



TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

April 5, 2005

Ms. Mary E. Peters
Administrator
Federal Highway Administration
U.S. Dept. of Transportation
400 Seventh Street, S.W.
Room 4218
Washington, DC 20590

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

Dear Ms. Peters and Mr. Horsley:

This is the eighteenth letter report of the Transportation Research Board (TRB) Long-Term Pavement Performance (LTPP) Committee (“the Committee”).

On January 24, 2005, the Committee met to review progress in the continuation of the LTPP studies. A roster indicating the members who attended this meeting is Attachment 1.

As you know, the LTPP studies initially were a part of the Strategic Highway Research Program (SHRP) and have been managed by the FHWA since 1992. Throughout its existence, SHRP was guided by a tripartite arrangement among the FHWA, AASHTO, and the National Research Council (NRC). By mutual agreement of the three parties, and through a contractual arrangement with the FHWA, the NRC continues to provide advice and assistance on the conduct of the LTPP studies through the work of its TRB LTPP Committee. Unfortunately, because of a funding shortage, it has been 13 months since the committee and its Expert Task Groups (ETGs) have met, causing a disruption of this tripartite collaboration.

The Committee meeting’s agenda consisted of briefings by the FHWA LTPP staff and discussions in which all attendees participated. The meeting focused on the FHWA’s 8-month budget allocation plan for LTPP in the period from October 1, 2004 to May 31, 2005. The review of this budget prompted discussions of the impacts on various LTPP activities, and the options available to decrease the levels of activity of some in order to increase those of others.

At the conclusion of the meeting’s open session, the Committee held a closed session to deliberate on its findings and formulate its consensus recommendations. Those items are as follows:

LTPP 8-Month Budget Allocation Plan

We appreciate having the opportunity to comment on the FHWA LTPP staff’s plan for allocating the funds to be received in the latest 8-month extension of TEA-21 funding, and recommend the following modifications:

- a. Proceed without delay to fill the gaps in the database.

- b. Maintain the schedule of two data releases per year, including the one for July 2005.
- c. Postpone the initiation of any new data analysis projects until the Data Analysis ETG meets, reviews the leading candidates, and establishes a new list of high-priority items.
- d. Defer plans to develop computed quantities for the determination of dynamic modulus.
- e. Fully fund the TRB contract to permit the TRB LTPP Committee and its ETGs to re-institute their full schedules of regular activities.

a. Filling the gaps in traffic and materials data.

LTPP's principal product is the database, and traffic, materials, and distress data are its key components. Without a sufficient quantity of high-quality key component data, analysts, designers, and managers will be unable to use the database to understand pavement behavior and design, build, and maintain longer-lasting pavements. We recommend that three data collection efforts be given the highest priority --- filling the gaps in the traffic data (under way), filling the gaps in the materials data (planned but not yet implemented), and capturing a photographic record of surface distresses (interrupted). At whatever funding level LTPP is operated, whether with funds received through continuing resolutions or a new reauthorization bill, we recommend that LTPP's apportionment of funds begin with the funding of these data collection efforts.

b. Release of data

Maximizing access to the data is as important as developing a high-quality, high-quantity database. This access takes two forms: distribution of the set of CDs that contain the data, and deployment of DataPave software that facilitates the manipulation and analysis of the data. Additionally, distribution of the database in the tangible form of CDs does much to dispel the lingering skepticism of some state representatives who continue to doubt that LTPP is producing products of value. We recommend that LTPP continue its regular schedule of two data releases per year, maintain the DataPave software, and continue to provide customer support in the use of the software and data.

c. Postpone data analysis

The Data Analysis ETG has not met since October 2003. Initiation of any new data analysis projects should be deferred until the ETG meets, assesses current progress, and re-prioritizes the candidate projects. Any monies in this eight-month budget that were going to be used to fund new data analysis projects this year could be used more productively for other activities.

d. Defer plans to calculate computed quantities supporting the determination of dynamic modulus.

NCHRP Project 9-30(A) – *Rutting Performance Models for HMA Mix and Structural Design* will attempt to calibrate the mechanistic-empirical rutting model included in the recently released Pavement Design Guide. It is anticipated that calculated values of dynamic modulus will be determined for selected LTPP sites. Any other plans for such work should be deferred until the scope of the NCHRP activity and the procedure employed are known.

e. Fully fund the TRB committee activities supporting LTPP

As reported earlier, TRB was notified in February 2004 that, due to the protracted delay in congressional reauthorization of the federal-aid surface transportation programs, the FHWA was no

longer able to provide the funds necessary to continue the Committee's advisory activity. We also reported that the TRB would be forced to suspend all activities of the Committee when the funds previously allotted for our support were exhausted.

We hoped that this suspension would be of short duration, but, as the series of continuing resolutions of the Congress provided short-term extensions of the TEA-21, the funds provided to us were insufficient to permit us to resume regular activities. This was the case even though these extensions provided \$9.4 million in fiscal year 2004 to the FHWA for the operation of LTPP.

As each extension occurred and our activities remained suspended, our concern deepened that we were being isolated from decisions made by the FHWA in the management of LTPP. It is important to remind and re-affirm that the LTPP studies are to be managed and operated by a federal, state, and provincial partnership and that all partners have roles to play in its decision-making.

While the FHWA LTPP Research Team has made decisions that it believed to be consistent with past Committee advice, the rapidly deteriorating financial situation might well have altered that advice or its application to specific decisions. We recommend that the FHWA refrain from "going it alone" in the decision-making for LTPP and quickly restore the funding of our activities and those of our ETGs. We believe it is imperative to the ultimate success and acceptance of the LTPP program that the advice of and collaboration with the committee be given full consideration.

"Fulfilling the Promise of Better Roads"

We acknowledge that fiscal years 2003 and 2004 have been a time of severe under-funding of LTPP, but we re-affirm the applicability of the plans for the program that are contained in the report we authored in 2002 entitled, "Fulfilling the Promise of Better Roads." We believe that these plans and their goals are still achievable if LTPP is funded at the levels indicated in the report for the next six years. Therefore, we recommend that the FHWA, which has adopted this document as its plan for LTPP in the 2003-2009 timeframe, continue to support it as reauthorization needs are debated.

Response to AASHTO Regarding Future Needs of LTPP

AASHTO, through questions articulated by Dr. Anthony Kane, has asked for a clear and definitive statement of LTPP needs in response to the changed circumstances surrounding a new reauthorization bill. Specifically:

What is the funding level necessary for LTPP in the period from 2004 to 2009?

We stated in "Fulfilling the Promise of Better Roads" that \$121.2 million was needed. The FHWA LTPP Team adopted this document as its plan for LTPP. While it is impossible to "buy back" the delays imposed by the uncertain and inadequate funding of the past two years, we firmly believe that, in each of the next four years, \$20 million can be productively expended and is needed if LTPP is to meet its goals. We have stated our position and believe it is time for the FHWA to state a definite position on LTPP's needs as well.

The Senate reauthorization bill debated in the past Congress called for a termination of LTPP activities by 9/30/2009. Is this a feasible completion date?

Our position remains that the vision of LTPP called for a 20-year data collection period. Data collection on the test sections began in the autumn of 1989. If funding at the level cited above is available, we currently believe that most major data collection activities can still be completed by the end of 2009. An exception to this will be the collection of vehicle weight and classification data on the specific pavement study test sites. Installation of monitoring equipment at these sites has been delayed by the funding shortfall and a minimum of 5 years of data is needed. In addition, data analysis and product development activities obviously began later than the initiation of data collection and will continue some time after its completion. It makes no sense to end these activities at the time when the final complement of performance data is entered into the database. We recommended previously that the completeness and quality of the database should be assessed in 2006, and that the plans for further data collection, data analysis, and product development be revised at that time. We re-affirm this recommendation.

Outreach to the LTPP Partners

At our meeting, we heard reports that the state DOT LTPP coordinators and other state DOT employees who attended the Annual LTPP State Coordinators Meeting expressed a sense of isolation from the program. Further, they reported confusion about the general status of LTPP beyond their specific state borders. Individual state coordinators also reported negative reactions to the suspension of TRB LTPP Committee and ETG meetings. Additionally, staff turnover at many agencies has brought into positions of authority individuals with no prior knowledge of LTPP. The need to revitalize the states' knowledge and interest in LTPP is acute.

At our meeting the FHWA LTPP Research Team reported on continuing efforts to conduct state-by-state meetings with senior managers consistent with past committee recommendations. We applaud this continuing effort. We recommend further that the FHWA communicate frequently with the members of the various AASHTO committees and subcommittees that are relevant to LTPP. The FHWA Team should also initiate periodic written communications with the state LTPP coordinators to supplement the annual coordinators meeting.

We applaud the FHWA's contributions to the American Concrete Pavement Association's "professors' workshops" in 2004 as an example of the high quality of outreach that it is able to provide, and recommend more such involvements.

In conclusion, the past year has been a difficult one for the LTPP studies. The FHWA Research Team has had to cope with inadequate resources made available in a most confusing manner. Both the funding shortfall (\$4 million last year and again this year) and the confusion have threatened the long-term viability of the studies. The FHWA team was forced to make many unwelcome decisions. At the meeting, a number of those decisions were criticized on technical grounds, but the committee members all recognize that alternative decisions would also have been criticized. Resources were simply inadequate or arrived too late to keep everything on track and up to speed. Our primary concern, rather, is that FHWA made these difficult decisions without discussion leading to consensus advice from the many LTPP partners. Throughout the meeting, there were many concerns and discouraging remarks expressed about the lack of communication with the Committee, the ETGs, the LTPP state coordinators, and the state DOT executive offices. By the close of our meeting, however, I felt that much had been done to restore the working relationship between the FHWA research team and the TRB LTPP Committee. I also believe that productive relationships with the other partners

can be restored with aggressive communications. The technical challenges that have arisen will be more difficult to resolve. The Committee looks forward to working closely with the FHWA and the AASHTO member departments in meeting these challenges.

Sincerely,

Gary Hoffman/ for

Victor M. Mendez
Chairman
TRB LTPP Committee

Attachments:

1. Roster of Committee Members Indicating Attendance at the Meeting of January 24, 2005

TRB LONG-TERM PAVEMENT PERFORMANCE COMMITTEE

MEMBER ROSTER

(Attendees of meeting of January 24, 2005 are indicated in **BOLD CAPITAL LETTERS**)

MICHAEL E. AYERS

Director of Pavement Technology Services
American Concrete Pavement Association

Don H. Freeman
State Highway Engineer
South Carolina Department of Transportation

RALPH HAAS

Norman W. McLeod Engineering Professor
University of Waterloo

GARY HOFFMAN

Deputy Secretary for Highway Administration
Pennsylvania Department of Transportation

John R. Hosang
Assistant Deputy Minister
Manitoba Department of Highways &
Government Services

HENRY G. R. KERALI

Senior Highway Engineer
The World Bank

JOSEPH M. LEONARDO

Chief Engineer (Acting)
California Department of Transportation

Victor M. Mendez (Chairman)
Director
Arizona Department of Transportation

CARL L. MONISMITH

Robert Horonjeff Professor of Civil
Engineering
University of California, Berkeley

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

CHARLES A. PRYOR, JR.

Vice President, Engineering
National Stone, Sand & Gravel Association

ROBERT L. SACK

Deputy Chief Engineer
New York State Department of Transportation

TED M. SCOTT

Executive Director of Government Relations
Roadway Express Inc.

WILLIAM H. TEMPLE

Chief Engineer, Office of Highways
Louisiana Department of Transportation and
Development

ROBERT WALTERS

Chief Engineer
Arkansas Highway & Transportation
Department

GARY C. WHITED

Deputy Administrator
Wisconsin Department of Transportation

JAMES MCFARLAND YOWELL

State Highway Engineer
Kentucky Transportation Cabinet