

**NCHRP Research Update
Bridge Preservation and Maintenance**

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Complete NCHRP Projects

- NCHRP 14-15 – “Developing a National Database System for Maintenance Actions on Highway Bridges” – Research Agency: University of Colorado at Boulder – Project complete - NCHRP Report 668 issued and posted on TRB website.
- NCHRP 14-18 – “Determining Highway Maintenance Costs” – Research Agency: Cambridge Systematics – Project complete - NCHRP Report 688 issued and posted on TRB website.

Complete NCHRP Projects

- NCHRP 14-20A – “Consequences of Delayed Maintenance of Highway Assets” – Research Agency: University of Texas El Paso – Project complete and NCHRP Report 859 issued.

Complete NCHRP Projects

- NCHRP 14-24 – “Guidance for Communicating the Value of Highway System Maintenance and Preservation” – Research Agency: High Street Consulting Group – Project complete - NCHRP Report 742 issued and posted on TRB website.
- NCHRP 14-27 – “A Guide for the Preservation of Highway Tunnel Systems ” – Research Agency: Gannett Fleming, Inc. – Project complete - NCHRP Report 816 issued and posted on TRB website.

Complete NCHRP Projects

- NCHRP 14-28 – “Inspection Guidelines for bridge post tensioning and stayed cable systems using NDE Methods” – Research Agency: Texas A&M Transportation Institute – Project complete- Report and Inspection Guidelines (NCHRP Report 848) issued and posted on TRB website.

Complete NCHRP Projects

- NCHRP 14-29 – “Assessing, Coding, and Marking of Highway Structures in Emergency Situations” - Research Agency: Oregon State University – Project Complete - The research report has been published as NCHRP Report 233. The Assessment Process Manual, Coding and Marking Guidelines are published as Volumes 2 and 3, respectively, of the report. The Guidelines for Development of Smart Apps will be available on the TRB website (www.trb.org) as NCHRP Web-Only Document 223. To facilitate use, the assessment forms and training material will be posted on the NCHRP Report 833 summary page and will be available by searching the TRB website for NCHRP Report 833. The AASHTO Maintenance Committee is working to publish the report as an AASHTO document.

Complete NCHRP Projects

- NCHRP 14-30 – “Spot Painting to Extend Highway Bridge Coating Life” - Research Agency: Kentucky Transportation Center – Project Complete - Guidance published as NCHRP Web Only Document 251 Volume 1. Research overview published as NCHRP Web Only Document 251 Volume 2 – Volumes 1 and 2 posted on TRB website.

Complete NCHRP Projects

- NCHRP 14-32 – “Proposed Revisions to the AASHTO Movable Bridge Inspection, Evaluation, and Maintenance Manual” - Research Agency: Parsons Brinckerhoff – Project complete - Final Report Issued and posted on TRB website - AASHTO Committee on Bridges and Structures adopted Manual on June 29, 2016 – AASHTO Movable Bridge Inspection, Evaluation, and Maintenance Manual, 2nd Edition published and available for purchase on AASHTO website.

Complete NCHRP Projects

- NCHRP 12-100 – “Guidelines for Maintaining Small Movement Bridge Expansion Joints” – Research Agency: University of Delaware – Research Report and Guidelines Complete – Report posted on TRB website - The AASHTO Maintenance Committee is working to publish the guidelines as an AASHTO document.

Complete NCHRP 20-05 Projects

- NCHRP Project 20-05/Topic 46-09 –“Extending Bridge Service Life Through Welded Repair and Retrofits” – Research Agency: Fish and Associates – Project complete - Synthesis 489 issued and posted on TRB website.
- NCHRP Project 20-05/Topic 46-11 –“Post Extreme Event Damage Assessment and Response for Highway Bridges” – Iowa State University – Project complete - Synthesis 497 issued and posted on TRB website .

Complete NCHRP 20-05 Projects

- NCHRP Project 20-05/Topic 47-03 – “Current Practices and Guidelines for the Reuse of Bridge Foundations ” – Research Agency: University of Missouri – Project complete - Synthesis 505 issued and posted on TRB website.
- NCHRP Project 20-05/Topic 20-07 – “Removing Concrete from Bridges” – Project complete – Synthesis can obtained from TRB website.

Complete NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 234 – “Guidelines for Selection of Bridge Deck Overlays, Sealers and Treatments” – Research Agency: Wiss, Janney, Elstner Associates – Project complete – Agency's final report submitted to AASHTO staff .
- NCHRP Project 20-07/Task 252 – “Guidelines for Implementing Quality Control and Quality Assurance for Bridge Inspection” – Research Agency: University of Missouri - Project complete - Report issued and posted on TRB website.

Complete NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 255 –“Development of a Test Method to Determine Ability of Adhesive Anchors Resist Sustained Tensile Load” – Research Agency: University of Florida – Project complete and NCHRP Report 639 issued.

Complete NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 378 – “Assessing Risk for Bridge Management” – Research Agency: Western Management & Consulting LLC – Project complete – Agency's final report submitted to AASHTO Committee on Bridges and Structures .
- NCHRP Project 20-07/Task 379 – “Update the SCOM Strategic Plan” – Work complete - Workshop conducted July 9-10,2015, at the National Academies' Beckman Center in Irvine, California – Updated plan published on SCOM website.

Complete NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 378 – “Assessing Risk for Bridge Management” – Research Agency: Western Management & Consulting LLC – Project complete – Agency's final report submitted to AASHTO Committee on Bridges and Structures .
- NCHRP Project 20-07/Task 379 – “Update the SCOM Strategic Plan” – Work complete - Workshop conducted July 9-10,2015, at the National Academies' Beckman Center in Irvine, California – Updated plan published on SCOM website.

Complete NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 380 – “Update the AASHTO Maintenance Manual for Roadways and Bridges” – Research Agency: Volkert Inc. – Project complete – Report issued.
- NCHRP Project 20-07/Task 397 – “Characteristics of Decommissioned Bridges” – Research Agency: Iowa State University – Project complete - Report issued and posted on TRB website.
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Active NCHRP Projects

- NCHRP 10-97 – “Detection and Remediation of Soluble Salt Contamination Prior to Coating Steel Highway Structures” – Research Agency: Elzly Technology Corporation – Research in progress - Estimated completion date: July 15, 2018.

Active NCHRP Projects

- NCHRP 14-23 – “Practical Bridge Preservation Actions and Investment Strategies” – Research Agency: Michigan State University – The work under the current task descriptions of NCHRP 14-23 has been terminated. The work that was completed through Phase 1 and Phase 2 has been documented in three un-reviewed deliverables submitted by the research team.
- Further research related to bridge preservation will be performed under the new NCHRP Project 14-36 – “Proposed AASHTO Guide for Bridge Preservation Actions”. Research Agency: University of Colorado - Boulder – Research in progress - Estimated completion date: April 30, 2019.

Active NCHRP Projects

- NCHRP 12-104 – “Guidelines to Improve the Quality of Element-Level Bridge Inspection Data ” – Research Agency: University of Missouri – Research in progress - Estimated completion date: October 31, 2018.
- NCHRP 12-108 – “Guide Specification for Service Life Design of Highway Bridges” - Research Agency: Modjeski & Masters Inc. – Research in progress - Estimated completion date: February 28, 2019.

Active NCHRP 20-05 Projects

- NCHRP Project 20-05/Topic 48-03 – “Corrosion Protection for Extending Steel Bridge Service Life” – Research Agency: Elzly Technology Corp.. – Research in progress – Second Panel Meeting conducted on May 23, 2017.
- NCHRP Project 20-05/Topic 49-03 – “Bridge Demolition Practices – Research Agency: Collins Engineering – Research in progress – Second panel meeting scheduled for August 21, 2018.

Active NCHRP 20-07 Projects

- NCHRP Project 20-07/Task 410 – “Load Rating for the Fast Act Emergency Vehicles EV-2 and EV-3” –
Research Agency: HNTP NY – Research in progress –
Estimated completion date March 25, 2019.

Complete NCHRP Domestic Scan

- NCHRP Domestic Scan 15-03 – “Successful Preservation Practices for Steel Bridge Coatings” - Information documented by the scan team will provide effective strategies and other specific information for use by bridge owners in their preservation of coating systems for steel structures that will result in substantial cost savings and significant extension of service life – A peer exchange workshop was conducted from May 23 – 26, 2016 in Orlando, Florida – Final scan report issued and posted on TRB website.

Active NCHRP Domestic Scan

- NCHRP Domestic Scan 17-01 – “Successful Approaches for the Use of Unmanned Aerial Systems by Surface Transportation Agencies” - This Scan will examine how agencies and their contractors are using UAS to facilitate inspection, inventory, survey, and other operations and dealing with regulatory and other impediments to UAS deployment. ” – Estimated Completion Date November 2018.

Active NCHRP Domestic Scan

- NCHRP Domestic Scan 17-03 – “Experiences in the Performance of Bridge Bearings and Expansion Joints Used for Highway Bridges” - This scan will facilitate the exchange of recent ideas and best practices for Bridge Bearings and Expansion Joint design, performance evaluation, maintenance and repair/reconstruction - Estimated Completion Date November 2018.

Pending NCHRP Projects

- NCHRP Project 12-115 - “Guidelines for Inspection and Strength Evaluation of Suspension Bridge Main Cable Systems” - Research contractor selected and the contracting process is underway.
- NCHRP Project 12-117 – “Effective Use of Duplex Coating Systems to improve Steel Bridge Structure Durability” – This project was selected for the NCHRP Fiscal Year 2019 Program.