

110TH CONGRESS
2^D SESSION

H. R. 3999

AN ACT

To amend title 23, United States Code, to improve the safety of Federal-aid highway bridges, to strengthen bridge inspection standards and processes, to increase investment in the reconstruction of structurally deficient bridges on the National Highway System, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “National Highway
5 Bridge Reconstruction and Inspection Act of 2008”.

6 **SEC. 2. HIGHWAY BRIDGE PROGRAM.**

7 (a) BRIDGES ON FEDERAL-AID HIGHWAYS.—

8 (1) RISK-BASED PRIORITIZATION FOR REPLACE-
9 MENT AND REHABILITATION OF DEFICIENT
10 BRIDGES.—Section 144 of title 23, United States
11 Code, is amended by striking subsections (b) and (c)
12 and inserting the following:

13 “(b) BRIDGES ON FEDERAL-AID HIGHWAYS.—The
14 Secretary, in consultation with the States, shall—

15 “(1) inventory all bridges on Federal-aid high-
16 ways that are bridges over waterways, other topo-
17 graphical barriers, other highways, and railroads;

18 “(2) identify each bridge inventoried under
19 paragraph (1) that is structurally deficient or func-
20 tionally obsolete;

21 “(3) assign a risk-based priority for replace-
22 ment or rehabilitation of each such bridge after con-
23 sideration of safety, serviceability, and essentiality
24 for public use and public safety, including the poten-
25 tial impacts to emergency evacuation routes and to

1 regional and national freight and passenger mobility
2 if the serviceability of the bridge is restricted or di-
3 minished; and

4 “(4) determine the cost of replacing each such
5 bridge with a comparable facility or of rehabilitating
6 such bridge.

7 “(c) BRIDGES ON OTHER PUBLIC ROADS.—

8 “(1) INVENTORY OF BRIDGES.—The Secretary,
9 in consultation with the States, shall—

10 “(A) inventory all those highway bridges
11 on public roads, other than those on any Fed-
12 eral-aid highway, which are bridges over water-
13 ways, other topographical barriers, other high-
14 ways, and railroads;

15 “(B) identify each bridge inventoried under
16 subparagraph (A) that is structurally deficient
17 or functionally obsolete;

18 “(C) assign a risk-based priority for re-
19 placement or rehabilitation of each such bridge
20 after consideration of safety, serviceability, and
21 essentiality for public use and public safety, in-
22 cluding the potential impacts to emergency
23 evacuation routes and to regional and national
24 freight and passenger mobility if the service-

1 ability of the bridge is restricted or diminished;
2 and

3 “(D) determine the cost of replacing each
4 such bridge with a comparable facility or of re-
5 habilitating such bridge.

6 “(2) INVENTORY OF BRIDGES FOR HISTORIC
7 SIGNIFICANCE.—The Secretary may, at the request
8 of a State, inventory bridges, on and off Federal-aid
9 highways, for historic significance.

10 “(3) INVENTORY OF INDIAN RESERVATION AND
11 PARK BRIDGES.—As part of the activities carried out
12 under paragraph (1), the Secretary, in consultation
13 with the Secretary of the Interior, shall—

14 “(A) inventory all those highway bridges
15 on Indian reservation roads and park roads
16 which are bridges over waterways, other topo-
17 graphical barriers, other highways, and rail-
18 roads;

19 “(B) identify each bridge inventoried under
20 subparagraph (A) that is structurally deficient
21 or functionally obsolete;

22 “(C) assign a risk-based priority for re-
23 placement or rehabilitation of each such bridge
24 after consideration of safety, serviceability, and
25 essentiality for public use and public safety, in-

1 including the potential impacts to emergency
2 evacuation routes and to regional and national
3 freight and passenger mobility if the service-
4 ability of the bridge is restricted or diminished;
5 and

6 “(D) determine the cost of replacing each
7 such bridge with a comparable facility or of re-
8 habilitating such bridge.”.

9 (2) PROCESS FOR ASSIGNING RISK-BASED PRI-
10 ORITIES.—

11 (A) DEADLINE FOR ESTABLISHMENT.—

12 After modifying national bridge inspection
13 standards in accordance with the amendments
14 made by section 3 and not later than 18
15 months after the date of enactment of this Act,
16 the Secretary, in consultation with the States,
17 shall establish a process for assigning risk-
18 based priorities under sections 144(b)(3),
19 144(c)(1)(C), and 144(c)(3)(C) of title 23,
20 United States Code, as amended by paragraph
21 (1) of this subsection.

22 (B) REPORT TO CONGRESS.—Not later
23 than 18 months after the date of enactment of
24 this Act, the Secretary shall submit to the Com-
25 mittee on Transportation and Infrastructure of

1 the House of Representatives and the Com-
2 mittee on Environment and Public Works of the
3 Senate a report containing a description of the
4 process for assigning risk-based priorities estab-
5 lished under subparagraph (A).

6 (C) INDEPENDENT REVIEW.—

7 (i) PARTICIPATION OF NATIONAL
8 ACADEMY OF SCIENCES.—Not later than
9 18 months after the date of enactment of
10 this Act, the Secretary shall enter into ap-
11 propriate arrangements with the National
12 Academy of Sciences to permit the Acad-
13 emy to conduct an independent review of
14 the process for assigning risk-based prior-
15 ities established under subparagraph (A).

16 (ii) REPORT TO CONGRESS.—Not later
17 than 2 years after the date of enactment
18 of this Act, the Academy shall submit a re-
19 port on the results of the review to the
20 Secretary, the Committee on Transpor-
21 tation and Infrastructure of the House of
22 Representatives, and the Committee on
23 Environment and Public Works of the Sen-
24 ate.

1 (iii) AUTHORIZATION OF APPROPRIA-
2 TIONS.—There is authorized to be appro-
3 priated to carry out this subparagraph
4 \$2,000,000 for fiscal year 2009. Such
5 sums shall remain available until expended.

6 (b) APPORTIONMENT.—Section 144(e) of such title
7 is amended by adding at the end the following: “In this
8 subsection, the term ‘deficient bridge’ means a bridge that
9 is structurally deficient or functionally obsolete.”.

10 (c) PARTICIPATION.—Section 144(d) of such title is
11 amended by adding at the end the following:

12 “(5) REQUIREMENTS FOR STATE PARTICIPA-
13 TION.—

14 “(A) IN GENERAL.—As a condition for
15 providing assistance to a State under this sec-
16 tion, the Secretary shall require the State to
17 take the following actions:

18 “(i) INSPECTIONS.—Not later than 24
19 months after the date of enactment of this
20 paragraph, and at least once every 24
21 months thereafter (except as otherwise
22 provided by section 151(d)), the State shall
23 inspect all highway bridges described in
24 subsections (b) and (c) that are located in
25 the State in accordance with the standards

1 established under section 151 and provide
2 updated information on such bridges to the
3 Secretary for inclusion in the national
4 bridge inventory.

5 “(ii) CALCULATION OF LOAD RAT-
6 INGS.—The State shall—

7 “(I) not later than 24 months
8 after the date of enactment of this
9 paragraph, calculate the load rating
10 for all highway bridges described in
11 subsections (b) and (c) that are lo-
12 cated in the State;

13 “(II) at least once every 24
14 months thereafter, reevaluate and, as
15 appropriate, recalculate the load rat-
16 ing for each such bridge; and

17 “(III) ensure that the safe load-
18 carrying capacities for such bridges
19 are properly posted.

20 “(iii) PERFORMANCE PLAN.—The
21 State shall develop, not later than 24
22 months after the date of enactment of this
23 paragraph, update annually, and imple-
24 ment a 5-year performance plan for—

1 “(I) the inspection of highway
2 bridges described in subsections (b)
3 and (c) that are located in the State;
4 and

5 “(II) the rehabilitation and re-
6 placement of any of such bridges that
7 are structurally deficient or function-
8 ally obsolete.

9 “(iv) BRIDGE MANAGEMENT SYS-
10 TEM.—Notwithstanding section 303(c), the
11 State shall develop and implement a bridge
12 management system that meets the re-
13 quirements of section 303.

14 “(B) APPROVAL OF PERFORMANCE
15 PLANS.—

16 “(i) SUBMISSION TO THE SEC-
17 RETARY.—A State that establishes a 5-
18 year performance plan under subparagraph
19 (A)(iii) shall submit the plan and each up-
20 date of the plan to the Secretary for ap-
21 proval.

22 “(ii) CRITERIA FOR APPROVAL.—Not
23 later than 1 year after the date of enact-
24 ment of this paragraph, the Secretary shall
25 establish criteria for the approval of per-

1 performance plans and updates submitted
2 under clause (i).

3 “(iii) APPROVAL AND DISAPPROVAL.—

4 The Secretary shall approve or disapprove
5 each 5-year performance plan and update
6 submitted by a State under this subpara-
7 graph. If the Secretary disapproves a plan
8 or update, the Secretary shall inform the
9 State of the reasons for the disapproval
10 and shall require the State to resubmit the
11 plan or update with such modifications as
12 the Secretary determines necessary.

13 “(C) HISTORIC BRIDGES.—

14 “(i) IN GENERAL.—A 5-year perform-
15 ance plan of a State under subparagraph
16 (A)(iii) may provide for more frequent, in-
17 depth inspection of a historic bridge lo-
18 cated in the State in lieu of replacement of
19 the bridge if the Secretary determines
20 that—

21 “(I) it is appropriate based on
22 the age, design, traffic characteristics,
23 and any known deficiency of the
24 bridge; and

1 “(II) granting the exception will
2 increase the overall safety of the
3 State’s bridge inventory.

4 “(ii) HISTORIC BRIDGE DEFINED.—In
5 this subparagraph, the term ‘historic
6 bridge’ means any bridge that is listed on
7 the National Register of Historic Places.”.

8 (d) INFORMATION AND REPORTS.—Section 144(h) of
9 such title is amended to read as follows:

10 “(h) INFORMATION AND REPORTS.—

11 “(1) UPDATES OF INFORMATION.—The Sec-
12 retary shall annually revise, as necessary, the infor-
13 mation required under subsections (b) and (c).

14 “(2) REPORTS TO CONGRESS.—Concurrently
15 with the President’s annual budget submission to
16 Congress under section 1105(a) of title 31, the Sec-
17 retary shall submit to the Committee on Transpor-
18 tation and Infrastructure of the House of Represent-
19 atives and the Committee on Environment and Pub-
20 lic Works of the Senate a report containing—

21 “(A) a description of projects and activities
22 approved under this section;

23 “(B) the information updated under para-
24 graph (1), including a description of the pri-
25 ority assigned, on a national basis and by State,

1 for the replacement or rehabilitation of each
2 structurally deficient or functionally obsolete
3 bridge on a Federal-aid highway;

4 “(C) a description of any project or activ-
5 ity carried out by a State under this section in
6 the preceding fiscal year that is inconsistent
7 with the priorities assigned by the Secretary
8 under subsection (b)(3), (c)(1)(C), and
9 (c)(3)(C); and

10 “(D) such recommendations as the Sec-
11 retary may have for improvements of the pro-
12 gram authorized by this section.”

13 (e) TRANSFERABILITY OF FUNDING.—Section 144 of
14 such title is amended by inserting after subsection (r) the
15 following:

16 “(s) TRANSFERABILITY OF FUNDING.—Notwith-
17 standing section 126 or any other provision of law, a State
18 may transfer funds apportioned to the State under this
19 section for a fiscal year to another apportionment of funds
20 to the State under this title only if the State demonstrates
21 to the satisfaction of the Secretary that there are not any
22 bridges on the National Highway System located in the
23 State that are eligible for replacement.”

24 (f) DEFINITIONS.—Section 144 of such title is fur-
25 ther amended by adding at the end the following:

1 “(t) DEFINITIONS.—In this section, the following
2 definitions apply:

3 “(1) FUNCTIONALLY OBSOLETE.—The term
4 ‘functionally obsolete’ as used with respect to a
5 bridge means a bridge that no longer meets current
6 design standards relating to geometrics, including
7 roadway width, shoulder width, and approach align-
8 ment, for the traffic demands on the bridge.

9 “(2) STRUCTURALLY DEFICIENT.—The term
10 ‘structurally deficient’ as used with respect to a
11 bridge means a bridge that has—

12 “(A) significant load-carrying elements
13 that are in poor or worse condition due to dete-
14 rioration or damage, or both;

15 “(B) a load capacity that is significantly
16 below current truckloads and that requires re-
17 placement; or

18 “(C) a waterway opening causing frequent
19 flooding of the bridge deck and approaches re-
20 sulting in significant traffic interruptions.

21 “(3) REHABILITATION.—The term ‘rehabilita-
22 tion’ means major work necessary to restore the
23 structural integrity of a bridge and work necessary
24 to correct a major safety defect.

1 “(4) REPLACEMENT.—The term ‘replacement’
2 as used with respect to a structurally deficient or
3 functionally obsolete bridge means a new facility
4 constructed in the same general traffic corridor that
5 meets the geometric, construction, and structural
6 standards, in effect at the time of such construction,
7 required for the types and volume of projected traf-
8 fic of the facility over its design life.”.

9 (g) NATIONAL BRIDGE INVENTORY.—

10 (1) IN GENERAL.—Not later than 1 year after
11 the date of enactment of this Act, the Secretary
12 shall take necessary actions to make information
13 contained in the national bridge inventory estab-
14 lished under section 144 of title 23, United States
15 Code, more readily available to the public, including
16 actions to make the information easier to under-
17 stand.

18 (2) AUTHORIZATION OF APPROPRIATIONS.—
19 There is authorized to be appropriated to carry out
20 this subsection \$2,000,000 for fiscal year 2009.
21 Such sums shall remain available until expended.

22 **SEC. 3. NATIONAL BRIDGE INSPECTION PROGRAM.**

23 (a) NATIONAL BRIDGE INSPECTION STANDARDS.—
24 Section 151(a) of title 23, United States Code, is amended
25 by adding at the end the following: “The standards estab-

1 lished under this subsection shall be designed to ensure
2 uniformity among the States in the conduct of such in-
3 spections and evaluations.”.

4 (b) MINIMUM REQUIREMENTS OF INSPECTION
5 STANDARDS.—Section 151(b) of title 23, United States
6 Code, is amended—

7 (1) in paragraph (4) by striking “and” at the
8 end;

9 (2) in paragraph (5) by striking the period at
10 the end and inserting a semicolon; and

11 (3) by adding at the end the following:

12 “(6) establish procedures for conducting annual
13 compliance reviews of State inspections, quality con-
14 trol and quality assurance procedures, load ratings,
15 and weight limit postings of structurally deficient
16 highway bridges;

17 “(7) establish procedures for States to follow in
18 reporting to the Secretary—

19 “(A) critical findings relating to structural
20 or safety-related deficiencies of highway
21 bridges; and

22 “(B) monitoring activities and corrective
23 actions taken in response to such a finding; and

24 “(8) provide for testing with a state-of-the-art
25 technology that detects growth activity of fatigue

1 cracks as small as 0.01 inches on steel bridges ex-
2 hibiting fatigue damage or bridges with fatigue sus-
3 ceptible members.”.

4 (c) REGULATIONS ON CRITICAL FINDINGS OF
5 BRIDGE DEFICIENCIES.—

6 (1) IN GENERAL.—Not later than 2 years after
7 the date of enactment of this Act, the Secretary of
8 Transportation shall issue regulations establishing
9 procedures to be used by States in reporting critical
10 findings of bridge deficiencies, and subsequent moni-
11 toring activities and corrective actions, to the Sec-
12 retary in accordance with the standards to be estab-
13 lished under section 151(b)(7) of title 23, United
14 States Code, as added by subsection (b)(3) of this
15 section.

16 (2) CONTENTS.—Regulations to be issued
17 under paragraph (1) shall—

18 (A) establish a uniform definition of the
19 term “critical finding”;

20 (B) establish deadlines for State reporting
21 of critical finding determinations to the Sec-
22 retary;

23 (C) establish requirements for monitoring
24 and follow-up actions and reporting following a
25 critical finding determination; and

1 (D) provide for enhanced training of
2 bridge inspectors relating to critical findings.

3 (d) TRAINING PROGRAM FOR ALL BRIDGE INSPEC-
4 TORS.—Section 151(c) of such title is amended by adding
5 at the end the following: “The Secretary shall expand the
6 scope of the training program to ensure that all persons
7 conducting highway bridge inspections receive appropriate
8 training and certification under the program.”.

9 (e) FREQUENCY OF BRIDGE INSPECTIONS.—Section
10 151 of such title is amended—

11 (1) in subsection (b)(2) by inserting “in accord-
12 ance with subsection (d)” before the semicolon;

13 (2) by redesignating subsection (d) as sub-
14 section (e); and

15 (3) by inserting after subsection (c) the fol-
16 lowing:

17 “(d) FREQUENCY OF BRIDGE INSPECTIONS.—

18 “(1) IN GENERAL.—Subject to paragraph (2),
19 the standards established under subsection (a), at a
20 minimum, shall provide for—

21 “(A) annual inspections of structurally de-
22 ficient highway bridges using the best prac-
23 ticable technologies and methods;

24 “(B) annual in depth inspections of frac-
25 ture critical members, as such terms are de-

1 fined in section 650.305 of title 23, Code of
2 Federal Regulations (as in effect on the date of
3 enactment of this paragraph); and

4 “(C) biennial inspections of highway
5 bridges that have not been determined to be
6 structurally deficient.

7 “(2) EXTENSIONS.—Upon the request of a
8 State, the Secretary may extend, to a maximum pe-
9 riod of 48 months, the time between required inspec-
10 tions of a highway bridge that has not been deter-
11 mined to be structurally deficient if the Secretary
12 determines that—

13 “(A) the extension is appropriate based on
14 the age, design, traffic characteristics, and any
15 known deficiency of the bridge;

16 “(B) the extension is consistent with the 5-
17 year performance plan of the State approved
18 under section 144(d)(5)(B); and

19 “(C) granting the extension will increase
20 the overall safety of the State’s bridge inven-
21 tory.”.

22 (f) QUALIFICATIONS OF PROGRAM MANAGERS AND
23 TEAM LEADERS.—

24 (1) REVISION OF REGULATIONS.—Not later
25 than 1 year after the date of enactment of this Act,

1 the Secretary of Transportation shall revise regula-
2 tions contained in section 650.309 of title 23, Code
3 of Federal Regulations, relating to the qualifications
4 of highway bridge inspection personnel, to require
5 that, in addition to meeting the qualifications identi-
6 fied in such section (as in effect on the date of en-
7 actment of this Act)—

8 (A) an individual serving as the program
9 manager of a State be a professional engineer
10 licensed under the laws of that State;

11 (B) an individual serving as a team leader
12 for a State for the inspection of complex
13 bridges or follow-up inspections of bridges for
14 which there has been a critical finding be a li-
15 censed professional engineer; and

16 (C) an individual serving as a team leader
17 for a State for the inspection of all other
18 bridges be a licensed professional engineer or
19 have at least 10 years of bridge inspection expe-
20 rience.

21 (2) APPLICABILITY.—The additional qualifica-
22 tion requirements specified in paragraphs (1)(A),
23 (1)(B), and (1)(C) shall apply only to an individual
24 selected by a State to serve as the program manager

1 or a team leader after the date of issuance of revised
2 regulations under paragraph (1).

3 (3) COMPLEX BRIDGE DEFINED.—In this sub-
4 section, the term “complex bridge” means a highway
5 bridge with unusual characteristics, including mov-
6 able, suspension, and cable-stayed highway bridges.

7 (g) EFFECTIVE DATE.—Not later than 1 year after
8 the date of enactment of this Act, the Secretary shall mod-
9 ify national bridge inspection standards and modify the
10 training program for bridge inspectors in accordance with
11 the amendments made by this section.

12 (h) REPORT TO CONGRESS.—Not later than 15 days
13 after a critical finding determination is made by a State
14 which results in the closure of a bridge, the Secretary of
15 Transportation shall report to the appropriate Committees
16 of Congress regarding the impact, including the economic
17 impact, on regional transportation and transit that will re-
18 sult from the such bridge closure and recommend solutions
19 to mitigate such impact.

20 **SEC. 4. GAO STUDY.**

21 Not later than 1 year after the date of enactment
22 of this Act, the Comptroller General shall conduct a study
23 and report its findings to the Secretary of Transportation
24 regarding—

1 (1) the identification of factors that contribute
2 to construction delays of bridge rehabilitation; and

3 (2) any recommendations the Comptroller Gen-
4 eral may have to simplify and expedite the construc-
5 tion of bridges that are to be rehabilitated.

6 **SEC. 5. SURFACE TRANSPORTATION RESEARCH.**

7 Section 502(d) of title 23, United States Code, is
8 amended—

9 (1) in paragraph (2) in the matter preceding
10 subparagraph (A) by inserting “and enhance the
11 safety” before “of bridge structures”; and

12 (2) in paragraph (4) by striking “for use with
13 existing infrastructure facilities and with next-gen-
14 eration infrastructure facilities” and inserting “for
15 assessing the structural integrity of existing infra-
16 structure facilities and next-generation infrastruc-
17 ture facilities”.

18 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

19 (a) IN GENERAL.—There is authorized to be appro-
20 priated to carry out section 144 of title 23, United States
21 Code, \$1,000,000,000 for fiscal year 2009.

22 (b) APPORTIONMENT AND USE OF FUNDS.—Funds
23 appropriated pursuant to subsection (a)—

1 evaluate the effectiveness, accuracy, and reliability of the
2 use of advanced condition assessment inspection processes
3 and technologies (including fiber optic, vibrating wire,
4 acoustical emissions, and peak strain displacement tech-
5 nologies) in monitoring and evaluating the structural
6 health of a highway bridge. Technologies evaluated under
7 the pilot program shall be real-time sensing technologies
8 that record objective data to determine accurate conditions
9 assessments of critical bridge elements.

10 (b) GRANTS.—

11 (1) IN GENERAL.—The Secretary may make
12 grants to States to conduct projects under the pilot
13 program.

14 (2) APPLICATIONS.—A State seeking a grant
15 under the pilot program shall submit an application
16 to the Secretary in such form and containing such
17 information as the Secretary may require by regula-
18 tion.

19 (c) ELIGIBILITY.—

20 (1) SELECTION OF HIGHWAY BRIDGES.—

21 (A) IN GENERAL.—In awarding grants
22 under the pilot program, the Secretary shall se-
23 lect not more than 15 highway bridges in not
24 more than 5 States for participation in the pro-
25 gram.

1 (B) BRIDGE REQUIREMENTS.—The Sec-
2 retary may select a highway bridge under sub-
3 paragraph (A) only if the bridge is—

4 (i) as of the date of enactment of this
5 Act, classified as structurally deficient
6 under section 144 of title 23, United
7 States Code;

8 (ii) a nonredundant, fracture critical
9 structure; and

10 (iii) greater than 200 feet in length.

11 (2) SELECTION AND USE OF TECHNOLOGIES.—

12 (A) IN GENERAL.—The Secretary shall se-
13 lect no fewer than 2 types of real-time, in-serv-
14 ice, sensor-based, commercially-available, ad-
15 vanced-condition assessment technologies to be
16 used in the pilot program.

17 (B) DURATION OF REAL-TIME DATA COL-
18 LECTION.—The duration of real-time data col-
19 lection from each highway bridge selected for
20 participation in the pilot program shall be not
21 less than 1 year.

22 (C) USE OF CALIBRATED FINITE ELEMENT
23 ANALYSIS MODEL.—At least one-half of the
24 highway bridges selected for participation in the
25 pilot program shall also be evaluated using a

1 calibrated finite element analysis model of the
2 bridge, based upon data from the advanced con-
3 dition assessment technologies.

4 (d) FEDERAL SHARE.—The Federal share payable on
5 account of a project carried out under the pilot program
6 shall be 80 percent of the cost of the project.

7 (e) DURATION OF THE PILOT PROGRAM.—The Sec-
8 retary shall carry out the pilot program for a period of
9 2 fiscal years.

10 (f) FINAL REPORT.—

11 (1) IN GENERAL.—Not later than 6 months
12 after the last day of the pilot program, the Secretary
13 shall submit to the Committee on Transportation
14 and Infrastructure of the House of Representatives
15 and the Committee on Environment and Public
16 Works of the Senate a report that describes the ef-
17 fectiveness and benefits of the pilot program carried
18 out under this section.

19 (2) CONTENTS.—The report shall describe, at a
20 minimum—

21 (A) the cost effectiveness of the tech-
22 nologies and processes selected;

23 (B) the objectivity, reliability, and accuracy
24 of the technologies and processes employed in

1 providing condition assessments of the highway
2 bridge;

3 (C) the quality of the data collected and
4 measured; and

5 (D) any recommendations for improving or
6 expanding the pilot program or the use of
7 structural health monitoring technologies or
8 processes, including a suggested plan for wider
9 adoption based on potential highway bridge re-
10 pair and replacement savings by the Federal
11 Government and State governments.

12 (g) AUTHORIZATION OF APPROPRIATIONS.—There is
13 authorized to be appropriated to carry out this section
14 \$5,000,000.

15 (h) AVAILABILITY OF AMOUNTS.—Amounts appro-
16 priated to carry out this section shall be available for obli-
17 gation in the same manner as funds apportioned under
18 chapter 1 of title 23, United States Code, except that such
19 funds shall not be transferable and shall remain available
20 until expended.

21 **SEC. 8. EFFECTIVENESS OF BRIDGE RATING SYSTEM.**

22 (a) STUDY.—The Comptroller General shall conduct
23 a study of the effectiveness of the bridge rating system
24 of the Federal Highway Administration, including the use
25 of the terms “structurally deficient” and “functionally ob-

1 solete” to describe the condition of highway bridges in the
2 United States.

3 (b) EVALUATION OF STATE SYSTEMS.—In con-
4 ducting the study, the Comptroller General shall evaluate
5 bridge rating systems used by State departments of trans-
6 portation and provide recommendations on how successful
7 aspects of such bridge rating systems may be incorporated
8 into the bridge rating system of the Federal Highway Ad-
9 ministration.

10 (c) REPORT.—Not later than February 1, 2009, the
11 Comptroller General shall submit to the Committee on
12 Transportation and Infrastructure of the House of Rep-
13 resentatives and the Committee on the Environment and
14 Public Works of the Senate a report on the results of the
15 study.

16 **SEC. 9. USE OF CARBON FIBER COMPOSITE MATERIALS IN**
17 **BRIDGE REPLACEMENT AND REHABILITA-**
18 **TION PROJECTS.**

19 (a) STUDY.—The Secretary of Transportation shall
20 conduct a study of the cost benefits of using carbon fiber
21 composite materials in bridge replacement and rehabilita-
22 tion projects instead of traditional construction materials.

23 (b) REPORT.—Not later than 180 days after the date
24 of enactment of this Act, the Secretary shall transmit to
25 the Committee on Transportation and Infrastructure of

1 the House of Representatives and the Committee on Envi-
2 ronment and Public Works of the Senate a report on the
3 results of the study conducted under this section.

4 **SEC. 10. SENSE OF CONGRESS.**

5 It is the sense of Congress that each State should
6 prepare a corrosion mitigation and prevention plan, for a
7 project for construction, replacement, or rehabilitation of
8 a bridge, that includes the following:

9 (1) An estimate of the expected useful life of
10 the bridge.

11 (2) An estimate of environmental exposure of
12 the bridge, including marine, deicer application, in-
13 dustrial, rural, rainfall, temperature, freeze-thaw,
14 and other factors that influence corrosion prevention
15 and corrosion mitigation strategies.

16 (3) An identification of the functional classifica-
17 tion of the bridge.

18 (4) Details of corrosion mitigation and preven-
19 tion methods that will be used with respect to the
20 bridge, taking into account—

21 (A) material selection;

22 (B) coating considerations;

23 (C) cathodic protection considerations;

24 (D) design considerations for corrosion;

25 and

1 (E) concrete requirements.

2 (5) Details of a project maintenance program
3 for the life of the bridge.

4 (6) A certification that the plan was developed
5 by the State or States and approved by a corrosion
6 expert.

7 (7) A certification that each individual con-
8 ducting inspections of Federal-aid highway bridges
9 in the State or States receives training from a corro-
10 sion expert.

11 **SEC. 11. FLOOD RISKS TO BRIDGES.**

12 (a) STUDY.—The Secretary of Transportation, in
13 consultation with the States, shall conduct a study of the
14 risks posed by floods to bridges on Federal-aid highways,
15 bridges on other public roads, bridges on Indian reserva-
16 tions, and park bridges that are located in a 500-year
17 floodplain.

18 (b) CONSIDERATIONS.—In conducting the study, the
19 Secretary shall give consideration to safety, serviceability,
20 essentiality for public use, and public safety, including the
21 potential impacts to regional and national freight and pas-
22 senger mobility if the serviceability of a bridge is restricted
23 or diminished.

24 (c) REPORT.—Not later than 2 years after the date
25 of enactment of this Act, the Secretary shall submit to

1 the Committee on Transportation and Infrastructure of
2 the House of Representatives and the Committee on Envi-
3 ronment and Public Works of the Senate a report on the
4 results of the study.

5 **SEC. 12. NATIONAL TUNNEL INSPECTION PROGRAM.**

6 (a) IN GENERAL.—Title 23, United States Code, is
7 amended by inserting after section 149 the following:

8 **“§ 150. National tunnel inspection program**

9 “(a) NATIONAL TUNNEL INSPECTION STANDARDS.—
10 The Secretary, in consultation with State transportation
11 departments and interested and knowledgeable private or-
12 ganizations and individuals, shall establish national tunnel
13 inspection standards for the proper safety inspection and
14 evaluation of all highway tunnels. The standards estab-
15 lished under this subsection shall be designed to ensure
16 uniformity among the States in the conduct of such in-
17 spections and evaluations.

18 “(b) MINIMUM REQUIREMENTS FOR INSPECTION
19 STANDARDS.—The standards established under sub-
20 section (a) shall, at a minimum—

21 “(1) specify, in detail, the method by which
22 highway tunnel inspections shall be carried out by
23 the States;

1 “(2) establish the maximum time period be-
2 tween the inspections based on a risk-management
3 approach;

4 “(3) establish the qualifications for those
5 charged with carrying out the inspections;

6 “(4) require each State to maintain and make
7 available to the Secretary upon request—

8 “(A) written reports on the results of the
9 inspections together with notations of any ac-
10 tion taken pursuant to the findings of the in-
11 spections; and

12 “(B) current inventory data for all high-
13 way tunnels located in the State reflecting the
14 findings of the most recent highway tunnel in-
15 spections conducted;

16 “(5) establish procedures for national certifi-
17 cation of highway tunnel inspectors;

18 “(6) establish procedures for conducting annual
19 compliance reviews of State inspections and State
20 implementation of quality control and quality assur-
21 ance procedures; and

22 “(7) establish standards for State tunnel man-
23 agement systems to improve the tunnel inspection
24 process and the quality of data collected and re-
25 ported by the States to the Secretary for inclusion

1 in the national tunnel inventory to be established
2 under this section.

3 “(c) TRAINING AND CERTIFICATION PROGRAM FOR
4 TUNNEL INSPECTORS.—The Secretary, in cooperation
5 with State transportation departments, shall establish a
6 program designed to ensure that all individuals carrying
7 out highway tunnel inspections receive appropriate train-
8 ing and certification. Such program shall be revised from
9 time to time to take into account new and improved tech-
10 niques.

11 “(d) NATIONAL TUNNEL INVENTORY.—The Sec-
12 retary shall establish a national inventory of highway tun-
13 nels reflecting the findings of the most recent highway
14 tunnel inspections conducted by States under this section.

15 “(e) AVAILABILITY OF FUNDS.—To carry out this
16 section, the Secretary may use funds made available pur-
17 suant to the provisions of sections 104(a) and 502.”.

18 (b) SURFACE TRANSPORTATION PROGRAM.—Section
19 133(b)(1) of such title is amended by inserting “, tunnels
20 that are eligible for assistance under this title (including
21 safety inspection of such tunnels),” after “highways”).

1 (c) CONFORMING AMENDMENT.—The analysis for
2 chapter 1 of such title is amended by inserting after the
3 item relating to section 149 the following:

“150. National tunnel inspection program.”.

Passed the House of Representatives July 24, 2008.

Attest:

Clerk.

110TH CONGRESS
2^D SESSION

H. R. 3999

AN ACT

To amend title 23, United States Code, to improve the safety of Federal-aid highway bridges, to strengthen bridge inspection standards and processes, to increase investment in the reconstruction of structurally deficient bridges on the National Highway System, and for other purposes.