OF THE NATIONAL ACADEMIES

August 6, 2004

Ms. Mary E. Peters Administrator Federal Highway Administration Room 4218 400 7th Street, SW Washington, D.C. 20590

#### Dear Administrator Peters:

The Research and Technology Coordinating Committee (FHWA) met on June 14–15, 2004, at the J. Erik Jonsson Woods Hole Center of the National Academies in Woods Hole, Massachusetts. The enclosed meeting roster indicates the members, liaisons, guests, and TRB staff in attendance. On behalf of the committee, I thank FHWA for its continuing interest in the work of the RTCC. I also thank and commend members of the FHWA staff for their participation in the meeting. The committee appreciates the presentations made by George Ostensen, Dennis Judycki, and Marci Kenney, as well as the contributions of other FHWA staff who attended the meeting.

This letter report is an intentionally brief summary of the meeting; information about the committee's future activities and meetings is also provided. The report is organized under four main topics:

- Review of the activities of the FHWA Office of Safety's research and technology (R&T) program
- Status reports on efforts under way to identify and document advanced research at FHWA, the laboratory assessment schedule for FHWA's Turner-Fairbank Highway Research Center (TFHRC), and FHWA's efforts aimed at research performance measurement
- Review of potential topics for future committee study
- The status of preparations for a set of *TRNews* articles describing the current state of local/regional stakeholder involvement in highway R&T programs.

### Review of Office of Safety R&T Activities

George Ostensen, Associate Administrator for Safety, reviewed activities of his office aimed at improving highway safety and focused on several key issues—roadway departure, intersection collisions, pedestrian and bicyclist safety—as well as a number of cross-cutting areas. He indicated that appropriate highway safety countermeasures are determined through a combination of accurate problem identification and assessment and

appropriate analysis and decision-making tools, all of which FHWA is addressing in its R&T program. By working closely with state and local research stakeholders, FHWA is attempting to ensure that needed countermeasures are developed and implemented. The Office of Safety was one of the first at FHWA to develop and use research roadmaps, and it continues to refine its roadmaps to support research management.

# Status Reports on FHWA's R&T Activities

FHWA staff reported on several ongoing activities that the committee has supported in the past. Marci Kenney, Director of the Office of R&T Program Development and Evaluation, reported on the office's efforts to identify and document advanced research under way in the agency. FHWA formed an external expert panel to review its internal inventory of agency research projects and determine whether the projects fit FHWA's definition of such research. In addition, the panelists made suggestions on the definitions and characteristics of advanced research, the management of an advanced research program, and the various degrees and definitions of risk associated with advanced research. This effort reflects the agency's response to past committee recommendations.

FHWA staff noted that the agency's efforts aimed at developing a corporate master plan for highway R&T have led to the development of more than 60 research roadmaps. As the agency develops its strategic-level roadmaps, the committee will be interested in reviewing them.

FHWA also reported on the schedule of TFHRC laboratory assessments by external experts. The committee was pleased to learn that several common suggestions emerged from the three assessments already completed. One suggestion—that the agency develop capital improvement and workforce succession plans for each laboratory workforce—also reflects past committee recommendations.

# **Potential Topics for Future Committee Study**

The committee reviewed material on a number of potential topics for future study that it believes would be of value to FHWA's R&T program.

- Effects of earmarking federal highway R&T funds
- Highway policy research issues
- International transportation R&D
- Private-sector and state department of transportation (DOT) highway research programs
- Research program performance measures
- Current pavement research needs

While each of these topics is of interest to the committee, several are being examined by

<sup>&</sup>lt;sup>1</sup> Research roadmaps are designed to provide researchers and decision makers with a quick sketch—using text and graphics with project timelines—of ongoing research program activities.

other groups, including the TRB Executive Committee. As a result, the RTCC will focus its future efforts on topics or subtopics not being examined by these other groups while monitoring their work as appropriate. A summary of the discussions and committee decisions on each of the above topics follows.

Effects of earmarking federal highway R&T funds. The committee would like to know more about how earmarking affects the agency's ability to undertake high-quality highway research on topics of national interest. We note that the TRB Executive Committee is also interested in earmarking and is organizing a workshop on earmarking issues related to transportation R&T. The committee decided to begin gathering information on how other federal agencies—particularly those subject to high levels of research program earmarking—manage earmarked projects to ensure accountability of recipients of earmarked project funds.

**Highway policy research issues.** The committee reviewed material prepared as a result of a public policy forum on federal surface transportation policy issues organized by the Eno Transportation Foundation. The forum reported that the federal role in surface transportation is changing as a result of economic, demographic, social, and environmental developments and echoed several themes identified in a previous committee report entitled *The Future Highway Transportation System and Society: Suggested Research on Impacts and Interaction.* The discussion of this material led the committee to invite FHWA's Office of Policy to describe its R&T program activities at the next committee meeting. In addition, a scoping study on freight policy currently being prepared for the TRB Executive Committee will be circulated to the committee and FHWA prior to the next meeting.

International transportation R&D. Several committee members have identified the need for more cooperation and information exchange among highway researchers in different countries. Dr. Michael Meyer of Georgia Tech reported to the committee on a current TRB Executive Committee initiative aimed at expanding and enhancing TRB's international activities. The ensuing discussion revealed that several countries are achieving considerable reductions in highway crashes, injuries, and deaths. In addition, the TRB Executive Committee is organizing a session at the 2005 TRB Annual Meeting that will focus on highway safety efforts and successes in other countries; the aim is to learn more about the research that supports these efforts. The RTCC decided to gather information on key highway safety successes in other countries and examine the how these successes could be transferred to the United States.

**Private-sector and state DOT highway research programs.** The committee believes more information on these programs would be helpful to all participants in the national highway R&T enterprise. Far less is known about private-sector and state DOT highway research programs than about the federal program. Experience has shown that obtaining information about private research activities is difficult and time-consuming. The RTCC will contact the Research Advisory Committee (RAC) of the American Association of State Highway and Transportation Officials, which regularly surveys its members for research program information, and express its interest in participating and assisting, as appropriate, in the next survey.

Research program performance measures. The difficulties of research performance measurement are well documented. Nonetheless, several committee members have noted that useful methodologies are being developed in response to the Government Performance and Results Act of 1993 and to the recent Office of Management and Budget (OMB) initiative, called the Performance Assessment Rating Tool (PART) initiative, which is aimed at evaluating federal programs. FHWA staff indicated that OMB's ongoing assessment of the agency's R&T program will be completed in July and that it will ask the committee to review the results of this assessment.

**Pavement research needs.** The Superpave<sup>®</sup> mix design system, developed under the Strategic Highway Research Program (SHRP), is being used in every state and yielding cost reductions and performance improvements over traditional design mixes. Nevertheless, there remain significant pavement research needs, including issues related to Superpave<sup>®</sup>; evaluation of other mix designs, such as stone matrix asphalt (SMA); and investigation of how more recycled pavement components can be used in alternative mix design systems. In preparation for more thorough discussion, the committee asked TRB staff to gather information on the focus current pavement research and the results of recent studies of pavement research needs.<sup>2</sup>

# Local/Regional Stakeholder Involvement in Highway R&T

Staff reviewed the status of preparations for a *TRNews* theme issue on local and regional stakeholder involvement in highway research programs.<sup>3</sup> Articles are being prepared on the following topics: the fundamentals of how and why stakeholders are involved in research and technology transfer programs, key issues associated with involving local and regional stakeholders in highway research programs, FHWA activities related to stakeholder involvement in the agency's research program activities, and a summary of what the committee learned about local and regional stakeholder involvement. The theme issue will be published in September-October, 2004 and will be distributed prior to the TRB Annual Meeting.

## **Future Meeting Plans**

The committee's next meeting is scheduled for November 22-23, 2004, in Washington, DC.

#### **Final Remarks**

In closing, the committee again expresses its appreciation for the highly constructive

<sup>2</sup> Previous work by the committee, as reported in *Developing Long-Lasting, Lower-Maintenance Highway Pavement: Research Needs* in 1997, will also be considered.

<sup>&</sup>lt;sup>3</sup> *TRNews* is a bimonthly publication of TRB that features articles on innovative and timely transportation R&T topics.

participation and presentations of FHWA staff during the meeting. The committee remains hopeful that the reauthorization process will provide the agency with the tools needed to effectively carry out the work outlined in the agency's *Corporate Master Plan for Highway R&T*.

On a personal note, I would like to add that it has been a privilege to serve as chair for the RTCC for the past six years. The RTCC attracts committee members who are dedicated and gifted professionals committed to advancing the nation's highway transportation system. It was been especially rewarding for the Committee to work with you and the leadership of FHWA these past four years. I believe that a collaborative partnership has emerged and actions have been taken that will serve the highway research community well into the future. Thank you for your support of the RTCC during my tenure and I know that the Committee under the leadership of Dean Carlson will make significant progress in accomplishing further the goals established of the RTCC partnership with FHWA.

Sincerely,

C. Michael Walton

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Chair

Research and Technology Coordinating Committee (FHWA)

Enclosure

# Meeting Attendance: Committee, Liaisons, Guests, and Staff June 14-15, 2004

# Committee

C. Michael Walton (NAE), Chair

Joel AndersonDon BrockE. Dean CarlsonJohn ConradKaren MillerCash MiselSandra RosenbloomMichael RyanLen SandersonPaul Wells

Kevin Womack

## **Liaisons and Guests**

Deb Elston, FHWA
Marci Kenney, FHWA
Stephen Lockwood, Parsons Brinckerhoff
Dennis Judycki, FHWA
Tom Krylowski, FHWA
Michael Meyer, Georgia Tech

George Ostensen, FHWA James Savage, University of Virginia

# **TRB Staff**

Ann Brach Walter Diewald Stephen Godwin Robert Reilly

Robert Skinner