

**Transportation Research Board**  
**RAIL-RELATED ACTIVITIES AND PUBLICATIONS**  
**August 2005**

[http://www.trb.org/publications/TRB\\_RAILROAD\\_SUMMARY.pdf](http://www.trb.org/publications/TRB_RAILROAD_SUMMARY.pdf)

**Recent TRB Publications**

*Flange Climb Derailment Criteria and Wheel/Rail Profile Management and Maintenance Guidelines for Transit Operations*, TCRP Report 71, Track-Related Research, Vol. 5, (2005) [http://www.trb.org/publications/tcrp/tcrp\\_rpt\\_71v5.pdf](http://www.trb.org/publications/tcrp/tcrp_rpt_71v5.pdf)

*International Transit Studies Program; Report on the Fall 2004 Mission: Innovations in Bus, Rail, and Specialized Transit Operations in Latin America*, TCRP Research Results Digest 70, (2005) [http://trb.org/publications/tcrp/tcrp\\_rrd\\_70.pdf](http://trb.org/publications/tcrp/tcrp_rrd_70.pdf)

*"Consensus Rulemaking at the Federal Railroad Administration: All Aboard for Railway Safety Measures,"* Grady C. Cothen, Jr., et al., TR News Number 236 (January-February 2005) <http://gulliver.trb.org/publications/trnews/trnews236.pdf>

*New IDEAS for High-Speed Rail: Annual Progress Report*, January 2005, [http://trb.org/publications/sp/hsr-idea\\_report\\_Jan2005.pdf](http://trb.org/publications/sp/hsr-idea_report_Jan2005.pdf)

*Cooperative Research for Hazardous Materials Transportation: Defining the Need, Converging on Solutions*, Special Report 283 (2005) <http://trb.org/publications/sr/sr283.pdf>

*Intercity Rail Passenger Systems Update*, Number 10, Fall 2004, [http://gulliver.trb.org/publications/irps/irps\\_10.pdf](http://gulliver.trb.org/publications/irps/irps_10.pdf)

*Driver and Vehicle Simulation, Human Performance, and Information Systems for Highways; Railroad Safety; etc.*, TR Record 1899 (2004)

*Intermodal Freight Transportation; Freight Transportation Planning*, TR Record 1873 (2004)

*Transit: Intermodal Transfer Facilities, Rail Transit, Commuter Rail, Light Rail, etc.*, TR Record 1872 (2004)

*Railroads: High-Speed Passenger Rail, Railway Bridges, and Track Design and Maintenance*, TR Record 1863 (2004)

*International Transit Studies Program; Report on the Spring 2004 Mission: Vehicle Design Standards And Procurement Practices In Europe*, TCRP Research Results Digest 68, [http://trb.org/publications/tcrp/tcrp\\_rrd\\_68.pdf](http://trb.org/publications/tcrp/tcrp_rrd_68.pdf)

*Track-Related Research Volume 3: Exothermic Welding of Heavy Electrical Cables to Rail -- Applicability of AREMA Track Recommended Practices for Transit Agencies*, TCRP Report 71 (2004) [http://trb.org/publications/tcrp/tcrp\\_rpt\\_71v3.pdf](http://trb.org/publications/tcrp/tcrp_rpt_71v3.pdf)

*Traffic Control Devices, Visibility, and Rail-Highway Grade Crossings 2004*, TR Record 1862 (2004)

*Transit Design, Construction, and Operations in the Mediterranean Region*, TCRP Research Results Digest 66, [http://trb.org/publications/tcrp/tcrp\\_rrd\\_66.pdf](http://trb.org/publications/tcrp/tcrp_rrd_66.pdf)

*Proceedings of the 9th National Light Rail Transit Conference*, TR Circular E-C058, <http://trb.org/publications/circulars/ec058/ec058.pdf>

*Traffic Control Devices, Visibility, and Rail-Highway Grade Crossings 2003*, TR Record 1844 (2003)

*Transit -- Rail Transit, Commuter Rail, Light Rail Transit, Major Activity Center Circulation Systems, New Technology, and Maintenance*, TR Record 1838 (2003)

*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>

### **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 May 13, 2004](#)
- [Letter Report of April 22, 2003](#)
- [Letter Report of May 29, 2002](#)

At the request of FRA, the committee will conduct a Railroad Research Needs Conference in the spring, 2006.

### **Standing Technical Committees**

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

As of January 2004, the TRB committee structure was reorganized. There is now a separate **RAIL GROUP** ([http://trb.org/directory/comm\\_search.asp?sCode=AR](http://trb.org/directory/comm_search.asp?sCode=AR)), which consists of the following committees:

### **Intercity Rail Passenger Systems (AR010)**

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.

### **Guided Intercity Passenger Transportation (AR020)**

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.

### **Railroad Operating Technologies (AR030)**

Scope: This committee is concerned with exploration of innovative strategies and application of new technologies to enhance and support rail freight, passenger, and transit operation. The committee's focus areas include command, control, communications, and information (C3I) systems; energy supply, distribution, efficiency and propulsion systems. The committee is concerned with technical aspects of new technology implementation, as well as system safety, reliability, and maintainability. Consideration is also given to economic factors, including benefits and life-cycle costs.

### **Local and Regional Rail Freight Transport (AR040)**

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.

### **Railroad Track Structure System Design (AR050)**

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.

## **Railway Maintenance (AR060)**

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.

## **Task Force on Railroad Operational Safety (AR070T)**

Scope: This task force will define, encourage, and disseminate research that will enhance the performance, safety, efficiency, and comfort of those who are involved in railroad and other fixed guideway operations, and users of fixed guideway transportation.

### **OTHER RAIL-RELATED COMMITTEES:**

## **Intermodal Freight Transport (AT045)**

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 (AT010)**

Website: <http://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.

## **Military Transportation (AT035)**

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 (AT040)**

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 (AT030T)**

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.

## **Intermodal Freight Terminal Design and Operations (AT050)**

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 (AP080)**

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.

## **Commuter Rail Transportation (AP070)**

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.

## **Highway/Rail Grade Crossings (AHB60)**

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.

## **Critical Transportation Infrastructure Protection (ABE40)**

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.

### **Policy study in progress**

*Transportation of Radioactive Waste*, Project BRWM-U-01-06-A, (Board on Radioactive Waste Management, lead) (report anticipated by late summer 2005)

<http://www4.nas.edu/webcr.nsf/5c50571a75df494485256a95007a091e/f7c60c36eef1609285256d130057559e?OpenDocument>

### **NCHRP studies underway**

<http://www4.trb.org/trb/crp.nsf/NCHRP+projects>

*Rail-Freight Solutions to Roadway Congestion*, Project 8-42

*Return on Investment on Freight Rail Capacity Improvement*, Project 8-36, Task 43 (anticipated completion by fall 2005)

### **TCRP Studies Underway**

<http://www4.trb.org/trb/crp.nsf/TCRP+projects>

*Shared Use of Railroad Infrastructure*, Project A-27

*Joint Track-Related Research with the Association of American Railroads/Transportation Technology Center, Inc.*, Project D-07

### **NCHRP Synthesis Upcoming Study**

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

*Preserving Passenger and Freight Rail Corridors*, Project 37-10 (beginning September 2005)

## **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/>

**Subscribe to the weekly TRB E-Newsletter:** send an e-mail to <mailto:rhouston@nas.edu> with "TRB E-Newsletter" in the message's subject field.

**Transportation Research Information Services (TRIS)** is now available as TRIS Online at <http://trisonline.bts.gov/search.cfm>

## **2006 TRB Annual Meeting**

**January 22-26, 2006**

<http://www.trb.org/Meeting/>

### **Workshops, Sunday, January 22, 2006**

(open to all Annual Meeting registrants, except as noted)

- Rail Transit Project Design Decisions and Choices: Effects on Vehicle–Track Dynamic Interaction

- Railway Track and Vehicle Performance Data for Design and Maintenance Planning
- Fatigue in Transportation: Issues and Countermeasures for the Operators of Trucks, Trains, and Automobiles (*Registration fee required*)
- Rail Transportation Ground-Borne Noise and Vibration Prediction

### **Preliminary Session Topics**

- Costing Shared Use Rail Infrastructure: Adding Apples and Oranges?
- Guided Ground Transportation Safety and Technology Developments
- Applications of Risk Assessment to Railroad Systems
- When is Tiered NEPA Documentation Effective?
- Railroad Corridor and System Capacity
- Positive Train Control Rules and Regulations
- Public Finance for Local Rail Improvements-Opportunities and Issues
- Perspectives on the Future of Single Car Railroad Shipments
- Insulated Bonded Rail Joint Design and Performance
- Railroad Cross Tie and Fastener Designs
- Emerging Technologies in Rail Flaw Inspection
- Focusing on the Future: Innovations in Work Management Systems for Railway Maintenance
- Shippers versus Railroads: Conflict, Cooperation, and Economics

### **Committee Meetings**

All committee, task force, and subcommittee meetings are open to all Annual Meeting registrants.