TRB Snap Search: Operations & Traffic Management

TRB's involvement in research on Operations & Traffic Management from 2021-2022

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- 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 Operations & Traffic Management within the past year.

Subject Webpage

- Operations & Traffic Management Research at TRB

Recent Reports & Publications

- Airport Cooperative Research Program (ACRP)
  - Impacts on Practice - Investing in Self-Serve Fueling Stations at Eagle River Union Airport
  - Report 237 - Primer and Framework for Considering an Airport Noise and Operations Monitoring System
  - Report 231 - Evaluating the Traveler's Perspective to Improve the Airport Customer Experience
  - Report 230 - Enhancing Academic Programs to Prepare Future Airport Industry Professionals
  - Report 229 - Airport Collaborative Decision Making (ACDM) to Manage Adverse Conditions
  - Synthesis 117 - Agricultural Operations on Airport Grounds

- National Cooperative Highway Research Program (NCHRP)
  - IDEA Report 228 - A Retroreflective Road Lane Marking Tape 1,000X Brighter than Existing Technology
  - IDEA Report 209 - An Automated System for Pedestrian Facility Data Collection from Aerial Images
  - Report 981 - Development of Guidelines for Quantifying Benefits of Traffic Incident Management Strategies
  - Report 978 - Initiating the Systems Engineering Process for Rural Connected Vehicle Corridors, Volume 1: Research Overview
  - Report 975 - Transportation System Resilience: Research Roadmap and White Papers
  - Report 969 - Traffic Signal Control Strategies for Pedestrians and Bicyclists
  - Report 952 - Guidebook for Managing Data from Emerging Technologies for Transportation
  - Report 948 - Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges
  - Synthesis 575 - Lighting Practices for Isolated Rural Intersections
  - Synthesis 567 - Summary State DOT Practices for Developing and Implementing TSMO Plans
  - Synthesis 561 - Use of Vehicle Probe and Cellular GPS Data by State Departments of Transportation
  - Web-Only Document 318 - Safety Prediction Models for Six-Lane and One-Way Urban and Suburban Arterials
Current & Upcoming Projects

- **Transit Cooperative Research Program (TCRP)**
  - IDEA Report 95 - Connected and Automated Parking Feasibility – A Pilot Study
  - IDEA Report 93 - An Open Platform for Transit Agencies to Improve the Quality of Their Real-Time Data
  - IDEA Report 92 - Augmented Reality Dispatcher Interface
  - Report 234 - Measuring and Managing Fare Evasion
  - Report 230 - Transit and Micromobility
  - Synthesis 159 - Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns
  - Synthesis 155 - Intelligent Transportation Systems in Headway-Based Bus Service

Current & Upcoming Projects

- **Current Projects**
  - ACRP 01-36 - Advancing the Practice of State Aviation System Planning
  - ACRP 01-41 - Airport Blockchain Implementation Guidebook
  - ACRP 02-95 - Understanding Airport Air Quality and Public Health Studies Related to Airports: An Update to ACRP Report 135
  - ACRP 03-49 - Effective Collaboration to Plan and Respond to Communicable Disease Threats
  - ACRP 03-52 - Guidelines for Adapting and Managing Airport Common Use Programs
  - ACRP 03-57 - A Guidebook to Prepare Airports for Transformations in Wireless Connectivity
  - ACRP 03-58 - Measuring the Effect of Changes in Air Service Connectivity on Regional Economic Development
  - ACRP 03-63 - Modernizing Air Cargo Operations and Infrastructure at U.S. Airports
  - ACRP 04-26 - Uncontrolled Terminal Evacuations: Planning, Response, and Recovery
  - ACRP 07-17 - Update to ACRP Report 40: Airport Roadway Analysis and Curbside Congestion Management Strategies
  - ACRP 09-19 - Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications
  - ACRP 09-21 - Asset Information Handover Guidelines: From Planning and Construction to O&M
  - ACRP 10-31 - Guidebook for Virtual Airport Ramp Control Operations Facilities
  - ACRP 10-32 - U.S. Airport Industry Adoption of Automated Ground Vehicle Systems
  - ACRP 11-02/Task 37 - Periodic Report on Transformative Technology at Airports
  - ACRP 11-08(20-01) - ACRP Insight Event—Future of Aviation
  - ACRP Synthesis 11-03/Topic S01-25 - Airport Parking Pricing Strategies
  - ACRP Synthesis 11-03/Topic S01-26 - The Landscape of the FBO Industry in 2022
  - ACRP Synthesis 11-03/Topic S02-22 - Airport Programs that Reduce Landside Vehicle Carbon Emissions
  - ACRP Synthesis 11-03/Topic S03-17 - Airport Centric Advanced Air Mobility Market Study
  - ACRP Synthesis 11-03/Topic S04-26 - Managing a Flight Diversion with an Emergency Response at Small, Non-Hub, or General Aviation Airports
  - ACRP Synthesis 11-03/Topic S10-19 - Airport Landside Operations Data and Collection Method
  - ACRP Synthesis 11-03/Topic S10-20 - Resilience Partnerships with the Air National Guard and other Military Organizations
  - BTS/CRP BTS-01 - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace
  - BTS/CRP BTS-06 - MPO and SHSO Coordination on Behavioral Traffic Safety
  - NCHRP 02-26 - Implementation of Life-Cycle Planning Analysis in a Transportation Asset Management Framework
  - NCHRP 02-27 - Making Targets Matter: Managing Performance to Enhance Decision-Making
  - NCHRP 03-114(01) - Planning and Evaluating Active Traffic Management Strategies
  - NCHRP 03-126 - Transportation Operations Manual
  - NCHRP 03-127(01) - Cybersecurity of Traffic Management Systems
  - NCHRP 03-128 - Business Intelligence Techniques for Transportation Agency Decision Making
- **NCHRP 03-129** - Essential Communications
- **NCHRP 03-130** - Guide for Roundabouts
- **NCHRP 03-134** - Determination of Encroachment Conditions in Work Zones
- **NCHRP 03-135** - Wrong-Way Driving Solutions, Policy, and Guidance
- **NCHRP 03-136** - Evaluating the Performance of Right-Turn-On-Red Operation at Signalized Intersections (with single and dual right-turn lanes)
- **NCHRP 03-137** - Algorithms to Convert Basic Safety Messages into Traffic Measures
- **NCHRP 03-138** - Application of Big Data Approaches for Traffic Incident Management (TIM)
- **NCHRP 03-139** - Next Generation of the USLIMITS2 Speed Limit Setting Expert System
- **NCHRP 03-141** - Guidance on Midblock Pedestrian Signals (MPS)
- **NCHRP 05-22A** - Gaps and Emerging Technologies in the Application of Solid-State Roadway Lighting
- **NCHRP 06-18** - Guide for Snow and Ice Control Operations
- **NCHRP 07-26** - Update of Highway Capacity Manual: Merge, Diverge, and Weaving Methodologies
- **NCHRP 07-30** - Methods for Assigning Short-Duration Traffic Volume Counts to Adjustment Factor Groups for Estimating AADT
- **NCHRP 08-115** - Guidebook for Data and Information Systems for Transportation Asset Management
- **NCHRP 08-118** - Risk Assessment Techniques for Transportation Asset Management
- **NCHRP 08-121** - Accessibility Measures in Practice: Guidance for Transportation Agencies
- **NCHRP 08-124** - Quantifying the Impacts of Corridor Management
- **NCHRP 08-132** - Accessing America’s Great Outdoors: Forecasting Recreational Travel Demand
- **NCHRP 08-135** - Reliability and Quality of Service Evaluation Methods for Rural Highways
- **NCHRP 08-145** - Utilizing Cooperative Automated Transportation (CAT) Data to Enhance the Use of Freeway Operational Strategies
- **NCHRP 08-147** - Improving Public Transportation in Rural Areas and Tribal Communities
- **NCHRP 10-109** - Modern Solutions to Safe and Efficient Work Zone Travel
- **NCHRP 10-102** - A Guidebook for Risk-Based Construction Inspection
- **NCHRP 14-42** - Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs
- **NCHRP 15-66** - Operational Performance and Safety Effects of Arterial Weaving Sections
- **NCHRP 15-73** - Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
- **NCHRP 15-78** - Guidebook for Urban and Suburban Roadway Cross-Sectional Reallocation
- **NCHRP 17-82** - Proposed Guidance for Fixed Objects in the Roadside Design Guide
- **NCHRP 17-86** - Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- **NCHRP 17-88** - Roadside Encroachment Database Development and Analysis
- **NCHRP 17-92** - Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- **NCHRP 17-95** - Crash Modification Factors (CMFs) for Intelligent Transportation System (ITS) Applications
- **NCHRP 17-98** - Guide for Intersection Control Evaluation
- **NCHRP 17-119** - Conflict-Based Crash Prediction Method for Intersections
- **NCHRP 17-122** - Evaluation of Trespassing Detection and Warning Systems in the Vicinity of Highway–Rail Grade Crossings
- **NCHRP 20-24(128)** - State-of-the-Art Review of Cooperative Automated Transportation (CAT) Systems
- **NCHRP 20-24(138)** - Collective and Individual Actions for State Departments of Transportation Envisioning and Realizing the Next Era of America’s Transportation Infrastructure – Phase I
- **NCHRP 20-44(09)** - Quantitative and Qualitative Methods for Capturing the Impacts and Value of NCHRP Research
- **NCHRP 20-50(21)** - Enhancements of Climatic Inputs and Related Models for Pavement ME Using LTPP Climate Tool (MERRA-2)
- **NCHRP 20-65/Task 81** - Best Practices in Rural Service Assessment
- **NCHRP 20-102(16)** - Impacts of Connected, Automated Vehicle Technologies on Traffic Incident Management Response
- **NCHRP 20-102(26)** - Dynamic Curbside Management: Keeping Pace with New and Emerging Mobility and Technology in the Public Right of Way
- **NCHRP 20-102(28)** - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
- **NCHRP 20-123(101)** - AASHTO Committee on Bridges and Structures Strategic Plan, Operating Guidelines, and Research Roadmap Development
- **NCHRP 20-123(12)** - System Mobility and Emerging Technologies (SMET): Strategic Planning Session and Research Roadmap Development
- **NCHRP 20-123(18)** - Development of a New Transportation System Operations Strategic Plan
- **NCHRP 22-43** - Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- Traffic Management Systems
- How to Measure and Communicate the Value of Access Management
- Pollinator Habitat Conservation Along Roadways
- From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- An Automated System for Large-Scale Intersection Marking Data Collection and Condition Assessment
- Identifying the Current Practice of Contrast Pavement Markings by Departments of Transportation
- Use of Smart Work Zone Technologies for Improving Work Zone Safety
- Micromobility Policies, Permits, and Practices
- Practices for Adding Bicycle and Pedestrians Access on Existing Vehicle Bridges
- Use of Probe Data for Freight Planning and Operations
- Critical Findings for Tunnel Functional Systems
- Truck Escape Ramp Design and Operation
- Quantitative Procedures for Designing and Operating Ferry Transit Services
- Improving Public Transportation in Rural Areas and Tribal Communities
- Evaluation Framework for Fare-free Public Transportation
- On Street Bus Operations Management
- Dynamic Optimization on ADA Paratransit Service
- Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand Response Services
- Performance Metrics in Third Party Contracts for Bus Operations and Maintenance
- – Bike Love

- Upcoming Projects
- Airport Energy Resiliency Primer and Roadmap
- Guidebook for Digital Twin Programs at Airports
- Human Factors in Airport Operations
- Incorporating Emerging Transportation and Ground Access Technologies at Airports
- ACRP Insight Event – On Demand Aviation Services for Passengers and Goods
- Evaluating the Impacts of Real-Time Warnings and Variable Speed Limits on Safety and Travel Reliability during Weather Events
- Warrants for a Pedestrian Traffic Control Signal and for Other Pedestrian Traffic Control Devices
- Leveraging Existing Traffic Signal Assets to Obtain Quality Traffic Counts and Enhance Transportation Monitoring Programs
- National Traffic Sensor System Evaluation Program
- LED Applications on Traffic Control Devices
- Capabilities, Requirements, Planning, and Preparing to Virtually Operate Traffic Management Systems (TMS)
- Best Practices for Roundabout and Alternative Intersection/Interchange Lighting
- Future-Proofing Automatic Traffic Signal Performance Measurement Systems for Scalability, Transferability, and CAV Integration
- Toward Artificial Intelligence-Enabled Decision Support Systems for TSMO Applications
- Best Practices in Coordination of Public Transit and Ride Sharing
- Guide to the Integration of Transportation Systems Management and Operations into Transportation Asset Management
- Guidebook for Truck Parking Information Management Systems
- A Guidebook for Local Truck Parking Regulations
- Guide to the Application of Spatial Segmentation on Travel Time Reliability Measures
- Best Practices in Determining Rural Transit Fleet Size – How to Provide Service for Changing Demographics of Rural Ridership (Right-sizing of Rural Transit Fleets)
- Integrating Resiliency into Transportation System Operations
- Estimating Benefits of Closing Gaps in Active Transportation Networks
- Best Practices for Data Fusion of Probe and Point Detector Data
- Development of Guidance for Non-Standard Roadside Hardware Installations
- NCHRP 15-82 - Effects of Operating Speed and Posted Speed Limit in Conjunction with Roadway Geometric Design on Safety Performance for High-Speed Rural Highways and Freeways
- NCHRP 17-99 - Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
- NCHRP 17-101 - Applying the Safe System Approach to Transportation Planning, Design, and Operations in the United States
- NCHRP 17-108 - Developing Crash Modification Factors for Alternative Intersections
- NCHRP 17-111 - Speed Management Solutions and Strategies to Improve Pedestrian and Bicyclist Safety on Arterial Roadways
- NCHRP 17-114 - Integrated Strategies for Managing High Travel Speeds
- NCHRP 19-23 - New Mobility and the User Fee Concept
- NCHRP 20-102(25) - Readiness and Effectiveness of Freeway-Based Corridor V2X Applications for Improving Congestion and Safety
- NCHRP 22-42 - Impact Performance Assessment of Barrier Performance at High Speeds
- NCHRP 23-13(01) - Telecommuting, Remote Work, and Hybrid Schedules: Managing the Shift to a Flexible Work Future
- NCHRP 23-13(04) - Scoping Supply Chain Challenges and Solutions amid COVID-19
- NCHRP 23-13(05) - Regulatory Relief of Commercial Vehicle Weight Requirements for Emergency Transportation of Critical Commodities
- NCHRP 23-13(06) - Assessing the Equity and Workforce Mobility Implications of the Expansion of E-Commerce and Direct-to-Consumer Delivery Services
- NCHRP 23-19 - Practices for Transportation Agency Procurement and Management of Advanced Technologies
- NCHRP 23-20 - Guidebook for Implementation of UAS Operational Capabilities
- NCHRP 23-28 - Changes to 4.9 Ghz Spectrum Access and Authorization – What You Need to Know
- NCHRP Synthesis 20-05/Topic 54-05 - Practices for Statewide and MPO Coordination

Reports from the National Academies Press on Operations & Traffic Management

- Aviation After a Year of Pandemic
- Energizing Data-Driven Operations at the Tactical Edge
- Space Nuclear Propulsion for Human Mars Exploration
- Necessary DoD Range Capabilities to Ensure Operational Superiority of U.S. Defense Systems
- Airborne Platforms to Advance NASA Earth System Science Priorities

Committees & Panels

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TRB Standing Committees – Search by transportation mode and committee topic

- ACP10 - Regional Transportation Systems Management and Operations
- ACP15 - Intelligent Transportation Systems
- ACP20 - Freeway Operations
- ACP25 - Traffic Signal Systems
- ACP30 - Vehicle-Highway Automation
- ACP35 - Managed Lanes
- ACP40 - Highway Capacity and Quality of Service
- ACP50 - Traffic Flow Theory and Characteristics
- ACP55 - Traffic Control Devices
- ACP60 - Access Management
- ACP80 - Traffic Simulation
- AKD10 - Performance Effects of Geometric Design
- AKD80 - Roundabouts and other Intersection Design and Control Strategies
- AKR10 - Maintenance and Operations Management
- AMR20 - Disaster Response, Emergency Evacuations, and Business Continuity
- AR080 - Highways/Highway Grade Crossings
- AV095 - New Users of Shared Airspace

Task Forces - Search for task force under committee here

Policy Study

- B0024 - Research and Technology Coordinating Committee (FHWA)
Recent and Upcoming Events

Upcoming TRB Conferences – Use left hand menu to filter events

- **18th Biennial National Harbor Safety Committee Conference**
  June 13-15, 2022
  Boston, MA

- **Automated Road Transportation Symposium**
  July 18-21, 2022
  Garden Grove, CA

- **TRB Annual Workshop on Transportation Law**
  July 24-27, 2022
  Portland, OR

- **Geospatial Data Acquisition Technologies in Design and Construction Summer Committee Meeting**
  July 25-27, 2022
  Washington, D.C.

- **Tools of the Trade Conference**
  August 29-31, 2022
  Boise, ID

- **TRANSED: Mobility, Accessibility, and Demand Response Transportation Conference**
  September 12-16, 2022
  Online

- **Conference on Scenario Planning in Transportation Planning**
  September 19-21, 2022
  Washington, D.C.

- **Symposium on Visualization in Transportation**
  November 3-4, 2022
  Washington, D.C.

- **TRB International Conference on Low Volume Roads**
  July 23-26, 2023
  Cedar Rapids, IA

Upcoming Events – In the Upcoming Events tab under Types, choose what event you are interested in, search titles by keyword

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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

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