

**Engineering and Design
PERIODIC SAFETY INSPECTION AND CONTINUING EVALUATION
OF USACE BRIDGES**

1. Purpose

This regulation defines the policy and prescribes procedures and responsibilities for the periodic inspection and evaluation of bridges owned or maintained by the U.S. Army Corps of Engineers (USACE) on civil works projects.

2. Applicability

This regulation applies to all USACE Commands having Civil Works responsibilities.

3. Distribution Statement. Approved for public release; distribution is unlimited.

4. References

a. 23 F.R. 650, "National Bridge Inspection Standard," October 1988 (see Appendix A of this Engineer Regulation (ER)).

b. ER 1110-2-100, Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures.

c. ER 1110-2-101, Reporting of Evidence of Distress of Civil Works Structures.

d. EM 385-1-1, Safety and Health Requirements Manual.

e. "AASHTO LRFD Bridge Design Specifications" (latest edition).

f. "Bridge Inspector's Training Manual/90," July 1991 (Revised March 1995), Federal Highway Administration, 6300 Georgetown Pike, McLean, VA 22101.

g. "Bridge Inspector's Manual for Movable Bridges," Federal Highway Administration, FHWA-IP-77-10, 1977, supplement to reference 4*f*.

- h.* “Construction and Maintenance Section,” American Railway Engineering Association, Volumes I & II.
- i.* “Culvert Inspection Manual,” Federal Highway Administration, FHWA-IP-86-2, July 01, 1986, supplement to reference 4*f*.
- j.* Evaluating Scour at Bridges,” Hydraulic Engineering Circular (HEC) 18, Federal Highway Administration, FHWA-NHI-01-001, May 01, 2001.
- k.* “Evaluating Scour at Bridges,” FHWA Technical Advisory T5140.23, October 28, 1991.
- l.* “Guide Specifications for Design of Pedestrian Bridges” (latest edition), American Association of State Highway and Transportation Officials.
- m.* “Guide Specifications for Fatigue Evaluation of Existing Steel Bridges,” American Association of State Highway and Transportation Officials, 1990.
- n.* “Inspection of Fracture Critical Bridge Members,” Federal Highway Administration, FHWA-IP-86-2, September 01, 1986, supplement to reference 4*f*.
- o.* “Manual for Maintenance Inspection of Bridges,” American Association of State Highway and Transportation Officials, 444 N. Capitol Street NW, Washington, DC 20001 (latest edition).
- p.* “Manual for Condition Evaluation of Bridges,” American Association of State Highway and Transportation Officials, 444 N. Capitol Street NW, Washington, DC 20001, 2nd ed.
- q.* “Manual for Railway Engineering,” American Railway Engineering and Maintenance-of-Way Association, Volumes I & II (latest edition).
- r.* OSHA Standard 1926.106(a), Personal Protective and Life Saving Equipment, “Standards Interpretation, Fall Protection, Lifejacket, and Lifesaving Requirements When Working Over or Near Water.”
- s.* “Recording and Coding Guide for the Structure Inventory and Appraisal of the Nations Bridges,” Design and Inspection Branch, Bridge Division, Federal Highway Administration, Washington, DC (latest edition).
- t.* “Revisions to the National Bridge Inspection Standards (NBIS),” FHWA Technical Advisory T5140.21, September 16, 1988.
- u.* “Seismic Retrofitting Manual for Highway Bridges,” Federal Highway Administration, FHWA-RD-94-052, May 1995.
- v.* “Standard Specifications for Highway Bridges,” American Association of State Highway and Transportation Officials, 16th ed.

- w. "Stream Stability at Highway Structures," Hydraulic Engineering Circular (HEC) 20, Federal Highway Administration, FHWA-NHI-01-002, March 01, 2001.
- x. "Underwater Inspection of Bridges," Federal Highway Administration, FHWA-DP-80-1, November 01, 1989.
- y. "USACE Bridge Inventory System," September 1992.

5. Background

The Surface Transportation Assistance Act of 1978 (PL 100-17) requires that all structures defined as bridges (see reference 4a) on public roads be inventoried and inspected in accordance with the National Bridge Inspection Standards (NBIS). Under the standards, each state is required to record and maintain structure inventory and appraisal data on each bridge and submit the data to the Federal Highway Administration (FHWA) upon request.

6. Policy

All bridges identified within this regulation owned or maintained by the USACE on Civil Works projects shall be inspected and inventoried to ensure their safety and structural integrity.

- a. Public highway/roadway bridges (see part 650.301 of reference 4a for definition) with spans greater than 6.1 m (20 feet) shall be inspected and evaluated in compliance with the NBIS.
- b. Railway bridges shall be inspected and evaluated in accordance with references 4f through 4i, 4n, 4o, 4q, 4x, and 4w.
- c. Access bridges to outlet works, dam service bridges which are closed to the public, public and non-public pedestrian bridges, and all bridges on public roads with spans of 6.1m (20 feet) or less shall be inspected and evaluated in accordance with a comprehensive, uniform plan approved by each Major Subordinate Command (MSC) in consultation with HQUSACE (CECW-EI).
- d. An inventory of subject bridges (public highway/roadway, railroad, foot/pedestrian, access bridges to outlet works and dam service bridges) shall be prepared and maintained in accordance with the Corps of Engineers Bridge Inventory System (CEBIS), reference 4y. The CEBIS is composed of three database files: the Structure Inventory and Appraisal (SI&A), the Inspection Sheet, and the Maintenance Sheet.
- e. All existing bridges over tidal and non-tidal waterways with public vehicular traffic should be evaluated for the risk of failure from scour during the occurrence of a flood on the order of magnitude of the 500-year return period. Bridge scour evaluations shall be conducted for each bridge to determine whether it is scour critical in accordance with references 4j and 4w. Scope of scour evaluations for all other bridges shall be determined by the structural engineer in charge of the bridge inspection and evaluation program (see paragraph 11a for definition) after consultation with Hydraulic and Geotechnical Engineering.

f. Fracture critical members (FCMs) of any bridge shall be identified and recorded in the bridge inspection report and CEBIS. An inspection plan for FCMs shall be developed and executed. See Appendix B for additional guidance.

g. Bridge seismic evaluations and retrofitting requirements shall be conducted in accordance with sections 1.4 and 1.5 of reference 4*u*.

h. Seismic performance category and soil type for each bridge shall be identified and recorded in the bridge inspection report and CEBIS.

i. HQUSACE (CECW-EI) shall send consolidated SI&A data of USACE Public Highway/Roadway bridges to the FHWA to comply with the NBIS.

7. Bridge Definitions

a. Public Highway/Roadway bridges are bridges defined in part 650.301 of reference 4*a*.

b. Short Span bridges are all bridges open to public vehicular traffic with spans less than or equal to 6.1 m (20 feet).

c. Non-Public Access bridges are access and service bridges used for operation and maintenance purposes only. Only traffic related to operation and maintenance of USACE projects is allowed.

d. Public Pedestrian bridges are bridges with bridge lengths not less than 6.1 m (20 feet) open to public use intended to carry primarily pedestrian and/or bicycle traffic. These bridges may be subjected to an occasional single maintenance vehicle or similar type loading.

e. Non-Public Pedestrian bridges are access bridges with bridge lengths not less than 6.1 m (20 feet) used for operation and maintenance purposes only. These bridges may be subjected to an occasional single maintenance vehicle or similar type loading. Only traffic related to operation and maintenance of USACE projects is allowed.

f. All Other Pedestrian bridges are public and non-public pedestrian bridges with lengths less than 6.1 m (20 feet). Inspection scope and frequency and inspector qualifications for All Other Pedestrian bridges shall be determined by the structural engineer in charge of the bridge inspection and evaluation program (see paragraph 11*a*).

8. Types of Safety Inspections

Inspection during the service life of the bridge includes an initial inventory inspection after construction is complete, periodic routine inspections, special inspection to evaluate damage or deterioration, or to monitor performance, and underwater inspections that require special equipment for access. Descriptions of the types of inspections are included in Appendix C (see paragraph 11*a*).

9. Frequency of Inspections

a. Routine inspections. Routine inspections for vehicle and pedestrian bridges shall be conducted every 2 years unless the condition of the bridge indicates that more frequent inspections are required. See Appendix D for guidelines on railway bridges.

b. Other inspections. Other types of inspections and their frequencies will depend upon the age, present load capacity, traffic, type of construction, state of maintenance, and any known deficiencies related to fatigue, scour, seismic influences, FCMS, and corrosion. Evaluation of bridge condition and scheduling of inspection intervals shall be the responsibility of the structural engineer in charge of the inspection program (see paragraph 11a).

c. Maximum inspection intervals. The maximum inspection interval may be increased for bridges if past inspection reports and favorable experience and analysis justify the increase. Maximum inspection intervals of 4 years and 5 years between inspections are permitted for bridges described in paragraphs 6a and 6c, respectively. Proposals to inspect bridges described in paragraph 6a at intervals greater than 2 years shall be submitted to the FHWA through the state agency responsible for bridge inspections in which the bridge is located. Proposals shall follow guidelines outlined in reference 4t. A copy of the request and FHWA approval, if received, shall be provided to the MSC and CECW-EI. Proposals to inspect bridges described in paragraph 6c at intervals greater than 2 years shall be submitted to the MSC. The plan for inspecting any bridge at intervals greater than 2 years should be based on the type (i.e., with tires, treads, or on a track) and frequency of vehicular traffic that may cause fatigue or deterioration of the structural members.

d. Underwater inspections. Underwater bridge members shall be inspected to the extent necessary to determine the condition and structural integrity of the bridge. Underwater inspections include wading, diving, and soundings as required. An underwater inspection of all substructures shall be performed at an interval not to exceed 5 years. Underwater inspections for bridges that cross dam structures shall be inspected under the dam safety program. See reference 4b for dam inspection requirements.

e. Special inspections. Special inspections are necessary after bridges experience significant events such as hurricanes, earthquakes, fires, floods, or collisions.

10. Organizational Responsibilities

HQUSACE, MSC, and District responsibilities require teamwork among Engineering and Operations Divisions and Programs/Project Management organizations at all levels, and with the U.S. Army Engineer Research and Development Center (ERDC). The responsibilities are described below.

a. District. The District's engineering element shall be responsible for the following activities:

(1) Formulating the inspection plans, conducting the inspections, processing and analyzing the results of the instrument observations, evaluating the condition of the bridges, determining

scope and frequency of future inspections, preparing and submitting the inspection reports, and performing an independent technical review. All reports shall be submitted in an electronic format (see paragraph 16).

(2) Submitting all inspection reports by the District Commander to the MSC Commander (or to the delegated approval authority) for certification of quality assurance and approval (Part 1 of Appendix E) within 60 days after the inspection. Copies of approved reports shall be forwarded to the District Operations Division and the District Project Office.

(3) Preparing, maintaining, and updating the District CEBIS, maintaining permanent record copy of all inspection reports at the District, and developing a quality control plan (QCP) annually for MSC review and approval. The District CEBIS shall be submitted to the MSC no later than 01 January of each calendar year. The QCP may be included in the District's 5-year bridge inspection program budget and schedule (see paragraph 12). The QCP shall be furnished to the MSC by 15 January of each year.

(4) Inviting a representative from the Operations Division to participate in each inspection. For those bridges being inspected for the first time, a representative from the Construction Division and Operations Division shall be invited to participate.

(5) Coordinating with Operations Division and Programs and Project Management on the annual operations and maintenance (O&M) budget process for funding existing bridge inspections, evaluations, repairs, improvements, or rehabilitation related to bridge safety. The 5-year bridge inspection program budget, schedule, and justification shall be provided to the Operations Division and Programs and Project Management organizations for use in the O&M budgeting process.

(6) Notifying any city, county, state, or local government and operating railway company which has jurisdiction of the roadway or railway of the inspection.

(7) Providing status on the bridge inspection and evaluation program at least annually to the District's Dam Safety Committee.

b. MSC. The MSC's engineering element shall be responsible for the following activities:

(1) Reviewing and monitoring the data collection, processing, evaluation, and inspection activity; maintaining the schedule of inspections and status of reports; verifying qualifications of the Bridge Inspector's team; and establishing procedures to promptly inform CECW-EI and CECW-OD when the evaluation of a bridge or instrumentation data indicate that a bridge is unsafe.

(2) Coordinating with Operations Division and Programs and Project Management on the annual O&M budget process for funding existing bridge inspections, evaluations, repairs, improvements, or rehabilitation related to bridge safety.

(3) Approving inspection reports. MSC Commanders are authorized to approve inspection reports. If the MSC decides to delegate approval authority to the Districts, then it should retain

responsibility for program management and oversight. Review and approval of reports should be completed within 90 days after completion of the field inspection. This period should include satisfactory resolution of all review comments. Reports shall be sent to CECW-EI for review and approval, with the views and recommendations of the MSC Commander included in the transmittal correspondence only under the following circumstances:

(a) Views and recommendations are requested by a HQUSACE representative at the inspection.

(b) Bridge inspection indicates that the safety of a bridge is in jeopardy and requires posting as described in paragraph 14.

(4) Consolidating, by the MSC Commander, District CEBIS into MSC CEBIS and submit to ERDC before 1 February of each calendar year.

(5) Maintaining and updating the MSC CEBIS.

(6) Designating a qualified structural engineer, responsible for the bridge inspection safety program at the MSC/District, as the point of contact for CEBIS, inspection, report, maintenance, repair, and rehabilitation of bridges.

(7) Developing a quality assurance (QA) program and completion of Part 2 of Appendix E. The QA shall be furnished to CECW-EI by 15 February of each year.

(8) Submitting each approved District QCP to CECW-EI by 15 February of each year.

(9) Providing status on the bridge inspection and evaluation program at least annually to the Division's Dam Safety Committee.

c. HQUSACE. The CECW-EI shall be responsible for the following activities:

(1) Overseeing engineering management of all phases of the USACE Bridge Safety Program.

(2) Coordinating with CECW-OD on the annual O&M budget process for funding existing bridge inspections, evaluations, repairs, improvements, or rehabilitation related to bridge safety.

(3) Developing engineering guidance for implementing a Bridge Safety Program covering public access bridges and other USACE bridges.

(4) Providing policy advice to HQUSACE elements on any new legislation related to the safety of USACE bridges.

(5) Providing policy compliance review of all decision documents related to bridge safety deficiencies.

(6) Acting as proponent for training needs of USACE bridge engineers and coordinating the training effort with courses offered by FHWA and American Association of State Highway and Transportation Officials (AASHTO).

(7) Acting as liaison with state and other federal agencies to evaluate procedures and capabilities with respect to bridge safety.

d. ERDC. ERDC shall be responsible for the following activities:

(1) Consolidating and compiling the data from all District inspection reports and MSC CEBIS into the computer database, compiling SI&A data of USACE Public Highway/Roadway bridges, and submitting to CECW-EI for reporting to FHWA before 15 March of each calendar year.

(2) Providing CEBIS reports to HQUSACE, MSCs, Districts, and other USACE installations upon request.

11. Qualifications of Bridge Inspector's Team

a. Structural engineer. The structural engineer in charge of the bridge inspection and evaluation program shall be a registered professional engineer and have completed a comprehensive training course based on the "Bridge Inspector's Training Manual/90" (reference 4f).

b. Field inspection team. All field inspections shall be performed by a team consisting of a team leader and at least one bridge technical specialist.

(1) The team leader shall be a structural engineer who meets the minimum qualifications stated in paragraph 650.307 of reference 4a and have completed a comprehensive training course based on the current version of reference 4f.

(2) Bridge technical specialists shall meet the following minimum qualifications:

(a) Have a Bachelor of Science Degree in Civil Engineering, or

(b) Have an Associate Degree in Civil Engineering Technology and have completed a comprehensive training course in Engineering Concepts for Bridge Inspectors based on the current version of reference 4f.

(3) The mechanical and electrical engineer involved with the inspection of movable bridges (swing, bascule, and vertical lift bridges) shall be qualified to be registered professional engineers who are proficient with the methods and procedures described in Chapter 20, reference 4f.

c. Underwater inspections and scour evaluation. Underwater inspectors must have knowledge and experience in bridge inspection. A diver not fully qualified as a bridge inspector or bridge inspection team leader must be used only under close supervision. Hydraulic and geotechnical engineers involved with the bridge scour evaluation should be registered

professional engineers or qualified to be registered who are proficient in the methods described in reference 4j and 4w and should have successfully completed the FHWA training course, Stream Stability and Scour at Highway Bridges. All underwater inspections and scour evaluations shall be conducted under the direct supervision of a qualified bridge inspection team leader.

d. Independent technical review. Reviewers should be senior engineers who have the proper knowledge, skills, training, and experience, and who were not directly involved in the inspection or report preparation. The reviewer's qualifications shall not be less than those stated in paragraph 11a, and must have current experience in inspecting and evaluating several bridges. Names and qualifications of the reviewers should be included in the District's QCPs, and be approved by the MSC as part of its QA program.

12. Inspection Procedures

A 5-year bridge inspection program budget and schedule shall be developed. Condition, age, size, and traffic are some of the parameters to consider in establishing priorities for the inspection plan. A copy of this plan is to be furnished through the MSC to CECW-EI by 15 February of each year. See Appendix D for guidelines specific to railroad bridges.

a. Notification of inspections. CECW-EI shall be notified, through the MSC, at least 30 days in advance of a scheduled inspection in order to determine whether a HQUSACE representative(s) will participate in the inspection.

b. Procedures for underwater members. See reference 4x and Chapter 17 of the reference 4f for details.

c. Procedures for fracture critical members. See Chapter 18 of the reference 4f, reference 4n, and Appendix B for details.

d. Procedures for inspection and evaluation of bridge structures. See Chapters 7-14 of reference 4f and reference 4p for details.

e. Procedures for inspection of movable bridges. See Chapter 20 of references 4f and 4g for details.

f. Inspection of segmental concrete bridges, cable-stayed bridges, and suspension bridges. See Chapter 21 of reference 4f for details.

g. Procedures for evaluating scour at bridges. See references 4j and 4w for details.

h. Safety plan. A safety plan, following guidelines in reference 4d of this regulation shall be prepared for all inspections in which the safety of the inspector is placed in jeopardy. Examples include falls and traffic. See reference 4r for guidance when working over water.

13. Load Capacity Rating

a. Load capacity rating for Public Use bridges. All Public Highway/Roadway bridges and Short Span bridges shall be rated for safe load-carrying capacity using the AASHTO vehicle loads described below. The capacity of all highway bridges shall be rated at two levels. The upper load level is referred to as the Operating Rating and the lower load level is referred to as the Inventory Rating. Load ratings for bridge members shall be made in accordance with references 4o and 4p.

(1) A load capacity rating shall be performed as part of:

(a) The initial inventory inspection.

(b) Periodic routine inspections if rating is not available in records or if the inspection reveals previously unknown conditions that affect the bridge load capacity.

(c) Special inspections after bridges experience significant events such as hurricanes, earthquakes, fires, floods, or collisions.

(2) A load rating shall be performed whenever the dead load from the bridge surface has increased due to a major rehabilitation or replacement of the decking.

(3) All load ratings shall be based on the AASHTO Standard MS (HS) Truck and Lane Load (references 4e and 4v). Alternatively, the HL-93 vehicle load of reference 4e may be used to determine load ratings. The Strength-I load factors shall be used for determining the Inventory Rating, and the Strength-II load factors shall be used to determine the Operating Rating for this vehicle.

b. Load capacity rating for Public Pedestrian bridges. All Public Pedestrian bridges shall be rated for safe load-carrying capacity using the pedestrian load guidance in reference 4l as modified in paragraph 14b. These bridges shall also be rated for vehicle or other loadings, if applicable, following loading guidelines of reference 4l, including commentary. Vehicle ratings may be based on the Operating Rating defined by AASHTO.

c. Load capacity rating for Non-Public and all other Pedestrian bridges. All Non-Public and all other Pedestrian bridges shall be rated for safe load-carrying capacity using acceptable standards. Acceptable standards shall be determined by the structural engineer in charge of the bridge inspection and evaluation program. Material properties should be conservatively estimated if no material specifications or other records are available.

d. Load capacity rating for Non-Public Access bridges. These bridges shall be rated for safe load-carrying capacity using expected loads and load configurations. Rating procedures shall follow AASHTO bridge rating standards. Loads shall be limited to safe levels. Safe levels may be based on the AASHTO Operating Rating for bridges with low levels of traffic.

e. Load capacity rating for Railway bridges. Railway bridges shall be rated for safe load-carrying capacity in accordance with reference 4q. Load ratings shall be based on the Cooper E80 load and expected loads and configurations (reference 4q). See Appendix D for further rating guidelines.

f. Evaluation for fatigue and fracture. A fatigue evaluation following procedures of reference 4m shall be conducted on all public use bridges with FCMs and all public use bridges with a high number of load cycles or stress ranges. Fatigue evaluation for non-public use bridges shall be determined by the structural engineer in charge of the bridge inspection program and should be based on degree of redundancy, age and condition of bridge, and number and magnitude of stress cycles. A fracture analysis shall be conducted when cracks are detected. See Appendix B for more detail.

14. Load Limit Posting

a. Public Highway/Roadway bridges and Short Span bridges. These bridges shall be posted for load-carrying capacity when the maximum legal load exceeds the Operating Rating capacity. Districts may choose to post an Inventory Rating capacity. If the bridge condition requires reducing the posted limit to less than 2.7 tonnes (3 tons), the bridge or culvert shall be closed for vehicular traffic.

b. Load posting for pedestrian bridges. All pedestrian bridges shall be posted when the safe load capacity is below 3.1 kPa (60 psf) of uniform load. The posting shall limit the number of pedestrians on the bridge at one time. Bridges with a safe load capacity below 1.9 kPa (40 psf) of uniform load shall be closed. Higher posting and closing limits may be imposed by the structural engineer in charge of the bridge inspection and evaluation program if use and consequences of failure warrant increased limits. Bridges shall be closed if bridge railing does not meet the loading requirements of reference 4d.

c. Railway bridges. Refer to Appendix D for guidance on control of railway loads when the safe load capacity is below the Cooper E80 load or expected loads and configurations.

15. Seismic Evaluation of Bridges

All vehicle bridges, except those under Seismic Performance Category A described in reference 4u, shall be evaluated in accordance with Appendix F.

16. Inventories and Inspection Report

a. Report preparation. A formal technical report shall be a permanent record and will serve as a basis for determining the need for remedial work. The report will be based on a detailed inspection and evaluation of each bridge as to its safety and structural adequacy. As a minimum, the report shall contain the results of the inspection, recommendations for remedial work, and approximate total cost. In order to more accurately portray conditions and changes in conditions of surfaces and structural details, photographs are generally required. Photographs shall be provided of all areas requiring visual monitoring or critical regions of structural distress. The

CEBIS printout shall be part of the inspection report. All reports shall be submitted in electronic format. Report contents and format shall be as shown in Appendix G.

b. Report review and certification. All bridge inspection and evaluation reports shall receive an independent technical review. The district shall certify that the inspections and evaluations were performed in accordance with this regulation and the referenced criteria by qualified engineers. The District shall also certify that all remedial work necessary to ensure that the safety of the bridge is being developed on an appropriate schedule. See Appendix E for certification and approval.

c. Report distribution. One copy of each approved report shall be submitted by the originating office through the MSC to CECW-EI.

d. Inventory preparation. Each District shall prepare and maintain a District CEBIS of all their bridges. The District CEBIS includes the SI&A data shown in Appendix H. Newly completed structures, physical changes to existing structures which would alter previously recorded data, and placement of load and/or speed restriction signs shall be entered in the District CEBIS within 60 days after the change in condition. The MSC shall update and forward the MSC CEBIS data to CECW-EI and also furnish a copy to ERDC within 30 days after receiving District updates.

e. CEBIS distribution. The District Commander shall submit one copy of the District CEBIS to the MSC in an acceptable electronic format. The MSC shall consolidate all District CEBIS's into an MSC CEBIS and forward one copy to ERDC. ERDC shall consolidate all MSC CEBIS's into a Civil Works CEBIS and forward to CECW-EI.

17. Reporting Distress

If the bridge inspection and evaluation indicate evidence of distress or potential failure requiring immediate remedial action, the District shall inform CECW-EI and CECW-OD immediately through the MSC office. Emergency situations will be handled in accordance with the guidance set forth in reference 4c.

18. Interagency Coordination

In those cases where ownership of major elements is divided between the Corps and other agencies, information pertinent to the condition of project elements owned by others, as observed by the Corps inspection team, shall be furnished to the co-owner for information purposes only.

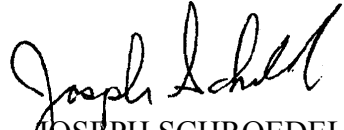
19. Funding

Requests for funding of bridge inspections, maintenance, and repair shall be prioritized and submitted to CECW-OD as part of the annual O&M budget process. CECW-OD, in consultation with CECW-EI, will allocate funds for inspections, evaluation, and repair of bridge structures not only in accordance with the needs and results reported in the Civil Works CEBIS database, but also subject to overall budget priorities.

FOR THE COMMANDER:

8 Appendices:

- App A National Bridge Inspection Standard
- App B Fracture Critical Members
- App C Description of Inspection Types
- App D Track Safety Standards
- App E Statement of Inspection Review and Approval
- App F Seismic Performance Evaluation
- App G Inspection Report Format and Content
- App H Structure Inventory and Appraisal (SI&A) Sheets



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