

Compliance with the National Bridge Inspection Standards

Formerly Federal-aid Policy Guide Non-Regulatory Supplement NS 23 CFR, Part 650 C,
September 30, 1992, Transmittal 5

See [Order 1321.1C FHWA Directives Management](#)

1. **Purpose (No CFR paragraph reference).** To describe the review and reporting requirement to determine compliance with the National Bridge Inspection Standards which are to be used by State highway departments for inspections and inventories.
2. **NBIS and Bridge Maintenance Reviews (RCS HNG-10-18) (No CFR paragraph reference)**
 - a. Management review of State bridge inspection and bridge maintenance programs required in the Supplement to 23 CFR 635, Subpart E, shall include an annual review of State compliance with the National Bridge Inspection Standards as well as the overall quality of bridge inspection and follow-up action taken on the previous years' findings. This is to be part of a division's Annual Maintenance Monitoring Program.
 - b. The reviews and the information submitted by the States concerning compliance with the NBIS requirements are to be considered in the development of the monitoring program.
 - c. The results of State bridge inspection and bridge maintenance program reviews should be a separate element of the annual maintenance report. This portion of the report shall include a discussion of the State highway agency's program to ensure the quality, uniformity and accuracy of bridge data collected under the NBIS. The report on the NBIS portion of the program should be sent directly to the Office of Engineering, Bridge Division, HNG-30, by the regional offices, by February 1, of each year. The evaluations of follow-up actions on critical recommendations by bridge inspection teams are also to be included with the submission. The key topics to cover in the report are: (1) Inspection procedures, (2) Frequency of inspection, (3) Qualifications of personnel, (4) Inspection reports, (5) Inventory, and (6) NBIS and bridge maintenance reviews.
3. **National Bridge Inspection Standards (NBIS) Follow-up Actions on Critical Recommendations by Bridge Inspection Teams (23 CFR 650.303).** An evaluation of the procedures used by the FHWA and the States for addressing critical bridge inspection findings indicates a need for either strengthening or clarification. To improve the FHWA monitoring of the National Bridge Inspection Standards (23 CFR 650C), the FHWA reinforces that FHWA division offices are to establish a process to monitor the States' accomplishments relating to critically needed bridge maintenance and strengthening recommendations. Generally, this process should include spot checking of a representative sample to determine what follow-up action was taken. A representative sample of both State and locally maintained bridges should be selected for field verification of follow-up actions. See paragraph 4, of this supplement, for additional guidance.
4. **National Bridge Inspection Standards, Follow-up Actions on Critical Recommendations by Bridge Inspection Teams (No CFR paragraph reference).** A procedure is needed to assure that critically needed maintenance activities or strengthening improvements by bridge inspection teams are made in a timely manner. It is essential that each State has a system which assures that necessary work is accomplished. Equally important is the need for each FHWA division office to establish an on-going process to monitor the State's accomplishments relating to critically needed bridge maintenance and strengthening recommendations.
 - a. The Regional Administrators are to ensure that:
 1. Each State has a system to record recommendations included in the Bridge Inspection report and document actions taken to address the recommendations, and
 2. Each division office establishes a procedure to provide for spot checking the State's follow-up actions in response to recommendations included in the inspection report.
 - b. One FHWA process for follow-up might include the following components: A procedure where the State promptly submits to the division office a copy of inspection reports or recommendations contained therein for all on-system and off-system bridges which meet the following criteria:
 1. Bridges with recommendations for immediate work on fracture critical members;
 2. Bridges with recommendations for immediate correction of scour or hydraulic problems;
 3. Bridges with condition ratings of 3 or less for the superstructure or substructure or appraisal ratings of 3 or less for waterway adequacy; and

4. Bridges with recommendations for immediate work to prevent substantial reduction in the safe load capacity.
5. **Compliance with the National Bridge Inspection Standards Underwater Inspection and Bridge Scour (23 CFR 650.309).**

The FHWA has taken several actions to strengthen the National Bridge Inspection Standards (23 CFR 650, subpart C). All States are to take appropriate action to ensure that underwater bridge inspection programs are underway. As part of the underwater program, bridge owners should establish a scour evaluation program to evaluate the adequacy of existing bridges to resist damage from scour. The essential elements of the scour program are:

- a. A screening process to identify those bridges that are most likely to be vulnerable to damage from scour and which should receive early attention.
 - b. Engineering evaluations of existing bridges to determine which bridges are scour critical; reporting the results of these evaluations in Item 113 of the FHWA Bridge Recording and Coding Guide.
 - c. A plan of action for monitoring and providing countermeasures as appropriate for scour critical bridges.
6. **National Bridge Inspection Standards Inspector Training (23 CFR 650.307)**
 - a. The FHWA provides additional guidance on the interpretation of what is considered a comprehensive training course as described in the National Bridge Inspection Standards (23 CFR 650, subpart C). A comprehensive training course would vary with the education and experience of the trainee as follows:
 1. A 3-week course would be required for persons without a civil engineering degree and with less than 5 years bridge inspection experience.
 2. A 2-week course would be sufficient for civil engineering graduates or for those with more than 5 years bridge inspection experience.
 - b. The purpose of this training is not to simply acquaint the inspector with facts; it is to enable the inspector to relate the conditions observed on an actual bridge to established criteria. For this reason, the FHWA would strongly recommend a minimum of 2-weeks training.
 7. **Compliance with the National Bridge Inspection Standards, Frequency OF Inspection and Load Posting of BRIDGES (23 CFR 650.305).** A management review of the bridge program led the FHWA to adopt an action plan phase to improve State and local government compliance with the National Bridge Inspection Standards (23 CFR 650, subpart C). Stronger FHWA action is needed to improve compliance with the frequency of inspection and load posting requirements of the NBIS. Bridges carrying a public road are to be inspected and evaluated for safety at regular intervals, not to exceed 2 years. Each bridge is to be rated as to its safe load capacity, and posted if the maximum legal load under State law exceeds the operating rating for the bridge.
 - a. In those States or local jurisdictions where substantial NBIS deficiencies are confirmed, the State is to be notified that to avoid suspension of Federal-aid in the jurisdiction involved, one of the following actions is required:
 1. correction of NBIS deficiencies, or
 2. submission, for approval by the FHWA, of an aggressive, short-term plan to correct NBIS deficiencies.
 - b. An acceptable plan shall be one which accomplishes NBIS compliance within the minimum practicable time frame. Approval of further Federal-aid projects should be suspended in those governmental entities that:
 1. after 90 days from the date of notification are not complying with the NBIS frequency and load posting requirements and do not have a satisfactory plan for correcting the deficiencies, or
 2. are not carrying out the plan to correct NBIS deficiencies satisfactorily and on schedule.
 8. **Bridge Inspection Program - Inspection of Bridge Piers and Fender Systems (No CFR paragraph reference).**

In fulfilling the inspection requirements of the National Bridge Inspection Standards (23 CFR 650, subpart C), the FHWA gives guidance regarding the inspection of bridge piers and fendering systems. Each FHWA field office is requested to evaluate and emphasize the State inspection procedures for bridges over navigable waters. The evaluation should assure that the State inspection continues to include an assessment and evaluation of bridge piers and fendering systems for structural integrity.

9. Inspection and Maintenance of Major or Unusual Bridges (No CFR paragraph reference)

- a. The FHWA provides guidance for the inspection, as required by the National Bridge Inspection Standards (23 CFR 650, subpart C), and maintenance of the Nation's major or unusual structures being designed and constructed under the Federal-aid highway program. Each Regional Administrator, through the FHWA and State highway agency channels, is directed to take appropriate measures, including contract modification if necessary, to assure that all ongoing design contracts for these types of bridges require explicit in-service inspection and maintenance guidance for bridge owners. Provision should, of course, be made efforts for these same categories of bridges.
- b. For the purposes of these instructions, "major or unusual structures" are defined as stayed girder bridges, segmental bridges, and those structures having a clear unsupported length in excess of 500 feet.