

## IN THIS ISSUE

**4** Although the **accident rate in commercial aviation** has remained notably low, it has reached somewhat of a plateau. Without a further reduction in the accident rate, the actual number of accidents will continue to grow with projected increases in traffic. Accordingly, industry and government have formed a unique partnership known as the Commercial Aviation Safety Team to explore those intervention strategies that can provide the greatest return in reducing aviation accidents.

**13** Fundamental changes now under way will shape the **marine transportation system of the 21st century**, necessitating new approaches to the assessment and management of risk in the system. Guidelines proposed by the National Research Council's Committee on Risk Assessment can be useful to those facing this challenge.

**19** Although transit is one of the safest ways to travel, the American Public Transit Association and the **public transit systems continue to pursue safety improvements**. A recent example is the issuance of 57 standards and recommended practices for the construction of passenger railcars. All of the commuter rail systems in the United States have agreed to comply with these voluntary standards, which go beyond the federal standards. This effort is but one of a broad range of actions being taken by the transit industry to improve safety.

**23** The Federal Railroad Administration's Office of Research and Development oversees a **railroad safety research program** that addresses human factors, rolling stock and components, track and structures, track–train interaction, train control, grade crossings, hazardous materials, train occupant protection, and railroad system safety. FRA owns the Transportation Technology Center at Pueblo, Colorado, and conducts a portion of its research program at the facility. In establishing and carrying out its safety research agenda, the agency cooperates with the American Association of Railroads, rail labor, suppliers, the states, universities, the American Public Transit Association, Amtrak, the Federal Transit Administration, and the Federal Highway Administration. Peer review of FRA's R&D program is carried out by a committee of the Transportation Research Board.

**27** A government–industry partnership focused on **achieving advances in railroad safety** has been formed among the Association of American Railroads; its subsidiary, Transportation Technology Center, Inc. (TTCI); and the Federal Railroad Administration. TTCI conducts research and testing, and assists railroads and suppliers in incorporating the results of those efforts in products, practices, and training programs. Current work is in the areas of heavy freight and high-speed rail systems, the safe transport of hazardous materials, and effective emergency response.

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# TRANSPORTATION SAFETY

## *Air, Marine, Transit, Rail*

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### INTRODUCTION

**T**ransportation safety is the critical element—a fundamental prerequisite—in all modes of transportation. A previous issue of *TR News* (March–April 1999) examined some of the major research initiatives aimed at improving highway safety. This issue reviews current safety research initiatives in other modes of transportation—air, marine, transit, and rail:

- ◆ William G. Bozin, Air Transport Association of America, details the cooperative initiatives of government and industry now under way to improve still further on the outstanding safety record of commercial air transportation.

- ◆ Martha Grabowski, LeMoyne College/Rensselaer Polytechnic Institute, reviews fundamental changes occurring in the marine transportation system and in the processes used to measure and manage risk as the system evolves.

- ◆ William W. Millar, American Public Transit Association, describes a broad range of actions being undertaken to identify and correct safety-related problems in public transit, including the issuance of voluntary standards and recommended practices for the construction of passenger railcars.

- ◆ Steven R. Ditmeyer, Federal Railroad Administration, outlines changes and trends in rail operations and safety, and describes FRA's safety-related objectives and activities as reflected in the agency's *Five-Year Strategic Plan for Research, Development, and Demonstrations*.

- ◆ Roy A. Allen and Semih Kalay, Transportation Technology Center, Inc. (TTCI), describe a government–industry partnership focused on achieving improvements in rail safety and the work to that end of TTCI, a subsidiary of the Association of American Railroads.

The articles in this issue reflect the common need among the various modes for timely, high-quality research focused on the technical, political, and human factors issues that must be addressed to achieve safety improvements. Significant advances in safety have been made in recent years; however, increasing demands for fast and efficient transport of people and goods necessitate continuing improvements in current safety practices. These improvements will in turn depend to a large extent on the quality of research undertaken in all modes of transportation, both individually and collectively.