



August 2, 2006

The Honorable Maria Cino  
Acting Secretary  
U.S. Department of Transportation  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Dear Secretary Cino:

Section 5208 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) requires the Department of Transportation (USDOT) to develop a 5-year strategic plan for federal transportation research, development, and technology (RD&T). The act calls for the plan to describe the primary purposes, topics, expected outcomes, and anticipated funding of RD&T. It also calls for the plan to integrate the RD&T programs of all USDOT operating agencies and reflect input from a wide range of stakeholders. The act further calls on the National Research Council (NRC) to review the plan.

On June 21–22, 2006, NRC, under the auspices of the Transportation Research Board (TRB), convened a 15-member committee of experts in transportation engineering, economics, system operations and administration, environmental policy, and research management. Senior officials from the Office of the Secretary of Transportation (OST) and Research and Innovative Technology Administration (RITA) provided a draft of the *Strategic RD&T Plan for 2006–2010* and briefed the committee on its content and development. Research managers from the department's operating agencies participated in the briefings. Afterward, the committee met in closed session to establish its findings and begin preparing this review, which was completed through correspondence. The enclosures contain the roster of committee members and the meeting agenda, which lists the individuals who briefed the committee. Biographical information about the committee is available at <http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=48663>.

On behalf of NRC and the committee, I thank the many USDOT officials who participated in the briefings, which were introduced by Chief of Staff John Flaherty and led by RITA Administrator Ashok Kaveeshwar. They asked the committee for a candid assessment of the plan and advice on RITA's potential role in future strategic planning. The committee also benefited from discussions with Martin Spitzer, professional staff member of the Science Committee of the U.S. House of Representatives. He explained the Science Committee's intent in drafting the legislation calling for the RD&T strategic plan and the NRC review.

The committee's review is contained in this letter. It is offered in a forward-looking spirit with the intention of aiding current and future strategic planning by USDOT.

Overarching themes and advice in the committee's review are as follows:

- Strategic RD&T planning is a critical responsibility of USDOT. Because the federal government owns and operates very little of the nation's transportation system, its contributions to improving multiple aspects of the system's functioning occur in large part through RD&T. Well-considered investments in RD&T are thus essential elements in USDOT's overall performance. In an environment marked by shrinking research spending and increased congressional earmarking, it is incumbent upon USDOT to articulate the national importance of RD&T and put forward a thoughtful and persuasive plan for RD&T investment.
- The *Strategic RD&T Plan for 2006–2010* is a reasonable first effort. It offers useful descriptions of the many RD&T programs within the department. At the same time, it is more a compendium of individual RD&T activities than a strategic plan that articulates departmentwide priorities and justifications for RD&T programs and budgets.
- The document's current limitations as a *strategic plan* can and must be overcome to make it more useful for decision makers in Congress, the executive branch, and USDOT, as well as for other transportation stakeholders and partners from the states and private industry. In particular, plans should be informed by a systems-level and intermodal perspective on transportation and the challenges that lie before this important sector. USDOT should develop such a perspective, and its emerging research priorities should reflect it.
- USDOT faces constraints to strategic RD&T planning and investment, especially because of earmarking and multiple, narrowly defined authorizations (designations) of RD&T budgets. Yet the importance of easing these constraints makes effective strategic planning even more necessary. A well-constructed strategic plan, the key elements of which are described in this review, can foster the alliances needed to reach executive branch and congressional agreement on federal funding for RD&T to address the nation's pressing transportation needs.
- RITA can have a meaningful role in strategic RD&T planning. Absent from the USDOT research portfolio is any policy or intermodal research that should guide strategic planning and policy development. RITA could fill these gaps if it had the resources to do so. More generally, effective participation by RITA in the strategic planning process will require financial resources, direct involvement by and cooperation with the modal agencies, and the support of Congress and USDOT.

## **REQUEST FOR THIS REVIEW**

SAFETEA-LU calls for NRC to review the details of the 5-year strategic RD&T plan. Section 5208 lays out a number of content requirements and considerations for USDOT in developing it. The act requires, at a minimum, that the plan describe the primary purposes of the transportation RD&T program in

- Reducing congestion and improving mobility,
- Promoting safety,
- Promoting security,
- Protecting and enhancing the environment,
- Preserving the existing transportation system, and
- Improving the durability and extending the life of transportation infrastructure.

The act specifically requires the plan to list the primary RD&T topics that USDOT intends to pursue to accomplish these six purposes. The act permits other categorizations such as fundamental research in the physical and natural sciences, applied research, technology development, and social science research. For each of the RD&T topics, the plan must show the funding levels anticipated over the period and describe the information expected to be obtained from the research portfolio during the period.

The legislation also calls on the Secretary to ensure that the plan reflects input from a wide range of stakeholders; includes and integrates the RD&T programs of all USDOT operating agencies; and avoids wasteful duplication of related RD&T conducted by other federal agencies, states, and private and nonprofit organizations.

With these statutory requirements in mind, the committee reviewed the current version of the strategic RD&T plan. The first part of this review presents the committee's findings. The committee took a pragmatic approach in undertaking this review; it realizes that this is USDOT's first response to SAFETEA-LU and is cognizant of the political and institutional constraints that USDOT confronts in formulating a strategic plan. Anticipating USDOT's need for future strategic planning, the committee offers its view of what a strategic plan could and should be in the second part of this review. The review concludes with advice on potential roles for RITA in developing and implementing strategic RD&T plans in the future.

## **CURRENT STRATEGIC RD&T PLAN: STRENGTHS AND LIMITATIONS**

The *Strategic RD&T Plan for 2006–2010* has strengths and limitations. The focus of this review is on the strengths and limitations of the plan itself and not the agency research programs referenced in it. Key elements of a strategic plan that are not part of the current document but that should be in future plans are identified and discussed later in this review.

## **Plan Strengths**

In covering the RD&T of the nine operating agencies and OST, the plan presents information from scores of RD&T activities scattered across the department. For policy makers, such an overview can be helpful in comprehending program coverage, funding levels, and subject matter. Indeed, the plan may be the first document that attempts to relate all major USDOT RD&T activities to shared priorities and goals. This is a difficult exercise, and USDOT deserves credit for carrying it out.

On the basis of presentations to the committee by USDOT RD&T managers, it appears that communications processes used to develop the plan have fostered dialogue among the research managers of the operating agencies. This is a desirable development, since such interaction can spur collaboration and improved outcomes in common areas of RD&T. Such interagency dialogue can also reduce the potential for duplication of research. These exchanges have led the USDOT presenters to conclude that duplication of RD&T is not a common occurrence.

Another strength of the plan is that, by highlighting six emerging research priorities, it reveals how strategic planning can have an important role in shaping the direction of RD&T policy and investment. The priorities listed are a promising start; they are cross-modal in nature and will require some fundamental research.

Finally, OST is drafting a strategic plan for *all* USDOT activity (more general than RD&T), which will be completed later in the summer. An early draft of this plan was circulated during the committee's meeting. The committee observed that the goals and priorities in this broader strategic plan are aligned with those of the RD&T plan. Moreover, the broader plan posits RD&T as one of the key levers available to USDOT to further these national transportation goals and priorities. The committee is encouraged to see RD&T emphasized in this manner.

## **Plan Limitations**

USDOT's ability to engage in strategic RD&T planning and investment is limited by several well-recognized and deep-seated political and institutional constraints. One would expect a strategic plan to recognize and seek ways to mitigate such constraints. The committee believes that the following are important factors constraining USDOT's ability to invest strategically in RD&T:

- Earmarking and designation of RD&T topics, projects, and institutions. In the past few years, transportation RD&T programs have experienced a dramatic growth in legislation specifying that research centers, projects, or studies be located at particular institutions. Even when RD&T funds are not earmarked in this manner, authorizing legislation and appropriations language often contain instructions designating the specific topics of RD&T. Congressional actions thus give little discretion to USDOT and its operating agencies to allocate resources across strategic RD&T priorities.

- Modal agencies have mode-specific missions, authorities, and constituencies that limit the department's ability to pursue inter- and cross-modal RD&T. The modal orientations of federal transportation programs have deep historical roots; they are the way U.S. transportation policy has been framed and administered for decades. Not surprisingly, the modal framework extends to and emerges from the numerous congressional authorizing and appropriating committees that govern the operating agencies. A result is marked differences in RD&T resources available to individual agencies; at one extreme, the department's only agency with responsibility pertaining to water transportation, the Maritime Administration, has no RD&T resources.
- Research to support regulatory and programmatic obligations consumes much of the RD&T resources available to each operating agency. While it is within the purview of most operating agencies to conduct more general and policy-oriented research to help improve the performance of their respective modes, the agencies often have few, if any, discretionary resources available to engage in such research.

More generally, the plan does not explain how the varied missions of USDOT and its operating agencies influence the RD&T portfolio. A few illustrations make the point. With the major exception of the air traffic control system, the federal government does not actually own or operate the nation's transportation infrastructure. For railroads, pipelines, automobiles, and motor carriers, the federal role centers on safety regulation. The plan is short on explanation of why and to what degree the RD&T activities of these agencies are devoted to supporting such regulatory functions. The federal highway and transit programs are less regulatory, but they focus instead on providing resources and expertise for system infrastructure development and connectivity. The plan does not discuss how the RD&T programs of the USDOT agencies concerned, the Federal Highway Administration and the Federal Transit Administration, meet the needs and seek to complement the RD&T of the states, counties, cities, and regional agencies that own and operate the nation's highway and transit systems. The Federal Aviation Administration (FAA) is both a safety regulator and the operator of the air traffic control system, and it administers aid for airport infrastructure development. The plan does not explain how FAA's RD&T activities are shaped by its multiple roles.

Such context would be helpful in understanding why a large proportion of the research funded within the department is mode-specific. While it should not be used to justify an absence of departmentwide strategic RD&T planning, such context is needed to give perspective on opportunities for integrating RD&T plans across agencies.

#### *Shortcomings in Plan's Organization of RD&T*

Given the requirement to develop a strategic RD&T plan in less than a year, it is not surprising that the plan is primarily a compendium of existing RD&T activities and not a detailed and documented analysis of objectives, alternatives, and choices as implied by a strategic plan. Yet even with the time constraint, the committee believes that USDOT could have better organized and analyzed the RD&T program along dimensions in addition to broad topic areas, several examples of which are given later in this review. Overall, the committee finds that the plan's organizational structure is not well suited to examining many research balance and content issues.

SAFETEA-LU calls for RD&T to be described in accordance with the six primary purposes of transportation RD&T that are listed above. The plan is fairly consistent with these six, grouping RD&T according to the strategic goals of safety, reduced congestion, global connectivity, environmental stewardship, security and emergency response, and organizational excellence. However, any such categorization of RD&T into a handful of areas is bound to produce an overly simplified and potentially misleading picture. This stems from the fact that RD&T is often aimed at addressing more than one goal. For example, RD&T that enhances transportation capacity and reduces congestion may lead to changes in safety performance. Likewise, research that yields improvements in safety and environmental performance may have congestion and security effects.

The way that RD&T activities are grouped into the six broad topic areas of the strategic plan could lead to confusion about the extent of transportation research in these areas. The level of funding for research pertaining to environmental stewardship (\$52.5 million) appears remarkably low relative to total reported RD&T spending (\$1.1 billion), and it is seemingly out of proportion with the strategic plan's own identification of challenges from climate change, transportation fuel, and environmental constraints on expanding capacity. Funding in this area may or may not be low; however, it is difficult to know with confidence from this document because of the gross categorizations of RD&T activities.

Similarly, it is difficult to understand the rationale for the plan's characterizing RD&T on construction and maintenance under the goal of reducing congestion. Congressional direction for the development of the plan highlights system preservation and durability. Given the more than \$40 billion invested annually in highway, transit, and airport infrastructure through federal programs, research to preserve and extend the life and serviceability of these assets appears to be a worthy goal in its own right.

Also confusing is the plan's summary funding table, which lists spending on the University Transportation Centers (UTC) program and all cooperative research programs as being aimed at reducing congestion. Funding for these and similar programs is shown to be \$313 million per year—accounting for almost half of the \$652 million in total funding shown for the goal of reduced congestion. UTC and cooperative research programs cover a multitude of topics, from research on safety and the environment to system capacity. The UTC program also aids in transportation workforce development. In fact, the UTC and cooperative research programs are described in the plan as activities to “advance the nation's transportation workforce and research capability.” This grouping has the effect of overstating the extent to which USDOT's RD&T addresses congestion and understating its contribution to other goals, such as security, environmental stewardship, and safety.

These examples illustrate how bundling so many diverse RD&T activities on a single dimension and into a small number of categories can yield a weak analytic framework for decision making.

### *Absence of Stakeholder Input in the Current Plan*

The important role that stakeholders can and should play in strategic planning and in building a constituency to support USDOT's RD&T priorities is discussed in more detail later in this review. The strategic plan lists various means by which the individual operating administrations shape their RD&T programs with input from technical experts, system owners and operators, transportation users, and other interested and affected parties. Such program-specific stakeholder involvement, however, is not a substitute for and should not be confused with seeking stakeholder input during the development of the strategic RD&T plan itself. Stakeholders can provide information and advice on a range of topics, from the allocation of RD&T resources across the department to cross-modal issues warranting further research. They should be consulted during the process of identifying emerging research priorities. A significant limitation of the current strategic RD&T plan is that it was not developed with such external input.

## **WHAT A STRATEGIC PLAN COULD AND SHOULD DO**

Recognizing that there is no general blueprint for a strategic plan, the committee urges USDOT to develop a strategic RD&T plan and supporting processes that (a) articulate the role and value of USDOT's RD&T, (b) highlight and promote ways to overcome constraints to strategic RD&T investment, (c) describe the RD&T program in various dimensions to inform decisions, (d) identify gaps in cross-modal policy and systems research, and (e) promote efficient and effective research processes.

### **Articulate the Role and Value of USDOT's RD&T**

Like the transportation system itself, transportation RD&T is highly decentralized and includes the efforts of USDOT and other federal agencies, private industry, and state and local governments. By one estimate, USDOT accounts for only 6 percent of all transportation-related research at the federal level, with the Departments of Defense and Energy accounting for the large majority (Brach 2005). USDOT should therefore explain how its RD&T programs interact with, complement, and leverage other RD&T activities. Although USDOT accounts for a small share of the total research enterprise, it is the only organization responsible for fostering a national transportation system. Having such a national perspective and the ability to leverage its research, USDOT can take a leadership role in transportation RD&T.

USDOT's leadership role should be expressed in its strategic RD&T plan, which should explain how transportation RD&T can help further national transportation goals and priorities. The plan should assess the major issues in transportation, analyze the strengths and weaknesses of USDOT's RD&T programs with regard to these issues, and establish the goals and priorities for making the choices that guide future RD&T. For the strategic RD&T plan to do this, USDOT's goals and priorities must be well articulated—for instance, in an overarching strategic plan for the department. That broader plan should identify the key challenges facing transportation now and in the coming decades, such as the challenges arising from trends in demographics and changing energy sources. As noted earlier, USDOT is drafting such an

overarching plan linked to the strategic RD&T plan. An example of another document that offers perspective on emerging challenges facing transportation is the *Critical Issues in Transportation* report developed triennially by the TRB Executive Committee, most recently in January 2006 (TRB 2006).

A strategic RD&T plan also provides the department with an opportunity to explain all that is encompassed by “research, development, and technology.” The outcomes of RD&T should be explained as consisting of not only technology development but also other desired results such as information for decisions, operational solutions to problems, knowledge to support future research, technology transfer, and a well-educated generation of transportation professionals. The plan should provide compelling examples of how transportation RD&T, in its many forms, has benefited the nation.

The plan should estimate how much the federal government invests in transportation RD&T relative to investments made at other levels of government and by the private and nonprofit sectors. It should also compare the transportation sector’s investment in RD&T with that of other major economic sectors and assess whether RD&T investments are commensurate with the problems and challenges facing the transportation sector. The committee suspects that such benchmarking would reveal that investment in transportation-related RD&T is lagging at the federal level and when compared with many other sectors of the economy.

### **Highlight and Promote Ways to Overcome Constraints to Strategic RD&T Investment**

In addition to a compelling vision of what RD&T can do to achieve national transportation goals, a plan can offer a realistic assessment of the constraints to strategic RD&T planning. The political and institutional constraints that limit a strategic approach to RD&T investment should be major considerations in the plan itself—indeed, a central part of the plan. Strategic planning requires being proactive in furthering and evolving toward desired outcomes. While these political and institutional constraints can be sensitive to address in a plan, some are subject to change and should be highlighted as a step toward constructive change. One need look no further than the creation of USDOT itself, now 40 years ago, for insight into how seemingly insurmountable institutional and legislative constraints can be modified, if not overcome.

The committee observes that the earmarking and designation of transportation RD&T have become much more prevalent in recent years (Brach and Wachs 2005). While less common in the federal aviation program, earmarking and designations pervade authorizations and appropriations for federal surface transportation RD&T. This prevalence is a concern. Not only does it impair USDOT’s ability to allocate RD&T resources in a coherent and strategic manner, it can reduce the efficiency and quality of the research through lack of competition and merit review. In the face of earmarking and other constraints, USDOT’s reluctance to offer strategic guidance for RD&T investment can have the perverse effect of perpetuating these constraints by creating the appearance of a vacuum in leadership needed to surmount them. If USDOT develops and promotes a well-constructed plan, it can mobilize constituencies with a shared interest in well-targeted and high-quality research.

### **Describe the RD&T Program in Various Dimensions to Inform Decisions**

Given the congressional requirement to develop a strategic RD&T plan in less than a year, the committee understands why the current plan is limited in analyses of the RD&T program. At the same time, the committee believes that USDOT could have gone further in presenting the program along a number of dimensions that would be helpful to decision making.

SAFETEA-LU identifies other approaches to describing and categorizing research in addition to topic areas, including fundamental and applied; physical, natural, and social sciences; and technology development. The committee would like to have seen a description of the RD&T program with regard to some of these dimensions as well as topic areas, perhaps expanded to include others such as probability of success (e.g., high risk, low risk), time frame (e.g., long term, near term), size and scale, tractability, and potential impact (e.g., incremental, breakthrough).

Other recent external reviews of USDOT RD&T programs have questioned whether sufficient attention is being given to research aimed at achieving breakthroughs in the understanding of transportation-related phenomena (TRB 2001, 6). Likewise, the committee questions whether USDOT is investing sufficiently in long-range research to support critical policy decisions. The current plan's organization makes it difficult to know whether these specific concerns are warranted and to assess the program's balance on other dimensions.

### **Identify Gaps in Cross-Modal Policy and Systems Research**

USDOT should look at the transportation enterprise from a multimodal and departmentwide perspective as a larger system in which interactions and interdependencies occur among modes, as they do between transportation and other large-scale societal and natural systems such as the economy, land use, national defense, and the environment. The nine modal agencies—with their own statutory requirements and narrow missions—seldom take such a broad and systems-level approach to programming their RD&T. For example, in seeking to reduce the nation's highway fatalities and injuries, the National Highway Traffic Safety Administration is not likely to assess the implications of changes in public transit use or air travel for this outcome. Likewise, the Federal Highway Administration and the Federal Aviation Administration do not have strong incentives to examine the implications of congestion pricing of highway and runway facilities for issues such as metropolitan land use and energy demand.

The absence within USDOT of RD&T pertaining to water transportation was noted earlier. The transfer of the U.S. Coast Guard to the Department of Homeland Security has left USDOT with limited research capability to support policies affecting water transportation, which plays an important role in the movement of both domestic and international freight. Such a gap in research coverage stymies achievement of a multi-modal, systems view; this gap is unlikely to be filled by mode-specific research programs.

Indeed, the advent of intermodal freight containerization some 50 years ago and the resulting demand for public investments to improve the connectivity of the freight modes illustrate the importance of USDOT conducting forward-looking research that explores emerging trends and technologies requiring policy responses. Major influences on the transportation

enterprise during the next 50 years will surely differ from those influencing it during the past 50 years. USDOT should conduct research now that examines these trends and developments to inform national transportation policies, as well as to shape the RD&T strategic plan itself.

The need for such forward-looking and crosscutting research can be highlighted in a strategic plan, along with opportunities and approaches for meeting this need.

### **Promote Efficient and Effective Research Processes**

The plan should develop and describe the various processes to be used across the department in selecting research topics and researchers to ensure relevance, quality, and performance. The extent to which the different processes are used and the reasons why should be explained.

The document should define the role of stakeholders in identifying research needs and in fostering the use of research results. In this regard, the plan should clearly indicate the processes by which stakeholder input will be sought and used for strategic planning. The plan should also explain how duplication of research, both across public agencies and with the private sector, is avoided and where cooperation and collaboration are desirable and taking place. In this regard, the plan should explain the ways in which RD&T from the private sector and elsewhere in government, from this country and abroad, is brought to bear on pressing national issues.

Procedures for determining the appropriate research processes should be formulated and explained in the plan. Such processes range from in-house research facilities and staff to the various forms of extramural RD&T, such as grants, competitive proposals, sole-source arrangements, and cooperative programming. The extent to which these processes are used should be examined, along with means for diffusion and deployment of research results. The plan should explain the reasons for differing research processes among the department's major RD&T programs, including any differences among RD&T programs that are more applied or exploratory in nature. It should likewise explain how methods of communicating and delivering RD&T results vary across the department, while bringing attention to those that have shown the most success.

Methods for ensuring relevance, quality, and performance should be developed and explained. There is a general recognition in the research community, for example, that competition and expert peer review foster both high-quality and cost-effective RD&T. Likewise, the involvement of stakeholders and constituents in guiding research programs can help ensure that products from research address genuine needs and are applied. The plan offers USDOT an opportunity to take stock of research processes, gleaned from across the operating agencies, that are most effective in producing high-quality, cost-effective, and useful research results.

Finally, expected outcomes from RD&T should be defined along with processes for tracking performance. As an example, the UTC program is expected to produce qualified transportation professionals as well as applicable research reports. Measures for both outcomes should be described. Performance-based metrics for other kinds of RD&T can also be developed; for example, to track the quantity and quality of research to support regulatory and

policy proposals. In general, the plan should explain the extent to which quantifiable goals, timetables, and performance measures are part of RD&T programs.

## **FURTHER CONSIDERATIONS AND RITA'S ROLE**

SAFETEA-LU requires that USDOT solicit input on its strategic plan from a wide range of stakeholders. The draft plan lists various means by which *individual* operating agencies obtain input from stakeholders on their RD&T programs. The strategic plan itself, however, was not developed with input or advice from stakeholders or other outside experts. Because of time constraints, USDOT solicited public comments and stakeholder feedback after the plan's development and concurrent with this committee's review.

Stakeholder input, including that of experts in transportation systems and system users such as travelers and shippers, must be sought during the development of the strategic plan. Such external input is essential in establishing plan credibility and building support for it in Congress. A broad-based strategic plan with stakeholder support should help ensure that research priorities reflect a shared view of the critical goals for and issues affecting the nation's transportation system. As noted earlier, a strength of the current plan is its listing of six emerging research priorities. The current plan, however, does not explain why or how these emerging priorities were chosen or whether they correspond to what transportation stakeholders and other experts would view as emerging priorities.

The committee was asked to comment on the six emerging research priorities in the plan, but a more relevant question is whether effective processes have been established for identifying such priorities. RITA can help meet this need by providing a venue for soliciting input from stakeholders and technical experts. As discussed earlier, the RD&T portfolio of the department is shaped largely by the collection of plans, priorities, and capabilities of the individual RD&T programs of operating administrations. Drawing on the information from its stakeholder consultations, RITA could assist senior leadership in identifying and prioritizing some of the RD&T portfolio in a more deliberate fashion.

RITA could perform other functions important for strategic RD&T planning. It can take the lead in tracking the transportation-related RD&T of other federal agencies, in the private sector, at other levels of government, and by entities outside the United States. USDOT needs such information to ensure that its RD&T programs are filling critical gaps and that they are collaborative where possible and appropriate. RITA can likewise identify opportunities for usefully integrating RD&T among the modal agencies. In developing the current plan, RITA has demonstrated a potential to foster interagency communication and cooperation—something that has long been needed.

Perhaps of greater long-run significance, RITA is the logical entity to promote and perhaps even undertake the kind of crosscutting policy and systems-level research discussed above. For example, it could encourage research to examine the effects of mode shifts on energy

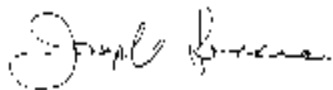
use, congestion, safety, and land use. RITA is in a position to seek resources from Congress and the department to conduct research on topics such as these that transcend individual modes.

In the committee's view, RITA can begin exercising some of these functions supportive to strategic RD&T planning. However, RITA has a small staff and limited financial resources. Whether it can aspire to an even greater role in strategic RD&T planning is an open question. RITA was created on a separate track from SAFETEA-LU, and whether Congress and USDOT share a similar vision of RITA's strategic mission remains unclear. For RITA to participate effectively in the strategic planning process, it will require financial resources, direct involvement by and cooperation with the modal agencies, and the support of Congress and USDOT leadership.

## **CONCLUDING REMARKS**

In closing, the committee is pleased that USDOT is engaged in strategic R&D planning and has welcomed the opportunity to undertake this review. Given the time constraints and organizational realities within USDOT, the current strategic plan is a reasonable first effort. Time will not permit all of the advice in this review to be integrated into the plan that is going to Congress in September of this year, but the committee hopes its advice will prove useful in future strategic planning. The committee has striven to be candid and constructive in its review and trusts that its advice will be received in this spirit. I welcome the opportunity to discuss this review and look forward to progress in this important area.

Sincerely,



Joseph M. Sussman

Chair

Committee on the Review of the USDOT Strategic Plan for R&D

## REFERENCES

Brach, A. M. 2005. Identifying Trends in Federal Transportation Research Funding: The Complex Task of Assembling Comprehensive Data. *TR News*, No. 241, Nov.–Dec., pp. 3–9.

Brach, A., and M. Wachs. 2005. Earmarking in U.S. Department of Transportation Research Programs. *Transportation Research A*, Vol. 39, No. 6, pp. 501–521.

TRB. 2001. *Special Report 261: The Federal Role in Highway Research and Technology*. National Research Council, Washington, D.C., 146 pp.

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## **Committee on the Review of the USDOT Strategic Plan for R&D**

(members in attendance at the meeting shown in bold)

### **Joseph M. Sussman, *Chairman***

JR East Professor of Civil and Environmental Engineering and Engineering Systems  
Massachusetts Institute of Technology, Cambridge

### **Christopher P. L. Barkan**

Associate Professor and Director, Railroad Engineering Program  
University of Illinois at Urbana–Champaign

### **Lillian C. Borrone**

Assistant Executive Director and Director of Port Commerce, Port Authority of New York and  
New Jersey (retired)  
Wilmington, North Carolina

### **Leigh B. Boske**

Associate Dean and Professor of Economics and Public Affairs  
LBJ School of Public Affairs  
University of Texas, Austin

### **David G. Burwell**

Partner  
BBG Group  
Bethesda, Maryland

Raymond F. Decker

Chief Technical Officer

Thixomat, Inc.

Ann Arbor, Michigan

### **Irwin Feller**

Senior Visiting Scientist

American Association for the Advancement of Science

State College, Pennsylvania

### **David W. Fowler**

Joe J. King Chair in Engineering and T.U. Taylor Professorship

Department of Civil Engineering

University of Texas, Austin

### **Angela Gittens**

Vice President, Airport Business Services

HNTB Companies

Miami, Florida

**Lester A. Hoel**

L.A. Lacy Distinguished Professor of Engineering and Director, Center for Transportation Studies  
University of Virginia, Charlottesville

**Thomas Imrich**

Chief Pilot, Research  
Boeing Commercial Aircraft/Boeing Company  
Seattle, Washington

**Carl L. Monismith**

Robert Horonjeff Professor of Civil Engineering (Emeritus) and Professor in Graduate School  
University of California, Berkeley

**Peter F. Sweatman**

Director  
Transportation Research Institute  
University of Michigan, Ann Arbor

**Michael S. Townes**

President and CEO  
Hampton Roads Transit  
Hampton, Virginia

**Richard N. Wright**

Director of Building and Fire Research  
National Institute of Standards and Technology (retired)  
Montgomery Village, Maryland

## AGENDA

### Committee on the Review of the USDOT Strategic Plan for R&D

June 21–22, 2006

Keck Center, Room 101

500 Fifth Street, N.W., Washington, D.C.

#### June 21

##### OPEN SESSION

- 9:30 a.m. Sponsor discussion of charge and institutional context for plan development  
John Flaherty, Chief of Staff, USDOT
- 10:30 a.m. Congressional mandate for plan and NRC review  
Martin Spitzer, Professional Staff, U.S. House of Representatives Committee on Science
- 10:45 a.m. Sponsor overview of plan development (approach, structure, schedule)  
Ashok Kaveeshwar, Administrator, RITA
- 11:15 a.m. Panel on Safety Objective  
Lead: Joan Bauerlein, FAA  
Panelists: Joseph Kanianthra, NHTSA; Terry Shelton, FMCSA; Mark Yachmetz, FRA;  
Michael Trentacoste, FHWA; William Chernicoff, RITA
- 12:45 p.m. Lunch
- 1:45 p.m. Panel on Congestion Reduction Objective  
Lead: Jeff Paniati, FHWA  
Panelists: Walt Kulyk, FTA; Joan Bauerlein, FAA; Jack Wells, OST; Steve Chase,  
FHWA; Todd Ripley, MARAD
- 3:30 p.m. Panel on Global Connectivity, Environmental Stewardship, and Emergency Response  
Lead: Jill Hochman, FHWA  
Panelists: Bruce Robinson, FTA; Lourdes Maurice, FAA; Robert Smith, PHMSA; Mark  
Yachmetz, FRA; William Chernicoff, RITA

#### June 22

##### OPEN SESSION

- 9:00 a.m. Initial Impressions and Discussion  
Joseph Sussman, Chairman
- 10:00 a.m. Break
- 10:15 a.m. Dialogue with USDOT staff and committee member comments