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TR NEWS

Reenvisioning New York's Legendary Bus Terminal

Plus

Six-Minute Pitch: Showcasing Innovations

U.S. DRIVE Partnership: Seeking Energy Sustainability

Stemming Fatigue for Commercial Drivers

Walking and Walkability: Setting National Goals

Transportation's Roles in Health Equity

The National Academies of
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TRB
TRANSPORTATION RESEARCH BOARD

The National Academies of
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The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, nongovernmental 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. C. D. Mote, Jr., is president.

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Learn more about the National Academies of Sciences, Engineering, and Medicine at **www.national-academies.org**.

The **Transportation Research Board** is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board's varied committees, task forces, and panels annually engage about 7,000 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.
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TRANSPORTATION RESEARCH BOARD 2017 EXECUTIVE COMMITTEE*

* Membership as of October 2017.

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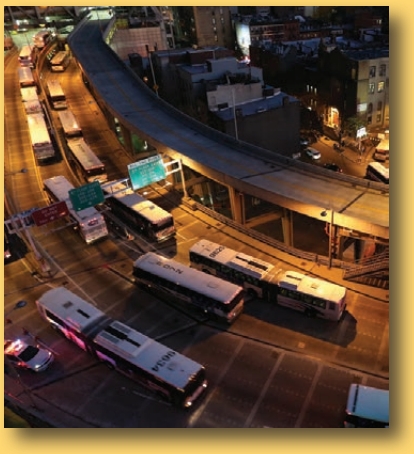

COVER: The busiest bus terminal in the world, the Port Authority Bus Terminal in Manhattan accommodates 250,000 commuters and intercity passengers via 8,000 buses per day. (Photo: Port Authority of New York and New Jersey)

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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The Transportation Research Board 2017 Annual Report is included as a special insert between pages 26 and 27.

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COMING NEXT ISSUE

PHOTO: MICHAEL PADILLA, SANDIA NATIONAL LABORATORIES

The U.S. Maritime Administration, Sandia National Laboratories, and Red and White Fleet are developing fuel cell–powered designs for operation in San Francisco Bay, one of many initiatives to make marine transportation more environmentally friendly.

Innovative problem solving, trends, applied research, and research needs at the state transportation agency level are the focus of a feature article highlighting findings from the 2017 state partnership visits by TRB senior program officers, covering all transportation modes and functions. The January–February *TR News* also includes articles on measures to control the environmental impacts of marine transportation; public–private partnerships in civil space; rapid response to major oil spills for healthier communities; and more.

Brian Ray

Kittelson & Associates, Inc.

Brian Ray's passion for and approach to transportation planning and geometric design were formed early in his career, when he first worked at CH2M Hill and had the opportunity to work with Jack and Joel Leisch in the offices of Jack E. Leisch and Associates. Ray was trained to approach projects from a systems planning and functional design perspective. He most enjoys the early project development stages—considering, screening, and refining alternatives. "Understanding each user's perspective is foundational in determining roadway geometrics," he notes.

When Ray was in high school, civil engineer Jory Abrams hosted him at a National Engineering Week dinner and helped guide him to the civil engineering program at Portland State University in Oregon. Ray became student chapter president of the American Society of Civil Engineers (ASCE) and was active in the Oregon Section, later receiving ASCE's Outstanding Younger Member award for the section.

"Understanding each user's perspective is foundational in determining roadway geometrics."

After he received a bachelor's degree in 1985 from Portland State University, Ray discovered transportation as a career path at CH2M Hill. As an engineer in training, he watched Joel Leisch assess and diagnose the freeway corridor, roadway network, and 1960s-era ramps. "He so easily defined system hierarchy, local roadway and transit user needs, and freeway traffic operations," Ray recalls. "I remember thinking, 'Well, of course!'"

In 1995, Ray joined Kittelson & Associates, Inc., where he still works. As a senior principal engineer based in Portland, Ray serves as a project manager and technical specialist. He has led National Cooperative Highway Research Program (NCHRP) projects on guidelines for selecting speed-reduction treatments at high-speed intersections, ramp and interchange spacing, and on performance-based analysis of geometric design of highways and streets. He also led Federal Highway Administration efforts to generate information guides for four alternative intersections: the displaced left turn, restricted-crossing U-turn, median U-turn, and diverging diamond interchange.

Ray also focuses on context-sensitive solutions for freeways and interchanges, rural highway corridor preservation, and intersection control evaluations. "I love the operational effects of geometric design," he comments, adding that new staff who come to him for input on an intersection concept are likely to get a lesson in speed profiles and the value of self-describing and self-enforcing roadways. "I know sometimes they just want the answer to a basic question, but sharing the principles leading to that answer will help them long after the immediate project."

Recent projects include developing a transportation safety action plan for Clackamas County, Oregon—the first of its kind for a county in the state; providing analysis and observations to the Office of the Mayor of Birmingham, Alabama, to enhance decision making about a proposed freeway system project; applying *Highway Safety Manual* freeway and interchange safety prediction methodologies to evaluation of a 7.6-mile segment of I-10 in Phoenix, Arizona; and evaluating interchange forms in Alaska, leading to the state's first diverging diamond interchange.

In 1995, Ray joined the Transportation Research Board (TRB) Standing Committee on Geometric Design. He was active in the research subcommittee and served as committee chair from 2006 to 2012, reorganizing its structure to focus on developing research needs statements and on promoting activities, conferences, and joint work sessions with the American Association of State Highway and Transportation Officials. He helped develop a committee strategic research plan that led to the funding of many research projects.

"It's surprising how long it takes to get from a research needs statement to a completed research report," he notes, adding that he is proud of the committee volunteers and of the amount of applied research completed on behalf of the National Cooperative Highway Research Program. Ray also is a member of the Task Force on Arterials and Public Health and chairs the Subcommittee on Context-Sensitive Solutions. He has served as chair of the Design Section since 2012.

Each year, Ray looks forward to representing the Design Section at the TRB Annual Meeting session for new attendees. "TRB is a large organization, and the Annual Meeting can be daunting for a new attendee," he observes. "Helping them connect with fellow TRB professionals—even outside geometric design—is always satisfying."

As Geometric Design Committee chair, Ray has emphasized support for emerging professionals, the involvement of younger members on the committee, and the promotion of TRB workshops for students. "So many people invested in me—it's a pleasure to share with and support others," he comments. "Allocating time for students creates an exciting learning opportunity."