TRB Snap Search: Safety & Human Factors

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

The [Transportation Research Board (TRB)](http://www.trb.org) 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](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 (BTSCRP)

**Specialty Report**

- Critical Issues in Transportation 2019

**Recent Reports & Publications**

- Airport Cooperative Research Program (ACRP)
  - 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

- 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
  - NCHRP 17-77 - Guide for Quantitative Approaches to Systemic Safety Analysis
  - NCHRP 20-65/Task 76 - Opportunities for State DOTs (and Others) to Encourage Shared Use Mobility Practices in Rural Areas

Updated 03/04/2021
Current & Upcoming Projects

- **NCHRP 20-65/Task 77** - Lessons Learned and Impacts to Date of State DOT Implementation of New Federal Transit Asset Management and Public Transportation Agency Safety Requirements
- **IDEA Report 212** - Non-Gating Guardrail Terminal
- **Legal Research Digest 83** - Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communication Strategies
- **Report 948** - Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges
- **Report 941** - Bicyclist Facility Preferences and Effects on Increasing Bicycle Trips
- **Report 932** - A Research Roadmap for Transportation and Public Health
- **Report 926** - Guidance to Improve Pedestrian and Bicyclist Safety at Intersections
- **Synthesis 557** - Utility Pole Safety and Hazard Evaluation Approaches

- **Special Reports / Consensus Studies**

- **Transit Cooperative Research Program (TCRP)**
  - **Report 218** - Characteristics and Elements of Non-Punitive Employee Safety Reporting Systems for Public Transportation
  - **Report 211** - Guidebook for Detecting and Mitigating Low-Level DC Leakage and Fault Currents in Transit Systems
  - **Synthesis 146** - Transit Security Preparedness
  - **Synthesis 145** - Current Practices in the Use of Onboard Technologies to Avoid Transit Bus Incidents and Accidents

- **Transportation Research Circulars**
  - **E-C268** - Insights, Inclusion, and Impact: Framing the Future for Women in Transportation

**Current Projects**

- **Current Projects**
  - **ACRP 03-49** - Effective Collaboration to Plan and Respond to Communicable Disease Threats
  - **ACRP 03-48** - Advanced Ground Vehicle Technologies (AGVT) for Airside Operations
  - **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 08-03** - Construction Safety and Phasing Plans
  - **ACRP 10-29** - Aircraft Jet Blast Estimation Tool
  - **ACRP 11-01/Topic 10-04** - Updated Survey of Laws and Regulations Applicable to Airport Commercial Ground Transportation
  - **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/CRP BTS-08** - Use of SHRP2 Naturalistic Driving Study Database to Improve Teen Driving Safety: Phase 1 Proof of Concept
  - **BTS/CRP BTS-09** - The Influence of Infrastructure Design on Distracted Driving
  - **BTS/CRP BTS-10** - E-Scooter Safety: Issues and Solutions
  - **BTS/CRP BTS-11** - Ensuring Child Safety in New Travel Modes
  - **BTS/CRP BTS-12** - State Practices Promoting Older Driver Safety
  - **BTS/CRP BTS-13** - Communicating Safe Behavior Practices to Vulnerable Road Users
  - **BTS/CRP BTS-15** - Highway Safety Strategies for Rural Communities

Page 2
- Application of MASH Test Criteria to Breakaway Sign and Luminaire Supports and Crashworthy Work-Zone Traffic Control Devices
- Guide for Roundabouts
- Guidance for Safe and Effective Temporary Traffic Control for Mobile Operations on Two-Lane Two-Way Roadways
- Traffic Signal Design and Operations Strategies for Non-Motorized Users
- Determination of Encroachment Conditions in Work Zones
- Next Generation of the USLIMITS2 Speed Limit Setting Expert System
- Effects of LED Roadway Lighting on Driver Sleep Health and Alertness
- Guidelines for Vehicle and Equipment Color, Marking, and Lighting
- Development of Safety Performance Based Guidelines for the Roadside Design Guide
- Effective Low-Noise Rumble Strips
- Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
- Safety Evaluation of On-Street Bicycle Facility Design Features
- Guidebook for Urban and Suburban Roadway Cross-Sectional Reallocation
- Development of Clear Recovery Area Guidelines
- Long-Term Roadside Crash Data Collection Program
- Comprehensive Analysis Framework for Safety Investment Decisions
- Lead States Initiative for Implementing the Highway Safety Manual
- Consideration of Roadside Features in the Highway Safety Manual
- Development of a Comprehensive Approach for Serious Traffic Crash Injury Measurement and Reporting Systems
- Benefit-Cost Methodology for Behavioral Highway Safety Countermeasures
- Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes
- Identification of Factors Contributing to the Decline of Traffic Fatalities in the United States
- Update of Crash Modification Factors for the Highway Safety Manual
- Application of Crash Modification Factors for Access Management
- Understanding and Communicating Reliability of Crash Prediction Models
- Safety Effects of Raising Speed Limits to 75 mph and Higher
- Expansion of Human Factors Guidelines for Road Systems, Second Edition
- Proposed Macro-Level Safety Planning Analysis Chapter for the Highway Safety Manual
- Proposed Guidance for Fixed Objects in the Roadside Design Guide
- Pedestrian and Bicycle Safety Performance Functions for the Highway Safety Manual
- Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities
- Roadside Encroachment Database Development and Analysis
- Safety Performance of Part-Time Shoulder Use on Freeways
- Evaluation of Roadside Crash Injury Metrics in MASH
- Assessing the Impacts of Connected, Automated and Autonomous Vehicles on the Future of Transportation Safety
- Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- Updating Safety Performance Functions for Data-Driven Safety Analysis
- Crash Modification Factors for Intelligent Transportation Systems (ITS) Applications
- Guidelines for Selecting Sign Sheeting Materials for AASHTO M268
- 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
- NCHRP 22-34 - Determination of Zone of Intrusion Envelopes under MASH Impact Conditions for Barrier Attachments
- NCHRP 22-35 - Evaluation of Bridge Rail Systems to Confirm AASHTO MASH Compliance
- NCHRP 22-37 - Development of a Barrier Design to Accommodate Vehicles, Pedestrians, and Cyclists
- NCHRP 22-38 - Development of MASH TL-3 Deflection Reduction Guidance for 31-inch Guardrail
- NCHRP 22-39 - Guardrail Performance at Various Offsets from Curb MASH TL-3 Applications
- NCHRP 22-40 - Update to AASHTO M 180-18 and Associated Highway Guardrail Specifications
- NCHRP 22-43 - Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- NCHRP 22-44 - A Transportation Agency Data Collection Practice for Use with In-Service Performance Evaluations (ISPEs)
- NCHRP 22-45 - Understanding and Analyzing Crash Contributing Factors
- NCHRP 22-47 - Incorporating Driver Behavior and Characteristics into Safety Prediction Methods
- NCHRP 22-48 - Development of Crash Prediction Models for Short-Term Durations
- NCHRP 23-05 - Guidance for Training and Certification of Construction Inspectors for Transportation Infrastructure
- NCHRP IDEA 20-30/IDEA 203 - Safer Cushions
- NCHRP IDEA 20-30/IDEA 206 - From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- NCHRP IDEA 20-30/IDEA 214 - An Enhanced Network-Level Curve Safety Assessment and Monitoring Using Mobile Devices
- NCHRP IDEA 20-30/IDEA 217 - A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- NCHRP IDEA 20-30/IDEA 223 - Fatigue Crack Inspection Using Computer Vision and Augmented Reality
- NCHRP IDEA 20-30/IDEA 226 - A Smart IoT Proximity Alert System for Highway Work Zone Safety
- NCHRP IDEA 20-30/IDEA 228 - A Retroreflective Road Lane Marking Tape 1,000X Brighter Than Existing Technology
- NCHRP Synthesis 20-05/Topic 51-03 - Pavement Markings Placement and Removal Practices and Its Effect on Work Zone Safety
- NCHRP Synthesis 20-05/Topic 52-01 - Highway Infrastructure Inspection Practices for the Digital Age
- NCHRP Synthesis 20-05/Topic 52-08 - Practices for Balancing Safety Investments in a Comprehensive Safety Program
- NCHRP Synthesis 20-05/Topic 52-09 - Use of Safety Management Systems in Managing Highway Maintenance Worker Safety
- NCHRP Synthesis 20-05/Topic 52-11 - Use of Smart Work Zone Technologies for Improving Work Zone Safety
- Safety IDEA Project 36 - Onboard High-Bandwidth Fiber Optic Sensing System for Broken Rail Detection
- Safety IDEA Project 43 - Augmenting Reality for Safer Inspections of Railroad Infrastructure and Operations
- Safety IDEA Project 44 - Laser-based Non-destructive Spike Defect Inspection System
- Safety IDEA Project 45 - Development of a Fatigue Load for Railway Bridges
- TCRP A-44 - Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way
- TCRP B-46 - Tactile Wayfinding in Transportation Settings for Travelers Who Are Blind or Visually Impaired
- TCRP F-26 - Improving the Health and Safety of Transit Workers with Corresponding Impacts on the Bottom Line
- TCRP G-17 - Assessing Lifecycle and Human Costs of Bus Operator Workstation Design and Components
- TCRP I-05/Topic 18-02 - Codes of Conduct on Transit Vehicles and Property: Legal Issues
- TCRP Synthesis I-07/Topic SA-51 - Transit Safety Risk Assessment Methodologies
- TCRP Synthesis I-07/Topic SA-52 - Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns
- Transit IDEA J-04/IDEA 98 - 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 02-95 - Update ACRP Report 135: Understanding Airport Air Quality and Public Health Studies Related to Airports
- 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 Arrestering Systems
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
- Predicting Human Health Effects from Environmental Exposures: Applying Translatable and Accessible Biomarkers of Effect

Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- ACHR10 – Pedestrians
- ACHR20 – Bicycle Transportation
- ACHR30 – Human Factors of Vehicles
- ACHR40 – Human Factors of Infrastructure Design and Operations
- ACHR50 – Road User Measurement and Evaluation
- ACHR60 – Vehicle User Education, Training, and Licensing
- ACS10 – Transportation Safety Management
- ACS20 – Safety Performance Analysis
- ACS50 – Impaired in Transportation
- ACS60 – Truck and Bus Safety
Task Forces - Search for task force under committee here

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

CRP Panels
  o Project Panels Related to Safety & Human Factors

Councils
  o 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.)

  10th International Conference on Bridge Maintenance, Safety, and Management (IABMAS2020)*
  April 11-15, 2021
  Sapporo, Japan

  Joint Rail Conference*
  April 20, 2021
  Online

  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

  2021 Innovations in Freight Data
  September 21, 2021
  Irvine, CA

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

Webinars – View upcoming webinars, suggest a webinar or add registration information

Past Webinars
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 - The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- Transportation Research Thesaurus (TRT) – trt.trb.org - A tool to improve the indexing and retrieval of transportation information.
- Research in Progress (RIP) Database – rip.trb.org - Current or recently completed transportation research projects
- Research Needs Statements (RNS) – rns.trb.org - Research needs as identified by TRB Technical Activities standing committees
- Publications Index (PubsIndex) Database – 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