



SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
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TAB 14

2010

February 22, 2010

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Dorothy W. Dugger
GENERAL MANAGER

Ms. Bimla Rhinehart
Executive Director
California Transportation Commission
1120 N Street, Room 2221 (MS-52)
Sacramento, CA 95814

Dear Ms. Rhinhart:

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On behalf of the San Francisco Bay Area Rapid Transit District (BART), we greatly appreciate your efforts to include the various eligible public agencies in your process for adopting the High-Speed Passenger Train Bond Program Guidelines.

For the most part, we believe that the draft Guidelines provide appropriate guidance for eligible agencies. However, we are somewhat concerned that the Guidelines, under the Commuter and Urban Rail Program – Project Eligibility section, specify that the Commission will “Give priority to those projects that provide direct connectivity to the high-speed train system,” without recognizing other critical elements of connectivity such as capacity enhancements, rolling stock and safety improvements, that were contained in the enabling legislation and the related bond measure passed by the voters.

Construction of the BART system began in the mid-1960s and the first operational segment of the system opened to passengers in 1972. Today, BART is the backbone of the Bay Area regional transportation system, carrying more than 330,000 passengers a day, providing a safe and efficient alternative to the automobile, and connecting travelers with other local transit options around the region. We look forward to providing critical connectivity to the High Speed Passenger Train system as well.

However, BART can not provide that critical connectivity without the necessary capacity improvements to existing facilities and rolling stock. The Legislature recognized the need to enhance capacity and improve safety to existing transit systems when they passed the enabling legislation and provided the statutory language for Section 2704.095 of the Streets and Highways code, which reads, in part :

2704.095. (a) (1) Net proceeds received from the sale of nine hundred fifty million dollars (\$950,000,000) principal amount of bonds authorized by this chapter shall be allocated to eligible recipients for capital improvements to intercity and commuter rail lines and urban rail systems that provide direct connectivity to the high-speed train system and its facilities, or that are part of the construction of the

high-speed train system as that system is described in subdivision (b) of Section 2704.04, or that provide capacity enhancements and safety improvements.

(d) Funds allocated pursuant to this section shall be used to pay or reimburse the costs of projects to provide or improve connectivity with the high-speed train system or for the rehabilitation or modernization of, or safety improvements to, tracks utilized for public passenger rail service, signals, structures, facilities, and rolling stock.

We recommend that the Commission consider adding language to the draft Guidelines that recognizes these critical elements of connectivity, and submit the following suggestion for your consideration:

Under the Commuter and Urban Rail Program – Project Eligibility section, item 15, amend the first bullet to read:

- Give priority to those projects that provide direct connectivity to the high-speed train system, or that provide for the rehabilitation or modernization of, or safety improvements to, tracks utilized for public passenger rail service, signals, structures, facilities, and rolling stock.

Thank you for your thoughtful consideration of this request. We look forward to working with you as the CTC implements this important program.

Sincerely,



Dorothy W. Dugger
General Manager

cc: All CTC Commissioners

Memorandum



To: David Schonbrunn, TRANSDEF
From: Norm Marshall
Subject: HSR Ridership & Revenue Model Coefficients and Constants
Date: February 3, 2010

I have reviewed the “final coefficients and constants in the HSR Ridership & Revenue Model” attached to the memorandum from George Mazur of Cambridge Systematics to Nick Brand dated January 29, 2010. This memo states that these coefficients and constants are different than the model coefficients and constants published in the Task 5a report, and furthermore that: “The client, MTC, elected not to update the Task 5a report nor to include the final coefficients and constants in the final project report.”

The transmittal of these materials from the California High Speed Rail Authority states: “... this material as presented did not previously exist and significant amounts of sub-consultant staff time went into preparing it.” Therefore, the mathematical underpinnings of the HSR ridership and revenue forecasts have never been disclosed to the public or to regulatory authorities, and the presumption that the previously documented coefficients and constants had been used to develop the forecasts was false.

I have reviewed the final coefficients and constants in the main mode choice model, and determined that they are completely different than those presented in the Task 5a. Furthermore, I conclude that the final coefficients and constants introduce unacceptable biases into the model, and that the model as presented in the January 29, 2010 memo is invalid for forecasting future HSR ridership and revenue. I summarize two of the problems I have identified in the attached page.

Two of the problems identified in the final coefficients and constants in the HSR Ridership & Revenue Model

1. The service frequency coefficients have increased in magnitude to implausible and invalid values. For long business trips, the coefficient has changed from -0.003 in the previously published model to -0.179 , a factor of 60. More importantly yet, the coefficient is completely out of scale with the in-vehicle time (IVT) coefficient. Both the service frequency and IVT variables are in terms of minutes. The Task 5a report table included the ratio between the service frequency and IVT coefficients. For the long business trips, the ratio was 0.21. This means that 1 minute of additional headway between train departures has the same disutility as 0.21 minutes of travel time on the train, or 1 hour of additional headway is equivalent to 18.6 minutes on the train. In contrast, the ratio (not shown) between the service frequency and IVT coefficients in the final model is 9.94. This implies that an additional hour of headway between trains is equivalent to 9.94 hours of onboard travel time, which is clearly ridiculous. This makes headways much more important in the model than they really are. The Altamont alignment has longer headways than the Pacheco alignment, so this biases the comparative results.
2. Many new mode-specific constants have been added in the final model, and the values of the constants have been changed drastically. The final constants are of such great magnitude that they dominate the model. For example, the final air constants are a combination of a general constant, an airport-to-airport constant, and (in some cases) an income constant. The airport-to-airport constants vary enormously from interchanges with good air service levels to those with poor air service levels. This should not be necessary. It indicates that the service variables are not working properly in the model. The HSR constants have dropped by a large amount from the model published in the Task 5a report. For example, for the long business trips, the constant has decreased from $-.3503$ to -6.757 (or -5.610 for high income). In the T-statistic column, this constant is labeled as "constrained" suggesting it has been fitted to a particular ridership number the same way the airport interchange constants appear to be fitted to air data. The question then is: fitted to what? There is no HSR service and no HSR ridership to fit to. Inexplicably, the HSR constants are significantly more negative than the conventional rail constants, which for long business trips is -4.620 (or -4.007 for high income). This implies that if both HSR and conventional rail had the same time, cost, and frequency, that the conventional rail would be preferred by a wide margin. This is nonsense.