foundation Report	10	20-Nov-09	03-Dec-09
192	Draft Final GDRs for I-10 and I-110	15	04-Dec-09	24-Dec-09
197	Draft Final Foundation Report (POC)	15	04-Dec-09	24-Dec-09
193	CT Review - Draft Final GDRs for I-10 & I-110	10	25-Dec-09	07-Jan-10
198	CT Review - Draft Final Foundation Report	10	25-Dec-09	07-Jan-10
194	Final GDRs for I-10 and I-110	5	08-Jan-10	14-Jan-10
199	Final Foundation Report (POC)	5	15-Jan-10	21-Jan-10
Draft DBOM RFP		**73**	**05-Oct-09 A**	**29-Jan-10**
Hot Lanes (I-10 and I-110)		**73**	**05-Oct-09 A**	**29-Jan-10**
92	Prepare Civil SOW (PB)	25	05-Oct-09 A	13-Nov-09
101	Evaluation Criteria (PB Recommendation)	11	12-Oct-09 A	13-Nov-09
96	Prepare Special Provisions (Tech)	17	15-Oct-09 A	09-Nov-09
89	Request DBOM Approval Metro Board	69	23-Oct-09 A	27-Jan-10
97	Prepare Schedule	10	23-Oct-09 A	30-Oct-09
98	Compile CT Special Provisions (Tech)	17	23-Oct-09 A	09-Nov-09
99	Pricing Sheets (Civil) PB	10	09-Nov-09	23-Nov-09
160	Pricing Sheets (System Integration) PB	10	09-Nov-09	23-Nov-09
95	Prepare RFP Terms & Cond. Using Metro/CT/FHWA Clauses...	6	16-Nov-09	23-Nov-09
115	Prepare RFP Boiler Plate (Metro)	6	16-Nov-09	23-Nov-09
104	Draft DBOM RFP (Metro)	10	23-Nov-09	07-Dec-09
105	Caltrans/Metro review of RFP	10	07-Dec-09	21-Dec-09
184	RFP Industry Review/Feedback	10	07-Dec-09	21-Dec-09
103	Hold Constructibility Meeting (Metro)	1	21-Dec-09	22-Dec-09
116	Incorporate CT/Metro Comments in SOW (Final PB Activity)	10	21-Dec-09	04-Jan-10



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Activity ID	Activity Name	Orig. Dur.	Start	Finish
106	Final DBOM RFP (Metro)	10	08-Jan-10	21-Jan-10
119	Metro Board Approval of DBOM Contract	1	28-Jan-10	28-Jan-10
107	DBOM RFP Ready for Advertisement	0	29-Jan-10	
DBOM Contract Procurement		**201**	**01-Feb-10**	**16-Nov-10**
Advertisement Process		**79**	**01-Feb-10**	**21-May-10**
120	Advertise DBOM RFP	1	01-Feb-10	01-Feb-10
110	Preproposal conference	1	16-Feb-10	16-Feb-10
111	Written response to preproposal conference	1	23-Feb-10	23-Feb-10
112	Written Questions from Bidders	56	24-Feb-10	12-May-10
113	Responses to written questions	56	03-Mar-10	19-May-10
114	Final addendum	0		21-May-10
Proposal Preparation & Evaluation Process		**200**	**02-Feb-10**	**16-Nov-10**
117	Bidders prepare proposals	94	02-Feb-10	11-Jun-10
118	Evaluate & Rank Proposals for Competitive Range	10	14-Jun-10	25-Jun-10
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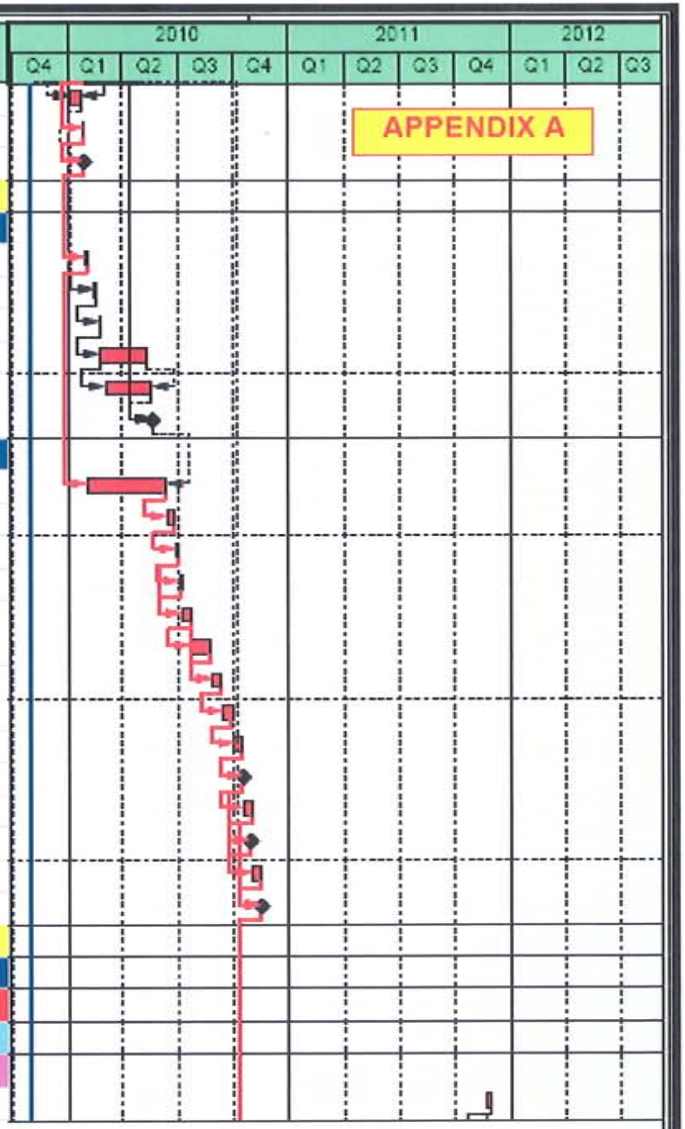
158	Oral Interview	3	05-Jul-10	07-Jul-10
218	Request for Clarifications	10	08-Jul-10	21-Jul-10
368	Negotiate with Proposers in Competitive Range	25	22-Jul-10	25-Aug-10
258	Best Value Final Evaluation	12	26-Aug-10	10-Sep-10
378	Draft and Issue Board Report	14	13-Sep-10	30-Sep-10*
388	Prepare Notice of Intent to Award	10	01-Oct-10	14-Oct-10
368	Notice of Intent to Award	0		15-Oct-10*
204	Protest Period	11	18-Oct-10	01-Nov-10
123	Metro Board Approves Contract Award	0		28-Oct-10*
494	GC Paperwork/Comform Contract	10	02-Nov-10	15-Nov-10
124	Issue NTP	0	16-Nov-10	
Civil Construction		**50**	**21-Nov-11**	**06-Feb-12**
I-10 Corridor		**50**	**21-Nov-11**	**06-Feb-12**
I-10 HOT Lanes		**50**	**21-Nov-11**	**06-Feb-12**
New Civil Work East Bound		**50**	**21-Nov-11**	**06-Feb-12**
Location 8		**50**	**21-Nov-11**	**06-Feb-12**
1677	Develop Traffic Maintenance Plan (Foundation)	6	21-Nov-11	28-Nov-11



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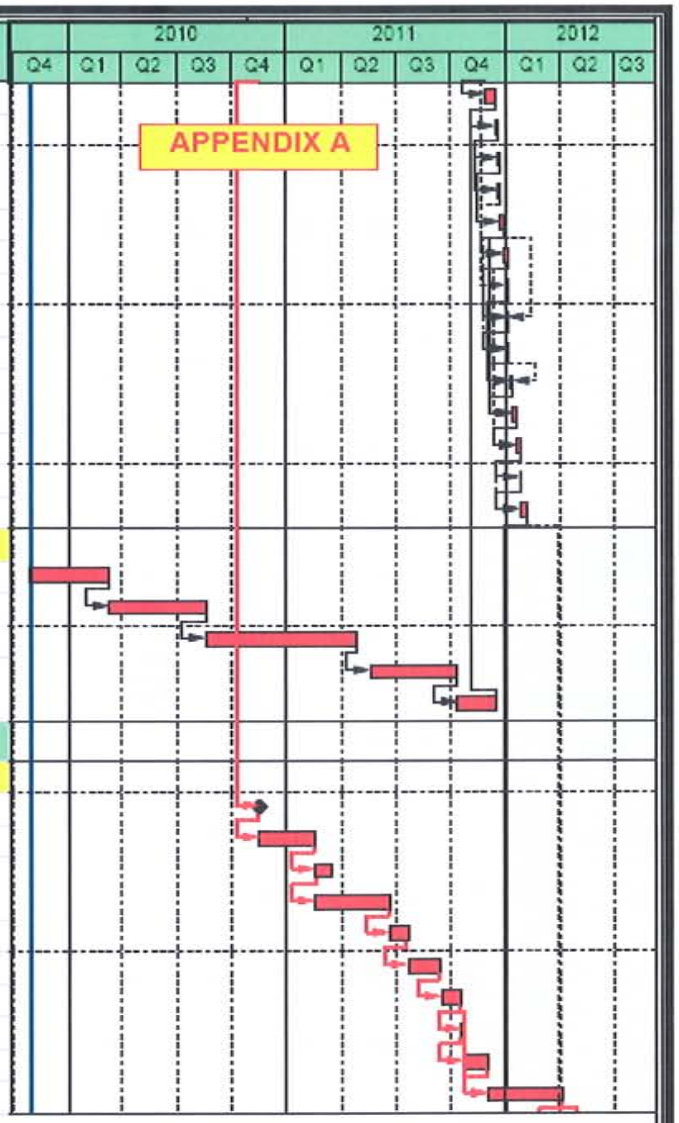
Activity ID	Activity Name	Orig. Dur.	Start	Finish
1687	Traffic Maintenance Plan Approved	11	28-Nov-11	13-Dec-11
1697	Single Lane Closure - Set Temp Barriers	5	14-Dec-11	20-Dec-11
1707	Drill Pole Foundation/Utility Conduits	3	20-Dec-11	23-Dec-11
1717	Horizontal Boring and Installation of Conduits	3	20-Dec-11	23-Dec-11
1856	Sign-Post Foundation - FRP Concrete	3	23-Dec-11	29-Dec-11
1727	Pull Power/Comm Cables & Test	2	29-Dec-11	02-Jan-12
1737	Develop Traffic Maintanance Plan (Signs)	6	30-Dec-11	06-Jan-12
1866	Restripe Affected Areas	2	02-Jan-12	04-Jan-12
1876	Remove Temporary Barrier (Foundation)	2	04-Jan-12	06-Jan-12
1886	Double Lane Closure - Set Temp Barriers	5	09-Jan-12	13-Jan-12
1896	Erect Sign-Pole/Lattice	3	13-Jan-12	18-Jan-12
1906	Install Sign/Reader/CCTV and Connect	2	18-Jan-12	23-Jan-12
1916	Remove Temporary Barriers (Sign Installation)	2	23-Jan-12	25-Jan-12
1926	VES/Reader Installation Test	8	25-Jan-12	06-Feb-12
I-10 Rehab Construction (CALTRANS)		534	26-Oct-09 A	13-Dec-11
451	Buffer Lane, Area 2, WB, Stage 1.1	98	26-Oct-09 A	09-Mar-10
452	HOV/Bus Lane, Area 2, WB, Stage 1.2	115	10-Mar-10	17-Aug-10
453	Outside Shoulder, Area 2, WB, Stage 2	180	18-Aug-10	26-Apr-11
449	HOV/Bus Lane, Area 2, EB, Stage 3	105	18-May-11	11-Oct-11
499	Rehab Contractor Schedule Delay	45	12-Oct-11	13-Dec-11
Tolling Implementation		429	16-Nov-10	01-Aug-12
HOT Lanes (I-10 and I-110)		429	16-Nov-10	01-Aug-12
127	Design and Deployment Begin - SI	0	16-Nov-10	
128	Initial Design - SI	66	16-Nov-10	15-Feb-11
129	Tolling Preliminary Design Review - SI	20	16-Feb-11	15-Mar-11
130	Finish Design- SI	90	16-Feb-11	21-Jun-11
131	Tolling Critical Design Review	20	22-Jun-11	19-Jul-11
132	Make required changes - SI	40	20-Jul-11	13-Sep-11
141	Factory Acceptance Test Toll Operation Service Center	25	14-Sep-11	18-Oct-11
143	Order Production TOSC Equipment	1	19-Oct-11	19-Oct-11
144	Receipt of Production TOSC Equipment	30	20-Oct-11	30-Nov-11
145	Setup CSC	90	01-Dec-11	04-Apr-12



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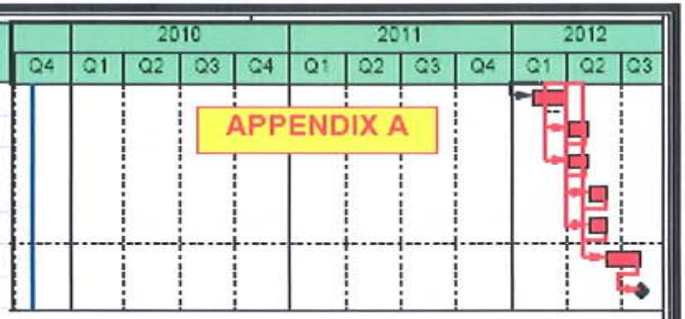
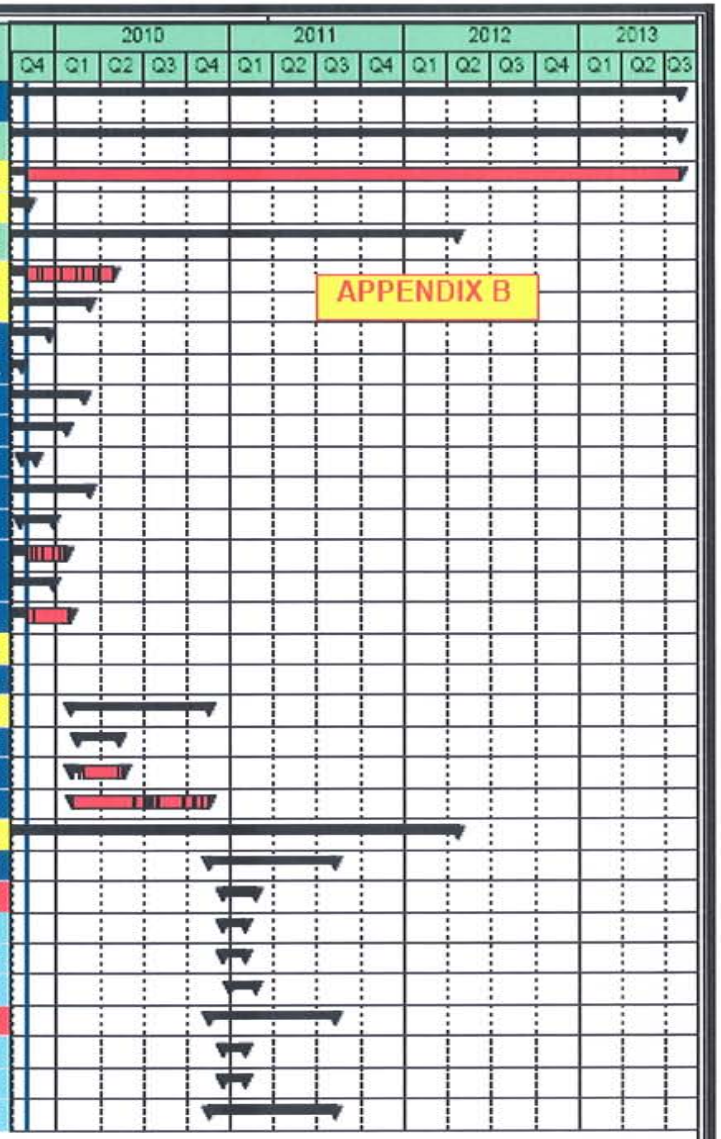
Activity ID	Activity Name	Orig. Dur.	Start	Finish
315	Install/Connect/Test Fiber to CSC	40	08-Feb-12	02-Apr-12
151	Installation Test of equipment on I-110 Northbound	22	05-Apr-12	04-May-12
152	Installation Test of equipment on I-110 Southbound	22	05-Apr-12	04-May-12
153	Installation Test of equipment on I-10 Eastbound	22	07-May-12	05-Jun-12
154	installation Test of equipment on I-10 Westbound	22	07-May-12	05-Jun-12
155	System Test	40	06-Jun-12	31-Jul-12
156	Open to Tolling	0		01-Aug-12*



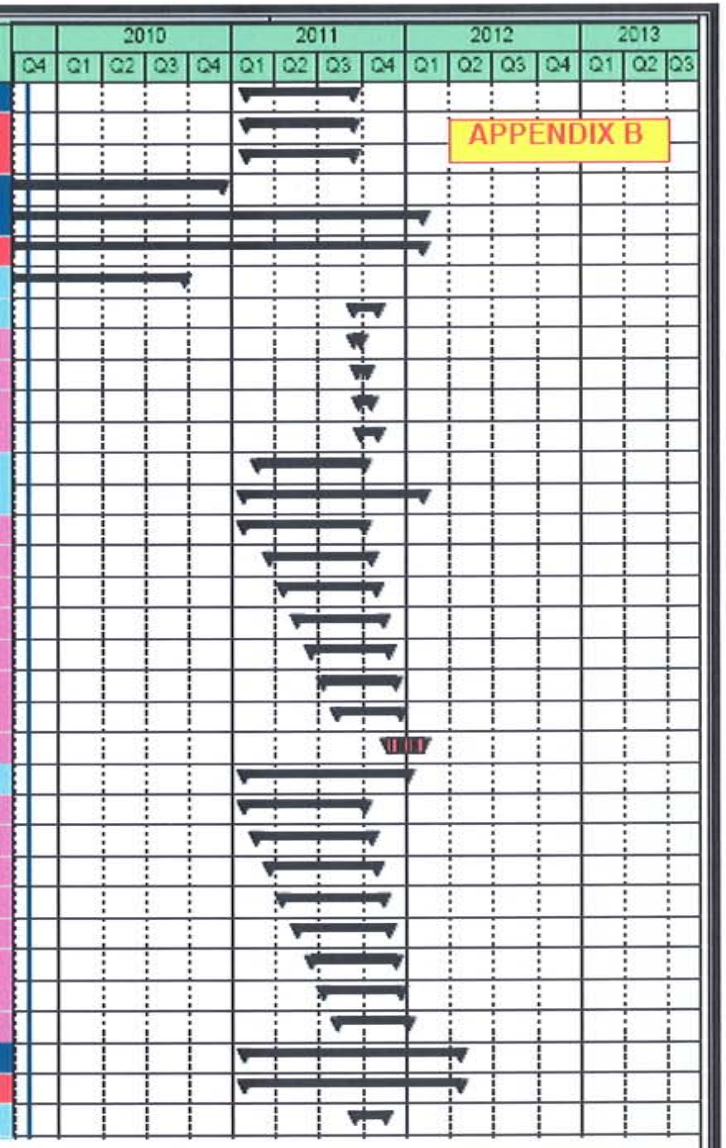
Project ID: HLane 10.30 BAFO	Critical Path 30-Oct-09 Update	Page 6 of 6

Activity ID	Activity Name	Orig Dur.	Start	Finish
	Congestion Reduction Demonstration Proj...	1762	04-Apr-06 A	01-Aug-13
	Community Outreach	1037	08-Jun-09 A	01-Aug-13
	Outreach Activities	1037	08-Jun-09 A	01-Aug-13
	Market Research	96	08-Jun-09 A	03-Nov-09
	I-10 & I-110 HOT Lanes	767	03-Apr-09 A	23-Apr-12
	EIR Preparation and Approval	226	01-Jun-09 A	30-Apr-10
	Design	235	03-Apr-09 A	11-Mar-10
	Concept Of Operations	59	03-Aug-09 A	17-Dec-09
	Travel Modeling	78	08-Jun-09 A	22-Oct-09 A
	Project Report	182	08-Jun-09 A	01-Mar-10
	Executive Summary	157	08-Jun-09 A	22-Jan-10
	I-10 Right of Way Activities	20	22-Oct-09 A	20-Nov-09
	Utility Coordination	190	08-Jun-09 A	11-Mar-10
	Systems Engineering Management	47	15-Oct-09 A	25-Dec-09
	HOT Lanes Project (I-10 and I-110)	201	03-Apr-09 A	21-Jan-10
	I-110 Corridor Pedestrian Crossing Bridge	124	29-Jun-09 A	25-Dec-09
	Draft DBOM RFP	91	24-Sep-09 A	29-Jan-10
	Toll System Solicitation Planning	68	27-Apr-09 A	31-Jul-09 A
	Prepare System Integrator Draft Scope, Ts and Cs, and Busi...	68	27-Apr-09 A	31-Jul-09 A
	DBOM Contract Procurement	201	01-Feb-10	16-Nov-10
	Funding	60	15-Feb-10	11-May-10
	Advertisement Process	79	01-Feb-10	21-May-10
	Proposal Preparation & Evaluation Process	200	02-Feb-10	16-Nov-10
	Civil Construction	625	23-Aug-09 A	23-Apr-12
	Design by DBOM Contractor	182	16-Nov-10	09-Aug-11
	I-10 Corridor	46	14-Dec-10	21-Feb-11
	Foundation Design Package	33	14-Dec-10	01-Feb-11
	Signs Design Packge	33	14-Dec-10	01-Feb-11
	Barrier Drainage Relocation Package	34	31-Dec-10	21-Feb-11
	I-110 Corridor	182	16-Nov-10	09-Aug-11
	Foundation Design Package	33	14-Dec-10	01-Feb-11
	Signs Design Packge	33	14-Dec-10	01-Feb-11
	Pedestrian Crossing @ Adams	182	16-Nov-10	09-Aug-11



Project ID: HLane 10.30 BAFO | **Summary** 30-Oct-09 Update | Page 1 of 4

Activity ID	Activity Name	Orig. Dur.	Start	Finish
	Procurement By DBOM Contractor	157	02-Feb-11	14-Sep-11
	New Sign Post Procurement	157	02-Feb-11	14-Sep-11
	New Signs Procurement	157	02-Feb-11	14-Sep-11
	Power Service	284	23-Aug-09 A	13-Dec-10
	I-10 Corridor	570	25-Sep-09 A	06-Feb-12
	I-10 HOT Lanes	570	25-Sep-09 A	06-Feb-12
	Change Order to I-10 rehab Contractor	230	25-Sep-09 A	23-Sep-10
	Bridge Mounted Sign Structures	35	16-Sep-11	02-Nov-11
	Location 1	11	16-Sep-11	29-Sep-11
	Location 2	16	20-Sep-11	11-Oct-11
	Location 3	21	23-Sep-11	21-Oct-11
	Location 4	26	28-Sep-11	02-Nov-11
	Barrier Relocation & Drainage Medification	160	21-Feb-11	06-Oct-11
	New Civil Work East Bound	259	25-Jan-11	06-Feb-12
	Location 1	178	25-Jan-11	06-Oct-11
	Location 2	150	18-Mar-11	19-Oct-11
	Location 3	139	18-Apr-11	01-Nov-11
	Location 4	126	16-May-11	14-Nov-11
	Location 5	114	13-Jun-11	25-Nov-11
	Location 6	104	11-Jul-11	08-Dec-11
	Location 7	93	09-Aug-11	21-Dec-11
	Location 8	50	21-Nov-11	06-Feb-12
	New Civil Work West Bound	236	25-Jan-11	03-Jan-12
	Location 1	178	25-Jan-11	06-Oct-11
	Location 2	169	18-Feb-11	19-Oct-11
	Location 3	159	18-Mar-11	01-Nov-11
	Location 4	147	15-Apr-11	14-Nov-11
	Location 5	134	16-May-11	25-Nov-11
	Location 6	123	13-Jun-11	08-Dec-11
	Location 7	113	11-Jul-11	21-Dec-11
	Location 8	100	08-Aug-11	03-Jan-12
	I-110 Corridor	313	25-Jan-11	23-Apr-12
	I-110 HOT Lanes	313	25-Jan-11	23-Apr-12
	Bridge Mounted Sign Structures	46	16-Sep-11	16-Nov-11



Project ID: HLane 10.30 BAFO

Summary

30-Oct-09 Update

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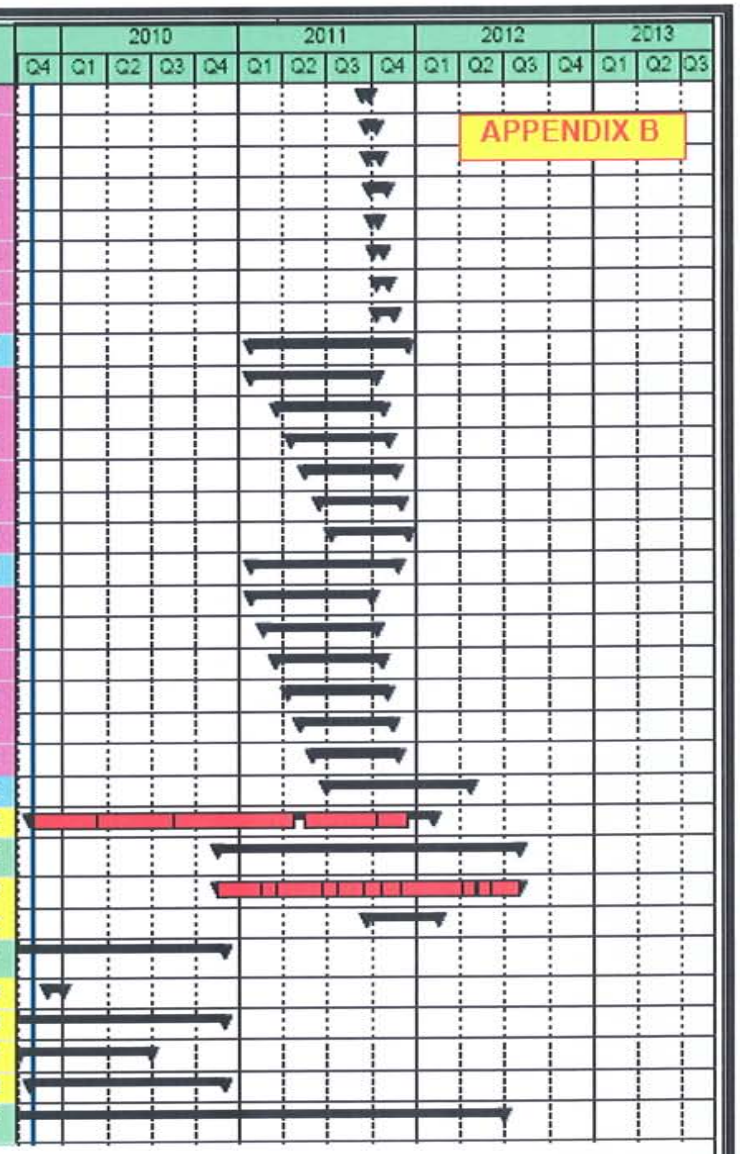
Activity ID	Activity Name	Orig. Dur.	Start	Finish
	Location 1	11	15-Sep-11	29-Sep-11
	Location 2	16	20-Sep-11	11-Oct-11
	Location 3	21	23-Sep-11	21-Oct-11
	Location 4	26	28-Sep-11	02-Nov-11
	Location 5	11	03-Oct-11	17-Oct-11
	Location 6	16	06-Oct-11	27-Oct-11
	Location 7	21	11-Oct-11	08-Nov-11
	Location 8	25	14-Oct-11	18-Nov-11
	New Civil Work North Bound	225	25-Jan-11	15-Dec-11
	Location 1	183	25-Jan-11	13-Oct-11
	Location 2	154	18-Mar-11	26-Oct-11
	Location 3	143	18-Apr-11	08-Nov-11
	Location 4	131	16-May-11	21-Nov-11
	Location 5	119	13-Jun-11	02-Dec-11
	Location 6	108	11-Jul-11	15-Dec-11
	New Civil Work South Bound	212	25-Jan-11	25-Nov-11
	Location 1	175	25-Jan-11	03-Oct-11
	Location 2	165	18-Feb-11	13-Oct-11
	Location 3	156	16-Mar-11	25-Oct-11
	Location 4	146	11-Apr-11	03-Nov-11
	Location 5	135	05-May-11	15-Nov-11
	Location 6	124	31-May-11	25-Nov-11
	Pedestrian Crossing @ Adams	204	30-Jun-11	23-Apr-12
	I-10 Rehab Construction (CALTRANS)	572	23-Oct-09 A	07-Feb-12
	Tolling Implementation	429	16-Nov-10	01-Aug-12
	HOT Lanes (I-10 and I-110)	429	16-Nov-10	01-Aug-12
	Test and Delivery of Transponders	100	21-Sep-11	16-Feb-12
	Transit Service Improvements (METRO)	291	16-Sep-09 A	30-Nov-10
	Procure New Buses for Metro	22	01-Dec-09	31-Dec-09
	Procure New Buses for Foothill Transit	275	16-Sep-09 A	30-Nov-10
	Procure New Buses for Gardena	187	01-Oct-09 A	30-Jun-10
	Procure New Buses for Torrence	275	23-Oct-09 A	30-Nov-10
	Transit Facility Improvements (METRO)	1436	04-Apr-06 A	29-Jun-12



Project ID: HLane 10.30 BAFO

Summary

30-Oct-09 Update

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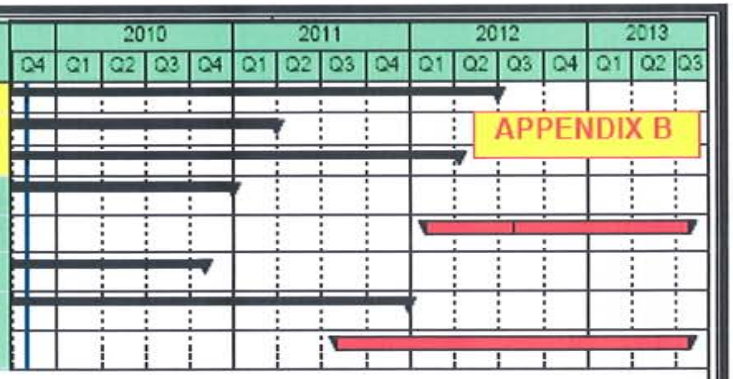
Activity ID	Activity Name	Orig. Dur.	Start	Finish
	Union Division - New Construction	1486	04-Apr-06 A	29-Jun-12
	Harbor Transitway Improvements CDRP	543	02-Feb-09 A	30-Mar-11
	El Monte Transit Ctr/Patsouras Plaza	803	02-Feb-09 A	11-Apr-12
	Metrolink Pomona Station Improvements	296	01-May-09 A	31-Dec-10
	Vanpools	382	01-Feb-12	31-Jul-13
	Transit Signal Priority in Downtown (LADOT)	257	15-Sep-09 A	01-Nov-10
	ExpressPark (LADOT)	732	02-Feb-09 A	29-Dec-11
	CRD Data Collection	607	01-Aug-11	31-Jul-13



APPENDIX B

Project ID: HLane 10.30 BAFO	**Summary** 30-Oct-09 Update	Page 4 of 4

ATTACHMENT C

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

General Instructions

☑ New Project	☐ Amendment (Existing Project)	Date:	08/31/09

Caltrans District	EA	PPNO	MPO ID	TCRP No.
07				

County	Route/Corridor	Project Sponsor/Lead Agency	MPO	Element
LA	10/110	LACMTA	SCAG	CO

Project Title

ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

PM Bk	PM Ahd	Project Mgr/Contact	Phone	E-mail Address
17.1/10.0	32.6/22.0	Stephanie Wiggins	213-922-1023	wigginss@metro.net

Location, Project Limits, Description, Scope of Work, Legislative Description

The project will convert existing HOV lanes into High Occupancy Toll (HOT) lanes on the I-10 Freeway between Alameda Street and the I-605 and on the I-110 Freeway between Adams Blvd and Artesia Transit Center

Component	Implementing Agency	AB 3090	Letter of No Prejudice
PA&ED	Caltrans	☐	☐
PS&E	LACMTA	☐	☐
Right of Way	N/A	☐	☐
Design/Build Construction	LACMTA	☐	☐

Legislative Districts

Assembly:	45, 46, 48, 49, 51, 52	**Senate:**	22, 24, 25, 26, 28, 32
Congressional:	31, 32, 34, 35, 38		

Purpose and Need

Both the I-10 and the I-110 experience traffic delays caused by heavy congestion. The project will add an additional HOT lane in each direction on I-10 and provide roadway improvements at Adams Boulevard on the I-110.

Project Benefits

The conversion of the HOV lanes to HOT lanes on these 2 freeways will reduce congestion, decrease greenhouse gas emissions, increase travel time savings and provide better trip reliability.

Project Milestone			Date
Project Study Report Approved			**11/01/08**
Begin Environmental (PA&ED) Phase			06/01/09
Circulate Draft Environmental Document	**Document Type**	EIR	11/01/09
Draft Project Report			09/11/09
End Environmental Phase (PA&ED Milestone)			02/01/10
Begin Preliminary Engineering **(Design-Build Approach)**			02/01/10
End Preliminary Engineering **(Design-Build Approach)**			07/01/10
Begin Right of Way Phase			N/A
End Right of Way Phase			N/A
Begin Design/Build Construction Phase **(Design-Build Approach)**			03/01/10
End Design/Build Construction Phase (Open to Traffic) **(Design-Build Approach)**			12/31/10
Begin Closeout Phase			01/31/11
End Closeout Phase (Closeout Report)			12/31/11

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			

Project Title: ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

Existing Total Project Cost									Implementing Agency
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B									
TOTAL									
Proposed Total Project Cost									
E&P (PA&ED)			800					800	
PS&E			4,000					4,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B			64,500					64,500	
TOTAL			69,300					69,300	

Fund No. 1:	SLPP (in 000's)								Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									State
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B									
TOTAL									
Proposed Funding									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B			20,000					20,000	
TOTAL			20,000					20,000	

Fund No. 2:	Prop C 25% (in 000's)								Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									LACMTA
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B									
TOTAL									
Proposed Funding									Notes
E&P (PA&ED)			92					92	This includes the 50% local match for the SLPP funds as well as the 11.47% match for the CMAQ funds
PS&E			4,000					4,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B			20,000					20,000	
TOTAL			24,092					24,092	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			

Project Title: ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

Fund No. 3: CMAQ (in 000's)

Program Code

Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									FHWA
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)			708					708	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON - D/B			24,500					24,500	
TOTAL			25,208					25,208	

Fund No. 4:

Program Code

Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 5:

Program Code

Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			
Project Title:	ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes			

Fund No. 6:									**Program Code**
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 7:									**Program Code**
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 8:									**Program Code**
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 9:		**Program Code**

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			

Project Title: ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 10:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 11:									Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 12:		Program Code
Existing Funding		

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			
Project Title:	ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes			

Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 13:									**Program Code**
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 14:									**Program Code**
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding									**Notes**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			

Project Title: ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

Existing Total Project Cost									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Implementing Agency
E&P (PA&ED)									Caltrans
PS&E									LACMTA
R/W SUP (CT)									
CON SUP (CT)									
R/W									N/A
CON									LACMTA
TOTAL									
Net Change									
E&P (PA&ED)			800					800	
PS&E			4,000					4,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			64,500					64,500	
TOTAL			69,300					69,300	
Proposed New Result									
E&P (PA&ED)			800					800	
PS&E			4,000					4,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			64,500					64,500	
TOTAL			69,300					69,300	

Fund No. 1:	SLPP (in 000's)								Program Code
Existing Funding									
Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Change									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			20,000					20,000	
TOTAL			20,000					20,000	
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			20,000					20,000	
TOTAL			20,000					20,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 3/08)

Date: 08/31/09

County	CT District	PPNO	TCRP Project No.	EA
LA	07			

Project Title: ExpressLanes - Conversion of I-10 and I-110 HOV Lanes to HOT Lanes

Fund No. 2: Prop C 25% (in 000's)

Program Code

Funding Agency

Notes

Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total
Existing Funding								
E&P (PA&ED)								
PS&E								
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON								
TOTAL								
Change								
E&P (PA&ED)			92					92
PS&E			4,000					4,000
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON			20,000					20,000
TOTAL			24,092					24,092
Proposed Funding								
E&P (PA&ED)			92					92
PS&E			4,000					4,000
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON			20,000					20,000
TOTAL			24,092					24,092

Fund No. 3: CMAQ (in 000's)

Program Code

Funding Agency

Notes

Component	Prior	08/09	09/10	10/11	11/12	12/13	13/14+	Total
Existing Funding								
E&P (PA&ED)								
PS&E								
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON								
TOTAL								
Change								
E&P (PA&ED)			708					708
PS&E								
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON			24,500					24,500
TOTAL			25,208					25,208
Proposed Funding								
E&P (PA&ED)			708					708
PS&E								
R/W SUP (CT)								
CON SUP (CT)								
R/W								
CON			24,500					24,500
TOTAL			25,208					25,208

ATTACHMENT D

7

Metro

Metropolitan Transportation Authority

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REVISION #3
REGULAR BOARD MEETING
SEPTEMBER 25, 2008

SUBJECT: PROGRAMMING OF FUNDS FOR LOS ANGELES REGION CONGESTION REDUCTION DEMONSTRATION INITIATIVE PROJECTS

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATIONS

A. Approve programming of $290.6 million to support the implementation of projects listed in Attachment A, consistent with the Board-approved Memorandum of Understanding (MOU) with the United States Department of Transportation (USDOT) for the Los Angeles Region Congestion Reduction Demonstration Initiative; and,

B. Authorize the Chief Executive Officer (CEO) to negotiate and execute funding agreements with Caltrans and local agencies for the implementation of their projects under the Initiative.

ISSUE

To implement projects under the Los Angeles Region Congestion Reduction Demonstration Initiative, the Los Angeles County Metropolitan Transportation Authority (LACMTA) must program a total of $290.6 million. The projects include transit improvements and the conversion of high occupancy vehicle (HOV) lanes on Interstate 10 and Interstate 110 to high occupancy toll (HOT) lanes.

POLICY IMPLICATIONS

Our recommendations are consistent with the June 2007 Board directive to develop an operating plan for congestion pricing alternatives that could be implemented in Los Angeles County by the year 2010. Our recommendations also are consistent with the Board-approved execution of the MOU with the USDOT, as directed in July 2008.

OPTIONS

The Board could elect to defer or not approve our recommendations. We do not recommend such options because without these actions, we would not be able to access the $210.6 million USDOT grant and we would risk losing these funds. Under the terms and

conditions of the MOU with the USDOT, we cannot draw down any of the $210.6 million until we certify to the USDOT that we have made funding available in an amount sufficient to pay for the HOV-to-HOT lane conversions.

FINANCIAL IMPACT

Funding for the recommended programming action is available from the $210.6 million USDOT grant and $80 million in state Proposition 1B Transit Modernization funding that the Board has not yet programmed. If the recommended programming is approved, the funding to complete projects included in the Congestion Reduction Demonstration Initiative will be included in the appropriate fiscal year budgets. As this is a multi-year program, the Chief Planning Officer and individual project managers for each activity will be responsible for budgeting the costs in future years.

BACKGROUND

On April 24, 2008 the Board authorized the Chair and the CEO to execute a Congestion Reduction Demonstration Agreement with the USDOT. On July 24, 2008, the Board authorized the CEO to execute an amendment to the MOU with the USDOT, changing the priority for implementing HOT lanes on the Interstate 10 and Interstate 210 to the Interstate 10 and Interstate 110 instead. The amended and restated MOU also reflected a revised federal allocation amount of $210.6 million.

Congestion Reduction Demonstration Initiative Projects

The projects listed in Attachment A of this report are those that we are recommending to receive $290.6 million in programming with Board approval. We have placed projects on this list after consulting with Caltrans, the City of Los Angeles Department of Transportation, affected municipal transit operators, LACMTA Operations, and other regional partners as to how we can best implement and support the Los Angeles Region Congestion Reduction Demonstration Initiative.

Most of the projects shown in Attachment A already appear in our USDOT application for the Congestion Reduction Demonstration Initiative, as well as in the MOU with the USDOT. However, funding recommended for individual projects may be different from that initially identified in the original application to the USDOT and in the MOU. The differences are due to more detailed analyses, additional input from our regional partners regarding transit service needs and required highway improvements, and the technical assistance that our consultants are now providing. In particular, working with Caltrans and our consultants, we have been able to obtain enough savings from original HOV-to-HOT conversion estimates to accommodate funding for additional projects that would help to ensure success for the region's Congestion Reduction Demonstration Initiative. These savings also allowed us to develop a funding reserve for the operation, maintenance, and enforcement of the HOT lanes, as well as a separate funding allotment for the new and expanded transit services that LACMTA and the municipal transit operators will be expected to provide.

We believe that the projects listed in Attachment A support a multimodal and integrated approach for managing traffic congestion in our region. These projects include transit and

highway components, with improved rail and bus facilities and services, parking infrastructure and management, transit signal priority, and amenities for non-motorized transport. Projects also include enhancements to park-and-ride facilities, as well as improvements for access, capacity, and security at transit centers, bus stops, and rail stations along Interstate 10 and Interstate 110. The purchase of 57 buses for LACMTA and municipal transit operators to provide new and enhanced transit service along the HOT lane corridors is part of our programming recommendation. Based on discussions with LACMTA Operations and affected municipal transit operators, this bus purchase with corresponding service expansions and improvements, will provide an adequate travel alternative to driving and would encourage mode shifts to transit.

We also anticipate that several of the Attachment A projects recommended for programming will help to address a concern that the Board has expressed regarding a potential bottleneck in the City of Los Angeles at the northern terminus of the Harbor Transitway along Interstate 110 near Adams Boulevard. The projects are expected to provide additional capacity at the northbound off-ramp on Adams Boulevard through street widening and the application of transit signal priority at major intersections, which will improve transit and passenger vehicle circulation. Also of note is a project for Interstate 10 that would expand the capacity of the HOV lane by re-striping and making buffer changes that could result in accommodating an additional lane in each direction.

Funding the Initiative's Projects

The USDOT has provided our Initiative with $210.6 million of Federal Transit Act Section 5309 Discretionary funds that can be used only for bus and bus facilities projects. Our Initiative includes activities that are ineligible for the funding that the USDOT has provided. In particular, the HOV-to-HOT lane conversions cannot use the Section 5309 funding directly. Therefore, we are pursuing a programming strategy that involves a series of funding transfers or exchanges that will make eligible highway funding available for the Initiative's HOV-to-HOT lane conversions and eligible transit funding available for the transit elements supporting the Initiative.

Our programming strategy includes a funding plan that will use the $210.6 million of USDOT monies on bus and bus facilities projects that presently are financed with less restrictive sources that may include federal Congestion Mitigation and Air Quality Improvement (CMAQ) funds, federal Surface Transportation Program (STP), local Proposition C sales tax revenues, lease revenues, parking-generated revenues, etc. Once we have released the less restrictive funding using the USDOT monies, we will transfer the appropriate and eligible amounts needed to fund the congestion pricing conversion projects and other support activities without delaying or affecting previously funded activities. We already have approached both the USDOT and the Federal Transit Administration (FTA) and they have concurred with our approach.

One such application of our strategy already has involved our Federal Transit Act Section 5307 Urban Formula funds. We typically use our annual allocation of Section 5307 funds (about $140 million per year) to finance bus preventive maintenance activities. Preventive maintenance is an eligible capital activity under the bus and bus facilities program. With final concurrence from the FTA and the Southern California Association of Governments,

we funded our bus preventive maintenance activities with the Section 5309 monies provided through the MOU with USDOT. Consequently, Section 5307 funds became available for use on other eligible activities in our Initiative such as bus and bus facilities projects, rail facilities improvements, security, and even the HOV-to-HOT lane conversion activities. Use of the available Section 5307 funding for HOV-to-HOT lane conversion activities will involve the extra step of transferring the funding to a federal highway program (such as CMAQ or STP) and then using the then-converted highway funds for our Initiative's lane conversions. Such a transfer is allowable under existing federal legislation that permits the movement of Section 5307 funds to the highway program. As we proceed with our strategy, we will continue working with the FTA, the Federal Highway Administration (FHWA), and our regional partners to ensure that the appropriate amount of funding released through transfers or exchanges will be used for only eligible activities or projects included in our Initiative.

NEXT STEPS

With Board approval, we will finalize funding agreements with Caltrans and local agencies for the implementation of their projects under the Initiative. We also will provide the certifications and assurances that the USDOT, FTA and FHWA will require of us before allowing us to access any federal funding used for activities or projects in our Initiative.

ATTACHMENT

A. Congestion Reduction Demonstration Initiative Projects

Prepared by: Ashad Hamideh, Ph.D., Transportation Planning Manager
Regional Program Management

Carol Inge
Chief Planning Officer

Roger Moliere
Chief, Real Property Management
and Development

Roger Snoble
Chief Executive Officer

REVISED #3
ATTACHMENT A

Los Angeles County Metropolitan Transportation Authority

Congestion Reduction Demonstration Initiative Projects

($ in millions)

Project Description	Total
1. HOT lanes on I-10 from Alameda St./Union Station to I-605 and on I-110 from 182nd St./Artesia Transit Center to Adams Blvd.	**57.2** ~~60.2~~
2. Expand capacity of the I-10 HOT~~V~~ lane (restriping and buffer changes)	3.2
3. I-110 Adams-Figueroa Flyover - Project Study Report	2.0
4. Expand capacity of the I-110 off-ramp at Adams Blvd., including street widening	**4.0** ~~1.0~~
5. Transit signal priority in the City of Los Angeles	1.0
6. 28 buses for the I-10 El Monte Busway	20.9
7. 29 buses for the I-110 Harbor Transitway	20.0
8. Platforms and parking at the Metrolink Pomona Station[1]	5.6
9. El Monte Transit Center expansion & El Monte Busway improvements, including bike lockers and access to Patsaouras Transit Plaza[2]	55.3
10. Ticket vending machines at El Monte Busway stations	0.2
11. City of Los Angeles Intelligent Parking Management Program[3]	15.0
12. Artesia Transit Center bike lockers and law enforcement substation	0.4
13. Harbor Transitway park & ride improvements, including signage, lighting, security, ticket vending machines, and new bus stops under Slauson & Manchester stations for Lines 108/115[4]	**2.5** ~~1.2~~
14. Union Division[5]	80.0
15. Project management	2.4
16. I-10/ I-110 HOT lane operations (O&M, including enforcement and new transit services)[6]	**20.9** ~~22.2~~
GRAND TOTAL	**$290.6**

Funding Sources ($ in millions)[7]	Total
1. Proposition 1B[8]	80.0
2. Congestion Reduction Demonstration (5309, 5307, CMAQ, Prop C, etc.)	210.6
GRAND TOTAL	**$290.6**

1. Project has additional federal funding of $3.5 million and Proposition C funds of $1.7 million.
2. Project has additional funding of $2.9 million from Call for Projects and $2.0 million from Union Station Gateway.
3. The City of Los Angeles to provide an additional $3.5 million from non-federal funding sources.
4. Includes Carson, Pacific Coast Highway, Harbor/Beacon, Rosecrans, Harbor Green Line, Slauson, Manchester, and Artesia.
5. Project has additional $5.0 million Proposition 1B funding already programmed by the Board.
6. New transit services may include vanpooling activities, subject to available funding.
7. Funding sources may change depending upon eligibility requirements and availability. Some funding sources may be exchanged with others, but total recommended programming amount of $290.6 million will remain the same.
8. All or part of Proposition 1B funds may be used for the Union Division.

Los Angeles County
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REVISION #2
AD HOC CONGESTION PRICING COMMITTEE
SEPTEMBER 16, 2009

SUBJECT: LIFE OF PROJECT BUDGET ADJUSTMENT FOR EXPRESSLANES

ACTION: APPROVE ADJUSTMENT TO LIFE OF PROJECT BUDGET AND AMEND THE FY10 BUDGET

RECOMMENDATION

Authorize the Chief Executive Officer to:

A. Adjust the life-of-project (LOP) budget for the ExpressLanes on I-10 and I-110, Capital Project 210120, in the amount of $34,100,000; and

B. ~~Amend the FY10 budget to transfer $800,000 of expenses and revenues from 405548 to 210120.~~ **Approve the ~~re-programming~~ swap of $20,000,000 in SLPP Funds along with the required local match of $20,000,000 in Prop C 25% Funds from the Caltrans I-5 South Carmenita Interchange project in exchange for $40,000,000 in CMAQ funds from the Congestion Reduction Initiative project; and,**

C. **Amend the FY10 budget to transfer $800,000 of expenses and revenues from 405548 to 210120 and include an additional $14,000,000 of Prop C 25% Funds as the local match for the SLPP Funds.**

RATIONALE

This action will provide for a technical adjustment to the LOP ExpressLanes budget. The adjustment of $34,100,000 results in no net increase to the overall Los Angeles County Congestion Reduction Demonstration (LA CRD) program budget and requires no further financial obligation to MTA. ~~The primary reason for the technical adjustment is the reallocation of~~ **The technical adjustment will reallocate** the Congestion Reduction Demonstration funds to MTA rather than Caltrans ~~in order~~ to facilitate the design-build-operate-maintain procurement for both the toll systems integrator and the civil roadway improvements. Caltrans concurs with this approach. The balance of the **LOP** adjustment is to incorporate the Congestion Reduction funds for MTA Project Management, marketing, and ExpressLane operations that are programmed and

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approved by the Board but not in the initial establishment of the LOP in February of this year.

The re-programming of SLPP/Prop C 25% Funds to the LA CRD project in exchange for CMAQ funds to the I-5 Carmenita project, will allow MTA and Caltrans to obtain the required Design-Build authorization from the State. Caltrans District 7 also concurs with this approach.

BACKGROUND

At its September 2008 meeting, the Board of Directors approved the programming of $290.6 million to implement projects under the LA CRD. The projects include transit improvements and the conversion of the carpool lanes on Interstate 10 and Interstate 110 to high-occupancy-toll (HOT) lanes. Funding for the September 2008 LA CRD programming action was obtained from a $210.6 million grant from the United States Department of Transportation (USDOT), and $80 million in State of California Proposition 1B Transit Modernization funding.

Design-Build authority from the State is required for MTA to proceed with the design-build-operate-maintain procurement of the toll systems integrator and civil roadway improvements. In order to obtain Design-Build authority from the State it is necessary to have State funds programmed to the project. Caltrans has agreed to re-program $20 million of the SLPP Funds and $20 million Prop C 25% Funds programmed to the I-5 Carmenita Interchange project, in exchange for $40 million in CMAQ Funds from the LA CRD project. Once the exchange is approved by the CTC and the FHWA, the programming of the CMAQ funds to the I-5 Carmenita project will have no financial or schedule impact to the project since it already has some CMAQ Funds programmed to it.

As listed in Attachment A of the September 2008 Board Report, several of the LA CRD projects will be managed by MTA. The LA CRD also funds projects managed by other agencies, such as Metrolink improvements, municipal agency bus purchases, and the City of Los Angeles Intelligent Parking Management/ExpressPark project. Initially, the plan anticipated Caltrans management of the expansion of capacity and lane reconfigurations on I-10 and I-110, however, the recommendation is to procure the roadway operational improvements with the toll systems elements. Caltrans will continue to provide design and construction oversight support.

The roadway improvements include:

- Adams Blvd Improvements including adding a right-turn lane on the Adams Blvd off-ramp and widening of Adams Blvd with a pedestrian walkway
- Re-striping I-10 El Monte to add 2nd HOT lane between I-605 and I-710
- Extension of transition lanes for I-110 Harbor Transitway

LA CRD Program Budget ($210.6 M)			
Project	**Agency**	**LOP**	**Amount**
Transit Operations			
41 CNG Buses	Metro	LOP #201059	$28.40 M
16 Buses	Foothill/Gardena/Torrance	N/A	$12.50 M
Operating Subsidy	Metro/Foothill/Gard/Torr	N/A	$14.50 M
Transit Signal Priority	LADOT	N/A	$1.00 M
Vanpool	Metro	N/A	$0.40 M
Subtotal Transit Operations			**$56.80 M**
Transit Facilities			
El Monte Transit Center	Metro	LOP #202286	$45.20 M
Patsaouras Plaza Connector	Metro	LOP #202286	$10.00 M
Harbor Transitway Improvements	Metro	LOP #202287	$2.80 M
Pomona Metrolink Station	SCRRA	N/A	$5.60 M
Bicycle Lockers	Metro	LOP #210115	$0.11 M
Subtotal Transit Facilities			**$63.71 M**
Intelligent Parking Management			
ExpressPark	LADOT	N/A	**$15.00 M**
Toll Technology & Roadway Improvements			
PSR Adams/Figueroa Flyover	Caltrans	N/A	$2.00 M
Environmental Doc and Oversight	Caltrans	N/A	$8.80 M
I-10/I-110 HOV Conversion	Metro	LOP #210120	$29.90 M
TVMs	Metro	LOP #210120	$0.20 M
Project Management	Metro	LOP #210120	$2.40M
Roadway Improvement	Metro	LOP#210120	$25.70M
I-10/I-110 Toll Support	Metro	LOP #210120	$6.00M
Subtotal Toll Technology & Roadway Improvements			**$75.00 M**
GRAND TOTAL			**$210.6 M**

FINANCIAL IMPACT

The adjustment of $34,100,000 results in no net increase to the overall LA CRD program budget approved September 2008 and requires no further financial obligation to MTA.

However, the ~~re-programming~~ swap of $20,000,000 in SLPP funds to the LA CRD Project from the I-5 Carmenita project will result in a net increase of $14 million to the FY10 budget. SLPP Funds will require a $20 million Prop C 25% local match. Since $6 million is already in the FY10 budget, an additional $14 million in Prop C 25% needs to be added to the FY10 budget.

ATTACHMENTS:

ATTACHMENT A: Funding/Expenditure Plan

Prepared by: Stephanie Wiggins, Executive Officer Congestion Reduction Initiative

David Yale, Deputy Executive Officer for Regional Programming Programming and Policy Analysis

Roger S. Moliere
Chief, Real Property Management & Development

Arthur T. Leahy
Chief Executive Officer

ATTACHMENT A

CP 210120 FastLanes on I-10 and I-110

Funding/Expenditure Plan

Dollars in (000's)		FY09 Forecast	FY10	FY11	FY12+	Total	%
Uses of Funds							
Project Adm		100	750	1,550	0	2,400	3.7%
Design/Specs/Other Prof Svcs		1,100	3,700	5,300	0	10,100	15.7%
Construction/Equipment		0	11,800	39,400	0	51,200	79.8%
Contingency		0	450	50	0	500	.8%
Total Project Cost		1,200	16,700	46,300	0	64,200	100%
Sources of Funds							
CMAQ		0	13,050	44,750	0	57,800	90%
PC25		1,200	3,650	1,550		6,400	10%
Total Project Funding		1,200	16,700	46,300	0	64,200	100%

ATTACHMENT E

DEPARTMENT OF TRANSPORTATION
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Flex your power!
Be energy efficient!

July 18, 2008

John Barna
Executive Director
California Transportation Commission
1120 N Street
Room 2221 (MS-52)
Sacramento, CA 95814

Caltrans District 7 Letter of Support of the Los Angeles County Metropolitan Transportation Authority Los Angeles Region Fast Lanes Project AB 1467 Application

Dear Mr. Barna:

The California Department of Transportation, District 7 (Department), is pleased to support the Los Angeles County Metropolitan Transportation Authority's (METRO) Assembly Bill 1467 application to the California Transportation Commission (CTC) for the Los Angeles Region Fast Lanes Project.

This application, developed in cooperation with the Department, requests the determination of eligibility, pursuant to the CTC's AB 1467 guidelines, to implement a High Occupancy Toll (HOT) project, heretofore referred to as Fast Lanes, in Los Angeles County and to forward that request to the state legislature for the enactment of statutory authority.

Caltrans District 7 has prepared a draft Project Study Report for this project, which is included in Appendix G of the METRO application. This draft Project Study Report (PSR) recommends that the Los Angeles Region Fast Lanes Project be programmed and proceed to the Project Approval and Environmental Document phase.

The Department has analyzed the Los Angeles Region Fast Lanes Project and has summarized the issues below:

Project Eligibility

The Department has determined that the Los Angeles Region Fast Lanes Project is consistent with the established standards, requirements, and limitations that apply to those facilities in Sections 149, 149.1, 149.3, 149.4, 149.5, 149.6 and 149.7 of the Streets and Highways Code. Examples of that compatibility include:

- The Los Angeles Region's High Occupancy Vehicle (HOV) Lanes were built by the Department pursuant to Section 149. METRO will operate a congestion pricing program on the four corridors.
- METRO and the Department will develop a concept of operations for the project.

- The Fast Lanes are planned to operate at a minimum of 45 miles per hour which corresponds to Level of Service (LOS) C.
- Operational parameters (i.e., operating hours, who will be charged, etc) of the proposed project will be determined at a later date through additional technical analysis.
- METRO will execute a Letter of Understanding with the Department that will identify their respective roles and obligations in connection with the development, implementation, operation and maintenance of the proposed project.

- METRO and the California Highway Patrol (CHP) will execute a Letter of Understanding that will identify their respective roles and obligations in connection with the development and implementation of the enforcement characteristics and delivery of law enforcement services for the proposed project.
- Toll revenues will be available to METRO for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program. Reimbursement for related planning and administrative costs for the operation of the congestion pricing project/program will not exceed three (3) percent of the revenues, without prior METRO Board approval. A Toll Advisory Committee will be formed and will have representatives from METRO and the Department.
- Remaining toll revenues will be re-invested within the corridor for transportation improvements, such as, but not limited to, transit, rail and vanpool operations/ support, 511 and for other eligible operating and capital projects pursuant to an expenditure plan adopted by the METRO Board.

Cooperation and Consistency with State Highway System Requirements

The Department also has determined the project to be consistent with State Highway System requirements. METRO, in partnership with the Department, will conduct a system evaluation of this project to track its implementation, procurement processes, institutional issues and system performance and determine the success/lessons learned of the project.

As District 7 Director, I attended the METRO Board meetings noted below and am an ex-officio member of the METRO board.

The METRO Board of Directors has acted to support innovative congestion-reduction initiatives. In June 2007, the METRO Board of Directors approved a motion to develop a system-wide congestion pricing operating plan for implementing congestion pricing in Los Angeles County by the Year 2010. In September 2007, the METRO Board approved the formation of an Ad-Hoc Congestion Pricing Committee, which is comprised of members from the METRO Board of Directors and the District Director of Caltrans- District 7, to provide policy guidance and recommendations to the METRO Board of Directors for implementing congestion pricing in Los Angeles County.

In November 2007, the METRO Board of Directors approved the submittal of the Los Angeles Region Congestion-Reduction Demonstration Initiative proposal to the United States Department of Transportation (USDOT).

In partnership with its state and local transportation partners, METRO submitted the Los Angeles Region Congestion-Reduction Demonstration Initiative proposal to USDOT in December 2007. The key element of the proposal focuses on the conversion of existing HOV lanes to HOT lanes.

In March 2008, METRO submitted to the CTC its application for its Congestion Pricing Demonstration Program for consideration, pursuant to AB 1467 program criteria.

In April, METRO and its partners learned that Los Angeles had been awarded a $213.6 million grant from the USDOT for its Congestion-Reduction Demonstration Initiative proposal. METRO has since been informed by USDOT that the amount of the award has been reduced to $210.6 million. Subsequently, METRO and the Department executed the Memorandum of Understanding with USDOT on April 25, 2008. The MOU establishes certain conditions that must be met before USDOT will disburse the funding made available by the grant. One of these conditions is that METRO and the Department be granted the legislative authority to toll, prior to October 15, 2008.

Subsequent to the execution of the MOU, and based on additional analysis of the proposed corridors comprising the program, it was proposed to designate the I-110 Transitway as a higher priority implementation corridor for HOT lane conversion over the I-210 corridor. The METRO Board will consider a change in the near-term focus from I-210 to I-110 at their July 24, 2008 meeting.

Contingent upon Metro Board approval, the parties would execute an amended MOU following the July CTC meeting, which would reflect the following proposed changes:

- The conversion of the I-110 Transitway will be implemented prior to the I-210 Corridor.
- The enactment of legal authority for the conversion of HOV lanes to HOT lanes, as a condition of funding, will be required for the I-10 and I-110 only, instead of all three corridors
- The requirement that HOV2 (carpools with two occupants) will not be charged a fee less than SOVs to access the HOT lanes will not apply to the I-110 corridor.

Once the Los Angeles Region Fast Lanes Project is approved by the California Transportation Commission (CTC) through its determination of eligibility per the adopted AB 1467 guidelines; a request will be submitted to the state legislature to enact legislative authority granting tolling authority to Los Angeles.

METRO, in cooperation with Caltrans District 7, plans to initiate the Fast Lanes Project environmental phase as early as July 2008.

State Highway System Compatibility and HOT Lane Viability

Los Angeles County currently has 485 lane-miles of operational HOV facilities, or 36% of the total 1320 HOV lane miles in the State of California. There are currently 29 lane- miles under construction and 210 lanes miles in design/planning. On average, each HOV facility in Los Angeles County carries 1350 vehicles per hour or 3200 people per hour, during peak hours. These volumes well exceed the minimum expected volume of 800 vehicles per hour or 1800 people per hour, as specified in the Department's *HOV Guidelines for Planning, Design, and*

Operations. On average, the person-trip volume of an HOV lane is two (2) times greater than that of a mixed-flow lane during peak hours.

Perhaps the most serious challenge Los Angeles County HOV lanes face is that they are now so successful that they are experiencing congestion on many segments. At this time, several HOV lanes in Los Angeles County have exceeded or are close to reaching a maximum desirable operating capacity, including the I-10 and I-210 corridors. To ensure these lanes continue to be effective, the region must find ways to better manage traffic flow. One of the options is to implement demonstrated travel demand management concepts such as congestion pricing.

As technical studies have proceeded, the I-110 corridor has emerged as an important congestion pricing demonstration opportunity. The HOV lanes have capacity of up to 1800 vehicles per hour; however, this capacity is only approached at the peak of the morning rush. Pricing of the HOV lanes, coupled with transit enhancements and other complementary improvements, will help to spread out peak traffic, maintaining improved operating conditions and reliability.

If METRO, in partnership with the Department, does not implement the HOT lanes, then the HOV lanes in these corridors, which are operating at or beyond their practical capacity during the peak hours, would no longer provide the travel time advantage needed to encourage greater system productivity, higher order of HOV formation, or mode shift to bus and/or rail transit.

The implementation of this project will require minimal physical alteration to the roadway, and will not require the widening of the freeway(s). Toll collection equipment, enforcement equipment, communication systems, signing and striping will be added to the existing HOV lanes in those corridors. It is planned that a Negative Declaration/Finding of No Significant Impact (FONSI) environmental document will be prepared for each separate corridor.

Project Proposal

The Project proposes the conversion of existing High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes along Interstate 10 (El Monte Busway), Interstate 110 (Harbor Freeway Transitway), and Interstate 210 (from Interstate 605 to Interstate 710) as part of a first phase. A second phase would include the conversion of HOV lanes to HOT lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing). The Fast Lanes Project is to be implemented in two operating segments. The City of Los Angeles downtown Los Angeles Intelligent Parking Management Program is the linkage amongst the four corridors.

Network of Toll Facilities

The proposal is based on a system approach to the implementation of HOT lanes, currently focused on major east-west or north-south high demand corridors. The system of HOT lanes will leverage against existing or proposed transit and rail systems/services; and vanpool programs within those corridors. The Los Angeles Region Fast Lanes Project proposal has been developed to be compatible with and provide connectivity to existing and proposed toll

facilities and technology in Southern California such as the I-15 managed lanes in San Diego, SR-91 Express Lanes in Orange County and the Orange County Toll Roads (SR-73/133/241/261). Note: Riverside and San Bernardino Counties are investigating toll options as well.

The design of the electronic toll collection system will be compatible with the other systems deployed in California utilizing FastTrak transponder technology.

Roles and Responsibilities

The environmental phase will be led by the Department and will include all work related with the implementation and operation of the Fast Lanes. Work will include, but not be limited to, road work, signing, striping, toll equipment design and installation, operational characteristics, toll systems, communications, etc.

The design and construction phase is currently contemplated to be procured through a contract with a tolling specialist contractor. Said contract may also include toll collection and operational responsibilities as well. Discussions are ongoing with METRO to have METRO procure this contract with the Department providing technical oversight.

The operations and maintenance phases of the tolling equipment will be led by METRO, which includes the procurement of a system operator.

The Department and METRO will develop an agreement that will detail their respective roles and responsibilities for the project. Both agencies have executed several similar agreements in the past for other highway and transit projects. It is planned to use a similar model to undertake the Fast Lanes Project.

Early in the planning and implementation process, METRO, in partnership with the Department, will establish an organization and management plan. This plan will evolve and will be updated periodically as the project moves toward implementation. Reference is made to the draft organization chart in Appendix C of the application which outlines METRO and Department planned roles and responsibilities.

Use of Toll Revenue

METRO plans to use regional, state and federal funds for the capital costs of the project. Toll revenues will be used first for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program.

Net toll proceeds will be used for a variety of complementary transit/rail/vanpool services and the adaptation of new transportation technologies would be deployed to optimize the operational performance of the overall transportation system. These may include expanding Bus Rapid Transit (BRT) and express bus services in these corridors, implementing an intelligent parking management system in the downtown of the City of Los Angeles, and expanding and promoting vanpools and transit by providing incentives.

Maintenance and Operation Agreements

The Department will continue to be the owner/operator of the roadway facility; METRO will assume the toll operation responsibility for the toll facility. It is anticipated that the operation of the toll facility will be contracted out by METRO to a qualified system contractor/operator.

METRO will be responsible for the operations and maintenance of the tolling equipment, which includes the procurement services of a toll system operator.

The Department will be responsible for the maintenance of the roadway facility as defined in the future maintenance agreement between the parties.

Metro, through its system operator, will be responsible for the operations of the toll facilities and the collection and enforcement of the toll revenues, maintenance of the tolling infrastructure/features, customer service and account management, and related duties.

An operating plan will be further developed during the design phase of this project.

Cost/Benefit Analysis

It is expected that the Fast Lanes Project, which includes transit/rail/vanpool related services and other travel demand strategies along the proposed corridors will result in improved operational performance, mainly due to driver behavioral shifts, without negatively impacting the general purpose lanes. These shifts would need to result in a combined net benefit for highway and transit users for the priced managed lanes to be deemed worthwhile by the public and result in growing acceptance.

Caltrans has performed a preliminary analysis based on its Cal B/C model and has determined that the Fast Lanes Project's benefit/cost (B/C) ratio is 7.7 and the rate of return is approximately 50 percent. This analysis is summarized in Table 5 and detailed by corridor in Appendix F of the METRO application.

Caltrans PSR

The Department has prepared a draft Project Study Report for this project, which is included in Appendix G of the METRO application. It is recommended that this project be programmed, and proceed to the Project Approval and Environmental Document (PA/ED) phase. A project report will serve as approval of the "selected" alternative.

This is a HB5 Program project and has been assigned the Project Development Category 4A.

HOT Lanes

The goal of the High Occupancy Toll (HOT) Lanes is better utilization of a freeway's capacity and a reduction of delays related to congestion. HOT Lanes achieve this through its demand management attributes by encouraging modal shift, movement into higher orders of carpools or vanpools, or shifting travel to another time. HOT Lanes achieve congestion reduction by

permitting a controlled or managed number of additional vehicles on the freeway to use the HOV lane, to the point that capacity is available and overall performance of the lane is not substantially affected. The adjustable toll rates in the HOT Lanes provide the mechanism to manage the overall number of cars that can use the lane while still maintaining an acceptable Level of Service (LOS).

The existing HOV lane on the proposed project for all four routes for both operating segments would be converted to a HOT Lane facility. A combination of electronic toll collection and enhanced highway patrol enforcement will assure an acceptable level of compliance by HOT Lane users. The HOT Lanes system components could be adjusted as changes in traffic and economic conditions warrant. The recommended separation between the HOT Lane and the adjacent mixed-flow lanes is a buffer zone delineated by solid striping. Ingress and egress to the Fast Lanes will not be continuous and limited to those specific points which will be determined by detailed operational analysis. No additional widening of the freeway traveled lanes is required to accommodate the addition of the Fast Lanes. Enhancements of transit/rail and vanpool services are complimentary strategies that are critical to the success of the project.

The roadway construction components of the Fast Lanes Project include striping, signing and installation of the Electronic Toll Collection System (ETCS).

Ingress and egress to the Fast Lanes will not be continuous and limited to those specific points of access which will be determined by detailed operational analysis. No additional widening of the freeway traveled lanes is required to accommodate the addition of the Fast Lanes.

It is anticipated that there will be additional non-standard design features associated with the implementation of the ETCS and physical HOT lanes. The Department will coordinate with the Federal Highway Administration to address any non-standard design features through existing approval procedures.

Tolling Facilities

The Los Angeles Region Fast Lanes Project will use a similar technology as used by the 91 Express Lanes and toll roads in Orange County; and San Diego Association of Governments (SANDAG) on its Interstate 15 Managed Lanes corridor. METRO anticipates using dedicated short range communications (DSRC) equipment, including the Title 21 FasTrak transponders and readers that are standard by law in California, to collect tolls electronically on the Fast Lanes Project.

Antennas mounted on overhead gantries along the corridors will read the transponders and send the information to a reader for further transmission via the lane controller to the toll operations administration office. Additional equipment to be installed along the lanes will include automatic vehicle detection (AVD) to identify the presence of a vehicle and violation enforcement system (VES) to take an image of vehicles that are not authorized to travel on the Express Lanes.

Tolls

Tolls would be dynamically priced to maintain a minimum speed of 45 mile per hour, which corresponds to Level of Service (LOS) C in the Fast Lanes.

Further analysis of available technology and enforcement strategies may modify this proposed concept of operations for tolling of Single Occupant Vehicles (SOV) and HOV 2's.

Currently, it is anticipated that HOV3+ vehicles would be exempt from the toll on all corridors. However, further analysis of the traffic demand of each corridor will determine the specific concept of operations as it relates to occupancy tolling.

In accordance with the current agreement with USDOT, HOV2 will not be charged less than SOVs to access the Fast Lanes, except for the I-110, where HOV2s may be allowed access for no fee.

Transit, emergency vehicles and motorcycles would be exempt.
There is a consideration to toll hybrids, however, that will be dependent on any proposed changes in existing state law regarding use of hybrids on HOV lanes.

Signage

Toll gantries and overhead signs are anticipated to be placed in the median barrier or in another location so as not to disrupt traffic flow or rail operations within the median of I-10, SR-60, I-110 and I-210. The existing HOV buffers will also be used for the Fast Lanes. Signs will be placed so that both the general purpose lane driver and the Fast Lanes driver can see them and make a decision to enter or exit the Fast Lane. All sign structures will be installed within the existing freeway facility.

Costs and Revenues

METRO and its consulting engineer have estimated the following costs and revenues:

- Capital Costs are estimated at $44.3 million for Operating Segment 1 and $74.8 million for Operating Segment 2, for a total of $119.1 million, escalated to midyear of construction at 3.0% per year.
- Annual Operations and Maintenance costs are estimated at $20.5 million in Year 2010 and $33.2 million in Year 2012.
- With the implementation of Operating Segment 1, the first year (2010) estimated revenues are $85.8 million. With the implementation of Operating Segment 2, Year 2012 revenues are estimated at $159.1 million.

Schedule

Operating Segment 1 of the proposed project is anticipated to be ready to advertise for bid in December 2009 with construction estimated to be completed by December 2010. Operating Segment 2 of the proposed project is anticipated to be ready to advertise for bid in December 2011 with construction estimated to be completed by December 2012

Engineering Challenges

Design Features: The project may reduce the existing roadway design features and require non-standard approvals, such as lane widths, horizontal clearance and vertical clearance associated with the implementation of the ETCS. If new non-standard design features need to be included in the project, an exception to mandatory design standards will be requested and the appropriate existing exception process will be followed.

This HOT lane conversion could be potentially considered by FHWA as a significant change to the original HOV lane and all previously-approved exceptions to mandatory design standards will be required to be re-submitted for review and re-approval. Many of the existing HOV lanes have non-standard lane widths, left shoulder widths less than 10 feet, so they do not meet the standards of lane and shoulder widths and horizontal clearance.

The change in use of HOV lanes, such as hours of use, generally does not require Federal approval. However, the authority of SOVs to use the Fast Lanes is considered an operational change and FHWA concurrence will be coordinated through the environmental phase.

Barrier Separation: A barrier-separated facility is highly desired that would separate the Fast Lanes from the adjacent mixed-flow lanes by a physical barrier such as a concrete barrier in the buffer zone. This alternative is more effective to deter lane crossing and toll evasion compared to the alternative that only utilizes solid stripes. However, this alternative was rejected due to the high capital cost to construct the widened freeway that would allow construction of a sufficiently wide buffer zone for the physical barrier and standard shoulders and the lack of flexibility to be able to easily modify the layout of the HOT lanes facility. The feasibility of utilizing pylons in the buffer area will be evaluated during the design phase.

Right-of-Way Issues: The existing HOV lanes on Interstate 210 and Interstate 10 are next to an operational rail facility. Due to this right-of-way constraint, some new sign posts design may require encroachment into the narrow left shoulder instead of engaging in the long process to acquire right-of-way from the railroad companies. If this happens, an exception to mandatory design standards will be requested. Right-of-Way issues are not present on Interstate 110.

Communications System: The discussed alternative has yet to determine the means of communications for the Electronic Toll Collection System. The two scenarios involve either using two T1 telephone lines or using the Department's fiber optic communication system facility for communications. While the T1 alternative appears to be a significantly lower cost alternative, further technical analysis of the two alternatives and the need for communication system redundancy will be conducted in the design phase to determine the most appropriate communication system strategy.

Cost Estimate: The overall cost estimate for the Report differs from METRO's Los Angeles Region Fast Lanes Projects AB 1467 application. The Department referenced the cost estimate from METRO's Application in creating the construction and support cost estimates in the draft PSR. Traffic Control and Toll System costs were adjusted per Caltrans' current costs and practices for communications, electrical, and equipment installations. Toll equipment costs, operating, and program costs were not changed from the application except for overall cost percentages.

Regional Transportation Plan (RTP) Listing

The concept of congestion pricing is supported in the SCAG Draft 2008 Regional Transportation Plan (RTP), recently released METRO Draft 2008 Long Range Transportation Plan (LRTP) and the Department's Traffic Operations Business Plan. The METRO Draft 2008 LRTP includes policies that advocate and support the implementation of incentives and disincentives to encourage alternatives to driving alone, including congestion pricing/toll lanes or other roadway pricing options.

Once the Los Angeles Region Fast Lanes Project has been determined to be eligible under AB1467 and securing state legislative authority for tolling, it will be amended into METRO LRTP, SCAG RTP and Metro/SCAG Regional Transportation Improvement Program (TIP), California Transportation Commission's State TIP and the Federal TIP.

Public Benefits

An extensive public outreach program with stakeholder outreach, a multi-agency taskforce, and public meetings are necessary for the success and acceptance of the Los Angeles Region Fast Lanes Project.

The Fast Lanes Project is implemented as a travel demand strategy to provide congestion relief rather than a revenue generator. The net toll proceeds will be utilized to provide improved and enhanced transit/rail and vanpool services. They will be communicated to the public and implemented as a congestion management tool first and a source of revenue second.

The Fast Lanes project will provide trip reliability and improve travel times through the corridor. This will help to improve air quality in the region.

Described below is METRO'S organizational structure to communicate and help implement the Express Lanes program:

- Ad-Hoc Congestion Pricing Committee
- Transportation Agency Advisory Group
- Community Advisory Groups
- Congestion Pricing Program Manager – Stephanie Wiggins (213) 922-1023.
- A general Metro information phone line (213) 922-4200.
- An e-mail address (congestionreduction@metro.net) for communication purposes.
- A Metro web site on Congestion Reduction Choices (http://www.metro.net/projects_programs/congestion_reduction/congestion_reduction.htm)

Conclusion

METRO's Los Angeles Fast Lanes Project application is consistent with the Department's mission and other regional priorities. METRO has acknowledged the need for additional legislation to implement this project. While the Department staff has identified a number of challenges in developing this project, none of these issues constitutes a fatal flaw.

Therefore, the Department finds that the Los Angeles Fast Lanes Project application is consistent, in concept, with state highway system requirements, and is in compliance with applicable state and federal laws and regulations except as described in this letter. Also, the Department is committed to working with METRO to ensure that the Los Angeles Fast Lanes Project is technically consistent with state highway system requirements, and will coordinate with METRO to ensure that the Los Angeles Fast Lanes Project is developed, designed, maintained and operated consistent with the requirements set forth in the Streets and Highways Code.

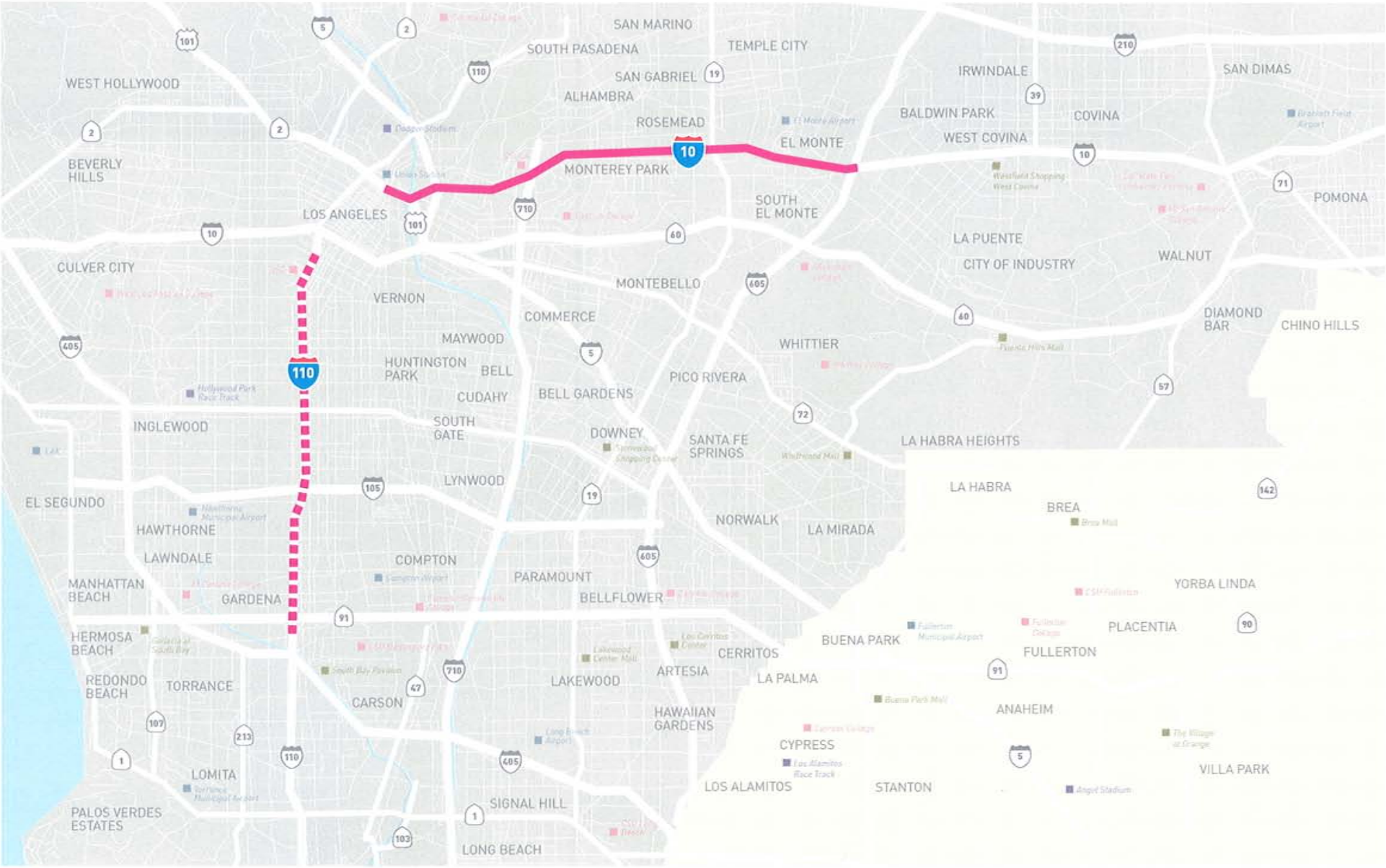
Sincerely,

Douglas R. Failing
District Director
District 7

Cc: Roger Snoble, CEO, METRO

ATTACHMENT F

Congestion Reduction Demonstration Project



Metro

Caltrans

ATTACHMENT G

DESIGN-BUILD
PROJECT SELECTION TOOL

The following is a tool that the Department of Transportation (Department) is developing to assist in determining the appropriate delivery method for projects. The Department is testing this tool on projects on the State Highway System that have been nominated for the Design-Build Demonstration Program authorized by Senate Bill (X2) 4. Please provide a response to each question below.

EVALUATION OF PROJECT SCOPE AND CHARACTERISTICS		
QUESTION No.	**QUESTION**	**Rating (A, B or C)**
1a)	**Where is the project in the project development process?** A. Detailed or final engineering stage B. Preliminary design C. Conceptual engineering stage	**B**
1b)	**What is the size/complexity of the project?** A. Relatively simple, smaller project with no need for specialized outside expertise B. Medium size project with more technically complex components and schedule complexity C. Large, complex project with significant schedule complexity (e.g. multiple phases, extensive third-party issues, specialized expertise needed)	**C**
1c)	**Does the project involve significant impacts to highway users and local businesses/community during construction?** A. No more than typical B. More than typical C. Much more than typical	**A**
1d)	**Does the project present right-of-way limitations that would benefit from a contractor's assistance?** A. No more than typical B. More than typical C. Much more than typical	**A**
1e)	**Does the project present environmental permitting issues that would benefit from a contractor's assistance?** A. No more than typical B. More than typical C. Much more than typical	**A**
1f)	**Does the project present utility or third-party issues that would benefit from a contractor's assistance?** A. No more than typical B. More than typical C. Much more than typical	**B**
1g)	**Does the project present unique work restrictions or traffic maintenance requirements that would benefit from a contractor's assistance?** A. No more than typical B. More than typical C. Much more than typical	**B**
1h)	**Would the project benefit by packaging features of work to allow early lock-in of construction materials/labor pricing?** A. No more than typical B. More than typical C. Much more than typical	**C**
1i)	**Would the project benefit by raising quality standards/benchmarks to minimize maintenance and achieve lower life-cycle cost?** A. No more than typical B. More than typical C. Much more than typical	**A**

EVALUATION OF SUCCESS CRITERIA		
QUESTION No.	**QUESTION**	**Rating (A, B or C)**
2a) Schedule Issues		
1	**Can time savings be realized through concurrent design and construction activities (fast-tracking)?** A. No more than typical B. More than typical C. Much more than typical	C
2	**Can the schedule be compressed?** A. No more than typical B. More than typical C. Much more than typical	B
2b) Opportunity for Innovation		
1	**Will the project scope allow for innovation (e.g., alternate designs, traffic management, construction means and methods, etc.)?** A. No more than typical B. More than typical C. Much more than typical	A
2	**Must the project scope be primarily defined in terms of prescriptive specifications (i.e., predetermined materials and methods), or can performance specifications (expressing desired end results) be used, or a combination of both?** A. Primarily prescriptive specifications B. Combination of prescriptive and performance specifications C. Performance specifications for significant elements	C
2c) Quality Enhancement		
1	**Will there be opportunities for contractors to provide materials or methods that provide greater value than normally specified by the state on similar projects?** A. No more than typical B. More than typical C. Much more than typical	A
2	**Will there be the opportunity for realization of greater value due to designs tailored to contractor's area of expertise?** A. No more than typical B. More than typical C. Much more than typical	A
3	**Will warranties or maintenance agreements be used?** A. No B. Limited to short-term workmanship and materials C. Much more than typical	C

EVALUATION OF SUCCESS CRITERIA (Continued)		
QUESTION No.	QUESTION	Rating (A, B or C)
2d) Cost Issues		
1	**Will there be opportunities for contractors to provide designs with lower initial construction costs than those typically specified by the state?** A. No more than typical B. More than typical C. Much more than typical	B
2	**Will there be opportunities for contractors to provide alternate design concepts with lower lifecycle costs than those typically specified by the state?** A. No more than typical B. More than typical C. Much more than typical	B
3	**Is funding for the project committed and available?** A. Secured for design phase only or cannot support accelerated construction B. Funding can accommodate fast-tracking to some extent C. Funding will accommodate compressed schedule/fast-tracking	C
4	**Will the cost of procurement affect the number of bidders?** A. Procurement cost would significantly limit competition B. Procurement cost could affect the number of bidders C. Procurement cost would not be a significant issue given the size or complexity of the project	C
5	**Will project budget control benefit from the use of formal contingencies?** A. No benefit B. A formal contingency may permit the Transportation Entity to add project scope or enhance quality within the constraints of its published budget C. A formal contingency is required to allow the Transportation Entity to maximize project scope and quality within the constraints of its published budget	A
2e) Staffing Issues		
1	**Does the Transportation Entity have the expertise and resources necessary for a complicated procurement process?** A. Inadequate resources or expertise B. Limited resources or expertise C. Adequate resources and expertise	C
2	**Are resources available to complete the design?** A. Resources are available to complete design B. Resources are available for partial design C. Specialized expertise, not available in-house, is required	C
3	**Are resources available to provide construction oversight?** A. Resources are available B. Full-time construction oversight could strain staff resources C. Resources are unavailable	A

Please provide name and telephone number of person most familiar with the responses to this questionnaire for potential follow-up questions:

Henry Fuks, Deputy Executive Officer-Project Management
Name

213-922-7282
Telephone Number