

September 8, 1997

Ms. Gloria Jeff  
Acting Administrator  
Federal Highway Administration  
U.S. Dept. of Transportation  
400 Seventh Street, S.W.  
Room 4218  
Washington, DC 20590

Mr. Francis B. Francois  
Executive Director  
AASHTO  
444 North Capitol Street, N.W.  
Suite 225  
Washington, DC 20001

Dear Ms. Jeff and Mr. Francois:

This is the second letter report of the Transportation Research Board's TRB LTPP Committee regarding the continuation of the Long-Term Pavement Performance (LTPP) studies initiated by the Strategic Highway Research Program (SHRP) and now managed by the Federal Highway Administration. Throughout its existence, the SHRP was guided by a tripartite arrangement among the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the National Research Council. By mutual agreement of the three parties and contractual arrangement with the FHWA, the National Research Council, through its TRB LTPP Committee, continues to provide advice and assistance on the conduct of the LTPP studies.

On May 19-20, 1997, the TRB LTPP Committee ("the committee") met and discussed progress in the continuation of the Long-Term Pavement Performance studies. A committee roster indicating the members who attended this meeting is attached.

FHWA staff briefed the committee regarding the status of current LTPP data analysis activities, program improvement plans, and the strategic plan for LTPP data analysis, and described LTPP's need for rehabilitated pavement sections to complete the testing matrix. The committee was also briefed on the FHWA's proposed plan for identification, development, and implementation of LTPP products, and the status of current LTPP implementation activities.

Based upon materials presented at the meeting or provided earlier, as well as on the discussions that followed, the committee developed in an executive session the consensus recommendations that follow.

#### RESULTS DISSEMINATION AND PRODUCT IMPLEMENTATION

The highway community should receive the fruits of LTPP research -- technical results, analytical findings, insights into pavement performance, and products -- as soon as possible. The LTPP program is approximately ten years old, and state highway agencies are growing impatient to receive what they view as the return on their investment. In some states where those individuals who were active in the creation of SHRP LTPP have retired, their successors display a skepticism of LTPP that will be dispelled only by the earliest and widest distribution of its

results. We caution against any delay in disseminating LTPP results due to internal agency reviews conducted after these results have completed the technical peer review process.

The committee requests further information from the FHWA describing the process by which LTPP research findings will be disseminated to the highway community.

We recommend that the FHWA develop a plan for the implementation of LTPP products that includes the active participation of the researchers, implementers, and users of the products in its development. The FHWA should prepare a more detailed workplan describing the tasks to be assigned to the researchers and product developers.

We request that the FHWA develop a white paper describing the rationale and procedure to be employed by the FHWA's Pavement Management Coordinating Group as its "screening process" for identifying significant findings in the final technical reports of LTPP research contractors.

The committee endorses the FHWA's concept of the FHWA LTPP Data Advisory Group ("DAG") to help plan the implementation of the DATA/PAVE software currently being developed by the FHWA to provide data analysts with easy access to the LTPP database. This software is viewed by the committee as an invaluable key to the widespread use of the database. The LTPP database, the National Information Management System, is perhaps LTPP's most significant contribution to pavement knowledge. The DAG should coordinate with AASHTO to resolve the issues of long-term software maintenance and user support concerning DATA/PAVE.

## DATA ANALYSIS

The committee is supported by four expert task groups (ETGs), which are groups of volunteers with technical expertise in specific areas that are of importance to the LTPP program. These ETGs meet periodically to review and comment on the operational status of parts of the LTPP program, to provide feedback to the FHWA's detailed technical questions, and to develop recommendations, which are then forwarded to the TRB LTPP Committee for its consideration. There are four ETGs -- on LTPP Data Analysis, LTPP Automated Distress Identification, LTPP Traffic Data Collection and Analysis, and State DOT Usage of the LTPP Data.

On the basis of a recommendation of the TRB ETG on LTPP Data Analysis, we recommend that the FHWA first determine whether the LTPP database contains a sufficient quantity of high-quality data before initiating newly proposed analyses.

The committee recommends that the FHWA proceed with the six "data studies" proposed for investigation as part of the FHWA LTPP data analysis program. Data studies were defined by the FHWA as initial analysis work that concentrates on narrow segments of LTPP data for making diagnoses, identifying extremes, and computing parameters. This work entails a much more in-depth examination of the data than conducted in the data collection quality assurance program. Before additional data studies are undertaken, however, the FHWA should develop a

comprehensive plan, with budgets, schedules, and identified products, describing how the LTPP Data Studies activity will support NCHRP Project 1-37, Development of the 2002 Guide for the Design of New and Rehabilitated Pavement Structures, and what practical products will be produced. It is important for the FHWA to describe explicitly the value of data studies to the states, and to complete the data studies within two years.

## DATA COLLECTION

Traffic data of high quality and in sufficient quantity are vital to the success of LTPP. On the basis of recommendations received from the TRB ETG on LTPP Traffic Data Collection and Analysis, the committee recommends that the FHWA:

- Develop a plan describing the process for effectively communicating the new traffic data collection plans to the states, and provide an opportunity to the TRB ETG on Traffic Data Collection and Analysis to discuss the plan and provide input to it before it is distributed to the states.

- Provide assistance to the states concerning calibrating traffic monitoring equipment using a documented test truck. This assistance should include technical information on the theory, and technical guidance on the practice, of monitoring the distribution of gross weights and front axle weights of Type 9 vehicles in the traffic stream. It is recommended further that a study be conducted to determine whether the distribution of gross weight is a valid indicator of scale calibration.

- Develop site-specific data collection plans for the next 3-5 years for all LTPP test sections, based on the results of the current LTPP program improvement activity's "test section report card development" effort.

- Enable LTPP to participate in the FHWA Pooled Fund Study of traffic data editing procedures to the extent of providing information and data to the contractor selected to perform the study.

There is value in the FHWA's plan to foster the "evolution" of test sections to fill the need for additional sections in order to study rehabilitation methods and strategies. The committee cautions, however, that the states must have the flexibility to agree or decline to participate in the evolution process.

## PROGRAM OPERATIONS

We recognize that the effective operation of the LTPP studies involves the active participation of many organizations and individuals, and that maintaining the relationships that have developed over many years among these groups and people is crucial to the continuing success of the program. We are concerned, therefore, by the almost simultaneous departure of all four of the

LTPP Regional Engineers (REs); people with appropriate technical experience and programmatic knowledge of the history of LTPP should be sought as replacements. We also have some concerns about the FHWA's proposal to reduce the number of REs, to distribute them across North America in a new and different manner, and to situate them organizationally within other existing units of FHWA where they will have supervisors other than the LTPP program manager. LTPP has experiential evidence only of the level of success of using four REs, with their specific skills, distributed across the continent as they have been, and reporting directly to the LTPP program manager. The FHWA should demonstrate that the conduct of the LTPP studies will not be adversely affected by the proposed changes.

The committee is concerned that the annual budget of \$15 million for LTPP over the next five years proposed by the FHWA will not keep pace with inflation, and lacks the funding growth needed as data analysis and product development activities increase while operational activities continue unabated. Further substantiation by the FHWA is needed to demonstrate that the conduct of the LTPP studies will be fully supported by the budget proposed, or that funds from other sources will be available to supplement the LTPP budget.

Sincerely,

Allan L. Abbott  
Chairman  
TRB LTPP Committee

Attachment: Roster of Committee Members Showing Attendance at the Meeting of  
May 19-20, 1997

ROSTER OF COMMITTEE MEMBERS  
SHOWING ATTENDANCE AT THE MEETING OF MAY 19-20, 1997

(Attendees are indicated in ***Bold Italics***)

E1002: TRB LONG-TERM PAVEMENT PERFORMANCE (LTPP) COMMITTEE

CHAIRMAN

***Allan L. Abbott***

Director - State Engineer  
Nebraska Department of Roads

MEMBERS

Roger Almond  
Deputy Director/Chief Engineer  
Arkansas DOT

Vice President  
National Asphalt Pavement Assn.

***Gary S. Carver***

Assistant Chief Engineer -  
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Director of Research & Materials  
Connecticut DOT

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American Concrete Pavement Assn.

***John R. Hosang***

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***William J. MacCreery***

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East Lansing, MI

***Raymond K. Moore***

Professor of Civil Engineering  
University of Kansas

***Richard D. Morgan***

***Charles A. Pryor, Jr.***

Vice President, Engineering  
National Stone Association

***Ted M. Scott***

Director, Highway Policy  
American Trucking Associations

***Gary D. Taylor***

Bureau Director, Hwy Tech Services  
Michigan DOT

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**FHWA LIAISON**

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Assoc Admin for Program Dev  
Federal Highway Administration

**INTERNATIONAL LIAISON**

***Govert T.H. Sweere***

Project Director  
SHRP-The Netherlands