

108TH CONGRESS
1ST SESSION

H. R. 3551

To authorize appropriations to the Department of Transportation for surface transportation research and development, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 20, 2003

Mr. EHLERS introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Transportation and Infrastructure, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To authorize appropriations to the Department of Transportation for surface transportation research and development, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Surface Transportation Research and Development Act
6 of 2003”.

7 (b) TABLE OF CONTENTS.—The table of contents for
8 this Act is as follows:

- Sec. 1. Short title; table of contents.
 Sec. 2. Findings.

TITLE I—SURFACE TRANSPORTATION RESEARCH

- Sec. 101. Authorization of appropriations.
 Sec. 102. Goals, principles, and processes.
 Sec. 103. Transportation research and development strategic planning and annual reporting.
 Sec. 104. Surface transportation research and development.
 Sec. 105. Technology deployment.
 Sec. 106. Training and education.
 Sec. 107. Bureau of Transportation Statistics.
 Sec. 108. State planning and research.
 Sec. 109. Future Strategic Highway Research Program.
 Sec. 110. University Transportation Centers.
 Sec. 111. Intelligent Transportation systems.
 Sec. 112. National Multimodal Trends Research Program.

TITLE II—MISCELLANEOUS

- Sec. 201. Authorization of appropriations.
 Sec. 202. Transit research.
 Sec. 203. National Transit Institute.
 Sec. 204. Human resource programs.
 Sec. 205. Highway safety research and development.
 Sec. 206. Motor carrier research and technology program.
 Sec. 207. Transportation, energy, and environment.
 Sec. 208. National Cooperative Freight Transportation Research Program.
 Sec. 209. Next Generation National Transportation Policy Study Commission.
 Sec. 210. Real-time system management information program.
 Sec. 211. Planning capacity building initiative.

1 **SEC. 2. FINDINGS.**

2 The Congress finds the following:

3 (1) Research and development is critical to de-
 4 veloping and maintaining a transportation system
 5 that meets the goals of safety, mobility, economic vi-
 6 tality, efficiency, equity, and environmental protec-
 7 tion.

8 (2) Federally sponsored surface transportation
 9 research and development has produced many suc-
 10 cesses. The development of rumble strips has in-
 11 creased safety; research on materials has increased

1 the lifespan of pavements, saving money and reduc-
2 ing the disruption caused by construction; and Geo-
3 graphic Information Systems have improved the
4 management and efficiency of transit fleets.

5 (3) Despite these important successes, the Fed-
6 eral surface transportation research and develop-
7 ment investment represents only about 0.5 percent
8 of overall government spending on surface transpor-
9 tation.

10 (4) While Congress increased funding for over-
11 all transportation programs by about 40 percent in
12 the Transportation Equity Act for the 21st Century,
13 funding for transportation research and development
14 remained relatively flat.

15 (5) The Federal investment in research and de-
16 velopment should be balanced between short-term
17 applied and long-term fundamental research and de-
18 velopment. The investment should also cover a wide
19 range of research areas, including research on mate-
20 rials and construction, research on operations, re-
21 search on transportation trends and human factors,
22 and research addressing the institutional barriers to
23 deployment of new technologies.

24 (6) Therefore, Congress finds that it is in the
25 United States interest to increase the Federal in-

1 vestment in transportation research and develop-
2 ment, and to conduct research in critical research
3 gaps, in order to ensure that the transportation sys-
4 tem meets the goals of safety, mobility, economic vi-
5 tality, efficiency, equity, and environmental protec-
6 tion.

7 **TITLE I—SURFACE** 8 **TRANSPORTATION RESEARCH**

9 **SEC. 101. AUTHORIZATION OF APPROPRIATIONS.**

10 (a) IN GENERAL.—

11 (1) SURFACE TRANSPORTATION RESEARCH, DE-
12 VELOPMENT, AND DEPLOYMENT.—To carry out sec-
13 tions 502, 503, 506, 507, and 509 of title 23,
14 United States Code, and section 112 of this Act, re-
15 lating to research and development, there are au-
16 thorized to be appropriated to the Secretary of
17 Transportation the following:

18 (A) \$228,000,000 for fiscal year 2004, of
19 which—

20 (i) \$15,000,000 shall be set aside to
21 carry out the Surface Transportation Envi-
22 ronment and Planning Cooperative Re-
23 search Program under section 507 of title
24 23, United States Code;

1 (ii) \$7,000,000 shall be set aside to
2 carry out advanced exploratory research
3 under section 502(d) of title 23, United
4 States Code; and

5 (iii) \$5,000,000 shall be set aside to
6 carry out the National Multimodal Trends
7 Research Program under section 112 of this
8 Act.

9 (B) \$272,000,000 for fiscal year 2005, of
10 which—

11 (i) \$15,000,000 shall be set aside to
12 carry out the Surface Transportation Envi-
13 ronment and Planning Cooperative Re-
14 search Program under section 507 of title
15 23, United States Code;

16 (ii) \$10,000,000 shall be set aside to
17 carry out research under section 502(d) of
18 title 23, United States Code; and

19 (iii) \$5,000,000 shall be set aside to
20 carry out research under section 112 of
21 this Act.

22 (C) \$316,000,000 for fiscal year 2006, of
23 which—

24 (i) \$20,000,000 shall be set aside to
25 carry out the Surface Transportation Envi-

1 environment and Planning Cooperative Re-
2 search Program under section 507 of title
3 23, United States Code;

4 (ii) \$15,000,000 shall be set aside to
5 carry out research under section 502(d) of
6 title 23, United States Code; and

7 (iii) \$5,000,000 shall be set aside to
8 carry out research under section 112 of
9 this Act.

10 (D) \$367,000,000 for fiscal year 2007, of
11 which—

12 (i) \$20,000,000 shall be set aside to
13 carry out the Surface Transportation Envi-
14 ronment and Planning Cooperative Re-
15 search Program under section 507 of title
16 23, United States Code;

17 (ii) \$15,000,000 shall be set aside to
18 carry out research under section 502(d) of
19 title 23, United States Code; and

20 (iii) \$5,000,000 shall be set aside to
21 carry out research under section 112 of
22 this Act.

23 (E) \$423,000,000 for fiscal year 2008, of
24 which—

1 (i) \$30,000,000 shall be set aside to
2 carry out the Surface Transportation Envi-
3 ronment and Planning Cooperative Re-
4 search Program under section 507 of title
5 23, United States Code;

6 (ii) \$15,000,000 shall be set aside to
7 carry out research under section 502(d) of
8 title 23, United States Code; and

9 (iii) \$5,000,000 shall be set aside to
10 carry out research under section 112 of
11 this Act.

12 (F) \$490,000,000 for fiscal year 2009, of
13 which—

14 (i) \$30,000,000 shall be set aside to
15 carry out the Surface Transportation Envi-
16 ronment and Planning Cooperative Re-
17 search Program under section 507 of title
18 23, United States Code;

19 (ii) \$15,000,000 shall be set aside to
20 carry out research under section 502(d) of
21 title 23, United States Code; and

22 (iii) \$5,000,000 shall be set aside to
23 carry out research under section 112 of
24 this Act.

1 (2) TRAINING AND EDUCATION.—To carry out
2 section 504 of title 23, United States Code, there
3 are authorized to be appropriated to the Secretary
4 of Transportation the following:

5 (A) \$50,000,000 for fiscal year 2004.

6 (B) \$60,000,000 for fiscal year 2005.

7 (C) \$70,000,000 for fiscal year 2006.

8 (D) \$70,000,000 for fiscal year 2007.

9 (E) \$75,000,000 for fiscal year 2008.

10 (F) \$75,000,000 for fiscal year 2009.

11 (3) BUREAU OF TRANSPORTATION STATIS-
12 TICS.—For the Bureau of Transportation Statistics
13 to carry out section 111 of title 49, United States
14 Code, there are authorized to be appropriated to the
15 Secretary of Transportation the following:

16 (A) \$36,000,000 for fiscal year 2004, of
17 which \$5,000,000 shall be set aside for research
18 and development grants under subsection
19 (k)(1)(B) of such section.

20 (B) \$37,000,000 for fiscal year 2005, of
21 which \$5,000,000 shall be set aside for research
22 and development grants under subsection
23 (k)(1)(B) of such section.

24 (C) \$38,000,000 for fiscal year 2006, of
25 which \$5,000,000 shall be set aside for research

1 and development grants under subsection
2 (k)(1)(B) of such section.

3 (D) \$43,000,000 for fiscal year 2007, of
4 which \$5,000,000 shall be set aside for research
5 and development grants under subsection
6 (k)(1)(B) of such section.

7 (E) \$47,000,000 for fiscal year 2008, of
8 which \$5,000,000 shall be set aside for research
9 and development grants under subsection
10 (k)(1)(B) of such section.

11 (F) \$50,000,000 for fiscal year 2009, of
12 which \$5,000,000 shall be set aside for research
13 and development grants under subsection
14 (k)(1)(B) of such section.

15 (4) UNIVERSITY TRANSPORTATION RE-
16 SEARCH.—For carrying out section 5505 of title 49,
17 United States Code, there are authorized to be ap-
18 propriated to the Secretary of Transportation the
19 following:

20 (A) \$56,000,000 for fiscal year 2004.

21 (B) \$66,000,000 for fiscal year 2005.

22 (C) \$76,000,000 for fiscal year 2006.

23 (D) \$90,000,000 for fiscal year 2007.

24 (E) \$90,000,000 for fiscal year 2008.

25 (F) \$90,000,000 for fiscal year 2009.

1 (5) INTELLIGENT TRANSPORTATION SYSTEMS
2 RESEARCH.—For carrying out the Intelligent Trans-
3 portation Systems Act of 2003, there are authorized
4 to be appropriated to the Secretary of Transpor-
5 tation the following:

6 (A) \$130,000,000 for fiscal year 2004.

7 (B) \$135,000,000 for fiscal year 2005.

8 (C) \$140,000,000 for fiscal year 2006.

9 (D) \$140,000,000 for fiscal year 2007.

10 (E) \$145,000,000 for fiscal year 2008.

11 (F) \$145,000,000 for fiscal year 2009.

12 (b) COLLABORATIVE RESEARCH AND DEVELOP-
13 MENT.—Section 502(b) of title 23, United States Code,
14 is amended—

15 (1) by striking paragraph (3); and

16 (2) by redesignating paragraphs (4) and (5) as
17 paragraphs (3) and (4), respectively.

18 **SEC. 102. GOALS, PRINCIPLES, AND PROCESSES.**

19 (a) GOALS.—The Federal Government shall support
20 surface transportation research in order to support the
21 goals established for the surface transportation system as
22 set forth in the Transportation Equity Act for the 21st
23 Century, including supporting economic vitality, improving
24 safety and security, increasing mobility, protecting and en-
25 hancing the environment, improving integration between

1 modes of transportation, promoting efficiency, and empha-
2 sizing the preservation of the existing transportation sys-
3 tem.

4 (b) BASIC PRINCIPLES GOVERNING RESEARCH AND
5 DEVELOPMENT.—

6 (1) FEDERAL RESPONSIBILITY.—Funding and
7 conducting surface transportation research and de-
8 velopment and technology transfer activities shall be
9 the responsibility of the Federal Government when—

10 (A) the work is of national significance;

11 (B) it supports research in which there is
12 a clear public benefit, and private sector invest-
13 ment is less than optimal due to market failure;

14 (C) it supports critical research that is not
15 otherwise being conducted by the public or pri-
16 vate sector;

17 (D) it supports a Federal stewardship role
18 in ensuring that State and local governments
19 use national resources efficiently; or

20 (E) it presents the best means to support
21 Federal policy goals compared to other policy
22 alternatives.

23 (2) ROLE.—Consistent with these Federal re-
24 sponsibilities, the Secretary of Transportation
25 shall—

1 (A) conduct research;

2 (B) support and facilitate research and de-
3 velopment and technology transfer activities by
4 State highway agencies, metropolitan planning
5 organizations, and local governments;

6 (C) share results of completed research;
7 and

8 (D) support and facilitate technology and
9 innovation deployment.

10 (3) PROGRAM CONTENT.—The surface trans-
11 portation research and development program shall
12 include—

13 (A) fundamental, long-term research;

14 (B) research aimed at significant research
15 gaps, and emerging issues with national impli-
16 cations; and

17 (C) research related to policy and plan-
18 ning.

19 (c) PROCESSES.—

20 (1) STAKEHOLDER INPUT.—Federally spon-
21 sored surface transportation research and develop-
22 ment activities shall address the needs of partners
23 and stakeholders. Stakeholders include users of re-
24 search (such as States, metropolitan planning orga-
25 nizations, local governments, and the private sector),

1 researchers, research sponsors, and other affected
2 parties, including public interest groups. Stake-
3 holders shall be included at every level of research
4 including strategic planning, agenda setting, and
5 program evaluation. The Secretary shall expand the
6 range and diversity of stakeholders engaged in the
7 process.

8 (2) COMPETITION AND PEER REVIEW.—All par-
9 ties entering into contracts or cooperative agree-
10 ments with the Secretary, or receiving grants, to
11 perform research and development activities or pro-
12 vide technical assistance under this Act shall be se-
13 lected on a competitive basis, and on the basis of the
14 results of peer review of proposals submitted to the
15 Secretary.

16 (3) PERFORMANCE REVIEW AND EVALUA-
17 TION.—All surface transportation research and de-
18 velopment projects shall include a component of per-
19 formance measurement and evaluation. Performance
20 measures shall be established during the proposal
21 stage of a research project and shall, to the max-
22 imum extent possible, be outcome-based. All evalua-
23 tions shall be made readily available to the public.
24 The results of all surface transportation research

1 and development funded under this Act shall be peer
2 reviewed.

3 **SEC. 103. TRANSPORTATION RESEARCH AND DEVELOP-**
4 **MENT STRATEGIC PLANNING AND ANNUAL**
5 **REPORTING.**

6 (a) AMENDMENT.—Section 508 of title 23, United
7 States Code, is amended to read as follows:

8 **“§ 508. Transportation research and development**
9 **strategic planning and annual reporting**

10 “(a) IN GENERAL.—The Secretary shall—

11 “(1) establish a strategic planning process, con-
12 sistent with section 306 of title 5 for the Depart-
13 ment of Transportation to determine national trans-
14 portation research and development priorities;

15 “(2) set national transportation strategic goals
16 and research and development priorities;

17 “(3) coordinate Federal transportation research
18 and development activities;

19 “(4) measure the results of those activities and
20 how they impact the performance of the transpor-
21 tation systems of the United States; and

22 “(5) ensure that planning and reporting activi-
23 ties carried out under this section are coordinated
24 with all other transportation planning and reporting
25 requirements.

1 “(b) IMPLEMENTATION.—The Secretary shall—

2 “(1) provide for the integrated planning, coordi-
3 nation, and consultation among the operating ad-
4 ministrations of the Department of Transportation,
5 including the aviation, transit, and rail operating ad-
6 ministrations, all other Federal agencies with re-
7 sponsibility for surface transportation research and
8 technology development, State and local govern-
9 ments, institutions of higher education, industry,
10 and other private and public sector organizations en-
11 gaged in surface transportation-related research and
12 development activities;

13 “(2) ensure that the transportation research
14 and development programs of the Department do
15 not duplicate other Federal, State, or private sector
16 research and development programs; and

17 “(3) provide for independent validation of the
18 scientific and technical assumptions underlying the
19 transportation research and development programs
20 of the Department.

21 “(c) TRANSPORTATION RESEARCH AND DEVELOP-
22 MENT STRATEGIC PLAN.—

23 “(1) DEVELOPMENT.—Not later than 1 year
24 after the date of enactment of the Surface Transpor-
25 tation Research and Development Act of 2003 the

1 Secretary shall develop an integrated transportation
2 research and development strategic plan. The Sec-
3 retary shall periodically revise such plan.

4 “(2) CONTENTS.—The plan shall—

5 “(A) include the general goals and prin-
6 ciples of the Department of Transportation for
7 transportation research and development pro-
8 gram set forth in section 102 of the Surface
9 Transportation Research and Development Act
10 of 2003;

11 “(B) define the roles of the Department
12 and other Federal agencies in achieving the
13 goals and principles identified under subpara-
14 graph (A), in order to avoid unnecessary dupli-
15 cation of effort;

16 “(C) define the Department’s overall strat-
17 egy and research and development priorities,
18 and for each research area specified in section
19 502, set out—

20 “(i) specific research strategies;

21 “(ii) research objectives and priorities;

22 “(iii) projects to be carried out;

23 “(iv) recommended technology trans-
24 fer activities to promote the deployment of
25 research results; and

1 “(v) short-term, medium-term, and
2 long-term technology development and de-
3 ployment activities;

4 “(D) define the role of each of the oper-
5 ating administrations of the Department in car-
6 rying out the plan over the next 5 years, includ-
7 ing a description of procedures for coordination
8 of the efforts of the Secretary with the efforts
9 of the operating administrations of the Depart-
10 ment and other Federal agencies;

11 “(E) assess how State and local research
12 and development activities are contributing to
13 the achievement of the goals identified under
14 subparagraph (A) and priorities identified
15 under subparagraph (C);

16 “(F) provide details of the transportation
17 research and development programs of the De-
18 partment, including performance goals, re-
19 sources needed to achieve those goals, and per-
20 formance indicators as described in section
21 1115(a) of title 31 for the next 5 years for each
22 area of research and development;

23 “(G) incorporate input from a wide range
24 of interests in the transportation community,
25 including State transportation officials, metro-

1 politan planning organizations, local govern-
2 ments, business, environmental and community
3 organizations, academia, and other relevant
4 Federal agencies, and summarize significant
5 comments on the plan obtained from these in-
6 terests; and

7 “(H) incorporate the input of the National
8 Academy of Sciences and include responses to
9 significant comments obtained from the Acad-
10 emy and other advisory bodies, and describe
11 any corrective actions taken pursuant to such
12 comments.

13 “(3) NATIONAL ACADEMY OF SCIENCES RE-
14 VIEW.—The Secretary shall enter into an agreement
15 for the review by the National Academy of Sciences
16 of the details of each—

17 “(A) strategic plan or revision required
18 under section 306 of title 5;

19 “(B) performance plan required under sec-
20 tion 1115 of title 31; and

21 “(C) program performance report required
22 under section 1116 of title 31—

23 with respect to transportation research and develop-
24 ment.

1 “(4) PERFORMANCE PLANS AND REPORTS.—In
2 reports submitted under sections 1115 and 1116 of
3 title 31, the Secretary shall include—

4 “(A) a summary of the results for the pre-
5 vious fiscal year of transportation research and
6 development programs to which the Department
7 of Transportation contributes, along with—

8 “(i) an analysis of the relationship be-
9 tween those results and the goals identified
10 under paragraph (2)(A); and

11 “(ii) a description of the methodology
12 used for assessing the results; and

13 “(B) a description of significant transpor-
14 tation research and development initiatives, if
15 any, undertaken during the previous fiscal year
16 that were not in the plan developed under para-
17 graph (1), and any significant changes in the
18 plan from the previous year’s plan.

19 “(d) MERIT REVIEW AND PERFORMANCE MEASURE-
20 MENT.—Not later than 1 year after the date of enactment
21 of the Surface Transportation Research and Development
22 Act of 2003, the Secretary shall transmit to Congress a
23 report describing competitive merit review procedures for
24 use in selecting grantees and contractors in the programs
25 covered by the plan developed under subsection (c) and

1 performance measurement procedures for evaluating the
2 programs.

3 “(e) PROCUREMENT PROCEDURES.—The Secretary
4 shall—

5 “(1) develop model procurement procedures
6 that encourage the use of advanced technologies; and

7 “(2) develop model transactions for carrying
8 out and coordinating Federal and State transpor-
9 tation research and development activities.

10 “(f) ANNUAL PROJECT REPORTS.—The Secretary
11 shall publish and make publicly available an annual report
12 documenting all transportation research and development
13 activities of the Department. The report shall include de-
14 tailed accounting of how Federal funds were expended.

15 “(g) CONSISTENCY WITH GOVERNMENT PERFORM-
16 ANCE AND RESULTS ACT OF 1993.—The plans and re-
17 ports developed under this section shall be consistent with
18 and incorporated as part of the plans developed under sec-
19 tion 306 of title 5 and sections 1115 and 1116 of title
20 31.”.

21 (b) CONFORMING AMENDMENT.—The analysis for
22 chapter 5 of title 23, United States Code, is amended by
23 striking the item related to section 508 and inserting the
24 following:

“508. Transportation research and development strategic planning and annual reporting.”.

1 **SEC. 104. SURFACE TRANSPORTATION RESEARCH AND DE-**
2 **VELOPMENT.**

3 (a) SURFACE TRANSPORTATION RESEARCH AND DE-
4 VELOPMENT.—Section 502 of title 23, United States
5 Code, is amended—

6 (1) in subsection (a)—

7 (A) by striking subparagraphs (B) and (C)
8 of paragraph (1) and inserting the following:

9 “(B) all phases of transportation planning
10 and development (including construction, trans-
11 portation system management and operation,
12 modernization, development, design, mainte-
13 nance, safety, data collection, performance anal-
14 ysis, multimodal assessment, financing, demand
15 forecasting, and traffic conditions);

16 “(C) institutional arrangements and sup-
17 port; and

18 “(D) the effect of State laws on the activi-
19 ties described in subparagraphs (A), (B), and
20 (C).”; and

21 (B) in paragraph (3)(C), by inserting
22 “academic researcher,” after “association, insti-
23 tution,”;

24 (2) in subsection (c)—

1 (A) in paragraph (1), by inserting “acces-
2 sibility, connectivity,” after “United States, in-
3 cluding”;

4 (B) by redesignating paragraphs (4)
5 through (11) as paragraphs (5) through (12),
6 respectively;

7 (C) by inserting after paragraph (3) the
8 following new paragraph:

9 “(4) Methods and testing to determine the im-
10 pacts, both positive and negative, to communities
11 from major transportation investments.”;

12 (D) in paragraph (6), as so redesignated
13 by subparagraph (B) of this paragraph—

14 (i) by striking “research project” and
15 inserting “improvements against policy ob-
16 jectives” in subparagraph (B); and

17 (ii) by inserting “and management”
18 after “transportation operations” in sub-
19 paragraph (C);

20 (E) in paragraph (12), as so redesignated
21 by subparagraph (B) of this paragraph, by
22 striking “, including unobtrusive eyetracking
23 technology”; and

24 (F) by adding at the end the following new
25 paragraphs:

1 “(13) Environmental research, including re-
2 search described in the Transportation Research
3 Board Special Report 268, entitled ‘Surface Trans-
4 portation Environmental Research: A Long-Term
5 Strategy’, published in 2002.

6 “(14) Assessment of planning strategies that
7 link land use and transportation in metropolitan
8 areas.

9 “(15) Exploratory advanced research under
10 subsection (d).

11 “(16) Research aimed at understanding how
12 emerging trends (including demographic, economic,
13 and social trends) will affect and are affected by sur-
14 face transportation usage and needs.

15 “(17) Research on the link between transpor-
16 tation and health (including asthma and obesity).

17 “(18) Research on, and dissemination of rec-
18 ommendations and best practices aimed at address-
19 ing, nontechnical barriers to technology deployment
20 (which include fragmented local authority, rigid pro-
21 curement rules, and privacy and liability consider-
22 ations).

23 “(19) Research on the effects of climate condi-
24 tions (such as freezing, thawing, and precipitation)
25 on highway construction and maintenance, including

1 research to reduce or repair damage caused by cli-
2 matic conditions, development of materials that can
3 withstand climatic conditions, and research on the
4 effects of climatic conditions on the costs of highway
5 construction and maintenance.

6 “(20) Research to improve the infrastructure
7 investment needs report under subsection (g)
8 through new methods of collecting better quality
9 data, monitoring in a system-wide manner, the de-
10 termination of critical metrics to assess condition
11 and performance, and new methods of statistical
12 analysis and computer models to improve the pre-
13 diction of future needs.

14 “(21) Research, development, and technology
15 transfer related to asset management.

16 “(22) Any other surface transportation research
17 topics that the Secretary determines, in accordance
18 with the strategic planning process under section
19 508, to be critical.”;

20 (3) in subsection (d)—

21 (A) in paragraph (1)—

22 (i) by inserting “exploratory” after
23 “shall establish an”; and

24 (ii) by inserting “fundamental” after
25 “508, that addresses”; and

1 (B) by striking paragraph (2) and insert-
2 ing the following new paragraphs:

3 “(2) GOAL.—The goal of the research program
4 under this subsection shall be to achieve break-
5 throughs in understanding transportation phe-
6 nomena. Exploratory advanced research should have
7 a broader objective, longer time frame, multidisci-
8 plinary nature, and have both a higher risk and a
9 higher potential payoff than for problem-solving re-
10 search.

11 “(3) AGENDA.—Not later than 15 months after
12 that date of enactment of this paragraph, the Sec-
13 retary shall develop an agenda for exploratory ad-
14 vanced research. The agenda shall outline key ques-
15 tions to be addressed and proposed areas of research
16 to address these questions. The agenda shall also
17 document the best way to accomplish this research
18 (such as through Federal laboratories or academic
19 researchers). Upon completion, the agenda shall be
20 transmitted to the Committee on Transportation and
21 Infrastructure and the Committee on Science of the
22 House of Representatives, and the Committee on
23 Environment and Public Works of the Senate, and
24 made available to the general public.

1 “(4) CONSULTATION.—The Secretary shall con-
2 sult with the National Science Foundation in review-
3 ing fundamental research proposals, and to obtain
4 advice on peer review protocols.

5 “(5) WORKSHOP.—In order to develop the
6 agenda for exploratory advanced research under
7 paragraph (3), the Secretary shall convene a work-
8 shop with appropriate researchers and policymakers
9 from Federal and State agencies, as well as aca-
10 demic researchers, to gather recommendations. The
11 goal of the workshop shall be to determine priority
12 areas of exploratory advanced research for Federal
13 investment. Emphasis shall be placed on hearing
14 from a diverse group of stakeholders. The Secretary
15 shall make the results of the workshop widely avail-
16 able to the public. The workshop shall be held within
17 9 months after the date of the enactment of this
18 paragraph.

19 “(6) USE OF FUNDS.—In any fiscal year with
20 respect to which \$5,000,000 or more is appropriated
21 for carrying out this subsection, at least $\frac{1}{2}$ of the
22 funds in excess of \$5,000,000 shall be used to carry
23 out the grant program described in paragraph (7).
24 Funds appropriated for carrying out this subsection
25 not used for the grant program described in para-

1 graph (7) shall be used to carry out the agenda de-
2 veloped under paragraph (3). All exploratory ad-
3 vanced research proposals and results under this
4 subsection shall be peer reviewed.

5 “(7) GRANT PROGRAM.—If funds are available
6 under paragraph (6), the Secretary shall administer
7 a competitive, merit-reviewed and peer-reviewed
8 grant program to support fundamental research out-
9 side of the Federal Government. Eligible applicants
10 include academic researchers, and for-profit and not-
11 for-profit research institutions. Under this grant
12 program, research solicitations shall be open and
13 broad in order to spur creativity and innovation.
14 Funds may be used under this paragraph to support
15 research in a range of topics, including materials,
16 operations, and social science. Proposals with the
17 greatest merit shall be funded, and projects may re-
18 ceive funding for multiple years.”;

19 (4) in subsection (e), by striking “(105 Stat.”
20 and all that follows through “performance program”
21 and inserting “and the Transportation Equity Act
22 for the 21st Century”;

23 (5) by amending subsection (f) to read as fol-
24 lows:

1 “(f) LONG-TERM BRIDGE PERFORMANCE PRO-
2 GRAM.—

3 “(1) AUTHORITY.—The Secretary shall estab-
4 lish a 20 year long-term bridge performance pro-
5 gram.

6 “(2) GRANTS, COOPERATIVE AGREEMENTS, AND
7 CONTRACTS.—Under the program, the Secretary
8 shall make grants and enter into cooperative agree-
9 ments and contracts to—

10 “(A) monitor, material-test, and evaluate
11 test bridges;

12 “(B) analyze the data obtained in carrying
13 out subparagraph (A); and

14 “(C) prepare products to fulfill program
15 objectives and meet future bridge technology
16 needs.”;

17 (6) in subsection (g)—

18 (A) in paragraph (1)—

19 (i) by striking “1999” and inserting
20 “2005”; and

21 (ii) by striking “highway and bridge”
22 each place it appears and inserting “sur-
23 face transportation”; and

24 (B) in paragraph (2), by striking “bian-
25 nual reports” and all that follows through

1 “21st Century” and inserting “previous reports
2 under this subsection”; and

3 (7) by adding at the end the following new sub-
4 section:

5 “(h) TURNER-FAIRBANK HIGHWAY RESEARCH CEN-
6 TER.—

7 “(1) IN GENERAL.—The Secretary shall operate
8 in the Federal Highway Administration a Turner-
9 Fairbank Highway Research Center.

10 “(2) USES OF THE CENTER.—The Turner-
11 Fairbank Highway Research Center shall support
12 the—

13 “(A) conduct of highway research and de-
14 velopment related to new highway technology;

15 “(B) development of understandings, tools,
16 and techniques that provide solutions to com-
17 plex technical problems through the develop-
18 ment of economical and environmentally sen-
19 sitive designs, efficient and quality controlled
20 construction practices, and durable materials;
21 and

22 “(C) development of innovative highway
23 products and practices.”.

24 (b) GEOSPATIAL INFORMATION SYSTEMS.—Section
25 5113 of the Transportation Equity Act of the 21st Cen-

1 tury (23 U.S.C. 502 note) is amended by revising sub-
2 section (b) to read as follows:

3 “(b) PROGRAM.—

4 “(1) NATIONAL POLICY.—The Secretary shall
5 establish and maintain a national policy for the use
6 of commercial remote sensing products and
7 geospatial information technologies in national
8 transportation infrastructure development and con-
9 struction.

10 “(2) POLICY IMPLEMENTATION.—The Sec-
11 retary shall develop new applications of commercial
12 remote sensing products and geospatial information
13 technologies for the implementation of the national
14 policy established and maintained under (b)(1) of
15 this section.”.

16 (c) ENVIRONMENT AND PLANNING.—

17 (1) AMENDMENT.—Section 507 of title 23,
18 United States Code, is amended to read as follows:

19 **“§ 507. Surface transportation environment and plan-
20 ning cooperative research program—**

21 “(a) ESTABLISHMENT.—The Secretary shall estab-
22 lish and support a collaborative, public-private,
23 multimodal surface transportation environment and plan-
24 ning cooperative research program.

1 “(b) AGREEMENT.—The Secretary shall make grants
2 to or enter into cooperative agreements with the National
3 Academy of Sciences, or another nonprofit research orga-
4 nization established for this purpose, to support, admin-
5 ister, and manage the surface transportation environment
6 and planning cooperative research program.

7 “(c) ADVISORY BOARD.—

8 “(1) ESTABLISHMENT.—The organization de-
9 scribed in subsection (b) shall establish an inde-
10 pendent advisory board drawn from core partners
11 that represent environment, transportation, sci-
12 entific, and other interests, including the Depart-
13 ment of Transportation, the Environmental Protec-
14 tion Agency, the National Science Foundation, other
15 Federal agencies, the States, regional and local gov-
16 ernments, nonprofit organizations, academia, foun-
17 dations, and the private sector.

18 “(2) RESPONSIBILITIES.—The Advisory Board
19 shall have the responsibility for—

20 “(A) development of a research agenda,
21 which shall be published annually, shall serve as
22 the basis of the annual project solicitation, and
23 shall be based on the multiyear strategy de-
24 scribed in subsection (e), as revised under sub-
25 paragraph (D) of this paragraph;

1 “(B) annual solicitation of project pro-
2 posals, including open competition and peer re-
3 view of research proposals;

4 “(C) development of project selection cri-
5 teria, through an open and public consultation
6 process with stakeholders, that emphasize—

7 “(i) the development of fundamental
8 knowledge; and

9 “(ii) collaborative research and fund-
10 ing; and

11 “(D) revision of the contents of the
12 multiyear strategy described in subsection (e),
13 through an open and public consultation proc-
14 ess, with the first revision to be completed 3
15 years after the first grants are awarded under
16 this section and subsequent revisions biennially
17 thereafter.

18 “(d) DISSEMINATION OF RESEARCH FINDINGS.—
19 The organization described in subsection (b) and the De-
20 partment of Transportation shall proactively disseminate
21 research findings under this section to researchers, practi-
22 tioners, and decisionmakers, through conferences and
23 seminars, field demonstrations, workshops, training pro-
24 grams, presentations, testimony to government officials,
25 the Internet, and publications for the general public.

1 “(e) CONTENTS.—The national research agenda for
2 the surface transportation environment and planning co-
3 operative research program required under subsection
4 (c)(2)(C) shall be based on Transportation Research
5 Board Special Report 268, entitled ‘Surface Transpor-
6 tation Environmental Research: A Long-Term Strategy’,
7 published in 2002, which included the following research
8 areas:

9 “(1) Human Health.

10 “(2) Ecology and Natural Systems.

11 “(3) Environmental and Social Justice.

12 “(4) Emerging Technologies.

13 “(5) Land Use.

14 “(6) Planning and Performance Measures.

15 “(f) PROJECT FUNDING.—

16 “(1) MULTIYEAR FUNDING.—Projects may re-
17 ceive funding for multiple years under this section.

18 “(2) JOINT PROJECT FUNDING.—In addition to
19 using funds authorized for this section, the organiza-
20 tion that administers this program may seek and ac-
21 cept additional funding sources from public and pri-
22 vate entities capable of attracting and accepting
23 funding from Federal agencies, States, local govern-
24 ments, nonprofit foundations, and the private sector.

1 “(g) PROGRAMMATIC EVALUATIONS.—(1) Not later
2 than 2 years after the first research project grants or con-
3 tracts are awarded under this section, the Secretary shall
4 enter into an arrangement with the National Academy of
5 Public Administration to review the program under this
6 section, and recommend improvements.

7 “(2) The National Academy of Public Administration
8 review shall—

9 “(A) assess the degree to which the projects
10 funded under this section have addressed the re-
11 search topics identified in the strategy established in
12 the Transportation Research Board Special Report
13 268, including identifying those topics which have
14 not yet been addressed;

15 “(B) assess the peer review process for project
16 proposals, and assess research project results; and

17 “(C) assess the extent of stakeholder involve-
18 ment in all facets of the program.

19 “(h) ANNUAL REPORT.—The organization described
20 in subsection (b) shall prepare and transmit to the Sec-
21 retary an annual report that includes a project summary
22 for every project funded under this section. Each summary
23 shall characterize the project, summarize its status, and
24 identify sponsors.”.

1 (2) CONFORMING AMENDMENT.—The analysis
2 for chapter 5 of title 23, United States Code, is
3 amended by striking the item related to section 507
4 and inserting the following:

“507. Surface transportation environment and planning cooperative research
program.”.

5 **SEC. 105. TECHNOLOGY DEPLOYMENT.**

6 Section 503 of title 23, United States Code, is
7 amended—

8 (1) in subsection (a)—

9 (A) by amending paragraph (7) to read as
10 follows:

11 “(7) GRANTS, COOPERATIVE AGREEMENTS, AND
12 CONTRACTS.—

13 “(A) IN GENERAL.—Under the program,
14 the Secretary may make grants and enter into
15 cooperative agreements and contracts with
16 States, metropolitan planning organizations,
17 local governments, other Federal agencies, uni-
18 versities and colleges, private sector entities,
19 and nonprofit organizations to foster alliances
20 and support efforts to stimulate advances in
21 transportation technology, and to pay the Fed-
22 eral share of the costs of research, development,
23 and technology transfer concerning innovative
24 technologies.

1 “(B) APPLICATIONS.—To receive a grant,
2 cooperative agreement, or contract, under this
3 paragraph, an entity described in subparagraph
4 (A) shall submit an application to the Sec-
5 retary. The application shall be in such form
6 and contain such information as the Secretary
7 may require. The Secretary shall select and ap-
8 prove the applications based on the applica-
9 tions’ merit and on whether the project that is
10 the subject of the grant, cooperative agreement,
11 or contract meets the goals of the program de-
12 scribed in paragraph (3).”;

13 (B) in paragraph (8), by inserting “and
14 the Committee on Science” after “Transpor-
15 tation and Infrastructure”;

16 (C) by redesignating paragraph (9) as
17 paragraph (11); and

18 (D) by inserting after paragraph (8) the
19 following new paragraphs:

20 “(9) TECHNOLOGY AND INFORMATION TRANS-
21 FER.—The Secretary shall ensure that the informa-
22 tion and technology resulting from research con-
23 ducted under this subsection is made available to
24 State and local transportation departments, metro-

1 politan planning organizations, and other interested
2 parties.

3 “(10) FEDERAL SHARE.—The Federal share of
4 the cost of a project under this subsection shall be
5 determined by the Secretary.”; and

6 (2) in subsection (b)—

7 (A) by striking “BRIDGE RESEARCH AND
8 CONSTRUCTION” and inserting “RESEARCH
9 AND DEPLOYMENT” in the subsection heading;

10 (B) by amending paragraphs (1) and (2)
11 to read as follows:

12 “(1) IN GENERAL.—The Secretary shall estab-
13 lish and carry out a program to demonstrate the ap-
14 plication of innovative technology in surface trans-
15 portation infrastructure construction (such as
16 bridges, pavements, and other structures) and safe-
17 ty.

18 “(2) GOALS.—The goals of the program shall
19 include—

20 “(A) the development of new, cost-effective
21 innovative material for surface transportation
22 infrastructure applications;

23 “(B) the deployment and evaluation of
24 safety technologies and innovations at the State
25 and local levels, and the deployment of best

1 practices in training, management, design, and
2 planning;

3 “(C) the reduction of life-cycle costs of
4 surface transportation infrastructure, including
5 the costs of new construction, replacement,
6 maintenance, and rehabilitation of deficient
7 highway infrastructure;

8 “(D) the development and deployment of
9 construction techniques to increase safety and
10 reduce construction time and traffic congestion;

11 “(E) the development of engineering de-
12 sign criteria for innovative products and mate-
13 rials for use in surface transportation infra-
14 structure;

15 “(F) the development of cost-effective and
16 innovative techniques to separate vehicle and
17 pedestrian traffic from railroad traffic;

18 “(G) the evaluation and documentation of
19 the performance and benefits of innovative tech-
20 nologies deployed to improve life, performance,
21 cost effectiveness, safety, and customer satisfac-
22 tion;

23 “(H) the refinement of innovative tech-
24 nologies based on the evaluation described in
25 subparagraph (G);

1 “(I) the wide dissemination of information
2 developed under subparagraph (G);

3 “(J) the development of surface transpor-
4 tation infrastructure, including alternative proc-
5 esses for the seismic retrofit of bridges, that
6 will withstand natural disasters and terrorist
7 attacks;

8 “(K) for pavements, the development of
9 designs and materials to reduce impacts of
10 storm water runoff;

11 “(L) the development of new non-
12 destructive infrastructure evaluation tech-
13 nologies and techniques; and

14 “(M) effective technology transfer and in-
15 formation dissemination to accelerate imple-
16 mentation of innovative technologies.”;

17 (C) in paragraph (5), by striking “section”
18 and inserting “subsection”; and

19 (D) by adding at the end the following new
20 subsection:

21 “(c) RESEARCH ON THE NONTECHNICAL BARRIERS
22 TO TECHNOLOGY DEPLOYMENT.—In order to support the
23 deployment goals established under subsection (a)(3), the
24 Secretary shall carry out a research program addressing
25 the nontechnical barriers to technology deployment, in-

1 cluding fragmented authority at the local and regional
2 level and rigid procurement rules. The goal of this re-
3 search shall be to generate proposals for how to overcome
4 these nontechnical barriers.

5 **SEC. 106. TRAINING AND EDUCATION.**

6 (a) NATIONAL HIGHWAY INSTITUTE.—Section
7 504(a) of title 23, United States Code, is amended by
8 striking paragraph (3) and inserting the following:

9 “(3) COURSES.—

10 “(A) IN GENERAL.—The Institute shall de-
11 velop or update existing courses in asset man-
12 agement, application of emerging technologies,
13 including intelligent transportation systems,
14 and in techniques, methods, regulations, infor-
15 mation technology, general management, envi-
16 ronmental stewardship, engineering, safety,
17 transportation system management and oper-
18 ations, construction, maintenance, contract ad-
19 ministration, inspection, and finance.

20 “(B) ADDITIONAL COURSES.—In addition
21 to the courses developed under subparagraph
22 (A), the Institute, in consultation with State
23 transportation departments and the American
24 Association of State Highway and Transpor-

1 tation Officials, may develop other courses as it
2 considers necessary.

3 “(C) REVISION OF COURSES OFFERED.—

4 The Institute shall periodically—

5 “(i) review the course inventory of the
6 Institute; and

7 “(ii) revise or cease to offer courses
8 based on course content, applicability, and
9 need.”.

10 (b) FEDERAL SHARE.—Section 504(b) of title 23,
11 United States Code, is amended by adding at the end the
12 following:

13 “(3) FEDERAL SHARE.—

14 “(A) GRANTS.—The grant funds author-
15 ized to carry out this subsection may be used
16 to cover up to 50 percent of the program costs
17 relating to local technical assistance. Funds
18 available for technology transfer and training
19 purposes under this title and title 49 may be
20 used to cover the remaining 50 percent of the
21 program costs.

22 “(B) TRIBAL TECHNICAL ASSISTANCE
23 CENTERS.—The Federal share of the cost of ac-
24 tivities carried out by the tribal technical assist-

1 ance centers under paragraph (2)(D)(ii) of this
2 subsection shall be 100 percent.”.

3 (c) DEFINITIONS AND DECLARATION OF POLICY.—

4 Section 101(a) of title 23, United States Code, is amend-
5 ed—

6 (1) in paragraph (3), by—

7 (A) striking “and” at the end of subpara-
8 graph (G);

9 (B) striking the period at the end of sub-
10 paragraph (H) and inserting “; and”; and

11 (C) adding after subparagraph (H) the fol-
12 lowing:

13 “(I) surface transportation workforce de-
14 velopment, training, and education.”;

15 (2) by redesignating paragraphs (35) through
16 (37) as paragraphs (36) through (38) respectively;
17 and

18 (3) by adding after paragraph (34) the fol-
19 lowing:

20 “(35) SURFACE TRANSPORTATION WORKFORCE
21 DEVELOPMENT, TRAINING, AND EDUCATION.—The
22 term ‘surface transportation workforce development,
23 training, and education’ means activities associated
24 with surface transportation career awareness, stu-
25 dent transportation career preparation, and training

1 and professional development for surface transpor-
2 tation workers.”.

3 **SEC. 107. BUREAU OF TRANSPORTATION STATISTICS.**

4 Section 111 of title 49, United States Code, is
5 amended to read as follows:

6 **“§ 111. Bureau of Transportation Statistics**

7 “(a) ESTABLISHMENT.—There is established in the
8 Department of Transportation a Bureau of Transpor-
9 tation Statistics to provide information to public decision-
10 makers, private industry, research organizations, and the
11 public on the extent, use, condition, performance, and con-
12 sequences of the Nation’s transportation system.

13 “(b) DIRECTOR.—

14 “(1) APPOINTMENT.—The Bureau shall be
15 headed by a Director who shall be appointed by the
16 President, by and with the advice and consent of the
17 Senate.

18 “(2) QUALIFICATIONS.—The Director shall be
19 appointed from among individuals who are qualified
20 to serve as the Director by virtue of their training
21 and experience in the collection, analysis, and use of
22 transportation statistics.

23 “(3) REPORTING.—The Director shall report
24 directly to the Secretary.

1 “(4) TERM.—The term of the Director shall be
2 5 years. The Director may continue to serve after
3 the expiration of the term until a successor is ap-
4 pointed and confirmed.

5 “(c) RESPONSIBILITIES.—The Director of the Bu-
6 reau shall be responsible for carrying out the following du-
7 ties:

8 “(1) SECRETARY’S SENIOR ADVISOR.—Serving
9 as the Secretary’s senior advisor on data and statis-
10 tics.

11 “(2) PROVIDING DATA, STATISTICS, AND ANAL-
12 YSIS TO TRANSPORTATION DECISIONMAKERS.—En-
13 suring that the statistics compiled under paragraph
14 (6) support transportation decisionmaking by the
15 Federal Government, State and local governments,
16 metropolitan planning organizations, transportation-
17 related associations, private businesses (including
18 the freight community), and consumers.

19 “(3) COORDINATING COLLECTION OF INFORMA-
20 TION.—Coordinating the collection of information by
21 the Department of Transportation required for sta-
22 tistics to be compiled under paragraph (6) with re-
23 lated information gathering activities conducted by
24 other Federal departments and agencies and col-
25 lecting appropriate data not elsewhere gathered.

1 “(4) DATA MODERNIZATION.—Implement a
2 data modernization program to improve surveys and
3 data collection methods to ensure that nationally col-
4 lected data accurately characterize all modes of
5 transportation and transportation users and are use-
6 ful for decisionmakers throughout the transportation
7 community.

8 “(5) ENCOURAGING DATA STANDARDIZATION.—
9 Encouraging standardization of data, data collection
10 methods, and data management and storage tech-
11 nologies for data collected by the Bureau, the oper-
12 ating administrations of the Department of Trans-
13 portation, States, local governments, metropolitan
14 planning organizations, and private sector entities.

15 “(6) COMPILING TRANSPORTATION STATIS-
16 TICS.—Compiling, analyzing, and publishing a com-
17 prehensive set of transportation statistics on—

18 “(A) productivity in various parts of the
19 transportation sector;

20 “(B) traffic flows for all modes of trans-
21 portation;

22 “(C) other elements of the Intermodal
23 Transportation Database established under sub-
24 section (g);

1 “(D) travel times and measures of conges-
2 tion;

3 “(E) vehicle weights and other vehicle
4 characteristics;

5 “(F) demographic, economic, and other
6 variables influencing—

7 “(i) travel;

8 “(ii) traveling behavior, including
9 choice of transportation mode; and

10 “(iii) goods movement;

11 “(G) transportation costs for passenger
12 travel and goods movement;

13 “(H) performance and impacts of the na-
14 tional transportation system;

15 “(I) availability and use of mass transit
16 (including the number of passengers served by
17 each mass transit authority) and other forms of
18 for-hire passenger travel;

19 “(J) frequency of vehicle and transpor-
20 tation facility repairs and other interruptions of
21 transportation service;

22 “(K) safety and security for travelers, vehi-
23 cles, and transportation systems;

24 “(L) consequences of transportation for
25 the human and natural environment;

1 “(M) the extent, connectivity, and condi-
2 tion of the transportation system, including ele-
3 ments of the National Transportation Atlas
4 Database developed under subsection (i); and

5 “(N) transportation-related variables that
6 influence the domestic economy and global com-
7 petitiveness.

8 “(7) NATIONAL SPATIAL DATA INFRASTRUC-
9 TURE.—Building and disseminating the transpor-
10 tation layer of the National Spatial Data Infrastruc-
11 ture, including coordinating the development of
12 transportation geospatial data standards, compiling
13 intermodal geospatial data, and collecting geospatial
14 data that is not being collected by others.

15 “(8) IMPLEMENTING LONG-TERM DATA COL-
16 LECTION PROGRAM.—Establishing and imple-
17 menting, in cooperation with the heads of the oper-
18 ating administrations of the Department of Trans-
19 portation, the States, metropolitan planning organi-
20 zations, the national statistical organizations of the
21 United States, and other Federal officials, a com-
22 prehensive, long-term program for the collection and
23 analysis of data to support the statistics compiled,
24 analyzed, and published under paragraph (6) and

1 other data on the performance of the transportation
2 systems of the United States. Such program shall—

3 “(A) be coordinated with efforts to meas-
4 ure outputs and outcomes of the Department of
5 Transportation and the transportation systems
6 of the United States under the Government
7 Performance and Results Act of 1993 (107
8 Stat. 285 et seq.) and the amendments made by
9 such Act;

10 “(B) ensure that data is collected under
11 this subsection in a manner which will maxi-
12 mize the ability to compare data from different
13 regions and for different time periods; and

14 “(C) ensure that data collected under this
15 subsection is controlled for accuracy, made rel-
16 evant to the States and metropolitan planning
17 organizations, and disseminated to the States
18 and other interested parties.

19 “(9) ISSUING GUIDELINES.—Issuing guidelines
20 for the collection and publication of information by
21 the Department of Transportation required for sta-
22 tistics to be compiled under paragraph (6) in order
23 to ensure that such information is accurate, reliable,
24 relevant, and in a form that permits systematic anal-
25 ysis. The Bureau shall review and report to the Sec-

1 retary of Transportation on the sources and reli-
2 ability of the statistics proposed by the heads of the
3 operating administrations of the Department to
4 measure outputs and outcomes as required by the
5 Government Performance and Results Act of 1993,
6 and the amendments made by such Act, and shall
7 carry out such other reviews of the sources and reli-
8 ability of other data collected or statistical informa-
9 tion published by the heads of the operating admin-
10 istrations of the Department as shall be requested
11 by the Secretary.

12 “(10) MAKING STATISTICS ACCESSIBLE.—Mak-
13 ing the statistics published under this subsection
14 readily accessible.

15 “(d) INFORMATION NEEDS ASSESSMENT.—

16 “(1) IN GENERAL.—Within 60 days after the
17 date of the enactment of the Surface Transportation
18 Research and Development Act of 2003, the Sec-
19 retary shall enter into an arrangement with the Na-
20 tional Academy of Sciences to develop and publish a
21 National Transportation Information Needs Assess-
22 ment. The Assessment shall be published not later
23 than 24 months after such arrangement is entered
24 into.

25 “(2) CONTENT.—The Assessment shall—

1 “(A) identify the major data needs of the
2 transportation community, including all levels
3 of government, the private and nonprofit sec-
4 tors, and academia, through a statistically valid
5 needs survey, the results of which shall be pub-
6 lished;

7 “(B) identify critical gaps, shortcomings,
8 and lack of standardization in existing data col-
9 lection and survey methods;

10 “(C) identify data collection required under
11 subsection (c)(6) that is not currently being
12 carried out; and

13 “(D) recommend data modernization goals,
14 specific improvements, and the estimated fund-
15 ing levels needed to accomplish those improve-
16 ments.

17 “(3) CONSULTATION.—In developing the As-
18 sessment, the National Academy of Sciences shall
19 consult with the Department’s Advisory Council on
20 Transportation Statistics and a representative cross-
21 section of the transportation community, including
22 business, the freight community, State and local
23 governments, metropolitan planning organizations,
24 transit, environmental, and community organiza-
25 tions, academia, and other Federal agencies, includ-

1 ing the Environmental Protection Agency, the De-
2 partment of Energy, and the Department of Hous-
3 ing and Urban Development.

4 “(e) STRATEGIC PLAN.—

5 “(1) DEVELOPMENT AND REVISION.—The Di-
6 rector shall develop an integrated, multimodal data
7 strategic plan within 3 years after the date of the
8 enactment of the Surface Transportation Research
9 and Development Act of 2003, and revise it every 3
10 years thereafter.

11 “(2) CONTENT.—The strategic plan shall in-
12 clude—

13 “(A) national goals for developing high
14 quality national, State, local, and metropolitan
15 transportation data;

16 “(B) national goals for encouraging im-
17 provements in non-Federal transportation data
18 collection and management to improve quality,
19 reliability, and comparability;

20 “(C) detailed strategies for—

21 “(i) addressing the needs and gaps
22 identified in the Assessment conducted
23 under subsection (d);

1 “(ii) integrating federally collected
2 transportation data collection and systems,
3 and coordinating data collection; and

4 “(iii) encouraging improvements in
5 data collected by entities other than the
6 Federal Government;

7 “(D) a plan to strengthen the Intermodal
8 Transportation Data Base required under sub-
9 section (g) and the National Transportation Li-
10 brary under subsection (h);

11 “(E) an assessment of how data collection
12 by entities other than the Federal Government
13 is contributing to the achievement of the goals
14 of this section;

15 “(F) responses to significant comments re-
16 ceived through the consultation required under
17 subsection (d)(2);

18 “(G) provision for the integrated planning,
19 coordination, and consultation among the oper-
20 ating administrations of the Department of
21 Transportation, all other Federal agencies with
22 responsibilities related to transportation data,
23 State and local governments, metropolitan plan-
24 ning organizations, institutions of higher edu-
25 cation, industry, and other private and public

1 sector organizations engaged in transportation-
2 related data activities and decisionmaking; and

3 “(H) details of the Department of Trans-
4 portation’s data programs, including perform-
5 ance goals, resources needed to achieve those
6 goals, and performance indicators as described
7 in section 1115(a) of title 31, United States
8 Code, for the next 5 years for each area data
9 collection and management.

10 “(3) CONSULTATION.—In developing the stra-
11 tegic plan, the Director shall consult with the Na-
12 tional Academy of Sciences, the Advisory Council on
13 Transportation Statistics, the Department’s oper-
14 ating administrations, other Federal agencies, State
15 and local governments, metropolitan planning orga-
16 nizations, business, and the public.

17 “(f) REVIEW.—The Comptroller General shall assess
18 the Department’s progress addressing the gaps identified
19 in the Assessment required under subsection (d) and in
20 preparing and implementing the strategic plan required
21 under subsection (e). The assessment under this sub-
22 section shall be completed not later than 4 years after the
23 date of the enactment of the Surface Transportation Re-
24 search and Development Act of 2003.

25 “(g) INTERMODAL TRANSPORTATION DATA BASE.—

1 “(1) IN GENERAL.—In consultation with the
2 Associate Deputy Secretary, the Assistant Secre-
3 taries, and the heads of the operating administra-
4 tions of the Department of Transportation, the Di-
5 rector shall establish and maintain a transportation
6 data base for all modes of transportation.

7 “(2) USE.—The data base shall be suitable for
8 analyses carried out by the Federal Government, the
9 States, and metropolitan planning organizations.

10 “(3) CONTENTS.—The data base shall in-
11 clude—

12 “(A) information on the volumes and pat-
13 terns of movement of goods, including local,
14 interregional, and international movement, by
15 all modes of transportation and intermodal
16 combinations, and by relevant classification;

17 “(B) information on the volumes and pat-
18 terns of movement of people, including local,
19 interregional, and international movements, by
20 all modes of transportation (including bicycle
21 and pedestrian modes) and intermodal combina-
22 tions, and by relevant classification;

23 “(C) information on the location and
24 connectivity of transportation facilities and
25 services; and

1 “(D) a national accounting of expenditures
2 and capital stocks on each mode of transpor-
3 tation and intermodal combination.

4 “(h) NATIONAL TRANSPORTATION LIBRARY.—

5 “(1) IN GENERAL.—The Director shall establish
6 and maintain a National Transportation Library,
7 which shall contain a collection of statistical and
8 other information needed for transportation decision-
9 making at the Federal, State, and local levels.

10 “(2) ACCESS.—The Director shall facilitate and
11 promote access to the Library, with the goal of im-
12 proving the ability of the transportation community
13 to share information and the ability of the Director
14 to make statistics readily accessible under subsection
15 (c)(10).

16 “(3) COORDINATION.—The Director shall work
17 with other transportation libraries and other trans-
18 portation information providers, both public and pri-
19 vate, to achieve the goal specified in paragraph (2).

20 “(i) NATIONAL TRANSPORTATION ATLAS DATA
21 BASE.—

22 “(1) IN GENERAL.—The Director shall develop
23 and maintain geospatial data bases that depict—

24 “(A) transportation networks;

1 “(B) flows of people, goods, vehicles, and
2 craft over the networks; and

3 “(C) social, economic, and environmental
4 conditions that affect or are affected by the net-
5 works.

6 “(2) INTERMODAL NETWORK ANALYSIS.—The
7 data bases shall be able to support intermodal net-
8 work analysis.

9 “(j) MANDATORY RESPONSE AUTHORITY FOR
10 FREIGHT DATA COLLECTION.—Whoever, being the
11 owner, official, agent, person in charge, or assistant to the
12 person in charge, of any corporation, company, business,
13 institution, establishment, or organization of any nature
14 whatsoever, neglects or refuses, when requested by the Di-
15 rector or other authorized officer, employee or contractor
16 of the Bureau, to answer completely and correctly to the
17 best of his/her knowledge all questions relating to the cor-
18 poration, company, business, institution, establishment, or
19 other organization, or to records or statistics in his/her
20 official custody, contained in a data collection request pre-
21 pared and submitted under the authority of subsection
22 (c)(6), shall be fined not more than \$500; and if the indi-
23 vidual willfully gives a false answer to a question, shall
24 be fined not more than \$10,000.

1 “(k) RESEARCH AND DEVELOPMENT GRANTS.—The
2 Secretary may make grants to, or enter into cooperative
3 agreements or contracts with, public and nonprofit private
4 entities (including State transportation departments, met-
5 ropolitan planning organizations, and institutions of high-
6 er education) for—

7 “(1) investigation of the subjects specified in
8 subsection (c)(6) and research and development of
9 new methods of data collection, standardization,
10 management, integration, dissemination, interpreta-
11 tion, and analysis;

12 “(2) demonstration programs by States, local
13 governments, and metropolitan planning organiza-
14 tions to harmonize data collection, reporting, man-
15 agement, storage, and archiving to simplify data
16 comparisons across jurisdictions;

17 “(3) development of electronic clearinghouses of
18 transportation data and related information, as part
19 of the National Transportation Library under sub-
20 section (h); and

21 “(4) development and improvement of methods
22 for sharing geographic data, in support of the na-
23 tional transportation atlas data base under sub-
24 section (i) and the National Spatial Data Infrastruc-
25 ture developed under Executive Order No. 12906.

1 “(l) RESEARCH AND GUIDELINES ON STATISTICAL
2 METHODS.—The Secretary shall conduct or support re-
3 search relating to methods of gathering or analyzing
4 transportation statistics and issuing guidelines for the col-
5 lection of information by the Department in order to en-
6 sure that such information is accurate, relevant, com-
7 parable, accessible, and in a form that permits systematic
8 analysis.

9 “(m) LIMITATIONS ON STATUTORY CONSTRUC-
10 TION.—Nothing in this section shall be construed—

11 “(1) to authorize the Bureau to require any
12 other department or agency to collect data; or

13 “(2) to reduce the authority of any other officer
14 of the Department of Transportation to collect and
15 disseminate data independently.

16 “(n) PROHIBITION ON CERTAIN DISCLOSURES.—

17 “(1) IN GENERAL.—An officer or employee of
18 the Bureau may not—

19 “(A) make any disclosure in which the
20 data provided by an individual or organization
21 under subsection (c)(8) can be identified;

22 “(B) use the information provided under
23 subsection (c)(8) for a nonstatistical purpose;

24 or

1 “(C) permit anyone other than an indi-
2 vidual authorized by the Director to examine
3 any individual report provided under subsection
4 (c)(8).

5 “(2) PROHIBITION ON REQUESTS FOR CERTAIN
6 DATA.—

7 “(A) GOVERNMENT AGENCIES.—No de-
8 partment, bureau, agency, officer, or employee
9 of the United States (except the Director in
10 carrying out this section) may require, for any
11 reason, a copy of any report that has been filed
12 under subsection (c)(8) with the Bureau or re-
13 tained by an individual respondent.

14 “(B) COURTS.—Any copy of a report de-
15 scribed in subparagraph (A) that has been re-
16 tained by an individual respondent or filed with
17 the Bureau or any of its employees, contractors,
18 or agents—

19 “(i) shall be immune from legal proc-
20 ess; and

21 “(ii) shall not, without the consent of
22 the individual concerned, be admitted as
23 evidence or used for any purpose in any
24 action, suit, or other judicial or adminis-
25 trative proceeding.

1 “(C) APPLICABILITY.—This paragraph
2 shall apply only to reports that permit informa-
3 tion concerning an individual or organization to
4 be reasonably inferred by direct or indirect
5 means.

6 “(3) DATA COLLECTED FOR NONSTATISTICAL
7 PURPOSES.—In a case in which the Bureau is au-
8 thorized by statute to collect data or information for
9 a nonstatistical purpose, the Director shall clearly
10 distinguish the collection of the data or information,
11 by rule and on the collection instrument, so as to in-
12 form a respondent that is requested or required to
13 supply the data or information of the nonstatistical
14 purpose.

15 “(o) TRANSPORTATION STATISTICS ANNUAL RE-
16 PORT.—The Director shall transmit to the President and
17 Congress a Transportation Statistics Annual Report which
18 shall include information on items referred to in sub-
19 section (c)(6), documentation of methods used to obtain
20 and ensure the quality of the statistics presented in the
21 report, and recommendations for improving transportation
22 statistical information.

23 “(p) IMPLEMENTATION ANNUAL REPORT.—The Sec-
24 retary shall prepare an annual report summarizing the
25 Department’s progress in implementing the requirements

1 of this section. The reports shall be submitted to Secretary
2 of Transportation, to the Committee on Transportation
3 and Infrastructure and the Committee on Science of the
4 House of Representatives, and to Committee on Environ-
5 ment and Public Works of the Senate.

6 “(q) PROCEEDS OF DATA PRODUCT SALES.—Not-
7 withstanding section 3302 of title 31, United States Code,
8 funds received by the Bureau from the sale of data prod-
9 ucts, for necessary expenses incurred, may be credited to
10 the Highway Trust Fund (other than the Mass Transit
11 Account) for the purpose of reimbursing the Bureau for
12 the expenses.

13 “(r) ADVISORY COUNCIL ON TRANSPORTATION STA-
14 TISTICS.—

15 “(1) ESTABLISHMENT.—The Director of the
16 Bureau of Transportation Statistics shall establish
17 an Advisory Council on Transportation Statistics.

18 “(2) FUNCTION.—It shall be the function of the
19 Advisory Council established under this subsection
20 to—

21 “(A) advise the Director of the Bureau of
22 Transportation Statistics on the quality, reli-
23 ability, consistency, objectiveness, and relevance
24 of transportation statistics and analyses col-
25 lected, supported, or disseminated by the Bu-

1 reau of Transportation Statistics and the De-
2 partment of Transportation;

3 “(B) provide input to and review the De-
4 partment’s Assessment under subsection (d)
5 and annual data strategic plan required under
6 subsection (e); and

7 “(C) advise the Director on methods to en-
8 courage harmonization and interoperability of
9 transportation data collected by the Bureau, the
10 operating administrations of the Department of
11 Transportation, States, local governments, met-
12 ropolitan planning organizations, and private
13 sector entities.

14 “(3) MEMBERSHIP.—The Advisory Council es-
15 tablished under this subsection shall be composed of
16 not less than 15 members appointed by the Director,
17 who are not officers or employees of the United
18 States, including—

19 “(A) 2 members with specific expertise in
20 economics;

21 “(B) 3 members with expertise in statis-
22 tics; and

23 “(C) additional members with expertise in
24 transportation statistics, analysis, and policy.

1 Members shall include representatives of a cross-section
2 tion of the transportation community, including
3 business, the freight community, State and local
4 governments, metropolitan planning organizations,
5 transit, environmental, and community organiza-
6 tions, and academia.

7 “(4) TERMS OF APPOINTMENT.—Members shall
8 be appointed to staggered terms not to exceed 3
9 years. A member may be renominated for one addi-
10 tional 3-year term.

11 “(5) APPLICABILITY OF FEDERAL ADVISORY
12 COMMITTEE ACT.—The Federal Advisory Committee
13 Act shall apply to the Advisory Council established
14 under this subsection, except that section 14 of the
15 Federal Advisory Committee Act shall not apply to
16 such Advisory Council.”.

17 **SEC. 108. STATE PLANNING AND RESEARCH.**

18 Section 505 of title 23, United States Code, is
19 amended to read as follows:

20 **“§ 505. State planning and research**

21 “(a) IN GENERAL.—There are authorized to be ap-
22 propriated \$1,073,000,000 to States for each fiscal year
23 for expenditure by the States, in consultation with the
24 Secretary, only for the following purposes:

1 “(1) Engineering and economic surveys and in-
2 vestigations.

3 “(2) The planning of future highway programs
4 and local public transportation systems, the planning
5 of the financing of such programs and systems, in-
6 cluding metropolitan and Statewide planning under
7 sections 134 and 135, freight planning, safety plan-
8 ning, transportation systems management and oper-
9 ations planning, transportation-related land use
10 planning, and transportation-related growth manage-
11 ment activities within these planning processes, and
12 planning capacity building activities.

13 “(3) Studies of the economy, safety, and con-
14 venience of highway, local public transportation, bi-
15 cycle, and pedestrian systems and the desirable reg-
16 ulation and equitable taxation of their use.

17 “(4) Research, development, and technology
18 transfer activities necessary in connection with the
19 planning, design, construction, management, mainte-
20 nance, regulation, and taxation of the use of high-
21 way, local public transportation, and intermodal
22 transportation systems.

23 “(5) Research on the effects of design stand-
24 ards on intermodal coordination, such as the high-

1 way-rail interface, and on safe pedestrian access to
2 transit on arterial roads and urban highways.

3 “(6) Study, research, and training on the engi-
4 neering standards and construction materials, in-
5 cluding accreditation of inspection and testing, for
6 highway, local public transportation, bicycle, pedes-
7 trian, and intermodal transportation systems.

8 “(b) MINIMUM EXPENDITURES ON RESEARCH, DE-
9 VELOPMENT, AND TECHNOLOGY TRANSFER ACTIVI-
10 TIES.—

11 “(1) IN GENERAL.—Subject to paragraph (2),
12 not less than 25 percent of the funds appropriated
13 pursuant to subsection (a) to a State for a fiscal
14 year shall be expended by the State for research, de-
15 velopment, and technology transfer activities de-
16 scribed in subsection (a), relating to highway, public
17 transportation, bicycle, pedestrian, and intermodal
18 transportation systems.

19 “(2) WAIVERS.—The Secretary may waive the
20 application of paragraph (1) with respect to a State
21 for a fiscal year if the State certifies to the Sec-
22 retary for the fiscal year that the funds described in
23 paragraph (1) are not needed for research, develop-
24 ment, and technology transfer and the Secretary ac-
25 cepts such certification.

1 “(3) NONAPPLICABILITY OF ASSESSMENT.—
2 Funds expended under paragraph (1) shall not be
3 considered to be part of the extramural budget of
4 the agency for the purpose of section 9 of the Small
5 Business Act (15 U.S.C. 638).

6 “(c) MINIMUM EXPENDITURES FOR IMPROVING THE
7 QUALITY OF COLLECTION AND REPORTING OF STRA-
8 TEGIC SURFACE TRANSPORTATION DATA.—

9 “(1) IN GENERAL.—Subject to paragraph (2),
10 not less than 10 percent of the funds appropriated
11 pursuant to subsection (a) for a fiscal year to a
12 State shall be expended by the State to improve the
13 collection and reporting of strategic surface trans-
14 portation data to provide critical information about
15 the extent, condition, use, performance, and financ-
16 ing of the Nation’s surface transportation system
17 (including intermodal connectors) for passenger and
18 freight movement.

19 “(2) WAIVERS.—The Secretary may waive the
20 application of paragraph (1) with respect to a State
21 for a fiscal year if the State certifies to the Sec-
22 retary for the fiscal year that the State is collecting
23 and reporting strategic data consistent with quality
24 assurance guidelines developed cooperatively with the
25 States and the Secretary approves such certification.

1 “(d) FEDERAL SHARE.—The Federal share of the
2 cost of a project carried out using funds subject to sub-
3 section (a) shall be matched in accordance with section
4 120(b) unless the Secretary determines that the interests
5 of the surface transportation program would be best
6 served without such matching.”.

7 **SEC. 109. FUTURE STRATEGIC HIGHWAY RESEARCH PRO-**
8 **GRAM.**

9 (a) AMENDMENT.—Chapter 5 of title 23, United
10 States Code, is amended by adding at the end the fol-
11 lowing new section:

12 **“§ 509. Future strategic highway research program**

13 “(a) ESTABLISHMENT.—The Secretary, in consulta-
14 tion with the American Association of State Highway and
15 Transportation Officials, shall enter into an arrangement
16 with the National Academy of Sciences for the establish-
17 ment of a Future Strategic Highway Research Program.

18 “(b) GRANTS, COOPERATIVE AGREEMENTS, AND
19 CONTRACTS.—The Secretary may make grants to, and
20 enter into cooperative agreements and contracts with, the
21 American Association of State Highway and Transpor-
22 tation Officials and the National Academy of Sciences to
23 carry out activities under this section. Advance payments
24 may be made as necessary to carry out the program under
25 this section. Although no matching funds are required for

1 this program, collaborative research projects with multiple
2 sources of funding shall be encouraged.

3 “(c) PERIOD OF AVAILABILITY.—Funds set aside to
4 carry out this section shall remain available for the fiscal
5 year for which such funds are made available and the
6 three succeeding fiscal years.

7 “(d) SET ASIDE.—There are authorized to be appro-
8 priated to the Secretary of Transportation for each of fis-
9 cal years 2004 through 2009, to carry out this section,
10 \$75,000,000.

11 “(e) PROGRAM ADMINISTRATION.—In carrying out
12 the program under this section, the National Academy of
13 Sciences shall ensure that—

14 “(1) the selection of projects and researchers
15 shall be based on the open solicitation of proposals
16 and be reviewed by panels of appropriate experts;
17 and

18 “(2) State transportation officials and other
19 stakeholders, including business, local governments,
20 metropolitan planning organizations, environmental
21 and community organizations, academia, other rel-
22 evant Federal agencies, and other members of the
23 transportation community are involved in the gov-
24 ernance of the program at the executive, the overall

1 program, and the technical levels, through the use of
2 expert panels and committees.

3 “(f) CONTENTS.—The program established under
4 this section shall be based on Transportation Research
5 Board Special Report 260, entitled ‘Strategic Highway
6 Research: Saving Lives, Reducing Congestion, Improving
7 Quality of Life’. It shall include the following research
8 areas:

9 “(1) Accelerating the renewal of America’s
10 highways.

11 “(2) Making a significant improvement in high-
12 way safety.

13 “(3) Providing a highway system with reliable
14 travel times.

15 “(4) Providing highway capacity in support of
16 the Nation’s economic, environmental, multi-modal
17 transportation, and social goals.

18 “(g) PROJECT EVALUATION.—The products of all re-
19 search grants, cooperative agreements, and contracts
20 awarded under this section shall be subject to peer review.

21 “(h) PROGRAMMATIC EVALUATIONS.—Within 2 years
22 after the first research project grants, cooperative agree-
23 ments, or contracts are awarded under this section, the
24 Secretary shall enter into an arrangement with the Na-
25 tional Academy of Public Administration to review the

1 program under this section, and to recommend improve-
2 ments. The review shall—

3 “(1) assess the degree to which projects funded
4 under this section have addressed the research topics
5 identified in the research agenda established in
6 Transportation Research Board Special Report 260,
7 including identifying those topics which have not yet
8 been addressed;

9 “(2) assess the merit and peer review process
10 for project proposals, and assess research project re-
11 sults; and

12 “(3) assess the extent of stakeholder involve-
13 ment in all facets of the program.

14 “(i) ANNUAL PROGRESS AND PERFORMANCE RE-
15 PORT.—The National Academy of Sciences shall produce
16 an annual progress and performance report for the pro-
17 gram under this section. The report shall summarize the
18 status, funding, and sponsors of all funded projects by the
19 research areas specified in subsection (f). It shall docu-
20 ment the progress of each project relative to milestones
21 included in the project proposal. The report shall identify
22 research areas and projects remaining unfunded, and an-
23 ticipated funding needs for completing that research. The
24 report shall be submitted to the Secretary, to the Com-
25 mittee on Transportation and Infrastructure and the

1 Committee on Science of the House of Representatives,
2 and to the Committee on Environment and Public Works
3 of the Senate.”.

4 (b) CONFORMING AMENDMENT.—The analysis of
5 chapter 5 of title 23, United States Code, is amended by
6 adding at the end the following new item:

“509. Future strategic highway research program.”.

7 **SEC. 110. UNIVERSITY TRANSPORTATION CENTERS.**

8 Section 5505 of title 49, United States Code, is
9 amended to read as follows:

10 **“§ 5505. University transportation research**

11 “(a) REGIONAL CENTERS.—The Secretary of Trans-
12 portation shall make grants to nonprofit institutions of
13 higher learning to establish and operate 1 university
14 transportation center in each of the 10 United States Gov-
15 ernment regions that comprise the Standard Federal Re-
16 gional Boundary System.

17 “(b) OTHER CENTERS.—The Secretary shall make
18 grants to nonprofit institutions of higher learning to es-
19 tablish and operate university transportation centers, in
20 addition to the centers receiving grants under subsection
21 (a), to address transportation management and research
22 and development matters, with special attention to in-
23 creasing the number of highly skilled individuals entering
24 the field of transportation.

25 “(c) SELECTION OF GRANT RECIPIENTS.—

1 “(1) APPLICATIONS.—In order to be eligible to
2 receive a grant under this section, a nonprofit insti-
3 tution of higher learning shall submit to the Sec-
4 retary an application that is in such form and con-
5 tains such information as the Secretary may require.

6 “(2) SELECTION CRITERIA.—Except as other-
7 wise provided by this section, the Secretary shall se-
8 lect each recipient of a grant under this section
9 through a competitive, peer-reviewed process on the
10 basis of the following:

11 “(A) For regional centers, the location of
12 the center within the Federal region to be
13 served.

14 “(B) The demonstrated research and ex-
15 tension resources available to the recipient to
16 carry out this section.

17 “(C) The capability of the recipient to pro-
18 vide leadership in making national and regional
19 contributions to the solution of immediate and
20 long-range transportation problems.

21 “(D) The recipient’s establishment of a
22 surface transportation program encompassing
23 several modes of transportation.

24 “(E) The recipient’s demonstrated commit-
25 ment of at least \$200,000 in regularly budgeted

1 institutional amounts each year to support on-
2 going transportation research and education
3 programs.

4 “(F) The recipient’s demonstrated ability
5 to disseminate results of transportation re-
6 search and education programs through a state-
7 wide or regionwide continuing education pro-
8 gram.

9 “(G) The strategic plan the recipient pro-
10 poses to carry out under the grant.

11 “(d) OBJECTIVES.—Each university transportation
12 center receiving a grant under this section shall conduct
13 the following programs and activities:

14 “(1) Basic and applied research that supports
15 the Department’s research agenda consistent with
16 section 508 of title 23, the products of which are
17 peer-reviewed by other experts in the field to ad-
18 vance the body of knowledge in transportation.

19 “(2) An education program that includes multi-
20 disciplinary course work, faculty and student partici-
21 pation in research, and an opportunity for practical
22 experience.

23 “(3) An ongoing program of technology transfer
24 that makes research results available to potential

1 users in a form that can be implemented, utilized,
2 or otherwise applied.

3 “(e) MAINTENANCE OF EFFORT.—To be eligible to
4 receive a grant under this section, an applicant shall—

5 “(1) enter into an agreement with the Secretary
6 to ensure that the applicant will maintain total ex-
7 penditures from all other sources to establish and
8 operate a university transportation center and re-
9 lated educational and research activities at a level
10 that is at least equal to the average level of those
11 expenditures during the 2 fiscal years before the
12 date on which the grant is provided;

13 “(2) provide the annual institutional contribu-
14 tion required under subsection (c)(2);

15 “(3) submit to the Secretary, in a timely man-
16 ner, for use by the Secretary in the preparation of
17 the annual research report under section 508(e)(5)
18 of title 23, an annual report on the projects and ac-
19 tivities of the university transportation center for
20 which funds are made available for the fiscal year
21 covered by the report, a description of—

22 “(A) the goals of the center;

23 “(B) the educational activities carried out
24 by the center (including a detailed summary of
25 the budget for those educational activities);

1 “(C) teaching activities of faculty at the
2 center;

3 “(D) each research project carried out by
4 the center, including—

5 “(i) the identity and location of each
6 investigator working on a research project;

7 “(ii) the overall funding amount for
8 each research project (including the
9 amounts expended for the project as of the
10 date of the report);

11 “(iii) the current schedule for each re-
12 search project; and

13 “(iv) the results of each research
14 project through the date of submission of
15 the report, with particular emphasis on re-
16 sults for the fiscal year covered by the re-
17 port; and

18 “(E) overall technology transfer and imple-
19 mentation efforts of the center;

20 “(4) make use of National Research Council,
21 Transportation Research Board, and Transportation
22 Research Information Services online databases
23 for—

24 “(A) program development and strategic
25 planning;

1 “(B) reporting of activities funded under
2 this section; and

3 “(C) input and dissemination of results
4 and reports from completed research; and

5 “(5) recommend a representative to serve as li-
6 aison to the Transportation Research Board.

7 “(f) FEDERAL SHARE.—The Federal share of the
8 costs of activities carried out using a grant made under
9 subsection (a) is 80 percent of costs, and under subsection
10 (b) is 50 percent of costs. The non-Federal share may in-
11 clude funds provided to a recipient under section 503,
12 504(b), or 505 of title 23, United States Code.

13 “(g) PROGRAM COORDINATION.—

14 “(1) COORDINATION.—The Secretary shall co-
15 ordinate the research, education, training, and tech-
16 nology transfer activities that grant recipients carry
17 out under this section, disseminate the results of the
18 research, and establish and operate a clearinghouse.

19 “(2) ANNUAL REVIEW AND EVALUATION.—At
20 least annually and consistent with the plan devel-
21 oped under section 508 of title 23, United States
22 Code, the Secretary shall review and evaluate pro-
23 grams the grant recipients carry out.

24 “(3) FUNDING LIMITATION.—The Secretary
25 may use not more than 1 percent of amounts made

1 available from Government sources to carry out this
2 subsection.

3 “(h) LIMITATION ON AVAILABILITY OF FUNDS.—
4 Funds made available to carry out this program shall re-
5 main available for obligation for a period of 2 years after
6 the last day of the fiscal year for which such funds are
7 authorized.

8 “(i) GRANTS.—The Secretary may make grants
9 under this section as follows:

10 “(1) For grants under subsection (a)—

11 “(A) \$2,000,000 for fiscal year 2004;

12 “(B) \$3,000,000 for fiscal year 2005;

13 “(C) \$4,000,000 for fiscal year 2006;

14 “(D) \$4,000,000 for fiscal year 2007;

15 “(E) \$4,000,000 for fiscal year 2008; and

16 “(F) \$4,000,000 for fiscal year 2009.

17 “(2) For grants under subsection (b) to centers
18 that received funding for fiscal years 2002 and 2003
19 under this section—

20 “(A) \$2,000,000 for fiscal year 2004;

21 “(B) \$2,000,000 for fiscal year 2005; and

22 “(C) \$2,000,000 for fiscal year 2006.

23 “(3) For 6 additional grants under subsection
24 (b)—

25 “(A) \$2,000,000 for fiscal year 2004;

1 “(B) \$2,000,000 for fiscal year 2005; and

2 “(C) \$2,000,000 for fiscal year 2006.

3 “(4) For 16 grants under subsection (b), which
4 may include grants to centers described in para-
5 graph (2)—

6 “(A) \$3,000,000 for fiscal year 2007;

7 “(B) \$3,000,000 for fiscal year 2008; and

8 “(C) \$3,000,000 for fiscal year 2009.

9 “(j) TRANSPORTATION EDUCATION DEVELOPMENT
10 PILOT PROGRAM.—

11 “(1) ESTABLISHMENT.—The Secretary shall es-
12 tablish a program to make grants to State Depart-
13 ments of Transportation, who in conjunction with
14 nonprofit institutions of higher education, will de-
15 velop and test new curricula to educate the transpor-
16 tation workforce.

17 “(2) SELECTION OF GRANT RECIPIENTS.—In
18 selecting applications for awards under this sub-
19 section, the Secretary shall consider—

20 “(A) the degree to which the new curricula
21 will address the specific workforce needs of the
22 State, evaluated on the basis of a State’s devel-
23 opment of a strategic human resources plan
24 and how the new curricula will help fulfill the
25 plan;

1 “(B) the degree to which the new curricula
2 will provide expertise in areas other than engi-
3 neering, such as business administration, eco-
4 nomics, information technology, environmental
5 science, and law, as determined necessary by
6 the State; and

7 “(C) a State’s commitment to continuing
8 the program beyond the pilot effort.

9 “(3) NUMBER AND AMOUNT OF GRANTS.—For
10 fiscal years 2004, 2005, and 2006, the Secretary
11 shall make 4 grants under this subsection, each in
12 the amount of \$1,000,000. For fiscal years 2007,
13 2008, and 2009, the Secretary shall make 4 grants
14 under this subsection, each in the amount of
15 \$500,000.”.

16 **SEC. 111. INTELLIGENT TRANSPORTATION SYSTEMS.**

17 (a) AMENDMENT.—Subtitle C of title V of the Trans-
18 portation Equity Act for the 21st Century is amended to
19 read as follows:

20 **“Subtitle C—Intelligent**
21 **Transportation Systems**

22 **“SEC. 5201. SHORT TITLE.**

23 “‘This subtitle may be cited as the ‘Intelligent Trans-
24 portation Systems Act of 2003’.

1 **“SEC. 5202. GOALS AND PURPOSES.**

2 “(a) GOALS.—The goals of the intelligent transpor-
3 tation system program include—

4 “(1) enhancement of surface transportation ef-
5 ficiency and facilitation of intermodalism and inter-
6 national trade to enable existing facilities to meet a
7 significant portion of future transportation needs,
8 including public access to employment, goods, and
9 services, and to reduce regulatory, financial, and
10 other transaction costs to public agencies and sys-
11 tem users;

12 “(2) achievement of national transportation
13 safety goals, including the enhancement of safe oper-
14 ation of motor vehicles and nonmotorized vehicles,
15 with particular emphasis on decreasing the number
16 and severity of collisions;

17 “(3) protection and enhancement of the natural
18 environment and communities affected by surface
19 transportation, with particular emphasis on assisting
20 State and local governments to achieve national en-
21 vironmental goals;

22 “(4) accommodation of the needs of all users of
23 surface transportation systems, including operators
24 of commercial vehicles, passenger vehicles, motor-
25 cycles, and bicycles, and including pedestrians and
26 individuals with disabilities; and

1 “(5) improvement of the Nation’s ability to re-
2 spond to security related or other man made emer-
3 gencies and natural disasters, and enhancement of
4 national defense mobility.

5 “(b) PURPOSES.—The Secretary shall implement ac-
6 tivities under the intelligent transportation system pro-
7 gram to, at a minimum—

8 “(1) develop and test new and emerging tech-
9 nologies to meet the goals described in subsection
10 (a);

11 “(2) expedite deployment, in both metropolitan
12 and rural areas, and ensure integration and inter-
13 operability of proven intelligent transportation sys-
14 tems;

15 “(3) ensure that Federal, State, and local
16 transportation officials have adequate knowledge of
17 intelligent transportation systems for full consider-
18 ation in the transportation planning process;

19 “(4) improve regional cooperation and oper-
20 ations planning for effective intelligent transpor-
21 tation system deployment;

22 “(5) promote the innovative use of private re-
23 sources;

1 “(6) develop a workforce capable of developing,
2 operating, and maintaining intelligent transportation
3 systems; and

4 “(7) evaluate costs and benefits of intelligent
5 transportation systems projects.

6 **“SEC. 5203. GENERAL AUTHORITIES AND REQUIREMENTS.**

7 “(a) SCOPE.—Subject to the provisions of this sub-
8 title, the Secretary shall conduct an ongoing intelligent
9 transportation system program to research, develop, and
10 operationally test intelligent transportation systems and
11 advance nationwide deployment of proven systems through
12 research on barriers to deployment as a component of the
13 surface transportation systems of the United States.

14 “(b) POLICY.—Intelligent transportation system re-
15 search, development, operational tests, and deployment
16 projects funded pursuant to this subtitle shall encourage
17 and not displace public-private partnerships or private sec-
18 tor investment in such research and development tests and
19 projects.

20 “(c) COOPERATION WITH GOVERNMENTAL, PRI-
21 VATE, AND EDUCATIONAL ENTITIES.—The Secretary
22 shall carry out the intelligent transportation system pro-
23 gram in cooperation with State and local governments and
24 other public entities, the United States private sector, the
25 Federal laboratories, and colleges and universities, includ-

1 ing historically black colleges and universities and other
2 minority institutions of higher education.

3 “(d) CONSULTATION WITH FEDERAL OFFICIALS.—

4 In carrying out the intelligent transportation system pro-
5 gram, the Secretary, as appropriate, shall consult with the
6 Secretary of Commerce, the Secretary of the Treasury, the
7 Secretary of Homeland Security, the Administrator of the
8 Environmental Protection Agency, the Director of the Na-
9 tional Science Foundation, and the heads of other Federal
10 departments and agencies.

11 “(e) TECHNICAL ASSISTANCE, TRAINING, AND IN-

12 FORMATION.—The Secretary shall provide technical as-
13 sistance, training, and information to State and local gov-
14 ernments seeking to implement, operate, maintain, or
15 evaluate intelligent transportation system technologies and
16 services.

17 “(f) TRANSPORTATION PLANNING.—The Secretary

18 may provide funding to support adequate consideration of
19 transportation system management and operations, in-
20 cluding intelligent transportation systems, within metro-
21 politan and statewide transportation planning processes.

22 “(g) INFORMATION CLEARINGHOUSE.—

23 “(1) IN GENERAL.—The Secretary shall—

24 “(A) maintain a repository for technical
25 and safety data collected as a result of federally

1 sponsored projects carried out under this sub-
2 title; and

3 “(B) make that information (except for
4 proprietary information and data) readily avail-
5 able to all users of the repository at an appro-
6 priate cost.

7 “(2) DELEGATION OF AUTHORITY.—

8 “(A) IN GENERAL.—The Secretary may
9 delegate the responsibility of the Secretary
10 under this subsection, with continuing oversight
11 by the Secretary, to an appropriate entity not
12 within the Department of Transportation.

13 “(B) FEDERAL ASSISTANCE.—If the Sec-
14 retary delegates the responsibility, the entity to
15 which the responsibility is delegated shall be eli-
16 gible for Federal assistance under this section.

17 “(h) ADVISORY COMMITTEE.—

18 “(1) IN GENERAL.—The Secretary shall estab-
19 lish an Advisory Committee to advise the Secretary
20 on carrying out this subtitle.

21 “(2) MEMBERSHIP.—The Advisory Committee
22 shall have no more than 20 members and include, at
23 a minimum—

24 “(A) a representative from a State high-
25 way department;

1 “(B) a representative from a local highway
2 department;

3 “(C) a representative from a State, local,
4 or regional transit agency;

5 “(D) a representative from a metropolitan
6 planning organization;

7 “(E) a private sector vendor of intelligent
8 transportation system technologies;

9 “(F) a private sector user of intelligent
10 transportation system technologies;

11 “(G) an academic researcher who is a civil
12 engineer;

13 “(H) an academic researcher who is a so-
14 cial scientist;

15 “(I) a representative from the Intelligent
16 Transportation Society of America;

17 “(J) a representative from a public interest
18 group concerned with safety;

19 “(K) a representative from a public inter-
20 est group concerned with community develop-
21 ment; and

22 “(L) members with expertise in planning,
23 safety, and operations.

24 “(3) DUTIES.—The Advisory Committee shall,
25 at a minimum, perform the following duties—

1 “(A) Provide input into the development of
2 the National ITS Program Plan, and the Intel-
3 ligent Transportation System portion of each
4 strategic plan under section 508 of title 23,
5 United States Code.

6 “(B) Review the National ITS Program
7 Plan and the Intelligent Transportation System
8 portion of each strategic plan under section 508
9 of title 23, United States Code, and transmit
10 the Advisory Committee’s views on the plans to
11 Congress.

12 “(C) Analyze intelligent transportation sys-
13 tems technologies, for which a plan or budget
14 proposal has recommended funding for research
15 and development activities or operational tests,
16 to advise the Department on—

17 “(i) whether the intelligent transpor-
18 tation system technologies are likely to be
19 deployed by users, and, if not, to determine
20 the barriers to deployment;

21 “(ii) the appropriate roles for govern-
22 ment and the private sector in investing in
23 specific intelligent transportation system
24 technologies; and

1 “(iii) whether these activities are like-
2 ly to advance either the state-of-the-prac-
3 tice or state-of-the-art in intelligent trans-
4 portation systems.

5 “(4) APPLICABILITY OF FEDERAL ADVISORY
6 COMMITTEE ACT.—The Advisory Committee shall be
7 subject to the Federal Advisory Committee Act (5
8 U.S.C. App.).

9 “(i) PROCUREMENT METHODS.—

10 “(1) TECHNICAL ASSISTANCE.—The Secretary
11 shall develop appropriate technical assistance and
12 guidance to assist State and local agencies in evalu-
13 ating and selecting appropriate methods of procure-
14 ment for intelligent transportation system projects
15 carried out using funds made available from the
16 Highway Trust Fund, including innovative and non-
17 traditional methods such as the Information Tech-
18 nology Omnibus Procurement.

19 “(2) INTELLIGENT TRANSPORTATION SYSTEM
20 SOFTWARE.—To the maximum extent practicable,
21 contracting officials shall use as a critical evaluation
22 criterion the Software Engineering Institute’s Capa-
23 bility Maturity Model, or another similar recognized
24 software design and development methodology, to re-
25 duce the cost, schedule, and performance risks asso-

1 ciated with the development, management, and inte-
2 gration of intelligent transportation system software.

3 “(j) EVALUATIONS.—

4 “(1) GUIDELINES AND REQUIREMENTS.—

5 “(A) IN GENERAL.—The Secretary shall
6 issue guidelines and requirements for the eval-
7 uation of operational tests and model deploy-
8 ment projects carried out under this subtitle.

9 “(B) CONTENT.—Such evaluations shall
10 include specific, quantitative measures to deter-
11 mine whether a technology is meeting its in-
12 tended goal. To the maximum extent prac-
13 ticable, these measures shall evaluate the out-
14 come of the technology (such as accidents
15 avoided or decreased travel times or travel time
16 variability).

17 “(C) OBJECTIVITY AND INDEPENDENCE.—

18 The guidelines and requirements issued under
19 subparagraph (A) shall include provisions to en-
20 sure the objectivity and independence of the
21 evaluator so as to avoid any real or apparent
22 conflict of interest or potential influence on the
23 outcome by parties to any such test or deploy-
24 ment project or by any other formal evaluation
25 carried out under this subtitle.

1 “(D) FUNDING.—The guidelines and re-
2 quirements issued under subparagraph (A) shall
3 establish evaluation funding levels, based on the
4 size and scope of each test or project, that en-
5 sure adequate evaluation of the results of the
6 test or project.

7 “(E) DISSEMINATION.—The Secretary
8 shall make readily available through the Inter-
9 net all information collected through evalua-
10 tions carried out under this subtitle.

11 “(2) SPECIAL RULE.—Any survey, question-
12 naire, or interview that the Secretary considers nec-
13 essary to carry out the evaluation of any test, de-
14 ployment project, or program assessment activity
15 under this subtitle shall not be subject to chapter 35
16 of title 44, United States Code.

17 “(k) USE OF RIGHTS-OF-WAY.—Intelligent transpor-
18 tation system projects specified in section 5117(b)(3) and
19 5117(b)(6) and involving privately owned intelligent trans-
20 portation system components that are carried out using
21 funds made available from the Highway Trust Fund shall
22 not be subject to any law or regulation of a State or polit-
23 ical subdivision of a State prohibiting or regulating com-
24 mercial activities in the rights-of-way of a highway for
25 which Federal-aid highway funds have been utilized for

1 planning, design, construction, or maintenance, if the Sec-
2 retary of Transportation determines that such use is in
3 the public interest. Nothing in this subsection shall affect
4 the authority of a State or political subdivision of a State
5 to regulate highway safety.

6 **“SEC. 5204. NATIONAL ITS PROGRAM PLAN.**

7 “(a) IN GENERAL.—

8 “(1) UPDATES.—The Secretary shall publish an
9 update of the ‘National Intelligent Transportation
10 Systems Program Plan Five-Year Horizon’, pub-
11 lished in August, 2000. The Secretary shall consult
12 with the Advisory Committee established under sec-
13 tion 5203(h) in carrying out this section.

14 “(2) SCOPE.—The National ITS Program Plan
15 update shall—

16 “(A) specify the goals, objectives, and mile-
17 stones for the research and deployment of intel-
18 ligent transportation systems in the context of
19 major metropolitan areas, smaller metropolitan
20 and rural areas, and commercial vehicle oper-
21 ations;

22 “(B) evaluate how the intelligent transpor-
23 tation systems program has progressed in
24 achieving the goals, objectives, and milestones
25 referred to in subparagraph (A);

1 “(C) compare actual outcomes of the intel-
2 ligent transportation systems program over the
3 last 5 years to projections from the 2000 Plan
4 referred to in paragraph (1);

5 “(D) for each goal, objective, milestone, or
6 projection found under subparagraph (B) or
7 (C) not to have been achieved, document the
8 barriers to achievement;

9 “(E) specify how specific programs and
10 projects will achieve the goals, objectives, and
11 milestones referred to in subparagraph (A), in
12 the next 5 years;

13 “(F) specify necessary and realistically
14 achievable timeframes and funding levels to
15 conduct the programs and projects referred to
16 in subparagraph (E) in order to achieve the
17 goals, objectives, and milestones referred to in
18 subparagraph (A);

19 “(G) develop a plan for addressing barriers
20 documented under subparagraph (D);

21 “(H) identify activities that provide for the
22 dynamic development of standards and proto-
23 cols to promote and ensure interoperability in
24 the implementation of intelligent transportation

1 system technologies, including actions taken to
2 establish critical standards; and

3 “(I) establish a cooperative process with
4 State and local governments for determining
5 desired surface transportation system perform-
6 ance levels and developing plans for incorpora-
7 tion of specific intelligent transportation system
8 capabilities into surface transportation systems.

9 “(b) REPORTING.—The National ITS Program Plan
10 shall be transmitted to the Congress not later than August
11 31, 2005.

12 “(c) ADVISORY COMMITTEE REVIEW.—The Advisory
13 Committee established under section 5203(h) shall review
14 the National ITS Program Plan that is transmitted to
15 Congress under this section, and shall transmit the Advi-
16 sory Committee’s views on the Plan to Congress.

17 **“SEC. 5205. INFORMATION STRATEGY.**

18 “(a) DEVELOPMENT AND IMPLEMENTATION.—The
19 Secretary shall develop and implement a strategy to use
20 information collected from intelligent transportation sys-
21 tem technologies (including technologies used in roadway,
22 transit, and in-vehicle applications) for traffic manage-
23 ment and for planning, performance monitoring, program
24 assessment, and policy applications. The Secretary shall
25 ensure that the Bureau of Transportation Statistics plays

1 a significant role in the development of the strategy under
2 this section.

3 “(b) CONSIDERATIONS.—The strategy developed
4 under this section shall—

5 “(1) consider current data sources and propose
6 future data sources, as well as proposing strategies
7 for both real-time use and archived use of data;

8 “(2) determine what data should be centralized
9 nationally in support of national planning and goals,
10 what information should be aggregated regionally,
11 and what information should be kept locally, and for
12 nationally centralized data, identify how to ensure
13 that data is collected and reported consistently;

14 “(3) assess the need for data standards;

15 “(4) outline how transportation decision proc-
16 esses can make best use of real-time data;

17 “(5) outline a vision for the future linkages be-
18 tween intelligent transportation system technologies
19 and data;

20 “(6) identify public and private data sources
21 other than intelligent transportation system data
22 sources (such as roadway characteristics inventories
23 and incident information) that, combined with intel-
24 ligent transportation system data, would enhance the
25 utility of intelligent transportation system data to

1 decisionmakers, and how these data sources can be
2 merged;

3 “(7) identify how to make data most accessible
4 and useful to users; and

5 “(8) identify what information would be useful
6 to stakeholders at the local, State, regional, and na-
7 tional levels.

8 “(c) **STAKEHOLDER INVOLVEMENT.**—In developing
9 the strategy under this section, the Secretary shall involve
10 developers and users of intelligent transportation system
11 technologies, including State and local highway depart-
12 ments, metropolitan planning organizations, transit agen-
13 cies, travelers, the private sector, not-for-profit organiza-
14 tions, and representatives from the planning, safety, oper-
15 ations, and research communities.

16 “(d) **INCORPORATION INTO NATIONAL ARCHITEC-**
17 **TURE.**—The strategy developed under this section shall,
18 to the extent practicable, be incorporated into the national
19 architecture.

20 “(e) **REPORT TO CONGRESS.**—Not later than 1 year
21 after the date of the enactment of this subsection, the Sec-
22 retary shall transmit to the Congress a report outlining
23 the strategy developed under this section.

24 **“SEC. 5206. NATIONAL ARCHITECTURE AND STANDARDS.**

25 “(a) **IN GENERAL.**—

1 “(1) DEVELOPMENT, IMPLEMENTATION, AND
2 MAINTENANCE.—Consistent with section 12(d) of
3 the National Technology Transfer and Advancement
4 Act of 1995 (15 U.S.C. 272 note; 110 Stat. 783),
5 the Secretary shall develop, implement, and maintain
6 a national architecture and supporting standards
7 and protocols to promote the widespread use and
8 evaluation of intelligent transportation system tech-
9 nology as a component of the surface transportation
10 systems of the United States.

11 “(2) GOAL.—The goal of the national architec-
12 ture and standards shall be to ensure interoper-
13 ability among, and efficiency of, intelligent transpor-
14 tation system technologies implemented throughout
15 the United States.

16 “(3) USE OF STANDARDS DEVELOPMENT ORGA-
17 NIZATIONS.—In carrying out this section, the Sec-
18 retary may use the services of such standards devel-
19 opment organizations as the Secretary determines to
20 be appropriate.

21 “(4) STANDARD VALIDATION.—The Secretary
22 shall ensure that new standards promulgated for in-
23 telligent transportation system technologies are test-
24 ed and validated, and shall ensure that the results

1 of such testing and validation are made publicly
2 available.

3 “(b) PROVISIONAL STANDARDS.—

4 “(1) IN GENERAL.—If the Secretary finds that
5 the development or balloting of an intelligent trans-
6 portation system standard jeopardizes the timely
7 achievement of the objectives identified in subsection
8 (a)(1) and (2), the Secretary may establish a provi-
9 sional standard after consultation with affected par-
10 ties, and using, to the extent practicable, the work
11 product of appropriate standards development orga-
12 nizations.

13 “(2) PERIOD OF EFFECTIVENESS.—A provi-
14 sional standard established under paragraph (1)
15 shall be published in the Federal Register and re-
16 main in effect until the appropriate standards devel-
17 opment organization adopts and publishes a stand-
18 ard.

19 “(c) CONFORMITY WITH NATIONAL ARCHITEC-
20 TURE.—

21 “(1) IN GENERAL.—Except as provided in para-
22 graphs (2) and (3), the Secretary shall ensure that
23 intelligent transportation system projects carried out
24 using funds made available from the Highway Trust
25 Fund, including funds made available to deploy in-

1 telligent transportation system technologies, conform
2 to the national architecture, applicable standards or
3 provisional standards, and protocols developed under
4 subsection (a).

5 “(2) SECRETARY’S DISCRETION.—The Sec-
6 retary may authorize exceptions to paragraph (1)
7 for—

8 “(A) projects designed to achieve specific
9 research objectives outlined in the National ITS
10 Program Plan under section 5204 or the Sur-
11 face Transportation Research and Development
12 Strategic Plan developed under section 508 of
13 title 23, United States Code; or

14 “(B) the upgrade or expansion of an intel-
15 ligent transportation system in existence on the
16 date of enactment of the Transportation Equity
17 Act for the 21st Century, if the Secretary de-
18 termines that the upgrade or expansion—

19 “(i) would not adversely affect the
20 goals or purposes of this subtitle;

21 “(ii) is carried out before the end of
22 the useful life of such system; and

23 “(iii) is cost-effective as compared to
24 alternatives that would meet the con-
25 formity requirement of paragraph (1).

1 “(3) EXCEPTIONS.—Paragraph (1) shall not
2 apply to funds used for operation or maintenance of
3 an intelligent transportation system in existence on
4 the date of enactment of the Transportation Equity
5 Act for the 21st Century.

6 **“SEC. 5207. RESEARCH AND DEVELOPMENT.**

7 “(a) IN GENERAL.—The Secretary shall carry out a
8 comprehensive program of research, development, and
9 operational tests of intelligent vehicles and intelligent in-
10 frastructure systems, as well as research into barriers to
11 their deployment, and other similar activities that are nec-
12 essary to carry out this subtitle.

13 “(b) PRIORITY AREAS.—Under the program, the Sec-
14 retary shall give higher priority to funding projects that—

15 “(1) reduce congestion in metropolitan regions;

16 “(2) improve mobility and efficiency by address-
17 ing traffic management, incident management, tran-
18 sit management, toll collection, traveler information,
19 or highway operations systems;

20 “(3) improve safety by focusing on crash-avoid-
21 ance and integration of in-vehicle crash protection
22 technologies with other onboard safety systems, in-
23 cluding the interaction of air bags and safety belts;

24 “(4) improve security by focusing on responding
25 to security-related emergencies, and preventing such

1 emergencies, through tracking the movement of
2 goods;

3 “(5) incorporate human factors research, in-
4 cluding the science of the driving process;

5 “(6) improve deployment of proven technologies
6 by addressing nontechnical barriers to the deploy-
7 ment of intelligent transportation system tech-
8 nologies, including institutional barriers such as
9 fragmented authority at the local level, privacy con-
10 siderations, and rigid procurement rules, and the
11 best ways to develop partnerships to successfully de-
12 ploy intelligent transportation system technologies;

13 “(7) facilitate the integration of intelligent in-
14 frastructure, vehicle, and control technologies, in-
15 cluding magnetic guidance control systems or other
16 materials or magnetics research;

17 “(8) incorporate research on the impact of envi-
18 ronmental, weather, and natural conditions on intel-
19 ligent transportation systems, including the effects
20 of cold climates; or

21 “(9) facilitate high-performance transportation
22 systems, through methods such as congestion pric-
23 ing, real-time facility management, rapid emergency
24 response, and just-in-time transit.

1 “(c) OPERATIONAL TESTS.—Operational tests shall
2 be used to evaluate promising technologies that have not
3 yet been demonstrated. Operational tests conducted under
4 this section shall be designed for the collection of data to
5 permit objective evaluation of the results of the tests, deri-
6 vation of cost-benefit information that is useful to others
7 contemplating deployment of similar systems, and develop-
8 ment and implementation of standards.

9 “(d) FEDERAL SHARE.—The Federal share of the
10 cost of operational tests and demonstrations under sub-
11 section (a) shall not exceed 80 percent.

12 **“SEC. 5208. USE OF FUNDS.**

13 “(a) CONGESTION REDUCTION.—At least $\frac{1}{3}$ of funds
14 spent under section 5207 for intelligent transportation
15 systems research and development shall be used to re-
16 search, develop, and operationally test technologies whose
17 primary purpose is to reduce congestion.

18 “(b) OUTREACH AND PUBLIC RELATIONS LIMITA-
19 TION.—

20 “(1) IN GENERAL.—For each fiscal year, not
21 more than \$5,000,000 of the funds made available
22 to carry out this subtitle shall be used for intelligent
23 transportation system outreach, public relations, dis-
24 plays, scholarships, tours, and brochures.

1 “(2) APPLICABILITY.—Paragraph (1) shall not
2 apply to intelligent transportation system training or
3 the publication or distribution of research findings,
4 technical guidance, or similar documents.

5 “(c) INFRASTRUCTURE DEVELOPMENT.—Funds
6 made available to carry out this subtitle for operational
7 tests—

8 “(1) shall be used primarily for the development
9 of intelligent transportation system infrastructure;
10 and

11 “(2) to the maximum extent practicable, shall
12 not be used for the construction of physical highway
13 and transit infrastructure unless the construction is
14 incidental and critically necessary to the implemen-
15 tation of an intelligent transportation system
16 project.

17 “(d) USE OF INNOVATIVE FINANCING.—

18 “(1) IN GENERAL.—The Secretary may use up
19 to 25 percent of the funds made available to carry
20 out this subtitle to make available loans, lines of
21 credit, and loan guarantees for projects that are eli-
22 gible for assistance under this subtitle and that have
23 significant intelligent transportation system ele-
24 ments.

1 “(2) CONSISTENCY WITH OTHER LAW.—Credit
2 assistance described in paragraph (1) shall be made
3 available in a manner consistent with the Transpor-
4 tation Infrastructure Finance and Innovation Act of
5 1998.

6 **“SEC. 5209. PROGRAM EVALUATION.**

7 “The Secretary shall enter into an arrangement with
8 the National Academy of Sciences, or another independent
9 institution, to evaluate the Department of Transpor-
10 tation’s intelligent transportation system program. The
11 evaluation shall assess, at a minimum—

12 “(1) how well the intelligent transportation sys-
13 tem program has achieved its goals as set forth in
14 the 2000 5-year plan referred to in section
15 5204(a)(1), including—

16 “(A) expediting integrated intelligent
17 transportation system deployment in metropoli-
18 tan and rural areas for both passenger and
19 freight transportation;

20 “(B) ensuring that Federal, State, and
21 local transportation officials consider intelligent
22 transportation systems in the transportation
23 planning process and have adequate knowledge
24 to do so;

1 “(C) improving regional cooperation and
2 operations planning for effective intelligent
3 transportation system deployment;

4 “(D) promoting the innovative use of pri-
5 vate resources; and

6 “(E) developing a workforce capable of de-
7 ploying, operating, and maintaining intelligent
8 transportation systems; and

9 “(2) in areas where the intelligent transpor-
10 tation system program has not met its goals, assess
11 the barriers to meeting those goals, and make rec-
12 ommendations for how those barriers may be over-
13 come.

14 **“SEC. 5210. DEFINITIONS.**

15 “In this subtitle, the following definitions apply:

16 “(1) INTELLIGENT TRANSPORTATION INFRA-
17 STRUCTURE.—The term ‘intelligent transportation
18 infrastructure’ means fully integrated public sector
19 intelligent transportation system components, as de-
20 fined by the Secretary.

21 “(2) INTELLIGENT TRANSPORTATION SYS-
22 TEM.—The term ‘intelligent transportation system’
23 means electronics, communications, or information
24 processing used singly or in combination to improve

1 the efficiency or safety of a surface transportation
2 system.

3 “(3) NATIONAL ARCHITECTURE.—The term
4 ‘national architecture’ means the common frame-
5 work for interoperability adopted by the Secretary
6 that defines—

7 “(A) the functions associated with intel-
8 ligent transportation system user services;

9 “(B) the physical entities or subsystems
10 within which the functions reside;

11 “(C) the data interfaces and information
12 flows between physical subsystems; and

13 “(D) the communications requirements as-
14 sociated with the information flows.

15 “(4) NATIONAL ITS PROGRAM PLAN.—The term
16 ‘National ITS Program Plan’ means the plan update
17 required under section 5204(a).

18 “(5) STANDARD.—The term ‘standard’ means a
19 document that—

20 “(A) contains technical specifications or
21 other precise criteria for intelligent transpor-
22 tation systems that are to be used consistently
23 as rules, guidelines, or definitions of character-
24 istics so as to ensure that materials, products,

1 processes, and services are fit for their pur-
 2 poses; and

3 “(B) may support the national architecture
 4 and promote—

5 “(i) the widespread use and adoption
 6 of intelligent transportation system tech-
 7 nology as a component of the surface
 8 transportation systems of the United
 9 States; and

10 “(ii) interoperability among intelligent
 11 transportation system technologies imple-
 12 mented throughout the States.

13 “(6) STATE.—The term ‘State’ has the mean-
 14 ing given the term under section 101 of title 23,
 15 United States Code.”.

16 (b) TABLE OF CONTENTS AMENDMENT.—The items
 17 relating to subtitle C of title V in the table of contents
 18 of the Transportation Equity Act for the 21st Century are
 19 amended to read as follows:

“Subtitle C—Intelligent Transportation Systems

- “Sec. 5201. Short title.
- “Sec. 5202. Goals and purposes.
- “Sec. 5203. General authorities and requirements.
- “Sec. 5204. National ITS Program Plan.
- “Sec. 5205. Information strategy.
- “Sec. 5206. National architecture and standards.
- “Sec. 5207. Research and development.
- “Sec. 5208. Use of funds.
- “Sec. 5209. Program evaluation.
- “Sec. 5210. Definitions.”.

1 (c) REPEAL.—The Intermodal Surface Transpor-
2 tation Efficiency Act of 1991 is amended by striking part
3 B of title VI (23 U.S.C. 307 note; 105 Stat. 2189).

4 **SEC. 112. NATIONAL MULTIMODAL TRENDS POLICY RE-**
5 **SEARCH PROGRAM.**

6 (a) IN GENERAL.—The Secretary shall establish and
7 carry out a National Multimodal Trends Policy Research
8 Program that systematically addresses critical short-term,
9 medium-term, and long-term social science issues affecting
10 and affected by the transportation system.

11 (b) CONTENTS.—The program to be carried out
12 under this section shall include—

13 (1) research on—

14 (A) the critical factors and major trends
15 affecting the success and performance of the
16 Nation’s transportation system, as well as how
17 such information can be incorporated into na-
18 tional, State, and local decisionmaking;

19 (B) the short-term, medium-term, and es-
20 pecially long-term economic, demographic, and
21 social trends that are affecting and are affected
22 by the transportation system, including topics
23 such as—

24 (i) economic trends, including
25 globalization and its effects on the transpor-

1 tation of people and goods, rapidly chang-
2 ing information technology, the growing
3 importance of metropolitan economies, di-
4 versification of employment sites, innova-
5 tions in goods movement, and larger capaci-
6 ty and faster goods movement;

7 (ii) demographic trends, including
8 population growth, increasing minority
9 populations, increasing urbanization, and
10 the aging of the population; and

11 (iii) social trends and issues, including
12 increasing income disparity and its impli-
13 cation for mobility and access to jobs, serv-
14 ices and health care, the unique needs of
15 rural populations, and the link between
16 human factors and driver behavior;

17 (C) improvements in evaluation methodolo-
18 gies and performance measures, and the evalua-
19 tion of project and transportation system per-
20 formance relative to the goals set forth in sec-
21 tion 102;

22 (D) how institutional factors within and
23 among the public and private sectors affect the
24 development and successful deployment of new
25 technologies;

1 (E) links between public health and the
2 transportation system; and

3 (F) other critical issues identified by the
4 Advisory Board established under subsection
5 (e); and

6 (2) research on and the development of policy
7 analysis tools and methods.

8 (c) ESTABLISHMENT.—Not later than 120 days after
9 the date of enactment of this Act, the Secretary shall enter
10 into an arrangement with the National Academy of
11 Sciences to establish an advisory board under subsection
12 (e) and, except as provided in subsection (e), to support,
13 administer, and manage the program.

14 (d) STRATEGIC PLAN.—Not later than 2 years after
15 entering into the arrangement under subsection (c) and
16 upon each update thereafter, the National Academy of
17 Sciences shall transmit the strategic plan developed by the
18 advisory board under subsection (e) to the Secretary, to
19 the Committee on Transportation and Infrastructure and
20 the Committee on Science of the House of Representa-
21 tives, and to the Committee on Environment and Public
22 Works of the Senate.

23 (e) ADVISORY BOARD.—

1 (1) ESTABLISHMENT.—The National Academy
2 of Sciences shall establish an independent advisory
3 board.

4 (2) MEMBERSHIP.—

5 (A) IN GENERAL.—A majority of members
6 of the advisory board shall be experts in—

7 (i) transportation social science re-
8 search; or

9 (ii) other social science fields with im-
10 portant or potentially important relation-
11 ships to transportation, selected after con-
12 sultation with the Consortium of Social
13 Science Associations.

14 Members selected under this subparagraph
15 shall, to the extent practicable, be evenly di-
16 vided between experts described in clause (i)
17 and experts described in clause (ii).

18 (B) ADDITIONAL MEMBERS.—Additional
19 members of the advisory board shall be evenly
20 balanced among representatives of Federal,
21 State, and local transportation agencies, other
22 agencies with appropriate expertise, metropoli-
23 tan planning organizations, transit operating
24 agencies, and environmental and other non-
25 profit organizations.

1 (3) RESPONSIBILITIES.—The advisory board
2 shall be responsible for—

3 (A) the development of a strategic plan
4 which shall specify at a minimum the goals, re-
5 search priorities, and fiscal needs of the pro-
6 gram, and which shall be updated periodically;

7 (B) overseeing the awarding of grants and
8 contracts to carry out the research strategy;

9 (C) the development of the annual request
10 for proposals and the solicitation of proposals
11 through open competition with peer review; and

12 (D) the development of project selection
13 criteria, through an open and public consulta-
14 tion process with stakeholders.

15 (4) EVALUATION OF RESEARCH.—Research
16 contracts and grants under this section shall require
17 peer review of the research results.

18 (5) ELIGIBLE RESEARCH.—At least 75 percent
19 of funds made available for research under this sec-
20 tion shall support research directed to the priorities
21 in the strategic plan, and up to 25 percent of such
22 funds may support appropriate sponsor directed re-
23 search.

24 (f) DISSEMINATION OF RESEARCH FINDINGS.—The
25 National Academy of Sciences and the Department of

1 Transportation shall disseminate research findings under
2 this section to researchers, practitioners, and decision-
3 makers, through conferences and seminars, field dem-
4 onstrations, workshops, training programs, presentations,
5 testimony to government officials, the Internet, and publi-
6 cations for the general public.

7 **TITLE II—MISCELLANEOUS**

8 **SEC. 201. AUTHORIZATION OF APPROPRIATIONS.**

9 (a) TRANSIT RESEARCH AND DEVELOPMENT.—

10 There are authorized to be appropriated to the Secretary
11 of Transportation to carry out sections 5312, 5313, 5314,
12 5315, and 5322 of title 49, United States Code, and sec-
13 tion 202 of this Act, relating to research and development,
14 \$75,000,000 for each of the fiscal years 2004 through
15 2009.

16 (b) HIGHWAY SAFETY RESEARCH AND DEVELOP-

17 MENT.—There are authorized to be appropriated to the
18 Secretary of Transportation to carry out section 403 of
19 title 23, United States Code, relating to research and de-
20 velopment, such sums as may be necessary for each of the
21 fiscal years 2004 through 2009.

22 (c) MOTOR CARRIER RESEARCH AND DEVELOP-

23 MENT.—There are authorized to be appropriated to the
24 Secretary of Transportation to carry out section 31108
25 of title 49, United States Code, relating to research and

1 development, such sums as may be necessary for each of
2 the fiscal years 2004 through 2009.

3 **SEC. 202. TRANSIT RESEARCH.**

4 (a) AMENDMENT.—Chapter 5 of title 23, United
5 States Code, as amended by this Act, is further amended
6 by adding at the end the following new section:

7 **“§ 510. Innovative Practices and Technologies Dem-**
8 **onstration and Deployment Program**

9 “(a) ESTABLISHMENT.—The Secretary shall estab-
10 lish an Innovative Practices and Technologies Demonstra-
11 tion and Deployment Program.

12 “(b) PROGRAM GOALS.—The goals of the program
13 are to—

14 “(1) demonstrate promising new transit prac-
15 tices and technologies, including new business mod-
16 els for managing and operating transit systems, that
17 may increase ridership, increase accessibility, reduce
18 cost, improve customer satisfaction, and improve
19 safety;

20 “(2) evaluate, refine, and document the per-
21 formance, benefits, and costs of innovative practices
22 and technologies; and

23 “(3) effectively disseminate information to ac-
24 celerate deployment of innovative practices and tech-
25 nologies.

1 “(c) GRANTS, COOPERATIVE AGREEMENTS, AND
2 CONTRACTS.—The Secretary may make grants to, or
3 enter into cooperative agreements or contracts with, tran-
4 sit agencies, States, other Federal agencies, universities
5 and colleges, private sector entities, and nonprofit organi-
6 zations to pay the Federal share of the cost of demonstra-
7 tion and deployment projects concerning innovative prac-
8 tices and technologies.

9 “(d) APPLICATIONS.—To receive a grant, cooperative
10 agreement, or contract under this section, an entity de-
11 scribed in subsection (c) shall submit an application to the
12 Secretary. The application shall be in such form and con-
13 tain such information as the Secretary may require. The
14 Secretary shall select and approve the applications based
15 on the following criteria:

16 “(1) Whether the project meets the goals of the
17 program.

18 “(2) Merit review.

19 “(3) The likelihood that the project will result
20 in more widespread deployment of the practice or
21 technology being proposed.

22 “(4) Preference shall be given to an application
23 that represents a public-private partnership.

24 “(e) TECHNOLOGY AND INFORMATION TRANSFER.—
25 The Secretary shall ensure that information about innova-

1 tive practices and technologies supported under this sec-
 2 tion is made available to transit agencies, State and local
 3 transportation departments, and other interested parties.
 4 Information disseminated under this subsection shall in-
 5 clude both the costs and benefits of deploying an innova-
 6 tive practice or technology, and shall document—

7 “(1) best practices for adopting successful prac-
 8 tices or technologies; and

9 “(2) the transferability of these practices and
 10 technologies.

11 “(f) FEDERAL SHARE.—The Federal share of the
 12 cost of a project under this section shall be determined
 13 by the Secretary.”.

14 (b) CONFORMING AMENDMENT.—The analysis of
 15 chapter 5 of title 23, United States Code, as amended by
 16 this Act, is further amended by adding at the end the fol-
 17 lowing new item:

“510. Innovative Practices and Technologies Demonstration and Deployment
 Program.”.

18 **SEC. 203. NATIONAL TRANSIT INSTITUTE.**

19 Section 5315 is amended—

20 (1) in subsection (a)—

21 (A) by striking “public mass transpor-
 22 tation” and inserting “public transportation”
 23 each place it appears;

1 (B) by striking “mass” after “Govern-
2 ment-aid” and inserting “public”; and

3 (C) in paragraphs (1), (6), (7), and (10)
4 by striking “mass” each place it appears before
5 “transportation” and inserting “public”; and

6 (2) in subsection (d) by striking “mass” each
7 place it appears.

8 **SEC. 204. HUMAN RESOURCE PROGRAMS.**

9 (a) IN GENERAL.—Section 5322 is amended—

10 (1) by inserting “(a) IN GENERAL.—” before
11 the beginning of the first sentence of the section;
12 and

13 (2) by adding the following at the end:

14 “(b) GRANTS TO HIGHER LEARNING INSTITU-
15 TIONS.—

16 “(1) The Secretary (or the Secretary of Hous-
17 ing and Urban Development when required by sec-
18 tion 5334(i) of this title) may make grants to non-
19 profit institutions of higher learning—

20 “(A) to conduct competent research and
21 investigations into the theoretical or practical
22 problems of urban transportation; and

23 “(B) to train individuals to conduct fur-
24 ther research or obtain employment in an orga-

1 nization that plans, builds, operates, or man-
2 ages an urban transportation system.

3 “(2) Research and investigations under this
4 subsection include—

5 “(A) the design and use of urban public
6 transportation systems and urban roads and
7 highways;

8 “(B) the interrelationship between various
9 modes of urban and interurban transportation;

10 “(C) the role of transportation planning in
11 overall urban planning;

12 “(D) public preferences in transportation;

13 “(E) the economic allocation of transpor-
14 tation resources; and

15 “(F) the legal, financial, engineering, and
16 esthetic aspects of urban transportation.

17 “(3) When making a grant under this sub-
18 section, the Secretary shall give preference to an in-
19 stitution that brings together knowledge and exper-
20 tise in the various social science and technical dis-
21 ciplines related to urban transportation problems.

22 “(c) FELLOWSHIPS.—

23 “(1) The Secretary may make grants to States,
24 local governmental authorities, and operators of pub-
25 lic transportation systems to provide fellowships to

1 train personnel employed in managerial, technical,
2 and professional positions in the mass transportation
3 field.

4 “(2) A fellowship under this subsection may be
5 for not more than one year of training in an institu-
6 tion that offers a program applicable to the public
7 transportation industry. The recipient of the grant
8 shall select an individual on the basis of dem-
9 onstrated ability and for the contribution the indi-
10 vidual reasonably can be expected to make to an ef-
11 ficient public transportation operation. A grant for
12 a fellowship may not be more than the lesser of
13 \$65,000 or 75 percent of—

14 “(A) tuition and other charges to the fel-
15 lowship recipient;

16 “(B) additional costs incurred by the train-
17 ing institution and billed to the grant recipient;
18 and

19 “(C) the regular salary of the fellowship
20 recipient for the period of the fellowship to the
21 extent the salary is actually paid or reimbursed
22 by the grant recipient.

23 “(d) OTHER GRANTS.—The Secretary may make
24 grants to State and local governmental authorities for

1 projects that will use innovative techniques and methods
2 in managing and providing public transportation.”.

3 **SEC. 205. HIGHWAY SAFETY RESEARCH AND DEVELOP-**
4 **MENT.**

5 Section 403(a) (Authority of the Secretary) of title
6 23, United States Code, is amended by adding the fol-
7 lowing paragraphs at the end:

8 “(4) EMERGENCY MEDICAL SERVICES.—In ad-
9 dition to the authority provided under this sub-
10 section, the Secretary is authorized to use funds ap-
11 propriated to carry out this section to enhance co-
12 ordination among Federal agencies involved with
13 State, local, tribal, and community-based emergency
14 medical services. In exercising this authority, the
15 Secretary may coordinate with State and local gov-
16 ernments, the Bureau of Indian Affairs on behalf of
17 Indian tribes, private industry, and other interested
18 parties; collect and exchange emergency medical
19 services data and information; examine emergency
20 medical services needs, best practices, and related
21 technology; and develop emergency medical services
22 standards and guidelines, and plans for the assess-
23 ment of emergency medical services systems.

24 “(5) INTERNATIONAL COOPERATION.—In addi-
25 tion to the authority provided under this subsection,

1 the Secretary is authorized to use funds appro-
2 priated to carry out this section to participate and
3 cooperate in international activities to enhance high-
4 way safety by such means as exchanging safety in-
5 formation; conducting safety research; and exam-
6 ining safety needs, best practices, and new tech-
7 nology.

8 “(6) NATIONAL MOTOR VEHICLE CRASH CAUSA-
9 TION SURVEY.—In addition to the authority pro-
10 vided under this subsection, the Secretary is author-
11 ized to use funds appropriated to carry out this sec-
12 tion to develop and conduct a nationally representa-
13 tive survey to collect on-scene motor vehicle crash
14 causation data.”.

15 **SEC. 206. MOTOR CARRIER RESEARCH AND TECHNOLOGY**
16 **PROGRAM.**

17 (a) IN GENERAL.—Title 49, United States Code, is
18 amended by repealing section 31108 and inserting the fol-
19 lowing new section, to read as follows:

20 **“§ 31108. Motor carrier research and technology pro-**
21 **gram**

22 “(a) RESEARCH, TECHNOLOGY AND TECHNOLOGY
23 TRANSFER ACTIVITIES.—

24 “(1) The Secretary of Transportation shall es-
25 tablish and carry out a motor carrier research and

1 technology program. The Secretary may carry out
2 research, development, technology, and technology
3 transfer activities with respect to—

4 “(A) the causes of accidents, injuries and
5 fatalities involving commercial motor vehicles;
6 and

7 “(B) means of reducing the number and
8 severity of accidents, injuries and fatalities in-
9 volving commercial motor vehicles.

10 “(2) The Secretary may test, develop, or assist
11 in testing and developing any material, invention,
12 patented article, or process related to the research
13 and technology program.

14 “(3) The Secretary may use the funds appro-
15 priated to carry out this section for training or edu-
16 cation of commercial motor vehicle safety personnel,
17 including, but not limited to, training in accident re-
18 construction and detection of controlled substances
19 or other contraband, and stolen cargo or vehicles.

20 “(4) The Secretary may carry out this sec-
21 tion—

22 “(A) independently;

23 “(B) in cooperation with other Federal de-
24 partments, agencies, and instrumentalities and
25 Federal laboratories; or

1 “(C) by making grants to, or entering into
2 contracts or cooperative agreements with, any
3 Federal laboratory, State agency, authority, as-
4 sociation, institution, for-profit or non-profit
5 corporation, organization, foreign country, or
6 person.

7 “(5) The Secretary shall use funds made avail-
8 able to carry out this section to develop, administer,
9 communicate, and promote the use of products of re-
10 search, technology, and technology transfer pro-
11 grams under this section.

12 “(b) COLLABORATIVE RESEARCH AND DEVELOP-
13 MENT.—

14 “(1) To advance innovative solutions to prob-
15 lems involving commercial motor vehicle and motor
16 carrier safety, security, and efficiency, and to stimu-
17 late the deployment of emerging technology, the Sec-
18 retary may carry out, on a cost-shared basis, col-
19 laborative research and development with—

20 “(A) non-Federal entities, including State
21 and local governments, foreign governments,
22 colleges and universities, corporations, institu-
23 tions, partnerships, and sole proprietorships
24 that are incorporated or established under the
25 laws of any State; and

1 “(B) Federal laboratories.

2 “(2) In carrying out this subsection, the Sec-
3 retary may enter into cooperative research and de-
4 velopment agreements (as defined in section 12 of
5 the Stevenson-Wydler Technology Innovation Act of
6 1980 (15 U.S.C. 3710a)).

7 “(3)(A) The Federal share of the cost of activi-
8 ties carried out under a cooperative research and de-
9 velopment agreement entered into under this sub-
10 section shall not exceed 50 percent, except that if
11 there is substantial public interest or benefit, the
12 Secretary may approve a greater Federal share.

13 “(B) All costs directly incurred by the non-Fed-
14 eral partners, including personnel, travel, and hard-
15 ware or software development costs, shall be credited
16 toward the non-Federal share of the cost of the ac-
17 tivities described in subparagraph (A).

18 “(4) The research, development, or use of a
19 technology under a cooperative research and develop-
20 ment agreement entered into under this subsection,
21 including the terms under which the technology may
22 be licensed and the resulting royalties may be dis-
23 tributed, shall be subject to the Stevenson-Wydler
24 Technology Innovation Act of 1980 (15 U.S.C. 3701
25 et seq.).

1 “(5) Section 3705 of title 41, United States
2 Code, shall not apply to a contract or agreement en-
3 tered into under this section.”.

4 (b) CONFORMING AMENDMENT.—The table of sec-
5 tions at the beginning of chapter 311 of title 49, United
6 States Code, is amended by revising the item relating to
7 section 31108 to read as follows:

 “31108. Motor carrier research and technology program.”.

8 **SEC. 207. TRANSPORTATION, ENERGY, AND ENVIRONMENT.**

9 (a) IN GENERAL.—As part of the National Climate
10 Change Technology Initiative and the Climate Change Re-
11 search Initiative, the Secretary shall establish and carry
12 out a multimodal energy and climate change program to
13 study the relationship of transportation, energy, and cli-
14 mate change.

15 (b) CONTENTS.—The program to be carried out
16 under this section shall include, but not be limited to, re-
17 search designed to—

18 (1) identify, develop and evaluate strategies to
19 improve energy efficiency and reduce greenhouse gas
20 emissions from transportation sources; and

21 (2) identify and evaluate the potential effects of
22 climate changes on the nation’s transportation sys-
23 tems, and strategies to address these effects.

24 (c) PROJECT SELECTION.—Activities to be under-
25 taken in this program will be determined by an internal

1 steering committee established by the Secretary of Trans-
2 portation. This intermodal committee shall include rep-
3 resentatives from the Office of the Secretary and oper-
4 ating administrations within the Department of Transpor-
5 tation as designated by the Secretary.

6 (d) GRANTS, COOPERATIVE AGREEMENTS AND CON-
7 TRACTS.—The Secretary may carry out this program inde-
8 pendently or by making grants to, or entering into con-
9 tracts and cooperative agreements with, a Federal agency,
10 State agency, local agency, authority, association, non-
11 profit or for-profit corporation, or institution of higher
12 education.

13 **SEC. 208. NATIONAL COOPERATIVE FREIGHT TRANSPOR-**
14 **TATION RESEARCH PROGRAM.**

15 (a) AUTHORIZATION.—To carry out a national coop-
16 erative freight transportation research program, there is
17 authorized the following sums:

18 (1) \$8,000,000 for each of fiscal years 2004
19 and 2005.

20 (2) \$10,000,000 for each of fiscal years 2006
21 and 2007.

22 (3) \$12,000,000 for each of fiscal years 2008
23 and 2009.

1 (b) IN GENERAL.—Chapter 5 of title 23, United
2 States Code, is amended by adding at the end the fol-
3 lowing:

4 **“§ 509. National Cooperative Freight Transportation**
5 **Research Program**

6 “(a) ESTABLISHMENT.—The Secretary shall estab-
7 lish and support a national cooperative freight transpor-
8 tation research program.

9 “(b) AGREEMENT.—The Secretary shall enter into an
10 agreement with the National Academy of Sciences to sup-
11 port and carry out administrative and management activi-
12 ties relating to the governance of the national cooperative
13 freight transportation research program.

14 “(c) ADVISORY COMMITTEE.—The National Acad-
15 emy of Sciences shall select an advisory committee con-
16 sisting of a representative cross-section of freight stake-
17 holders, including the Department of Transportation,
18 other Federal agencies, State transportation departments,
19 local governments, the American Association of State
20 Highway and Transportation Officials and other nonprofit
21 entities (including environmental groups), academia, and
22 the private sector.

23 “(d) GOVERNANCE.—The national cooperative
24 freight transportation research program established under

1 this section shall include the following administrative and
2 management elements:

3 “(1) NATIONAL RESEARCH AGENDA.—The advi-
4 sory committee, in consultation with stakeholders,
5 shall recommend a national research agenda for the
6 national cooperative freight transportation research
7 program. The national research agenda shall include
8 a multi-year strategic plan.

9 “(2) STAKEHOLDER INVOLVEMENT.—Stake-
10 holders may—

11 “(A) submit research proposals to the advi-
12 sory committee;

13 “(B) participate in merit reviews of re-
14 search proposals and peer reviews of research
15 products; and

16 “(C) receive research results.

17 “(3) OPEN COMPETITION AND PEER REVIEW OF
18 RESEARCH PROPOSALS.—The National Academy of
19 Sciences shall award research contracts and grants
20 through open competition and merit review con-
21 ducted on a regular basis.

22 “(4) EVALUATION OF RESEARCH.—

23 “(A) PEER REVIEW.—Research contracts
24 and grants shall allow peer review of the re-
25 search results.

1 “(B) PROGRAMMATIC EVALUATIONS.—The
2 National Academy of Sciences may conduct
3 periodic programmatic evaluations on a regular
4 basis.

5 “(5) DISSEMINATION OF RESEARCH FIND-
6 INGS.—The National Academy of Sciences shall dis-
7 seminate research findings to researchers, practi-
8 tioners, and decision-makers, through conferences
9 and seminars, field demonstrations, workshops,
10 training programs, presentations, testimony to gov-
11 ernment officials, world wide web, publications for
12 the general public, and other appropriate means.

13 “(e) CONTENTS.—The national research agenda for
14 the national cooperative freight transportation research
15 program required under subsection (d)(1) shall include re-
16 search in the following areas:

17 “(1) Techniques for estimating and quantifying
18 public benefits derived from freight transportation
19 projects.

20 “(2) Alternative approaches to calculating the
21 contribution of truck traffic to congestion on specific
22 highway segments.

23 “(3) The feasibility of freight villages as a
24 means of consolidating origins and destinations for
25 freight movement.

1 “(4) Methods for incorporating estimates of
2 international trade into landside transportation plan-
3 ning.

4 “(5) The use of technology applications to in-
5 crease capacity of highway lanes dedicated to truck-
6 only traffic.

7 “(6) Development of physical and policy alter-
8 natives for separating car and truck traffic.

9 “(7) Ways to synchronize infrastructure im-
10 provements with freight transportation demand.

11 “(8) The effect of changing patterns of freight
12 movement on transportation planning decisions re-
13 lating to rest areas.

14 “(9) Additional priorities to identify and ad-
15 dress the emerging and future research needs re-
16 lated to freight transportation.

17 “(f) FUNDING.—

18 “(1) FEDERAL SHARE.—The Federal share of
19 the cost of an activity carried out using such funds
20 shall be up to 100 percent, and such funds shall re-
21 main available until expended.

22 “(2) USE OF NON-FEDERAL FUNDS.—In addi-
23 tion to using funds authorized for this section, the
24 National Academy of Sciences may seek and accept
25 additional funding sources from public and private

1 entities capable of accepting funding from the
2 United States Department of Transportation (Fed-
3 eral Highway Administration, Federal Transit Ad-
4 ministration, Federal Railroad Administration, Re-
5 search and Special Programs Administration, and
6 the National Highway Traffic Safety Administra-
7 tion), states, local governments, nonprofit founda-
8 tions, and the private sector.”.

9 (c) CONFORMING AMENDMENT.—The analysis for
10 chapter 5 of title 23, United States Code, is amended by
11 redesignating section 509 as follows:

“509. National cooperative freight transportation research program.”.

12 **SEC. 209. NEXT GENERATION NATIONAL TRANSPORTATION**
13 **POLICY STUDY COMMISSION.**

14 (a) ESTABLISHMENT OF COMMISSION.—(1) The
15 President shall established a Commission to be known as
16 the Next Generation National Transportation Policy
17 Study Commission, in this section referred to as the
18 “Commission”.

19 (2) The Commission shall make a full and complete
20 investigation and study of the transportation needs and
21 of the resources, requirements, and policies of the United
22 States to meet such expected needs. It shall take into con-
23 sideration all reports on national transportation policy
24 which have been submitted to Congress in the last decade,
25 including all reports referenced in the Intermodal Surface

1 Transportation Efficiency Act of 1991 and the Transpor-
2 tation Equity Act of the 21st Century. It shall also take
3 into consideration the changes in global trade and its im-
4 pact on the Nation's economy. It shall evaluate the relative
5 merits of all modes of transportation in meeting our Na-
6 tion's transportation needs. It shall take into account the
7 link between transportation and the natural environment.
8 Based on such study, it shall recommend changes to exist-
9 ing policies and any new policies that are most likely to
10 ensure that adequate multimodal transportation systems
11 are in place which will meet the needs for a safe and effi-
12 cient movement of people and goods and also support and
13 grow the national economy.

14 (b) MEMBERSHIP.—The Commission shall be com-
15 prised of 16 members appointed by the President from
16 among individuals who are knowledgeable in transpor-
17 tation activities, including individuals representing State
18 and local governments, metropolitan planning organiza-
19 tions, transportation-related industries, academic and
20 technical institutions, and public interest organizations in-
21 volved with scientific, regulatory, economic, and environ-
22 mental transportation activities. The membership of the
23 Commission shall be balanced geographically to the extent
24 consistent with maintaining the highest level of expertise

1 on the Commission. Members shall be appointed for the
2 life of the Commission as follows:

3 (1) 4 shall be appointed from a list of 8 individ-
4 uals who shall be recommended by the majority lead-
5 er of the Senate in consultation with the Chairman
6 of the Committee on Environment and Public
7 Works, and the Chairman of the Committee on
8 Commerce, Science and Transportation, and the
9 Chairman of the Committee on Banking, Housing
10 and Urban Affairs of the Senate.

11 (2) 4 shall be appointed from a list of 8 individ-
12 uals who shall be recommended by the minority lead-
13 er of the Senate in consultation with the ranking
14 member of the Committee on Environment and Pub-
15 lic Works, the ranking member of the Committee on
16 Commerce, Science and Transportation, and the
17 ranking member of the Committee on Banking,
18 Housing and Urban Affairs of the Senate.

19 (3) 4 shall be appointed from a list of 8 individ-
20 uals who shall be recommended by the Speaker of
21 the House of Representatives in consultation with
22 the Chairman of the Committee on Transportation
23 and Infrastructure, the Chairman of the Committee
24 on Energy and Commerce, and the Chairman of the

1 Committee on Science of the House of Representa-
2 tives.

3 (4) 4 shall be appointed from a list of 8 individ-
4 uals who shall be recommended by the minority lead-
5 er of the House of Representatives in consultation
6 with the ranking member of the Committee on
7 Transportation and Infrastructure, the ranking
8 member of the Committee on Energy and Com-
9 merce, and the ranking member of the Committee
10 on Science of the House of Representatives.

11 (5) Any vacancy which may occur on the Com-
12 mission shall not affect its powers or functions but
13 shall be filled in the same manner in which the origi-
14 nal appointment was made.

15 (c) FINAL REPORT.—The Commission shall not later
16 than December 31, 2005, submit to the President and
17 Congress its final report including its findings and rec-
18 ommendations. The Commission shall cease to exist six
19 months after submission of such report. All records and
20 papers of the Commission shall thereupon be delivered to
21 the Administrator of General Services for deposit in the
22 Archives of the United States.

23 (d) FINDINGS AND RECOMMENDATIONS.—The final
24 report shall include the Commission's findings and rec-
25 ommendations with respect to the following:

1 (1) The Nation's transportation needs, both na-
2 tional and regional, through the year 2025.

3 (2) The ability of our current transportation
4 systems to meet the projected needs.

5 (3) The proper mix of transportation modes
6 and necessary linkages between modes to meet an-
7 ticipated needs.

8 (4) Necessary measures and policies to ensure
9 enhancement and protection of the natural environ-
10 ment in transportation decisionmaking.

11 (5) Short-term, medium-term, and long-term
12 research, development, and deployment to meet ex-
13 pected needs.

14 (6) The roles of the public and private sectors
15 relative to each mode and the balance between public
16 and private investment.

17 (7) The existing policies and programs of the
18 Federal Government which affect the development of
19 our national transportation system.

20 (8) The new policies required to develop a bal-
21 anced national transportation system which meets
22 projected needs, accommodates international trade
23 and supports the national economy.

1 (9) The adequacy of existing methods to fi-
2 nance transportation and alternative new methods of
3 financing.

4 (e) SPECIFIC FACTORS TO CONSIDER.—In devel-
5 oping its findings and recommendations, the Commission
6 shall address the following specific factors:

7 (1) The role of transportation as a critical link
8 to the global economy and trade.

9 (2) A balance between the transportation of
10 people and goods.

11 (3) Improving operations and management of
12 the transportation system to improve efficiency, in-
13 cluding asset and information management.

14 (4) The need to address aging infrastructure.

15 (5) The need to address the enhancement and
16 protection of the natural environment.

17 (6) The need to address congestion in all
18 modes.

19 (7) The need to improve environmental deci-
20 sionmaking.

21 (8) A balance between the demand for transpor-
22 tation reliability with new threats to security.

23 (9) Ways to eliminate barriers to transportation
24 investment created by the current modal structure of
25 transportation funding.

1 (10) Existing barriers to private investment in
2 transportation facilities including tax inequities be-
3 tween modes.

4 (11) The adequacy of the Federal transpor-
5 tation trust funds to finance future transportation
6 needs.

7 (12) Appropriate measures of transportation
8 need.

9 (13) The adequacy of integration among Fed-
10 eral programs affecting transportation.

11 (14) The relationship between land use and
12 transportation infrastructure investment.

13 (15) The role that transportation plays in pro-
14 moting economic growth, improving the environment
15 and sustaining the quality of life.

16 (f) RECOMMENDATIONS ON THE ROLES OF GOVERN-
17 MENT.—The Commission shall also make recommenda-
18 tions on the roles of the Federal and State governments
19 in—

20 (1) environmental review of transportation
21 projects;

22 (2) the provision of intercity passenger rail
23 services;

24 (3) financing transportation at international
25 border crossings;

1 (4) facilitating international goods movement
2 to, from and within the United States;

3 (5) ensuring consistency in data and commu-
4 nications links for and between all modes;

5 (6) financing for each mode of transportation;
6 and

7 (7) effectively using transportation networks to
8 enhance the quality of life, protect natural resources
9 and promote sustainable economic growth.

10 (g) PARTICIPATION IN COMMISSION ACTIVITIES.—

11 (1) PARTICIPATION OF FEDERAL AGENCIES.—

12 The Chairman of the Commission shall request the
13 head of each Federal department or agency with an
14 interest in or a responsibility for national transpor-
15 tation policy to appoint a liaison who shall work
16 closely with the Committee and its staff. Such de-
17 partments and agencies shall include, but not be lim-
18 ited to, the Department of Transportation, and each
19 of its modal administrations, Office of Management
20 and Budget, Department of Energy, Department of
21 Homeland Security, Environmental Protection Agen-
22 cy, Department of Health and Human Services, De-
23 partment of Commerce, Department of the Treas-
24 ury, Department of Defense, Department of Agri-
25 culture, National Transportation Safety Board, Sur-

1 face Transportation Board, and Army Corps of En-
2 gineers.

3 (2) ADVICE FROM PUBLIC AND PRIVATE ORGA-
4 NIZATIONS.—In carrying out its duties, the Commis-
5 sion shall seek the advice of various groups inter-
6 ested in national transportation policy including
7 State and local governments, public and private or-
8 ganizations in the fields of transportation and safe-
9 ty, business, education, environment and labor, and
10 the public.

11 (h) HEARINGS.—The Commission or, on the author-
12 ization of the Commission, any Committee of two or more
13 members may, for the purpose of carrying out the provi-
14 sions of this section, hold such hearings at such times and
15 places as the Commission or such authorized committee
16 may deem advisable.

17 (i) COMPENSATION.—Members of Congress or other
18 governmental employees shall serve without compensation,
19 but shall be reimbursed for travel, per diem in accordance
20 of the rules of the House of Representatives and Senate,
21 accordingly, or subsistence and other necessary expenses
22 incurred in the performance of the duties vested in the
23 Commission.

24 (j) COMMISSION STAFF.—The Commission is author-
25 ized to appoint and fix the compensation of a staff director

1 and such additional personnel as may be necessary to en-
2 able it to carry out its functions.

3 (k) **CONTRACTS.**—The Commission is authorized to
4 enter into contracts or agreements for studies and surveys
5 with public and private organizations and, if necessary,
6 to transfer funds to Federal agencies from sums appro-
7 priated pursuant to this section to carry out such of its
8 duties as the Commission determines can best be carried
9 out in the that manner.

10 (l) **AUTHORIZATION OF APPROPRIATIONS.**—(1)
11 There are authorized to be appropriated to carry out this
12 section such sums as may be necessary.

13 (2) Funds authorized by this subsection shall remain
14 available until expended.

15 **SEC. 210. REAL-TIME SYSTEM MANAGEMENT INFORMATION**
16 **PROGRAM.**

17 (a) **GOALS AND PURPOSES.**—

18 (1) **GOALS.**—The goals of the real-time system
19 management information program are to provide the
20 nationwide capability to monitor, in real-time, the
21 traffic and travel conditions of our nation’s major
22 highways and to widely share that information to
23 improve the security of the surface transportation
24 system, address congestion problems, support im-

1 proved response to weather events, and facilitate na-
2 tional and regional traveler information.

3 (2) PURPOSES.—The purposes of the real-time
4 system management information program are to—

5 (A) establish a nationwide system of basic
6 real-time information for managing and oper-
7 ating our surface transportation system;

8 (B) identify longer range real-time high-
9 way and transit monitoring needs and develop
10 plans and strategies for meeting those needs;
11 and

12 (C) provide the capability and means to
13 share that data with state and local govern-
14 ments, and the traveling public.

15 (b) DATA EXCHANGE FORMATS.—Within one year of
16 enactment of this Act, the Secretary shall establish data
17 exchange formats to ensure that the data provided by
18 highway and transit monitoring systems, including state-
19 wide incident reporting systems can readily be exchanged
20 across jurisdictional boundaries, facilitating nationwide
21 availability of information.

22 (c) STATEWIDE INCIDENT REPORTING SYSTEM.—
23 Within 2 years of enactment of this legislation, each State
24 shall establish a statewide incident reporting system.

1 (d) REGIONAL INTELLIGENT TRANSPORTATION SYS-
2 TEM ARCHITECTURE.—

3 (1) As State and local governments develop or
4 update their regional ITS architectures, as specified
5 in section 940.9 of title 23, Code of Federal Regula-
6 tions (Regional ITS Architecture), they shall explic-
7 itly address their real-time highway and transit in-
8 formation needs and the systems needed to meet
9 those needs. This specific incorporation of informa-
10 tion needs should address coverage, monitoring sys-
11 tems, data fusion and archiving, and methods of ex-
12 changing or sharing this information.

13 (2) States are encouraged to incorporate the
14 data exchange formats developed by the Secretary to
15 ensure that the data provided by highway and tran-
16 sit monitoring systems can readily be exchanged
17 across state and local governments, and with the
18 traveling public.

19 (e) DEFINITION.—In this section, the term “state-
20 wide incident reporting system” means a statewide system
21 for facilitating the real-time electronic reporting of inci-
22 dents to a central location for use in monitoring the event,
23 providing accurate traveler information, and responding to
24 the incident as appropriate.

1 **SEC. 211. PLANNING CAPACITY BUILDING INITIATIVE.**

2 Section 104 of title 23, United States Code, is
3 amended by inserting after subsection (i), as added by this
4 Act, the following:

5 “(j) PLANNING CAPACITY BUILDING INITIATIVE.—

6 “(1) IN GENERAL.—The Secretary shall estab-
7 lish a planning capacity building initiative to support
8 enhancements in transportation planning, in order
9 to—

10 “(A) strengthen metropolitan and state-
11 wide transportation planning under chapter 52
12 of title 49;

13 “(B) enhance tribal capacity to conduct
14 joint transportation planning under Chapter 2
15 of this title; and

16 “(C) participate in the metropolitan and
17 statewide transportation planning programs
18 under chapter 52 of title 49.

19 “(2) PRIORITY.—The Secretary shall give pri-
20 ority to planning practices and processes that sup-
21 port homeland security planning, performance based
22 planning, safety planning, operations planning,
23 freight planning, and integration of environment and
24 planning.

25 “(3) USE OF FUNDS.—Funds authorized for
26 this program may be used for research, program de-

1 velopment, information collection and dissemination,
2 and technical assistance. The Secretary may use
3 these funds independently or make grants to, or
4 enter into contracts and cooperative agreements
5 with, a Federal agency, State agency, local agency,
6 federally recognized Indian tribal government or
7 tribal consortium, authority, association, nonprofit
8 or for-profit corporation, or institution of higher
9 education, to carry out the purposes of this sub-
10 section.

11 “(4) FEDERAL SHARE.—The Federal share of
12 the cost of an activity carried out using such funds
13 shall be up to 100 percent, and such funds shall re-
14 main available until expended.

15 “(5) ADMINISTRATION.—This initiative shall be
16 administered by the Federal Highway Administra-
17 tion in cooperation with the Federal Transit Admin-
18 istration.”.

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