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TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Bridges & Other Structures

TRB's involvement in research on Bridges & Other Structures from 2019-2020

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 Bridges & Other Structures within the past year.

Subject Webpage

- Bridges & Other Structures Research at TRB

Recent Reports & Publications

- Innovations Deserving Exploratory Analysis (IDEA)
  - Safety Report 35 - Non-contact Deflection Monitoring System for Timber Railroad Bridges

- National Cooperative Highway Research Program (NCHRP)
  - IDEA Report 202 - Vertical Electrical Impedance Scanner for Concrete Bridge Deck Assessment without Direct Rebar Attachment
  - IDEA Report 197 - Nano-Enabled Multifunctional Concrete for Transportation Infrastructure
  - IDEA Report 191 - Testing of In-Service Bridges Using Automated Ultrasonic Testing Methods
  - Letter Report - Long-Term Infrastructure Program – January 2, 2020
  - NCHRP 25-25/Task 102 - Artificial Bat Roost Mitigation Designs and Standardized Monitoring Criteria
  - NCHRP 20-07/Task 415 - Proposed AASHTO Guidelines for Bottom Flange Limits of Steel Box Girders
  - NCHRP 20-07/Task 410 - Load Rating for the Fast Act Emergency Vehicles Ev-2 and Ev-3
  - Report 935 - Proposed AASHTO Seismic Specifications for ABC Column Connections
  - Report 912 - Guidelines for Detection and Remediation of Soluble Salt Contamination Prior to Coating Steel Highway Structures
  - Report 908 - Acceptance Criteria of Complete Joint Penetration Steel Bridge Welds Evaluated Using Enhanced Ultrasonic Methods
  - Report 907 - Design of Concrete Bridge Beams Prestressed with CFRP Systems
  - Report 906 - LRFD Minimum Flexural Reinforcement Requirements
  - Synthesis 556 - Asset Management Approaches to Identifying and Evaluating Assets Damaged Due to Emergency Events
  - Synthesis 546 - Use of Weigh-in-Motion Data for Pavement, Bridge, Weight Enforcement, and Freight Logistics Applications
  - Synthesis 544 - Concrete Technology for Transportation Applications
  - Synthesis 536 - Bridge Demolition Practices
  - Synthesis 532 - Seismic Design of Non-Conventional Bridges

Updated 06/09/2020
• Web-Only Document 260 - Proposed Refinements to Design Procedures for Geosynthetic Reinforced Soil (GRS) Structures in AASHTO LRFD Bridge Design Specifications

• Special Reports
  o Report 330 - Performance of Bridges That Received Funding Under the Innovative Bridge Research and Construction Program

• Transportation Research Circulars
  o E-Circular 257 - Primer on Bridge Load Testing
  o E-Circular 246 - Structural Monitoring

Current & Upcoming Projects

• Current Projects
  o NCHRP 12-95A - Proposed AASHTO Guidelines for Adjacent Precast Concrete Box Beam Bridge Systems
  o NCHRP 12-115 - Guidelines for Risk-Based Inspection and Strength Evaluation of Suspension Bridge Main Cable Systems
  o NCHRP 12-117 - Guidelines for Corrosion Protection of Steel Bridges Using Duplex Coating Systems
  o NCHRP 12-118 - Design and Construction Specifications for Bonded and Unbonded Post-Tensioned Concrete Bridge Elements
  o NCHRP 20-07/Task 424 - AASHTO Guidelines for the Operation of Movable Bridges from Remote Locations
  o NCHRP 20-44(04) - Implementing Products from NCHRP Research on Adhesive Anchor Systems
  o NCHRP 22-32 - Development of Methods to Evaluate Side Impacts for Next Edition MASH
  o NCHRP 22-33 - Multi-State In-Service Performance Evaluations of Roadside Safety Hardware
  o NCHRP 22-35 - Evaluation of Bridge Rail Systems to Confirm AASHTO MASH Compliance
  o NCHRP 22-41 - Proposed Modification to AASHTO LRFD Bridge Design Specifications, Section 13—Railing
  o NCHRP 24-48 - A Methodology for Determining Scour Depth around Structures in Gravel-bed Rivers
  o NCHRP IDEA 20-30/IDEA 205 - MRI Bridge Analysis and Multi-Modal Imaging Using Optimal Multi-Coil Resonant Coupling
  o NCHRP IDEA 20-30/IDEA 208 - Determining Bridge Deck Chloride Quantities with Ground Penetrating Radar
  o NCHRP IDEA 20-30/IDEA 210 - Material Characteristics of Cu-Based Superelastic Alloys for Applications in Bridge Columns to Improve Seismic Performance
  o NCHRP IDEA 20-30/IDEA 213 - SEAHIVE – Sustainable Estuarine and Marine Revetment
  o NCHRP IDEA 20-30/IDEA 215 - Achieving Resilient Multi-Span Bridges by using Buckling-Restrained Braces
  o NCHRP IDEA 20-30/IDEA 220 - Bridge Deck Sealant Monitor: Thermal Sealcheck
  o NCHRP IDEA 20-30/IDEA 222 - Mixed Reality Assisted Infrastructure Inspections
  o NCHRP Synthesis 20-05/Topic 51-13 - Load Rating of Bridges and Culverts with Missing or Incomplete As-Built Information
  o NCHRP Synthesis 20-05/Topic 51-14 - Repair and Maintenance of Post-Tensioned Concrete Bridges
  o Safety IDEA Project 37 - Measuring Behavior of Railroad Bridges under Revenue Traffic using Lasers and Unmanned Aerial Vehicles (UAVs) for Safer Operations: Implementation
  o Safety IDEA Project 39 - Non-contact Scour monitoring for Railroad Bridges

• Upcoming Projects
  o NCHRP 08-139 - Methods to Prevent Bridge Strikes by Trucks/Bridge Strike Challenges, Prevention, Mitigation Strategies and Best Practices
  o NCHRP 12-116A - Proposed AASHTO Specifications for Design of Piles for Downdrag
  o NCHRP 12-119 - MASH Railing Load Requirements for Bridge Deck Overhang
  o NCHRP 12-120 - Stainless Steel Strands for Prestressed Concrete Bridge Elements
  o NCHRP 12-121 - Developing AASHTO Specifications for the Use of FRP Auxiliary Reinforcement in Prestressed Concrete Beams and Girders
  o NCHRP 12-122 - Evaluating and Implementing Unmanned Aerial Systems (UAS) into Bridge Management Methods Through Element-Level Data Collection
  o NCHRP 12-123 - Load Rating Examples and Changes to the AASHTO Manual for Bridge Evaluation for Concrete Segmental Post-Tensioned Box Girder Bridges
  o NCHRP 14-45 - Guidelines for Response Planning, Assessment, and Rapid Restoration of Service of Bridges in Extreme Events
- NCHRP 20-123(07) - Update proposed Manual for the Maintenance of Roadways and Bridges
- NCHRP 20-123(11) - High-Value Research Marketing and Communications for 2020
- NCHRP 22-43 - Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- NCHRP 23-08 - A Guide for Incorporating Maintenance Costs into a Transportation Asset Management Plan
- NCHRP 25-61 - Development of On-Bridge Stormwater Treatment Practices
- NCHRP 25-63 - Evaluating and Improving Current Practices for Temporarily Deterring Bat Use of Bridges and Similar Structures
- NCHRP Synthesis 20-05/Topic 52-03 - Practices for Ensuring Bridge Surface Smoothness

Reports from the National Academies Press on Bridges & Other Structures

- Evolving the Geodetic Infrastructure to Meet New Scientific Needs
- A Vision for NSF Earth Sciences 2020-2030
- From Research to Reward - When the Ground Gives Way: Understanding and Predicting Soil Liquefaction Caused by Earthquakes
- 21st Century Paradigm Change in Performance and Design Metrics
- Frontiers of Materials Research – A Decadal Survey

Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- AFD30 - General and Emerging Pavement Design
- AFF20 - Steel Bridges
- AFF30 - Concrete Bridges
- AFN00 - Concrete Materials
- AK000 - Transportation Infrastructure Group
- AKB00 - Bridges and Structures
- AKB10 - Innovative Highway Structures and Appurtenances
- AKB40 - Testing and Evaluation of Transportation Structures
- AKB50 - Seismic Design and Performance of Bridges
- AKB60 - Tunnels and Underground Structures
- AKB70 - Culverts, Buried Bridges and Soil Structure Interaction
- AKC40 - Construction of Bridges and Structures
- AKC70 - Fabrication and Inspection of Metal Structures
- AKM60 - Properties of Concrete
- AKM70 - Durability of Concrete
- AKG70 - Foundations of Bridges and Other Structures
- AKT40 - Structures Maintenance
- AKT50 - Bridge and Structures Management
- AKT60 - Bridge Preservation
- AR050A - Railroad Track Structure System Design
- B0024 – Research and Technology Coordinating Committee
- B0147 – Bridge Data Analysis Working Group

Task Forces - Search for task force under committee here

- AB020T – Value of Transportation Infrastructure

CRP Panels

- Project Panels Related to Bridges and Other Structures

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.)

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

11th International Conference on the Bearing Capacity of Roads, Railways, and Airfields*
June 22, 2021
Trondheim, Norway

BEI International Symposium on UHPC and Emerging Concrete (BEI-UHPC)*
July 19, 2021
Singapore

12th International Conference on Concrete Pavements*
August 29, 2021
Minneapolis, Minnesota

Webinars – View upcoming webinars, suggest a webinar or add registration information
Past Webinars
  o  Bridges and Other Structures

TRB’s Transportation Research Information Services (TRIS)

TRIS includes the TRB Library and the TRIS Databases (listed below) which are available for 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:

TRID – The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation - trid.trb.org

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

Research in Progress (RiP) Database – Current or recently completed transportation research projects - rip.trb.org

Research Needs Statements (RNS) – Research needs as identified by TRB Technical Activities standing committees - rns.trb.org

Contact the Library at TRBLibrary@nas.edu or l (202) 334-2989