TRB Snap Search: Safety & Human Factors

TRB’s involvement in research on Safety & Human Factors from 2020-2021

The Transportation Research Board (TRB) provides innovative, research-based solutions to improve how we move. TRB is part of the National Academies of Sciences, Engineering, and Medicine, an independent, non-profit institution that provides objective advice on scientific, engineering, and medical issues.

A resource to the nation and to the transportation community worldwide, TRB provides an extensive portfolio of services:

- Opportunities for information exchange on current transportation research and practice
- Management of cooperative research and other research programs
- Analyses of national transportation policy issues and guidance on federal and other research programs
- Publications and access to research information from around the world

All available Snap Searches can be accessed online here: http://www.trb.org/InformationServices/Snap.aspx

TRB Research

TRID – The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation

- Click here to view search results on TRB published research on Safety & Human Factors within the past year.

Subject Webpages

- Safety & Human Factors Research at TRB
- Behavioral Traffic Safety Cooperative Research Program (BTSCRCP)

Specialty Report

- Critical Issues in Transportation 2019

Recent Reports & Publications

- Airport Cooperative Research Program (ACRP)
  - Report 229 - Airport Collaborative Decision Making (ACDM) to Manage Adverse Conditions
  - Report 222 - Collecting and Sharing of Operations and Safety Data
  - Synthesis 115 - Practices in Airport Emergency Plans
  - Synthesis 109 - Escalator Falls
  - Synthesis 106 - Airport Risk Identification and Prioritization Practices
  - Web-Only Document 50 - Research Roadmap on Safety Issues

- Behavioral Traffic Safety Cooperative Research Program (BTSCRCP)
  - Report 1 - Using Electronic Devices While Driving: Legislation and Enforcement Implications

- Conference Proceedings

- IDEA Safety Program
  - Rail IDEA Report 41 - Vibration-based Longitudinal Rail Stress Estimation Exploiting Acoustic Measurement and Machine Learning
  - Rail IDEA Report 40 - Using Light to Reduce Fatigue and Improve Alertness in Railway Operations
  - Rail IDEA Report 33 - Adaptive Prestressing System for Concrete Crossties

- National Cooperative Highway Research Program (NCHRP)
  - NCHRP 03-127 - Cybersecurity of Traffic Management Systems
  - NCHRP 17-76 - Guidance for the Setting of Speed Limits
Current & Upcoming Projects

**Current Projects**
- **ACRP 03-49** - Effective Collaboration to Plan and Respond to Communicable Disease Threats
- **ACRP 03-57** - A Guidebook to Prepare Airports for Transformations in Wireless Connectivity
- **ACRP 04-24** - Guidelines to Develop an Anti-Human Trafficking Action Plan for Airports
- **ACRP 04-27** - Alternative Methods to Manage Tree Growth Near Airports
- **ACRP 08-03** - Construction Safety and Phasing Plans
- **ACRP 10-29** - Aircraft Jet Blast Estimation Tool
- **ACRP 11-02/Task 36** - Research Roadmap on Safety Issues
- **ACRP Synthesis 11-03/Topic S04-21** - Models for Law Enforcement at Airports
- **ACRP Synthesis 11-03/Topic S10-17** - Agricultural Operations on Airport Grounds
- **BTS CRP BTS-01** - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace
- **BTS CRP BTS-02** - Guide for Behavioral Traffic Safety Messaging on Variable Message Signs
- **BTS CRP BTS-04** - Tracking State Traffic Citation and Adjudication Outcomes
- **BTS CRP BTS-06** - MPO and SHSO Coordination on Behavioral Traffic Safety
- **BTS/SCR/BTS-08** - Use of SHRP2 Naturalistic Driving Study Database to Improve Teen Driving Safety: Phase 1 Proof of Concept
- **BTS/SCR/BTS-09** - The Influence of Infrastructure Design on Distracted Driving
- **BTS/SCR/BTS-10** - E-Scooter Safety: Issues and Solutions
- **BTS/SCR/BTS-11** - Ensuring Child Safety in New Travel Modes
- **BTS/SCR/BTS-12** - State Practices Promoting Older Driver Safety
- **BTS/SCR/BTS-13** - Communicating Safe Behavior Practices to Vulnerable Road Users
- **BTS/SCR/BTS-15** - Highway Safety Strategies for Rural Communities
- **NCHRP 03-119** - Application of MASH Test Criteria to Breakaway Sign and Luminaire Supports and Crashworthy Work-Zone Traffic Control Devices
- **NCHRP 03-130** - Guide for Roundabouts
- **NCHRP 03-132** - Guidance for Safe and Effective Temporary Traffic Control for Mobile Operations on Two-Lane Two-Way Roadways
- **NCHRP 03-133** - Traffic Signal Design and Operations Strategies for Non-Motorized Users
- **NCHRP 03-134** - Determination of Encroachment Conditions in Work Zones
- **NCHRP 03-135** - Wrong-Way Driving Solutions, Policy, and Guidance
- **NCHRP 03-139** - Next Generation of the USLIMTS2 Speed Limit Setting Expert System
- **NCHRP 03-141** - Guidance on Midblock Pedestrian Signals (MPS)
- **NCHRP 05-24** - Guidelines for Vehicle and Equipment Color, Marking, and Lighting
- **NCHRP 15-65** - Development of Safety Performance Based Guidelines for the Roadside Design Guide
- **NCHRP 15-68** - Effective Low-Noise Rumble Strips
- **NCHRP 15-73** - Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
- **NCHRP 15-74** - Safety Evaluation of On-Street Bicycle Facility Design Features
- **NCHRP 15-78** - Guidebook for Urban and Suburban Roadway Cross-Sectional Reallocation
- **NCHRP 17-11(02)** - Development of Clear Recovery Area Guidelines
- **NCHRP 17-43** - Long-Term Roadside Crash Data Collection Program
- **NCHRP 17-46** - Comprehensive Analysis Framework for Safety Investment Decisions
- **NCHRP 17-50** - Lead States Initiative for Implementing the Highway Safety Manual
- **NCHRP 17-57** - Development of a Comprehensive Approach for Serious Traffic Crash Injury Measurement and Reporting Systems
- **NCHRP 17-60** - Benefit-Cost Methodology for Behavioral Highway Safety Countermeasures
- **NCHRP 17-66** - Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes
- **NCHRP 17-67** - Identification of Factors Contributing to the Decline of Traffic Fatalities in the United States
- **NCHRP 17-72** - Update of Crash Modification Factors for the Highway Safety Manual
- **NCHRP 17-74** - Application of Crash Modification Factors for Access Management
- **NCHRP 17-78** - Understanding and Communicating Reliability of Crash Prediction Models
- **NCHRP 17-79** - Safety Effects of Raising Speed Limits to 75 mph and Higher
- **NCHRP 17-81** - Proposed Macro-Level Safety Planning Analysis Chapter for the Highway Safety Manual
- **NCHRP 17-82** - Proposed Guidance for Fixed Objects in the Roadside Design Guide
- **NCHRP 17-84** - Pedestrian and Bicycle Safety Performance Functions for the Highway Safety Manual
- **NCHRP 17-86** - Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- **NCHRP 17-87** - Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities
- **NCHRP 17-88** - Roadside Encroachment Database Development and Analysis
- **NCHRP 17-89** - Safety Performance of Part-Time Shoulder Use on Freeways
- **NCHRP 17-90** - Evaluation of Roadside Crash Injury Metrics in MASH
- **NCHRP 17-91** - Assessing the Impacts of Connected, Automated and Autonomous Vehicles on the Future of Transportation Safety
- **NCHRP 17-92** - Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- **NCHRP 17-93** - Updating Safety Performance Functions for Data-Driven Safety Analysis
- **NCHRP 17-95** - Crash Modification Factors for Intelligent Transportation Systems (ITS) Applications
- **NCHRP 20-07/Task 374** - Guidelines for Selecting Sign Sheeting Materials for AASHTO M268
- **NCHRP 20-44(13)** - Implementation of NCHRP Research Report 893: The Oregon DOT Statewide Pedestrian and Bicycle Plan
- Cybersecurity Implications of CV/AV Technologies on State and Local Transportation Agencies
- Topical White Papers for the TRB Forum on Automated Vehicles and Shared Mobility
- State DOT Contributions to the Study, Investigation, and Interdiction of Human Trafficking
- High-Value Research Marketing and Communications for 2020
- Deploying Transportation Security Practices in State DOTs
- Evaluating the Performance of Longitudinal Barriers on Curved, Superelevated Off-Ramps
- Multi-State In-Service Performance Evaluations of Roadside Safety Hardware
- Determination of Zone of Intrusion Envelopes under MASH Impact Conditions for Barrier Attachments
- Evaluation of Bridge Rail Systems to Confirm AASHTO MASH Compliance
- Development of a Barrier Design to Accommodate Vehicles, Pedestrians, and Cyclists
- Development of MASH TL-3 Deflection Reduction Guidance for 31-inch Guardrail
- Guardrail Performance at Various Offsets from Curb MASH TL-3 Applications
- Update to AASHTO M 180-18 and Associated Highway Guardrail Specifications
- Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- A Transportation Agency Data Collection Practice for Use with In-Service Performance Evaluations (ISPEs)
- Understanding and Analyzing Crash Contributing Factors
- Incorporating Driver Behavior and Characteristics into Safety Prediction Methods
- Development of Crash Prediction Models for Short-Term Durations
- Guidance for Training and Certification of Construction Inspectors for Transportation Infrastructure
- Safer Cushions
- From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- An Enhanced Network-Level Curve Safety Assessment and Monitoring Using Mobile Devices
- A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- Fatigue Crack Inspection Using Computer Vision and Augmented Reality
- A Smart IoT Proximity Alert System for Highway Work Zone Safety
- A Retroreflective Road Lane Marking Tape 1,000X Brighter Than Existing Technology
- Pavement Markings Placement and Removal Practices and Its Effect on Work Zone Safety
- Highway Infrastructure Inspection Practices for the Digital Age
- Practices for Balancing Safety Investments in a Comprehensive Safety Program
- Use of Safety Management Systems in Managing Highway Maintenance Worker Safety
- Use of Smart Work Zone Technologies for Improving Work Zone Safety
- Design Practices for Rock Slopes and Rockfall Management
- Onboard High-Bandwidth Fiber Optic Sensing System for Broken Rail Detection
- Augmenting Reality for Safer Inspections of Railroad Infrastructure and Operations
- Laser-based Non-destructive Spike Defect Inspection System
- Development of a Fatigue Load for Railway Bridges
- Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way
- Improving the Health and Safety of Transit Workers with Corresponding Impacts on the Bottom Line
- Assessing Lifecycle and Human Costs of Bus Operator Workstation Design and Components
- Codes of Conduct on Transit Vehicles and Property: Legal Issues
- Transit Safety Risk Assessment Methodologies
- Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns
- Evaluation of an Automatic, Individual, Computer-Based Operator Education and Training Program
- Safety Assessment of the Interaction Between the Autonomous Shuttle Bus and Vulnerable Road Users
• **Upcoming Projects**
  - ACRP 01-41 - Airport Blockchain Implementation Guidebook
  - ACRP 01-44 - Airport Insurance Requirements
  - ACRP 02-94 - Update ACRP WebResource 4: Airport Air Quality Resource Library
  - ACRP 02-95 - Understanding Airport Air Quality and Public Health Studies Related to Airports: An Update to ACRP Report 135
  - ACRP 04-25 - Airports and Communicable Diseases—Preparedness and Response
  - ACRP 04-27 - Alternative Methods to Manage Tree Growth Near Airports
  - ACRP 04-28 - Developing Alternative Aircraft Arresting Systems
  - ACRP 06-08 - Human Factors in Airport Operations
  - ACRP 10-30 - Evaluating the Effectiveness of an Airport's Wildlife Hazard Management Program
  - ACRP 11-02/Task 41 - Toward a Touchless Airport Journey
  - BTS/CRP BTS-14 - Understanding and Analyzing Crash Contributing Factors (Joint project with NCHRP 22-45)
  - BTS/CRP BTS-16 - Developing On-road Driver Skills Test and Scoring Guidance for Measuring and Predicting High Safety Risk Drivers
  - BTS/CRP BTS-17 - Determining the Effectiveness of Combined High Visibility Enforcement (HVE)
  - BTS/CRP BTS-19 - Improving Moped and Seated Motor Scooter (50 cc or less) Rider Safety
  - NCHRP 03-141 - Guidance on Midblock Pedestrian Signals (MPS)
  - NCHRP 03-25 - Safety Performance of LED and Variable Lighting Systems
  - NCHRP 07-31 - State DOT Usage of Bicycle and Pedestrian Data: Practices, Sources, Needs, and Gaps
  - NCHRP 08-139 - Guide for Preventing and Mitigating the Risk of Bridge and Tunnel Strikes by Motor Vehicles
  - NCHRP 10-109 - Modern Solutions to Safe and Efficient Work Zone Travel
  - NCHRP 15-66 - Operational Performance and Safety Effects of Arterial Weaving Sections
  - NCHRP 15-79 - Development of Guidance for Non-Standard Roadside Hardware Installations
  - NCHRP 17-96 - Traffic Safety Culture Research Roadmap
  - NCHRP 17-97 - Strategies to Improve Pedestrian Safety at Night
  - NCHRP 17-99 - Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
  - NCHRP 17-100 - Leveraging Big Data and Artificial Intelligence to Streamline Safety Data Analyses
  - NCHRP 17-101 - Safe Systems in the U.S. – Developing a Roadmap for Transportation Road Designers, Planners, and Engineers
  - NCHRP 20-07/Task 358 - Reducing Risks to Worker Safety in Work Zones Due to Distracted Drivers
  - NCHRP 20-07/Task 368 - Development of a Roadmap for Use of SHRP2 Safety Data to Enhance Existing Publications
  - NCHRP 20-102(16) - Preparing TIM Responders for Connected Vehicles and Automated Vehicles
  - NCHRP 20-102(18) - Minimum Safety Data Needed for Automated Vehicle Operations and Crash Analysis
  - NCHRP 20-102(33) - Safety of Vulnerable Road Users in a C/AV Future
  - NCHRP 22-32A - Development of Methods to Evaluate Side Impacts for Next Edition MASH
  - NCHRP 22-42 - Impact Performance Assessment of Barrier Performance at High Speeds
  - NCHRP 22-49 - The Effect of Vehicle Mix on Crash Frequency and Crash Severity
  - NCHRP 22-50 - Crashworthiness of Roadside Hardware on Curbed Roadways
  - NCHRP 22-51 - Evaluation of MASH 2016 Soil Specifications and Procedures
  - NCHRP 23-09 - Scoping Study to Develop the Basis for a Highway Standard to Conduct an All-Hazards Risk and Resilience Analysis
  - NCHRP 23-13 - Transportation Research Related to COVID-19
  - NCHRP 23-13(01) - Effective Tools and Practices for Measuring Telecommuting Employee Performance
  - NCHRP 23-13(02) - Employee Safety during COVID-19
  - NCHRP 23-13(03) - Guidance for State DOTs on Truck Rest and Service Areas for Critical Supply Chain Delivery
  - TCRP C-25 - Bus Operator Barrier Design
  - TCRP D-19 - Detecting and mitigating low level DC fault currents in transit systems thus eliminating electrical fires in tunnels and rights-of-way
  - TCRP E-13 - COVID-19 and Transit Air Quality Protections (Insight Event)

**Reports from the National Academies Press on Safety & Human Factors**

- Decarcerating Correctional Facilities during COVID-19 - Advancing Health, Equity, and Safety
- Public–Private Partnerships for Global Health at the National, Municipal, and Community Levels
- Value Proposition and Innovative Models for Multi-Sectoral Engagement in Global Health
- Stronger Food and Drug Regulatory Systems Abroad
- Health-Focused Public–Private Partnerships in the Urban Context
Committees & Panels

Sign-up to be a committee "Friend"

**TRB Standing Committees** – Search by transportation mode and committee topic

- ACH10 – Pedestrians
- ACH20 – Bicycle Transportation
- ACH30 – Human Factors of Vehicles
- ACH40 – Human Factors of Infrastructure Design and Operations
- ACH50 – Road User Measurement and Evaluation
- ACH60 – Vehicle User Education, Training, and Licensing
- ACS10 – Transportation Safety Management
- ACS20 – Safety Performance Analysis
- ACS50 – Impaired in Transportation
- ACS60 – Truck and Bus Safety
- AKD20 – Roadside Safety Design
- AKD80 – Roundabouts and other Intersection Design and Control Strategies
- AL070 – Tort Liability and Risk Management
- AME60 – Accessible Transportation and Mobility
- AN000 – Safety and Systems Users Group
- ANB00 – Safety
- ANB23 – Highway Safety Workforce Development
- ANB40 – Traffic Law Enforcement
- ANB45 – Occupant Protection
- ANB60 – Safe Mobility of Older Persons
- AND00 – Users Performance
- AND40 – Visibility
- ANF30 – Motorcycles and Mopeds
- AR070 – Rail Safety
- AR080 – Highway/Rail Grade Crossings
- AT040 – Transportation of Hazardous Materials
- AV090 – Aviation Security and Emergency Management
- AW040 – Marine Safety and Human Factors

**Task Forces** - Search for task force under committee here

**Policy Study**

- B0110 - Commercial Truck and Bus Safety Synthesis Program
- B0140 - Offshore Oil and Gas Safety Culture: A Framing Study

**CRP Panels**

- Project Panels Related to Safety & Human Factors

**Councils**

- A001C – Young Members Coordinating Council

Recent and Upcoming Events

**Upcoming Conferences** - Left hand menu “upcoming conferences by topic”
(Conferences cosponsored by TRB are denoted with an asterisk.)

- **6th International Symposium on Highway Geometric Design**
  *June 23, 2021*
  Amsterdam, the Netherlands

- **How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health**
  *July 1, 2021*
  Online

- **Automated Road Transportation Symposium 2021**
July 12, 2021
Online

**Bridging Transportation Researchers Online Conference***
*August 5, 2021
Online

**Innovations in Freight Data**
*September 21, 2021
Online

**18th Biennial National Harbor Safety Committee Conference**
*June 13, 2022
Boston, MA

**National Conference on Rural Public and Intercity Bus Transportation**
*October 25, 2021
Online

**Security Conference on Transformative Times in Transportation**
*October 26, 2021
Washington, D.C.

**International Conference on Roundabouts**
*April 1, 2022
Monterey, CA

**18th Biennial National Harbor Safety Committee Conference**
*June 13, 2022
Boston, MA

**13th Access Management Conference**
*July 1, 2022
online

**International Conference on Mobility and Transport for Older Adults and People with Disabilities (TRANSED)**
*September 1, 2022
Seattle, WA

[Webinars](#) – View upcoming webinars, suggest a webinar or add registration information

Past Webinars
- Safety and Human Factors

**TRB’s Transportation Research Information Services (TRIS)**

TRIS includes the [TRB Library](#) and the [TRIS Databases](#) (listed below) which are available free on TRB’s website.

The TRB Library provides information services to TRB staff, sponsors, TRB Committee members and panels and researchers. Access to the TRB Library is a benefit to TRB sponsors and TRB committee members.

In cooperation with your State DOT Library or Information Service, the TRB Library provides:

- Reference and research assistance
- Literature searches
- Articles for TRB Committee work

The TRB Library provides training on effective and efficient use of the following TRIS resources:

- **Transportation Research International Documentation (TRID) –** [trid.trb.org](http://trid.trb.org) - The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- **Transportation Research Thesaurus (TRT) –** [trt.trb.org](http://trt.trb.org) – A tool to improve the indexing and retrieval of transportation information.
- **Research in Progress (RiP) Database –** [rip.trb.org](http://rip.trb.org) - Current or recently completed transportation research projects
- **Research Needs Statements (RNS)** – [rns.trb.org](http://rns.trb.org) - Research needs as identified by TRB Technical Activities standing committees

- **Publications Index (PubsIndex) Database** – [pubsindex.trb.org](http://pubsindex.trb.org) - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board

**Contact or Questions:** [TRBLibrary@nas.edu](mailto:TRBLibrary@nas.edu)