

MINUTES OF THE FIFTH MEETING

**ADVISORY COMMITTEE ON REGIONAL
TRANSPORTATION PLANNING**

DATE: March 2, 2005
TIME: 1:00 p.m.
PLACE: Commission Offices
W239 N1812 Rockwood Drive
Waukesha, WI

Committee Members Present

Frederick J. Patrie, Chairman..... Director of Public Works, Kenosha County
Sandra K. Beaupre Director, Bureau of Planning,
Division of Transportation Investment Management,
Wisconsin Department of Transportation
John M. Bennett City Engineer, City of Franklin
Donna L. Brown..... Systems Planning Group Manager, District 2,
Wisconsin Department of Transportation
Larry H. Bruss..... Regional Pollutant and Mobile Source Section Chief,
(Representing Lloyd L. Eagan) Bureau of Air Management,
Wisconsin Department of Natural Resources
Paul A. Feller Director of Public Works, City of Waukesha
Richard M. Jones Commissioner of Public Works, City of Racine
William Kappel..... Director of Public Works, City of Wauwatosa
Glenn M. Lampark..... Director of Public Works, Racine County
Michael K. Lynett Village Engineer/Commissioner of Public Works,
Village of Fox Point
Jeffrey J. Mantes Commissioner of Public Works, City of Milwaukee
Dwight E. McComb Planning and Program Development Engineer,
Federal Highway Administration,
U.S. Dept. of Transportation
Gloria L. McCutcheon Southeast Regional Director,
Wisconsin Department of Natural Resources
Kenneth M. Pesch Highway Commissioner, Washington County
Jeffrey S. Polenske..... City Engineer, City of Milwaukee
Ronald J. Rutkowski Transportation Planning Director,
(Representing George A. Torres) Department of Parks and Public Infrastructure,
Milwaukee County
Wallace Thiel..... Village Administrator, Village of Hartland
Michael Vebber..... Director of Operations,
(Representing Kenneth J. Warren) Milwaukee County Transit System

Staff Members and Guests Present

Albert A. Beck Principal Planner, SEWRPC
Robert E. Beglinger Chief Transportation Engineer, SEWRPC
Douglas F. Dalton Urban Planning Manager,
Division of Transportation Investment Management,
Wisconsin Department of Transportation

Christopher T. Hiebert Senior Engineer, SEWRPC
David M. Jolicoeur..... Senior Engineer, SEWRPC
Robert Madison..... Intern, Milwaukee County Transit System
Donald R. Martinson.....Special Projects Transportation Engineer, SEWRPC
Guy D. Smith Trails Coordinator, Department of Parks and Public Infrastructure,
Milwaukee County
Kenneth R. Yunker Deputy Director, SEWRPC

WELCOME AND ROLL CALL

Chairman Patrie welcomed all of those in attendance and indicated that roll call would be accomplished through a sign-in roster circulated by Commission staff.

CONSIDERATION OF APPROVAL OF MINUTES OF JANUARY 5, 2005, MEETING

Chairman Patrie asked if there were any questions or comments on the [minutes](#) of the Advisory Committee’s fourth meeting held on January 5, 2005. There being no questions or comments, a motion to approve the minutes was made by Mr. Mantes, seconded by Mr. Kappel, and carried unanimously by the Committee.

REVIEW OF PRELIMINARY DRAFT OF INITIAL SECTIONS OF CHAPTER VI, “TRAVEL SIMULATION MODELS,” OF SEWRPC PLANNING REPORT NO. 49, “A REGIONAL TRANSPORTATION SYSTEM PLAN FOR SOUTHEASTERN WISCONSIN: 2035”

Chairman Patrie asked Mr. Yunker to lead the Committee through a review of the [preliminary draft of initial sections of Chapter VI](#), “Travel Simulation Models.” During Mr. Yunker’s review of the chapter, the following questions were raised and comments made by Committee members:

1. With respect to the last full paragraph on page 6, and the reference to the comparison of the Commission’s third-generation model battery to models used by 10 regional planning agencies nationwide, Mr. Bruss asked if it was appropriate to deem this comparison a peer review, and whether the Commission would consider requesting a review of its travel models under the U.S. Department of Transportation Travel Model Improvement Program (USDOT TMIP). Mr. Yunker responded that the comparison documented in the chapter of the Commission’s third generation models to those of 10 metropolitan planning organizations (MPOs) was indeed a review and comparison of the Commission models to the models of its peers, and should be considered a peer review. He noted that the review clearly indicated that the Commission’s current models were consistent with the state of the practice of travel models. He added that the Commission staff is familiar with the USDOT TMIP peer review program. Typically, representatives from five to seven other MPOs meet to review the travel models of the requesting MPO. He noted that the Commission model comparison included a number of the MPOs which typically participate in TMIP peer reviews. Mr. Yunker stated that such peer reviews are usually conducted for the purpose of making specific improvements to an agency’s travel models, in which the requesting agency is uncertain on how to proceed in implementing those improvements. Mr. Yunker added that the comparison conducted by the Commission is consistent with published findings of peer reviews conducted through the USDOT TMIP. Mr. Yunker stated that Commission staff did share its comparison of the Commission’s models to the

models of the 10 MPOs with each MPO, and those MPO staffs indicated that the Commission staff had accurately represented their travel demand models.

Mr. Bruss stated that he thought it would be appropriate to note in the chapter that the Commission did solicit comments from the other metropolitan planning organizations. Mr. Yunker stated that the text would be amended.

[Secretary's Note: The following sentence has been added prior to the first full sentence on page 31: "Staff of the 10 MPOs did review Table 12, and confirmed that it was an accurate representation of their travel simulation models."]

2. Ms. Beaupre stated that it may be beneficial to include in the section of the chapter discussing the history of Commission travel models a listing of the refinements which have been made with each generation of models.

[Secretary's Note: The following has been added at the end of the second full paragraph on Page 4: "These refinements included increasing the number of traffic analysis zones in the Region from 619 to 1,220 zones; use of cross classification in place of linear regression for trip production forecasting; use of a post-trip distribution logit mode choice model in place of a pre-trip distribution regression equation mode choice model; calibration of trip production and mode choice models with household rather than zonal data; and development of a vehicle ownership forecasting model."

Also, the following has been added at the end of the first paragraph on page 6: "These refinements included increasing the number of traffic analysis zones in the Region from 1,220 to 1,431; use of cross classification in place of linear regression equations for person trip attraction forecasting; the inclusion of travel cost in addition to travel time in the gravity model used for trip distribution forecasting; the development of a mode choice model for work trips which would forecast choice between public transit, drive alone, and shared ride alternatives; use of a vehicle occupancy model based on cross classification; and development of alternative means to forecast peak hour and period travel as well as travel by time period of the day."]

3. Mr. Bruss asked if there were specific criteria which are applied in determining whether the model is performing well or not. He noted the over prediction by the models of average weekday transit ridership by about 27 percent. Mr. Yunker responded that there are no standards. He indicated that the text of the chapter discusses Commission staff conclusions regarding model accuracy. He stated that the models did perform well particularly when it is recognized that model estimates are being compared to survey and count estimates. He noted that the text on page 28 indicates that the only substantial over - or under - prediction was with respect to transit ridership. Mr. Yunker noted that the Commission applies the same mode choice model regionwide. He stated that because most of the average weekday transit ridership is on the Milwaukee County Transit System, the travel survey data used in calibrating the model is heavily influenced by Milwaukee County Transit System passengers. As a result, ridership is over-estimated on the smaller transit systems within the Region, including Cities of Kenosha, Racine, and Waukesha. He also noted that the Commission staff adjusts the forecast transit ridership for the smaller systems in its long range planning. He added that many metropolitan planning organizations have experienced over the years similar over-prediction of transit ridership on small transit systems in their areas, and as a result many do not model these systems. He added that the

only implication of over-prediction of transit ridership on the Region's small transit systems is an under-prediction of highway traffic in these areas of one percent or less, given the small percentage of total travel in these areas by public transit.

4. Ms. Beaupre asked for clarification regarding the Commission's time-of-day traffic assignment models. She noted that Table 12 indicated that the Commission's third-generation battery of travel simulation models did include time-of-day traffic assignment, while the text on page 46 indicated that a time-of-day traffic assignment should be considered for the Commission's fourth generation models. Mr. Yunker stated that Commission does have time-of-day traffic assignment models and that the text on page 46 would be corrected.

[Secretary's Note: The second sentence of the last full paragraph on page 46 has been revised to read as follows: "Refinement of the highway traffic assignment for the fourth generation models will include recently developed and applied time-of-day traffic assignments, and possibly multi-class assignment."]

5. Ms. Beaupre asked if the Commission's fourth generation travel simulation models would include the consideration of travel demand management measures. Mr. Yunker responded that the fourth generation travel simulation models would address travel demand management measures to the extent possible in the modeling process.
6. Ms. Beaupre stated the Wisconsin Department of Transportation has underway an effort to standardize travel simulation models of the other metropolitan planning organizations within the State, and to integrate those models with the statewide travel simulation models.
7. Mr. Thiel asked if it was possible for Commission staff to measure the accuracy of each generation of the Commission's travel simulation models. Mr. Thiel stated that if the text could document how the Commission's travel simulation models performed over time, it may help the reader of the report better understand the accuracy and validity of the models.

[Secretary's Note: Attachment A to these minutes provides text to be added following the second complete paragraph on page 28.]

8. Mr. Dalton asked if the Commission's travel simulation models have improved in forecasting travel by modes other than personal vehicles as the models have evolved. Mr. Yunker responded that the ability to forecast travel by other modes such as public transit has generally improved with each model generation.

There being no further discussion, a motion to approve the preliminary draft of initial portions of Chapter VI, "Travel Simulation Models" as amended was made by Mr. Pesch, seconded by Mr. Bennett, and carried unanimously by the Committee.

REVIEW OF PRELIMINARY DRAFT OF APPENDIX A, "ACCURACY CHECKS OF THE YEAR 2001 TRAVEL SURVEYS," OF SEWRPC PLANNING REPORT NO. 49, "A REGIONAL TRANSPORTATION SYSTEM PLAN FOR SOUTHEASTERN WISCONSIN: 2035"

Chairman Patrie asked Mr. Yunker to review for the Committee the [preliminary draft of Appendix A](#), "Accuracy Checks of the Year 2001 Travel Surveys," of SEWRPC Planning Report No. 49, "A Regional

Transportation System Plan for Southeastern Wisconsin: 2035.” During Mr. Yunker’s review of the appendix, the following questions were raised and comments made by Committee members:

1. With respect to the location of 2001 screenline locations as shown in Map A-1, Mr. Pesch asked why there were no screenline locations in Washington County. Mr. Yunker replied that the screenline locations chosen and shown on Map A-1 were based upon the designation of those areas as urbanized areas by the U.S. Bureau of the Census.

There being no further discussion, a motion to approve the preliminary draft of Appendix A, “Accuracy Checks of the Year 2001 Travel Surveys,” was made by Mr. Thiel, seconded by Mr. Pesch, and carried unanimously by the Committee.

ADJOURNMENT

Mr. Yunker stated that the Advisory Committee’s next meeting was scheduled for April 6, 2005. He stated that Commission staff would determine if sufficient materials would be ready for Advisory Committee review at an April 6 meeting. He stated that Commission staff would contact Advisory Committee members about two weeks prior to the meeting to inform them if the April 6 meeting would be held. He indicated that if the April 6 meeting were cancelled, the Advisory Committee’s next meeting would be held on May 4, 2005, as previously scheduled.

Mr. Pesch asked if the Commission would be reconvening the Jurisdictional Highway Planning Committees this year. Mr. Yunker responded that letters would probably go out to the Jurisdictional Highway Planning Committees within the next month to reconvene those committees.

The fifth meeting of the Advisory Committee on Regional Transportation Planning was adjourned at 2:15 p.m. on a motion by Mr. Jones, seconded by Mr. Lynett, and carried unanimously by the Committee.

Signed

Kenneth R. Yunker
Recording Secretary

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ATTACHMENT A

Another test of the validity of travel simulation models is the degree to which the forecasts provided by the models are consistent with actual estimates, as the design year of the plan is approached 20 to 30 years in the future. Table 11A provides the results of such a review of the validity of travel models and forecasts for the year 1990 regional plan which used the Commission's first generation models, for the year 2000 regional plan which used the second generation models, and for the year 2010 and 2020 plans which used the third generation models. This test of forecast validity is a test of both the travel models and the underlying plan forecasts, including population, household, and employment levels. Commission travel forecasts have generally proven to be very accurate, with year 1990 plan travel forecasts being within about five percent of actual year 1990 travel, and year 2010 and 2020 plan forecasts being within about three percent of actual year 2001 travel. The only exception was the year 2000 plan with forecasts of vehicle trips and vehicle-miles of travel being about 20 percent less than actual estimated year 2000 travel, and forecast person trips under the year 2000 plan being about five percent less than actual year 2000 person trips. The reason for the differences between actual and forecast travel in the year 2000 was the significant decline in ridesharing and vehicle occupancy which occurred between 1972 and 1991, due to declining household size, increasing personal vehicle availability, and changing population lifestyles. The vehicle occupancy forecast under the year 2000 plan assumed no change in vehicle occupancy over the plan forecast period. Vehicle occupancy forecasts under the subsequent year 2010 and 2020 plans were based upon a model which projected vehicle occupancy based upon household size and personal vehicle availability.

Table 11A

**COMPARISON OF COMMISSION TRAVEL FORECASTS TO
 ACTUAL ESTIMATED TRAVEL: 1990, 2000, 2010, AND 2020 PLANS**

	Plan Base Year	Plan Forecast	Estimated Actual	Percent Difference: Estimated Actual and Forecast
Year 1990 Plan				
Average Weekday Resident Internal Person Trips	3.60 million (1963)	6.02 million (1990)	5.59 million (1991)	+7.7 percent
Average Weekday Resident Internal Personal Vehicle Trips	2.17 million (1963)	3.94 million (1990)	4.08 million (1991)	-3.4 percent
Average Weekday Vehicle- Miles of Travel	13.1 million (1963)	32.3 million (1990)	32.4 million (1990)	-0.3 percent
Year 2000 Plan				
Average Weekday Resident Internal Person Trips	4.46 million (1972)	5.75 million (2000)	6.11 million (2001)	-5.9 percent
Average Weekday Resident Internal Personal Vehicle Trips	2.89 million (1972)	3.77 million (2000)	4.53 million (2001)	-16.8 percent
Average Weekday Vehicle- Miles of Travel	20.1 million (1972)	30.1 million (2000)	39.2 million (2000)	-23.2 percent
Year 2010 Plan				
Average Weekday Resident Internal Person Trips	5.59 million (1991)	5.91 million (2001)	6.11 million (2001)	-3.2 percent
Average Weekday Resident Internal Personal Vehicle Trips	4.08 million (1991)	4.43 million (2001)	4.53 million (2001)	-2.2 percent
Average Weekday Vehicle- Miles of Travel	33.1 million (1991)	38.1 million (2001)	40.0 million (2001)	-4.7 percent
Year 2020 Plan				
Average Weekday Resident Internal Person Trips	5.59 million (1991)	6.10 million (2001)	6.11 million (2001)	-0.2 percent
Average Weekday Resident Internal Personal Vehicle Trips	4.08 million (1991)	4.57 million (2001)	4.53 million (2001)	+0.9 percent
Average Weekday Vehicle- Miles of Travel	33.1 million (1991)	40.3 million (2001)	40.0 million (2001)	+0.7 percent

Source: SEWRPC.