

Memorandum

To: Chair and Commissioners

Date: March 27, 2008

From: JOHN F. BARNA, JR.

File: Book Item 4.8

Ref: Riverside County Transportation Commission Public Partnership High Occupancy Toll (HOT) Lane Application – Determination of Eligibility

ISSUE: Should the Commission, in accordance with the requirements of AB 1467 and the Commission's Public Partnership HOT Lane Guidelines, find the Riverside County Transportation Commission's (RCTC) Public Partnership Application for HOT Lanes for the Interstate 15 Corridor and HOT Lane Project in Riverside County eligible for consideration by the Legislature?

RECOMMENDATION: Commission staff recommends that the Commission, in accordance with the requirements of AB 1467 and the Commission's Public Partnership HOT Lane Guidelines, find the RCTC Public Partnership Application for HOT Lanes for the Interstate 15 Corridor and HOT Lane Project in Riverside County eligible for consideration by the Legislature. Staff also recommends that the Commission direct staff to hold public hearings, one in Northern California and one in Southern California, as required by AB 1467. Further, staff recommends that the Commission direct the Executive Director to submit the eligible application and any public comments made during the hearings to the Legislature.

BACKGROUND: Assembly Bill 1467 (Nunez), approved by the Governor May 19, 2006, authorizes that, until January 1, 2012, RTAs, in cooperation with the Department of Transportation (Department) may apply to the Commission to develop and operate high-occupancy toll lanes, including the administration and operation of a value pricing program and exclusive or preferential lane facilities for public transit, as specified. The number of projects that may be approved is limited to four, two in Northern California and two in Southern California.

AB 1467 provides that the Legislature will select the HOT lane project(s). The Commission's role in implementing this legislation is limited to establishing eligibility criteria, determining whether each HOT lane application is eligible, holding public hearings in both Northern and Southern California for each eligible application, and submitting eligible application(s) and any public comments to the Legislature for approval or rejection. Approval is achieved by enactment of a statute.

On October 27, 2007, the Commission adopted the Public Partnership High Occupancy Toll (HOT) Lane Guidelines and Application to implement the requirements of AB 1467.

On December 13, 2007, RCTC submitted their Public Partnership Application for HOT Lanes for the Interstate 15 Corridor and HOT Lane Project in Riverside County (Application) to the Commission.

Commission staff evaluated the Application for compliance with the Public Partnership HOT Lane Guidelines (Guidelines) adopted by the Commission and AB 1467. Eligibility objectives included obtaining evidence to determine whether the project is consistent with the Streets & Highways Code Sections 149-149.7; whether there is cooperation with the Department of Transportation (Department) and consistency with state highway system requirements; whether the project is technically and financially feasible; whether the project is consistent with the Regional Transportation Plan; and whether there are performance measures established for project monitoring and tracking.

To address the issues of cooperation with the Department, compliance with the Streets & Highways Code Sections 149-149.7, consistency with the state highway system requirements, consistency with the Regional Transportation Plan, and technical feasibility, the Department reviewed the Application. Based on this review, the Department submitted a letter to the Commission stating that the Application is consistent with state highway system requirements, is consistent with regional priorities, is technically feasible, and was submitted in cooperation with the Department. The Department did note some inconsistencies with the Streets & Highways Code Sections 149-149.7, but committed to working with RCTC to ensure that the HOT Lane project is technically consistent with state highway system requirements. Also, the Department agreed to coordinate with RCTC to ensure that the HOT Lanes are maintained and operated consistent with the requirements set forth in the Streets and Highways Code.

To assist Commission staff in the review of the Application, the Commission retained a financial consultant. The consultant provided Commission staff with an independent review and opinion on the reasonableness of the financial data included in the RCTC Application and whether the Application met the financial eligibility requirements stated in the Commission's HOT Lane Guidelines and AB 1467. Specifically, the consultant reviewed the Application to determine whether RCTC submitted adequate evidence that the project is financially feasible; that the Application includes a reasonable financial plan demonstrating financial guarantees; that the Application includes a documented commitment to provide sufficient equity; that the Application documents reasonable funding for project development and operations; and that the projected rate of return and life cycle cost estimates are reasonable. The consultant determined that the construction of HOT lanes along the I-15 corridor appears to be financially feasible.

Attached for your information are the following documents:

- The Executive Summary section of RCTC's Application. The Application in its entirety is posted on the Commission's website, www.catc.ca.gov.
- The Department's Letter in support of the Application.
- The consultant's financial feasibility report, "Financial Analysis of Public Partnership High Occupancy Toll (HOT) Lane Project Proposal".

EXECUTIVE SUMMARY

Riverside County's Need for Congestion Relief

Riverside County's population is projected to be second only to Los Angeles County by 2050. Today, Riverside County is two million people large, situated in a metropolitan area of more than 17 million people. Currently, 65 percent of all vehicle miles traveled (VMT) in Riverside County occur at Level of Service (LOS) F conditions. Without significant improvements that number will grow to 99 percent by 2030. Additionally, the residents of the City of Riverside, the county seat, already have the fourth longest average travel time to work in the United States – and the longest of any other California city, above Los Angeles, San Francisco, Anaheim, and Long Beach. It will take more than \$13 billion to build enough highway capacity to significantly reduce highway congestion in Riverside County by 2030. These numbers depict nothing less than a congestion crisis.

In order to respond to this congestion crisis, the Riverside County Transportation Commission (RCTC) has developed a comprehensive vision and plan that will utilize the legal provision contained in Assembly Bill 1467 (2006, Nunez) regarding the development of High Occupancy Toll (HOT) Lanes.

A Solution

Riverside County voters have aggressively supported transportation investment and have twice voted with a two-thirds margin to approve a half-cent sales tax program. The second of these elections was held in 2002. As RCTC approaches the start of its reauthorized Measure A half-cent sales tax program, the Commission has prioritized the projects contained in the new Measure A Expenditure Plan. Like many agencies, RCTC has reevaluated its financial projections to determine if its sales tax program revenues are sufficient to address the county's needs through 2039, and how to close potential funding gaps. Thus, RCTC embarked on an extensive and exhaustive multi-pronged effort including the "10-Year Western County Highway Delivery Plan" and a full-scale investigation of Public/Private Financing opportunities.

The result was the adoption of four western-county highway corridors as priorities for construction and the incorporation of publicly owned and operated toll lanes on two of the corridors, based on thorough feasibility studies. The plan recommends:

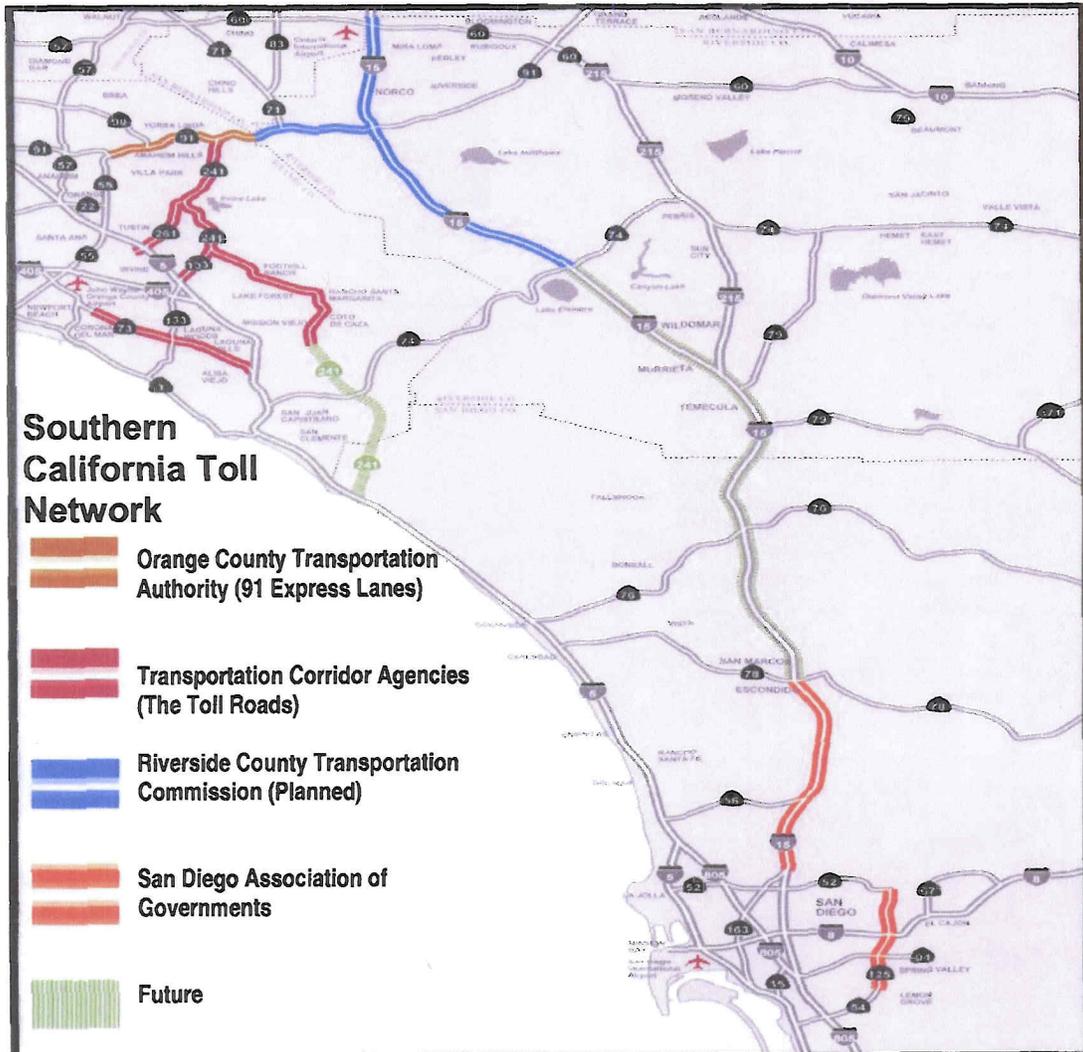
- Two HOT lanes and a mixed-flow lane on SR-91 from the Orange County line to I-15,
- Two HOT lanes and a mixed-flow lane on I-15 from the San Bernardino County line to SR-74,
- An interim HOV and eventual HOT lane extension of I-15 to the San Diego County line,
- Widening I-215 and I-10

The purpose of this application is to seek eligibility from the California Transportation Commission (CTC) under the parameters of AB 1467 for RCTC's plan to build HOT

Lanes on Interstate 15. Implementation of SR-91 HOT lanes is not governed by the parameters of AB 1467.

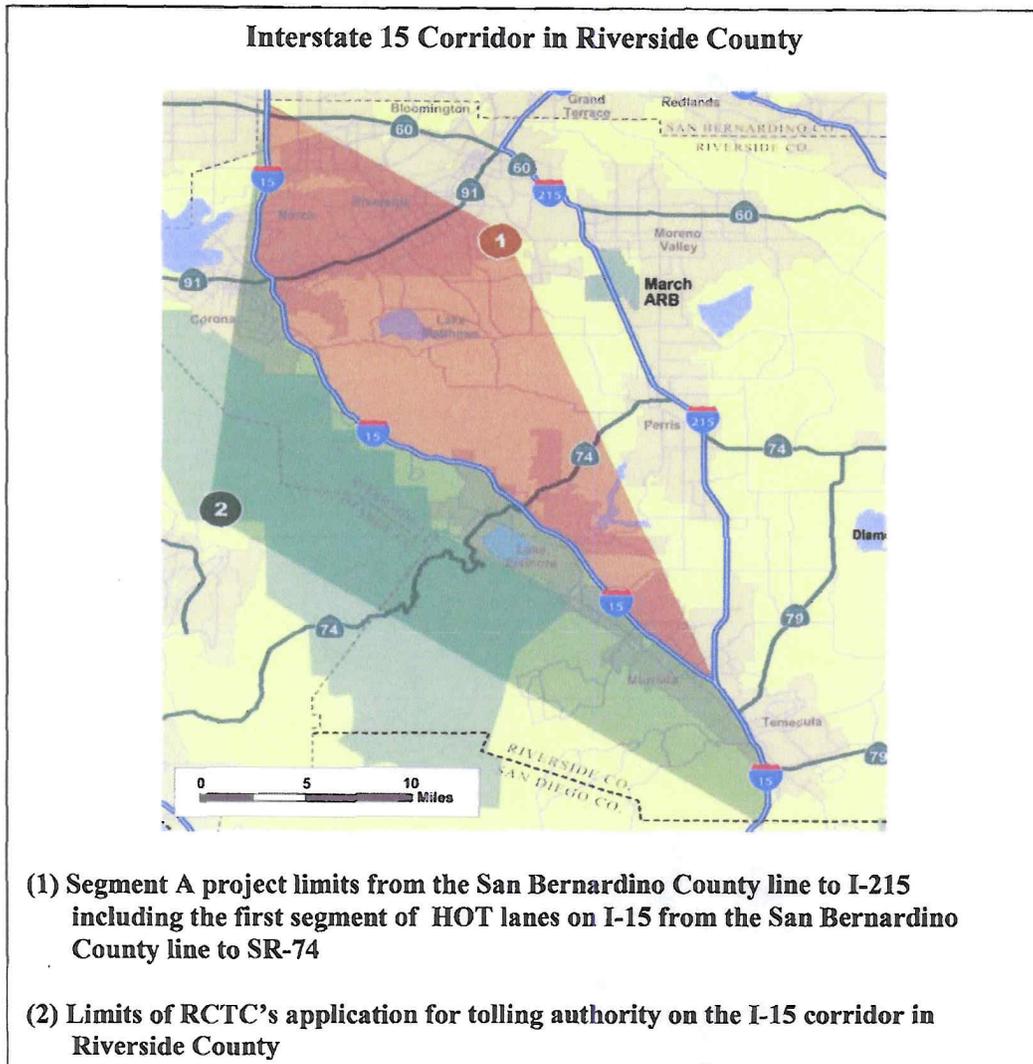
Overall Goals

The eligibility sought from the CTC would allow RCTC to seek legislative authority to develop, construct, operate, and maintain HOT lanes on I-15 from the San Bernardino County line to the San Diego County line. The implementation of RCTC's HOT lane program would provide a significant link connecting existing toll facilities within Southern California. Existing facilities in adjacent Orange and San Diego counties include the I-15 Managed Lanes, 91 Express Lanes and the Orange County Toll Roads (SR-73/133/241/261). In addition, both Los Angeles and San Bernardino counties are exploring congestion pricing and/or toll opportunities. These facilities, both existing and proposed, represent significant investment in additional traffic capacity in the Southern California region and would partially form a regional network of tolled facilities. The additional capacity, funded through user fees, is an important step in addressing this region's congestion crisis.



Implementation of I-15 Corridor HOT Lanes by Segment

Based on recent feasibility work, HOT lanes are financially feasible on portions of both the SR-91 and I-15 corridors. The extension of the existing 91 Express Lanes from the Orange County line to I-15 is the first planned HOT lane operation in Riverside County.



RCTC plans to phase over time the construction of I-15 corridor improvements. RCTC, with its strategic advisors, has determined that a publicly-owned, tolled facility on I-15 is currently feasible between the San Bernardino County line and SR-74. This conclusion is based on the feasibility work performed for a project constructed by 2019. Much of the information presented in the body of this application relates to the I-15 corridor from the San Bernardino County line to I-215. This first corridor segment, Segment A, is the first proposed I-15 project, named the I-15 Corridor and HOT Lane Project, and extends from the San Bernardino County line to I-215. Segment A includes HOT lane development from the San Bernardino County line to SR-74. Development of HOT lanes for the remainder of the I-15 corridor from SR-74 to the San Diego County line, Segment B,

would occur in the future pending funding availability, demonstrated traffic need, and connectivity with the I-15 Managed Lanes in San Diego County.

		Sub-Segment Length (Miles)	New Lane Miles		
			Express (HOT) Lanes	HOV Lanes	General Purpose Lanes
SEGMENT A (aka I-15 Corridor and HOT Lane Project)	San Bern. Cnty. line to SR-91	11.8	59.2		23.6
	SR-91 to Mid-County Parkway	4.7	23.3		9.4
	Mid-County Parkway to SR-74	14.5	62.5		29.0
	SR-74 to I-215	14.7		29.4	
	Total SEGMENT A	45.7	145.0	29.4	62.0
SEGMENT B (Future Project)	SR-74 to I-215	14.7	63.4		29.4
	I-215 to San Diego Cnty. line	8.2	35.3		16.4
	Total SEGMENT B	22.9	98.7		45.8

Figure 1 I-15 Corridor HOT Lane Segmentation

An overall planned sequencing of HOT Lane improvements for Riverside County is summarized below:

● **91 Express Lanes with I-15 HOT Lane Connectivity (Orange Cnty. line to I-15):**
Estimated operation date: 2015

Construct HOT lanes and other improvements on SR-91 plus a HOT lane direct connector from SR-91 to I-15 to provide the initial HOT connectivity between the two freeways (HOT lane direct connector consists of a one-lane ramp for northbound to westbound traffic and a one-lane ramp for eastbound to southbound traffic)

● **I-15 Segment A (San Bernardino County line to I-215, HOT Lanes from San Bernardino County line to SR-74):**
Estimated operation date: 2019

Construct the I-15 Corridor and HOT Lane Project which currently includes:

- 1) Two HOT lanes in each direction from the San Bernardino County line to SR-74;
- 2) One HOV lane in each direction from SR-74 to I-215;
- 3) One general purpose lane in each direction from the San Bernardino County line to SR-74;
- 4) Merging lanes at each point of ingress or egress to the I-15 HOT lanes;
- 5) HOT lane direct connector from the I-15 corridor north of SR-91 to the 91 Express Lanes west of I-15 (HOT lane direct connector consists of a one-lane ramp for southbound to westbound traffic and a one-lane ramp for eastbound to northbound traffic);

- 6) Installation of electronic toll collection equipment, video enforcement equipment and electronic vehicle occupancy detection systems; and
- 7) A toll operations center with space for administration of the HOT lanes and a customer service center.

● **I-15 Segment B (SR-74 to the San Diego County line)**

Estimated operation date: to be determined

- 1) Construct one HOT lane and one general purpose lane and convert an existing HOV lane to a HOT lane from SR-74 to I-215; and
- 2) Construct two HOT lanes and one general purpose lane from I-215 to the San Diego County Line.

Legislative and Policy Issues

During the last few years and even as recently as the State of the State Address in early January, there has been considerable discussion regarding public-private partnerships, toll roads and alternative forms of transportation financing. After more than a year of careful analysis, input from the elected officials who serve on RCTC and only after public discussion and approval for action, RCTC has emphasized two important principles for its HOT Lane development efforts. The first principle stresses public ownership of any facility to guarantee public input, control and transparency regarding the process. The second principle has been the objective to use toll lanes as a means to add capacity and to do so in order to provide facilities sooner than what could be accomplished under traditional financing needs. RCTC has no intention of converting existing I-15 lanes that have already been financed into toll lanes just for the sake of generating revenue.

Should the CTC find this proposal meets eligibility criteria and the application is approved, future enactment of statute per AB1467 will further define certain issues to allow RCTC to operate the I-15 HOT lanes to maintain a high level of customer service, maintain the expected revenue stream, and/or to be consistent with the operation of the existing 91 Express Lanes. These issues are as follows:

- a. Allowance for peak/off-peak pricing and/or congestion/variable pricing
- b. Definition of where and how excess toll revenue could be spent
- c. HOV use policy related to tolls for HOV2+ and HOV3+
- d. Determination of maintenance and operational responsibilities in conjunction with the California Department of Transportation(Caltrans)

The Cost and Financing Plan

The 2009-2039 Measure A voter-approved expenditure plan promises the construction of one additional lane on I-15 in each direction from SR-60 to the San Diego County line. The expenditure plan earmarks only \$359 million for the project. As Figure 2 demonstrates, the revised cost estimate for the Measure A project is approximately 80% more than what was planned in 2002. Although revenue estimates for Measure A have also increased since 2002 due to Riverside County's economic growth, a funding

shortfall still exists. The addition of HOT lanes to the corridor provides a user-based financing mechanism that supplements the Measure A funded lane. This is capacity that neither Measure A, developer fees, or other sources can currently provide.

I-15 Improvements: Construction Cost Estimates			
(in '000's; 2006\$)	Measure A Project (Gen. Purpose and HOV Lanes)	HOT Lanes	Total Project
Soft Costs	\$130,345	\$149,579	\$279,924
Hard Costs	\$516,349	\$583,263	\$1,099,612
Total Capital Cost	\$646,694	\$732,842	\$1,379,536
<i>Source: PB Consult</i>			
Soft Costs: Environmental, Preliminary Design, Final Design, and Construction Oversight Hard Costs: Right-of-way acquisition, Roadway items, Structure items, Toll Collection System, ITS, Buildings			

Figure 2 I-15 Corridor and HOT Lane Project Cost Estimate

Traffic and Revenue studies and financial models were prepared for various project development scenarios and scopes of work to assist RCTC in developing the current Segment A project definition. The financial analysis and detailed discussion are contained in the application and attachments. The Segment A analysis indicates that the projected toll revenue generated from the project is sufficient to fund all HOT lane project support, construction, operations and maintenance costs for the life of the bond repayment period with a subsidy of local Measure A funds. Toll revenue will be utilized for funding operations, maintenance and rehabilitation in perpetuity.

Summary & Conclusion

The approval of AB 1467 in 2006 provided California with a new opportunity to seek additional sources of investment for transportation infrastructure. The legislation provides a great deal of promise but requires careful implementation especially in the area of relying on tolls. The Riverside County Transportation Commission has developed a comprehensive plan for High Occupancy Toll Lanes on Interstate 15 that emphasizes the public’s goals and interests. Given an emphasis on providing more capacity and quicker project delivery instead of private sector profit, the state can consider RCTC’s I-15 HOT application with a high level of confidence knowing that it complies with the original legislative intent and also advances the state’s commitment to better transportation.



California Transportation Commission (CTC)

**FINANCIAL ANALYSIS OF PUBLIC
PARTNERSHIP HIGH OCCUPANCY TOLL
(HOT) LANE PROJECT PROPOSALS**

FINDINGS

March 26, 2008

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Overview

This draft report summarizes the main findings of System Metrics Group, Inc. in association with Jeffrey A. Parker & Associates and Aldaron, Inc. (the “Consultant Team”) in evaluating the eligibility from the standpoint of financial feasibility of the application filed by the Riverside County Transportation Commission (RCTC) in seeking legislative authority to develop High-Occupancy Toll Lanes (“HOT Lanes”) in the entire length of the I-15 corridor in its jurisdiction. RCTC’s application was filed in accordance with Assembly Bill (AB) 1467 and California Transportation Commission (CTC) HOT Lane guidelines promulgated pursuant to AB1467. The CTC guidelines specify numerous eligibility criteria, amongst which is “Financial Feasibility.”

RCTC’s application was based on a number of initial analyses and was necessarily submitted prior to RCTC expending additional resources to undertake more detailed studies and forecasts and in advance of environmental approvals. Thus, the data and assumptions contained therein and reviewed in this report must be viewed as being preliminary and subject to refinement during later stages of project development. Accordingly, our finding of financial feasibility is based on a level of due diligence that is appropriate and possible given the technical analyses that have been performed to-date. It can be anticipated that additional analyses and refinements, including an investment-grade toll revenue study, will be conducted prior to RCTC’s seeking financing from capital markets.

RCTC’s application contemplates initially developing a portion of the corridor under a project scope that comprises HOT Lanes as well as new general purpose lanes and HOV Lanes. **This report finds that the construction of HOT lanes along the I-15 corridor (which is the subject of the legislative authority being sought by RCTC) appears to be financially feasible, given the preliminary information provided, including the availability of subsidy from RCTC and the assumption of all cost and schedule risks being assumed by RCTC.** The construction of the new general purpose lanes and HOV lanes shown in the initial project concept may require RCTC to reprogram additional 2009 Measure A or other funds. It should be noted, however, that such lanes are outside the scope of the authority being sought by RCTC from the Legislature.

Given the relatively early stage of project development, a number of issues have been identified that cannot reasonably be definitively resolved at this juncture, and these are described at appropriate points in this report. The identification and subsequent resolution of such issues is typical for any project of the magnitude being contemplated. None of these issues can be said, at this stage, to render the project financially *infeasible*, but instead should be viewed as matters that require further refinement and resolution prior to final project financing arrangements being put in place.

RCTC’s application includes a draft MOU with Caltrans for the Project Report/Environmental Document phase that explicitly allocates essentially all project development costs and overrun risk to RCTC for the current phase. The MOU is silent on operating and renewal costs which

RCTC and Caltrans have indicated to the Consultant Team will be addressed in a future MOU with Caltrans. However, RCTC and Caltrans have both indicated that the responsibilities for these costs in respect to the HOT Lanes portion of the project will be allocated to RCTC as well. The CTC and Caltrans may wish to reach a clear understanding on this point during the application review and approval process.

This report is comprised of four sections:

1. Assessment of Project Objectives;
2. Review of Financial Plan and Model;
3. Review of Financing Arrangements;
4. Attachments

1. Assessment of Project Objectives

The Riverside County Transportation Commission (RCTC) is seeking legislative approval to develop HOT lanes along the entire length of I-15 within the county. The goal of the application is obtain approval to toll I-15 within RCTC's jurisdiction.

RCTC's application describes an initial project (the "Project" or "Segment A") consisting of:

- Adding two HOT Lanes and one General Purpose Lane per direction of traffic between the San Bernardino County Line and the intersection of I-15 with SR-74;
- Building one HOV lane per direction of traffic between the intersection with SR-74 and the junction with I-215 near the town of Murrieta.

As noted above, RCTC is seeking legislative authority to develop HOT lanes in the entire I-15 corridor in Riverside County from the San Bernardino County line to the San Diego County line. RCTC has offered the "Segment A" project, as defined, so as to provide the basis for assessing the financial feasibility of HOT lanes in the corridor.

1.1 Project Scope

RCTC has included scope beyond HOT lanes in its application. The scope included in the application is consistent with that of the project currently in development through the standard Caltrans Project Development process. This project is in the Project Report/Environmental Document Phase. As discussed below, this broader scope negatively impacts the feasibility of the HOT lanes. However, because RCTC has indicated in its application that development of the additional, non-tolled lanes could be delayed or potentially funded from other sources, in effect de-linking them from the HOT lanes from a financing standpoint, the Consultant Team has considered them optional for the purposes of assessing the feasibility of the HOT lanes.

The decision to include the entire length of the I-15 corridor in the application rather than simply the initial project is reasonable and will help to ensure that the project objectives are realized: should congestion become significant between the junctions of I-15 with I-74 and I-215, and the San Diego County line, then RCTC will have the flexibility add capacity on the southern segments. Otherwise, congestion at the terminus of the initial project HOT lanes could result in back-ups on the HOT lanes which by definition should have free-flow at all times.

1.2 Benefit / Cost Analysis

System Metrics reviewed the benefit-cost analysis submitted by the Riverside County Transportation Commission (RCTC) in support of its I-15 High Occupancy Toll (HOT) lane application. RCTC provided project input sheets and the results pages from California Life-Cycle Benefit/Cost Analysis Model (Cal-B/C). RCTC submitted data for the project section from the I-15/SR-74 junction to the Riverside/San Bernardino County Line, including an expansion of the general purpose travel lanes in addition to HOT lanes. The data indicate that a total of six lanes (four HOT and two general purpose) are being added to the freeway.

Based on information provided elsewhere in RCTC's application, System Metrics identified a number of changes (described below) that might be appropriate to make to the B/C analysis to more accurately reflect the project. While some of these changes would lower and others would increase the B/C Ratio for the Project, System Metrics believes that the net effect of the above omissions will be higher benefit-cost ratios and a more defensible and detailed analysis. Taking into account all of these changes, the highway section could have a benefit-cost ratio between 2.0 and 3.0. By contrast, RCTC reports a benefit-cost ratio of 1.1. Our analysis indicates this ratio does not take into account the following factors:

- a. No-Build Project Hourly High Occupancy Vehicle (HOV) Traffic. Cal-B/C is currently unable to estimate benefits accurately if different numbers of HOVs are entered in the no-build and build cases.
- b. High Estimates of HOV Traffic – According to the 2003 edition of the HOV Operations Manual, Caltrans considers level of service (LOS) C to occur at approximately 1,650 vehicles per hour per lane (vphpl). Some Caltrans districts assume that the capacity of an HOV lane is even lower at about 1500 vphpl. In the application and accompanying correspondence, RCTC and its consultants indicate that they estimated low toll revenues to make a conservative financial case, but it also results in higher estimates of HOV traffic. The project information sheets suggest that 3600 vph for the two HOT lanes in each direction. This exceeds the assumed capacity and results in speeds on the HOV lanes of about 35 miles per hour (mph), which is slower than on the general purpose lanes. A reduction in the HOV traffic estimate to 1,650 or 1,500 would increase speeds and project benefits.
- c. Low HOV Lane Capacity – The benefit-cost analysis indicates a capacity of about 1500 vphpl. This is a conservative estimate of capacity, which could be higher since demand will be actively managed. A higher capacity would be consistent with the HOV Operations Manual.

- d. High Average Vehicle Occupancy (AVO) – The project information sheet and benefit-cost analysis indicate an AVO on the HOT lanes of about 2.05. This is probably a high estimate, since the HOT lanes would carry a combination of HOVs and toll-paying non-HOVs.
- e. Operating and Maintenance Costs – The benefit-cost calculation does not include operating and maintenance costs for the facility.

2. Review of Financial Plan and Model

This section presents an overview and brief discussion of the financial elements of the submission. The financial team was not provided with a soft copy of the financial model; hence, only limited comments can be made about its robustness.¹ The level of detail in the model and the support for its assumptions reflect that the project analysis to-date is preliminary and has been conducted over the course of a series of non-contemporaneous studies. For example, the “Financial Model Assumptions Book” in Attachment V of the Application was prepared in October of 2007 for a different project scope than the Project described in the Part IV of the Application and the Financial Model Results shown in Attachment V. This is reasonable given the state of the Project. However, this report and the application would be more conclusive if the Assumptions Book, dated October 2007, were updated to match the assumptions in the March 2008 financial model results.

RCTC’s application includes two sets of results: “Segment A – Base Case Run” (hereafter referred to as the “Original Run”), and “Segment A – JPA Assumptions w/DSCR=1.75” (hereafter referred to as the “Revised Run”). For purposes of this feasibility review, the Consultant Team believes that the Revised Run is the appropriate base case for considering feasibility (it should not be considered a “stress” or conservative case). As further discussed below, this is because: (a) the Original Run contains cost indexation assumptions that are considerably more aggressive than those used by Caltrans in its cost projections and than are typical in the experience of the Consultant Team and rating agency professionals consulted by the Consultant Team; and (b) because the Original Run shows that construction will be funded in part by a toll revenue bond issue sized given potentially unrealistic assumptions that the bonds will receive an A rating with a 1.0x debt service coverage ratio (“DSCR”). While not indicated in the RCTC application, it is implicit that RCTC would have to back these bonds by pledging additional RCTC funds (such as Measure A monies) to the Project. The Revised Run includes this subsidy and uses a more realistic, but not conservative 1.75x DSCR. (According to the

¹ In the “Financial Model Assumptions Book” in Part IV of the Application, RCTC’s consultant states, “The Assumptions Book should be read in conjunction with the electronic version of the Model... KPMG makes no representation or warranty as to the consistency of the assumptions contained in this Assumptions Book... Users should satisfy themselves independently that the Assumptions Book and the Model are consistent with the scope and terms governing the Project.” For the purposes of this report, the Consultant Team *has* assumed that the Model and the Assumptions Book are consistent unless otherwise indicated.

results shown in the RCTC application, the Revised Run requires over \$400 million (in 2007 dollars) in additional subsidy than the amount shown in the Original Run.²)

Based on the current project scope, funding proposal and available information regarding their entire Measure A program, RCTC appears able to build the HOT Lane portion of the project with adequate fund subsidy available for this purpose. RCTC has available to it a number of options for addressing potential funding shortfall issues. These include:

- a) Deferring or, if necessary, removing the general purpose and HOV lanes from the Project scope;
- b) Allocating some share of future federal and State formula and/or discretionary funds to the Project;
- c) Reprogramming Measure funds from other projects;
- d) Increasing toll revenues by ensuring the use of optimized toll policy parameters;
- e) Accessing Federal credit programs such as TIFIA, an important source for subordinate borrowing on advantageous terms; and
- f) Developing other, more efficient borrowing structures involving subordinated debt.
- g) Using recourse financing.
- h) Using the net proceeds from other toll projects for which revenues exceed costs.

RCTC has indicated that it intends to consider some or all of the above as well as other options as the financial analysis of the Project evolves from its current preliminary state.

2.1 Financial Model Assumptions

A. Funding Sources

Toll revenues are forecasted by Stantec (formerly Vollmer Associates), under contract from PB Consult. The forecast is preliminary and is not investment grade. Stantec predicts traffic patterns throughout Riverside County based on extrapolations from pre-existing population and economic forecasts.

According to RCTC, total toll revenues for the Project are expected to generate a Net Present Value (“NPV”) of \$1,397 million in 2007 dollars, assuming a 5% discount rate. However, this total includes revenues through 2080. Given the uncertainty of revenue models so far in the future and the relative lack of long-term, municipal debt instruments which extend beyond 40 years, this figure does not represent revenues available to support the project construction. An NPV of revenues for 45 years from the time of debt issuance is \$955 million in \$2007.

² Because the DSCR creates a cash-flow cushion, KPMG estimates that under the Revised Run there will be approximately \$75 million (in \$2007) in additional free cash flow returned to RCTC once the Project is in operations AND if revenues projections are realized, as compared to the Original Run. However, RCTC indicates that the subsidy would be provided during the construction period, so the additional revenue does not directly offset the subsidy from a cash flow perspective.

The main traffic assumptions of the forecasting model are:

- a) Two toll rates: \$0.30 per mile during peak hours; \$0.15 per mile during off peak hours (in 2006 \$).
- b) Tolls assumed to be escalated yearly at 3% (which is in excess of the 2.5% rate for CPI assumed elsewhere in the financial plan).
- c) Same toll structure for all vehicles.
- d) Buses use the lanes without charge.
- e) No charge for HOV 3+.
- f) No trucks in HOT lanes.
- g) Maximum free-flow volume for the two Express Lanes is 3,200 vehicles per hour.
- h) Ramp up 60% of forecast in first year, 80% in second and 100% in third year.
- i) Long run traffic growth of 1% per year (takes effect after 2030).
- j) 280 traffic revenue days/year.
- k) SR-91 Express Lanes extension is open to I-15 in 2015.
- l) The Mid County Pkwy is not built.

Caltrans reviewed these assumptions and found them to be reasonable. SR-91 seems to be a primary traffic generator for the Project. The proposed peak toll rates are lower than those levied on SR-91. It seems likely that the toll rate elasticity on I-15 will be affected by the rates charged on SR-91.

Some issues relating to the traffic model remain open and will have to be addressed in the future. For instance, according to Caltrans, the acceptable range for maintaining free flow conditions (65 mph, LOS C) is between 1,100 to 1,600 vehicles per lane per hour. The observed maximum usage of the SR-91 toll lane is approx 2,800 vehicles (1,400 vehicles per lane per hour) – lower than the 3,200 assumed by RCTC. However, PB Consult indicated (in response to a question from the Consultant Team) that RCTC would use a higher toll rate when needed to constrain traffic to an optimal level. PB Consult assumes that the increase in tolls would at least offset the revenue lost due to decreased vehicle counts.

Traffic and revenue levels could also be impacted by design choices and capacity constraints at the SR-91 interchange, a key traffic generator for the project. According to the Application, only one-lane ramps are envisioned to connect the I-15 HOT lanes with the SR-91 HOT lanes. RCTC's consultant PB Consult indicated that two lane ramps were considered but believed likely to cause traffic backup on SR-91 due to excess traffic from I-15. If the ramp capacity is constrained to create a bottleneck then the effective capacity of the I-15 HOT lanes may be less than 2,800 near the SR-91 interchange. RCTC has indicated that this issue will be studied further as the project is developed and a solution will be achieved.

Measure A tax revenues are an important source of revenue for The Project, as RCTC is accepting complete responsibility for overruns and subsidies. Measure A is identified RCTC's sole local funding source for the project for purposes of these analyses. (RCTC has suggested to the Consultant Team that its transportation projects can be funded from

a variety of funding sources.) RCTC estimates that the total nominal Measure A revenues over the 2009-2039 interval will be \$11,143m, divided between three geographical areas: Western County (74.6%), Coachella Valley (28.84%) and Palo Verde (0.7%). Within each region, the funds will be further subdivided for as economic development, regional arteries, bond financing and highway development. It should be noted that in 2007 receipts from the Measure A tax decreased by some 2%, reflecting a slowdown in the regional economy. RCTC indicates in its application that estimates provided reflect this slow-down.

RCTC has indicated that the Project will be funded from the Western County Highways fund, expected to be collect some \$2,518m in nominal terms over the lifetime of the tax. Fully assessing this forecast was beyond the scope of our analysis. According to RCTC, this amount represents the minimum allocation to this fund based on the voter-approved expenditure plan, and RCTC may have the discretion to allocate an increased amount of total receipts to this fund if needed. According to RCTC, the current 10-year Western County Highway Delivery Plan commits 2009 Measure A moneys to four major projects: Route 91 (\$814m), I-215 (\$294m), I-15 (\$827m) and I-10 (\$47m). In total, RCTC expected in this plan that these Projects would require some \$1,982m in nominal Measure A funding or other funding, according to RCTC's correspondence with the Consultant Team.

Because the bulk of the Measure A funds will be collected in the later years of the period and project spending is to occur in the early years, there may be a funding gap that RCTC will have to address as discussed in Section 2 above. Specifically, as currently allocated the Measure A Western County Highways funds by themselves appear to be insufficient to fund the likely shortfalls for the initial project described as "Segment A" in the RCTC application. However, pending further study, it seems reasonable to assume that total funds available could fund at least the HOT Lanes portion of the Segment A project (i.e. excluding the new general purpose and HOV lanes).

Table 1 below summarizes RCTC's projection for the Western County Highways fund as currently allocated and provides a very rough estimate of the borrowing capacity of those funds for upfront subsidy as calculated by the Consultant Team in \$2007 (in RCTC's application, the financial model results are summarized in \$2007 net present value terms).

Table 1: Summary of 2009 Measure A Funds Available to RCTC

Western County Program, Total Highways Funds			
<u>Year</u>	<u>RCTC Projection*</u>	<u>Y-o-Y Growth Rate</u>	<u>Estimated Upfront Subsidy Capacity**</u>
FY09/10	\$29,752,421	-	\$22,038,830
FY10/11	30,347,469	2.0%	22,479,607
FY11/12	31,561,368	4.0%	23,378,791
FY12/13	33,455,050	6.0%	24,781,519
FY13/14	35,984,876	7.6%	26,655,464
FY14/15	38,823,852	7.9%	28,758,409
FY15/16	41,791,697	7.6%	30,956,813
FY16/17	44,939,034	7.5%	33,288,173
FY17/18	48,305,401	7.5%	35,781,779
FY18/19	51,865,485	7.4%	38,418,878
FY19/20	55,607,878	7.2%	41,191,020
FY20/21	59,431,140	6.9%	44,023,067
FY21/22	63,477,450	6.8%	47,020,333
FY22/23	67,758,747	6.7%	50,191,665
FY23/24	72,294,735	6.7%	53,551,656
FY24/25	77,206,175	6.8%	57,189,759
FY25/26	82,215,897	6.5%	60,900,665
FY26/27	87,342,899	6.2%	64,698,444
FY27/28	92,835,156	6.3%	68,766,782
FY28/29	98,672,344	6.3%	73,090,626
FY29/30	104,805,687	6.2%	77,633,842
FY30/31	111,301,936	6.2%	82,445,879
FY31/32	118,092,331	6.1%	87,475,801
FY32/33	125,116,495	5.9%	92,678,885
FY33/34	132,511,392	5.9%	98,156,587
FY34/35	140,201,214	5.8%	103,852,751
FY35/36	148,115,090	5.6%	109,714,882
FY36/37	156,374,713	5.6%	115,833,121
FY37/38	164,977,612	5.5%	122,205,638
FY38/39	173,765,487	5.3%	128,715,176
Net Present Value in \$2007***	\$936,015,863		\$693,345,084

* RCTC estimates, Official Application, March 13 2008, Attachment VI

** Assumes 1.35x Debt Service Coverage Ratio requirement

*** Uses 5% discount rate from RCTC's financial model

Federal Funding. In its revised application, RCTC indicated that a variety of additional funding sources may be available for The Project. For instance, according to RCTC, over \$600 million of state and federal revenue in the form of formula funds may be available over the 30-year life of Measure A (2009-2039). This would likely equate to a total Present Value of \$200 - \$300 million depending on when such funds are available. However, assessing the reasonableness of any assumption that these funds could be available for this Project and/or that they would not create a shortfall on another Measure A project of equal priority was beyond the scope of our analysis. The Consultant Team does expect that Federal credit programs such as TIFIA could be an important source for subordinate borrowing on advantageous terms, should such programs remain in place.

Excess Toll Revenue. Finally, RCTC expects some additional revenues from the SR-91 HOT lanes project to be allocated to the Western County Highways fund. A revenue forecast for the SR-91 project was not provided with the application, so no assessment of this option can be made.

B. Costs

Initial Capital Expenditure. The current initial capital cost assumptions are outlined in Attachment 1 hereto. According to Caltrans, these assumed costs are generally consistent with Caltrans practice/expectations for the corridor. RCTC has indicated the Capex estimates include a 25% contingency for most line items, although this is not included as a separate line item in the Part V of the application. The recently completed Project Study Report (PSR) included as Attachment III of Part IV of the Application details a different project scope than one currently contemplated in the Project – essentially four lanes within the median only. However, on a rough order of magnitude basis, the PSR costs seem to correlate with the cost-per-mile of the HOT Lanes portion of the Project shown in Part V.

Operating and Rehabilitation & Renewal Expenditures. Attachment 2 hereto outlines the projected Operating costs for the Project. The costs do not include those associated with the general purpose or HOV lanes because current policy does not require local agency sponsors to fund these costs. Caltrans' Maintenance records for Fiscal Year (FY) 2007 shows that the annual cost for routine maintenance of the existing 6 lane segment of roadway between the SR-74 and San Bernardino County Line (30 miles) was \$1,100,000, or \$36,700 per mile. This includes pavement, drainage, landscape, electrical, storm water, litter, and graffiti maintenance. The actual incurred cost for maintaining the (4 lane) SR-91 HOT Lanes was \$47,000 per mile. Caltrans indicates that estimates provided for the Project by RCTC seem reasonable. RCTC has indicated that it included a 20% contingency for most O&M costs.

Ideally, Caltrans strives to provide preventive maintenance (chip seals, open grade, crack seals) every 5-7 years. Larger rehabilitation projects are programmed in the 10-year SHOPP. This is consistent with the rehabilitation and refurbishment (R&R) schedule proposed by RCTC for the Project (see Attachment 3 hereto). Like the Operating cost

estimates, the R&R costs estimates are for the HOT lanes only as the other facilities apparently will be incorporated into Caltrans inventory.

Scheduling The proposed project schedule is provided in Attachment 3 hereto. RCTC currently assumes it will have design-build authority for the Project. In commenting on the schedule, Caltrans cited an FHWA survey that found that the overall duration of projects were reduced by 14 percent and total cost by 3 percent due to design-build. Should RCTC not obtain design build authority, it expects the project to continue on schedule until 2011, at which time procurement of the design-build contractor would otherwise commence. Instead, final design would start in 2012, construction would begin in 2018, and the HOT lanes would open to traffic in 2022. RCTC did not provide a sensitivity analysis demonstrating how this would affect the project cost. Caltrans indicated that it finds the project schedule shown to be reasonable and potentially achievable without design-build.

In Part IV of the Application, RCTC expresses its flexibility in constructing the general purpose lanes at a later date than what is proposed in the Project, but before the Measure A extension expires in 2039, in order to enhance the feasibility of the Project. This could result in some cost savings, as hard costs for the GP lanes are forecast at some \$516.3 million in \$2007. However, RCTC did not provide a financial model result showing this delayed option. Incurring hard costs at a later date would reduce financing costs and result in a more feasible project. Still, the amount saved may be reduced due to lost economies of scale for hard costs. Similarly, delaying these lanes may not result in a commensurate savings of soft costs. Currently soft costs allocated to the general purpose lanes are \$169m out of a project total \$326m.

In Section 2.2, below, the Consultant Team undertook a rough estimate of savings that might be achieved if the non-tolled HOV and general purpose lanes are excluded from the project.

Indexation. A summary of the cost escalation rates that RCTC uses its Part V financial model runs is shown as Table 2 below (Caltrans' recently adopted standard assumptions are also provided as a reference).

Table 2: Summary of Cost Escalation Assumptions

Escalator	Original Run	Revised Run	Caltrans
Operations & Management	2.50%	2.75%	3%
Rehabilitation & Resurfacing	2.50%	3.50%	5%
Right-of-Way ("RoW") acquisition	8%	8%	20%
Capital expenditure w/o RoW	3.50%	5%	5%

Original Run indexation figures seem aggressive compared to national practice, particularly since costs are being escalated from \$2006. The Consultant Team believes that the Revised Run is a more reasonable base case. (Caltrans ROW expenditures inflation estimates reflect recent history but may prove overly conservative beyond 2007. In any case, ROW is a limited cost for the Project.)

C. Financing Structure

The financial model results shown in the RCTC application indicate that pre-development costs will be paid for with Measure A proceeds prior to environmental approval. Short-term loans, referred to as "Traditional Construction Financing" in the RCTC application, is used to repay Measure A pre-development expenditures and to initiate construction of portions of the Project. The bulk of the Project is financed using what the model shows as a RCTC Measure A-funded subsidy during the construction period and non-recourse capital appreciation bonds (CABs) leveraging future toll revenues.

Traditional Construction Financing. While the current short-term securities market is in flux, it is a reasonable assumption that this market will be available to the Project by 2012 as contemplated in the Financial Model Results. For the Revised Run, RCTC assumes that approximately \$50m of short-term financing will be used until CABs are issued and additional Measure A subsidy is provided. RCTC currently has the capacity to issue \$185m of such financing and it is a reasonable assumption that similar capacity will exist in the future (subject to availability of unpledged Measure A funds).

Capital Appreciation Bonds. The Financial Model Assumptions Book in Part IV of the Application indicates that CABs are assumed to be issued on the following terms:

- a) Bonds would receive an "A" category rating;
- b) 5% annual yield;

- c) One year grace period;
- d) Financing fee of 1.5% paid at financial close;
- e) Amortization: sculpted repayments based on available cash flows that would meet coverage ratios based on mortgage style repayment; principal deferred until construction.
- f) Debt Service Reserve Account equal to one year of debt service.

In subsequent correspondence with the Consultant Team, KPMG indicated that a 1.75x DSCR was considered reasonable for the bonds. The Consultant Team finds that this is an aggressive assumption for A rated bonds issued pre-construction – but that it is an acceptable plug for this stage of the project analysis because more efficient borrowing structures involving subordinated debt, including TIFIA, might be assumed in the future. As discussed above, the Original Run assumed a 1.0x DSCR which is not realistic without an ongoing subsidy from RCTC to provide additional coverage.

The Consultant Team also discussed the expected bond rating for non-recourse HOT lane-based toll revenue bonds with rating agency professionals familiar with SR-91's bond issuances. SR-91 bonds achieved an "A" rating, but this came after construction was complete and seven years of successful, documented revenue operations. For non-recourse bonds on I-15 pre-construction a more reasonable assumption would be BBB or BBB-. The Revised Run assumes a 6% annual yield, which is not conservative based on the long-term yield curve and prospective rating. The rating agency would also expect greater liquidity reserves for construction overruns and ramp-up of revenue operations. Accordingly, the Consultant Team finds the Revised Run to be a more reasonable, not overly conservative base case from a debt perspective.

RCTC Contributions provide all subsidy for the Project. According to the Financial Model Results in the Application for the Revised Run, this contribution is expected to amount to a Net Present Value ("NPV") of more than \$1.1bn in \$2007 and nearly \$2 billion in nominal dollars. All subsidy is shown as provided prior to 2020, implying funding through the issuance of Measure A revenue bonds or other sources. As shown in Table 1, the upfront subsidy potential of the projected 2009 Measure A Western Country Highways funds may be approximately \$700 million in \$2007 and in any case, no more than \$950 million, representing a shortfall of \$400 million under reasonable assumptions. Further, I-15 is not the only project for which the Western County Highway funds are currently pledged. Options for addressing potential funding shortfalls are summarized in Section 2 above.

However, as described below, the Consultant Team expects that the available Measure A subsidy would be sufficient to fund the HOT Lanes alone.

2.2 Financial Model Testing

As noted above, a soft copy of the financial model was not provided, so its robustness could not be fully evaluated. However, output data for a number of model runs was provided. The difference between the various model runs was summarized in the following table which was provided by RCTC with the application (note that the “Original Run” is the Base Case Assumptions row shaded in gray, and the “Revised Run” is row #9”).

Table 3. Model results, US\$000’ in 2007 NPV (Excerpted from RCTC)

Summary of Sensitivity Runs on the I-15 Project Segment A Base Case

Variables/ Assumptions			Results in \$000's ; Present Value to 1/1/2007			
Item	Base Case	Sensitivity	Project Development Cost	Required Subsidy	Distributions to RCTC	
	Base Case Assumptions	see note below	N/A	1,199,188	700,666	347,015
1	Operating Expenses Escalation Rate	2.50%	2.75%	1,199,188	718,681	332,866
2	Initial Capex (excl. ROW) Escalation Rate	3.50%	5.00%	1,381,175	883,803	347,523
3	Rehabilitation & Refurbishment Escalation Rate	2.50%	3.50%	1,199,188	718,201	291,775
4	DSCR	1.00 X	1.40 X	1,199,188	845,917	512,423
5	DSCR	1.00 X	1.75 X	1,199,188	917,686	594,153
6	Interest Rate on CABs	5.00%	6.00%	1,199,188	806,439	330,637
7	DSCR & Initial Capex Escalation Rate	DSCR=1.00 InCapex=3.5%	DSCR=1.40 InCapex=5%	1,381,175	1,028,730	512,794
8	All JPA assumptions: DSCR=1.40	see note below		1,381,175	1,122,274	424,229
9	All JPA assumptions: DSCR=1.75			1,381,175	1,174,863	501,112

As discussed above, the Consultant Team considers that the Revised Run (#9) should be considered the base case. Discussions with rating agency executives and Caltrans support this conclusion.

To begin to consider the feasibility of a HOT lanes only project (as this application only pertains to HOT lanes), the Consultant Team utilized information provided by RCTC in Part V to test rough estimates of the reduction in subsidy requirements that could be achieved, as shown in Table 4. Allocation of capital costs between HOT Lanes and non-tolled lanes was estimated based on the relative weighting shown in Attachment 1 hereto but using the costs from the Revised Run. Because the financial model for the project was not provided, these estimates should only be considered useful for gauging order of magnitude differences, if at all.

Table 4: Considering the Feasibility of a HOT Lanes-only scope

Funding Shortfall Estimates: Considering a Reduced Scope with HOT Lanes Only					
<i>(Rough Estimates and Stress Test Adapted from RCTC Revised Run)</i>					
<u>Revenue and Expense Estimates (as NPV in \$2007)</u>	<u>Revised Run (per RCTC Application)</u>	<u>HOT Lanes Only Assumptions*</u>	<u>HOT Lanes Only</u>	<u>HOT Lanes Only Stress Case*</u>	<u>HOT Lanes Only</u>
Toll Revenues thru 2053, less:	\$841	115%	\$967	95%	\$799
Operating Expenditures	(399)	100%	(399)	110%	(439)
Rehabilitation & Resurfacing	(181)	55%	(100)	65%	(118)
Capital Expenditures	(1,381)	55%	(760)	65%	(898)
Rough Estimate of NPV Shortfall	(1,120)		(291)		(655)

* Percentages applied to revenue and expense amount used in Revised Run as provided by RCTC

Note that according to RCTC, hard costs of HOT Lanes comprise approximately 53% of the total hard costs.

Table 4 shows a rough, order-of-magnitude test of a HOT Lanes-only scope.³ The HOT Lanes-only test assuming some increase in revenue as additional general purpose lane capacity will not be added, and assuming reduced costs. Operating costs are assumed unchanged as RCTC estimates already excluded General Purpose and HOV lanes to be maintained by Caltrans. The Stress Case assumes a “perfect storm” of events that could conceivably combine to adversely affect the financial feasibility. These events include significant losses in economy of scale for Capital, O&M and R&R costs, as well as toll revenues being less than forecast in the PB Consult estimate and thus also low in the HOT Lane only scenario. To be clear: the fact that these events *could* happen is not a prediction that they *will* happen, but they do serve to illustrate the due diligence that RCTC will need to continue to exercise during the project development process to ensure the financial integrity of the project.

There appears to be sufficient 2009 Measure A Western County Highway funds available for either HOT Lanes-only scenario (see Table 1 and), and thus the HOT Lanes can be considered feasible under the given assumptions. The Stress Case considers a simultaneous shortfall in revenues and overrun in costs and should be reviewed for reasonableness in future studies. However, in the event of such a scenario, funding now allocated to major Western County Highway projects during the first 10 or more years of 2009 Measure A may need to be utilized to support the I-15 HOT Lanes. Should it wish to pursue the full Segment A Project, RCTC may need to review and potentially re-prioritize its 2009 Measure A commitments, pending the results of more detailed cost and revenue analysis of the Project.

³ In all Table 4 cases, DSCR and debt covenants are not directly considered, but will be part of RCTC’s constraints and subject to more complete analysis as project development proceeds.

3. Findings and Conclusions

Based on the materials provided to CTC by the applicant, the construction of HOT lanes themselves on the I-15 corridor appears feasible from a financial perspective. The feasibility analysis undertaken thus far is preliminary, which is not unexpected given the early stage of the project. A number of concerns remain, particularly regarding the Project scope, and must be addressed before RCTC can raise financing from capital markets. RCTC has agreed in the draft MOU with Caltrans to bear the development costs required to answer these questions, including nearly all of the pre-environmental approval costs – as well as all future construction costs. Thus, it remains RCTC’s and its constituent’s prerogative to allocate available Measure A funds as they so choose.

4. Attachments

Attachment 1: Construction Cost Estimates (from Part V of RCTC Application)

SEGMENT A: I-15 CORRIDOR AND HOT LANE PROJECT				February 27, 2008 Revision 1	
COST ESTIMATE IN 2006 DOLLARS					
				TOTAL SEGMENT A PROJECT	
		I-15 GENERAL PURPOSE AND HOV LANES	I-15 EXPRESS LANES (OUTSIDE PORTION)	I-15 EXPRESS LANES (MEDIAN PORTION)	TOTAL
Soft Costs					
	Project Approval and Environmental Document	\$ 25,819,000	\$ 6,488,000	\$ 22,679,000	\$ 54,986,000
	Preliminary Design & Design Review	\$ 15,492,000	\$ 3,893,000	\$ 13,607,000	\$ 32,992,000
	Final Design	\$ 36,147,000	\$ 9,082,000	\$ 31,750,000	\$ 76,979,000
	<i>Total Development Cost</i>	\$ 77,458,000	\$ 19,463,000	\$ 68,036,000	\$ 164,957,000
	<i>Legal/Procurement Support</i>	\$ 1,250,000	-	\$ 3,750,000	\$ 5,000,000
	<i>Construction Services</i>	\$ 51,637,000	\$ 12,975,000	\$ 45,355,000	\$ 109,967,000
Subtotal Project Soft Cost		\$ 130,345,000	\$ 32,438,000	\$ 117,141,000	\$ 279,924,000
Hard Costs					
	<i>Right of Way Acquisition Cost</i>	\$ 5,460,000	\$ 1,821,000	-	\$ 7,281,000
	Roadway Items Cost	\$ 350,493,649	\$ 85,141,000	\$ 329,017,000	\$ 764,651,649
	Additional Roadway Items for Express Lanes	-	-	\$ 1,000,000	\$ 1,000,000
	Structure Items Cost	\$ 155,450,071	\$ 42,763,000	\$ 97,037,000	\$ 295,250,071
	<i>Subtotal Construction Cost</i>	\$ 505,943,720	\$ 127,904,000	\$ 427,054,000	\$ 1,060,901,720
	<i>Toll Collection System Cost</i>	-	-	\$ 8,676,000	\$ 8,676,000
	<i>ITS Cost</i>	\$ 4,945,251	-	\$ 11,208,000	\$ 16,153,251
	<i>Building Cost</i>	-	-	\$ 6,600,000	\$ 6,600,000
Subtotal Project Hard Cost		\$ 516,349,000	\$ 129,725,000	\$ 453,538,000	\$ 1,099,612,000
Total Capital Cost					
	Subtotal Project Soft Cost	\$ 130,345,000	\$ 32,438,000	\$ 117,141,000	\$ 279,924,000
	Subtotal Project Hard Cost	\$ 516,349,000	\$ 129,725,000	\$ 453,538,000	\$ 1,099,612,000
Total Capital Cost		\$ 646,694,000	\$ 162,163,000	\$ 570,679,000	\$ 1,379,536,000
Basis for Cost Estimate					
	I-15 GENERAL PURPOSE LANES	Cost estimate is based on PB cost estimate prepared for RCTC on 03-30-07.			
	I-15 EXPRESS LANES	Cost estimate is based on the cost estimate jointly prepared for Phase 1 of the I-15 Managed Lanes by Bechtel and PB submitted to RCTC on 10-6-2006.			
	ITS Cost	Cost estimate is based on modification to the cost estimate prepared for Phase 1 of the I-15 Managed Lanes by PB on 11-10-2006.			

Attachment 2: O&M Costs (estimates and comparables provided by PB Consult / RCTC)

DESCRIPTION	Actual COSTS INCURRED, SR-91			COST/MILE FOR COSTS THAT VARY WITH LENGTH	OCTA ANNUALIZED COSTS OR BUDGET FOR 2005/06	ESTIMATE PREPARED FOR SR-91	I-15 ESTIMATE GIVEN TO KPMG FOR TOLL FEASIBILITY STUDY
	12 MONTHS ENDING 6/30/05	11 MONTHS ENDING 5/31/06	ANNUALIZED COSTS ENDING 5/31/06				
Contracted Services	\$5,336,765	\$5,046,254	\$5,505,004		\$5,505,004	\$1,400,000	\$1,400,000
Administrative Fee	\$1,526,590	\$1,400,449	\$1,527,763		\$1,527,763	\$585,000	\$585,000
Other Professional Services/Refinancing Costs	\$1,302,235	\$1,835,128	\$2,001,958		\$1,701,174	\$2,100,000	\$2,100,000
Credit Card Processing Fee	\$971,054	\$973,082	\$1,061,544		\$1,061,544	\$265,000	\$265,000
Toll Road Account Servicing	\$1,075,505	\$751,382	\$819,689		\$819,689	\$205,000	\$205,000
Transponders Issued*	\$903,100	\$678,071	\$739,714		\$739,714	\$185,000	\$185,000
Other Insurance Expense	\$338,763	\$221,408	\$241,536	\$24,154	\$241,536	\$174,000	\$174,000
Toll Road Maintenance Contract - Caltrans	\$492,582	\$427,514	\$466,379	\$46,638	\$1,131,654	\$815,000	\$815,000
Patrol Services	\$397,366	\$348,799	\$380,508	\$38,051	\$397,366	\$400,000	\$400,000
Advertising Fees	\$119,374	\$89,609	\$97,755		\$97,755	\$100,000	\$100,000
Other Services	\$143,329	\$209,468	\$228,511				
Utilities	\$234,246	\$129,789	\$141,588	\$14,159	\$141,588	\$102,000	\$102,000
Office Expense	\$496,949	\$487,500	\$531,818		\$531,818	\$250,000	\$250,000
Bad Debt Expense (To be adjusted at year end)	\$1,067,550	\$25,394	\$27,703		\$218,695	\$55,000	\$55,000
Toll Road Maintenance Supply/Repairs					\$466,379		
Building Equipment Repairs and Maintenance	\$326,777	\$349,500	\$381,273		\$381,273	\$152,000	\$152,000
Miscellaneous**	\$77,465	\$200,470	\$218,695				
Travel and Mileage	\$4,203	\$6,093	\$6,647		\$6,093	\$5,000	\$5,000
Training and conferences	\$359	\$0	\$0		\$0	\$2,000	\$2,000
Books and Subscriptions	\$1,570	\$545	\$595		\$595	\$1,000	\$1,000
Dues and memberships	\$14,702	\$16,400	\$17,891		\$17,891	\$10,000	\$10,000
Bond Issuance Expense					\$142,335	\$150,000	
Leases	\$267,244	\$317,074	\$345,899		\$345,899	\$100,000	\$100,000
Property Taxes	\$0	\$0	\$0		\$0		
Depreciation and Amortization	\$9,108,316	\$8,357,060	\$9,116,793		\$0		
			\$0				
Total Operating Expenses	\$24,206,044	\$21,870,989	\$23,859,261		\$15,475,765	\$7,056,000	\$6,906,000

Note: a 20% contingency has been added into the O&M costs for the project according to RCTC.

Attachment 3: Construction and rehabilitation schedules assumed for I-15 HOT Project
(from Part V of RCTC Application)

Scenario 2 Construction Schedule		
	Completion year	Constructed mile lanes
Phase 1	2016	9.4 HOT + 23.3 GP
Phase 2	2020	59.2 HOT + 23.6 GP
Phase 3	2020	62.5 HOT + 29.0 GP
Phase 4	2030	37.3 HOV + 16.4 GP
Phase 5	2030	61.8 HOV + 29.4 GP

Source: Attachment V.

Note: the above “scenario 2” phasing schedule differs slightly from “Segment A” as proposed in the latest version of the RCTC application. Based on the information available, this variance does not appear to impact feasibility of the HOT Lanes portion of the project.

Year*	Description	Cost
2026	Crack seal – roadway	\$173,000
2030	Crack seal – roadway	\$1,217,000
2036	5% Slab replacement/grinding	\$3,460,000
	Crack seal – structures	\$346,295
	Upgrade/replace toll equipment	\$780,000
	Phase Cost	\$4,587,295
2040	5% Slab replacement/grinding	\$24,340,000
	Crack seal – structures	\$1,666,560
	Crack seal – roadway	\$0
	Upgrade/replace toll equipment	\$3,847,000
Phase Cost	\$29,583,560	
2046	5% Slab Replacement/Grinding	\$3,460,000
2050	5% Slab Replacement/Grinding	\$24,340,000
	Crack seal – structures	\$0
	Upgrade/replace toll collection equipment.	\$0
	Phase Cost	\$24,340,000
2056	Lane Reconstruction – Roadway	\$34,600,000
	Crack seal – structures	\$346,925
	Upgrade/replace toll collection equipment.	\$781,000
	Phase Cost	\$35,727,295
2060	Lane Reconstruction – Roadway	\$243,400,000
	5% Slab Replacement/Grinding	\$0
	Crack seal – structures	\$1,666,560
	Upgrade/replace toll collection equipment.	\$3,487,000
Phase Cost	\$248,913,560	
2066	Crack seal – roadway	\$173,000
2070	Crack seal – roadway	\$1,217,000
	Crack seal – structures	
	Lane Reconstruction – Roadway	
	Upgrade/replace toll collection equipment.	
Phase Cost	\$1,217,000	
2076	5% Slab Replacement/Grinding	\$3,460,000
	Crack seal – structures	\$346,295
	Upgrade/replace toll collection equipment.	\$781,000
	Phase Cost	\$4,587,295
2080	5% Slab Replacement/Grinding	\$24,340,000
	Crack seal – roadway	\$1,666,560
	Crack seal – structures	\$0
	Upgrade/replace toll collection equipment.	\$3,847,000
Phase Cost	\$29,853,560	

Exhibit 10: Rehabilitation and Refurbishment costs in 2006\$ - Scenario 2

Memorandum

*Flex your power!
Be energy efficient!*

To: JOHN BARNA
Executive Director
California Transportation Commissioner

Date: March 25, 2008


From: MICHAEL A. PEROVICH
District Director

Subject: Review of RCTC Public Partnership Application

Riverside County Transportation Commission (RCTC) submitted a Public Partnership Application for High Occupancy Toll (HOT) Lanes along Interstate 15 (I-15 Corridor and HOT Lane Project) in Riverside County to the California Transportation Commission (CTC) on February 5, 2008.

Caltrans Headquarters Programming staff and CTC staff have requested that Caltrans District 8 provide a technical assessment of the proposed project. This memorandum is intended to provide technical background on the project and Caltrans District 8 staff conclusions.

- **Project Eligibility**—Compliance with Streets and Highway Code Sections 149 through 149.7

RCTC's project application for the I-15 Corridor and HOT Lane Project is not entirely consistent with 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. The code sections cite "Unrestricted access to the lanes by high-occupancy vehicles shall be available at all times." The I-15 Corridor and HOT Lane Project policy for HOV2 and HOV3 would require flexibility in order to be consistent with the adjoining SR-91 Express Lanes. The SR-91 Express Lanes currently allow HOV3 to travel for free at all times with the exception of the eastbound rush hour, when HOV3 is charged half price. HOV2 must pay the same toll as all other vehicles.

Sections 149-149.7 specify transit and HOV lanes as exclusive uses of remaining toll revenue. Transit and HOV facilities are not part of RCTC's current I-15 Corridor and HOT Lane Project proposal. RCTC is requesting flexibility in this area as well. It should be noted that RCTC has jointly submitted with the Riverside Transit Agency an application to the USDOT for the I-15 Corridor and HOT Lane Project. This application,

submitted in December 2007 under the Congestion-Reduction Demonstration Initiative program, requests tolling authority for the corridor and funding to conduct an FTA Alternatives Analysis for a Bus Rapid Transit system utilizing the I-15 HOT Lanes.

- **Cooperation and Consistency with State Highway System Requirements**

Caltrans District 8 supports the submittal of and finds that the RCTC proposal for the I-15 Corridor and HOT Lane Project is consistent with state highway system requirements.

District 8 staff has worked closely with RCTC staff since 2003 performing alternatives analyses and discussing the feasibility of developing HOV or HOT lanes on SR-91 and I-15. District staff provided RCTC with preliminary engineering layouts for proposed SR-91/I-15 Interchange improvements and for HOV or managed lanes on SR-91 and I-15.

RCTC staff provided formal presentations to their board in December 13, 2006 and July 11, 2007 regarding possible development of HOT Lanes and toll facilities, and evaluating the feasibility of public/private partnerships to build additional transportation capacity. The focus of these presentations was on the SR-91 and I-15 corridors. At the December 2006 meeting, RCTC took action to seek legislative approval for toll facilities on SR-91 and I-15. Mike Perovich, District 8 Director, attended the board meetings noted above and is an ex-officio member of the RCTC board representing Will Kempton.

- **Maintenance and Operation Agreements**

No agreement has been drafted for maintenance and operations of the proposed toll facility at this time. However, RCTC has indicated that a proposed maintenance agreement would be similar to the existing SR-91 Maintenance Service Agreement (MSA) for the Orange County/SR-91 Toll Facility. Using language from that agreement, RCTC would maintain the facility in accordance with Caltrans' then-applicable published maintenance schedules and standards, and would be entitled—but not obligated—to engage Caltrans to maintain the non-toll collection components of the Initial Facility.

The Department and RCTC will need to negotiate an MOU for Operations and Maintenance. RCTC has indicated that they intend to follow the SR-91 Franchise Agreement.

A draft cooperative agreement between Caltrans and RCTC for the Project Approval/Environmental Document phase of this proposed project has been initiated.

Technical Feasibility

- **State Highway System Compatibility and Hot Lane Viability**

The route concept for this portion of I-15 is for the Interstate to operate at a minimum Level of Service (LOS) E. With the HOT lanes operating at LOS C, the general-purpose lanes are expected to operate at an acceptable LOS C to D. Without HOT lanes the Interstate is projected to operate at LOS F.

A study of operating conditions on the SR-91 shows that HOT lanes are beneficial and sustainable. During peak hours, the eastbound SR-91 Toll lanes currently carry 4,000 people in 2,800 vehicles. This benefits SR-91 by reducing congestion in the general-purpose lanes. It is anticipated that extending the Toll lanes on SR-91 and building toll lanes on I-15 will expand these benefits.

- **Project Proposal**

Segment A: The first segment of the proposed I-15 Corridor and HOT Lane Project (from San Bernardino County Line to I-215) is to be constructed by 2019. This segment consists of: Two HOT lanes in each direction from the San Bernardino County line to SR-74; One HOV lane in each direction from SR-74 to I-215; and one general purpose lane in each direction from the San Bernardino County line to SR-74; Merging lanes at each point of ingress or egress to the I-15 HOT lanes; HOT lane direct connector from the I-15 corridor north of SR-91 to the 91 Express Lanes west of I-15 (HOT lane direct connector consists of a one-lane ramp for southbound to westbound traffic and a one-lane ramp for eastbound to northbound traffic). Also included is the installation of electronic toll collection equipment, video enforcement equipment, and electronic occupancy detection systems.

Segment B: The second segment of the I-15 Corridor and HOT Lane Project (SR-74 to the San Diego County Line) would be constructed in the future as the San Diego County facilities along I-15 are extended north to the Riverside County line.

- **Network of Toll Facilities**

The I-15 Corridor and HOT Lane Project proposal has been developed to be compatible with and provide connectivity to existing and proposed toll facilities in Southern California such as I-15 managed lanes, SR-91 Express Lanes and the Orange County Toll Roads (SR-73/133/241/261). Note: Los Angeles and San Bernardino Counties are investigating toll options as well.

- **Regional Transportation Plan (RTP) Listing**

The draft 2008 RTP includes provisions for:

- Building HOV/HOT lanes (2 HOV 3+ lanes or HOT lanes in each direction) from SR-74 to San Bernardino County Line. Estimated cost for this project is: \$873 million.
- Building/Extending 4 HOT lanes (2 in each direction) from Orange County Line to I-15 and including construction of Connector Lanes from EB SR-91 to SB I-15 and from NB I-15 to WB SR-91. Estimated cost for this project is: \$751 million.

- **Riverside County Measure A**

Riverside County Measure A includes wording: I-15 add one lane in each direction from route 60 to San Diego County Line \$359 M. RCTC is proposing funding for the general-purpose lane using Measure funds.

Funding for the I-15 Corridor and HOT Lanes Project is based on revenue bonds issued on projected toll revenue. No additional funding is identified beyond the Measure.

- **Caltrans PSR**

The PSR did not include a HOT lane alternative but it did acknowledge RCTC's 2009 Delivery Plan and proposed RTP amendment both of which detail an I-15 corridor with HOT Lanes from the San Bernardino County line to SR-74. The PSR proposed to widen from six to eight mixed flow lanes and two HOV lanes from I-15/I-215 (City of Murrieta) Junction to the Riverside/San Bernardino County Line.

The HOT lane alternative was not officially defined at the time of completion of the PSR, as the PSR alternatives were established prior to RCTC adopting HOT lane corridors in their 2009 Delivery Plan. The HOT lane alternative will be fully developed during the Project Approval and Environmental Document (PA/ED) phase.

- **Geometrics**

Within the project limits, I-15 is predominantly a six-lane divided urban freeway with three 12-foot lanes in each direction, with the exception of the segment between Railroad Canyon Road and Temescal Canyon Road for approximately 13 miles, where a fourth lane exists in each direction, that presently function as the outside shoulders. The inside and outside shoulders are 8 feet and 10 feet wide, respectively. The existing median is 70 feet wide and is unpaved beyond the shoulders. The structural section of the existing pavement consists of asphalt concrete pavement. The horizontal alignment is general

tangential and the vertical alignment is in general gentle rolling profiles. There are 41 bridge structures, including twenty-five local street interchanges, three railroad overheads and thirteen drainage facilities within the project limits.

- **Engineering Challenges**

From a horizontal and vertical alignment perspective, the existing interstate alignment does not present any geometric restriction, as the facility was originally designed and constructed to freeway standards. Limitations may exist with regards to the right of way, as the existing median is approximately 70 feet wide, and does not provide the required width to construct the additional mixed flow, HOV lane, buffer, and standard inside shoulder called for in the TCR for the Ultimate Concept Facility. In addition, the split profile configuration of the roadbed at some locations may require the construction of extensive retaining walls. Use of the existing right of way, which varies between 230 and 450 feet beyond the outside shoulders would be restrictive as well, given the topography of the terrain abutting the facility, as well as the closeness of local development.

- **Riverside County 2009 Delivery Plan**

Language reads add 2 HOT lanes in each direction from SB County to SR-74.

- **Public Benefits**

Currently there are insufficient public funds to make these improvements. RCTC's proposal would use anticipated revenues from a toll facility—user fees—to finance these improvements.

Without these improvements, conditions on SR-91 and I-15 will deteriorate beyond their current critically congested level. The increased congestion will negatively affect air quality, commercial development, quality of life, and mobility in western Riverside County, Orange County, and southern Los Angeles County.

- **Route Classification**

I-15 is a National Highway System (NHS) High Priority Corridor – Economic Lifeline Corridor, as well as part of the Strategic Highway Corridor Network of National Defense. I-15 is considered a major interstate goods-movement corridor, which links to the Los Angeles area, High Desert and beyond. I-15 is classified as a “High Emphasis” and “Gateway” route in the Interregional Road System (IRRS).

Conclusion: RCTC's Public Partnership Application is consistent with Caltrans District 8 and other regional priorities. RCTC has noted the need for additional legislation to implement this project. While District 8 staff has identified a number of challenges in developing this project, none of these issues constitute a fatal flaw. Therefore, Caltrans finds that the I-15 Corridor and HOT Lane 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, Caltrans is committed to working with RCTC to ensure that that I-15 Corridor and HOT Lane Project is technically consistent with state highway system requirements, and will coordinate with RCTC to ensure that the I-15 HOT Lanes are maintained and operated consistent with the requirements set forth in the Streets and Highways Code.