



Memorandum

Subject: **INFORMATION:** Specifications for the National Bridge Inventory - Updates for Data Submittal Schema, Data Validation Logic, and NBIS Bridge Length

Date: September 17, 2024
In Reply Refer To:
HIBS-30

From: Joseph L. Hartmann, Ph.D., P.E.
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To: Division Administrators
Federal Lands Highway Division Directors

An update to 23 CFR part 650 Subpart C, National Bridge Inspection Standards (NBIS), was published on May 6, 2022, incorporating by reference in Section 650.317 the Specifications for the National Bridge Inventory (SNBI). Implementation of the SNBI has been proceeding as States begin to capture bridge inspection data in the revised format. Throughout this period, FHWA has responded to questions and comments, some of which have illustrated the need for technical corrections, clarifications, or accommodation of inventory and inspection data reporting that does not fit within current SNBI item formats, codes, or descriptions. In consideration of these identified needs, FHWA published [SNBI Errata #1](#) to the March 2022 SNBI publication.

SNBI Errata #1 will become official when an update occurs, by future rulemaking action, to the SNBI incorporated reference in Section 650.317 of the NBIS. In the interim, the redlined text is provided solely for the information of SNBI users and does not constitute official changes to the March 2022 SNBI publication.

The FHWA data submittal and acceptance procedures are being adapted to receive data that is reported in accordance with the SNBI and SNBI Errata #1 beginning in 2026. As a result, we have updated the [NBI Submittal File Schema](#) with the following changes:

- Changes due to SNBI Errata #1.

Item ID	Data Tag	Existing Format	New Format	Item Name
B.EP.01	BEP01	AN(3)	AN(15)	Legal Load Configuration
B.EP.03	BEP03	AN(1)	AN(17)	Posting Type
B.EP.04	BEP04	N(2,0)	AN(15)	Posting Value

- Changes in SNBI field length to accommodate temporary codes during 2026 and 2027. Applicable temporary codes can be found in the [SNBI Data Crosswalk and Detailed Coding Map](#). Changes due to temporary codes will revert to the existing format as specified in the SNBI beginning with the 2028 data submittal. A new data submittal schema will be published prior to the 2028 data submittal.

Item ID	Data Tag	Existing Format	New Format	Item Name
B.SP.04	BSP04	AN(3)	AN(4)	Span Material
B.SP.05	BSP05	AN(1)	AN(3)	Span Continuity
B.SP.06	BSP06	AN(3)	AN(4)	Span Type
B.SP.09	BSP09	AN(3)	AN(4)	Deck Material and Type
B.SP.11	BSP11	AN(3)	AN(4)	Deck Protective System
B.RT.03	BRT03	AN(2)	AN(3)	Route Direction
B.H.01	BH01	AN(1)	AN(3)	Functional Classification
B.H.04	BH04	AN(1)	AN(3)	National Highway Freight Network
B.N.06	BN06	AN(1)	AN(3)	Substructure Navigation Protection
B.PS.01	BPS01	AN(2)	AN(4)	Load Posting Status
B.C.11	BC11	AN(1)	AN(4)	Scour Condition Rating
B.AP.02	BAP02	AN(1)	AN(5)	Overtopping Likelihood
B.AP.03	BAP03	AN(1)	AN(5)	Scour Vulnerability
B.AP.04	BAP04	AN(1)	AN(3)	Scour Plan of Action

The second iteration of logic for the validation process includes a combination of data verification checks by SNBI Item ID along with cross validation and reasonable value checks based on the relationship between data items. The cross validation logic is available in [HTML format](#) and can also be downloaded as an [Excel file](#).

The NBIS defines a bridge as having an opening measured along the center of the roadway of *more than 20 feet* between under copings of abutments or spring lines of arches or extreme ends of openings for multiple boxes, and includes multiple pipes where the clear distance between openings is less than half of the smaller contiguous opening (23 CFR 650.305).

Converting metric units to imperial units and using common rounding techniques for Coding Guide Item 49 Structure Length results in bridges equal to 6.1 meters translating to 20.01 feet which would be rounded to 20.0 feet for reporting using the SNBI. The specification for SNBI Item B.G.01 NBIS Bridge Length requires field measuring bridges when SNBI Item B.G.02 Total Bridge Length is less than 30 feet to confirm they meet the NBIS bridge definition. During the transition period (2026 and 2027), the FHWA recommends transitioning all bridges currently reported to the NBI as 6.1 meters to 20.1 feet until the first inspection in which the bridge length can be measured in the field and SNBI-formatted data can be collected. The FHWA is working on Errata #2 which will include additional language requiring that field measurements greater than 20.00 feet and less than 20.10 feet be rounded up to 20.1 feet to ensure all NBIS length bridges are reported to the NBI.

Please share this memorandum with appropriate staff and with all appropriate Agency officials. Questions regarding the NBI Data Submittal Schema and Data Verification Logic can be directed to Doug Blades at (202) 366-4622 or Douglas.Blades@dot.gov, or to Wendy McAbee at (202) 366-5658 or Wendy.McAbee@dot.gov.

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