



Pete Ricketts, Governor

February 7, 2022

**RE: Bridge Inspection Program**

## Nebraska Bridge Inspection Program Participants:

The National Bridge Inspection Standards (NBIS) requires all states to inspect and maintain inventory records of all bridges greater than 20 feet on all public roads. The Nebraska Department of Transportation (NDOT) manages and oversees this requirement for Nebraska with the assistance of bridge owners and bridge inspectors performing reviews in accordance with the NDOT Bridge Inspection Program (BIP). This program includes a Quality Assurance (QA) component that performs independent reviews of bridge inspections and other bridge data entered in the Bridge Management (BrM) data system. The QA review has been completed for data entered in BrM from April 1, 2020, to March 31, 2021. This review included the following items as part of the QA review:

### • Inspection Frequency

214 bridges were selected for this Quality Assurance (QA) review for their inspection frequency and timeliness of report submittal. The bridge inspection reports consisted of 185 Routine Inspections and 29 Special Inspections, (17 Scheduled).

ROUTINE INSPECTION INTERVAL			SPECIAL INSPECTION INTERVAL		
Inspections Within 24 Months	94.6%	175 / 185	Inspections Within 12 Months	100.0%	17 / 17
Inspections Within 25 Months	98.9%	183 / 185	Inspections Within 13 Months	100.0%	17 / 17
Inspections Within 26 Months	100.0%	185 / 185	Inspections Within 13 Months	100.0%	17 / 17

### • Bridge Inspections

A total of 6,148 bridges from the inspections performed in the 2020 inspection cycle, were used for the QA review. This portion was further reduced to include only the Structurally Deficient bridges, both On and Off System; and supplemented with non-structurally deficient Off-System bridges. This final lot consisted of 3,943 bridges inspected by 94 distinct Inspection Team Leaders.

Notable findings from the review include the following:

- ◆ Item 36A, Traffic Safety - Remains an item where the greatest deviation in the evaluation is found. Bridges with blunt exposed rail ends and railings less than 27 inches were often the reason for the QA discrepancies.
- ◆ Item 60, Substructure - In cases where Item 113 – Scour Critical was changed to a 3 or less through a Special Inspection, the follow up Routine Inspection did not code Item 60 in accordance with Item 113.
- ◆ Item 60, Substructure - Unbalanced loading of abutments due to scour or newly placed rock resulted to a QA rating lower than subject rating.
- ◆ Item 61, Channel Protection - Repairs have made including erosion control placement, however Item 61 was not updated.

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• **Load Posting**

The review of load posting was limited to the field QA visits verifying the coded NBI Item 41 in the BrM accurately represents the bridge status found in the field. Of the 214 sites visited, only 4 were found with a status different than coded in the BrM.

- ◆ Bridge Owners should update the BrM as they update their bridge physical postings.
- ◆ When new structures are completed, BrM data should be updated.

• **Bridge Owner Records**

216 unique bridge owners consisting of 90 counties and 126 cities were randomly reduced to 20 bridge owners for the purpose of records review. The review showed a decline in performance from the 2020 bridge owner records review.

BRIDGE FILE REVIEW							
COMPLETE	32%	30%	56%	43%	35%	60%	54%
SUBSTANTIALLY COMPLETE	28%	36%	21%	28%	35%	29%	25%
NOT COMPLETE	40%	34%	23%	29%	30%	11%	21%
	2015	2016	2017	2018	2019	2020	2021

Notable findings include the following:

- ◆ Plans that were scanned and electronically stored had a lower image quality making them hard to read important dimensions or discern complete geometry. Please scan images at higher resolutions.
- ◆ Generally, maintenance work was not documented with either photos (before/after) or noted file entries.
- ◆ Many files were still void of the standard set of site photos. Please obtain and file these photos in accordance with the Nebraska Bridge Inspection Program (BIP) manual.
- ◆ While the records for the bridge files were available at the local bridge owner’s office, they were commonly found in different formats and in different file locations. It is advisable to develop an increased level of file organization.
- ◆ Most of the culverts built prior to 1980 lacked plans. It is advisable for the bridge owners to have the structure accurately measured and develop a “basic” dimensioned sketch for the record.

Nebraska Department of Transportation and Federal Highway Administration appreciate your cooperation in meeting the requirements of the National Bridge Inspection Standards. This memorandum is being sent to all local Bridge Owners and is intended to provide an update on the Nebraska Bridge Inspection Program (BIP). Electronic copies of this and previous BIP memos, as well as other BIP information, can be found on the NDOT Bridge Division website at the following link:

<http://dot.nebraska.gov/business-center/bridge/inspection/>

Sincerely,



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cc: Babrak Niazi, NBIS Program Manager

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