

TR NEWS

January–March 2024

NUMBER 348

Welcome
to the first
TR News
quarterly
issue!

Improving Maritime Safety

PLUS

**Roadside Fire Risk
and Prevention**

**Post-Pandemic
Intercity Bus Planning**

**Artificial Intelligence
Frontiers**

**NATIONAL
ACADEMIES** *Sciences
Engineering
Medicine*

TRB TRANSPORTATION RESEARCH BOARD

The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, non-governmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. John L. Anderson is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the National Academies of Sciences, Engineering, and Medicine to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The National Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at www.nationalacademies.org.

The Transportation Research Board is one of seven major program divisions of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to mobilize expertise, experience, and knowledge to anticipate and solve complex transportation-related challenges. The Board's varied activities annually engage about 8,500 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.

Learn more about the Transportation Research Board at www.TRB.org.



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* Membership as of November 2023.



3 Roadside Fire Risk and Prevention Strategies

Ray Willard and Ken Murray

With examples from Washington State and California, two of the nation's wildfire hotspots, the authors discuss the common causes of roadside fires and provide strategic approaches to designing and maintaining roadways with fire avoidance—and the preservation of life—in mind.

8 Intercity Buses: Planning for a Post-Pandemic Paradigm

Matthew W. Daus

Intercity buses have struggled to make a comeback after the COVID-19 pandemic. What changes do operators need to implement to navigate the post-pandemic world and lure travelers back? The author offers insights into the complexities facing the intercity bus segment of the transportation industry.

13 Fresh Perspectives: Native American Artists Portray Transportation's Impact

Sam Ricord and Joseph Parampathu

An art competition hosted by the TRB Standing Committee on Native American Transportation Issues showcased the impact of transportation on tribal communities. The authors share the creative insights of the winners, who were presented at the 2023 TRB Annual Meeting.

17 Artificial Intelligence Frontiers in Transportation

Bo Wang, David Reinke, and Yinhai Wang

Artificial intelligence technologies are changing how people live, work, and travel. However, safe, equitable deployment of innovations from self-driving taxis to automated asset-management systems will require transportation professionals to shift gears, including overhauling the education and training of future engineers.

22 Improving Maritime Safety

Jennifer E. Lincoln, Joseph Myers, Todd Ripley, and Douglas W. Scheffler

Near miss, grounding, collision, or allision? At times, vessels—from large tankers to small fishing boats—encounter hazardous situations that may threaten lives, property, or the environment. Hoping to improve safety, the authors delve into 10 incident investigation reports to glean and highlight lessons learned.

26 Probable Causes of Sample Incidents

Jennifer E. Lincoln, Joseph Myers, Todd Ripley, and Douglas W. Scheffler



Courtesy of U.S. Coast Guard

COVER A U.S. Coast Guard Jayhawk helicopter crew prepares to rescue three crew members on the fishing vessel *Predator*, which sprang a leak after running aground near Akutan Harbor, Alaska. A research demonstration project is now collecting and analyzing crew and other sources of data from near-miss incidents to boost maritime transportation safety.

Coming Next Issue

The April–June 2024 issue of *TR News* features the 103rd TRB Annual Meeting highlights. Authors also look back at the first four years of transportation performance management, discuss how to set performance targets, and examine rehabilitating culvert structures.



Oregon DOT

Water laps the sides of a corroded culvert under I-5 near Myrtle Creek, Oregon. Balancing condition and cost, state departments of transportation (DOTs) consider available and emerging methodologies to determine whether to repair, rehabilitate, or replace such vital infrastructure.

ALSO IN THIS ISSUE

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Elizabeth Sall, UrbanLabs, and Sean Pribyl, Holland & Knight

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Margaret-Avis Akofio-Sowah, WSP

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TRB COVID-19 Resources

Agencies and organizations can use TRB publications and online resources for useful and timely information to help address issues related to the COVID-19 pandemic. To read about TRB's current research and activities, and for a list of relevant publications, visit www.nationalacademies.org/trb/blog/transportation-in-the-face-of-communicable-disease.

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.

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