

# TR NEWS



---

## Rural Passenger Transportation *Models and Strategies*

- From Horse Power to Horsepower
- Residential Growth and Travel Needs
- Adapting High Technologies
- Building Intercity Bus Links
- Intermodal Start-ups and Visions

## THE NATIONAL ACADEMIES

*Advisers to the Nation on Science, Engineering, and Medicine*

The Transportation Research Board is a division of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. The Board's mission is to promote innovation and progress in transportation through research. In an objective and interdisciplinary setting, the Board facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encourages their implementation. The Board's varied activities annually draw on approximately 4,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities.

**[www.TRB.org](http://www.TRB.org)**

## TRANSPORTATION RESEARCH BOARD 2003 EXECUTIVE COMMITTEE \*

Chair: Genevieve Giuliano, Director and Professor, School of Policy, Planning, and Development, Metrans Transportation Center, University of Southern California, Los Angeles  
Vice Chair: Michael S. Townes, President and CEO, Hampton Roads Transit, Virginia  
Executive Director: Robert E. Skinner, Jr., Transportation Research Board

Michael W. Behrens, Executive Director, Texas Department of Transportation, Austin  
Joseph H. Boardman, Commissioner, New York State Department of Transportation, Albany  
Sarah C. Campbell, President, TransManagement, Inc., Washington, D.C.  
E. Dean Carlson, Consultant, Topeka, Kansas (Past Chair, 2002)  
Joanne F. Casey, President, Intermodal Association of North America, Greenbelt, Maryland  
James C. Codell III, Secretary, Kentucky Transportation Cabinet, Frankfort  
John L. Craig, Director, Nebraska Department of Roads, Lincoln  
Bernard S. Groseclose, Jr., President and CEO, South Carolina State Ports Authority, Charleston  
Susan Hanson, Landry University Professor of Geography, Graduate School of Geography, Clark University, Worcester, Massachusetts  
Lester A. Hoel, L.A. Lacy Distinguished Professor of Engineering, Department of Civil Engineering, University of Virginia, Charlottesville (Past Chair, 1986)  
Henry L. Hungerbeeler, Director, Missouri Department of Transportation, Jefferson City  
Adib K. Kanafani, Cahill Professor and Chairman, Department of Civil and Environmental Engineering, University of California, Berkeley  
Ronald F. Kirby, Director of Transportation Planning, Metropolitan Washington Council of Governments, Washington, D.C.  
Herbert S. Levinson, Principal, Herbert S. Levinson Transportation Consultant, New Haven, Connecticut  
Michael D. Meyer, Professor, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta  
Jeff P. Morales, Director of Transportation, California Department of Transportation, Sacramento  
Kam Movassaghi, Secretary, Louisiana Department of Transportation and Development, Baton Rouge  
Carol A. Murray, Commissioner, New Hampshire Department of Transportation, Concord  
David Plavin, President, Airports Council International, Washington, D.C.  
John Rebensdorf, Vice President, Network and Service Planning, Union Pacific Railroad Company, Omaha, Nebraska  
Catherine L. Ross, Executive Director, Georgia Regional Transportation Agency, Atlanta  
John M. Samuels, Senior Vice President, Operations Planning and Support, Norfolk Southern Corporation, Norfolk, Virginia (Past Chair, 2001)  
Paul P. Skoutelas, CEO, Port Authority of Allegheny County, Pittsburgh, Pennsylvania  
Martin Wachs, Director, Institute of Transportation Studies, University of California, Berkeley (Past Chair, 2000)  
Michael W. Wickham, Chairman and CEO, Roadway Express, Inc., Akron, Ohio

Mike Acott, President, National Asphalt Pavement Association, Lanham, Maryland (ex officio)  
Marion C. Blakey, Administrator, Federal Aviation Administration, U.S. Department of Transportation (ex officio)  
Rebecca M. Brewster, President and COO, American Transportation Research Institute, Smyrna, Georgia (ex officio)  
Thomas H. Collins (Adm., U.S. Coast Guard), Commandant, U.S. Coast Guard, Washington, D.C. (ex officio)  
Jennifer L. Dorn, Administrator, Federal Transit Administration, U.S. Department of Transportation (ex officio)  
Ellen G. Engleman, Administrator, Research and Special Programs Administration, U.S. Department of Transportation (ex officio)  
Robert B. Flowers (Lt. Gen., U.S. Army), Chief of Engineers and Commander, U.S. Army Corps of Engineers, Washington, D.C. (ex officio)  
Harold K. Forsen, Foreign Secretary, National Academy of Engineering, Washington, D.C. (ex officio)  
Edward R. Hamberger, President and CEO, Association of American Railroads, Washington, D.C. (ex officio)  
John C. Horsley, Executive Director, American Association of State Highway and Transportation Officials, Washington, D.C. (ex officio)  
Michael P. Jackson, Deputy Secretary, U.S. Department of Transportation (ex officio)  
Roger L. King, Chief Technologist, Applications Division, National Aeronautics and Space Administration (ex officio)  
Robert S. Kirk, Director, Office of Advanced Automotive Technologies, U.S. Department of Energy (ex officio)  
Rick Kowalewski, Acting Director, Bureau of Transportation Statistics, U.S. Department of Transportation (ex officio)  
William W. Millar, President, American Public Transportation Association, Washington, D.C. (ex officio) (Past Chair, 1992)  
Mary E. Peters, Administrator, Federal Highway Administration, U.S. Department of Transportation (ex officio)  
Suzanne Rudzinski, Director, Office of Transportation and Air Quality, U.S. Environmental Protection Agency (ex officio)  
Jeffrey W. Runge, Administrator, National Highway Traffic Safety Administration, U.S. Department of Transportation (ex officio)  
Allan Rutter, Administrator, Federal Railroad Administration, U.S. Department of Transportation (ex officio)  
Annette M. Sandberg, Deputy Administrator, Federal Motor Carrier Safety Administration, U.S. Department of Transportation (ex officio)  
William G. Schubert, Administrator, Maritime Administration, U.S. Department of Transportation (ex officio)

---

\* Membership as of April 2003

# TR NEWS

NUMBER 225

MARCH-APRIL 2003

## Rural Passenger Transportation: Models and Strategies

### 3 Introduction **Rural Passenger Transportation: Finding a Way To Get Where They Need To Go**

*Peter Schauer*

Lessons from history, an analysis of the new demographics, adaptations of technologies, and the development of transit networks and intermodal connections offer promising approaches to solving some of the transportation needs of rural America.

### 4 **The Trip to Town: Rural Transportation Patterns and Developments Since 1900**

*Peter Schauer*

Horse power rapidly yielded to the horsepower of the automobile and the farm truck in rural America in the early 20th century, this author notes, producing a progression from dirt road to barn-raising road to country road to booster road to state highway, and finally to the Interstate. But did this inevitable progression take a wrong turn?

### 12 **The Changing Demographics of Rural America: What Are the Implications for Transportation Providers?**

*Sandi Rosenbloom*

A survey of the extensive literature on rural demographics reveals trends that have reversed decades of population losses, affecting economics, societal relationships, and land use, as well as travel patterns and needs. The findings yield strategic insights for rural transit service operators.

### 18 **Intelligent Transportation Systems for Rural Transit: Not Just for Urban Systems Anymore**

*Carol L. Schweiger*

Adapting urban intelligent transportation systems to improve rural transit services raises problems that involve operations, staffing, and financing, as well as service coordination, data management, and communications infrastructure. But several successes and initiatives are showing the way.

### **Surveying the Issues: Conference on Rural Bus Transportation a Continuing Success, 23**

*Randy Isaacs*

### 24 **Intercity Bus Links: Moving into New Territory**

*Frederic D. Fravel*

Integral to the nation's surface transportation network, rural intercity bus services have been developing mostly at the state level with federal rural assistance funding. A range of strategies has been employed to initiate, preserve, and enhance effective rural intercity bus links with other carriers, Amtrak and regional rail, rural feeder lines, local urban transit, and major airports.



4



18



24



**Cover:** Aerial view of rural roadways; insets (top to bottom): horses rescue a car stuck in the mud, circa 1920 (photo courtesy of Texas Department of Transportation), bus driver uses wireless technology to streamline rural services, and intercity bus provides affordable and accessible travel option to rural residents.

# TR NEWS

features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

## TR News is produced by the Transportation Research Board Publications Office

Nancy A. Ackerman, Director  
Javy Awan, Assistant Director and  
Managing Editor  
Kristin C. Motley, Associate Editor  
Juanita Green, Production Manager

## TR News Editorial Board

Neil F. Hawks, Chairman  
Nancy A. Ackerman  
Joseph A. Breen  
Walter J. Diewald  
Frederick D. Hejl  
Timothy Hess  
Stephen F. Maher  
Stephan A. Parker  
A. Robert Raab

## Transportation Research Board

Robert E. Skinner, Jr., Executive Director  
Suzanne B. Schneider, Associate Executive  
Director  
Mark R. Norman, Director,  
Technical Activities  
Stephen R. Godwin, Director,  
Studies and Information Services  
Michael P. LaPlante, Director,  
Administration and Finance  
Robert J. Reilly, Director,  
Cooperative Research Programs  
Neil F. Hawks, Director, Special Programs

**TR News** (ISSN 0738-6826) is issued bimonthly by the Transportation Research Board, National Research Council, 500 Fifth Street, NW, Washington, DC 20001. Internet address: [www.TRB.org](http://www.TRB.org).

**Editorial Correspondence:** By mail to the Publications Office, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001, by telephone 202-334-2972, by fax 202-334-3495, or by e-mail [kmotley@nas.edu](mailto:kmotley@nas.edu).

**Subscriptions:** North America: 1 year \$55.00; single issue \$9.50. Overseas: 1 year \$75.00; single issue \$13.50. Inquiries or communications concerning new subscriptions, subscription problems, or single-copy sales should be addressed to the Business Office at the address below, or telephone 202-334-3216, fax 202-334-2519. Periodicals postage paid at Washington, D.C.

**Postmaster:** Send changes of address to *TR News*, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001.

**Notice:** The opinions expressed in articles appearing in *TR News* are those of the authors and do not necessarily reflect the views of the Transportation Research Board. The Transportation Research Board and *TR News* do not endorse products of manufacturers. Trade and manufacturers' names appear in an article only because they are considered essential to its object.

Printed in the United States of America.

Copyright © 2003 Transportation Research Board. All rights reserved.

## 30 Point of View Making the Connections: Strengthening the Nation's Transportation System

Craig Lentzsch

As Congress considers reauthorization of the Transportation Equity Act for the 21st Century, the agenda should include new funding for intermodal transportation centers that can develop into an integrated public transportation system and for bus links from rural communities to remote air and rail systems, as well as a nationwide public transportation information system, according to this bus industry leader.

## 34 Profiles

Civil Engineering Professor Ronald W. Eck and Project Chief Larry W. Emig

## 36 TRB Highlights

CRP News, 36

## 37 Calendar

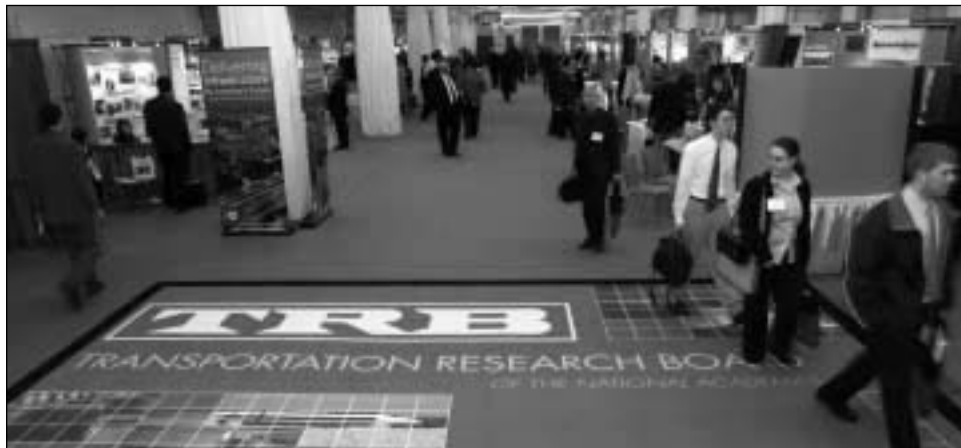
## 38 Bookshelf

**CORRECTION:** The correct web address for Maglev Quicklinks, included in the list at the end of the feature article, "Traveling by Magnetic Levitation: New Technology on the Move at Home and Abroad," by Arrigo Mongini, Arnold Kupferman, and John Harding (*TR News*, November–December 2002, pp. 12–18) is [faculty.washington.edu/jbs/itrans/maglevq.htm](http://faculty.washington.edu/jbs/itrans/maglevq.htm).

Thanks to Jerry Schneider of Innovative Transportation Technologies and professor emeritus, University of Washington, Seattle, for pointing out the typographic error and for creating a link to redirect readers to the updated website.

## COMING NEXT ISSUE

The May–June issue will offer feature articles on identifying and championing high-pay-off, ready-to-use technologies in transportation; increasing the flexibility of transportation energy sources; methods for preserving the profession's memory; a historical perspective on the critical issues TRB has identified and addressed over three decades; plus photographic highlights from TRB's 82nd Annual Meeting—and more.



TRB's 82nd Annual Meeting, held January 12–16, 2003, in Washington, D.C., featured more than 500 sessions, including 115 sessions that spotlighted four theme issues: Security: One Year Later; Congestion: What Does the Future Hold?; New Tools for Improving Safety; and The Route to Reauthorization.