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- B.S. Rose-Hulman Institute of Technology (2007)
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- PE (AZ)
- 15 years with HDR Engineering in Phoenix, AZ
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 - Load Rating
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Just Another Day Inspecting in AZ



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Photos
courtesy of
AZ Republic
and
Wikipedia

FHWA Update

A Presentation for the General Session of the 2022 Annual Meeting of the
AASHTO Committee on Bridges and Structures
June 22, 2022

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Director, Office of Bridges and Structures



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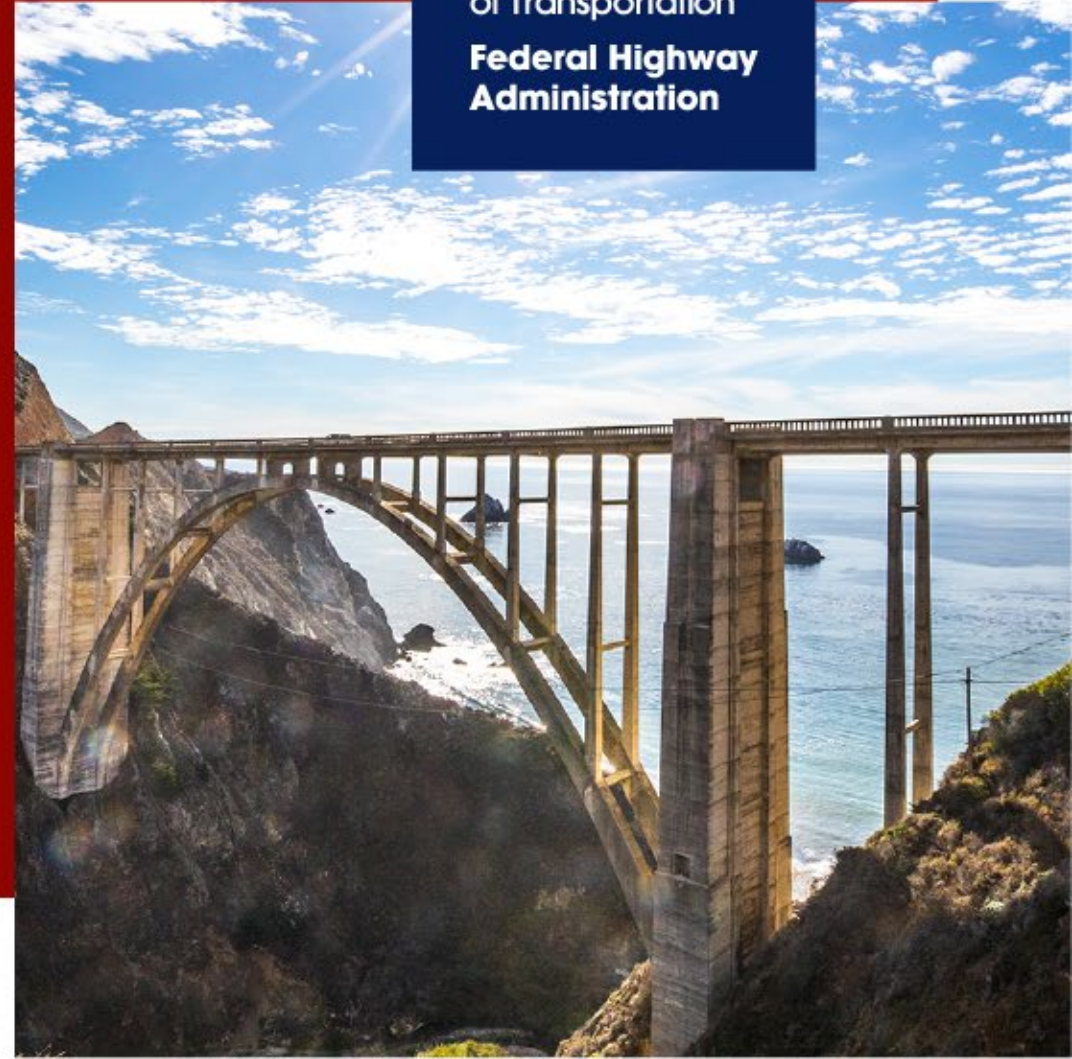
Contents

- National Bridge Inspection Standards
- Specifications for the National Bridge Inventory
- Transition Plan
- Bridge Investment Program



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National Bridge Inspection Standards

- Some Significant Changes
- Key Dates
- Implementation Resources





§ 650.303 Applicability

Expanded the applicability to include:

- Tribally owned bridges
- Privately owned bridges that are connected to public roads immediately at both ends
- Temporary bridges, and bridges under construction with portions open to traffic



§ 650.311 Inspection Interval

Made changes and classified requirements under two methods

- Method 1: simplified assessment of risk
 - Uses similar approach to prior practice (1988 FHWA Technical Advisory 5140.21)
 - Allows up to 48 months interval for routine & **NSTM** inspections
 - Allows up to 72 months for underwater inspections
 - Requires agencies to develop their own criteria for intervals less than 24 months
 - Requires agencies to develop a policy and FHWA notification prior to implementation of extended intervals (longer than 24 months)



§ 650.311 Inspection Interval

- Method 2: rigorous assessment of risk
 - Uses approach outlined in NCHRP Report 782
 - Allows up to 48-month interval for NSTM inspections
 - Allows up to 72-month interval for routine & underwater inspections
 - Requires FHWA approval



§ 650.313 Inspection Procedures

650.313(b) Initial Inspection

- Initial inspection to be performed as soon as practical, but within **3** months of the bridge being open to traffic for bridges that are:
 - New
 - Replaced
 - Rehabilitated
 - Temporary



§ 650.313 Inspection Procedures

650.313(e) and (f) Underwater and NSTM Inspections

- Underwater and NSTM inspection are due within **12** months of opening or completed rehabilitation
- Hands-on inspection is required for primary steel members in tension without load path redundancy
 - The “hands-on” requirement may be waived where system redundancy, internal redundancy, or low risk of fracture can be demonstrated through an FHWA-approved procedure



§ 650.313 Inspection Procedures

650.313(k), (l), (m) Load Rating, Load Posting, Closed Bridges

- Load rate within 3 months of initial inspection and when changes warrant re-rating
- Analyze for routine and special permit loads
- Load post within 30 days of load rating or need is identified
- Develop and document criteria for closing bridges
 - Bridges must be closed when the gross live load capacity is less than 3 tons



§ 650.313 Inspection Procedures

650.313(q) Critical Findings

- Document procedures to address critical findings in a timely manner
- Define critical findings considering the location and the redundancy of the member affected and the extent and consequence of a deficiency. At a minimum, include findings which warrant:
 - Full or partial closure
 - NSTM in serious or worse condition (≤ 3)
 - Component in critical or worse condition ($\leq \underline{2}$)
- Certain critical findings on NHS must be reported within 24 hours
 - Full or partial closure
 - NSTM in serious or worse condition
- Monthly status reports for all critical findings until resolved



§ 650.315 Inventory

- Data to be reported in accordance with Specifications for the National Bridge Inventory
- Data must be updated within three months of field portion of inspection is completed
- Establish and document a process that ensures the timeframes are met



Key Dates

- NBIS was published in Federal Register on May 6, 2022
- NBIS effective date is June 6, 2022 (thirty days after publication)
- Several specific sections in the NBIS take effect 24 months from the effective date of final rule - outlined in the next slide
- Final rule requirements will not be used to make compliance determination for CY 2022



Key Dates

The following sections take effect on June 6, 2024 (24 months from the effective date of the final rule)

Section	Description
650.309(a)	Program manager qualifications for existing PM
650.309(b)	Team leader qualifications for existing TL
650.309(c)	Team leaders on NSTM inspections
650.309(h)(3)	FHWA-approved alternate training under prior regulations
650.311(a)(1)(ii)	Routine inspections, Reduced intervals
650.311(b)(1)(ii)	Underwater inspections, Reduced intervals
650.311(c)(1)(ii)	NSTM inspections, Reduced intervals
650.311(g)	Prior FHWA approved extended inspection interval policies



Implementation Resources

- Questions on the NBIS and SNBI can be submitted to [NBIS SNBI Questions@dot.gov](mailto:NBIS_SNBI_Questions@dot.gov)
- FHWA Bridge Inspection website <https://www.fhwa.dot.gov/bridge/inspection/>
- Guidance available in the following areas:
 - Alternate Training (coming soon)
 - Inspection Intervals (on website)
 - NSTM Inspections (on website)
 - Data Collection and the SNBI (on website)
 - Questions and Answers



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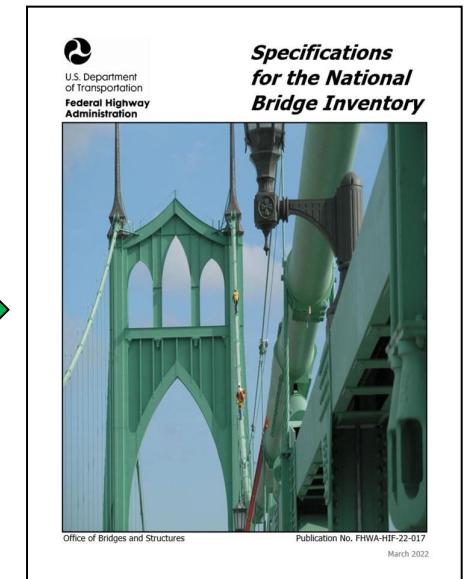
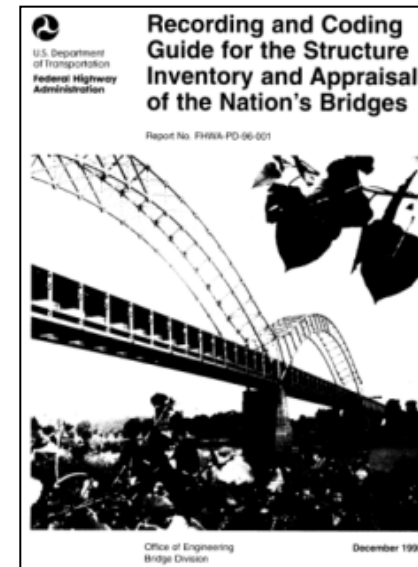
Specifications for the National Bridge Inventory

- Some Significant Changes
- Future Resources



Significant Changes – Global

- U.S. customary units
 - E.g., feet and tons
- Specification and Commentary format
- Item grouping – sections/subsections
 - E.g., Features/Highways
- New Item IDs
 - E.g., B.C.01 - Deck Condition Rating
- Comprehensive example
- One item per page where possible
- Condensed and expanded Table of Contents (linked)
- PDF only, no printed copies supplied by FHWA

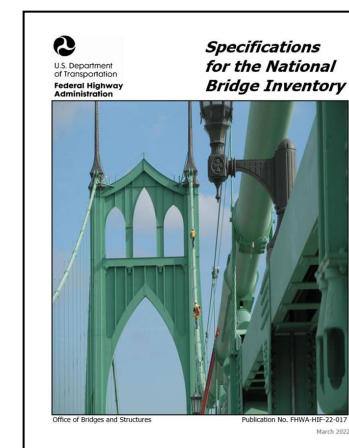
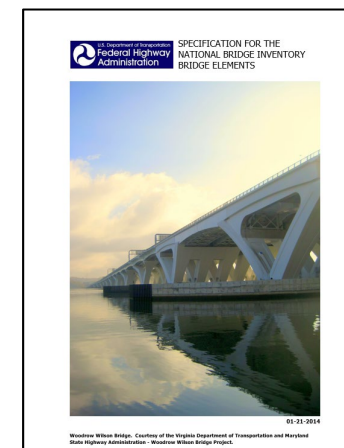


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Significant Changes – Global (cont.)

- Element-level data included (2014 SNBIBE)
- Consistency with SNTI and HPMS
- No non-NBIS structures
- One-to-one and many-to-one data sets
 - E.g., Primary data set - one item to one bridge
 - E.g., Features data set - many features to one bridge
- Data for multiple features, span sets, substructure sets, posting status changes, legal load configuration posting evaluation, inspection events, elements, and work performed
- Data submittal format will no longer be a fixed width text string file





Significant Changes – Data

- New items 54, discontinued 20, continued 100*
 - Total SNBI items 154: Initial 113, each inspection 37, calculated 4
- New and expanded item codes (e.g., span material and type)*
- Latitude and Longitude in decimal degrees
- Bridge and transition railing crash test-level and general condition rating
- Separate scour vulnerability and scour condition rating
- Removed SR, Status (SD, FO), and calculated appraisal items

*The 100 data items continued from the Coding Guide may have new and/or expanded data item codes.



Future Resources Planned

- Guidance
 - Updated FHWA Bridge Inspection website
 - <https://www.fhwa.dot.gov/bridge/inspection/>
 - Guidance
 - Questions and Answers
 - Presentations at national and regional conferences
 - Updated Bridge Inspector's Reference Manual
 - Updated National Highway Institute training courses
 - SNBI training development and deployment

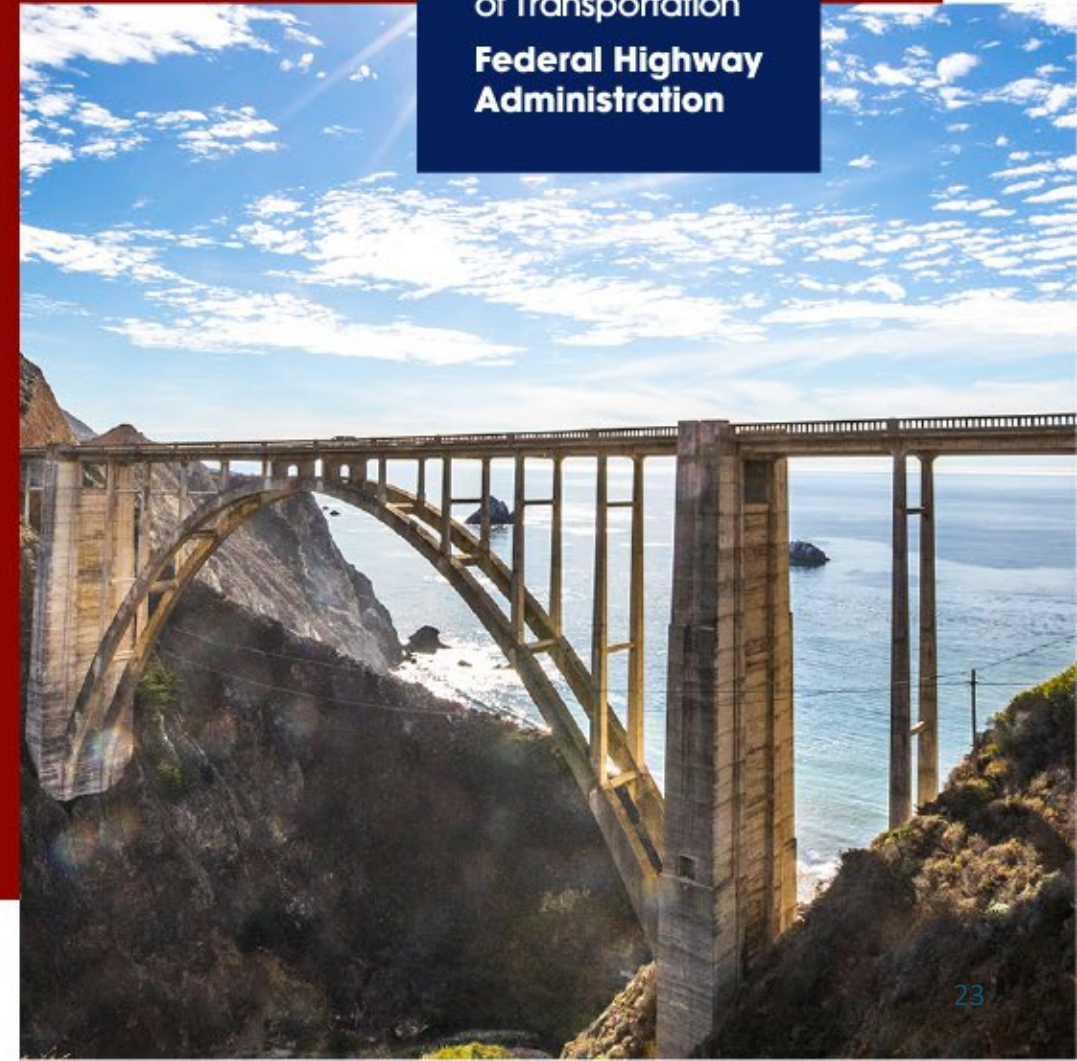
Transition Plan 2022-2028

- CY2022
 - Data: Coding and Recording Guide
 - Compliance: 23 Metrics
 - Publication of...
 - Data crosswalk
 - Data schema and validation logic for NextGen NBI
- CY2023...
 - Data: Coding and Recording Guide
 - Compliance: 23 Metrics plus 30-day requirements
 - Publish/make available a data transition tool



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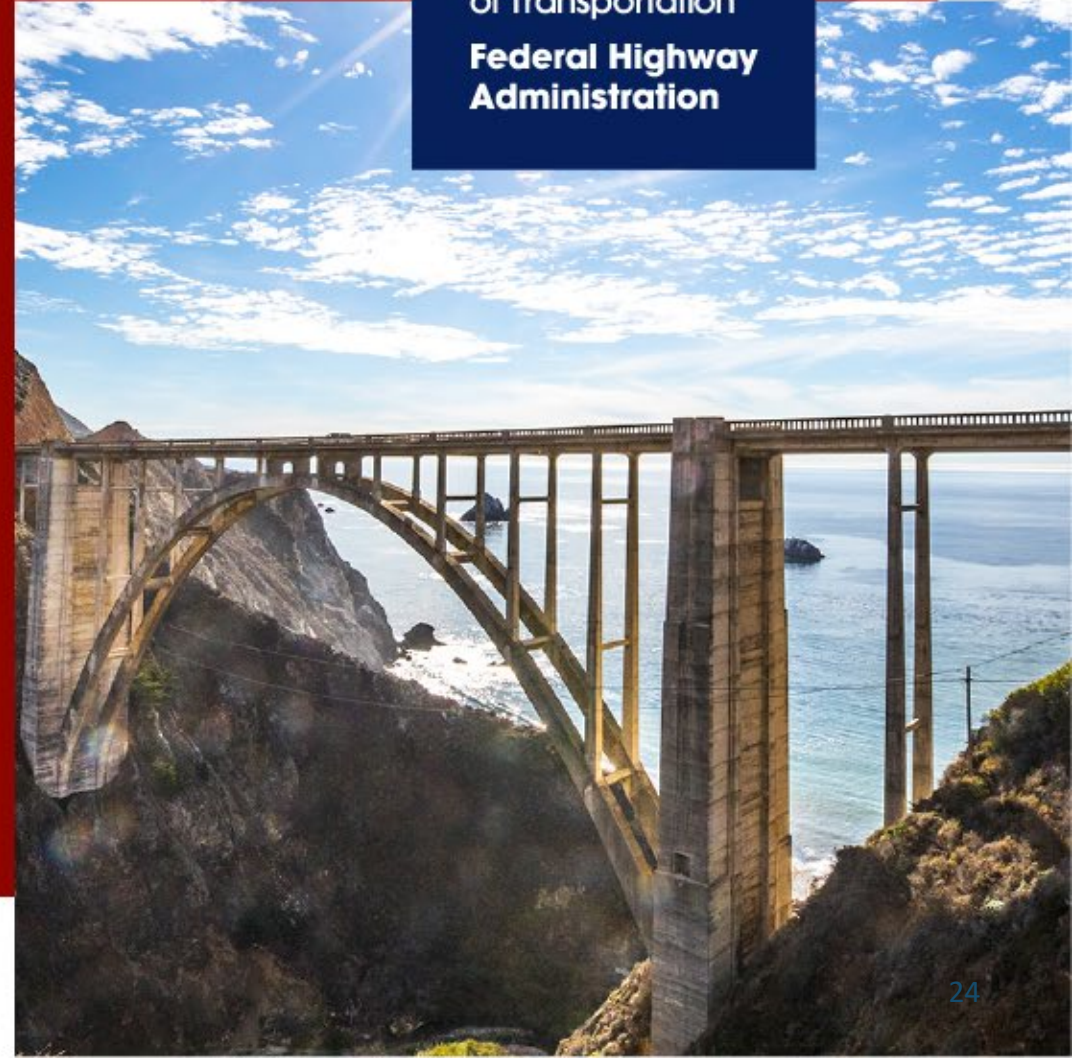
Transition Plan 2022-2028

- CY2024...
 - Data: Coding and Recording Guide
 - Compliance: 23 Metrics plus 30-day and 24-month requirements
 - NextGen NBI available for data checking only
- CY2025...
 - Data: Coding and Recording Guide
 - Compliance: 23 Metrics plus 30-day and 24-month requirements
 - Publish revised NBIS assessment metrics



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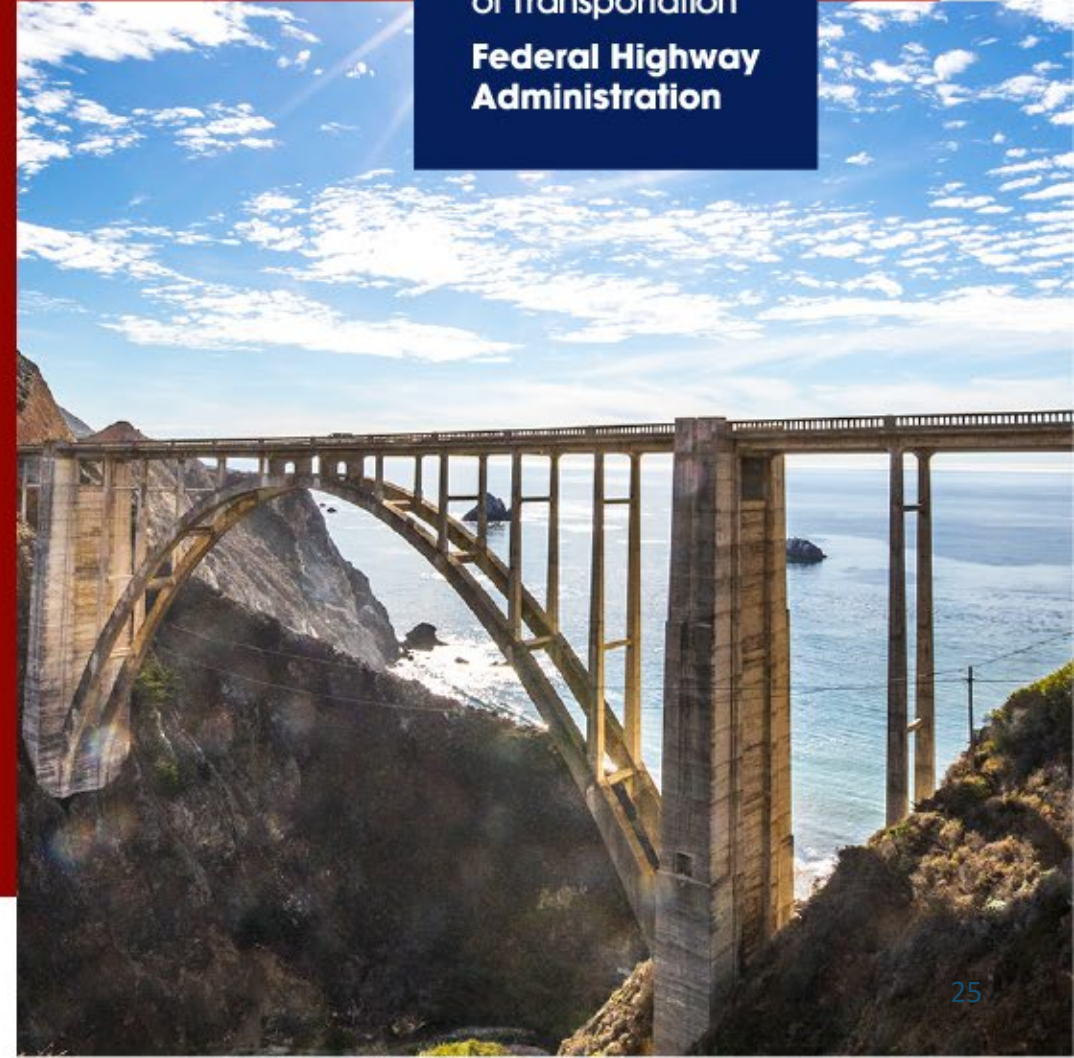
Transition Plan 2022-2028

- CY2026...
 - Data collection per the SNBI must start
 - Data: SNBI...but a transitioned/hybrid dataset
 - Compliance: Hybrid Metrics
- CY2027...
 - Data: SNBI...but a transitioned/hybrid dataset
 - Compliance: Hybrid Metrics
- CY2028...full implementation of revised NBIS and SNBI
 - Data: SNBI
 - Compliance: Revised Metrics



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Bridge Investment Program

- What is the BIP?
- Program Goals
- Statutory Evaluation Requirements
- Outcome Criteria
- Application Templates
- Process Details



BIL's [NEW] Bridge Investment Program* (discretionary)

Purpose	Improve bridge (and culvert) condition, safety, efficiency, and reliability
Funding	<p>\$12.5 B (FY 22-26), including—</p> <ul style="list-style-type: none"> • \$3.3 B (FY 22-26) in Contract Authority from the HTF; and • \$9.2 B (FY 22-26) in advance appropriations from the GF
Eligible entities	<ul style="list-style-type: none"> • State • MPO (w/ pop. >200K) • Local government • Special purpose district/public authority with a transportation function • Federal land management agency • Tribal government
Eligible projects	<ul style="list-style-type: none"> • Project to replace, rehabilitate, preserve or protect one or more bridges on the National Bridge Inventory • Project to replace or rehabilitate culverts to improve flood control and improve habitat connectivity for aquatic species
Other key provisions	<ul style="list-style-type: none"> • At least 50% of funding reserved for certain large projects; option for multi-year funding agreements • Different process for funding projects ≤\$100 M cost • Set aside average of \$20M per FY for planning grants • Sets aside average of \$40M per FY for Tribal transportation bridges



What is the BIP?

- The Bipartisan Infrastructure Law (BIL*) established a new program, the Bridge Investment Program (BIP) under 23 U.S.C. 124
- In addition, BIL designated funding for FY22 through FY26 for this program
- BIL established two funding categories within BIP: Large Projects (Large Bridge Projects) and Other than Large Projects (Bridge Projects)
- For FY22-FY26, a third funding category was added: Planning Grants (Division J, Title VIII of BIL)

*BIL - Enacted as the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117-58, Nov. 15, 2021)



Program Goals (23 U.S.C. 124 (b)(2))

Improve condition by reducing number of and total person miles traveled over bridges:

- In poor condition
- In fair condition and at risk of falling into poor condition
- That do not meet current geometric design standards
- That cannot meet the load and traffic requirements of the regional transportation network

Improve safety, efficiency, and reliability of the movement of people and freight over bridges

Provide financial assistance that leverages and encourages non-Federal contributions



Statutory Evaluation Requirements

Statutory Evaluation Requirements

- Required items for consideration in project outcome criteria, economic analysis rating, or project readiness rating

Statutory Secretarial Considerations

- Considerations for project selection

Statutory Project Selection Priorities

- Every State awarded at least 1 Large Bridge Project or 2 Bridge Projects between FY22 – FY26

Bridge Project and Large Bridge Project Outcome Criteria



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- State of Good Repair
- Safety
- Mobility and Economic Competitiveness
- Climate Change, Resiliency, and the Environment
- Quality of Life
- Innovation



Application Templates

- Three templates developed, one for each application type
 - Planning
 - Large Bridge Project
 - Bridge Project
- Provides an overall document framework for developing an application
- Expected to be supplemented with additional information
 - Benefit-Cost Analysis Calculations
 - Calculations for determining risk of fair bridges falling into poor within 3 years
 - Additional information to support narrative statements about project outcome criteria and project readiness and environmental risk



Process Details

How are applications submitted?

- All applications must be submitted through grants.gov

When are applications required to be submitted by?

- Planning grants – 45 days from publication or July 25, 2022, at 11:59 PM EDT
- Large Bridge Projects – 60 days from publication or August 9, 2022, at 11:59 PM EDT
- Bridge Projects – 90 days from publication or September 8, 2022, at 11:59 PM EDT

Questions... BridgeInvestmentProgram@dot.gov

Website... www.fhwa.dot.gov/bip/



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QUESTIONS?

- NBIS or SNBI: [NBIS SNBI Questions@dot.gov](mailto:NBIS_SNBI_Questions@dot.gov)
- BIP: BridgeInvestmentProgram@dot.gov
- Otherwise: Joey.Hartmann@dot.gov

