

National Capital Region Transportation Planning Board

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MEMORANDUM

TO: TPB Technical Committee

FROM: Jim Hogan
Travel Forecasting Director

SUBJECT: Report of the TPB Travel Forecasting Subcommittee

Since my last report in February, the Subcommittee has met five times to review progress with the work program in the following areas:

- Network Development;
- Models Development;
- Cordon Counts;
- Congestion Monitoring; and
- Travel Surveys.

The TPB Technical Committee was given detailed briefings on the following products emerging from this work program during the past year:

- Spring 2006 Central Employment Area Cordon Count Report (February/March);
- Version 2.2 Travel Demand Model (March/April); and
- Arterial Highway Congestion Monitoring (May/June).

These products had received extensive review by the Subcommittee prior to being placed on the Technical Committee agenda. In addition to monitoring progress with these elements, the Subcommittee has received detailed briefings on the following topics:

- Updates on the Household Travel Survey;
- Version 2.2 Travel Demand Model Sensitivity Analyses;
- Progress Report on Development of a Nested Logit Mode Choice Model;
- Commercial Vehicle Model Development;
- Network Development and Models Development Documentation Reports;
- Update on the 2007 Regional Air Passenger Survey;
- Presentations by VHB, Inc., under contract to TPB to conduct task orders documenting the experiences of other MPOs with various topics emerging from the national TRB survey of modeling practice; and
- Recommendations for TPB work program made by Frank Spielberg, VHB, Inc. based upon TRB Special Report 288 – *Metropolitan Travel Forecasting*.

The sensitivity analyses of the new Version 2.2 travel demand model ranged from fare elasticity determination executing the model under varying transit fare assumptions to investigations of shifting travel patterns should capacity on one of the bridges crossing either the Potomac River or Anacostia River be removed.

The commercial vehicle model is a product flowing from the TRB panel recommendations for upgrading the TPB travel forecasting procedures in 2004, and it required special traffic counts to be conducted throughout the Washington region prior to model development.

The nested logit mode choice model is currently nearing completion and will be part of a new Version 2.3 travel demand model unveiled early in 2008. This model set will undergo extensive sensitivity testing, similar to the Version 2.2 model, during the first half of next year.

Topics investigated by VHB, Inc. using task orders were the following:

- Reviewing outline practices in travel demand model validation;
- Exploring approaches to peak spreading in travel modeling;
- Investigating experiences with microsimulation and dynamic traffic assignment;
- Examining the application of nested logit mode choice models with feedback loops;
- Summarizing experiences with FTA's Summit process for evaluating transit New Starts; and
- Surveying the experiences elsewhere with equilibrium traffic assignment.

Additional task orders for VHB, Inc. in the current work program are the following:

- Expanding the traffic count database to address a larger portion of the TPB region as an aid to better understanding peak-spreading; and
- Researching changes in external – internal travel patterns in the TPB region over time and the implications for forecasting and planning.

Among the recommendations made by Mr. Spielberg for the TPB work program from the TRB Special Report 288 were the following:

- Consider adding discrete choice modeling based on population synthesis;
- Consider developing a destination choice model;
- Monitor tour-based and activity-based model developments in other MPOs;
- Monitor traffic microsimulation at other MPOs.

The recommendations flowing from the information presented to the Subcommittee in 2007 are being reviewed by staff for inclusion in the proposed FY2009 UPWP, to be discussed at both the TPB Technical Committee and the TPB Travel Forecasting Subcommittee meetings in January.