

**Transportation Research Board**  
**RAIL-RELATED ACTIVITIES AND PUBLICATIONS**  
September 2003

**Recent TRB Publications**

*A Concept for a National Freight Data Program*, Special Report 276,  
<http://gulliver.trb.org/publications/sr/sr276.pdf>

*Cybersecurity of Freight Information Systems: A Scoping Study*,  
Special Report 274, <http://gulliver.trb.org/publications/sr/sr274.pdf>

*Freight Capacity for the 21st Century*, Special Report 271  
<http://gulliver.trb.org/publications/sr/sr271.pdf>

*Railroad Research Topics*, TR Record 1825 (pending publication, Fall 2003)

*Transit Switch Design Analysis (Phase 1)*, TCRP Report 71, Volume 2 (2003)  
[http://gulliver.trb.org/publications/tcrp/tcrp\\_rpt\\_71v2.pdf](http://gulliver.trb.org/publications/tcrp/tcrp_rpt_71v2.pdf)

*Intercity Rail Passenger Systems Update*, Number 9, Spring 2003,  
[http://gulliver.trb.org/publications/irps/irps\\_9.pdf](http://gulliver.trb.org/publications/irps/irps_9.pdf)

TR News Theme Issue: *Working on the Railroad: Getting Passenger Services Up to Speed*, September-October, 2002  
<http://gulliver.trb.org/publications/trnews/trnews222.pdf>

*Traffic Control Devices, Visibility, and Rail-Highway Grade Crossings 2002*,  
TR Record 1801

*Transit: Intermodal Facilities, Rail Transit, Commuter Rail, Light Rail Transit, Maintenance, and Ferry Transportation*, TR Record 1793 (2002)

*Railroads: Intercity Rail Passenger Transport; Track Design and Maintenance*,  
TR Record 1785 (2002)

*Traffic-Control Devices for Passive Railroad-Highway Grade Crossings*, NCHRP  
Report 470 (2002) [http://gulliver.trb.org/publications/nchrp/nchrp\\_rpt\\_470-a.pdf](http://gulliver.trb.org/publications/nchrp/nchrp_rpt_470-a.pdf)

**Review of FRA's Research, Development and Demonstration Programs**

Committee for Review of the Federal Railroad Administration's Research, Development, and Demonstration Programs (<http://www4.trb.org/trb/onlinepubs/nsf/web/reports?OpenDocument>)

- [Letter Report of April 22, 2003](#)
- [Letter Report of May 29, 2002](#)

## **Standing Technical Committees**

This is a list of many of the TRB rail-related committees. For complete information on TRB committees, see <http://gulliver.trb.org/directory/>

### **Intermodal Freight Transport (A1B05)**

Website: <http://www.wilbursmith.com/a1b05>

Scope: The scope of this committee includes all aspects of research pertaining to intermodal freight transport. Attention will be given initially to rail-water, rail-highway, highway-water, and highway-air modal combinations, but other combinations may be considered later. As used here, intermodal freight transport includes all shipments that employ more than one mode in a single through movement from origin to destination; local pick-up and delivery by truck for others not included. Consideration of rates, routes, services, transfer facilities, containers, and other items that impact the movement of freight in intermodal transport are included.

### **Freight Transportation Economics and Regulation (A1B06)**

Website: <http://gulliver.trb.org/wb/wbpx.dll/~A1B06>

Scope: The scope of this committee includes all aspects of research pertaining to domestic and international surface freight transportation economics and regulation. Consideration will be given to research into the impact of regulation on social, public, and private costs and benefits; among the various modes; on regulated vis-à-vis unregulated carriers; and on technological change.

### **Local and Regional Rail Freight Transport (A1B10)**

Scope: This committee is concerned with the spectrum of issues related to shortline and regional freight railroads, such as relationships with Class 1 carriers, including impacts of mergers; demand for shortline and regional freight services, including intermodal traffic; evaluation of long-term financial viability; integration into the state transportation planning process; private and public investment strategies, including public/private partnerships; safety; regulatory impacts; and implementation of new technology.

### **Military Transportation (A1B11)**

Scope: This committee addresses issues of planning and management of military use of U.S. commercial ports and airports; connecting channels, roads and railroads; and associated private and non-military public sector transportation equipment and services. Attention will be given to development issues; technology relating to cargo handling and communication; port access; logistics; and local, state and national issues which contribute to or conflict with the integration of military use of the nation's multimodal and intermodal transportation systems.

### **Transportation of Hazardous Materials (A1B14)**

Website: <http://projects.battelle.org/trbhazmat/>

Scope: This committee is concerned with the protection of human health and the environment through the safe packaging, handling and transportation of hazardous materials, and effective response to hazardous materials incidents. The focus will be on risk management process development; type and extent of hazards associated with materials shipments; conditions and

forces encountered during transportation of hazardous materials; consequences associated with hazardous materials transport incidents; legal and regulatory controls affecting hazardous materials; support and training for state and local hazardous materials transportation and emergency response personnel; sources of information to support analysis, planning and response; tools and technology to support risk assessment; and risk communication.

### **Task Force on Agricultural Transportation (A1B55)**

Website: <http://www.trb-agtrans.org/>

Scope: This task force is concerned with infrastructure, economic, institutional, operational, equipment, technological, and capacity issues influencing and affecting the movement of agricultural products by all modes of transportation. While the emphasis will be on North American transport systems, consideration will also be given to international developments that have an impact on the global market for U.S. agricultural products.

### **Railroad Track Structure System Design (A2M01)**

Scope: This committee is concerned with the factors, both internal and external, influencing the interactions that occur between the various components of a track structure and its supporting systems. This includes the development, evaluation and application of new and existing theories and technology all directed toward a better understanding of the performance of the system as a whole. Among the factors of interest are dimensions and mechanical properties of components, traffic loadings, and their interaction with the track system, safety, economics, environmental conditions, construction and maintenance.

### **Electrification and Train Control Systems for Guided Ground Transportation Systems (A2M02)**

Scope: This committee is concerned with the design, construction, and performance of electrification and control systems for guided ground transportation and with all factors influencing system performance; engineering economics; financial, environmental, and institutional issues; operations and maintenance; and safety, reliability, and maintainability.

### **Intermodal Freight Terminal Design and Operations (A2M03)**

Scope: This committee is concerned with the design and operation of intermodal freight terminals. Intermodal includes rail-truck, rail-barge or rail-marine. The design includes loading and unloading equipment, track layouts, trailer and container storage areas, identification and retrieval systems, inspection and maintenance facilities, control systems, and highway, rail, and water interfaces.

### **Rail Transit System Design (A2M04)**

Scope: This committee is concerned with the identification of research needs and dissemination of research related to the design, maintenance, and construction of transit right of way infrastructure features such as track, traction power systems, structure, stations, communications and signals, and other related features located in a heavy, light, or commuter rail transit system.

### **Guided Intercity Passenger Transportation (A2M05)**

Scope: The committee is concerned with the design and construction of guided intercity and commuter passenger and high-speed/high-value freight transportation systems, operating over

fixed rights-of-way, excluding systems operating on the pavements of public highways or by conventional airways. The committee will address feasibility determinations including initial and operating cost estimates for specific systems, safety and environmental issues, terminals, support facilities, track and guideways, operations and maintenance, security, and vehicles. Advanced systems, such as electromagnetic levitation (maglev) will also be considered.

### **Railway Maintenance (A2M06)**

Website: <http://www.trba2m06.com/index.html>

Scope: The committee is concerned with education, planning, administration, and management of railway fixed plant maintenance with emphasis on problem definition, methodologies for their solution, and technology transfer.

### **Commuter Rail Transportation (A1E07)**

Scope: This committee is concerned with the planning, management, and operation of non-intercity passenger transportation service on existing railroads and with the development of new commuter rail service.

### **Intercity Rail Passenger Systems (A1E13)**

Scope: The committee is concerned with research that will lead to better planning and implementation of intercity rail passenger systems, with particular emphasis on the full range of high-speed systems including new technology. This research will include demand analysis, financial considerations, economic impacts (including consideration of user and social benefits), and public-private partnerships. The research should also address impacts on other rail operations, coordination with other modes, rail-highway interfaces, corridor versus system concerns, technology assessment, environmental impacts, and implementation strategies.

### **Highway/Rail Grade Crossings (A3A05)**

Scope: This committee is concerned with the safety and other affected characteristics (including economic considerations, traffic flow and delay, and countermeasures) of both highway and rail traffic at points where they intersect at grade, including the proximate surrounding environment and also including rail transit facilities.

### **Vehicle User Characteristics (A3B02)**

#### **Includes Subcommittee on Railroad Operational Safety A3B02(1)**

Website: <http://www.nads-sc.uiowa.edu/trb/>

Scope: This committee is concerned with the needs, capabilities, and limitations of vehicle users as these considerations affect the design, operation, and maintenance of personal, commercial and public transportation systems embracing highway and rail operations. The objectives of this committee are to maximize performance, safety, comfort, and efficiency of such systems.

## Critical Transportation Infrastructure Protection (A5021)

Website: <http://san-antonio.tamu.edu/trba5021/Members/members.html>

Scope: To consider issues relating to threats posed by potential physical, chemical, biological, and cyber attacks on critical transportation infrastructure in the United States. It will develop activities and provide a forum for discussion among the academic community, the private sector, and appropriate government agencies regarding transportation infrastructure assurance. The Committee will also be in a position to support outreach efforts of the USDOT and other federal agencies to the owners and operators of the nation's transportation system from states and municipalities to trucking companies, airlines, barge operators, ocean shipping companies, railroads, mass transit, port and airport authorities, pipelines, and shippers. Attention will be given to a full range of security issues including risk assessment, prevention, technology, procedures and applications, emergency preparedness and response, as well as the integration of security considerations in the planning and operation of the nation's transportation systems.

### **TRB Annual Meeting**

**January 11–15, 2004**

<http://www4.trb.org/trb/annual.nsf>

- **Workshop on Advances in Railway Design, Construction, and Maintenance**, Sunday, January 11, 9:00 a.m. – 5:00 p.m., open to all Annual Meeting registrants; no separate registration fee.
- **Workshop on Alternative Freight Capacity: Opportunities and Barriers**, Sunday, January 11, 2:00 – 5:30 p.m., open to all Annual Meeting registrants; no separate registration fee.
- **All TRB committee meetings are open** to interested Annual Meeting participants. (See list of committees above.)
- **Technical session planning is now underway, and some topics being developed are as follows:**
  - Why is Capacity Expansion Unattractive to Railroads?
  - Slab Track Design and Performance Criteria: Are we Hitting the Mark?
  - Rail Transit Noise and Vibration Issues
  - Rail Transit System Updates
  - Latest Developments in Design and Construction of High-Speed Maglev...
  - Environmental Analysis of Proposed High-Speed Rail Project in California: A Case Study
  - High-Speed Ground Transportation Technology Updates: High-Speed Rail and Maglev
  - Better Wayside Detection Technologies and their Applications
  - Advances in Special Trackwork Designs
  - Standardization of Turnout Components
  - Shortline Railroad Issues with Heavy Axle Loads
  - Developments in Train Control
  - Developments in Electrification

- Public Funding of Railroad Projects
- Intercity Rail Passenger Policy Issues
- Intercity Rail Passenger Finance and Implementation Issues
- Airport-Rail Intermodal Issues
- Maintenance of Interlockings and Special Trackwork
- Use of Information Technology for Track Maintenance

### **Midyear committee meetings**

- Intercity Rail Passenger Systems (A1E13) and Guided Intercity Passenger Transportation (A2M05) held midyear meetings in conjunction with High-Speed Ground Transportation Association Annual Conference, Anaheim, CA, May 2003.
- Intermodal Freight Transport (A1B05), Freight Transportation Economics and Regulation (A1B06), Local and Regional Rail Freight Transport (A1B10), Military Transportation (A1B11), Agricultural Transportation Task Force, Intermodal Freight Terminal Design and Operations, Critical Transportation Infrastructure Protection, and other freight committees met in conjunction with the TRB Summer Ports and Waterways and Joint Midyear Meeting in Portland, OR, July 2003.
- Local and Regional Rail Freight Transport (A1B10) held an additional meeting in conjunction with SCORT Annual Conference, Buffalo, NY, September 2003.
- Several freight committees will meet in conjunction with the Joint Midyear Meeting in July 2004, location to be determined.

### **Policy study in progress**

*Transportation of Radioactive Waste*, Project BRWM-U-01-06-A, (Board on Radioactive Waste Management, lead) <http://www4.nationalacademies.org/cp.nsf>

### **NCHRP study underway**

*Rail-Freight Solutions to Roadway Congestion*, Project 8-42 (scheduled completion, May 2004) <http://www4.trb.org/trb/crp.nsf/NCHRP+projects>

### **TCRP study underway**

*Joint Track-Related Research with the Association of American Railroads/Transportation Technology Center, Inc.*, Project D-07  
<http://www4.trb.org/trb/crp.nsf/TCRP+projects>

## **High-Speed Rail IDEA Program**

[http://www4.trb.org/trb/dive.nsf/web/high-speed\\_rail\\_idea](http://www4.trb.org/trb/dive.nsf/web/high-speed_rail_idea)

The HSR-IDEA program solicits proposals for innovative concepts and technologies that will help attain the goal of cost-effective upgrading of current rail infrastructure for high-speed passenger travel and lead to a viable high-speed rail transportation system in the United States. HSR-IDEA projects are selected based on their potential to support upgrading the existing U.S. rail system to accommodate operations of 125 mph and beyond. HSR-IDEA is funded by the Federal Railroad Administration in support of the next-generation high-speed rail technology development program.

## **Safety IDEA Program**

[http://www4.trb.org/trb/dive.nsf/web/Transportation\\_Safety\\_Technology\\_IDEA](http://www4.trb.org/trb/dive.nsf/web/Transportation_Safety_Technology_IDEA)

The Safety IDEA program is jointly sponsored by the Federal Motor Carrier Safety Administration and the Federal Railroad Administration. The U.S. Department of Transportation has set aggressive goals for reducing fatalities and injuries by the year 2010. To this end, the sponsors have provided funding for projects that promote innovative approaches to improving railroad, intercity bus, and truck safety. The program encompasses vehicle improvements, operator performance, and alertness improvements; operational practices; and hazard reduction, among other interest areas.

## **TRB Information Sources**

Website: <http://trb.org/>

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