

TRB TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Maintenance & Preservation

TRB's involvement in research on Maintenance & Preservation from 2021-2022

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 Maintenance & Preservation within the past year.

Subject Webpage

- [Maintenance & Preservation Research at TRB](#)

Recent Reports & Publications

- [Airport Cooperative Research Program \(ACRP\)](#)
 - [Report 234](#) - Rapid Slab Repair and Replacement of Airfield Concrete Pavement
- [National Cooperative Highway Research Program \(NCHRP\)](#)
 - [Report 964](#) - Protocols for Network-Level Macrotexture Measurement
 - [Report 960](#) - Proposed AASHTO Practice and Tests for Process Control and Product Acceptance of Asphalt-Treated Cold Recycled Pavements
 - [Report 957](#) - Utilization Measurement and Management of Fleet Equipment
 - [Report 876](#) - Guidelines for Integrating Safety and Cost-Effectiveness into Resurfacing, Restoration, and Rehabilitation (3R) Projects
 - [Synthesis 577](#) - Collaborative Practices for Performance-Based Asset Management Between State DOTs and MPOs
 - [Synthesis 569](#) - Practice and Performance of Cold In-Place Recycling and Cold Central Plant Recycling
 - [Synthesis 566](#) - Practices for Bridge Approach Systems
 - [Synthesis 565](#) - Maintenance and Surface Preparation Activities Prior to Pavement Preservation Treatments
 - [Synthesis 562](#) - Repair and Maintenance of Post-Tensioned Concrete Bridges
 - [Web-Only Document 304](#) - Criteria for Restoration of Longitudinal Barriers, Phase II
 - [Web-Only Document 244](#) - Developing Guidelines for Integrating Safety and Cost-Effectiveness into Resurfacing, Restoration, and Rehabilitation (3R) Projects
- [Transportation Research Circulars](#)
 - [E-Circular 272](#) - Technology Exchange on Local Roads Bridge Programs

Current & Upcoming Projects

- [Current Projects](#)
 - [ACRP 09-19](#) - Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications
 - [ACRP 09-20](#) - Quantifying the Impacts of Delayed Maintenance of Airport Assets
 - [ACRP 09-21](#) - Guidelines for the Effective Transition of Asset Data from Design/Construction to Operations and Maintenance
 - [ACRP Synthesis 11-03/Topic S09-09](#) - Automated Pavement Condition Survey Practices at Airports

- [NCHRP 01-61](#) - Evaluation of Bonded Concrete Overlays on Asphalt Pavements
 - [NCHRP 02-25](#) - Workforce 2030--Attracting, Retaining, and Developing the Transportation Workforce: Design, Construction, and Maintenance
 - [NCHRP 02-26](#) - Implementation of Life-Cycle Planning Analysis in a Transportation Asset Management Framework
 - [NCHRP 06-18](#) - Guide for Snow and Ice Control Operations
 - [NCHRP 06-19](#) - Guidebook for Mechanical Methods for Snow and Ice Control Operations
 - [NCHRP 09-57A](#) - Ruggedness of Laboratory Tests to Assess Cracking Resistance of Asphalt Mixtures
 - [NCHRP 10-102](#) - A Guidebook for Risk-Based Construction Inspection
 - [NCHRP 10-105](#) - Verification of Traffic Speed Deflection Devices' (TSDDs) Measurements
 - [NCHRP 12-115](#) - Guidelines for Risk-Based Inspection and Strength Evaluation of Suspension Bridge Main Cable Systems
 - [NCHRP 12-122](#) - Proposed AASHTO Guidelines for Applications of Unmanned Aerial Systems Technologies for Element-Level Bridge Inspection
 - [NCHRP 13-06A](#) - Guide for the Formulation of Long-Range Plans and Budgets for Replacement of Highway Operations Equipment
 - [NCHRP 13-08](#) - Guideline for Decision Making for Repair vs. Replacement of Highway Maintenance Equipment
 - [NCHRP 14-41](#) - Permanent Vegetation Control Treatments for Roadsides
 - [NCHRP 14-42](#) - Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs
 - [NCHRP 14-43](#) - Guide Construction Specifications for Cold In-place Recycling and Cold Central Plant Recycling
 - [NCHRP 14-44](#) - Guide Specifications for the Construction of Slurry Seals, Scrub Seals, and Tack Coats
 - [NCHRP 14-46](#) - Guidelines for the Maintenance and Construction of Rumble Strips
 - [NCHRP 18-20](#) - AASHTO LRFD Design, Installation, and Standard Practice of Testing for Cured In-Place Pipe Liners
 - [NCHRP 20-07/Task 428](#) - Update of the 2012 AASHTO Guide Specification for Design of Bonded FRP Systems for Repair
 - [NCHRP 20-50\(18\)](#) - LTPP Data Analysis: Significance of As-Constructed Asphalt Pavement Air Voids to Pavement Performance
 - [NCHRP 20-102\(28\)](#) - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
 - [NCHRP 23-08](#) - A Guide for Incorporating Maintenance Costs into a Transportation Asset Management Plan
 - [NCHRP 25-63](#) - Handbook on Detering and Excluding Bats from Transportation Structures
 - [NCHRP IDEA 20-30/IDEA 205](#) - MRI Bridge Analysis and Multi-Modal Imaging Using Optimal Multi-Coil Resonant Coupling
 - [NCHRP IDEA 20-30/IDEA 223](#) - Fatigue Crack Inspection Using Computer Vision and Augmented Reality
 - [NCHRP IDEA 20-30/IDEA 222](#) - Mixed Reality Assisted Infrastructure Inspections
 - [NCHRP IDEA 20-30/IDEA 226](#) - A Smart IoT Proximity Alert System for Highway Work Zone Safety
 - [NCHRP Synthesis 20-05/Topic 51-07](#) - Practices for Assessing and Mitigating the Moisture Susceptibility of Asphalt Pavements
 - [NCHRP Synthesis 20-05/Topic 52-01](#) - Highway Infrastructure Inspection Practices for the Digital Age
 - [NCHRP Synthesis 20-05/Topic 52-02](#) - Current Practices in Bridge Asset Management Decision-Making
 - [NCHRP Synthesis 20-05/Topic 52-03](#) - Practices for Ensuring Bridge Surface Smoothness
 - [NCHRP Synthesis 20-05/Topic 52-07](#) - Use of Pavement Data Collection Technology for Pavement Data Quality Management and MAP-21 Target Setting
 - [NCHRP Synthesis 20-05/Topic 52-09](#) - Use of Safety Management Systems in Managing Highway Maintenance Worker Safety
 - [NCHRP Synthesis 20-05/Topic 52-12](#) - Rehabilitation of Culverts and Buried Storm Drain Pipes
 - [NCHRP Synthesis 20-05/Topic 52-11](#) - Use of Smart Work Zone Technologies for Improving Work Zone Safety
 - [NCHRP Synthesis 20-05/Topic 52-17](#) - Use of Recycling Agents in Asphalt Concrete Mixtures
 - [NCHRP Synthesis 20-05/Topic 53-04](#) - Practices for the Collection, Use, and Management of Utility As-Built Information
 - [NCHRP Synthesis 20-05/Topic 53-16](#) - Critical Findings for Tunnel Functional Systems
 - [Safety IDEA Project 45](#) - Development of a Fatigue Load for Railway Bridges
 - [Safety IDEA Project 44](#) - Laser-based Non-destructive Spike Defect Inspection System
 - [Safety IDEA Project 43](#) - Augmenting Reality for Safer Inspections of Railroad Infrastructure and Operations
 - [Safety IDEA Project 37](#) - Measuring Behavior of Railroad Bridges under Revenue Traffic using Lasers and Unmanned Aerial Vehicles (UAVs) for Safer Operations: Implementation
 - [Safety IDEA Project 38](#) - Fatigue Life Extension of Thermitic Welds by Porosity Minimization
 - [TCRP C-24](#) - Transit Traction Power Cables: Replacement Guidelines
- [Upcoming Projects](#)
 - [ACRP 09-22](#) - Cost-Effective Training for Airfield Electricians at Small Airports

- [NCHRP 08-136](#) - Guidance on Using Performance-Based Management Approaches for Maintenance
- [NCHRP 10-112](#) - Guidelines for Digital Technologies and Systems for Remote Construction Inspection for Highway Infrastructure Projects
- [NCHRP 10-114](#) - Developing Performance and Safety Specifications for Rejuvenating Seals
- [NCHRP 14-45](#) - Guidelines for Response Planning, Assessment, and Rapid Restoration of Service of Bridges in Extreme Events
- [NCHRP 14-47](#) - Tools and Technology for Roadside Landscape Asset Management
- [NCHRP 20-44\(36\)](#) - Workshops on Long-Range Strategic Issues Affecting Preservation, Maintenance, and Renewal of Highway Infrastructure
- [NCHRP 20-44\(37\)](#) - Workshops on Performance Measures in Snow and Ice Control Operations
- [NCHRP 20-50\(22\)A](#) - LTPP Data Analysis: Guidelines to Improve Use of FWD and Longitudinal Profile Measurements
- [NCHRP 23-13\(03\)](#) - Guidance for State DOTs on Truck Rest and Service Areas for Critical Supply Chain Delivery
- [NCHRP 25-65](#) - Successful Approaches in Preparing Convincing Section 106 Effect Determination
- [NCHRP Synthesis 20-05/Topic 53-02](#) - Practices to Motivate Safe Behaviors with Highway Construction and Maintenance Crews
- [NCHRP Synthesis 20-05/Topic 53-09](#) - Use of Unmanned Aerial Systems for Highway Stormwater Inspections
- [TCRP D-20](#) - Insulated Joint Failure Investigation Mitigation
- [TCRP Synthesis I-07/Topic SG-20](#) - Performance Metrics in Third Party Contracts for Bus Operations and Maintenance

Reports from the [National Academies Press](#) on Maintenance & Preservation

- [America's Geoheritage II: Identifying, Developing, and Preserving America's Natural Legacy](#)
- [Service Life Assessment and Predictive Modeling for an Aging Critical Infrastructure](#)

Committees & Panels

[Sign-up to be a committee "Friend"](#)

TRB Standing Committees – Search by transportation mode and committee topic

- [ACP55](#) - Traffic Control Devices
- [AKB40](#) - Testing and Evaluation of Transportation Structures
- [AKC60](#) - Asphalt Pavement Construction and Rehabilitation
- [AKG30](#) - Geo-Environmental and Climatic Impacts on Geomaterials
- [AKM90](#) - Polymer Concretes, Adhesives, and Sealers
- [AKP10](#) - Pavement Condition Evaluation
- [AKR10](#) - Maintenance and Operations Management
- [AKR20](#) - Roadside Maintenance Operations
- [AKR30](#) - Maintenance Fleet and Equipment
- [AKR40](#) - Winter Maintenance
- [AKR50](#) - Road Weather
- [AKT10](#) - Pavement Management Systems
- [AKT20](#) - Pavement Preservation
- [AKT30](#) - Pavement Maintenance
- [AKT40](#) - Structures Maintenance
- [AKT50](#) - Bridge and Structures Management
- [AKT60](#) - Bridge Preservation
- [AKT70](#) - Maintenance Management Systems
- [AR050](#) - Railroad Infrastructure Design and Maintenance
- [AR060](#) - Rail Transit Infrastructure Design and Maintenance

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

CRP Panels

- [Project Panels Related to Maintenance & Preservation](#)

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.)

[International Workshop on Structural Health Monitoring*](#)

December 7, 2021

Stanford, CA

[TRB Virtual Careers in Motion Networking Fair](#)

December 8, 2021

Washington, DC

[Accelerated Bridge Construction Conference*](#)

December 8, 2021

Online

[International Conference on Managing Pavement Assets \(ICMPA\)*](#)

June 7, 2022

Chicago, IL

[TRB International Conference on Low-Volume Roads](#)

July 23, 2023

Cedar Rapids, IA

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

[Past Events](#) - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword

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**