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Public Works

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Reported by Mrs. BOXER, without amendment

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”.

1 **SEC. 2. HIGHWAY BRIDGE PROGRAM.**

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

3 (1) RISK-BASED PRIORITIZATION FOR REPLACE-
4 MENT AND REHABILITATION OF DEFICIENT
5 BRIDGES.—Section 144 of title 23, United States
6 Code, is amended by striking subsections (b) and (c)
7 and inserting the following:

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

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

13 “(2) identify each bridge inventoried under
14 paragraph (1) that is structurally deficient or func-
15 tionally obsolete;

16 “(3) assign a risk-based priority for replace-
17 ment or rehabilitation of each such bridge after con-
18 sideration of safety, serviceability, and essentiality
19 for public use and public safety, including the poten-
20 tial impacts to emergency evacuation routes and to
21 regional and national freight and passenger mobility
22 if the serviceability of the bridge is restricted or di-
23 minished; and

24 “(4) determine the cost of replacing each such
25 bridge with a comparable facility or of rehabilitating
26 such bridge.

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

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

4 “(A) inventory all those highway bridges
5 on public roads, other than those on any Fed-
6 eral-aid highway, which are bridges over water-
7 ways, other topographical barriers, other high-
8 ways, and railroads;

9 “(B) identify each bridge inventoried under
10 subparagraph (A) that is structurally deficient
11 or functionally obsolete;

12 “(C) assign a risk-based priority for re-
13 placement or rehabilitation of each such bridge
14 after consideration of safety, serviceability, and
15 essentiality for public use and public safety, in-
16 cluding the potential impacts to emergency
17 evacuation routes and to regional and national
18 freight and passenger mobility if the service-
19 ability of the bridge is restricted or diminished;
20 and

21 “(D) determine the cost of replacing each
22 such bridge with a comparable facility or of re-
23 habilitating such bridge.

24 “(2) INVENTORY OF BRIDGES FOR HISTORIC
25 SIGNIFICANCE.—The Secretary may, at the request

1 of a State, inventory bridges, on and off Federal-aid
2 highways, for historic significance.

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

7 “(A) inventory all those highway bridges
8 on Indian reservation roads and park roads
9 which are bridges over waterways, other topo-
10 graphical barriers, other highways, and rail-
11 roads;

12 “(B) identify each bridge inventoried under
13 subparagraph (A) that is structurally deficient
14 or functionally obsolete;

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

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

4 (2) PROCESS FOR ASSIGNING RISK-BASED PRI-
5 ORITIES.—

6 (A) DEADLINE FOR ESTABLISHMENT.—

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

17 (B) REPORT TO CONGRESS.—Not later
18 than 18 months after the date of enactment of
19 this Act, the Secretary shall submit to the Com-
20 mittee on Transportation and Infrastructure of
21 the House of Representatives and the Com-
22 mittee on Environment and Public Works of the
23 Senate a report containing a description of the
24 process for assigning risk-based priorities estab-
25 lished under subparagraph (A).

1 (C) INDEPENDENT REVIEW.—

2 (i) PARTICIPATION OF NATIONAL
3 ACADEMY OF SCIENCES.—Not later than
4 18 months after the date of enactment of
5 this Act, the Secretary shall enter into ap-
6 propriate arrangements with the National
7 Academy of Sciences to permit the Acad-
8 emy to conduct an independent review of
9 the process for assigning risk-based prior-
10 ities established under subparagraph (A).

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

20 (iii) AUTHORIZATION OF APPROPRIA-
21 TIONS.—There is authorized to be appro-
22 priated to carry out this subparagraph
23 \$2,000,000 for fiscal year 2009. Such
24 sums shall remain available until expended.

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

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

7 “(5) REQUIREMENTS FOR STATE PARTICIPA-
8 TION.—

9 “(A) IN GENERAL.—As a condition for
10 providing assistance to a State under this sec-
11 tion, the Secretary shall require the State to
12 take the following actions:

13 “(i) INSPECTIONS.—Not later than 24
14 months after the date of enactment of this
15 paragraph, and at least once every 24
16 months thereafter (except as otherwise
17 provided by section 151(d)), the State shall
18 inspect all highway bridges described in
19 subsections (b) and (c) that are located in
20 the State in accordance with the standards
21 established under section 151 and provide
22 updated information on such bridges to the
23 Secretary for inclusion in the national
24 bridge inventory.

1 “(ii) CALCULATION OF LOAD RAT-
2 INGS.—The State shall—

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

9 “(II) at least once every 24
10 months thereafter, reevaluate and, as
11 appropriate, recalculate the load rat-
12 ing for each such bridge; and

13 “(III) ensure that the safe load-
14 carrying capacities for such bridges
15 are properly posted.

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

21 “(I) the inspection of highway
22 bridges described in subsections (b)
23 and (c) that are located in the State;
24 and

1 “(II) the rehabilitation and re-
2 placement of any of such bridges that
3 are structurally deficient or function-
4 ally obsolete.

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

10 “(B) APPROVAL OF PERFORMANCE
11 PLANS.—

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

18 “(ii) CRITERIA FOR APPROVAL.—Not
19 later than 1 year after the date of enact-
20 ment of this paragraph, the Secretary shall
21 establish criteria for the approval of per-
22 formance plans and updates submitted
23 under clause (i).

24 “(iii) APPROVAL AND DISAPPROVAL.—
25 The Secretary shall approve or disapprove

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

9 “(C) HISTORIC BRIDGES.—

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

17 “(I) it is appropriate based on
18 the age, design, traffic characteristics,
19 and any known deficiency of the
20 bridge; and

21 “(II) granting the exception will
22 increase the overall safety of the
23 State’s bridge inventory.

24 “(ii) HISTORIC BRIDGE DEFINED.—In
25 this subparagraph, the term ‘historic

1 bridge' means any bridge that is listed on
2 the National Register of Historic Places.”.

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

5 “(h) INFORMATION AND REPORTS.—

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

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

16 “(A) a description of projects and activities
17 approved under this section;

18 “(B) the information updated under para-
19 graph (1), including a description of the pri-
20 ority assigned, on a national basis and by State,
21 for the replacement or rehabilitation of each
22 structurally deficient or functionally obsolete
23 bridge on a Federal-aid highway;

24 “(C) a description of any project or activ-
25 ity carried out by a State under this section in

1 the preceding fiscal year that is inconsistent
2 with the priorities assigned by the Secretary
3 under subsection (b)(3), (c)(1)(C), and
4 (c)(3)(C); and

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

8 (e) TRANSFERABILITY OF FUNDING.—Section 144 of
9 such title is amended by inserting after subsection (r) the
10 following:

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

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

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

23 “(1) FUNCTIONALLY OBSOLETE.—The term
24 ‘functionally obsolete’ as used with respect to a
25 bridge means a bridge that no longer meets current

1 design standards relating to geometrics, including
2 roadway width, shoulder width, and approach align-
3 ment, for the traffic demands on the bridge.

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

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

10 “(B) a load capacity that is significantly
11 below current truckloads and that requires re-
12 placement; or

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

16 “(3) REHABILITATION.—The term ‘rehabilita-
17 tion’ means major work necessary to restore the
18 structural integrity of a bridge and work necessary
19 to correct a major safety defect.

20 “(4) REPLACEMENT.—The term ‘replacement’
21 as used with respect to a structurally deficient or
22 functionally obsolete bridge means a new facility
23 constructed in the same general traffic corridor that
24 meets the geometric, construction, and structural
25 standards, in effect at the time of such construction,

1 required for the types and volume of projected traf-
2 fic of the facility over its design life.”.

3 (g) NATIONAL BRIDGE INVENTORY.—

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

12 (2) AUTHORIZATION OF APPROPRIATIONS.—

13 There is authorized to be appropriated to carry out
14 this subsection \$2,000,000 for fiscal year 2009.

15 Such sums shall remain available until expended.

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

17 (a) NATIONAL BRIDGE INSPECTION STANDARDS.—

18 Section 151(a) of title 23, United States Code, is amended
19 by adding at the end the following: “The standards estab-
20 lished under this subsection shall be designed to ensure
21 uniformity among the States in the conduct of such in-
22 spections and evaluations.”.

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

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

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

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

6 “(6) establish procedures for conducting annual
7 compliance reviews of State inspections, quality con-
8 trol and quality assurance procedures, load ratings,
9 and weight limit postings of structurally deficient
10 highway bridges;

11 “(7) establish procedures for States to follow in
12 reporting to the Secretary—

13 “(A) critical findings relating to structural
14 or safety-related deficiencies of highway
15 bridges; and

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

18 “(8) provide for testing with a state-of-the-art
19 technology that detects growth activity of fatigue
20 cracks as small as 0.01 inches on steel bridges ex-
21 hibiting fatigue damage or bridges with fatigue sus-
22 ceptible members.”.

23 (c) REGULATIONS ON CRITICAL FINDINGS OF
24 BRIDGE DEFICIENCIES.—

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

11 (2) CONTENTS.—Regulations to be issued
12 under paragraph (1) shall—

13 (A) establish a uniform definition of the
14 term “critical finding”;

15 (B) establish deadlines for State reporting
16 of critical finding determinations to the Sec-
17 retary;

18 (C) establish requirements for monitoring
19 and follow-up actions and reporting following a
20 critical finding determination; and

21 (D) provide for enhanced training of
22 bridge inspectors relating to critical findings.

23 (d) TRAINING PROGRAM FOR ALL BRIDGE INSPEC-
24 TORS.—Section 151(c) of such title is amended by adding
25 at the end the following: “The Secretary shall expand the

1 scope of the training program to ensure that all persons
2 conducting highway bridge inspections receive appropriate
3 training and certification under the program.”.

4 (e) FREQUENCY OF BRIDGE INSPECTIONS.—Section
5 151 of such title is amended—

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

8 (2) by redesignating subsection (d) as sub-
9 section (e); and

10 (3) by inserting after subsection (c) the fol-
11 lowing:

12 “(d) FREQUENCY OF BRIDGE INSPECTIONS.—

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

16 “(A) annual inspections of structurally de-
17 ficient highway bridges using the best prac-
18 ticable technologies and methods;

19 “(B) annual in depth inspections of frac-
20 ture critical members, as such terms are de-
21 fined in section 650.305 of title 23, Code of
22 Federal Regulations (as in effect on the date of
23 enactment of this paragraph); and

1 “(C) biennial inspections of highway
2 bridges that have not been determined to be
3 structurally deficient.

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

10 “(A) the extension is appropriate based on
11 the age, design, traffic characteristics, and any
12 known deficiency of the bridge;

13 “(B) the extension is consistent with the 5-
14 year performance plan of the State approved
15 under section 144(d)(5)(B); and

16 “(C) granting the extension will increase
17 the overall safety of the State’s bridge inven-
18 tory.”.

19 (f) QUALIFICATIONS OF PROGRAM MANAGERS AND
20 TEAM LEADERS.—

21 (1) REVISION OF REGULATIONS.—Not later
22 than 1 year after the date of enactment of this Act,
23 the Secretary of Transportation shall revise regula-
24 tions contained in section 650.309 of title 23, Code
25 of Federal Regulations, relating to the qualifications

1 of highway bridge inspection personnel, to require
2 that, in addition to meeting the qualifications identi-
3 fied in such section (as in effect on the date of en-
4 actment of this Act)—

5 (A) an individual serving as the program
6 manager of a State be a professional engineer
7 licensed under the laws of that State;

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

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

18 (2) APPLICABILITY.—The additional qualifica-
19 tion requirements specified in paragraphs (1)(A),
20 (1)(B), and (1)(C) shall apply only to an individual
21 selected by a State to serve as the program manager
22 or a team leader after the date of issuance of revised
23 regulations under paragraph (1).

24 (3) COMPLEX BRIDGE DEFINED.—In this sub-
25 section, the term “complex bridge” means a highway

1 bridge with unusual characteristics, including mov-
2 able, suspension, and cable-stayed highway bridges.

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

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

16 **SEC. 4. GAO STUDY.**

17 Not later than 1 year after the date of enactment
18 of this Act, the Comptroller General shall conduct a study
19 and report its findings to the Secretary of Transportation
20 regarding—

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

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

1 **SEC. 5. SURFACE TRANSPORTATION RESEARCH.**

2 Section 502(d) of title 23, United States Code, is
3 amended—

4 (1) in paragraph (2) in the matter preceding
5 subparagraph (A) by inserting “and enhance the
6 safety” before “of bridge structures”; and

7 (2) in paragraph (4) by striking “for use with
8 existing infrastructure facilities and with next-gen-
9 eration infrastructure facilities” and inserting “for
10 assessing the structural integrity of existing infra-
11 structure facilities and next-generation infrastruc-
12 ture facilities”.

13 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

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

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

19 (1) shall be apportioned among the States
20 under paragraphs (1) and (2) of section 144(e) of
21 such title;

22 (2) shall be used for the replacement and reha-
23 bilitation of structurally deficient highway bridges on
24 the National Highway System; and

25 (3) shall be available for obligation in the same
26 manner as other funds apportioned under chapter 1

1 of such title, except that such funds shall not be
2 transferable and shall remain available until ex-
3 pended.

4 (c) LIMITATION.—None of the funds appropriated
5 pursuant to subsection (a) may be earmarked by Congress
6 or any Federal department or agency for a specific project
7 or activity.

8 (d) COMPLIANCE WITH IMMIGRATION AND NATION-
9 ALITY ACT.—None of the funds appropriated pursuant to
10 subsection (a) may be used to employ workers in violation
11 of section 274A of the Immigration and Nationality Act
12 (8 U.S.C. 1324a).

13 **SEC. 7. BRIDGE ADVANCED CONDITION ASSESSMENT PILOT**
14 **PROGRAM.**

15 (a) IN GENERAL.—Not later than 180 days after the
16 date of enactment of this Act, the Secretary of Transpor-
17 tation shall establish and implement a pilot program to
18 evaluate the effectiveness, accuracy, and reliability of the
19 use of advanced condition assessment inspection processes
20 and technologies (including fiber optic, vibrating wire,
21 acoustical emissions, and peak strain displacement tech-
22 nologies) in monitoring and evaluating the structural
23 health of a highway bridge. Technologies evaluated under
24 the pilot program shall be real-time sensing technologies

1 that record objective data to determine accurate conditions
2 assessments of critical bridge elements.

3 (b) GRANTS.—

4 (1) IN GENERAL.—The Secretary may make
5 grants to States to conduct projects under the pilot
6 program.

7 (2) APPLICATIONS.—A State seeking a grant
8 under the pilot program shall submit an application
9 to the Secretary in such form and containing such
10 information as the Secretary may require by regula-
11 tion.

12 (c) ELIGIBILITY.—

13 (1) SELECTION OF HIGHWAY BRIDGES.—

14 (A) IN GENERAL.—In awarding grants
15 under the pilot program, the Secretary shall se-
16 lect not more than 15 highway bridges in not
17 more than 5 States for participation in the pro-
18 gram.

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

22 (i) as of the date of enactment of this
23 Act, classified as structurally deficient
24 under section 144 of title 23, United
25 States Code;

1 (ii) a nonredundant, fracture critical
2 structure; and

3 (iii) greater than 200 feet in length.

4 (2) SELECTION AND USE OF TECHNOLOGIES.—

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

10 (B) DURATION OF REAL-TIME DATA COL-
11 LECTION.—The duration of real-time data col-
12 lection from each highway bridge selected for
13 participation in the pilot program shall be not
14 less than 1 year.

15 (C) USE OF CALIBRATED FINITE ELEMENT
16 ANALYSIS MODEL.—At least one-half of the
17 highway bridges selected for participation in the
18 pilot program shall also be evaluated using a
19 calibrated finite element analysis model of the
20 bridge, based upon data from the advanced con-
21 dition assessment technologies.

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

1 (e) DURATION OF THE PILOT PROGRAM.—The Sec-
2 retary shall carry out the pilot program for a period of
3 2 fiscal years.

4 (f) FINAL REPORT.—

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

13 (2) CONTENTS.—The report shall describe, at a
14 minimum

15 (A) the cost effectiveness of the tech-
16 nologies and processes selected;

17 (B) the objectivity, reliability, and accuracy
18 of the technologies and processes employed in
19 providing condition assessments of the highway
20 bridge;

21 (C) the quality of the data collected and
22 measured; and

23 (D) any recommendations for improving or
24 expanding the pilot program or the use of
25 structural health monitoring technologies or

1 processes, including a suggested plan for wider
2 adoption based on potential highway bridge re-
3 pair and replacement savings by the Federal
4 Government and State governments.

5 (g) AUTHORIZATION OF APPROPRIATIONS.—There is
6 authorized to be appropriated to carry out this section
7 \$5,000,000.

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

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

15 (a) STUDY.—The Comptroller General shall conduct
16 a study of the effectiveness of the bridge rating system
17 of the Federal Highway Administration, including the use
18 of the terms “structurally deficient” and “functionally ob-
19 solete” to describe the condition of highway bridges in the
20 United States.

21 (b) EVALUATION OF STATE SYSTEMS.—In con-
22 ducting the study, the Comptroller General shall evaluate
23 bridge rating systems used by State departments of trans-
24 portation and provide recommendations on how successful
25 aspects of such bridge rating systems may be incorporated

1 into the bridge rating system of the Federal Highway Ad-
2 ministration.

3 (c) REPORT.—Not later than February 1, 2009, the
4 Comptroller General shall submit to the Committee on
5 Transportation and Infrastructure of the House of Rep-
6 resentatives and the Committee on the Environment and
7 Public Works of the Senate a report on the results of the
8 study.

9 **SEC. 9. USE OF CARBON FIBER COMPOSITE MATERIALS IN**
10 **BRIDGE REPLACEMENT AND REHABILITA-**
11 **TION PROJECTS.**

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

16 (b) REPORT.—Not later than 180 days after the date
17 of enactment of this Act, the Secretary shall transmit to
18 the Committee on Transportation and Infrastructure of
19 the House of Representatives and the Committee on Envi-
20 ronment and Public Works of the Senate a report on the
21 results of the study conducted under this section.

22 **SEC. 10. SENSE OF CONGRESS.**

23 It is the sense of Congress that each State should
24 prepare a corrosion mitigation and prevention plan, for a

1 project for construction, replacement, or rehabilitation of
2 a bridge, that includes the following:

3 (1) An estimate of the expected useful life of
4 the bridge.

5 (2) An estimate of environmental exposure of
6 the bridge, including marine, deicer application, in-
7 dustrial, rural, rainfall, temperature, freeze-thaw,
8 and other factors that influence corrosion prevention
9 and corrosion mitigation strategies.

10 (3) An identification of the functional classifica-
11 tion of the bridge.

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

15 (A) material selection;

16 (B) coating considerations;

17 (C) cathodic protection considerations;

18 (D) design considerations for corrosion;

19 and

20 (E) concrete requirements.

21 (5) Details of a project maintenance program
22 for the life of the bridge.

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

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

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

6 (a) **STUDY.**—The Secretary of Transportation, in
7 consultation with the States, shall conduct a study of the
8 risks posed by floods to bridges on Federal-aid highways,
9 bridges on other public roads, bridges on Indian reserva-
10 tions, and park bridges that are located in a 500-year
11 floodplain.

12 (b) **CONSIDERATIONS.**—In conducting the study, the
13 Secretary shall give consideration to safety, serviceability,
14 essentiality for public use, and public safety, including the
15 potential impacts to regional and national freight and pas-
16 senger mobility if the serviceability of a bridge is restricted
17 or diminished.

18 (c) **REPORT.**—Not later than 2 years after the date
19 of enactment of this Act, the Secretary shall submit to
20 the Committee on Transportation and Infrastructure of
21 the House of Representatives and the Committee on Envi-
22 ronment and Public Works of the Senate a report on the
23 results of the study.

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

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

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

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

14 “(b) MINIMUM REQUIREMENTS FOR INSPECTION
15 STANDARDS.—The standards established under sub-
16 section (a) shall, at a minimum—

17 “(1) specify, in detail, the method by which
18 highway tunnel inspections shall be carried out by
19 the States;

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

23 “(3) establish the qualifications for those
24 charged with carrying out the inspections;

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

1 “(A) written reports on the results of the
2 inspections together with notations of any ac-
3 tion taken pursuant to the findings of the in-
4 spections; and

5 “(B) current inventory data for all high-
6 way tunnels located in the State reflecting the
7 findings of the most recent highway tunnel in-
8 spections conducted;

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

11 “(6) establish procedures for conducting annual
12 compliance reviews of State inspections and State
13 implementation of quality control and quality assur-
14 ance procedures; and

15 “(7) establish standards for State tunnel man-
16 agement systems to improve the tunnel inspection
17 process and the quality of data collected and re-
18 ported by the States to the Secretary for inclusion
19 in the national tunnel inventory to be established
20 under this section.

21 “(c) TRAINING AND CERTIFICATION PROGRAM FOR
22 TUNNEL INSPECTORS.—The Secretary, in cooperation
23 with State transportation departments, shall establish a
24 program designed to ensure that all individuals carrying
25 out highway tunnel inspections receive appropriate train-

1 ing and certification. Such program shall be revised from
2 time to time to take into account new and improved tech-
3 niques.

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

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

11 (b) SURFACE TRANSPORTATION PROGRAM.—Section
12 133(b)(1) of such title is amended by inserting “, tunnels
13 that are eligible for assistance under this title (including
14 safety inspection of such tunnels),” after “highways”).

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

“150. National tunnel inspection program.”.

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110TH CONGRESS
2^D SESSION

H. R. 3999

[Report No. 110-482]

AN ACT

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

SEPTEMBER 23 (legislative day, SEPTEMBER 17), 2008
Reported without amendment