



TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

December 2, 2009

Mr. Victor M. Mendez
Administrator
Federal Highway Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
HOA-1, Room E87-314
Washington, DC 20590-9898

Mr. John Horsley
Executive Director
American Association of State Highway
and Transportation Officials
444 North Capitol Street, NW
Suite 225
Washington, DC 20001

Dear Mr. Mendez and Mr. Horsley:

I am writing to report the findings and recommendations of the Transportation Research Board (TRB) Long-Term Pavement Performance (LTPP) Committee ("the committee") developed at its meeting on October 14, 2009. The meeting was convened to review progress in the continuation of the LTPP studies. A roster indicating the members who attended the meeting is attached.

First, allow me to recognize Mr. Mendez for his leadership of the committee from 2001 to this past August, when he resigned upon his appointment as Administrator of the Federal Highway Administration (FHWA). As Chair, he presided during a period of great stress for the LTPP program. Its funding was reduced continually and substantially, and all program activities, including the work of this committee and its expert task groups (ETGs), were consequently downsized. Throughout all of these changes, he kept the committee focused on what was achievable rather than on what was wished for the program. He established an atmosphere of collaboration with FHWA that is now "standard operating procedure." I congratulate him on a job well done and on his appointment as Administrator, and I wish him every success.

As you both know, the LTPP studies initially were a part of the Strategic Highway Research Program and have been managed by FHWA since 1992. Throughout its existence, the LTPP program has been guided by an arrangement among FHWA, the American Association of State Highway and Transportation Officials, and the National Research Council (NRC) of the National Academies. By agreement of the three parties and through a contractual arrangement with FHWA, NRC continues to provide advice and assistance on the conduct of the LTPP studies through the work of its TRB LTPP Committee.

The agenda of the October 14 meeting consisted of briefings by members of the FHWA LTPP Team, members of the committee and its ETGs, and TRB staff, followed by a question-and-answer period and discussion. The topics included FHWA organizational updates, LTPP program status, ETG reports, options for preserving the database and maximizing its use, the recording of the history of the program, plans for enhancements of the database, and

documentation of the benefits of the program to the highway community.

At the conclusion of the open session, the committee held a closed session to deliberate on its findings and formulate its consensus recommendations, which are presented below.

- We commend FHWA's LTPP Team for resolving the funding problems and consequent contracting delays caused by FHWA bookkeeping issues. The problems had been adversely affecting the LTPP Specific Pavement Study Traffic Pooled Fund Study (TPFS). We note that \$690,000 had been deobligated and that \$218,000 was reobligated and supplemented by \$300,000 in completed contracts, leaving a shortfall of only \$172,000. We are pleased that the FHWA will fund this shortfall out of LTPP program funds.
- We are pleased that the new TPFS Phase I contract to evaluate and calibrate existing data collection systems will be awarded by December and that the Phase II contract to install weigh-in-motion (WIM) systems and collect data has sufficient funds to continue to the end of 2011.
- We are pleased by the substantial increase in research-quality traffic data collected by the program and recommend that efforts be undertaken to inform the states about this achievement. The TPFS has produced:
 - Protocols for the capture of research-quality traffic data (definition, installation, calibration, and maintenance of hardware; data processing; data analysis),
 - A uniform vehicle classification system,
 - Methods for quantifying pavement surface profiles of WIM sites, and
 - 49 test sites that are producing large quantities of research-quality traffic data.

We believe that these achievements do much to address the concerns of database users who have experienced gaps in the traffic data and have concluded that this segment of the database is seriously flawed.

- While everyone awaits the legislation that will follow the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, we contemplate with some apprehension the potential impact of the new law on the LTPP program. The program was explicitly authorized in the language of the Surface Transportation and Uniform Relocation Assistance Act of 1987 and three succeeding acts of Congress. Whether the new bill will recognize the program with such distinction and support is uncertain. If the bill is silent on LTPP, the program will only receive funding that FHWA allocates from its discretionary funds for research. This would require LTPP to compete for funds with all other FHWA-sponsored research programs in an arena in which few if any programs receive full funding of their plans. Whether it is Congress or FHWA that sets the funding level for LTPP in the post-2009 era, we stand behind our earlier

recommendation¹ that the program's critical activities require a 6-year budget of \$54 million.

- We congratulate the FHWA LTPP Team on its past successes in securing Focus Area Leadership and Coordination (FALCON) funding for LTPP data analysis projects, but we note that the amount of this funding for the LTPP program is steadily declining. Any funding provided by this process is welcome, but we do not consider it a reliable source of funds for the program in the future. The FALCON process causes multiple ongoing programs to vie, through the submission of project proposals, for funding that is insufficient to meet all program needs. We note that many projects in the Strategic Plan for LTPP Data Analysis remain unfunded, and yet FALCON funds were not requested for them. We recommend that the FHWA LTPP Team pursue funding of the plan through the FALCON process and that FHWA apply available funds on the basis of merit.
- Also with regard to the Strategic Plan for LTPP Data Analysis, we note that some of the analyses listed as completed were conducted years ago. The researchers who conducted those analyses encountered many difficulties because of gaps in the database and data of questionable quality. Their results were compromised by these difficulties, which led some observers to conclude that the database was irretrievably flawed. Some still hold this opinion, even though it was formed more than a decade ago. We recommend that new data analysis projects be initiated in cases where early projects produced only limited results. The new results will be useful and will help dispel any lingering negative opinions of the LTPP database.
- We thank the FHWA LTPP Team for sharing with us drafts of a brochure and a companion document that record the many benefits that have been and continue to be derived from the results and products of the LTPP program. We commend efforts to compile this information in an interesting, comprehensive, and readable manner. The team can take pride in this record. We recommend that the definition of "benefits" be broadened to include the data collection protocols; design specifications; and procedures for installation, calibration, and validation of data collection equipment that were developed in the course of LTPP activities. All of these advances in the technology of gathering pavement performance data, and the resulting improvements in and standardization of data collection by the states, qualify as benefits. Furthermore, we recommend the completion, publication, and wide dissemination of both the brochure and the document. We caution, however, that neither the program nor the list of benefits should be portrayed as complete in these materials, because the LTPP program is an ongoing activity that will yield additional benefits as data are added to the database and as new data analysis efforts are completed.
- We are particularly pleased that the LTPP database has been physically relocated to the Turner-Fairbank Highway Research Center and that the operation of the database has been transferred from contractors to FHWA staff. These actions are directly in line

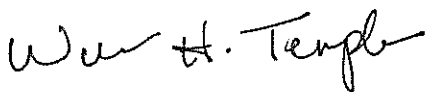
¹ *Preserving and Maximizing the Utility of the Pavement Performance Database*. Transportation Research Board of the National Academies, Washington, D.C., 2009.

with the committee's earlier recommendation² calling for the establishment of the National Pavement Performance Database (NPPD) and for the NPPD to be the custodian and steward of the LTPP database. However, we remain concerned that, without the formal establishment and authorization of the NPPD, the status of the database will remain subject to changes in policy, organization, and staff that inevitably will occur within FHWA. We will continue to press for the committee's recommendation to be implemented fully, and we urge FHWA to include the recommendation in its reauthorization proposal. Specifically, we urge the following:

- Establishment of the NPPD to be the custodian of the LTPP database, as a self-contained and fully funded entity within an existing agency, with the appropriate mandate and staffing resources to carry out the duties encompassed in this and the following two actions;
- Authorization of the NPPD to preserve and keep current the LTPP database hardware and software as the technology of computers and data storage evolves and to incorporate additional pavement performance data into the database as the data become available;
- Authorization of the NPPD to conduct LTPP data analysis and product development, to support those who seek to analyze the data to improve understanding of the causes of pavement deterioration, and to develop new designs and maintenance procedures based on this improved knowledge; and
- Funding of the NPPD in the amount of \$9 million annually during the next period of reauthorization of surface transportation research to enable the above actions.

In closing, I thank Aramis López, the FHWA LTPP Team leader, for a highly productive meeting.

Sincerely,



William H. Temple
Chair
TRB LTPP Committee

Enclosure: Roster of committee members indicating attendance at the meeting
of October 14, 2009

² Ibid.

Enclosure

TRB LONG-TERM PAVEMENT PERFORMANCE COMMITTEE¹

WILLIAM H. TEMPLE, *Chair*
Chief Engineer, Office of Highways
Louisiana Department of Transportation
and Development

THOMAS E. BAKER, *Vice Chair*
State Materials Engineer
Washington State Department of
Transportation

MICHAEL E. AYERS
Director of Education
American Concrete Pavement Association

JUDITH B. CORLEY-LAY
State Pavement Management Engineer
North Carolina Department of
Transportation

DONALD H. FREEMAN
President
Freeman's Consulting Services, Inc.

RALPH HAAS
Norman W. McLeod Engineering Professor
University of Waterloo

CARL L. MONISMITH
Robert Horonjeff Professor of Civil
Engineering, Emeritus
University of California, Berkeley
(attended by closed-circuit television
hookup)

David E. Newcomb
Vice President, Research and Technology
National Asphalt Pavement Association

ROBERT L. SACK
Deputy Chief Engineer
New York State Department of
Transportation

TED M. SCOTT II
Director of Special Projects
American Trucking Associations, Inc.

GARY C. WHITED
Program Manager, Construction and
Materials Support Center
University of Wisconsin, Madison

JAMES M. YOWELL
Engineering Group Manager, City-County
Planning Commission
Bowling Green, Kentucky

¹ Attendees of the meeting of October 14, 2009, are indicated in bold capital letters.