I-15 FasTrak™ Project Management Team
Meeting Summary
Tuesday, April 19, 2005

1. The following individuals participated in the meeting:

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<th>Name</th>
<th>Agency</th>
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<tbody>
<tr>
<td>Derek Toups</td>
<td>SANDAG</td>
<td>George McMahon</td>
<td>WSA</td>
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<td>Dana Weaver</td>
<td>SANDAG</td>
<td>Susan Lee</td>
<td>FHWA</td>
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<td>Jeramie Brown</td>
<td>SANDAG</td>
<td>Shane Savgur</td>
<td>CTV</td>
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<td>Gordon Shugars</td>
<td>TransCore</td>
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<td>Fares Ibrahim</td>
<td>TransCore</td>
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<td>Lynn Barton</td>
<td>Caltrans</td>
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<td>Oscar Orozco</td>
<td>Caltrans</td>
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<td>Officer Brad Bohm</td>
<td>CHP</td>
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<td>Mitchell Berner</td>
<td>FasTrak Patron</td>
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2. Changes to the Previous Minutes

There were no changes to the previous Project Management Team (PMT) minutes (April 19, 2005) and all action items from that meeting have been completed.

3. TransCore Update: Customer Service Center (CSC); Operations and Maintenance

Customer Service Center
Fares Ibrahim (TransCore) updated the PMT on Customer Service Center (CSC) activities. As of February 15, 2004, there were 18,695 I-15 FasTrak accounts open and 27,743 transponders (“tags”) issued with another 9,735 tags in inventory.

Twelve comments and complaints were received in the months of February and March, 2005. Most comments were regarding one of the following items: (1) suggestions for improving I-15 FasTrak operations; (2) questions concerning construction along I-15; (3) matters related to CHP enforcement of HOV lane violations on I-15; and (4) matters concerning transponders possibly malfunctioning.

Mitchell Berner, an I-15 FasTrak patron, attended the PMT meeting and suggested SANDAG’s I-15 CSC can provide improved customer communication and education of I-15 FasTrak users. Berner, a public relations professional, suggested SANDAG resume sending out a newsletter to remind customer’s of important issues such as updating credit card information, registering new vehicles, proper mounting of transponders, and related matters.

Operations and Maintenance
Gordon Shugars (TransCore) described several minor software updates that TransCore is currently performing to the I-15 FasTrak toll collection and accounting systems. A proposal to perform a major lane controller upgrade is being prepared and testing to exchange daily transactional data with the new Bay Area Toll Authority (BATA), whose Regional Customer Service Center goes live in May 2005, is on-going.

Mr. Ibrahim indicated that several transponders from a recent shipment have failed the internal quality control tests performed by TransCore. These tags will be returned to the manufacturer for further testing.
Due to a flare-up of system hardware/software failures in late March and early April, TransCore organized a field test at the I-15 toll plaza to verify and test the current lane/reader configuration of the Sirit (TIRIS) hardware. Several measurements were made including tests of radio frequency field strength, vehicle (AVI) detection patterns, and lane controller hardware. Because the I-15 toll system is now seven years old, much of the lane controller hardware is no longer supported and upgrades are becoming difficult to support.

Shane Savgur (CTV) suggested a problem could relate to the absence of a recent firmware upgrade to the TIRIS Reader Controller Card (RCC). Shane recalled installing the firmware upgrades when he was System Manager for MFS, overseeing the System Design, Development, and Maintenance for Caltrans' Bay Area Bridges Advanced Toll Collection and Accounting System (ATCAS).

Shane also suggested a problem with reader/tag reliability might be related to the RCC Polling cycle. The SIRIT RCC can be made to poll using three poll types – Title 21 Poll, HELP Poll, and TIRIS Pole. Sirit’s older transponders used to respond to both the TIRIS Poll and the Title 21 Poll. Shane provided another example where in February 2004 Caltrans had purchased some new transponders from SIRIT which only respond to Title 21 Polls and do not respond to SIRIT Polls. If the SIRIT tags are of the newer type (SANDAG purchases the same type of tags that Caltrans purchases) reading accuracy is significantly better if RCC is switched to only Title 21 polls.

Following the PMT meeting, Gordon confirmed that TransCore had installed the latest firmware version, 4.6.3, in the I-15 readers in 1999; and TransCore has also changed the RCC cards to poll Title 21 only.


Lynn Barton (Caltrans) reported on Caltrans traffic operations and construction activities. Caltrans continues to make progress on the I-15 Managed Lanes (I-15 ML) construction. Construction work at the I-15/SR-56 interchange is progressing without any impacts foreseen in the upcoming months.

A southbound auxiliary lane opened this month on the I-15 general purpose lanes, between SR-56 and Carroll Canyon Road. Caltrans is trying to complete a final segment of the shoulder conversion-to-auxiliary lane project within the next few months, which will extend the lane south approximately one mile to Miramar Road.

The reconstruction of the Ted Williams Parkways/SR-56 bridge over-crossing I-15 was discussed. Demolition of the south half of the bridge has been completed and reconstruction of that half is currently underway. Completion of that section should continue for about another year or so. After the demolition and rebuilding of the south half is complete, work will begin on the demolition and rebuilding of the northern half of the bridge.

Mitch Berner suggested that FasTrak modify prices on Friday evenings to better reflect volume and speeds on the Express Lanes. Mr. Berner feels that many times it is not worth paying the toll to use the Lanes because the delay is comparable, if not worse, than in the adjacent general purpose lanes. The I-15 Toll Modifications Study (see item 6 below) will wrap up in June 2005 and implementation and testing of system improvements to the FasTrak price-setting equation are anticipated by late 2005. The new algorithm will factor vehicle volume and speeds, unlike the current algorithm which only factors volumes.

A second request was discussed to extend the length of the HOV/FasTrak diamond lane that currently exists in the northbound direction between Ted Williams Parkway/SR 56 and Carmel
Mountain Road. The request arose from a FasTrak customer who asked what effect extending the lane north to the approach of the Lake Hodges Bridge (north of West Bernardo Drive) would have on Express Lane traffic flow. The PMT discussed the pros and cons of the proposal and determined it would not be warranted at the present time due to lack of clear separation between the diamond lane and the adjacent I-15 main lanes, and due to issues of ingress and egress, and viability to enforce the HOV provisions of the Vehicle Code.

A third request was discussed regarding expansion to current Express Lanes hours of operation, also originating from a FasTrak customer. The suggested expanded hours were as follows: 5:00 a.m. to 8:00 p.m., instead of 5:45 a.m. to 7:00 p.m., as currently operated. Due to increased traffic levels during the early morning and late evening commute periods, these changes may warrant further consideration. Caltrans will review impacts to its I-15 reversible lane control operation, and return with feedback at the next PMT meeting.

Questions concerning the possible use of lane separators on the I-15 Express Lanes and diamond lane surfaced again. Both locations were discussed previously due to on-going illegal merge problems. Wilbur Smith Associates (WSA) recommended possible use of lane-separators to minimize illegal crossovers, which solution is one of several that SANDAG will take to its Transportation Committee or Board of Directors in late summer/early fall for consideration of use on I-15. Lynn stated that Caltrans will oppose the use of this technology in District 11 (San Diego) due to high maintenance costs; also he noted Caltrans has no other installations of lane separators in the region. Derek forwarded a video clip demonstrating one lane separator product in high-speed operations.

5. CHP Update: Violation Enforcement

Officer Brad Bohm (CHP) provided a summary of enforcement activity on the Express Lanes for the months of February and March, 2005. CHP issued 219 citations and verbal warnings combined during the two month period. Officers are working the total hours allotted for I-15 Express Lane enforcement. Total hours worked in February and March were 168 hours with an average of 1.3 enforcement contacts per hour. Officer Bohm discussed the possibility of putting an officer on the slip ramp only several times a month and issuing citations for HOV and other traffic movement violations. There are approximately 20 to 22 units assigned to FasTrak enforcement per month, with shifts spread between a.m. and p.m. hours on weekdays, and limited weekend hours. There are only three motorcycle officers that work the lanes continuously throughout the month.

Derek stated that SANDAG would like CHP to step up enforcement during the remainder of 2005, since additional dollars remain on the current Contract amendment. He suggested CHP should provide more motorcycle units than patrol cars, since motorcycles can easily exit the Lanes through small openings in the barrier that separate them from general purpose lanes. The time savings should result in improved enforcement efficiency. Derek requested statistics be provided showing total enforcement contacts and citations by motorcycle and patrol car units. Officer Bohm provided the data following the meeting, which confirms slightly higher productivity by motorcycle units (1.25 citations per hour) than patrol car units (1.12 citations per hour) thus far in 2005.

SANDAG and CHP will arrange a media event to coincide with increased enforcement levels to re-educate the public on FasTrak toll evasion fines and to announce SANDAG’s recent award of a federal grant to study the use of video-based enforcement technology in HOT-lanes applications.

A discussion ensued concerning what constitutes a “verbal warning” as reported on the monthly CHP enforcement report. SANDAG and Caltrans would like verbal warnings to be synonymous with enforcement contacts that do not result in citation, because, for example,
the officer did not see a child in the rear seats, etc. The confidence in such a figure could be
used to adjust raw vehicle occupancy counts to increase estimates of violation rates. Officer
Bohm indicated this might be difficult to ensure, as CHP officers apply standard enforcement
procedures which allow for the provision of verbal warnings in situations where the motorist
is in fact a violator but is provided leniency. Lynn referenced an outdated CHP enforcement
study which found that one out of ten violators pulled over were actually violating a law. More
recent data indicate that between eight and nine out of ten contacts result in violations.

Susan Lee of the Federal Highway Administration (FHWA) reported that her agency is in the
final stages of issuing a report on HOV exemptions including HOT lanes that covers all types
of vehicles, particularly hybrid vehicle use in HOV/HOT lanes. The report also covers the
subject of public agency and law enforcement vehicles with exemptions, which none of the
PMT members felt to be a major problem on I-15.

Oscar Orozco (Caltrans) discussed the results of recent average vehicle occupancy (AVO)
counts performed by Caltrans at various points in the I-15 corridor. The counts were taken
over a six-day period in late March 2005 by seven people and covered both the northbound
and southbound directions of travel. Over a fifty minute monitoring period, the Caltrans
counters recorded 38 percent SOV, 40 percent HOV-2, and 22 percent HOV-3 on the Express
Lanes. These data seem to indicate current violation rates may be as high as 13 percent, over
the 25 percent of total traffic that are paying FasTrak customers. Data from the FasTrak
daily traffic and toll reports had not been compared to the Caltrans AVO counts prior to the
PMT meeting/discussion. Another noteworthy observation: approximately one-half of the
buses observed on the Express Lanes were at or near full occupancy!


George McMahon (WSA) provided a brief synopsis of the I-15 Toll Modifications Study; the
last technical memorandum has been turned in and was discussed in January between
Caltrans and TransCore. SANDAG has received some preliminary information from Caltrans
regarding the loop data, what format the data is in, and how it can be offloaded. TransCore has been performing early steps to prepare to start implementing the algorithm. Derek added he feels WSA has produced a thoughtful algorithm proposal that he
anticipates will begin operating on a test basis by October 2005. Derek and Gordon Shugars
will develop a schedule for the algorithm implementation.

7. Results of I-15 FasTrak Patron Survey

In January 2005, SANDAG mailed out a short survey to all FasTrak patrons. The survey was
designed to elicit feedback concerning the customer’s preferences for Service Center
enhancements, such as use of online account management tools, or possible relocation of
the CSC. The results of the survey were conclusive that patrons generally prefer the current
CSC location and over 73 percent of respondents indicated they were “somewhat likely” or
“extremely likely” to use the online account management system. A third question
confirmed that only 13 percent of patron respondents visit the CSC in person more than
once per year. The results indicate development of an online account management feature
on the FasTrak website would be highly favorable to patrons.

8. Next Meeting

The next PMT meeting is scheduled for August 16, 2005, at SANDAG from 9:30 a.m. to 11:00
a.m. Pacific Time.