

LONG-TERM BRIDGE PERFORMANCE (LTBP) NEWSLETTER

FEDERAL HIGHWAY ADMINISTRATION (FHWA) RELEASES INFOPTF WEB PORTAL

A new Web portal, InfoPTF^{TM(1)} has been added to <u>InfoHighwayTM,⁽²⁾</u> FHWA's gateway to various Info portals, including Long-Term Pavement Performance InfoPaveTM,⁽³⁾ Long Term Bridge Performance InfoBridgeTM,⁽⁴⁾ FHWA InfoMaterials,^{TM(5)} and FHWA InfoTechnologyTM.⁽⁶⁾ InfoPTF provides access to data collected from FHWA's Pavement Testing Facility located at the Turner-Fairbank Highway Research Center.

WINNER OF THE 2024 STUDENT DATA ANALYSIS CONTEST

The LTBP committee selected one paper for the first place award in the Bridge category of the 2024 Long Term Infrastructure Performance (LTIP) Student Data Analysis Contest.⁽⁷⁾ The first-place (bridge) student winner was Shadi Azad from Iowa State University for "Data-Enabled Joint Condition Assessment of Bridges With Integral Abutments and Tied Approach Slabs."

The winner received an all-expenses paid trip to attend the 2025 Transportation Research Board (TRB) Annual Meeting in January. FHWA recognized Ms. Azad with an award plaque at the LTBP Lectern Session at TRB. Ms. Azad presented her paper at the LTBP session.

The <u>Annual LTIP Student Data Analysis Contest</u>⁽⁷⁾ encourages students to use the data sources

from <u>InfoHighway⁽²⁾</u> to address specific infrastructure issues or challenges. Entries for the 2025 contest are due August 1, 2025.

INFOBRIDGE: RECENT ENHANCEMENTS

The most recent version of InfoBridge,⁽⁴⁾ released in January 2025, includes several usability enhancements, tools, and products resulting from research performed by the LTBP Program. For a complete list of new InfoBridge features and enhancements, visit <u>InfoBridge Update Notes</u>.⁽⁸⁾

New InfoBridge highlights are as follows:

- The National Bridge Inventory (NBI)⁽⁹⁾ and the National Bridge Elements⁽¹⁰⁾ data are now available for the 2024 submittal.
- The "advanced find" filter has been updated with the latest metropolitan planning organizations (MPOs) (06/29/23) and political districts, along with city (01/06/23) data, provided by FHWA's Office of Planning, Environment, and Realty platform and the U.S Census Bureau.
- The MPO filter in "advanced find" now lists the MPOs in the States selected under the "find bridges" filter.
- The three deterioration models—Base Models, Machine Learning Models, and the Survival Models—have been updated with the 2024 NBI data.⁽⁹⁾



Source: FHWA. Figure 1. Screenshot. Deck condition rating forecast.

• Special Projects now include Enhancing Performance with Internally Cured Concrete (EPIC2) bridges. There are 104 bridges in the list. EPIC2 is an innovative new technique in FHWA's Every Day Counts Innovations Project.⁽¹¹⁾



Figure 2. Screenshot. List of Special Projects.

- The list of ultra-high performance concrete bridges under Special Projects has been updated to contain 396 bridges.
- The Bridge Condition Transition History table can now be exported. Three files are exported: a comma-separated values, plain text file for the contents of the table; a file showing the criteria for the report; and a portable document format file showing the number of bridges per year transitioning from the user-specified condition in one year to another condition in a later year.
- A new module was added to the Historical Spec Changes tool for Approximate Methods of Analysis of Decks and Beam Slab Bridges. The historical review of the Approximate Methods of Analysis of Decks and Beam Slab Bridges is available through the first edition of the Load and Resistance Factor Design specifications under the Library menu.



Source: FHWA. Figure 3. Screenshot. List of Historical Spec Changes.

LTBP SESSION AT 2025 TRB ANNUAL MEETING

FHWA hosted a session number 2080 titled "Long-Term Bridge Performance (LTBP) Program" at the 2025 TRB Annual Meeting.⁽¹²⁾ The session provided updates on accelerated bridge performance testing, preliminary research findings on deicing chemical use, deck treating practices, and steel coating practices. The session also provided updates on the January 2025 release of InfoBridge, the overview of the Bridge Deck Preservation Tool ⁽¹³⁾ developed by the Transportation Pooled Fund Study TPF-5(474), and a presentation by the first-place winner of the FHWA 2024 LTIP Student Data Analysis Contest (Bridges).⁽⁷⁾

The TRB Standing Committee on Bridge and Structures Management (AKT50) sponsored the session, and the TRB Standing Committees on Bridge Preservation (AKT60), Testing and Evaluation of Transportation Structures (AKB40), and Structures Maintenance (AKT40) cosponsored.

INFRASTRUCTURE DATA WORKSHOP AT 2025 TRB ANNUAL MEETING

FHWA hosted a workshop number 1019 titled "Data That Extend the Life Cycle of Highway Infrastructure Assets" at the 2025 TRB Annual Meeting.⁽¹⁴⁾ The workshop was sponsored by one TRB group, three TRB sections, and 13 TRB committees. The workshop built on the topics discussed during the 2023 TRB workshop number 1024 with a similar theme—"Use of Available Data to Extend the Life of Highway Infrastructure."⁽¹⁵⁾ The 2025 workshop discussed preservation and the effects of traffic loading, sustainability, and resilience on designing new, and preserving existing, infrastructure. The workshop had more than 100 attendees.

INFOBRIDGE WEBINARS

LTBP staff provide on-demand, online webinars about InfoBridge.⁽⁴⁾ InfoBridge users include bridge owners, researchers, consultants, and students. To date, several webinars have been presented to State departments of transportation, researchers, university students, and professors. A webinar can be tailored to meet your needs. To arrange a webinar for your colleagues or students, please contact <u>Shri.Bhide@dot.gov</u>.

RECENT PUBLICATIONS

FHWA's latest publications can be found at: <u>https://highways.dot.gov/turner-fairbank-highway-research-center/publications</u>.

 <u>Quantification of the Correlation Between Bridge</u> <u>Skew Angle and Concrete Deck Deterioration Rate</u> <u>in New Jersey</u>. Report No. FHWA-HRT-24-109. Washington, DC: Federal Highway Administration.

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- <u>Correlation of Bridge Deck Deterioration With</u> <u>Truckload Spectra Based on NBI Condition</u> <u>Rating and Weigh-In-Motion Data</u>. Report No. FHWA HRT-24-032. Washington, DC: Federal Highway Administration.
- Exploratory Testing of Stress Corrosion Cracking in Stainless Steels at Low Temperature. Report No. FHWA HRT-24-132. Washington, DC: Federal Highway Administration.
- <u>Best Practices for Corrosion Control and Mitigation</u>. Report No. FHWA-HRT-24-127. Washington, DC: Federal Highway Administration.
- <u>Industry-Recognized Corrosion Prevention Worker</u> <u>Certifications Effectiveness Evaluation</u>. Report No. FHWA HRT-24-128. Washington, DC: Federal Highway Administration.
- <u>Laboratory Evaluation of Five Metallic Strand</u> <u>Materials for Corrosion Control of Post-Tensioned</u> <u>Tendons: Summary of Preliminary Findings</u>. Report No. FHWA-HRT-24-158. Washington, DC: Federal Highway Administration.
- <u>Corrosion-Induced Major Tendon Failures in</u> <u>Post-Tension (PT) Concrete Bridges</u>. Report No. FHWA HRT 24-148. Washington, DC: Federal Highway Administration.

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