

110TH CONGRESS  
2D SESSION

# S. 3338

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.

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## IN THE SENATE OF THE UNITED STATES

JULY 25, 2008

Ms. KLOBUCHAR (for herself and Mr. DURBIN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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## A BILL

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 title 23,  
 2 United States Code, is amended by adding at the end the  
 3 following: “In this subsection, the term ‘deficient bridge’  
 4 means a bridge that is structurally deficient or function-  
 5 ally obsolete.”.

6 (c) PARTICIPATION.—Section 144(d) of title 23,  
 7 United States Code, is amended by adding at the end the  
 8 following:

9 “(5) REQUIREMENTS FOR STATE PARTICIPA-  
 10 TION.—

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

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

1 Secretary for inclusion in the national  
2 bridge inventory.

3 “(ii) CALCULATION OF LOAD RAT-  
4 INGS.—The State shall—

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

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

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

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

23 “(I) the inspection of highway  
24 bridges described in subsections (b)



1 and (c) that are located in the State;  
2 and

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

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

12 “(B) APPROVAL OF PERFORMANCE  
13 PLANS.—

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

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

1 “(iii) APPROVAL AND DISAPPROVAL.—

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

11 “(C) HISTORIC BRIDGES.—

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

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

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

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

5           (d) INFORMATION AND REPORTS.—Section 144(h) of  
 6 title 23, United States Code, is amended to read as fol-  
 7 lows:

8           “(h) INFORMATION AND REPORTS.—

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

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

19                   “(A) a description of projects and activities  
 20           approved under this section;

21                   “(B) the information updated under para-  
 22           graph (1), including a description of the pri-  
 23           ority assigned, on a national basis and by State,  
 24           for the replacement or rehabilitation of each

1 structurally deficient or functionally obsolete  
 2 bridge on a Federal-aid highway;

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

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

12 (e) TRANSFERABILITY OF FUNDING.—Section 144 of  
 13 title 23, United States Code, is amended by inserting after  
 14 subsection (r) the following:

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

23 (f) DEFINITIONS.—Section 144 of title 23, United  
 24 States Code, is further amended by adding at the end the  
 25 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-

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

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

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

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

(3) by adding at the end the following:

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

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

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

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

“(8) provide for testing with a state-of-the-art  
 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 TIONS.—Section 151(c) of title 23, United States Code, is  
 5 amended by adding at the end the following: “The Sec-  
 6 retary shall expand the scope of the training program to  
 7 ensure that all persons conducting highway bridge inspec-  
 8 tions receive appropriate training and certification under  
 9 the program.”.

10 (e) FREQUENCY OF BRIDGE INSPECTIONS.—Section  
 11 151 of title 23, United States Code, is amended—

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

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

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

18 “(d) FREQUENCY OF BRIDGE INSPECTIONS.—

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

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

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

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

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

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

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

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

24          (f) QUALIFICATIONS OF PROGRAM MANAGERS AND  
 25          TEAM LEADERS.—

1           (1) REVISION OF REGULATIONS.—Not later  
 2           than 1 year after the date of enactment of this Act,  
 3           the Secretary of Transportation shall revise regula-  
 4           tions contained in section 650.309 of title 23, Code  
 5           of Federal Regulations, relating to the qualifications  
 6           of highway bridge inspection personnel, to require  
 7           that, in addition to meeting the qualifications identi-  
 8           fied in such section (as in effect on the date of en-  
 9           actment of this Act)—

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

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

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

23           (2) APPLICABILITY.—The additional qualifica-  
 24           tion requirements specified in paragraphs (1)(A),  
 25           (1)(B), and (1)(C) shall apply only to an individual

1       selected by a State to serve as the program manager  
2       or a team leader after the date of issuance of revised  
3       regulations under paragraph (1).

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

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

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

21      **SEC. 4. GAO STUDY.**

22      Not later than 1 year after the date of enactment  
23      of this Act, the Comptroller General shall conduct a study  
24      and report its findings to the Secretary of Transportation  
25      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           (1) shall be apportioned among the States  
2           under paragraphs (1) and (2) of section 144(e) of  
3           title 23, United States Code;

4           (2) shall be used for the replacement and reha-  
5           bilitation of structurally deficient highway bridges on  
6           the National Highway System; and

7           (3) shall be available for obligation in the same  
8           manner as other funds apportioned under chapter 1  
9           of title 23, United States Code, except that such  
10          funds shall not be transferable and shall remain  
11          available until expended.

12          (c) LIMITATION.—None of the funds appropriated  
13          pursuant to subsection (a) may be earmarked by Congress  
14          or any Federal department or agency for a specific project  
15          or activity.

16          (d) COMPLIANCE WITH IMMIGRATION AND NATION-  
17          ALITY ACT.—None of the funds appropriated pursuant to  
18          subsection (a) may be used to employ workers in violation  
19          of section 274A of the Immigration and Nationality Act  
20          (8 U.S.C. 1324a).

21      **SEC. 7. BRIDGE ADVANCED CONDITION ASSESSMENT PILOT**  
22                                      **PROGRAM.**

23          (a) IN GENERAL.—Not later than 180 days after the  
24          date of enactment of this Act, the Secretary of Transpor-  
25          tation shall establish and implement a pilot program to

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 title 23, United States Code, is amended by  
20 inserting “, tunnels that are eligible for assistance under  
21 this title (including safety inspection of such tunnels),”  
22 after “highways”).

23 (c) CONFORMING AMENDMENT.—The analysis for  
24 chapter 1 of title 23, United States Code, is amended by



- 1 inserting after the item relating to section 149 the fol-
- 2 lowing:

“150. National tunnel inspection program.”.

