



December 27, 2007

Mr. J. Richard Capka
Administrator
Federal Highway Administration
U.S. Department 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

**Re: Twenty-third letter report of the Transportation Research Board (TRB)
Long-Term Pavement Performance (LTPP) Committee (“the committee”)**

Dear Mr. Capka and Mr. Horsley:

The committee met on October 11–12, 2007, to review progress in the continuation of the LTPP studies. A roster indicating the members who attended this meeting is attached.

As you know, the LTPP studies initially were a part of the Strategic Highway Research Program (SHRP) and have been managed by the Federal Highway Administration (FHWA) since 1992. Throughout its existence, LTPP has been guided by a tripartite arrangement among FHWA, the American Association of State Highway and Transportation Officials, and the National Research Council (NRC) of the National Academies. By mutual 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 meeting’s agenda consisted of briefings by FHWA LTPP staff, LTPP contractors, and TRB staff, followed by questions and answers and open discussion. The meeting’s principal topic was the plan being developed by FHWA for the continuation of certain high-priority activities in the post-2009 period and, in particular, FHWA’s final draft document titled *Long-Term Pavement Performance, FY 2010 to FY 2015* (“the FHWA document”). Other topics included the recent reorganization of the TRB committees supporting LTPP; reports from TRB’s expert task groups; and briefings on FHWA’s Office of Infrastructure Strategic Planning, Pavement and Materials Strategic Planning, and LTPP Benefits Study.

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

1. We extend our congratulations to FHWA and its LTPP Team for the continuous effort applied since 1992, when the LTPP studies were transferred from SHRP to FHWA, to the development and maturation of the LTPP database.
2. In our opinion, this database is the premier product of the LTPP studies. Although it is not yet complete, it already contains more research-quality data than have ever been collected anywhere. This database contains data that have been collected systematically and rigorously concerning the type, extent, and rate of deterioration of a sample of the nation's highway pavements as a result of time, traffic, weather, and other influences.
3. The database will continue to be analyzed for as long as it is available to discover cause-and-effect relationships and to explain why some pavements decline rapidly in serviceability, smoothness, and structural integrity while others do not. These relationships and explanations will enable pavement engineers to design pavements rationally, by using local or site-specific data for calibration of design parameters in accordance with the guidelines in the new mechanistic-empirical design guide.
4. For these reasons, we believe that the LTPP database is a national asset and merits designation as such by FHWA, the federal agency credited for its development. We recommend that the database be titled the "National Pavement Performance Database" and that the activities identified in the FHWA document be conducted by FHWA as part of an unambiguous commitment to maintain and operate this national asset for the foreseeable future.

More specifically, we recommend the following steps with regard to the FHWA document:

- a. Planning for LTPP activities in FY 2010–FY 2015:* We recommend that FHWA develop alignment and linkage between the plan for operating LTPP activities in FY 2010–FY 2015 and FHWA's Highways of the Future Strategic Plan. At a time when the agency is developing multiple plans whose components address similar topics, it is important (and potentially efficient and effective) to identify the activities in each plan that complement or supplement activities in other plans. In particular, we see the LTPP database serving into the indefinite future as a key component of the agency's pavement research activities, and those activities will benefit substantially from the many LTPP data collection and analysis activities in FY 2010–FY 2015 that are mentioned in the FHWA document.
- b. Operation of LTPP activities in FY 2010–FY 2015:* We were told at our meeting that the first four cost elements listed in Table 5 of the FHWA document pertain to the core functions listed on page 22. In our opinion, all six of the cost elements in this table—database security and maintenance, database user support, test section

monitoring, database refinements, data analysis, and product development—are of the utmost importance, and we recommend that the list of core functions be expanded to include all of them. All of these activities will be key components of maintaining and operating the National Pavement Performance Database, and all references in the FHWA document to the operation of these activities should be couched as “National Pavement Performance Database operations.”

- c. *Management of LTPP activities in FY 2010–FY 2015:* It would be extremely helpful to us and other readers of the FHWA document if “centralized management” as it appears in Section 4.1 were defined. In addition, we suggest that the agency clarify whether the LTPP activities will be conducted in a centralized management manner or whether the agency is simply stating that centralized management is the ideal management structure for LTPP. It is our view that all seven core functions listed in this section are components of the normal operation of the national asset and that they will be most efficiently and effectively operated in a centralized manner by a single entity within the agency, such as the LTPP Team, rather than being managed by separate offices within the agency.

- d. *Costs of LTPP activities in FY 2010–FY 2015:* The cost estimates contained in Table 5 are low and allocate inordinately small portions of the yearly totals to data analysis and product development. In particular, the amounts listed for test section monitoring are too low, and it puzzles us that the funding in this category falls to \$0 in FY 2015. An explanation is warranted. We recommend that FHWA reevaluate all of the cost estimates and allocate increased portions of the total yearly funds to data analysis and product development in the early years of the FY 2010–FY 2015 period.

I want to thank FHWA’s LTPP Team, led by Aramis López, for a highly productive meeting.

Sincerely,



Victor M. Mendez
Chairman
TRB LTPP Committee

Attachment: Roster of committee members indicating attendance at the meeting of October 11–12, 2007.

Attachment

TRB LONG-TERM PAVEMENT PERFORMANCE COMMITTEE

Member Roster¹

MICHAEL E. AYERS²

Director of Pavement Technology
Services
American Concrete Pavement
Association

THOMAS E. BAKER

State Materials Engineer
Washington State Department of
Transportation

DONALD H. FREEMAN

Principal
Freeman's Consulting Services, Inc.

RALPH HAAS²

Norman W. McLeod Engineering
Professor
University of Waterloo

VICTOR M. MENDEZ

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

ROBERT L. SACK

Deputy Chief Engineer
New York State Department of
Transportation

TED M. SCOTT

Director of Special Projects
American Trucking Associations, Inc.

WILLIAM H. TEMPLE

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

GARY C. WHITED

Program Manager, Construction and
Materials Support Center
University of Wisconsin-Madison

JAMES MCFARLAND YOWELL

Engineering Group Manager, City -
County Planning Commission
Bowling Green, Kentucky

¹ Attendees of the meeting of October 11–12, 2007, are indicated in **BOLD CAPITAL LETTERS**.

² Attended the open sessions only.