

NATIONAL
ACADEMIES

Sciences
Engineering
Medicine

TRB TRANSPORTATION RESEARCH BOARD

“Today, Tomorrow and Forever”

Victoria Sheehan

February 23, 2023



TRB Vision

- A nation and a world that rely on scientific evidence and expertise about transportation to ensure a system that benefits individuals, society, and the environment.

TRB Mission Statement

- TRB mobilizes expertise, experience, and knowledge to anticipate and solve complex transportation-related challenges.



THE WHITE HOUSE

Infrastructure, Investment and Jobs Act



No More
Lead Pipes



High-Speed
Internet Access



Better Roads
and Bridges



Investments in
Public Transit



Upgrade Airports
and Ports



Investment in
Passenger Rail



Network of Electric
Vehicle Chargers



Upgrade Power
Infrastructure



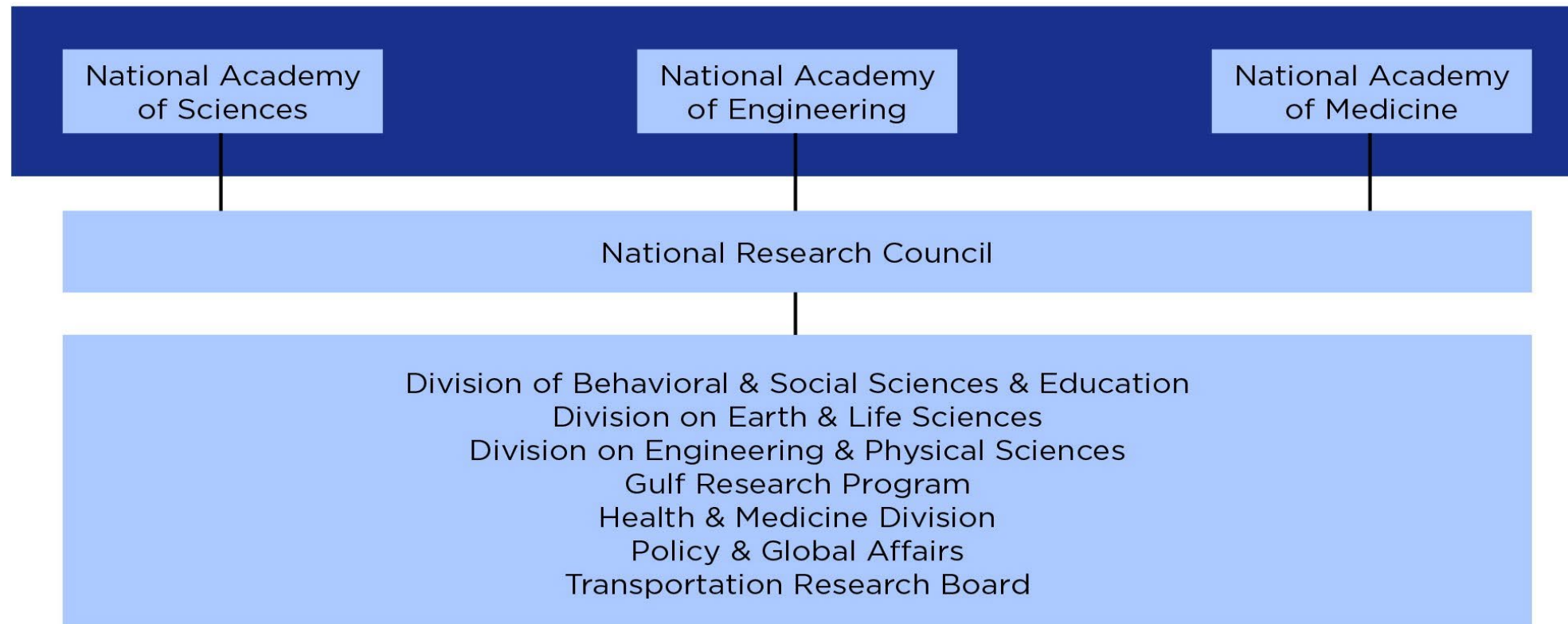
Resilient
Infrastructure



Investment in
Environmental
Remediation



National Academies of Sciences, Engineering, and Medicine

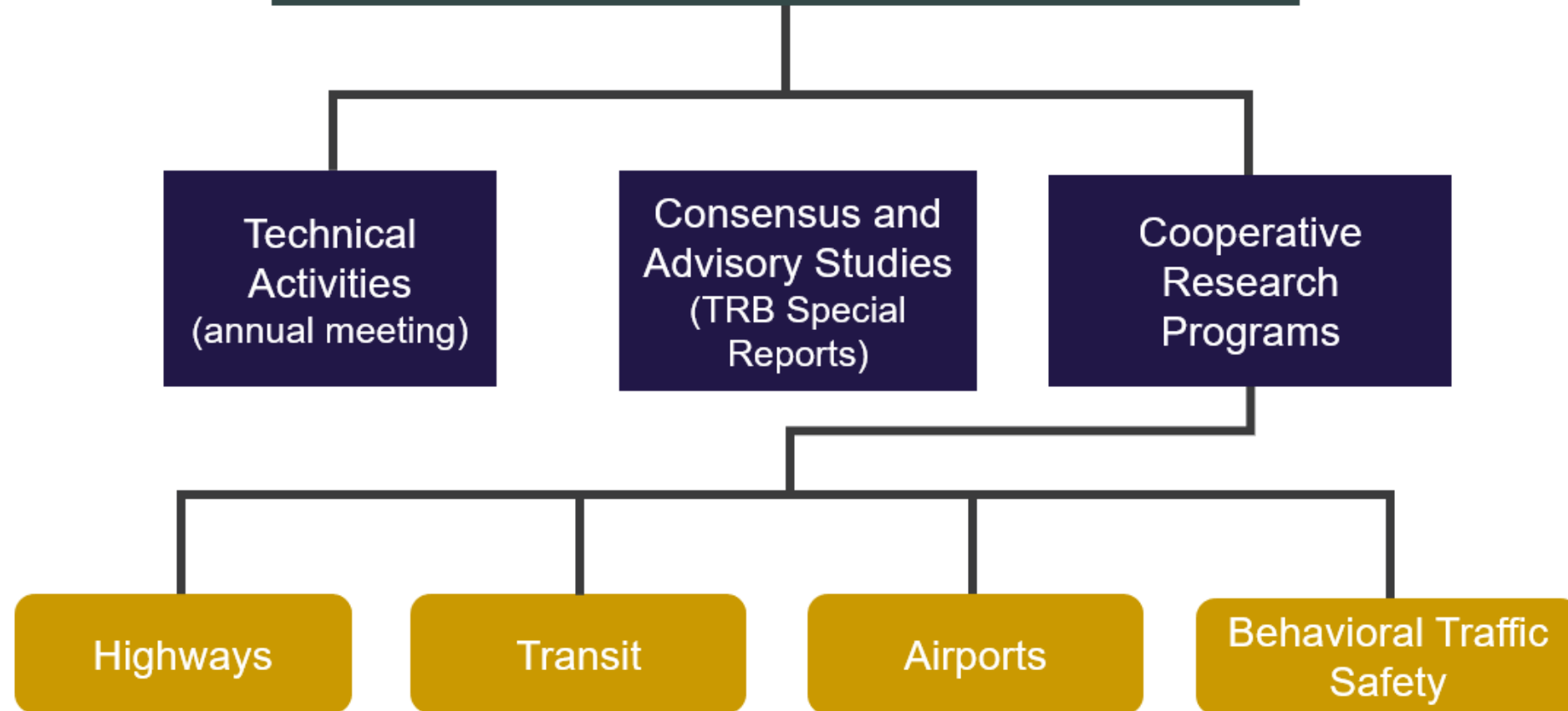




THE WHITE HOUSE

- Invest public dollars efficiently, avoid waste, and focus on measurable outcomes for the American people.
- Buy American and increase the competitiveness of the U.S. economy, especially via the legislation's "Made-in-America" purchasing requirements, while also bolstering domestic manufacturing and manufacturing supply chains.
- Create good-paying job opportunities for Americans by focusing on prevailing wages and the free and fair chance to join a union.
- Invest public dollars equitably, including through the "Justice40 Initiative," which seeks to make 40 percent of the overall benefits from federal investments in climate and clean energy flow to disadvantaged communities.
- Build resilient infrastructure that can withstand the impacts of climate change and that helps combat the climate crisis.
- Effectively coordinate with state, local, tribal, and territorial governments in implementing IJA's critical investments.

Transportation Research Board



Governance:



Joel Jundt
*Chair, AASHTO Special
Committee on Research
and Innovation*



**Rhonda
Hamm-Niebruegge**
*Chair, ACRP Oversight
Committee*



Doran Barnes
*Chair, TCRP Oversight
and Project Selection
Commission*



Mark Ezzell
*Chair, Governors
Highway Safety
Association Research
Committee*

No. 1 CRP success factor:

Industry partners
(stakeholders) are involved in
the program from problem
identification to implementation
of research results

- Submission of problem statements
- Review of problem statements
- Selection of projects
- Membership on advisory panels
- Development of RFPs
- Selection of contractors
- Oversight of research
- Implementation of results

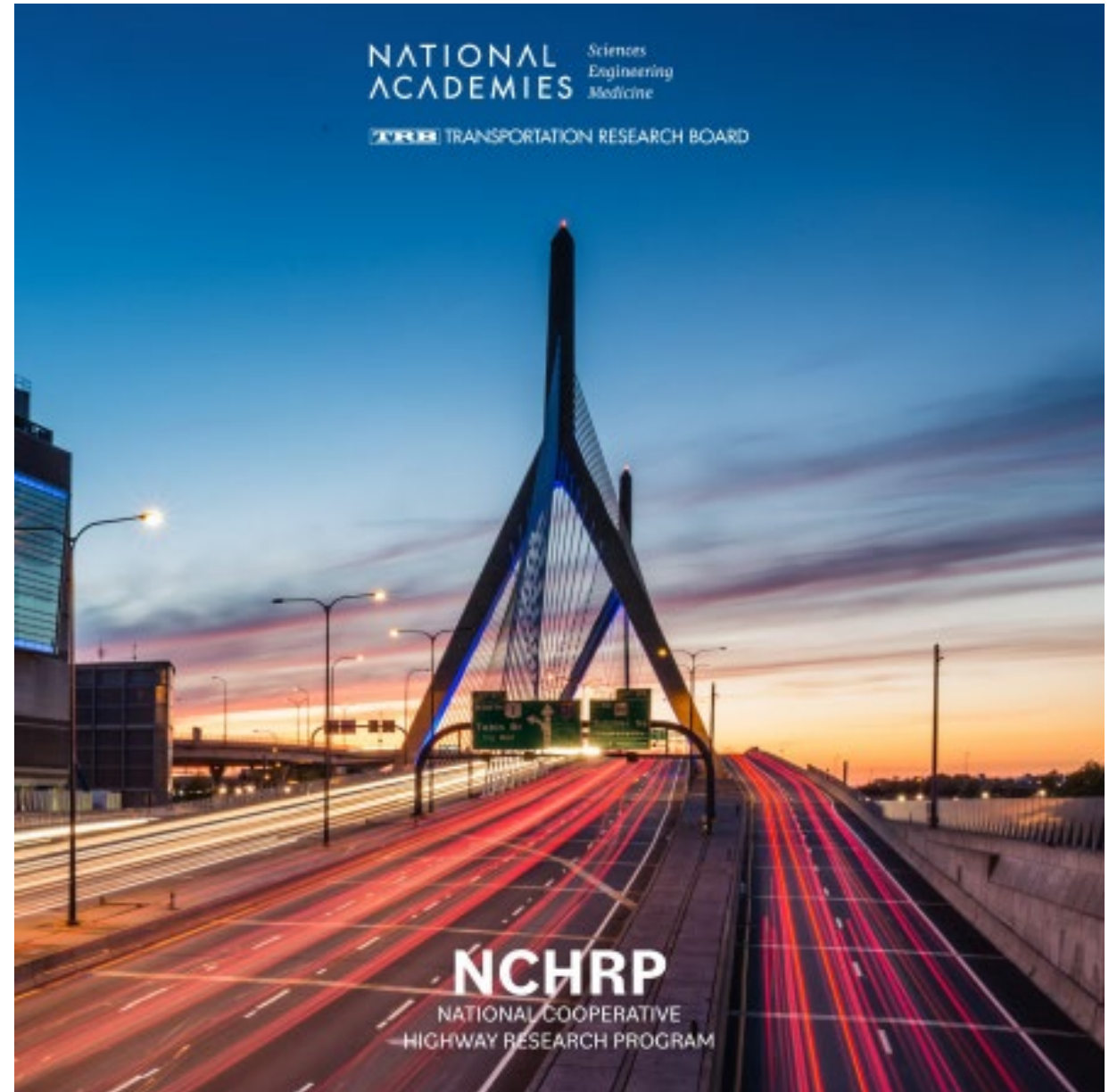
TRB's Cooperative Research Programs

Program	Funded Years	Annual Budget	Partners
NCHRP (Highways)	1962–	\$54M	FHWA, AASHTO
TCRP (Transit)	1992–	\$6.6M	FTA, APTA
ACRP (Airports)	2004–	\$15M	FAA, ACI, AAAE + ...
BTSCRP (Behavioral Traffic Safety)	2017–	\$3.5M	NHTSA, GHSA

National Cooperative Highway Research Program NCHRP



Waseem Dekelbab
NCHRP Manager



NCHRP 2022 Accomplishments

- 60th year of research supporting state DOTs
- 41 Research Reports, 21 Syntheses of Highway Practice
- 4 Legal Research Digests and 30 web-only products
- AASHTO Board of Directors adoption of “Development of a National Vision for the Future of Transportation and Individual and Collective Actions for State Departments of Transportation to Make Progress toward the Vision.”
- \$4 million allocated to support the nation in preparing for weather-related and climate-related disasters



Some key reports in 2022:

- Research Report 985 - Integrating Effective Transportation Performance, Risk, and Asset Management Practices
- Research Report 988 - Rural Transportation Issues: Research Roadmap
- Research Report 1003 - Guide to Alternative Technologies for Preventing and Mitigating Vehicle Intrusions into Highway Work Zones
- Research Report 998 - Planning Freight-Efficient Land Uses: Methodology, Strategies, and Tools
- Research Report 1004 - Federal Funding Uncertainty in State, Local, and Regional Departments of Transportation: Impacts, Responses, and Adaptations
- Research Report 1006 - Guide to Understanding Effects of Raising Speed Limits
- Research Report 1008 - Attracting, Retaining, and Developing the 2030 Transportation Workforce: Design, Construction, and Maintenance
- Research Report 1001 - Framework for Assessing Potential Safety Impacts of Automated Driving Systems
- Research Report 1000 - Accessibility Measures in Practice: A Guide for Transportation Agencies

Airport Cooperative Research Program ACRP



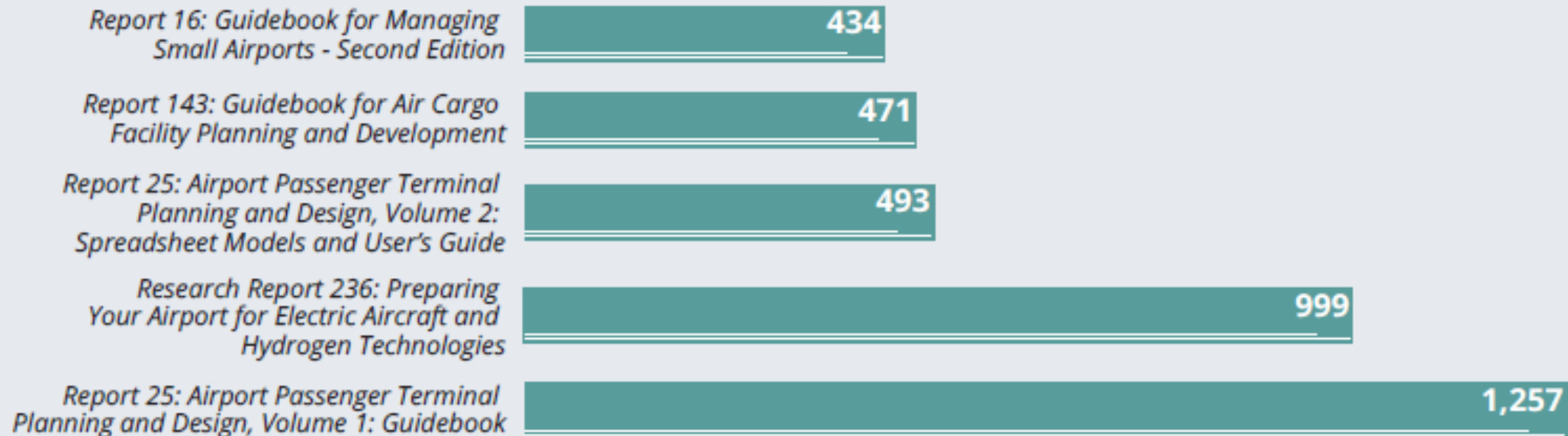
Marci Greenberger
ACRP Manager



Recent ACRP Reports:

- **ACRP Research Report 236:** *Preparing Your Airport for Electric Aircraft and Hydrogen Technologies*
- **ACRP Research Report 237:** *Primer and Framework for Considering an Airport Noise and Operations Monitoring System*
- **ACRP Research Report 241:** *Toward a Touchless Airport Journey*
- **ACRP Research Report 246:** *Airside Operations Safety: Understanding the Effects of Human Factors*

Publications with the Most Downloads in 2022



Data runs through September 30, 2022

Transit Cooperative Research Program TCRP



Gwen Chisholm-Smith, TCRP Manager

TCRP Oversight and Project Selection Commission, Nov 4 2022

Selection of TCRP Reports in 2022:

- Report 232: The **Impacts of Vehicle Automation** on the Public Transportation Workforce
- Report 233: Strategies for Deterring **Trespassing** on Rail Transit and Commuter Rail Rights of-Way, Volume 1: Guidebook and Volume 2: Research Overview
- Synthesis 163: Considering the Unbanked in **Cashless Fare Payment** at Point of Service for Bus/Demand-Response Services
- Synthesis 164: **Bus Rapid Transit**: Current State of Practice
- Synthesis 159: Assessing **Equity** and Identifying Impacts Associated with Bus Network Redesigns

Behavioral Traffic Safety CRP

Six reports published in 2022:

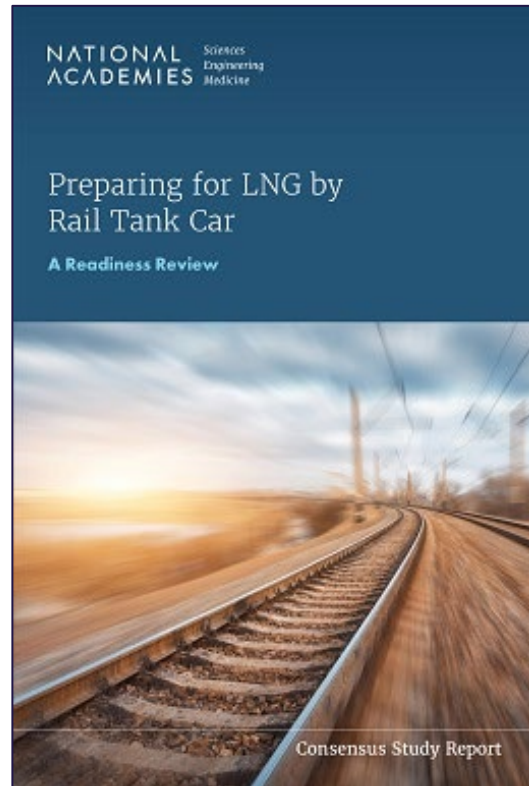
- Guidance For Employer-based Behavioral Traffic Safety Programs In The Workplace
- Guide For Behavioral Traffic Safety Messaging On Variable Message Signs
- Assessing The Impacts Of Connected, Automated, And Autonomous Vehicles On The Future Of Transportation Safety
- Naturalistic Driving Study Database To Improve Teen Driving Safety: Phase 1 Proof Of Concept
- Influence Of Infrastructure Design On Distracted Driving
- E-scooter Safety Issues And Solutions



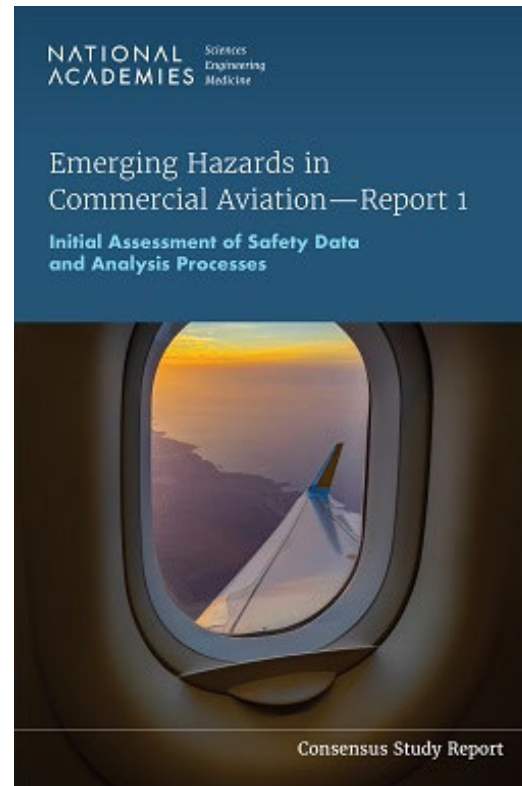
Status of Congressionally Mandated Studies

- Criteria for Installing Automatic Shutoff Valves on Pipelines, PHMSA
- New Statutory Authorities Needed by the Coast Guard, USCG
- Opportunities for Repurposing Plastics Waste in Infrastructure, OST-R, EPA
- Emerging Trends in Aviation Safety, FAA (Phase 2)
- Impacts of Truck Driver Compensation Methods on Safety, FMCSA (New)
- Safety and Other Impacts of Very Long Trains, FRA (New)
- Best Practices for Provisioning Chassis, FMCSA (New)
- Review of Coast Gas (LNG) Carrier Inspection Program, USCG (New)

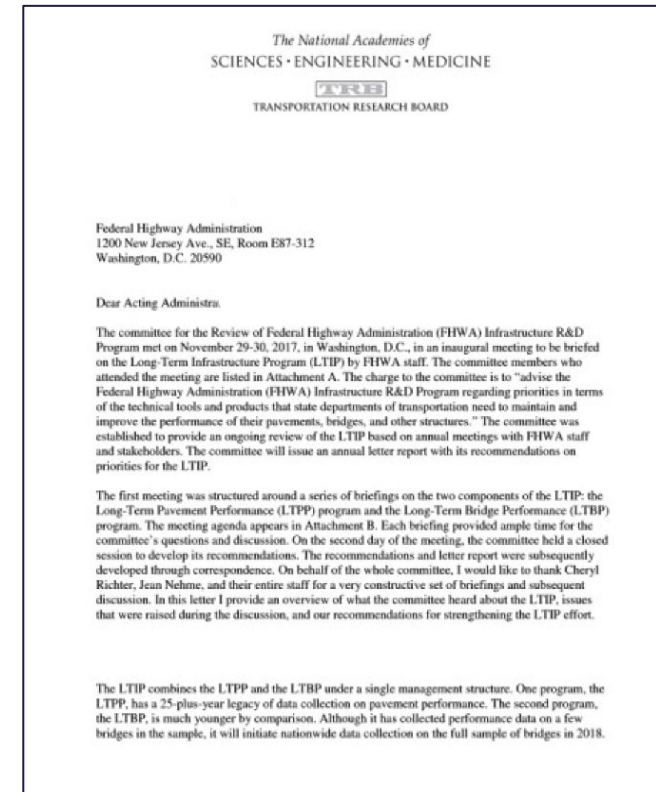
Studies Completed Since April 2022



Preparing for LNG by Rail Tank Car: A Readiness Review



Emerging Hazards in Commercial Aviation—Report 1: Initial Assessment of Safety Data and Analysis Processes



Annual Letter Report, Research and Technology Coordinating Committee (FHWA)

TRB's Ongoing NASEM Collaborations

- **Repurposing Plastics Waste in Infrastructure:** Board on Chemical Sciences and Technology (DELS); Board on Infrastructure and Constructed Environment (DEPS)
- **Impacts of Truck Driver Compensation Methods on Safety:** Committee on National Statistics (DBASSE)
- **Emerging Trends in Aviation Safety:** Board on Human Systems Integration (DBASSE), Aeronautics and Space Engineering Board (DEPS)
- **New Coast Guard Authorities:** Ocean Studies Board (DELS)
- **Changing Risk Profile in Gulf of Mexico Offshore Oil and Gas Sector:** Gulf Research Program
- **Effectiveness of Substance Abuse Treatment in Transportation:** Board on Behavioral Sciences
- **Accelerating Decarbonization of the Energy System:** Board on Energy and Environmental Systems

Pending Studies

Highway Stormwater Best Management Practices

Enacted in Sec. 11520 of BIL. Discussion underway on scope with FHWA. This will be a collaboration with the Board on Water Sciences and Technology

Equity Metrics for Surface Transportation Projects

\$1.5 million appropriated in FY2022 Omnibus Appropriations Act. **Award in place for \$500,000 study to begin in 2024 and \$1,000,000 CRP project to begin in 2025**

**EVERYONE
INTERESTED
IS INVITED**



**THE
TRANSPORTATION
RESEARCH BOARD**

**1920
2020**

EVERYONE INTERESTED IS INVITED



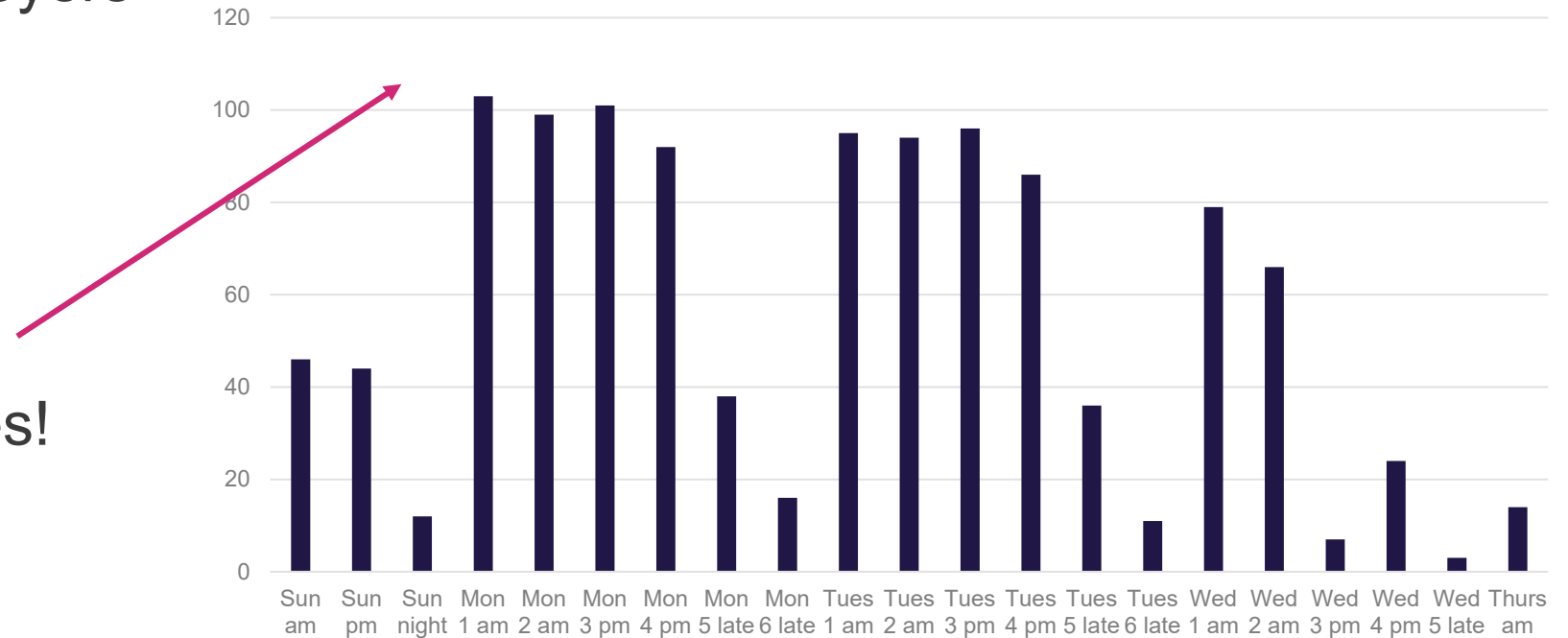
SARAH JO PETERSON

Annual Meeting 2023



Annual Meeting

- Registration exceeded 12,000 attendees
- 212 exhibitors, 50 patrons
- 27 career fair employers
- 618 sessions
- 423 meetings
- More than 100 events at peak times!



The people are happy!



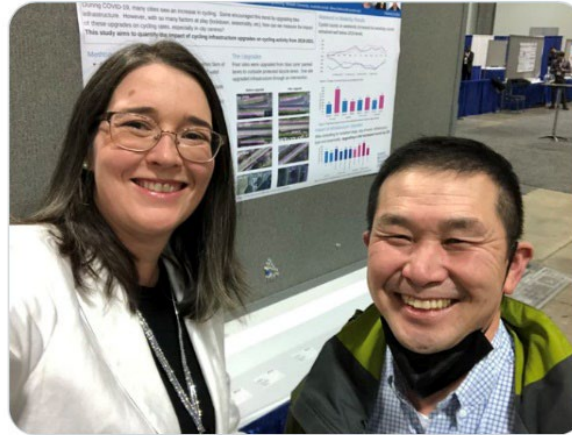
Jonathan Ahn @urbanahnjo · Jan 8

happy transportation nerd prom 2023 [#TRBAM](#)
[#TRBAM2023](#)



Dr Alexa Delbosc @AlexaDelbosc · 8h

Finally got to meet [@dongho_chang](#), my [#TRBAM](#) is complete. Sustainable traffic engineers of the world, unite!



Javier Castañeda @fjaviercg · Jan 10

Mexican group at TRB [#TRBAM](#)



Sunday Okafor 🇳🇮 🇬🇧 🇺🇸 @Okafor... · 6h ...

Finally got to meet Fred Mannering (left), one of the most respected professor and referred author in traffic safety research. [#TRBAM](#)



Peter Koonce @pkoonce · 4h ...

As [#TRBAM](#) begins to wind down, it's worth stating that the Annual Meeting is a bucket list event that every transportation professional should attend once in their career

TRB is more than 5 days in January, examples:

- 11 conferences planned for 2023:
 - Resilient Supply Chains
 - Road Weather and Winter Maintenance
 - Aviation System Planning
 - Travel Analysis and Planning
 - Marine Transportation System Innovative for Sustainability
 - Asset Management
 - Automated Road Transportation
 - Transportation Law
 - Low Volume Roads
 - Freight Data
 - Resilience for Extreme Weather and Climate Change Challenges
- Plus dozens of committee and subcommittee meetings, mostly virtual or hybrid
- 34 webinars for first 4 months of 2023:
 - Covering highways, transit, aviation, marine, and multimodal freight
 - Topics include: workforce, safety, equity, travel demand, ferry system capacity, truck parking, fare policies, privatization, infrastructure materials and methods, asset management and performance, resilience, sustainability, data and analysis, artificial intelligence, noise mitigation, utilities.
- Free online access to:
 - Hundreds of reports
 - Bibliographic database of 1.3 million completed research project reports and papers
 - Database of Research in Progress
 - Research Need Statements database
- Careers in Motion Job Center
- Snap Searches that provide in one document links to TRB work in specific areas

Conferences 2023

These may be good opportunities for people who can't attend the Annual Meeting to experience the benefits of in-person events that are typically shorter and less expensive.

- Workshop on Building More Resilient Supply Chains
- Conference on Road Weather and Winter Maintenance
- National Aviation System Planning Symposium
- Innovation in Travel Analysis and Planning
- Conference on the Marine Transportation System Innovative Science and Technologies Toward Greater Sustainability
- National Conference on Asset Management
- Automated Road Transportation Symposium
- Annual Workshop on Transportation Law
- Conference on Low Volume Roads
- Innovations in Freight Data Workshop
- Transportation Resilience 2023: Conference on Extreme Weather and Climate Change Challenges

- Recommend if you are not currently engaging with TRB Committees -
 - Go to www.MyTRB.org,
 - Identify TRB committee(s) related to your area of interest and sign up to become a Friend of the TRB committee(s).
- Free online access to:
 - Hundreds of reports
 - Bibliographic database of 1.3 million completed research project reports and papers
 - Database of Research in Progress
 - Research Need Statements database