



INDIANA DEPARTMENT OF TRANSPORTATION

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Bridge Inspection Memorandum No. 18-02

February 1, 2018

TO: All Inspection Personnel, and Consultants

FROM: /s/Andrew Fitzgerald
Andrew Fitzgerald
Bridge Inspection Manager
Bridge Division

SUBJECT: Bridge Inspection Extended Frequency Policy

EFFECTIVE: February 6, 2018

This memorandum contains the criteria for the Bridge Inspection Extended Frequency Policy. Bridges within the State of Indiana that pass the screening criteria provided in this document are eligible for an inspection frequency of four years. The screening process only effects the frequency of the routine inspection. Other events may require the structure to be inspected.

The screening must be completed by a registered engineer with INDOT Bridge Inspection Team Leader with fracture critical certification. The screening document must be reviewed at each subsequent routine inspection. This screening procedure has no impact on structures that require a reduced frequency interval for routine inspections. In accordance with Section 1-2.04(03) of the INDOT Bridge Inspection Manual, bridges with a rating of 4 or less for the deck, superstructure, substructure, or culvert rating shall have a reduced interval between Routine Inspections. A maximum inspection interval of 12 months shall be used.

Structures that fail the following screening criteria will not be considered for an extended frequency. Structures granted an extended frequency that become ineligible due to structural defects, condition ratings, collision or fire damage will undergo a routine inspection within seven days of the event or findings. Structures included in the program must continue to pass the screening criteria at each routine inspection.

Screening criteria:

1. The deck, superstructure, and substructure must have a condition rating of 6 or greater.
2. The structure must have load path redundancy.

3. The superstructure must be constructed using steel or concrete. If the superstructure is constructed using adjacent box beams, there must be a structural concrete deck.
4. Structures over traffic must have a minimum vertical clearance of 14'-6" with minimal risk of vehicular collision and must not show signs of vehicular impact.
5. The structure must not have been recently rehabilitated or newly constructed. The structure may be considered for an extended frequency after the first routine inspection.
6. The structure must have valid load ratings with operating ratings greater than the State's legal loads.
7. Structure must not be highly susceptible to fire damage, or collision damage (e.g. structures with parking spaces underneath, narrow bridges, pony trusses, covered bridges).
8. The structure must not have joints that are presently leaking.
9. The structure must not be at risk of over topping and item 113 from the Structure Inventory and Appraisal Sheet must be rated N, 9, 8, 7, or 5.
10. The structure must not have fatigue prone details, out of plane bending cracks, risk of constraint-induced fracture, cover plates, or pins and hanger details.
11. Structures must not have an average daily truck traffic (ADTT) greater than 14,500. This value represents two standard deviations from a normal distribution which eliminates our bridges on segments of the Interstates with the highest truck volumes.
12. Complex and border bridges are not included in the alternate bridge inspection program.

Field review procedure:

1. After compliance with the screening criteria above, perform an inspection of the structure to validate the condition ratings and to detect any defect or deterioration not recorded in previous inspection reports which may disqualify the structure from being granted an extended frequency of inspection. The report must contain a clear description of all noticeable defects. The inspection may be supplemented as practical, with the necessary access equipment that will allow the bridge inspector to clearly describe the extent of any defect in the structure.
2. All aspects of the bridge are to be photo documented. For example, a single span bridge will have photos of each approach, bridge deck, profile views, each bent and one photo of the underside of the deck. The intent is to have all areas of the bridge photo documented. Any minor defects should be photographed.
3. The structure screening sheet is to be indexed and included in the BIAS report.

Approval procedure:

1. The structures to be included in the alternate inspection program will be submitted to the State Program Manager for concurrence. After concurrence, the following information must be provided or included within the screening document and submitted to the FHWA Division Office:
 - a. Structure type and description

- b. Structure age
 - c. Structure load rating
 - d. Structure condition ratings
 - e. Volume of traffic carried
 - f. ADTT
 - g. Any major maintenance or structural repair performed within the last 2 years.
2. The FHWA Division Office in consultation with the FHWA Washington Headquarters Office will make a determination based on the information provided. Determination will then be sent to the State Program Manager. Upon approval, the structure can be granted an extended inspection frequency until it fails to meet the screening criteria stated in this document. The program manager will review the submitted structures and assign some structures for quality assurance review.