

How to Streamline Bridge Inspections to Meet the New SNBI Requirements

Preparation is the Key to Success



Structural Integrity. **It's what we do.**



FHWA Sets 2028 Deadline for New Bridge Inspection Data Submittal Requirements

Bridge owners: are you ready to implement the Specifications for the National Bridge Inventory (SNBI)?

In 2022, the Federal Highway Administration (FHWA) officially included the SNBI in the National Bridge Inspection Standards (NBIS) Final Rule 23 CFR 650.317 (b) (1).

This incorporation will provide multiple anticipated benefits, which include:

- Enhancing highway bridge safety
- Improving emergency response capabilities
- Promoting the collection of high-quality data through easier-to-understand documents

As part of this implementation, 54 new items were added while 20 previous items have been discontinued. Even with all of the support and guidance provided by FHWA, bridge owners will need to find the necessary resources to implement the changes.

Based on comments submitted to **FHWA by reviewers of the Notice of Proposed Rulemaking, estimates of implementing the SNBI could take between one to ten hours per bridge.** That means a bridge owner with a portfolio of 100 bridges would have to allocate, on average, an additional 550 hours of effort to implement the SNBI.

“The new, more detailed reporting system will require careful preparation,” says Edgardo Ruiz, PhD, PE, Senior Project Manager of Fickett Structural Solutions (Fickett), Orlando, Florida. “Even experienced inspectors found adapting to the new method time-consuming.”

Ruiz, who previously worked for the U.S. Army Corps of Engineers, brings the perspective of both the owner and the service provider.



Noah Boehnen of Fickett inspecting a bridge. (Fickett Photo)

TIME RUNS OUT IN MARCH 2028



FHWA developed a timeline for the full implementation of the SNBI. Designated intermediate milestones will help ensure full implementation by March 2028. Bridge owners can use several FHWA tools to navigate the transition.

FHWA Submittal Schedule

May 2022: NBIS and SNBI published, FHWA memo released

March 15, 2025: Last NBI Data Submittal in accordance with the 1995 Coding Guide

January 1, 2026: Last date to begin verification of transitioned data and collection of SNBI-based data for inspected bridges

January 1, 2026: FHWA makes NBI NextGen available for Data Submittals

March 15, 2026: First SNBI-based NBI data submittal – Transitioned/Hybrid Dataset

June 2026: Transition Tool sunsets

March 15, 2027: Second SNBI-based NBI Data Submittal – Transitioned/Hybrid Dataset

March 15, 2028: Third SNBI-based NBI data submittal – **100% populated and verified**

Ruiz was part of a group responsible for the Army's bridge inspection program. Each Army base owns its bridges and has to meet federal requirements, such as correctly reporting data and performing all necessary inspections and analyses.

In the same way, bridge owners are responsible for accurately inspecting their bridges and reporting data in accordance with the new SNBI.

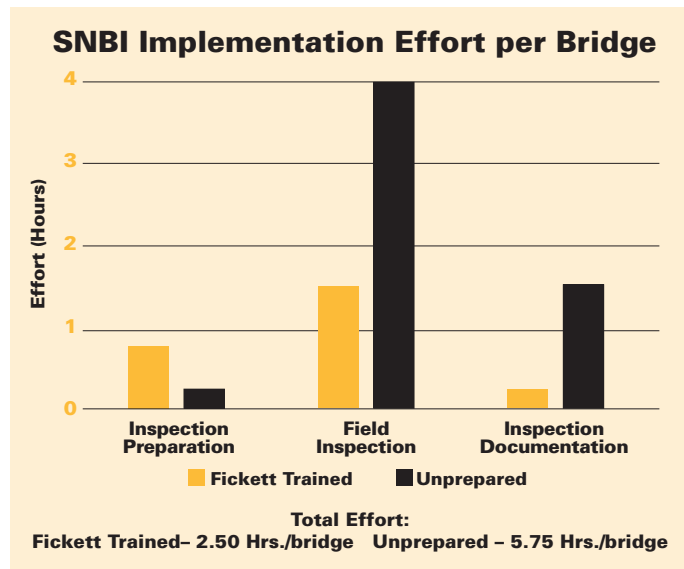
Fickett Helps Owners Meet the Deadlines

The regulation change poses challenges for bridge owners with a limited budget and staffing availability. Potential consequences could be:

- Failure to meet implementation deadlines
- Low-quality data that could result in audits and more time and effort

Fickett understands the challenges facing bridge owners of all sizes and is ready to help.

"From our experience, we have found that being proactive through training and preparation prior to the inspections is the key to successfully implementing the SNBI," says Ruiz.



The times shown are for total person hours. It assumes one person for the inspection preparation and documentation phases and a two-person team for the field inspection phase.

Fickett's proposed approach will result in the following benefits:

- Reduced implementation time estimated at 3.25 hours/bridge
- Higher quality data that will mean less cleanup effort
- A successful plan to meet implementation deadlines

Preparation is the Key to Success

The bridge community has faced changes in the past. "In the same way that the Coding Guide became engrained into the bridge community, the same will happen with the SNBI over the next few years," Ruiz predicts.

Fickett believes training is essential for everyone, from the bridge program managers to the inspectors (engineers and technicians).

Office preparation before on-site inspections allows owners to:

- Accurately collect data from a variety of sources
- Identify data that is required to be collected during field inspections, which streamlines the process

"The new, more detailed reporting system will require careful preparation."
– Edgardo Ruiz, PhD

Fickett Understands the SNBI

Fickett is well known for providing quality structural inspections and training. The company's professionals have studied and used the SNBI and can help State and Local bridge owners make the transition to the new process.

Fickett's services include:

- Transitioning current data items to the new format
- Training inspection personnel and program managers
- Office planning and preparation for data collection
- Conducting data collection and inspections

Ruiz explains that more information will need to be collected during future bridge inspections to meet federal mandates. Audits will also be conducted to ensure accuracy.

Information related to the transition will be posted on the National Bridge Inventory website (fhwa.dot.gov/bridge/snbi.cfm).

Key Requirement Changes

Todd Demski, PE, CWI, Executive Vice President at Fickett, emphasizes that bridge owners will have many challenges related to bridge inspections and database conversion for capturing inspection data.

The inspection process has a lot of nuanced rules and guidelines, making it complicated for even experienced bridge inspectors.

Fickett's experts have thoroughly reviewed the SNBI, with its extensive modifications and additions. Demski says, "We've applied the new manual's rules in the field. We'll include this experience in our company's training."

The new specifications call for many reporting modifications. "With the new changes, bridge owners can now record multiple instances for a bridge," Ruiz explains. The SNBI describes this concept as "many-to-one."

To give you an idea of what is involved, Ruiz offered three data input changes for bridge owners to consider.

The first example deals with the features that a bridge crosses over. In the past, the data format only allowed for coding one feature, such as a road, railroad, trail or body of water. With the SNBI, every feature is recorded.

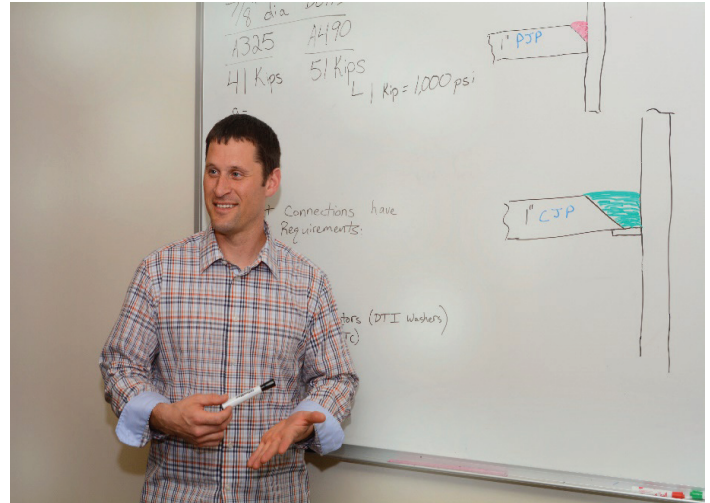
The next example concerns load ratings. The previous NBI Database could only capture a single general load rating. In contrast, the new format will capture load ratings for all configurations.

"The new information is critical for planning logistics," Ruiz says. The data can help determine which bridges can handle specific heavy vehicles. This information is essential for establishing travel routes.

The third example addresses how the bridge data will reflect multiple span types. The previous method only focused on the main span.

The new data items can help keep track of a bridge's maintenance or replacement needs.

"State and local bridge owners need to assess whether they have the internal resources to manage this added workload or if they need to find additional resources to assist with the process," he says.



Todd Demski providing inspection training. (Fickett Photo)

Prepare for Inspections

Fickett can help bridge inspectors understand the nuanced changes in how data should be collected and reported. For example, the Bridge Condition Ratings have been modified, so the terminology now includes terms like *isolated*, *some* and *widespread*. While these terms seem ambiguous, detailed examples are provided in the SNBI to demonstrate how to use them.

Furthermore, Fickett can provide additional guidance on using and applying these terms to properly rate the condition of your bridges.

What is the best way to comply with the regulations? Bridge owners and their inspectors could take the time to read the extensive regulations. However, that process would be time-consuming.

"We can help inspectors digest and understand the information and guidelines," says Ruiz. "That way they're better prepared to conduct streamlined inspections."



Traa Haase inspecting a bridge in Montana. (Fickett Photo)

Challenges Faced By Local & State Bridge Owners

Bridge owners must comply with the new SNBI requirements no matter how many bridges they own. Demski notes that local bridge owners may face challenges because they lack resources.

“Budgetary constraints and time commitments are significant obstacles for local agencies,” he says.

Both state and local bridge owners must assess if they have the internal resources to manage the added workload. Otherwise, they may need to hire consultants or add temporary internal staff to help with the process.

Typically, bridges are inspected every 24 months. “Adding these new data collection steps could double the mobilization costs if they aren’t properly coordinated,” Demski says.

Proper office preparation is an essential step in the process to limit the field time needed for the conversion.



Fickett inspects bridges of all sizes. (Fickett Photo)

“Starting early and understanding the new rules are critical for a smooth transition to the new data collection methods.”

–Todd Demski

Start the Compliance Process As Soon As Possible

The best way to reduce costs will be to perform planning and research in the office before performing the inspection. In-house personnel can review a bridge’s plans and as-builts to look for items requiring updates to meet the SNBI requirements. Interns or limited-term employees could pre-populate inspection forms based on plan sheets and as-built drawings. That way, inspectors will only have to verify this data while in the field, saving time.

Demski predicts that under the new rules, each bridge could take an extra one-half hour to 1.5 hours to inspect. The good news is that once bridge owners complete the initial SNBI Inspection, future inspections will be routine. Most of the data items for the SNBI will only need to be collected during the initial inspection.

Some states are waiting for their entire bridge database to be fully converted before starting the updated data collection. Others plan to convert data in 2024.

“Starting early and understanding the new rules are critical for a smooth transition to the new data collection methods,” Demski says.

Want to Know More?

Fickett is available to assist State and Local agencies with all levels of the SNBI conversion. Our team can train agency personnel with the necessary resources to complete the SNBI data conversion or fully implement the SNBI for the agency.

Fickett’s knowledgeable SNBI-trained employees are ready to assist when you are prepared to start your conversion, whether it is in 2024 or later.

Contact Todd Demski at tdemski@fickettinc.com for more information about how to comply with the new FHWA bridge regulations to meet the 2028 deadline. Fickett offers both training and inspection assistance for bridges throughout the country.



www.fickettinc.com