(Added Pub. L. 105–178, title II, § 2005(a), June 9, 1998, 112 Stat. 332; amended Pub. L. 110–244, title III, § 303(c)(4), June 6, 2008, 122 Stat. 1619.)

REFERENCES IN TEXT

The date of enactment of the Transportation Equity Act for the 21st Century, referred to in subsec. (a)(3), is the date of enactment of Pub. L. 105–178, which was approved June 9, 1998.

AMENDMENTS

2008—Subsecs. (c) to (e). Pub. L. 110–244 redesignated subsecs. (c), relating to administrative expenses, and (d) as (d) and (e), respectively.

§ 412. Agency accountability

(a) TRIENNIAL STATE MANAGEMENT REVIEWS.—At least once every 3 years the Secretary shall conduct a review of each State highway safety program. The review shall include a management evaluation of all grant programs funded under this chapter. The Secretary shall provide review-based recommendations on how each State could improve the management and oversight of its grant activities and may provide a management and oversight plan for such grant programs.

(b) RECOMMENDATIONS BEFORE SUBMISSION.—In order to provide guidance to State highway safety agencies on matters that should be addressed in the goals and initiatives of the State highway safety program before the program is submitted for review, the Secretary shall provide data-based recommendations to each State at least 90 days before the date on which the program is to be submitted for approval.

(c) STATE PROGRAM REVIEW.—The Secretary shall—

(1) conduct a program improvement review of a highway safety program under this chapter of a State that does not make substantial progress over a 3-year period in meeting its priority program goals; and

(2) provide technical assistance and safety program requirements to be incorporated in the State highway safety program for any goal not achieved.

(d) REGIONAL HARMONIZATION.—The Secretary and the Inspector General of the Department of Transportation shall undertake an administrative review of the practices and procedures of the management reviews and program reviews of State highway safety programs under this chapter conducted by the regional offices of the National Highway Traffic Safety Administration and prepare a written report of best practices and procedures for use by the regional offices in conducting such reviews. The report shall be completed within 180 days after the date of enactment of this section.

(e) BEST PRACTICES GUIDELINES.—

(1) UNIFORM GUIDELINES.—The Secretary shall issue uniform management review guidelines and program review guidelines based on the report under subsection (d). Each regional office shall use the guidelines in executing its State administrative review duties under this section.

(2) PUBLICATION.—The Secretary shall make publicly available on the Web site (or successor electronic facility) of the Administration the following documents upon their completion:

(A) The Secretary's management review guidelines and program review guidelines.

(B) All State highway safety programs submitted under this chapter.

(C) State annual accomplishment reports.

(D) The Administration's Summary Report of findings from Management Reviews and Improvement Plans.

(3) REPORTS TO STATE HIGHWAY SAFETY AGENCIES.—The Secretary may not make publicly available a program, report, or review under paragraph (2) that is directed to a State highway safety agency until after the date on which the program, report, or review is submitted to that agency under this chapter.

(f) GAO REVIEW.—

(1) ANALYSIS.—The Comptroller General shall analyze the effectiveness of the Administration's oversight of traffic safety grants under this chapter by determining the usefulness of the Administration's advice to the States regarding administration and State activities under this chapter, the extent to which the States incorporate the Administration's recommendations into their highway safety programs, and the improvements that result in a State's highway safety program that may be attributable to the Administration's recommendations.

(2) REPORT.—Not later than September 30, 2008, the Comptroller General shall submit a report on the results of the analysis to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(Added Pub. L. 109–59, title II, § 2008(a), Aug. 10, 2005, 119 Stat. 1533.)

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsec. (d), is the date of enactment of Pub. L. 109–59, which was approved Aug. 10, 2005.

CHAPTER 5—RESEARCH, TECHNOLOGY, AND EDUCATION

Sec.
501. Definitions.
502. Surface transportation research.
503. Technology deployment program.[1]
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505. State planning and research.
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507. Surface transportation environment and planning cooperative research program.[1]
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PRIOR PROVISIONS

A prior chapter 5, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 830, consisting of sections 501 to 512, relat-

[1] So in original. Does not conform to section catchline.

ed to highway relocation assistance, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903. See section 4601 et seq. of Title 42, The Public Health and Welfare. For Effective Date of Repeal and Savings Provisions, see sections 221 and 220(b) of Pub. L. 91–646, set out as notes under sections 4601 and 4621, respectively, of Title 42.

AMENDMENTS

2008—Pub. L. 110–244, title I, § 111(b)(2)(B), June 6, 2008, 122 Stat. 1605, amended Pub. L. 109–59, § 5210. See 2005 Amendment note below.

2005—Pub. L. 109–59, title V, § 5210(c), formerly § 5210(d), Aug. 10, 2005, 119 Stat. 1804, as renumbered by Pub. L. 110–244, title I, § 111(b)(2)(B), June 6, 2008, 122 Stat. 1605, added item 510.

Pub. L. 109–59, title V, §§ 5201(a)(2), 5207(c), 5208(b), 5209(c), 5211(c), 5301(b), 5302(b), Aug. 10, 2005, 119 Stat. 1781, 1798, 1799, 1801, 1804, 1805, substituted ''RESEARCH, TECHNOLOGY, AND EDUCATION'' for ''RESEARCH AND TECHNOLOGY'' in chapter heading, ''Surface transportation environment and planning cooperative research program'' for ''Surface transportation-environment cooperative research program'' in item 507, ''Transportation research and development strategic planning'' for ''Surface transportation research strategic planning'' in item 508, and added items 509 and 511 to 513.

§ 501. Definitions

In this chapter, the following definitions apply:

(1) FEDERAL LABORATORY.—The term ''Federal laboratory'' includes a Government-owned, Government-operated laboratory and a Government-owned, contractor-operated laboratory.

(2) SAFETY.—The term ''safety'' includes highway and traffic safety systems, research, and development relating to vehicle, highway, driver, passenger, bicyclist, and pedestrian characteristics, accident investigations, communications, emergency medical care, and transportation of the injured.

(Added Pub. L. 105–178, title V, § 5101(2), June 9, 1998, 112 Stat. 422.)

PRIOR PROVISIONS

A prior section 501, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 830, related to declaration of policy as to highway relocation assistance, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

§ 502. Surface transportation research

(a) BASIC PRINCIPLES GOVERNING RESEARCH AND TECHNOLOGY INVESTMENTS.—

(1) COVERAGE.—Surface transportation research and technology development shall include all activities leading to technology development and transfer, as well as the introduction of new and innovative ideas, practices, and approaches, through such mechanisms as field applications, education and training, and technical support.

(2) FEDERAL RESPONSIBILITY.—Funding and conducting surface transportation research and technology transfer activities shall be considered a basic responsibility of the Federal Government when the work—

(A) is of national significance;

(B) supports research in which there is a clear public benefit and private sector investment is less than optimal;

(C) supports a Federal stewardship role in assuring that State and local governments use national resources efficiently; or

(D) presents the best means to support Federal policy goals compared to other policy alternatives.

(3) ROLE.—Consistent with these Federal responsibilities, the Secretary shall—

(A) conduct research;

(B) support and facilitate research and technology transfer activities by State highway agencies;

(C) share results of completed research; and

(D) support and facilitate technology and innovation deployment.

(4) PROGRAM CONTENT.—A surface transportation research program shall include—

(A) fundamental, long-term highway research;

(B) research aimed at significant highway research gaps and emerging issues with national implications; and

(C) research related to policy and planning.

(5) STAKEHOLDER INPUT.—Federal surface transportation research and development activities shall address the needs of stakeholders. Stakeholders include States, metropolitan planning organizations, local governments, the private sector, researchers, research sponsors, and other affected parties, including public interest groups.

(6) COMPETITION AND PEER REVIEW.—Except as otherwise provided in this chapter, the Secretary shall award, to the maximum extent practicable, all grants, contracts, and cooperative agreements for research and development under this chapter based on open competition and peer review of proposals.

(7) PERFORMANCE REVIEW AND EVALUATION.—To the maximum extent practicable, all surface transportation research and development projects shall include a component of performance measurement and evaluation. Performance measures shall be established during the proposal stage of a research and development project and shall, to the maximum extent possible, be outcome-based. All evaluations shall be made readily available to the public.

(8) TECHNOLOGICAL INNOVATION.—The programs and activities carried out under this section shall be consistent with the surface transportation research and technology development strategic plan developed under section 508.

(b) GENERAL AUTHORITY.—

(1) RESEARCH, DEVELOPMENT, AND TECHNOLOGY TRANSFER ACTIVITIES.—The Secretary may carry out research, development, and technology transfer activities with respect to—

(A) motor carrier transportation;

(B) all phases of transportation planning and development (including construction, operation, transportation system management and operations, modernization, development, design, maintenance, safety, financing, and traffic conditions); and

(C) the effect of State laws on the activities described in subparagraphs (A) and (B).

(2) TESTS AND DEVELOPMENT.—The Secretary may test, develop, or assist in testing and developing any material, invention, patented article, or process.

(3) COOPERATION, GRANTS, AND CONTRACTS.—The Secretary may carry out research, development, and technology transfer activities related to transportation—

(A) independently;

(B) in cooperation with other Federal departments, agencies, and instrumentalities and Federal laboratories; or

(C) by making grants to, or entering into contracts and cooperative agreements with one or more of the following: the National Academy of Sciences, the American Association of State Highway and Transportation Officials, any Federal laboratory, Federal agency, State agency, authority, association, institution, for-profit or nonprofit corporation, organization, foreign country, or any other person.

(4) TECHNOLOGICAL INNOVATION.—The programs and activities carried out under this section shall be consistent with the surface transportation research and technology development strategic plan developed under section 508.

(5) FUNDS.—

(A) SPECIAL ACCOUNT.—In addition to other funds made available to carry out this section, the Secretary shall use such funds as may be deposited by any cooperating organization or person in a special account of the Treasury established for this purpose.

(B) USE OF FUNDS.—The Secretary shall use funds made available to carry out this section to develop, administer, communicate, and promote the use of products of research, development, and technology transfer programs under this section.

(6) POOLED FUNDING.—

(A) COOPERATION.—To promote effective utilization of available resources, the Secretary may cooperate with a State and an appropriate agency in funding research, development, and technology transfer activities of mutual interest on a pooled funds basis.

(B) SECRETARY AS AGENT.—The Secretary may enter into contracts, cooperative agreements, and grants as the agent for all participating parties in carrying out such research, development, or technology transfer activities.

(c) COLLABORATIVE RESEARCH AND DEVELOPMENT.—

(1) IN GENERAL.—To encourage innovative solutions to surface transportation problems and stimulate the deployment of new technology, the Secretary may carry out, on a cost-shared basis, collaborative research and development with—

(A) non-Federal entities, including State and local governments, foreign governments, colleges and universities, corporations, institutions, partnerships, sole proprietorships, and trade associations that are incorporated or established under the laws of any State; and

(B) Federal laboratories.

(2) COOPERATION, GRANTS, CONTRACTS, AND AGREEMENTS.—Notwithstanding any other provision of law, the Secretary may directly initiate contracts, cooperative research and development agreements (as defined in section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a)) to fund, and accept funds from, the Transportation Research Board of the National Research Council of the National Academy of Sciences, State departments of transportation, cities, counties, and their agents to conduct joint transportation research and technology efforts.

(3) FEDERAL SHARE.—

(A) IN GENERAL.—The Federal share of the cost of activities carried out under a cooperative research and development agreement entered into under this subsection shall not exceed 50 percent, except that if there is substantial public interest or benefit, the Secretary may approve a greater Federal share.

(B) NON-FEDERAL SHARE.—All costs directly incurred by the non-Federal partners, including personnel, travel, and hardware development costs, shall be credited toward the non-Federal share of the cost of the activities described in subparagraph (A).

(4) USE OF TECHNOLOGY.—The research, development, or use of a technology under a cooperative research and development agreement entered into under this subsection, including the terms under which the technology may be licensed and the resulting royalties may be distributed, shall be subject to the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.).

(5) WAIVER OF ADVERTISING REQUIREMENTS.—Section 6101(b) to (d) of title 41 shall not apply to a contract or agreement entered into under this chapter.

(d) CONTENTS OF RESEARCH PROGRAM.—The Secretary shall include in surface transportation research, technology development, and technology transfer programs carried out under this title coordinated activities in the following areas:

(1) Development, use, and dissemination of indicators, including appropriate computer programs for collecting and analyzing data on the status of infrastructure facilities, to measure the performance of the surface transportation systems of the United States, including productivity, efficiency, energy use, air quality, congestion, safety, maintenance, and other factors that reflect system performance.

(2) Methods, materials, and testing to improve the durability of surface transportation infrastructure facilities and extend the life of bridge structures, including—

(A) new and innovative technologies to reduce corrosion;

(B) tests simulating seismic activity, vibration, and weather; and

(C) the use of innovative recycled materials.

(3) Technologies and practices that reduce costs and minimize disruptions associated

with the construction, rehabilitation, and maintenance of surface transportation systems, including responses to natural disasters.

(4) Development of nondestructive evaluation equipment for use with existing infrastructure facilities and with next-generation infrastructure facilities that use advanced materials.

(5) Dynamic simulation models of surface transportation systems for—

(A) predicting capacity, safety, and infrastructure durability problems;

(B) evaluating planned research projects; and

(C) testing the strengths and weaknesses of proposed revisions to surface transportation system management and operations programs.

(6) Economic highway geometrics, structures, and desirable weight and size standards for vehicles using the public highways and the feasibility of uniformity in State regulations with respect to such standards.

(7) Telecommuting and the linkages between transportation, information technology, and community development and the impact of technological change and economic restructuring on travel demand.

(8) Expansion of knowledge of implementing life cycle cost analysis, including—

(A) establishing the appropriate analysis period and discount rates;

(B) learning how to value and properly consider use costs;

(C) determining tradeoffs between reconstruction and rehabilitation; and

(D) establishing methodologies for balancing higher initial costs of new technologies and improved or advanced materials against lower maintenance costs.

(9) Standardized estimates, to be developed in conjunction with the National Institute of Standards and Technology and other appropriate organizations, of useful life under various conditions for advanced materials of use in surface transportation.

(10) Evaluation of traffic calming measures that promote community preservation, transportation mode choice, and safety.

(11) Development and implementation of safety-enhancing equipment, including unobtrusive eyetracking technology.

(12) Investigation and development of various operational methodologies to reduce the occurrence and impact of recurrent congestion and nonrecurrent congestion and increase transportation system reliability.

(13) Investigation of processes, procedures, and technologies to secure container and hazardous material transport, including the evaluation of regulations and the impact of good security practices on commerce and productivity.

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

(e) EXPLORATORY ADVANCED RESEARCH.—

(1) IN GENERAL.—The Secretary shall establish an exploratory advanced research program, consistent with the surface transportation research and technology development strategic plan developed under section 508 that addresses longer-term, higher-risk research with potentially dramatic breakthroughs for improving the durability, efficiency, environmental impact, productivity, and safety (including bicycle and pedestrian safety) aspects of highway and intermodal transportation systems. In carrying out the program, the Secretary shall strive to develop partnerships with public and private sector entities.

(2) RESEARCH AREAS.—In carrying out the program, the Secretary may make grants and enter into cooperative agreements and contracts in such areas of surface transportation research and technology as the Secretary determines appropriate, including the following:

(A) Characterization of materials used in highway infrastructure, including analytical techniques, microstructure modeling, and the deterioration processes.

(B) Assessment of the effects of transportation decisions on human health.

(C) Development of surrogate measures of safety.

(D) Environmental research.

(E) Data acquisition techniques for system condition and performance monitoring.

(F) System performance data and information processing needed to assess the day-to-day operational performance of the system in support of hour-to-hour operational decisionmaking.

(f) LONG-TERM PAVEMENT PERFORMANCE PROGRAM.—

(1) AUTHORITY.—The Secretary shall continue to carry out, through September 30, 2009, tests, monitoring, and data analysis under the long-term pavement performance program.

(2) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—Under the program, the Secretary shall make grants and enter into cooperative agreements and contracts to—

(A) monitor, material-test, and evaluate highway test sections in existence as of the date of the grant, agreement, or contract;

(B) analyze the data obtained under subparagraph (A); and

(C) prepare products to fulfill program objectives and meet future pavement technology needs.

(g) SEISMIC RESEARCH.—The Secretary shall—

(1) in consultation and cooperation with Federal agencies participating in the National Earthquake Hazards Reduction Program established by section 5 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704), coordinate the conduct of seismic research;

(2) take such actions as are necessary to ensure that the coordination of the research is consistent with—

(A) planning and coordination activities of the National Institute of Standards and Technology under section 5(b)(1) of that Act (42 U.S.C. 7704(b)(1)); and

(B) the plan developed by the Director of the National Institute of Standards and Technology under section 8(b) of that Act (42 U.S.C. 7705b(b)); and

(3) in cooperation with the Center for Civil Engineering Research at the University of Ne-

vada, Reno, and the National Center for Earthquake Engineering Research at the University of Buffalo, carry out a seismic research program—

(A) to study the vulnerability of the Federal-aid system and other surface transportation systems to seismic activity;

(B) to develop and implement cost-effective methods to reduce the vulnerability; and

(C) to conduct seismic research and upgrade earthquake simulation facilities as necessary to carry out the program.

(h) INFRASTRUCTURE INVESTMENT NEEDS REPORT.—

(1) IN GENERAL.—Not later than July 31, 2006, and July 31 of every second year thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes—

(A) estimates of the future highway, transit, and bridge needs of the United States; and

(B) the backlog of current highway, transit, and bridge needs.

(2) COMPARISON WITH PRIOR REPORTS.—Each report under paragraph (1) shall provide the means, including all necessary information, to relate and compare the conditions and service measures used in the previous biennial reports.

(i) TURNER-FAIRBANK HIGHWAY RESEARCH CENTER.—

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

(2) USES OF THE CENTER.—The Turner-Fairbank Highway Research Center shall support—

(A) the conduct of highway research and development related to new highway technology;

(B) the development of understandings, tools, and techniques that provide solutions to complex technical problems through the development of economical and environmentally sensitive designs, efficient and quality-controlled construction practices, and durable materials; and

(C) the development of innovative highway products and practices.

(j) LONG-TERM BRIDGE PERFORMANCE PROGRAM.—

(1) AUTHORITY.—The Secretary shall establish a 20-year long-term bridge performance program.

(2) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—Under the program, the Secretary shall make grants and enter into cooperative agreements and contracts to—

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

(B) analyze the data obtained under subparagraph (A); and

(C) prepare products to fulfill program objectives and meet future bridge technology needs.

(Added Pub. L. 105–178, title V, § 5102, June 9, 1998, 112 Stat. 422; amended Pub. L. 109–59, title V, §§ 5201(b)–(g), (i)(1), (j)(1), (k), (*l*), 5202(a)(1), Aug. 10, 2005, 119 Stat. 1781–1785; Pub. L. 110–244, title I, § 111(g)(1), June 6, 2008, 122 Stat. 1605; Pub. L. 111–350, § 5(e)(2), Jan. 4, 2011, 124 Stat. 3847.)

REFERENCES IN TEXT

The Stevenson-Wydler Technology Innovation Act of 1980, referred to in subsec. (c)(4), is Pub. L. 96–480, Oct. 21, 1980, 94 Stat. 2311, which is classified generally to chapter 63 (§ 3701 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short title note set out under section 3701 of Title 15 and Tables.

PRIOR PROVISIONS

A prior section 502, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 831, related to State assurances of adequate highway relocation assistance program, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2011—Subsec. (c)(5). Pub. L. 111–350 substituted ''Section 6101(b) to (d) of title 41'' for ''Section 3709 of the Revised Statutes (41 U.S.C. 5)''.

2008—Subsec. (h). Pub. L. 110–244 struck out subsec. (h) relating to infrastructure investment needs report to be submitted not later than Jan. 31, 1999, and Jan. 31 of every second year thereafter.

2005—Subsec. (a). Pub. L. 109–59, § 5201(b)(2), added subsec. (a). Former subsec. (a) redesignated (b).

Subsec. (b). Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (a) as (b). Former subsec. (b) redesignated (c).

Subsec. (b)(1)(B). Pub. L. 109–59, § 5201(e)(1), inserted ''transportation system management and operations,'' after ''operation,''.

Subsec. (b)(3). Pub. L. 109–59, § 5201(c), reenacted heading without change and amended text of par. (3) generally. Prior to amendment, text read as follows: ''The Secretary may carry out this section—

''(A) independently;

''(B) in cooperation with other Federal departments, agencies, and instrumentalities and Federal laboratories; or

''(C) by making grants to, or entering into contracts, cooperative agreements, and other transactions with, the National Academy of Sciences, the American Association of State Highway and Transportation Officials, or any Federal laboratory, State agency, authority, association, institution, for-profit or nonprofit corporation, organization, foreign country, or person.''

Subsec. (b)(6). Pub. L. 109–59, § 5201(d), added par. (6).

Subsec. (c). Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (b) as (c). Former subsec. (c) redesignated (d).

Subsec. (c)(2). Pub. L. 109–59, § 5201(f), amended heading and text of par. (2) generally. Prior to amendment, text read as follows: ''In carrying out this subsection, the Secretary may enter into cooperative research and development agreements (as defined in section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a)).''

Subsec. (d). Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (c) as (d). Former subsec. (d) redesignated (e).

Subsec. (d)(5)(C). Pub. L. 109–59, § 5201(e)(2), inserted ''system management and'' before ''operations programs''.

Subsec. (d)(12) to (14). Pub. L. 109–59, § 5201(e)(3), added pars. (12) to (14).

Subsec. (e). Pub. L. 109–59, § 5201(g), amended heading and text of subsec. (e) generally, substituting provisions relating to exploratory advanced research for provisions relating to establishment of an advanced research program and authorizing the Secretary to make grants and enter into cooperative agreements and con-

tracts in such areas including: characterization of materials used in highway infrastructure; diagnostics for evaluation of the condition of bridge and pavement structures to enable the assessment of risks of failure; design and construction details for composite structures; safety technology-based problems in the areas of pedestrian and bicycle safety, roadside hazards, and composite materials for roadside safety hardware; environmental research, including particulate matter source apportionment and model development; data acquisition techniques for system condition and performance monitoring; and human factors, including prediction of the response of travelers to new technologies.

Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (d) as (e). Former subsec. (e) redesignated (f).

Subsec. (f). Pub. L. 109–59, § 5201(i)(1), reenacted heading without change and amended text of subsec. (f) generally, substituting provisions authorizing tests, monitoring, and data analysis under the long-term pavement performance program through Sept. 30, 2009, for provisions directing the completion of long-term pavement performance program tests through the midpoint of a planned 20-year life of the long-term pavement performance program.

Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (e) as (f). Former subsec. (f) redesignated (g).

Subsec. (g). Pub. L. 109–59, § 5201(j)(1), amended heading and text of subsec. (g) generally. Prior to amendment, subsec. (g) directed the Secretary to establish a seismic research program and to conduct such program in cooperation with the National Center for Earthquake Engineering Research at the University of Buffalo and in consultation and cooperation with Federal departments and agencies participating in the National Earthquake Hazards Reduction Program.

Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (f) as (g). Former subsec. (g) redesignated (h).

Subsec. (h). Pub. L. 109–59, § 5201(k), added subsec. (h) relating to infrastructure investment needs report to be submitted not later than July 31, 2006, and July 31 of every second year thereafter.

Pub. L. 109–59, § 5201(b)(1), redesignated subsec. (g), relating to infrastructure investment needs report to be submitted not later than Jan. 31, 1999, and Jan. 31 of every second year thereafter, as (h).

Subsec. (i). Pub. L. 109–59, § 5201(*l*), added subsec. (i).

Subsec. (j). Pub. L. 109–59, § 5202(a)(1), added subsec. (j).

TRANSPORTATION SAFETY INFORMATION MANAGEMENT SYSTEM PROJECT

Pub. L. 109–59, title V, § 5501, Aug. 10, 2005, 119 Stat. 1820, provided that:

''(a) IN GENERAL.—The Secretary [of Transportation] shall fund and carry out a project to further the development of a comprehensive transportation safety information management system (in this section referred to as 'TSIMS').

''(b) PURPOSES.—The purpose of the TSIMS project is to further the development of a software application to provide for the collection, integration, management, and dissemination of safety data from and for use among State and local safety and transportation agencies, including driver licensing, vehicle registration, emergency management system, injury surveillance, roadway inventory, and motor carrier databases.

''(c) FUNDING.—

''(1) FEDERAL FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $1,000,000 for fiscal years 2006 and 2007 shall be available to carry out the TSIMS project under this section.

''(2) STATE CONTRIBUTION.—The sums authorized in paragraph (1) are intended to supplement voluntary contributions to be made by State departments of transportation and other State safety and transportation agencies.''

SURFACE TRANSPORTATION CONGESTION RELIEF SOLUTIONS RESEARCH INITIATIVE

Pub. L. 109–59, title V, § 5502, Aug. 10, 2005, 119 Stat. 1820, provided that:

''(a) ESTABLISHMENT.—The Secretary [of Transportation] shall establish a surface transportation congestion solutions research initiative consisting of 2 independent research programs described in subsections (b)(1) and (b)(2) and designed to develop information to assist State transportation departments and metropolitan planning organizations [to] measure and address surface transportation congestion problems.

''(b) SURFACE TRANSPORTATION CONGESTION SOLUTIONS RESEARCH PROGRAM.—

''(1) IMPROVED SURFACE TRANSPORTATION CONGESTION MANAGEMENT SYSTEM MEASURES.—The purposes of the first research program established under this section shall be—

''(A) to examine the effectiveness of surface transportation congestion management systems since enactment of the Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102–240) [Dec. 18, 1991];

''(B) to identify best case examples of locally designed reporting methods and incorporate such methods in research on national models for developing and recommending improved surface transportation congestion measurement and reporting; and

''(C) to incorporate such methods in the development of national models and methods to monitor, measure, and report surface transportation congestion information.

''(2) ANALYTICAL TECHNIQUES FOR ACTION ON SURFACE TRANSPORTATION CONGESTION.—The purposes of the second research program established under this section shall be—

''(A) to analyze the effectiveness of procedures used by State transportation departments and metropolitan planning organizations to assess surface transportation congestion problems and communicate those problems to decisionmakers; and

''(B) to identify methods to ensure that the results of surface transportation congestion analyses lead to the targeting of funding for programs, projects, or services with demonstrated effectiveness in reducing travel delay, congestion, and system unreliability.

''(c) TECHNICAL ASSISTANCE AND TRAINING.—In fiscal year 2006, the Secretary [of Transportation] shall develop a technical assistance and training program to disseminate the results of the surface transportation congestion solutions research initiative for the purpose of assisting State transportation departments and local transportation agencies with improving their approaches to surface transportation congestion measurement, analysis, and project programming.

''(d) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $9,000,000 for each of fiscal years 2006 through 2009 shall be available to carry out subsections (a) and (b) of this section. Of the amounts made available by section 5101(a)(2), $750,000 for each of fiscal years 2006 through 2009 shall be available to carry out subsection (c) of this subsection.''

THERMAL IMAGING

Pub. L. 109–59, title V, § 5513(a), Aug. 10, 2005, 119 Stat. 1829, provided that:

''(1) IN GENERAL.—The Secretary [of Transportation] shall make a grant to carry out a demonstration project that uses a thermal imaging inspection system (TIIS) that leverages state-of-the-art thermal imagery technology, integrated with signature recognition software, providing the capability to identify, in real time, faults and failures in tires, brakes and bearings mounted on commercial motor vehicles.

''(2) USE OF FUNDS.—Funds shall be used—

''(A) to employ a TIIS in a field environment, along the Interstate, to further assess the system's ability to identify faults in tires, brakes, and bearings mounted on commercial motor vehicles;

''(B) to establish, through statistical analysis, the probability of failure for each component; and

''(C) to develop and integrate a predictive tool into the TIIS, which identifies an impending tire, brake, or bearing failure and provides the use of a time frame in which this failure may occur.

''(3) FUNDING.—Of the amounts made available under section 5101(a)(1) of this Act [119 Stat. 1779], $2,000,000 in fiscal year 2006 shall be available to carry out this subsection.''

STUDY OF FUTURE STRATEGIC HIGHWAY RESEARCH PROGRAM

Pub. L. 105–178, title V, § 5112, June 9, 1998, 112 Stat. 445, provided that:

''(a) STUDY.—Not later than 120 days after the date of enactment of this Act [June 9, 1998], the Secretary shall make a grant to, or enter into a cooperative agreement or contract with, the Transportation Research Board of the National Academy of Sciences (in this section referred to as the 'Board') to conduct a study to determine the goals, purposes, research agenda and projects, administrative structure, and fiscal needs for a new strategic highway research program to replace the program established under section 307(d) (as in effect on the day before the date of enactment of this Act), or a similar effort.

''(b) CONSULTATION.—In conducting the study, the Board shall consult with the American Association of State Highway and Transportation Officials and such other entities as the Board determines appropriate to the conduct of the study.

''(c) REPORT.—Not later than 5 years after making a grant or entering into a cooperative agreement or contract under subsection (a), the Board shall submit a final report on the results of the study to the Secretary, the Committee on Environment and Public Works of the Senate, and the Committee on Transportation and Infrastructure of the House of Representatives.''

COMMERCIAL REMOTE SENSING PRODUCTS AND SPATIAL INFORMATION TECHNOLOGIES

Pub. L. 109–59, title V, § 5506, Aug. 10, 2005, 119 Stat. 1823, provided that:

''(a) IN GENERAL.—The Secretary [of Transportation] shall establish and carry out a program to validate commercial remote sensing products and spatial information technologies for application to national transportation infrastructure development and construction.

''(b) PROGRAM.—

''(1) NATIONAL POLICY.—The Secretary [of Transportation] shall establish and maintain a national policy for the use of commercial remote sensing products and spatial information technologies in national transportation infrastructure development and construction.

''(2) POLICY IMPLEMENTATION.—The Secretary shall develop new applications of commercial remote sensing products and spatial information technologies for the implementation of the national policy established and maintained under paragraph (1).

''(c) COOPERATION.—The Secretary [of Transportation] shall carry out this section in cooperation with a consortium of university research centers.

''(d) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $7,750,000 for each of fiscal years 2006 through 2009 shall be available to carry out this section.''

Pub. L. 105–178, title V, § 5113, June 9, 1998, 112 Stat. 445, provided that:

''(a) IN GENERAL.—The Secretary shall establish and carry out a program to validate commercial remote sensing products and spatial information technologies for application to national transportation infrastructure development and construction.

''(b) PROGRAM STAGES.—

''(1) FIRST STAGE.—Not later than 18 months after the date of enactment of this Act [June 9, 1998], the Secretary shall establish a national policy for the use of commercial remote sensing products and spatial information technologies in national transportation infrastructure development and construction.

''(2) SECOND STAGE.—After establishment of the national policy under paragraph (1), the Secretary shall develop new applications of commercial remote sensing products and spatial information technologies for the implementation of the national policy.

''(c) COOPERATION.—The Secretary shall carry out this section in cooperation with the Commercial Remote Sensing Program of the National Aeronautics and Space Administration and a consortium of university research centers.

''(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $10,000,000 for each of fiscal years 1999 through 2004.''

TRANSPORTATION TECHNOLOGY INNOVATION AND DEMONSTRATION PROGRAM

Pub. L. 109–59, title V, § 5204(g), Aug. 10, 2005, 119 Stat. 1794, provided that:

''(1) FUNDAMENTAL PROPERTIES OF ASPHALTS AND MODIFIED ASPHALTS.—The Secretary [of Transportation] shall continue to carry out section 5117(b)(5) of the Transportation Equity Act for the 21st Century [Pub. L. 105–178, set out below] (112 Stat. 450).

''(2) TRANSPORTATION, ECONOMIC, AND LAND USE SYSTEM.—The Secretary shall continue to carry out section 5117(b)(7) of the Transportation Equity Act for the 21st Century (112 Stat. 450).

''(3) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], for each of fiscal years 2005 through 2009 $4,200,000 shall be available to carry out paragraph (1) and $1,000,000 shall be available to carry out paragraph (2).''

Pub. L. 105–178, title V, § 5117, June 9, 1998, 112 Stat. 448, as amended by Pub. L. 105–206, title IX, § 9011(g), (h), July 22, 1998, 112 Stat. 864; Pub. L. 105–277, div. A, § 101(g) [title III, § 3769 [369]], Oct. 21, 1998, 112 Stat. 2681–439, 2681–478; Pub. L. 107–117, div. B, § 1101, Jan. 10, 2002, 115 Stat. 2330; Pub. L. 109–59, title V, § 5508, Aug. 10, 2005, 119 Stat. 1824, provided that:

''(a) IN GENERAL.—The Secretary shall carry out a transportation technology innovation and demonstration program in accordance with the requirements of this section.

''(b) CONTENTS OF PROGRAM.—

''(1) MOTOR VEHICLE SAFETY WARNING SYSTEM.—

''(A) IN GENERAL.—The Secretary shall expand and continue the study authorized by section 358(c) of the National Highway System Designation Act of 1995 [Pub. L. 104–59] (23 U.S.C. 401 note; 109 Stat. 625) relating to the development of a motor vehicle safety warning system and shall conduct tests of such system.

''(B) GRANTS.—In carrying out this paragraph, the Secretary may make grants to State and local governments.

''(C) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2000 by section 5001(a)(2) of this Act [112 Stat. 419], $700,000 per fiscal year shall be available to carry out this paragraph.

''(2) MOTOR CARRIER ADVANCED SENSOR CONTROL SYSTEM.—

''(A) IN GENERAL.—The Secretary shall conduct research on the deployment of a system of advanced sensors and signal processors in trucks and tractor trailers to determine axle and wheel alignment, monitor collision alarm, check tire pressure and tire balance conditions, measure and detect load distribution in the vehicle, and monitor and adjust automatic braking systems.

''(B) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(2) of this Act, $700,000 per fiscal year shall be available to carry out this paragraph.

''(3) INTELLIGENT TRANSPORTATION INFRASTRUCTURE.—

''(A) DEFINITIONS.—In this paragraph:

''(i) CONGESTED AREA.—The term 'congested area' means a metropolitan area that experiences

significant traffic congestion, as determined by the Secretary on an annual basis, including the metropolitan areas of Albany, Atlanta, Austin, Burlington, Charlotte, Columbus, Greensboro, Hartford, Jacksonville, Kansas City, Louisville, Milwaukee, Minneapolis-St. Paul, Nashville, New Orleans, Norfolk, Raleigh, Richmond, Sacramento, San Jose, Tuscson, and Tulsa.

''(ii) DEPLOYMENT AREA.—The term 'deployment area' means any of the metropolitan areas of Baltimore, Birmingham, Boston, Chicago, Cleveland, Dallas/Fort Worth, Denver, Detroit, Houston, Indianapolis, Las Vegas, Los Angeles, Miami, New York/Northern New Jersey, Northern Kentucky/Cincinnati, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Portland, Providence, Salt Lake, San Diego, San Francisco, St. Louis, Seattle, Tampa, and Washington, District of Columbia.

''(iii) METROPOLITAN AREA.—The term 'metropolitan area', including a major transportation corridor serving a metropolitan area, means any area that—

''(I) has a population exceeding 300,000; and

''(II) meets criteria established by the Secretary in conjunction with the intelligent vehicle highway systems corridors program.

''(iv) ORIGINAL CONTRACT.—The term 'original contract' means the Department of Transportation contract numbered DTTS 59–99–D–00445 T020013.

''(v) PROGRAM.—The term 'program' means the 2-part intelligent transportation infrastructure program carried out under this paragraph.

''(vi) STATE TRANSPORTATION DEPARTMENT.—The term 'State transportation department' means—

''(I) a State transportation department (as defined in section 101 of title 23, United States Code); and

''(II) a designee of a State transportation department (as so defined) for the purpose of entering into contracts.

''(vii) UNCOMMITTED FUNDS.—The term 'uncommitted funds' means the total amount of funds that, as of the date that is 180 days after the date of enactment of the SAFETEA–LU [Aug. 10, 2005], remain uncommitted under the original contract.

''(B) INTELLIGENT TRANSPORTATION INFRASTRUCTURE PROGRAM.—

''(i) IN GENERAL.—The Secretary shall carry out a 2-part intelligent transportation infrastructure program in accordance with this paragraph to advance the deployment of an operational intelligent transportation infrastructure system, through measurement of various transportation system activities, to simultaneously—

''(I) aid in transportation planning and analysis; and

''(II) make a significant contribution to the ITS program under this title [see Tables for classification].

''(ii) OBJECTIVES.—The objectives of the program are—

''(I) to build or integrate an infrastructure of the measurement of various transportation system metrics to aid in planning, analysis, and maintenance of the Department of Transportation, including the buildout, maintenance, and operation of greater than 40 metropolitan area systems with a total cost not to exceed $2,000,000 for each metropolitan area;

''(II) to provide private technology commercialization initiatives to generate revenues that will be reinvested in the intelligent transportation infrastructure system;

''(III) to aggregate data into reports for multipoint data distribution techniques; and

''(IV) with respect to part I of the program under subparagraph (C), to use an advanced information system designed and monitored by an entity with experience with the Department of Transportation in the design and monitoring of high-reliability, mission-critical voice and data systems.

''(C) PART I.—

''(i) IN GENERAL.—In carrying out part I of the program, the Secretary shall permit the entity to which the original contract was awarded to use uncommitted funds to deploy intelligent transportation infrastructure systems that have been accepted by the Secretary—

''(I) in accordance with the terms of the original contract; and

''(II) in any deployment area, with the consent of the State transportation department for the deployment area.

''(ii) APPLICABLE CONDITIONS.—The same asset ownership, maintenance, fixed price contract, and revenue sharing model, and the same competitively selected consortium leader, as were used for the deployment of intelligent transportation infrastructure systems under the original contract before the date of enactment of the SAFETEA–LU [Aug. 10, 2005] shall apply to each deployment carried out under clause (i).

''(iii) DEPLOYMENT IN CONGESTED AREAS.—If the entity referred to in clause (i) is unable to use the uncommitted funds by deploying intelligent transportation infrastructure systems in deployment areas, as determined by the Secretary, the entity may deploy the systems in accordance with this paragraph in one or more congested areas, with the consent of the State transportation departments for the congested areas.

''(D) PART II.—

''(i) IN GENERAL.—In carrying out part II of the program, the Secretary shall award, on a competitive basis, contracts for the deployment of intelligent transportation infrastructure systems that have been accepted by the Secretary in congested areas, with the consent of the State transportation departments for the congested areas.

''(ii) REQUIREMENTS.—The Secretary shall award contracts under clause (i)—

''(I) for individual congested areas among entities that seek to deploy intelligent transportation infrastructure systems in the congested areas; and

''(II) on the condition that the terms of each contract awarded requires the entity deploying such system to ensure that the deployed system is compatible (as determined by the Secretary) with systems deployed in other congested areas under this paragraph.

''(iii) PROVISIONS IN CONTRACTS.—The Secretary shall require that each contract for the deployment of an intelligent transportation infrastructure system under this subparagraph contain such provisions relating to asset ownership, maintenance, fixed price, and revenue sharing as the Secretary considers to be appropriate.

''(E) USE OF FUNDS FOR UNDEPLOYED SYSTEMS.—

''(i) IN GENERAL.—If, under part I or part II of the program, a State transportation department for a deployment area or congested area does not consent by the later of the date that is 180 days after the date of enactment of the SAFETEA–LU [Aug. 10, 2005], or another date determined jointly by the State transportation department and the deployment area or congested area, to participate in the deployment of an intelligent transportation infrastructure system in the deployment area or congested area, upon application by any other deployment area or congested area that has consented by that date to participate in the deployment of such a system, the Secretary shall distribute any such unused funds to any other deployment or congested area that has consented by that date to participate in the deployment of such a system.

''(ii) NO INCLUSION IN COST LIMITATION.—Costs paid using funds provided through a distribution under clause (i) shall not be considered in determining the limitation on maximum cost described in subparagraph (F)(ii).

''(F) FEDERAL SHARE; LIMITS ON COSTS OF SYSTEMS FOR METROPOLITAN AREAS.—

''(i) FEDERAL SHARE.—Subject to clause (ii), the Federal share of the cost of any project or activity carried out under the program shall be 80 percent.

''(ii) LIMIT ON COSTS OF SYSTEM FOR EACH METROPOLITAN AREA.—

''(I) IN GENERAL.—Not more than $2,000,000 may be provided under this paragraph for deployment of an intelligent transportation infrastructure system for a metropolitan area.

''(II) FUNDING UNDER EACH PART.—A metropolitan area in which an intelligent transportation infrastructure system is deployed under part I or part II under subparagraphs (C) and (D), respectively, including through a distribution of funds under subparagraph (E), may not receive any additional deployment under the other part of the program.

''(G) USE OF RIGHTS-OF-WAY.—

''(i) IN GENERAL.—An intelligent transportation system project described in this paragraph or paragraph (6) that involves privately owned intelligent transportation system components and is carried out using funds made available from the Highway Trust Fund shall not be subject to any law (including a regulation) of a State or political subdivision of a State prohibiting or regulating commercial activities in the rights-of-way of a highway for which Federal-aid highway funds have been used for planning, design, construction, or maintenance for the project, if the Secretary determines that such use is in the public interest.

''(ii) EFFECT OF SUBPARAGRAPH.—Nothing in this subparagraph affects the authority of a State or political subdivision of a State—

''(I) to regulate highway safety; or

''(II) under sections 253 and 332(c)(7) of the Communications Act of 1934 (47 U.S.C. 253, 332(c)(7)).

''(H) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated such sums as may be necessary for each of fiscal years 2005 through 2009 to carry out this paragraph.

''(4) CORROSION CONTROL AND PREVENTION.—

''(A) IN GENERAL.—The Secretary shall make a grant to conduct a study on the costs and benefits of corrosion control and prevention. The study shall be conducted in conjunction with an interdisciplinary team of experts from the fields of metallurgy, chemistry, economics, and others, as appropriate. Not later than September 30, 2001, the Secretary shall submit to Congress a report on the study results, together with any recommendations.

''(B) FUNDING.—Of the amounts made available for each of fiscal years 1999 and 2000 by section 5001(a)(1) of this Act [112 Stat. 419], $500,000 per fiscal year shall be available to carry out this paragraph.

''(5) FUNDAMENTAL PROPERTIES OF ASPHALTS AND MODIFIED ASPHALTS.—

''(A) IN GENERAL.—The Secretary shall continue to carry out section 6016 of the Intermodal Surface Transportation Efficiency Act of 1991 [Pub. L. 102–240, set out as a note below]. Additional areas of the program under such section shall be asphalt-water interaction studies and asphalt-aggregate thin film behavior studies.

''(B) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(1) of this Act, $1,000,000 for fiscal year 1998 and $3,000,000 for each of fiscal years 1999 through 2003 shall be available to carry out this paragraph.

''(6) ADVANCED TRAFFIC MONITORING AND RESPONSE CENTER.—

''(A) IN GENERAL.—The Secretary shall make grants to the Commonwealth of Pennsylvania, in conjunction with the Pennsylvania Turnpike Commission, to establish an advanced traffic monitoring and emergency response center at Letterkenny Army Depot in Chambersburg, Pennsylvania. The center shall help develop and coordinate traffic monitoring and ITS systems on portions of the Pennsylvania Turnpike system and I–81, coordinate emergency response with State and local governments in the Central Pennsylvania Region and conduct research on emergency response and prototype trauma response.

''(B) FUNDING.—

''(i) ELIGIBILITY UNDER SECTION 5208.—The center established under this paragraph shall be eligible for funding under section 5208 of this Act [set out in a note below].

''(ii) ALLOCATION.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(2) of this Act, $1,667,000 per fiscal year shall be available to carry out this paragraph.

''(7) TRANSPORTATION ECONOMIC AND LAND USE SYSTEM.—

''(A) IN GENERAL.—The Secretary shall continue development and deployment through the New Jersey Institute of Technology to metropolitan planning organizations of the Transportation Economic and Land Use System.

''(B) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(2) of this Act, $1,000,000 per fiscal year shall be available to carry out this paragraph.

''(8) RECYCLED MATERIALS RESOURCE CENTER.—

''(A) ESTABLISHMENT.—The Secretary shall establish at the University of New Hampshire a research program to be known as the 'Recycled Materials Resource Center' (referred to in this paragraph as the 'Center').

''(B) ACTIVITIES.—

''(i) IN GENERAL.—The Center shall—

''(I) systematically test, evaluate, develop appropriate guidelines for, and demonstrate environmentally acceptable and occupationally safe technologies and techniques for the increased use of traditional and nontraditional recycled and secondary materials in transportation infrastructure construction and maintenance;

''(II) make information available to State transportation departments, the Federal Highway Administration, the construction industry, and other interested parties to assist in evaluating proposals to use traditional and nontraditional recycled and secondary materials in transportation infrastructure construction;

''(III) encourage the increased use of traditional and nontraditional recycled and secondary materials by using sound science to analyze thoroughly all potential long-term considerations that affect the physical and environmental performance of the materials; and

''(IV) work cooperatively with Federal and State officials to reduce the institutional barriers that limit widespread use of traditional and nontraditional recycled and secondary materials and to ensure that such increased use is consistent with the sustained environmental and physical integrity of the infrastructure in which the materials are used.

''(ii) SITES AND PROJECTS UNDER ACTUAL FIELD CONDITIONS.—In carrying out clause (i)(III), the Secretary may authorize the Center to—

''(I) use test sites and demonstration projects under actual field conditions to develop appropriate performance data; and

''(II) develop appropriate tests and guidelines to ensure correct use of recycled and secondary materials in transportation infrastructure construction.

''(C) REVIEW AND EVALUATION.—

''(i) IN GENERAL.—Not less often than every 2 years, the Secretary shall review and evaluate the program carried out by the Center.

''(ii) NOTIFICATION OF DEFICIENCIES.—In carrying out clause (i), if the Secretary determines that the Center is deficient in carrying out subparagraph (B), the Secretary shall notify the Center of each deficiency and recommend specific measures to address the deficiency.

''(iii) DISQUALIFICATION.—If, after the end of the 180-day period that begins on the date of notification to the Center under clause (ii), the Secretary determines that the Center has not corrected each deficiency identified under clause (ii), the Secretary may, after notifying the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives of the determination, disqualify the Center from further participation under this section.

''(D) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(1) of this Act, $1,500,000 per fiscal year shall be available to carry out this paragraph.''

INTELLIGENT TRANSPORTATION SYSTEMS

Pub. L. 105–178, title V, subtitle C, June 9, 1998, 112 Stat. 452, as amended by Pub. L. 105–206, title IX, § 9011(c), July 22, 1998, 112 Stat. 863; Pub. L. 105–277, div. A, § 101(g) [title III, § 370], Oct. 21, 1998, 112 Stat. 2681–439, 2681–478; Pub. L. 109–59, title V, § 5509, Aug. 10, 2005, 119 Stat. 1828, provided that:

''SEC. 5201. SHORT TITLE.

''This subtitle may be cited as the 'Intelligent Transportation Systems Act of 1998'.

''SEC. 5202. FINDINGS.

''Congress finds that—

''(1) investments authorized by the Intermodal Surface Transportation Efficiency Act of 1991 (105 Stat. 1914 et seq.) [Pub. L. 104–240, see Tables for classification] have demonstrated that intelligent transportation systems can mitigate surface transportation problems in a cost-effective manner; and

''(2) continued investment in architecture and standards development, research, and systems integration is needed to accelerate the rate at which intelligent transportation systems are incorporated into the national surface transportation network, thereby improving transportation safety and efficiency and reducing costs and negative impacts on communities and the environment.

''SEC. 5203. GOALS AND PURPOSES.

''(a) GOALS.—The goals of the intelligent transportation system program include—

''(1) enhancement of surface transportation efficiency and facilitation of intermodalism and international trade to enable existing facilities to meet a significant portion of future transportation needs, including public access to employment, goods, and services, and to reduce regulatory, financial, and other transaction costs to public agencies and system users;

''(2) achievement of national transportation safety goals, including the enhancement of safe operation of motor vehicles and nonmotorized vehicles, with particular emphasis on decreasing the number and severity of collisions;

''(3) protection and enhancement of the natural environment and communities affected by surface transportation, with particular emphasis on assisting State and local governments to achieve national environmental goals;

''(4) accommodation of the needs of all users of surface transportation systems, including operators of commercial vehicles, passenger vehicles, and motorcycles, and including individuals with disabilities; and

''(5) improvement of the Nation's ability to respond to emergencies and natural disasters and enhancement of national defense mobility.

''(b) PURPOSES.—The Secretary shall implement activities under the intelligent system transportation program to, at a minimum—

''(1) expedite, in both metropolitan and rural areas, deployment and integration of intelligent transportation systems for consumers of passenger and freight transportation;

''(2) ensure that Federal, State, and local transportation officials have adequate knowledge of intelligent transportation systems for full consideration in the transportation planning process;

''(3) improve regional cooperation and operations planning for effective intelligent transportation system deployment;

''(4) promote the innovative use of private resources;

''(5) develop a workforce capable of developing, operating, and maintaining intelligent transportation systems; and

''(6) complete deployment of Commercial Vehicle Information Systems and Networks in a majority of States by September 30, 2003.

''SEC. 5204. GENERAL AUTHORITIES AND REQUIREMENTS.

''(a) SCOPE.—Subject to the provisions of this subtitle, the Secretary shall conduct an ongoing intelligent transportation system program to research, develop, and operationally test intelligent transportation systems and advance nationwide deployment of such systems as a component of the surface transportation systems of the United States.

''(b) POLICY.—Intelligent transportation system operational tests and deployment projects funded pursuant to this subtitle shall encourage and not displace public-private partnerships or private sector investment in such tests and projects.

''(c) COOPERATION WITH GOVERNMENTAL, PRIVATE, AND EDUCATIONAL ENTITIES.—The Secretary shall carry out the intelligent transportation system program in cooperation with State and local governments and other public entities, the United States private sector, the Federal laboratories, and colleges and universities, including historically black colleges and universities and other minority institutions of higher education.

''(d) CONSULTATION WITH FEDERAL OFFICIALS.—In carrying out the intelligent transportation system program, the Secretary, as appropriate, shall consult with the Secretary of Commerce, the Secretary of the Treasury, the Administrator of the Environmental Protection Agency, the Director of the National Science Foundation, and the heads of other Federal departments and agencies.

''(e) TECHNICAL ASSISTANCE, TRAINING, AND INFORMATION.—The Secretary may provide technical assistance, training, and information to State and local governments seeking to implement, operate, maintain, or evaluate intelligent transportation system technologies and services.

''(f) TRANSPORTATION PLANNING.—The Secretary may provide funding to support adequate consideration of transportation system management and operations, including intelligent transportation systems, within metropolitan and statewide transportation planning processes.

''(g) INFORMATION CLEARINGHOUSE.—

''(1) IN GENERAL.—The Secretary shall—

''(A) maintain a repository for technical and safety data collected as a result of federally sponsored projects carried out under this subtitle; and

''(B) on request, make that information (except for proprietary information and data) readily available to all users of the repository at an appropriate cost.

''(2) DELEGATION OF AUTHORITY.—

''(A) IN GENERAL.—The Secretary may delegate the responsibility of the Secretary under this sub-

section, with continuing oversight by the Secretary, to an appropriate entity not within the Department of Transportation.

''(B) FEDERAL ASSISTANCE.—If the Secretary delegates the responsibility, the entity to which the responsibility is delegated shall be eligible for Federal assistance under this section.

''(h) ADVISORY COMMITTEES.—

''(1) IN GENERAL.—In carrying out this subtitle, the Secretary may use 1 or more advisory committees.

''(2) APPLICABILITY OF FEDERAL ADVISORY COMMITTEE ACT.—Any advisory committee so used shall be subject to the Federal Advisory Committee Act (5 U.S.C. App.).

''(i) PROCUREMENT METHODS.—

''(1) TECHNICAL ASSISTANCE.—The Secretary shall develop appropriate technical assistance and guidance to assist State and local agencies in evaluating and selecting appropriate methods of procurement for intelligent transportation system projects carried out using funds made available from the Highway Trust Fund, including innovative and nontraditional methods such as the Information Technology Omnibus Procurement.

''(2) INTELLIGENT TRANSPORTATION SYSTEM SOFTWARE.—To the maximum extent practicable, contracting officials shall use as a critical evaluation criterion the Software Engineering Institute's Capability Maturity Model, or another similar recognized standard risk assessment methodology, to reduce the cost, schedule, and performance risks associated with the development, management, and integration of intelligent transportation system software.

''(j) EVALUATIONS.—

''(1) GUIDELINES AND REQUIREMENTS.—

''(A) IN GENERAL.—The Secretary shall issue guidelines and requirements for the evaluation of operational tests and deployment projects carried out under this subtitle.

''(B) OBJECTIVITY AND INDEPENDENCE.—The guidelines and requirements issued under subparagraph (A) shall include provisions to ensure the objectivity and independence of the evaluator so as to avoid any real or apparent conflict of interest or potential influence on the outcome by parties to any such test or deployment project or by any other formal evaluation carried out under this subtitle.

''(C) FUNDING.—The guidelines and requirements issued under subparagraph (A) shall establish evaluation funding levels based on the size and scope of each test or project that ensure adequate evaluation of the results of the test or project.

''(2) SPECIAL RULE.—Any survey, questionnaire, or interview that the Secretary considers necessary to carry out the evaluation of any test, deployment project, or program assessment activity under this subtitle shall not be subject to chapter 35 of title 44.

''(k) USE OF RIGHTS-OF-WAY.—Intelligent transportation system projects specified in section 5117(b)(3) and 5117(b)(6) [set out above] and involving privately owned intelligent transportation system components that is carried out using funds made available from the Highway Trust Fund shall not be subject to any law or regulation of a State or political subdivision of a State prohibiting or regulating commercial activities in the rights-of-way of a highway for which Federal-aid highway funds have been utilized for planning, design, construction, or maintenance, if the Secretary of Transportation determines that such use is in the public interest. Nothing in this subsection shall affect the authority of a State or political subdivision of a State to regulate highway safety.

''SEC. 5205. NATIONAL ITS PROGRAM PLAN.

''(a) IN GENERAL.—

''(1) UPDATES.—The Secretary shall maintain and update, as necessary, the National ITS Program Plan developed by the Department of Transportation and the Intelligent Transportation Society of America.

''(2) SCOPE.—The National ITS Program Plan shall—

''(A) specify the goals, objectives, and milestones for the research and deployment of intelligent transportation systems in the context of major metropolitan areas, smaller metropolitan and rural areas, and commercial vehicle operations;

''(B) specify how specific programs and projects will achieve the goals, objectives, and milestones referred to in subparagraph (A), including consideration of the 5- and 10-year timeframes for the goals and objectives;

''(C) identify activities that provide for the dynamic development of standards and protocols to promote and ensure interoperability in the implementation of intelligent transportation system technologies, including actions taken to establish critical standards; and

''(D) establish a cooperative process with State and local governments for determining desired surface transportation system performance levels and developing plans for incorporation of specific intelligent transportation system capabilities into surface transportation systems.

''(b) REPORTING.—The plan described in subsection (a) shall be transmitted and updated as part of the Surface Transportation Research and Development Strategic Plan developed under section 508 of title 23, United States Code.

''SEC. 5206. NATIONAL ARCHITECTURE AND STANDARDS.

''(a) IN GENERAL.—

''(1) DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE.—Consistent with section 12(d) of the National Technology Transfer and Advancement Act of 1995 [Pub. L. 104–113] (15 U.S.C. 272 note; 110 Stat. 783), the Secretary shall develop, implement, and maintain a national architecture and supporting standards and protocols to promote the widespread use and evaluation of intelligent transportation system technology as a component of the surface transportation systems of the United States.

''(2) INTEROPERABILITY AND EFFICIENCY.—To the maximum extent practicable, the national architecture shall promote interoperability among, and efficiency of, intelligent transportation system technologies implemented throughout the United States.

''(3) USE OF STANDARDS DEVELOPMENT ORGANIZATIONS.—In carrying out this section, the Secretary may use the services of such standards development organizations as the Secretary determines to be appropriate.

''(b) REPORT ON CRITICAL STANDARDS.—Not later than June 1, 1999, the Secretary shall submit a report to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure and the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives identifying which standards are critical to ensuring national interoperability or critical to the development of other standards and specifying the status of the development of each standard identified.

''(c) PROVISIONAL STANDARDS.—

''(1) IN GENERAL.—If the Secretary finds that the development or balloting of an intelligent transportation system standard jeopardizes the timely achievement of the objectives identified in subsection (a), the Secretary may establish a provisional standard after consultation with affected parties, and using, to the extent practicable, the work product of appropriate standards development organizations.

''(2) CRITICAL STANDARDS.—If a standard identified as critical in the report under subsection (b) is not adopted and published by the appropriate standards development organization by January 1, 2001, the Secretary shall establish a provisional standard after consultation with affected parties, and using, to the extent practicable, the work product of appropriate standards development organizations.

''(3) PERIOD OF EFFECTIVENESS.—A provisional standard established under paragraph (1) or (2) shall

be published in the Federal Register and remain in effect until the appropriate standards development organization adopts and publishes a standard.

''(d) WAIVER OF REQUIREMENT TO ESTABLISH PROVISIONAL STANDARD.—

''(1) IN GENERAL.—The Secretary may waive the requirement under subsection (c)(2) to establish a provisional standard if the Secretary determines that additional time would be productive or that establishment of a provisional standard would be counterproductive to achieving the timely achievement of the objectives identified in subsection (a).

''(2) NOTICE.—The Secretary shall publish in the Federal Register a notice describing each standard for which a waiver of the provisional standard requirement has been granted, the reasons for and effects of granting the waiver, and an estimate as to when the standard is expected to be adopted through a process consistent with section 12(d) of the National Technology Transfer and Advancement Act of 1995 [Pub. L. 104–113] (15 U.S.C. 272 note; 110 Stat. 783).

''(3) WITHDRAWAL OF WAIVER.—At any time the Secretary may withdraw a waiver granted under paragraph (1). Upon such withdrawal, the Secretary shall publish in the Federal Register a notice describing each standard for which a waiver has been withdrawn and the reasons for withdrawing the waiver.

''(e) CONFORMITY WITH NATIONAL ARCHITECTURE.—

''(1) IN GENERAL.—Except as provided in paragraphs (2) and (3), the Secretary shall ensure that intelligent transportation system projects carried out using funds made available from the Highway Trust Fund, including funds made available under this subtitle to deploy intelligent transportation system technologies, conform to the national architecture, applicable standards or provisional standards, and protocols developed under subsection (a).

''(2) SECRETARY'S DISCRETION.—The Secretary may authorize exceptions to paragraph (1) for—

''(A) projects designed to achieve specific research objectives outlined in the National ITS Program Plan under section 5205 or the Surface Transportation Research and Development Strategic Plan developed under section 508 of title 23, United States Code; or

''(B) the upgrade or expansion of an intelligent transportation system in existence on the date of enactment of this subtitle [June 9, 1998], if the Secretary determines that the upgrade or expansion—

''(i) would not adversely affect the goals or purposes of this subtitle;

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

''(iii) is cost-effective as compared to alternatives that would meet the conformity requirement of paragraph (1).

''(3) EXCEPTIONS.—Paragraph (1) shall not apply to funds used for operation or maintenance of an intelligent transportation system in existence on the date of enactment of this subtitle.

''(f) SPECTRUM.—The Federal Communications Commission shall consider, in consultation with the Secretary, spectrum needs for the operation of intelligent transportation systems, including spectrum for the dedicated short-range vehicle-to-wayside wireless standard. Not later than January 1, 2000, the Federal Communications Commission shall have completed a rulemaking considering the allocation of spectrum for intelligent transportation systems.

''SEC. 5207. RESEARCH AND DEVELOPMENT.

''(a) IN GENERAL.—The Secretary shall carry out a comprehensive program of intelligent transportation system research, development and operational tests of intelligent vehicles and intelligent infrastructure systems, and other similar activities that are necessary to carry out this subtitle.

''(b) PRIORITY AREAS.—Under the program, the Secretary shall give higher priority to funding projects that—

''(1) address traffic management, incident management, transit management, toll collection, traveler information, or highway operations systems;

''(2) focus on crash-avoidance and integration of in-vehicle crash protection technologies with other on-board safety systems, including the interaction of air bags and safety belts;

''(3) incorporate human factors research, including the science of the driving process;

''(4) facilitate the integration of intelligent infrastructure, vehicle, and control technologies, including magnetic guidance control systems or other materials or magnetics research; or

''(5) incorporate research on the impact of environmental, weather, and natural conditions on intelligent transportation systems, including the effects of cold climates.

''(c) OPERATIONAL TESTS.—Operational tests conducted under this section shall be designed for the collection of data to permit objective evaluation of the results of the tests, derivation of cost-benefit information that is useful to others contemplating deployment of similar systems, and development and implementation of standards.

''(d) FEDERAL SHARE.—The Federal share of the cost of operational tests and demonstrations under subsection (a) shall not exceed 80 percent.

''[SECS. 5208, 5209. Repealed. Pub. L. 109–59, title V, § 5509, Aug. 10, 2005, 119 Stat. 1828.]

''SEC. 5210. USE OF FUNDS.

''(a) OUTREACH AND PUBLIC RELATIONS LIMITATION.—

''(1) IN GENERAL.—For each fiscal year, not more than $5,000,000 of the funds made available to carry out this subtitle shall be used for intelligent transportation system outreach, public relations, displays, scholarships, tours, and brochures.

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

''(b) INFRASTRUCTURE DEVELOPMENT.—Funds made available to carry out this subtitle for operational tests and deployment projects—

''(1) shall be used primarily for the development of intelligent transportation system infrastructure; and

''(2) to the maximum extent practicable, shall not be used for the construction of physical highway and transit infrastructure unless the construction is incidental and critically necessary to the implementation of an intelligent transportation system project.

''(c) LIFE CYCLE COST ANALYSIS AND FINANCING AND OPERATIONS PLAN.—The Secretary shall require an applicant for funds made available under sections 5208 and 5209 to submit to the Secretary—

''(1) an analysis of the life-cycle costs of operation and maintenance of intelligent transportation system elements, if the total initial capital costs of the elements exceed $3,000,000; and

''(2) a multiyear financing and operations plan that describes how the project will be cost-effectively operated and maintained.

''(d) USE OF INNOVATIVE FINANCING.—

''(1) IN GENERAL.—The Secretary may use up to 25 percent of the funds made available to carry out this subtitle to make available loans, lines of credit, and loan guarantees for projects that are eligible for assistance under this subtitle and that have significant intelligent transportation system elements.

''(2) CONSISTENCY WITH OTHER LAW.—Credit assistance described in paragraph (1) shall be made available in a manner consistent with the Transportation Infrastructure Finance and Innovation Act of 1998 [see section 1501 of Pub. L. 105–178, set out as a Short Title of 1998 Amendments note under section 101 of this title].

''SEC. 5211. DEFINITIONS.

''In this subtitle, the following definitions apply:

''(1) COMMERCIAL VEHICLE INFORMATION SYSTEMS AND NETWORKS.—The term 'Commercial Vehicle Informa-

tion Systems and Networks' means the information systems and communications networks that support commercial vehicle operations.

''(2) COMMERCIAL VEHICLE OPERATIONS.—The term 'commercial vehicle operations'—

''(A) means motor carrier operations and motor vehicle regulatory activities associated with the commercial movement of goods, including hazardous materials, and passengers; and

''(B) with respect to the public sector, includes the issuance of operating credentials, the administration of motor vehicle and fuel taxes, and roadside safety and border crossing inspection and regulatory compliance operations.

''(3) CORRIDOR.—The term 'corridor' means any major transportation route that includes parallel limited access highways, major arterials, or transit lines.

''(4) INTELLIGENT TRANSPORTATION INFRASTRUCTURE.—The term 'intelligent transportation infrastructure' means fully integrated public sector intelligent transportation system components, as defined by the Secretary.

''(5) INTELLIGENT TRANSPORTATION SYSTEM.—The term 'intelligent transportation system' means electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

''(6) NATIONAL ARCHITECTURE.—The term 'national architecture' means the common framework for interoperability adopted by the Secretary that defines—

''(A) the functions associated with intelligent transportation system user services;

''(B) the physical entities or subsystems within which the functions reside;

''(C) the data interfaces and information flows between physical subsystems; and

''(D) the communications requirements associated with the information flows.

''(7) STANDARD.—The term 'standard' means a document that—

''(A) contains technical specifications or other precise criteria for intelligent transportation systems that are to be used consistently as rules, guidelines, or definitions of characteristics so as to ensure that materials, products, processes, and services are fit for their purposes; and

''(B) may support the national architecture and promote—

''(i) the widespread use and adoption of intelligent transportation system technology as a component of the surface transportation systems of the United States; and

''(ii) interoperability among intelligent transportation system technologies implemented throughout the States.

''(8) STATE.—The term 'State' has the meaning given the term under section 101 of title 23, United States Code.

''SEC. 5212. PROJECT FUNDING.

''(a) USE OF HAZARDOUS MATERIALS MONITORING SYSTEMS.—

''(1) IN GENERAL.—The Secretary shall conduct research on improved methods of deploying and integrating existing ITS projects to include hazardous materials monitoring systems across various modes of transportation.

''(2) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(6) of this Act [112 Stat. 420], $1,500,000 per fiscal year shall be available to carry out this paragraph.

''(b) OUTREACH AND TECHNOLOGY TRANSFER ACTIVITIES.—

''(1) IN GENERAL.—The Secretary shall continue to support the Urban Consortium's ITS outreach and technology transfer activities.

''(2) FUNDING.—Of the amounts made available for each of fiscal years 1998 through 2003 by section 5001(a)(5) of this Act [112 Stat. 420], $500,000 per fiscal year shall be available to carry out this paragraph.

''(c) TRANSLINK.—

''(1) IN GENERAL.—The Secretary shall make grants to the Texas Transportation Institute to continue the Translink Research program.

''(2) FUNDING.—Of the amounts allocated for each of fiscal years 1999 through 2001 by section 5001(a)(6) of this Act, $1,300,000 per fiscal year shall be available to carry out this paragraph.

''SEC. 5213. REPEAL.

''The Intermodal Surface Transportation Efficiency Act of 1991 [Pub. L. 102–240] is amended by striking part B [§§ 6051–6059] of title VI (23 U.S.C. 307 note; 105 Stat. 2189).''

[Pub. L. 109–59, title V, § 5509, Aug. 10, 2005, 119 Stat. 1828, provided that the amendment made by section 5509, repealing sections 5208 and 5209 of Pub. L. 105–178, set out above, is effective Oct. 1 2005.]

RESEARCH ADVISORY COMMITTEE

Pub. L. 102–240, title VI, § 6011, Dec. 18, 1991, 105 Stat. 2179, provided that:

''(a) ESTABLISHMENT.—Not later than 180 days after the date of transmittal of the report to Congress under section 6010 [of Pub. L. 102–240, formerly set out as a note under section 307 of this title], the Secretary shall establish an independent surface transportation research advisory committee (hereinafter in this section referred to as the 'advisory committee').

''(b) PURPOSES.—The advisory committee shall provide ongoing advice and recommendations to the Secretary regarding needs, objectives, plans, approaches, content, and accomplishments with respect to short-term and long-term surface transportation research and development. The advisory committee shall also assist in ensuring that such research and development is coordinated with similar research and development being conducted outside of the Department of Transportation.

''(c) MEMBERSHIP.—The advisory committee shall be composed of not less than 20 and not more than 30 members appointed by the Secretary from among individuals who are not employees of the Department of Transportation and who are specially qualified to serve on the advisory committee by virtue of their education, training, or experience. A majority of the members of the advisory committee shall be individuals with experience in conducting surface transportation research and development. The Secretary in appointing the members of the advisory committee shall ensure that representatives of Federal, State, and local governments, other public agencies, colleges and universities, public, private, and nonprofit research organizations, and organizations representing transportation providers, shippers, labor, and the financial community are represented on an equitable basis.

''(d) CHAIRMAN.—The chairman of the advisory committee shall be designated by the Secretary.

''(e) PAY AND EXPENSES.—Members of the advisory committee shall serve without pay, except that the Secretary may allow any member, while engaged in the business of the advisory committee or a subordinate committee, travel expenses, including per diem in lieu of subsistence, in accordance with sections 5702 and 5703 of title 5, United States Code.

''(f) SUBORDINATE COMMITTEES.—The Secretary shall establish a subordinate committee to the advisory committee to provide advice on advanced highway vehicle technology research and development, and may establish other subordinate committees to provide advice on specific areas of surface transportation research and development. Such subordinate committees shall be subject to subsections (e), (g), and (i) of this section.

''(g) ASSISTANCE OF SECRETARY.—Upon request of the advisory committee, the Secretary shall provide such information, administrative services, support staff, and supplies as the Secretary determines to be necessary for the advisory committee to carry out its functions.

''(h) REPORTS.—The advisory committee shall, within 1 year after the date of establishment of the advisory committee, and annually thereafter, submit to the Congress a report summarizing its activities under this section.

''(i) TERMINATION.—Section 14 of the Federal Advisory Committee Act [5 U.S.C. App.] shall not apply to the advisory committee established under this section.''

FUNDAMENTAL PROPERTIES OF ASPHALTS AND MODIFIED ASPHALTS

Pub. L. 102–240, title VI, § 6016, Dec. 18, 1991, 105 Stat. 2182, provided that:

''(a) STUDIES.—The Administrator of the Federal Highway Administration (hereinafter in this section referred to as the 'Administrator') shall conduct studies of the fundamental chemical property and physical property of petroleum asphalts and modified asphalts used in highway construction in the United States. Such studies shall emphasize predicting pavement performance from the fundamental and rapidly measurable properties of asphalts and modified asphalts.

''(b) CONTRACTS.—To carry out the studies under subsection (a), the Administrator shall enter into contracts with the Western Research Institute of the University of Wyoming in order to conduct the necessary technical and analytical research in coordination with existing programs which evaluate actual performance of asphalts and modified asphalts in roadways, including the Strategic Highway Research Program.

''(c) ACTIVITIES OF STUDIES.—The studies under subsection (a) shall include the following activities:

''(1) Fundamental composition studies.

''(2) Fundamental physical and rheological property studies.

''(3) Asphalt-aggregate interaction studies.

''(4) Coordination of composition studies, physical and rheological property studies, and asphalt-aggregate interaction studies for the purposes of predicting pavement performance, including refinements of Strategic Highway Research Program specifications.

''(d) TEST STRIP.—

''(1) IMPLEMENTATION.—The Administrator, in coordination with the Western Research Institute of the University of Wyoming, shall implement a test strip for the purpose of demonstrating and evaluating the unique energy and environmental advantages of using shale oil modified asphalts under extreme climatic conditions.

''(2) FUNDING.—For the purposes of construction activities related to this test strip, the Secretary and the Director of the National Park Service shall make up to $1,000,000 available from amounts made available from the authorization for parkroads and parkways.

''(3) REPORT TO CONGRESS.—Not later than November 30, 1995, the Administrator shall transmit to Congress as part of a report under subsection (e) the Administrator's findings on activities conducted under this subsection, including an evaluation of the test strip implemented under this subsection and recommendations for legislation to establish a national program to support United States transportation and energy security requirements.

''(e) ANNUAL REPORT TO CONGRESS.—Not later than 180 days after the date of the enactment of this Act [Dec. 18, 1991], and on or before November 30th of each year beginning thereafter, the Administrator shall transmit to Congress a report of the progress made in implementing this section.

''(f) AUTHORIZATION OF APPROPRIATIONS.—The Secretary shall expend from administrative and research funds deducted under section 104(a) of this title [probably means section 104(a) of Title 23, Highways] at least $3,000,000 for each of fiscal years 1992, 1993, 1994, 1995, and 1996 to carry out subsection (b).''

[For termination, effective May 15, 2000, of annual reporting provisions in section 6016(e) of Pub. L. 102–240, set out above, see section 3003 of Pub. L. 104–66, set out as a note under section 1113 of Title 31, Money and Finance, and page 139 of House Document No. 103–7.]

STUDY OF FACTORS AFFECTING SAFE AND EFFICIENT OPERATION OF BRIDGES, TUNNELS AND ROADS WITHIN UNITED STATES

Pub. L. 95–599, title I, § 166, Nov. 6, 1978, 92 Stat. 2722, provided that: ''The Secretary of Transportation shall make a full and complete investigation and study of all those factors affecting the safe and efficient operation of bridges, tunnels, and roads within the United States, including, but not limited to, structural, operational, environmental, and civil disturbance factors.''

§ 503. Technology deployment

(a) TECHNOLOGY DEPLOYMENT PROGRAM.—

(1) ESTABLISHMENT.—The Secretary shall develop and administer a national technology deployment program.

(2) PURPOSE.—The purpose of the program shall be to significantly accelerate the adoption of innovative technologies by the surface transportation community.

(3) DEPLOYMENT GOALS.—

(A) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this section, the Secretary shall establish not more than 5 deployment goals to carry out paragraph (1).

(B) DESIGN.—Each of the goals and the program developed to achieve the goals shall be designed to provide tangible benefits, with respect to transportation systems, in the areas of efficiency, safety, reliability, service life, environmental protection, and sustainability.

(C) STRATEGIES FOR ACHIEVEMENT.—For each goal, the Secretary, in cooperation with representatives of the transportation community such as States, local governments, the private sector, and academia, shall use domestic and international technology to develop strategies and initiatives to achieve the goal, including technical assistance in deploying technology and mechanisms for sharing information among program participants.

(4) INTEGRATION WITH OTHER PROGRAMS.—The Secretary shall integrate activities carried out under this subsection with the efforts of the Secretary to disseminate the results of research sponsored by the Secretary and to facilitate technology transfer.

(5) LEVERAGING OF FEDERAL RESOURCES.—In selecting projects to be carried out under this subsection, the Secretary shall give preference to projects that leverage Federal funds with other significant public or private resources.

(6) CONTINUATION OF SHRP PARTNERSHIPS.—Under the program, the Secretary shall continue the partnerships established through the strategic highway research program established under section 307(d) (as in effect on the day before the date of enactment of this section).

(7) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary may make grants to, and enter into cooperative agreements and contracts with, States, other Federal agencies, univer-

sities and colleges, private sector entities, and nonprofit organizations to pay the Federal share of the cost of research, development, and technology transfer activities concerning innovative materials.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit an application to the Secretary. The application shall be in such form and contain such information as the Secretary may require. The Secretary shall select and approve an application based on whether the project that is the subject of the grant meets the purpose of the program described in paragraph (2).

(8) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall ensure that the information and technology resulting from research conducted under paragraph (7) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(9) ALLOCATION.—To the extent appropriate to achieve the goals established under paragraph (3), the Secretary may further allocate funds made available to carry out this section to States for their use.

(b) INNOVATIVE BRIDGE RESEARCH AND CONSTRUCTION PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and carry out a program to promote, demonstrate, evaluate, and document the application of innovative designs, materials, and construction methods in the construction, repair, and rehabilitation of bridges and other highway structures.

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

(A) the development of new, cost-effective, innovative highway bridge applications;

(B) the development of construction techniques to increase safety and reduce construction time and traffic congestion;

(C) the development of engineering design criteria for innovative products, materials, and structural systems for use in highway bridges and structures;

(D) the reduction of maintenance costs and life-cycle costs of bridges, including the costs of new construction, replacement, or rehabilitation of deficient bridges;

(E) the development of highway bridges and structures that will withstand natural disasters;

(F) the documentation and wide dissemination of objective evaluations of the performance and benefits of these innovative designs, materials, and construction methods;

(G) the effective transfer of resulting information and technology; and

(H) the development of improved methods to detect bridge scour and economical bridge foundation designs that will withstand bridge scour.

(3) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary shall make grants to, and enter into cooperative agreements and contracts with—

(i) States, other Federal agencies, universities and colleges, private sector entities, and nonprofit organizations to pay the Federal share of the cost of research, development, and technology transfer concerning innovative materials; and

(ii) States to pay the Federal share of the cost of repair, rehabilitation, replacement, and new construction of bridges or structures that demonstrate the application of innovative materials.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit an application to the Secretary. The application shall be in such form and contain such information as the Secretary may require. The Secretary shall select and approve the applications based on whether the project that is the subject of the grant meets the goals of the program described in paragraph (2).

(4) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall take such action as is necessary to ensure that the information and technology resulting from research conducted under paragraph (3) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(5) FEDERAL SHARE.—The Federal share of the cost of a project under this section shall be determined by the Secretary.

(c) INNOVATIVE PAVEMENT RESEARCH AND DEPLOYMENT PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and implement a program to promote, demonstrate, support, and document the application of innovative pavement technologies, practices, performance, and benefits.

(2) GOALS.—The goals of the innovative pavement research and deployment program shall include—

(A) the deployment of new, cost-effective, innovative designs, materials, recycled materials (including taconite tailings and foundry sand), and practices to extend pavement life and performance and to improve customer satisfaction;

(B) the reduction of initial costs and life-cycle costs of pavements, including the costs of new construction, replacement, maintenance, and rehabilitation;

(C) the deployment of accelerated construction techniques to increase safety and reduce construction time and traffic disruption and congestion;

(D) the deployment of engineering design criteria and specifications for innovative practices, products, and materials for use in highway pavements;

(E) the deployment of new nondestructive and real-time pavement evaluation technologies and techniques;

(F) the evaluation, refinement, and documentation of the performance and benefits of innovative technologies deployed to improve life, performance, cost effectiveness, safety, and customer satisfaction;

(G) effective technology transfer and information dissemination to accelerate imple-

mentation of innovative technologies and to improve life, performance, cost effectiveness, safety, and customer satisfaction; and

(H) the development of designs and materials to reduce storm water runoff.

(3) RESEARCH TO IMPROVE NHS PAVEMENT.—The Secretary shall obligate for each of fiscal years 2006 through 2009 from funds made available to carry out this subsection, $4,100,000 to conduct research to improve asphalt pavement, $4,100,000 to conduct research to improve concrete pavement, $4,100,000 to conduct research to improve alternative materials used in highways (including alternative materials used in highway drainage applications), and $2,450,000 to conduct research to improve aggregates used in highways on the National Highway System.

(d) SAFETY INNOVATION DEPLOYMENT PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and implement a program to demonstrate the application of innovative technologies in highway safety.

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

(A) the deployment and evaluation of safety technologies and innovations at State and local levels; and

(B) the deployment of best practices in training, management, design, and planning.

(3) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary shall make grants to, and enter into cooperative agreements and contracts with, States, other Federal agencies, universities and colleges, private sector entities, and nonprofit organizations for research, development, and technology transfer for innovative safety technologies.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit to the Secretary an application at such time and containing such information as the Secretary may require. The Secretary shall select and approve an application based on whether the project that is the subject of the application meets the goals of the program described in paragraph (2).

(4) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall take such action as is necessary to ensure that the information and technology resulting from research conducted under paragraph (3) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(e) PROMOTIONAL AUTHORITY.—Funds authorized to be appropriated for necessary expenses for administration and operation of the Federal Highway Administration shall be available to purchase promotional items of nominal value for use in the recruitment of individuals and to promote the programs of the Federal Highway Administration.

(Added Pub. L. 105–178, title V, § 5103, June 9, 1998, 112 Stat. 427; amended Pub. L. 109–59, title V, §§ 5202(b)(1), (2), 5203(a), (b)(1), (c)(1), (d), Aug. 10, 2005, 119 Stat. 1786–1789.)

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsec. (a)(3)(A), (6), is the date of enactment of Pub. L. 105–178, which was approved June 9, 1998.

PRIOR PROVISIONS

A prior section 503, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 831, related to administration of highway relocation assistance program, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Subsec. (a). Pub. L. 109–59, § 5203(a)(1), struck out ''INITIATIVES AND PARTNERSHIPS'' before ''PROGRAM'' in heading.

Subsec. (a)(1). Pub. L. 109–59, § 5203(a)(2), added par. (1) and struck out heading and text of former par. (1). Text read as follows: ''The Secretary shall develop and administer a national technology deployment initiatives and partnerships program.''

Subsec. (a)(7). Pub. L. 109–59, § 5203(a)(3), added par. (7) and struck out heading and text of former par. (7). Text read as follows: ''Under the program, the Secretary may make grants and enter into cooperative agreements and contracts to foster alliances and support efforts to stimulate advances in transportation technology, including—

''(A) the testing and evaluation of products of the strategic highway research program;

''(B) the further development and implementation of technology in areas such as the Superpave system and the use of lithium salts and other alternatives to prevent and mitigate alkali silica reactivity;

''(C) the provision of support for long-term pavement performance product implementation and technology access; and

''(D) other activities to achieve the goals established under paragraph (3).''

Subsec. (a)(8). Pub. L. 109–59, § 5203(a)(4), added par. (8) and struck out heading and text of former par. (8). Text read as follows: ''Not later than 18 months after the date of enactment of this section, and biennially thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the progress and results of activities carried out under this section.''

Subsec. (b)(1). Pub. L. 109–59, § 5202(b)(1), reenacted heading without change and amended text of par. (1) generally. Prior to amendment, text read as follows: ''The Secretary shall establish and carry out a program to demonstrate the application of innovative material technology in the construction of bridges and other structures.''

Subsec. (b)(2). Pub. L. 109–59, § 5202(b)(2), reenacted heading without change and amended text of par. (2) generally. Prior to amendment, text read as follows: ''The goals of the program shall include—

''(A) the development of new, cost-effective innovative material highway bridge applications;

''(B) the reduction of maintenance costs and life-cycle costs of bridges, including the costs of new construction, replacement, or rehabilitation of deficient bridges;

''(C) the development of construction techniques to increase safety and reduce construction time and traffic congestion;

''(D) the development of engineering design criteria for innovative products and materials for use in highway bridges and structures;

''(E) the development of cost-effective and innovative techniques to separate vehicle and pedestrian traffic from railroad traffic;

''(F) the development of highway bridges and structures that will withstand natural disasters, including alternative processes for the seismic retrofit of bridges; and

''(G) the development of new nondestructive bridge evaluation technologies and techniques.''

Subsec. (c). Pub. L. 109–59, § 5203(b)(1), added subsec. (c).

Subsec. (d). Pub. L. 109–59, § 5203(c)(1), added subsec. (d).

Subsec. (e). Pub. L. 109–59, § 5203(d), added subsec. (e).

HIGH PERFORMING STEEL BRIDGE RESEARCH AND TECHNOLOGY TRANSFER

Pub. L. 109–59, title V, § 5202(c), Aug. 10, 2005, 119 Stat. 1786, provided that:

''(1) IN GENERAL.—The Secretary [of Transportation] shall carry out a program to demonstrate the application of high-performing steel in the construction and rehabilitation of bridges.

''(2) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $4,100,000 for each of fiscal years 2006 through 2009 shall be available to carry out this subsection.''

STEEL BRIDGE TESTING

Pub. L. 109–59, title V, § 5202(d), Aug. 10, 2005, 119 Stat. 1787, provided that:

''(1) IN GENERAL.—The Secretary [of Transportation] shall carry out a program to test steel bridges using a nondestructive technology that is able to detect growing cracks, including subsurface flaws as small as 0.010 inches in length or depth, in the bridges.

''(2) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $1,250,000 for each of fiscal years 2006 through 2009 shall be available to carry out this subsection.

''(3) FEDERAL SHARE.—The Federal share of the cost of activities carried out in accordance with this subsection shall be 80 percent.''

§ 504. Training and education

(a) NATIONAL HIGHWAY INSTITUTE.—

(1) IN GENERAL.—The Secretary shall operate in the Federal Highway Administration a National Highway Institute (in this subsection referred to as the ''Institute''). The Secretary shall administer, through the Institute, the authority vested in the Secretary by this title or by any other law for the development and conduct of education and training programs relating to highways.

(2) DUTIES OF THE INSTITUTE.—In cooperation with State transportation departments, United States industry, and any national or international entity, the Institute shall develop and administer education and training programs of instruction for—

(A) Federal Highway Administration, State, and local transportation agency employees;

(B) regional, State, and metropolitan planning organizations;

(C) State and local police, public safety, and motor vehicle employees; and

(D) United States citizens and foreign nationals engaged or to be engaged in surface transportation work of interest to the United States.

(3) COURSES.—

(A) IN GENERAL.—The Institute shall—

(i) develop or update existing courses in asset management, including courses that include such components as—

(I) the determination of life-cycle costs;

(II) the valuation of assets;

(III) benefit-to-cost ratio calculations; and

(IV) objective decisionmaking processes for project selection; and

(ii) continually develop courses relating to the application of emerging technologies for—

(I) transportation infrastructure applications and asset management;

(II) intelligent transportation systems;

(III) operations (including security operations);

(IV) the collection and archiving of data;

(V) expediting the planning and development of transportation projects; and

(VI) the intermodal movement of individuals and freight.

(B) ADDITIONAL COURSES.—In addition to the courses developed under subparagraph (A), the Institute, in consultation with State transportation departments, metropolitan planning organizations, and the American Association of State Highway and Transportation Officials, may develop courses relating to technology, methods, techniques, engineering, construction, safety, maintenance, environmental mitigation and compliance, regulations, management, inspection, and finance.

(C) REVISION OF COURSES OFFERED.—The Institute shall periodically—

(i) review the course inventory of the Institute; and

(ii) revise or cease to offer courses based on course content, applicability, and need.

(4) SET-ASIDE; FEDERAL SHARE.—Not to exceed ½ of 1 percent of the funds apportioned to a State under section 104(b)(3) for the surface transportation program shall be available for expenditure by the State transportation department for the payment of not to exceed 80 percent of the cost of tuition and direct educational expenses (excluding salaries) in connection with the education and training of employees of State and local transportation agencies in accordance with this subsection.

(5) FEDERAL RESPONSIBILITY.—

(A) IN GENERAL.—Except as provided in subparagraph (B), education and training of employees of Federal, State, and local transportation (including highway) agencies authorized under this subsection may be provided—

(i) by the Secretary at no cost to the States and local governments if the Secretary determines that provision at no cost is in the public interest; or

(ii) by the State through grants, cooperative agreements, and contracts with public and private agencies, institutions, individuals, and the Institute.

(B) PAYMENT OF FULL COST BY PRIVATE PERSONS.—Private agencies, international or foreign entities, and individuals shall pay the full cost of any education and training received by them unless the Secretary determines that a lower cost is of critical importance to the public interest.

(6) TRAINING FELLOWSHIPS; COOPERATION.—The Institute may—

(A) engage in training activities authorized under this subsection, including the granting of training fellowships; and

(B) carry out its authority independently or in cooperation with any other branch of the Federal Government or any State agency, authority, association, institution, for-profit or nonprofit corporation, other national or international entity, or other person.

(7) COLLECTION OF FEES.—

(A) GENERAL RULE.—In accordance with this subsection, the Institute may assess and collect fees solely to defray the costs of the Institute in developing or administering education and training programs under this subsection.

(B) LIMITATION.—Fees may be assessed and collected under this subsection only in a manner that may reasonably be expected to result in the collection of fees during any fiscal year in an aggregate amount that does not exceed the aggregate amount of the costs referred to in subparagraph (A) for the fiscal year.

(C) PERSONS SUBJECT TO FEES.—Fees may be assessed and collected under this subsection only with respect to—

(i) persons and entities for whom education or training programs are developed or administered under this subsection; and

(ii) persons and entities to whom education or training is provided under this subsection.

(D) AMOUNT OF FEES.—The fees assessed and collected under this subsection shall be established in a manner that ensures that the liability of any person or entity for a fee is reasonably based on the proportion of the costs referred to in subparagraph (A) that relate to the person or entity.

(E) USE.—All fees collected under this subsection shall be used to defray costs associated with the development or administration of education and training programs authorized under this subsection.

(8) RELATION TO FEES.—The funds made available to carry out this subsection may be combined with or held separate from the fees collected under paragraph (7).

(b) LOCAL TECHNICAL ASSISTANCE PROGRAM.—

(1) AUTHORITY.—The Secretary shall carry out a local technical assistance program that will provide access to surface transportation technology to—

(A) highway and transportation agencies in urbanized and rural areas;

(B) contractors that perform work for the agencies; and

(C) infrastructure security staff.

(2) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—The Secretary may make grants and enter into cooperative agreements and contracts to provide education and training, technical assistance, and related support services to—

(A) assist rural, local transportation agencies and tribal governments, and the consultants and construction personnel working for the agencies and governments, to—

(i) develop and expand expertise in road and transportation areas (including pavement, bridge, concrete structures, intermodal connections, safety management systems, intelligent transportation systems, incident response, operations, and traffic safety countermeasures);

(ii) improve roads and bridges;

(iii) enhance—

(I) programs for the movement of passengers and freight; and

(II) intergovernmental transportation planning and project selection; and

(iv) deal effectively with special transportation-related problems by preparing and providing training packages, manuals, guidelines, and technical resource materials;

(B) develop technical assistance for tourism and recreational travel;

(C) identify, package, and deliver transportation technology and traffic safety information to local jurisdictions to assist urban transportation agencies in developing and expanding their ability to deal effectively with transportation-related problems (particularly the promotion of regional cooperation);

(D) operate, in cooperation with State transportation departments and universities—

(i) local technical assistance program centers designated to provide transportation technology transfer services to rural areas and to urbanized areas; and

(ii) local technical assistance program centers designated to provide transportation technical assistance to tribal governments; and

(E) allow local transportation agencies and tribal governments, in cooperation with the private sector, to enhance new technology implementation.

(3) FEDERAL SHARE.—The Federal share of the cost of activities carried out by the tribal technical assistance centers under paragraph (2)(D)(ii) shall be 100 percent.

(c) RESEARCH FELLOWSHIPS.—

(1) GENERAL AUTHORITY.—The Secretary, acting either independently or in cooperation with other Federal departments, agencies, and instrumentalities, may make grants for research fellowships for any purpose for which research is authorized by this chapter.

(2) DWIGHT DAVID EISENHOWER TRANSPORTATION FELLOWSHIP PROGRAM.—The Secretary shall establish and implement a transportation research fellowship program for the purpose of attracting qualified students to the field of transportation. The program shall be known as the ''Dwight David Eisenhower Transportation Fellowship Program''.

(d) GARRETT A. MORGAN TECHNOLOGY AND TRANSPORTATION EDUCATION PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish the Garrett A. Morgan Technology and Transportation Education Program to improve the preparation of students, particularly

women and minorities, in science, technology, engineering, and mathematics through curriculum development and other activities related to transportation.

(2) AUTHORIZED ACTIVITIES.—The Secretary shall award grants under this subsection on the basis of competitive peer review. Grants awarded under this subsection may be used for enhancing science, technology, engineering, and mathematics at the elementary and secondary school level through such means as—

(A) internships that offer students experience in the transportation field;

(B) programs that allow students to spend time observing scientists and engineers in the transportation field; and

(C) developing relevant curriculum that uses examples and problems related to transportation.

(3) APPLICATION AND REVIEW PROCEDURES.—

(A) IN GENERAL.—An entity described in subparagraph (C) seeking funding under this subsection shall submit an application to the Secretary at such time, in such manner, and containing such information as the Secretary may require. Such application, at a minimum, shall include a description of how the funds will be used to serve the purposes described in paragraph (2).

(B) PRIORITY.—In making awards under this subsection, the Secretary shall give priority to applicants that will encourage the participation of women and minorities.

(C) ELIGIBILITY.—Local educational agencies and State educational agencies, which may enter into a partnership agreement with institutions of higher education, businesses, or other entities, shall be eligible to apply for grants under this subsection.

(4) DEFINITIONS.—In this subsection, the following definitions apply:

(A) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given that term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(B) LOCAL EDUCATIONAL AGENCY.—The term ''local educational agency'' has the meaning given that term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(C) STATE EDUCATIONAL AGENCY.—The term ''State educational agency'' has the meaning given that term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(e) SURFACE TRANSPORTATION WORKFORCE DEVELOPMENT, TRAINING, AND EDUCATION.—

(1) FUNDING.—Subject to project approval by the Secretary, a State may obligate funds apportioned to the State under sections 104(b)(1), 104(b)(2), 104(b)(3), 104(b)(4), and 144(e) for surface transportation workforce development, training, and education, including—

(A) tuition and direct educational expenses, excluding salaries, in connection with the education and training of employees of State and local transportation agencies;

(B) employee professional development;

(C) student internships;

(D) university or community college support; and

(E) education activities, including outreach, to develop interest and promote participation in surface transportation careers.

(2) FEDERAL SHARE.—The Federal share of the cost of activities carried out in accordance with this subsection shall be 100 percent.

(3) SURFACE TRANSPORTATION WORKFORCE DEVELOPMENT, TRAINING, AND EDUCATION DEFINED.—In this subsection, the term ''surface transportation workforce development, training, and education'' means activities associated with surface transportation career awareness, student transportation career preparation, and training and professional development for surface transportation workers, including activities for women and minorities.

(f) TRANSPORTATION EDUCATION DEVELOPMENT PILOT PROGRAM.—

(1) ESTABLISHMENT.—The Secretary shall establish a program to make grants to institutions of higher education that, in partnership with industry or State departments of transportation, will develop, test, and revise new curricula and education programs to train individuals at all levels of the transportation workforce.

(2) SELECTION OF GRANT RECIPIENTS.—In selecting applications for awards under this subsection, the Secretary shall consider—

(A) the degree to which the new curricula or education program meets the specific needs of a segment of the transportation industry, States, or regions;

(B) providing for practical experience and on-the-job training;

(C) proposals oriented toward practitioners in the field rather than the support and growth of the research community;

(D) the degree to which the new curricula or program will provide training in areas other than engineering, such as business administration, economics, information technology, environmental science, and law;

(E) programs or curricula in nontraditional departments that train professionals for work in the transportation field, such as materials, information technology, environmental science, urban planning, and industrial technology; and

(F) the commitment of industry or a State's department of transportation to the program.

(3) LIMITATIONS.—The amount of a grant under this subsection shall not exceed $300,000 per year. After a recipient has received 3 years of Federal funding under this subsection, Federal funding may equal not more than 75 percent of a grantee's program costs.

(g) FREIGHT CAPACITY BUILDING PROGRAM.—

(1) ESTABLISHMENT.—The Secretary shall establish a freight planning capacity building initiative to support enhancements in freight transportation planning in order to—

(A) better target investments in freight transportation systems to maintain efficiency and productivity; and

(B) strengthen the decisionmaking capacity of State transportation departments and local transportation agencies with respect to freight transportation planning and systems.

(2) AGREEMENTS.—The Secretary shall enter into agreements to support and carry out administrative and management activities relating to the governance of the freight planning capacity initiative.

(3) STAKEHOLDER INVOLVEMENT.—In carrying out this section, the Secretary shall consult with the Association of Metropolitan Planning Organizations, the American Association of State Highway and Transportation Officials, and other freight planning stakeholders, including the other Federal agencies, State transportation departments, local governments, nonprofit entities, academia, and the private sector.

(4) ELIGIBLE ACTIVITIES.—The freight planning capacity building initiative shall include research, training, and education in the following areas:

(A) The identification and dissemination of best practices in freight transportation.

(B) Providing opportunities for freight transportation staff to engage in peer exchange.

(C) Refinement of data and analysis tools used in conjunction with assessing freight transportation needs.

(D) Technical assistance to State transportation departments and local transportation agencies reorganizing to address freight transportation issues.

(E) Facilitating relationship building between governmental and private entities involved in freight transportation.

(F) Identifying ways to target the capacity of State transportation departments and local transportation agencies to address freight considerations in operations, security, asset management, and environmental excellence in connection with long-range multimodal transportation planning and project implementation.

(5) FEDERAL SHARE.—The Federal share of the cost of an activity carried out under this section shall be up to 100 percent, and such funds shall remain available until expended.

(6) USE OF FUNDS.—Funds made available for the program established under this subsection may be used for research, program development, information collection and dissemination, and technical assistance. The Secretary may use such funds independently or make grants or to[1] and enter into contracts and cooperative agreements with a Federal agency, State agency, local agency, federally recognized Indian tribal government or tribal consortium, authority, association, nonprofit or for-profit corporation, or institution of higher education, to carry out the purposes of this subsection.

(Added Pub. L. 105–178, title V, §5104, June 9, 1998, 112 Stat. 429; amended Pub. L. 109–59, title V, §5204(a)(1), (b), (d)(1), (e), (h)(1), Aug. 10, 2005, 119 Stat. 1790, 1792–1794.)

[1] So in original.

PRIOR PROVISIONS

A prior section 504, added Pub. L. 90–495, §30, Aug. 23, 1968, 82 Stat. 831, related to Federal reimbursement for highway relocation assistance, prior to repeal by Pub. L. 91–646, title II, §220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Subsec. (a)(3). Pub. L. 109–59, §5204(a)(1), reenacted heading without change and amended text of par. (3) generally. Prior to amendment, text read as follows: ''The Institute may develop and administer courses in modern developments, techniques, methods, regulations, management, and procedures relating to surface transportation, environmental mitigation and compliance, acquisition of rights-of-way, relocation assistance, engineering, safety, construction, maintenance and operations, contract administration, motor carrier safety activities, inspection, and highway finance.''

Subsec. (b). Pub. L. 109–59, §5204(b), reenacted heading without change and amended text of subsec. (b) generally, substituting provisions relating to authority to carry out a local technical assistance program, authority to make grants and enter into cooperative agreements and contracts, and Federal share of the cost of activities carried out by tribal technical assistance centers, consisting of pars. (1) to (3), for provisions relating to authority to carry out a local technical assistance program and authority to make grants and enter into cooperative agreements and contracts, consisting of pars. (1) and (2).

Subsec. (d). Pub. L. 109–59, §5204(d)(1), added subsec. (d).

Subsecs. (e), (f). Pub. L. 109–59, §5204(e), added subsecs. (e) and (f).

Subsec. (g). Pub. L. 109–59, §5204(h)(1), added subsec. (g).

CENTER FOR TRANSPORTATION ADVANCEMENT AND REGIONAL DEVELOPMENT

Pub. L. 109–59, title V, §5504, Aug. 10, 2005, 119 Stat. 1822, provided that:

''(a) ESTABLISHMENT.—The Secretary [of Transportation] shall establish a Center for Transportation Advancement and Regional Development (referred to in this section as the 'Center') to assist, through training, education, and research, in the comprehensive development of small metropolitan and rural regional transportation systems that are responsive to the needs of businesses and local communities.

''(b) ACTIVITIES.—In carrying out this section, the Center shall—

''(1) provide training, information, and professional resources for small metropolitan and rural regions to pursue innovative strategies to expand the capabilities, capacity, and effectiveness of a region's transportation network, including activities related to freight projects, transit system upgrades, roadways and bridges, and intermodal transfer facilities and operations;

''(2) assist local officials, rural transportation and economic development planners, officials from State departments of transportation and economic development, business leaders, and other stakeholders in developing public-private partnerships to enhance their transportation systems; and

''(3) promote the leveraging of regional transportation planning with regional economic and business development planning to assure that appropriate transportation systems are created.

''(c) PROGRAM ADMINISTRATION.—To carry out this section, the Secretary [of Transportation] shall make a grant to, or enter into a cooperative agreement or contract with the National Association of Development Organizations.

''(d) FUNDING.—

''(1) IN GENERAL.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $625,000 shall be available for each of fiscal years 2006 through 2009 to carry out this section.

''(2) FEDERAL SHARE.—The Federal share of the cost of activities carried out in accordance with this subsection shall be 100 percent.''

TRANSPORTATION SCHOLARSHIP OPPORTUNITIES PROGRAM

Pub. L. 109–59, title V, § 5505, Aug. 10, 2005, 119 Stat. 1822, provided that:

''(a) IN GENERAL.—

''(1) ESTABLISHMENT OF PROGRAM.—The Secretary [of Transportation] may establish and implement a scholarship program for the purpose of attracting qualified students for transportation-related critical jobs.

''(2) PARTNERSHIP.—The Secretary may establish the program in partnership with appropriate nongovernmental institutions.

''(b) PARTICIPATION.—An operating administration of the Department and the Office of Inspector General may participate in the scholarship program.

''(c) FUNDING.—Notwithstanding any other provision of law, the Secretary [of Transportation] may use funds available to an operating administration or from the Office of Inspector General of the Department for the purpose of carrying out this section.''

§ 505. State planning and research

(a) GENERAL RULE.—Two percent of the sums apportioned to a State for fiscal year 1998 and each fiscal year thereafter under section 104 (other than sections 104(f) and 104(h)) and under section 144 shall be available for expenditure by the State, in consultation with the Secretary, only for the following purposes:

(1) Engineering and economic surveys and investigations.

(2) The planning of future highway programs and local public transportation systems and the planning of the financing of such programs and systems, including metropolitan and statewide planning under sections 134 and 135.

(3) Development and implementation of management systems under section 303.

(4) Studies of the economy, safety, and convenience of surface transportation systems and the desirable regulation and equitable taxation of such systems.

(5) Research, development, and technology transfer activities necessary in connection with the planning, design, construction, management, and maintenance of highway, public transportation, and intermodal transportation systems.

(6) Study, research, and training on the engineering standards and construction materials for transportation systems described in paragraph (5), including the evaluation and accreditation of inspection and testing and the regulation and taxation of their use.

(7) The conduct of activities relating to the planning of real-time monitoring elements.

(b) MINIMUM EXPENDITURES ON RESEARCH, DEVELOPMENT, AND TECHNOLOGY TRANSFER ACTIVITIES.—

(1) IN GENERAL.—Subject to paragraph (2), not less than 25 percent of the funds subject to subsection (a) that are apportioned to a State for a fiscal year shall be expended by the State for research, development, and technology transfer activities described in subsection (a), relating to highway, public transportation, and intermodal transportation systems.

(2) WAIVERS.—The Secretary may waive the application of paragraph (1) with respect to a State for a fiscal year if the State certifies to the Secretary for the fiscal year that total expenditures by the State for transportation planning under sections 134 and 135 will exceed 75 percent of the funds described in paragraph (1) and the Secretary accepts such certification.

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

(c) FEDERAL SHARE.—The Federal share of the cost of a project carried out using funds subject to subsection (a) shall be 80 percent unless the Secretary determines that the interests of the Federal-aid highway program would be best served by decreasing or eliminating the non-Federal share.

(d) ADMINISTRATION OF SUMS.—Funds subject to subsection (a) shall be combined and administered by the Secretary as a single fund and shall be available for obligation for the period described in section 118(b)(2).

(Added Pub. L. 105–178, title V, § 5105, June 9, 1998, 112 Stat. 432; amended Pub. L. 109–59, title V, § 5205, Aug. 10, 2005, 119 Stat. 1795.)

PRIOR PROVISIONS

A prior section 505, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 831, related to highway relocation assistance payments, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Subsec. (a)(7). Pub. L. 109–59, § 5205(1), added par. (7).

Subsec. (d). Pub. L. 109–59, § 5205(2), substituted ''for the period described in section 118(b)(2)'' for ''for the same period as funds apportioned under section 104(b)(1)''.

ALASKA HIGHWAY STUDY

Pub. L. 87–866, § 13, Oct. 23, 1962, 76 Stat. 1149, as amended by Pub. L. 97–449, § 2(a), Jan. 12, 1983, 96 Stat. 2439, provided that:

''(a) The Secretary of Transportation, in cooperation with the State of Alaska, is hereby authorized to make engineering studies and estimates and planning surveys relative to a highway construction program for the State of Alaska, and, in accordance with treaties or other agreements to be negotiated with Canada by the Secretary of State in consultation with the Secretary of Transportation, engineering studies, estimates, and planning surveys relative to connecting Alaskan roads with Canadian roads at the International boundary.

''(b) On or before May 15, 1964, the Secretary of Transportation shall submit a report to the Congress which shall include—

''(1) an analysis of the adequacy of the Federal-aid highway program to provide for a satisfactory program in both the populated and the undeveloped areas in Alaska;

''(2) specific recommendations as to the construction of roads through undeveloped areas of Alaska and connection of such roads with Canadian roads at the International boundary; and

''(3) a feasible program for implementing such specific recommendations, including cost estimates, recommendations as to the sharing of cost responsibilities, and other pertinent matters.

''(c) From time to time, either before or after submission of the report provided for in subsection (b) of this section, the Secretary of Transportation may submit recommendations to the Congress with respect to the

construction of particular highways to carry out the purposes of this section.

''(d) Nothing in this section shall be construed as creating any obligation in the Congress, express or implied, to carry out the recommendations referred to in subsections (b) and (c).

''(e) There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, to be available until expended, the sum of $800,000 for the purpose of making the studies, surveys, and report authorized by subsections (a) and (b) hereof.''

§ 506. International highway transportation outreach program

(a) ESTABLISHMENT.—The Secretary may establish an international highway transportation outreach program—

(1) to inform the United States highway community of technological innovations in foreign countries that could significantly improve highway transportation in the United States;

(2) to promote United States highway transportation expertise, goods, and services in foreign countries; and

(3) to increase transfers of United States highway transportation technology to foreign countries.

(b) ACTIVITIES.—Activities carried out under the program may include—

(1) the development, monitoring, assessment, and dissemination in the United States of information about highway transportation innovations in foreign countries that could significantly improve highway transportation in the United States;

(2) research, development, demonstration, training, and other forms of technology transfer and exchange;

(3) the provision to foreign countries, through participation in trade shows, seminars, expositions, and other similar activities, of information relating to the technical quality of United States highway transportation goods and services;

(4) the offering of technical services of the Federal Highway Administration that cannot be readily obtained from private sector firms in the United States for incorporation into the proposals of those firms undertaking highway transportation projects outside the United States, if the costs of the technical services will be recovered under the terms of the project;

(5) the conduct of studies to assess the need for, or feasibility of, highway transportation improvements in foreign countries; and

(6) the gathering and dissemination of information on foreign transportation markets and industries.

(c) COOPERATION.—The Secretary may carry out this section in cooperation with any appropriate—

(1) Federal, State, or local agency;

(2) authority, association, institution, or organization;

(3) for-profit or nonprofit corporation;

(4) national or international entity;

(5) foreign country; or

(6) person.

(d) FUNDS.—

(1) CONTRIBUTIONS.—Funds available to carry out this section shall include funds deposited by any cooperating organization or person into a special account of the Treasury established for this purpose.

(2) ELIGIBLE USES OF FUNDS.—The funds deposited into the account, and other funds available to carry out this section, shall be available to cover the cost of any activity eligible under this section, including the cost of—

(A) promotional materials;

(B) travel;

(C) reception and representation expenses; and

(D) salaries and benefits.

(3) REIMBURSEMENTS FOR SALARIES AND BENEFITS.—Reimbursements for salaries and benefits of Department employees providing services under this section shall be credited to the account.

(e) REPORT.—For each fiscal year, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes the destinations and individual trip costs of international travel conducted in carrying out activities described in this section.

(Added Pub. L. 105–178, title V, § 5106, June 9, 1998, 112 Stat. 433; amended Pub. L. 109–59, title V, § 5206(a), Aug. 10, 2005, 119 Stat. 1795.)

PRIOR PROVISIONS

A prior section 506, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 832; amended Pub. L. 91–605, title I, § 137, Dec. 31, 1970, 84 Stat. 1735, related to replacement housing, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Pub. L. 109–59 reenacted section catchline without change and amended text generally, substituting provisions relating to international highway transportation outreach program for similar former provisions which related to, in subsec. (a), establishment of an international highway transportation outreach program, in subsec. (b), activities which could be carried out under the program, in subsec. (c), cooperation with other entities, in subsec. (d), funding, and, in subsec. (e), State obligation of funds.

§ 507. Surface transportation-environmental cooperative research program

(a) IN GENERAL.—The Secretary shall establish and carry out a surface transportation-environmental cooperative research program.

(b) CONTENTS.—The program carried out under this section may include research—

(1) to develop more accurate models for evaluating transportation control measures and transportation system designs that are appropriate for use by State and local governments (including metropolitan planning organizations) in designing implementation plans to meet Federal, State, and local environmental requirements;

(2) to improve understanding of the factors that contribute to the demand for transportation;

(3) to develop indicators of economic, social, and environmental performance of transportation systems to facilitate analysis of potential alternatives;

(4) to meet additional priorities as determined by the Secretary in the strategic planning process under section 508; and

(5) to refine, through the conduct of workshops, symposia, and panels, and in consultation with stakeholders (including the Department of Energy, the Environmental Protection Agency, and other appropriate Federal and State agencies and associations) the scope and research emphases of the program.

(c) PROGRAM ADMINISTRATION.—The Secretary shall—

(1) administer the program established under this section; and

(2) ensure, to the maximum extent practicable, that—

(A) the best projects and researchers are selected to conduct research in the priority areas described in subsection (b)—

(i) on the basis of merit of each submitted proposal; and

(ii) through the use of open solicitations and selection by a panel of appropriate experts;

(B) a qualified, permanent core staff with the ability and expertise to manage a large multiyear budget is used;

(C) the stakeholders are involved in the governance of the program, at the executive, overall program, and technical levels, through the use of expert panels and committees; and

(D) there is no duplication of research effort between the program established under this section and the new strategic highway research program established under section 510.

(d) NATIONAL ACADEMY OF SCIENCES.—The Secretary may make grants to, and enter into cooperative agreements with, the National Academy of Sciences to carry out such activities relating to the research, technology, and technology transfer activities described in subsections (b) and (c) as the Secretary determines to be appropriate.

(Added Pub. L. 105–178, title V, § 5107, June 9, 1998, 112 Stat. 434; amended Pub. L. 109–59, title V, § 5207(a), Aug. 10, 2005, 119 Stat. 1797.)

PRIOR PROVISIONS

A prior section 507, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 832, related to expenses incidental to transfer of property, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Pub. L. 109–59 amended section catchline and text generally, substituting provisions relating to establishment of a surface transportation-environmental cooperative research program, contents of program, administration of program by the Secretary, and grants and agreements with the National Academy of Sciences, for provisions relating to establishment of a a surface transportation-environment cooperative research program, contents of program, establishment of an advisory board to recommend environmental and energy conservation research, technology, and technology transfer activities, and grants and agreements with the National Academy of Sciences.

§ 508. Transportation research and development strategic planning

(a) IN GENERAL.—

(1) DEVELOPMENT.—Not later than 1 year after the date of enactment of the SAFETEA–LU, the Secretary shall develop a 5-year transportation research and development strategic plan to guide Federal transportation research and development activities. This plan shall be consistent with section 306 of title 5, sections 1115 and 1116 of title 31, and any other research and development plan within the Department of Transportation.

(2) CONTENTS.—The strategic plan developed under paragraph (1) shall—

(A) describe the primary purposes of the transportation research and development program, which shall include, at a minimum—

(i) reducing congestion and improving mobility;

(ii) promoting safety;

(iii) promoting security;

(iv) protecting and enhancing the environment;

(v) preserving the existing transportation system; and

(vi) improving the durability and extending the life of transportation infrastructure;

(B) for each purpose, list the primary research and development topics that the Department intends to pursue to accomplish that purpose, which may include the fundamental research in the physical and natural sciences, applied research, technology development, and social science research intended for each topic; and

(C) for each research and development topic, describe—

(i) the anticipated annual funding levels for the period covered by the strategic plan; and

(ii) the additional information the Department expects to gain at the end of the period covered by the strategic plan as a result of the research and development in that topic area.

(3) CONSIDERATIONS.—In developing the strategic plan, the Secretary shall ensure that the plan—

(A) reflects input from a wide range of stakeholders;

(B) includes and integrates the research and development programs of all the Department's operating administrations, including aviation, transit, rail, and maritime; and

(C) takes into account how research and development by other Federal, State, private sector, and nonprofit institutions contributes to the achievement of the purposes identified under paragraph (2)(A), and avoids unnecessary duplication with these efforts.

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

(A) a summary of the Federal transportation research and development activities

for the previous fiscal year in each topic area;

(B) the amount of funding spent in each topic area;

(C) a description of the extent to which the research and development is meeting the expectations set forth in paragraph (2)(C)(ii); and

(D) any amendments to the strategic plan.

(b) ANNUAL REPORT.—The Secretary shall submit to appropriate committees of Congress an annual report, in conjunction with the President's annual budget request as set forth in section 1105 of title 31, describing the amount spent in the last completed fiscal year on transportation research and development and the amount proposed in the current budget for transportation research and development.

(c) NATIONAL RESEARCH COUNCIL REVIEW.—The Secretary shall enter into an agreement for the review by the National Research Council of the details of each—

(1) strategic plan under this section;

(2) performance plan required under section 1115 of title 31; and

(3) program performance report required under section 1116 of title 31, with respect to transportation research and development.

(Added Pub. L. 105–178, title V, § 5108, June 9, 1998, 112 Stat. 435; amended Pub. L. 109–59, title V, § 5208(a), Aug. 10, 2005, 119 Stat. 1798.)

REFERENCES IN TEXT

The date of enactment of the SAFETEA–LU, referred to in subsec. (a)(1), is the date of enactment of Pub. L. 109–59, which was approved Aug. 10, 2005.

PRIOR PROVISIONS

A prior section 508, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 833, related to highway relocation services, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Pub. L. 109–59 amended section catchline and text generally, substituting provisions relating to development of a 5-year transportation research and development strategic plan, annual report, and review by the National Research Council, consisting of subsecs. (a) to (c), for provisions relating to establishment of a strategic planning process to determine transportation research and technology development priorities, implementation of programs, development of a strategic plan, merit review and performance measurement, procurement procedures, and requirement of consistency with section 306 of title 5 and sections 1115 and 1116 of title 31, consisting of subsecs. (a) to (f).

SURFACE TRANSPORTATION RESEARCH AND DEVELOPMENT PLANNING

Pub. L. 102–240, title VI, § 6009, Dec. 18, 1991, 105 Stat. 2175, as amended by Pub. L. 104–59, title III, § 338(c)(1), Nov. 28, 1995, 109 Stat. 604, provided that:

''(a) FINDINGS.—Congress finds that—

''(1) despite an annual expenditure in excess of $10,000,000,000 on surface transportation and its infrastructure, the Federal Government has not developed a clear vision of—

''(A) how the surface transportation systems of the 21st century will differ from the present;

''(B) how they will interface with each other and with other forms of transportation;

''(C) how such systems will adjust to changing American population patterns and lifestyles; and

''(D) the role of federally funded research and development in ensuring that appropriate transportation systems are developed and implemented;

''(2) the population of the United States is projected to increase by over 30,000,000 people within the next 20 years, mostly in existing major metropolitan areas, which will result in increased traffic congestion within and between urban areas, more accidents, loss of productive time, and increased cost of transportation unless new technologies are developed to improve public transportation within cities and to move people and goods between cities;

''(3) 18,000,000 crashes, 4,000,000 injuries, and 45,000 fatalities each year on the Nation's highways are intolerable and substantial research is required in order to develop safer technologies in their most useful and economic forms;

''(4) current research and development funding for surface transportation is insufficient to provide the United States with the technologies essential to providing its own advanced transportation systems in the future and, as a result, the United States is becoming increasingly dependent on foreign surface transportation technologies and equipment to meet its expanding surface transportation needs;

''(5) a more active, focused surface transportation research and development program involving cooperation among the Federal Government, United States based industry, and United States universities should be organized on a priority basis;

''(6) intelligent transportation systems represent the best near-term technology for improving surface transportation for public benefit by providing equipment which can improve traffic flow and provide for enhanced safety;

''(7) research and development programs related to surface transportation are fragmented and dispersed throughout government and need to be strengthened and incorporated in an integrated framework within which a consensus on the goals of a national surface transportation research and development program must be developed;

''(8) the inability of government agencies to cooperate effectively, the difficulty of obtaining public support for new systems and rights-of-way, and the high cost of capital financing discourage private firms from investing in the development of new transportation equipment and systems; therefore, the Federal Government should sponsor and coordinate research and development of new technologies to provide safer, more convenient, and affordable transportation systems for use in the future; and

''(9) an effective high technology applied research and development program should be implemented quickly by strengthening the Department of Transportation research and development staff and by contracting with private industry for specific development projects.

''(b) SURFACE TRANSPORTATION RESEARCH AND DEVELOPMENT PLAN.—

''(1) DEVELOPMENT.—The Secretary shall develop an integrated national surface transportation research and development plan (hereinafter in this subsection referred to as the 'plan').

''(2) FOCUS.—The plan shall focus on surface transportation systems needed for urban, suburban, and rural areas in the next decade.

''(3) CONTENTS.—The plan shall include the following:

''(A) Details of the Department's surface transportation research and development programs, including appropriate funding levels and a schedule with milestones, preliminary cost estimates, appropriate work scopes, personnel requirements, and estimated costs and goals for the next 3 years for each area of research and development.

''(B) A 10-year projection of long-term programs in surface transportation research and development and recommendations for the appropriate source or mechanism for surface transportation research and

development funding, taking into account recommendations of the Research and Development Coordinating Council of the Department of Transportation and the plan of the National Council on Surface Transportation Research.

''(C) Recommendations on changes needed to assure that Federal, State, and local contracting procedures encourage the adoption of advanced technologies developed as a consequence of the research programs in this Act [Pub. L. 102–240, see Tables for classification].

''(4) OBJECTIVES.—The plan shall provide for the following:

''(A) The development, within the shortest period of time possible, of a range of technologies needed to produce convenient, safe, and affordable modes of surface transportation to be available for public use beginning in the mid-1990's.

''(B) Maintenance of a long-term advanced research and development program to provide for next generation surface transportation systems.

''(5) COOPERATION WITH INDUSTRY.—A primary component of the plan shall be cooperation with industry in carrying out this part [part A (§§ 6001–6024) of title VI of Pub. L. 102–240, enacting sections 325 and 326 of this title, sections 3711b and 3711c of Title 15, Commerce and Trade, section 111 of Title 49, Transportation, and section 1625 of former Title 49, Transportation, amending sections 204, 307, and 321 of this title, section 5316 of Title 5, Government Organization and Employees, sections 3708 and 3712 to 3715 of Title 15, sections 101 and 301 of Title 49, and sections 1607c and 1608 of former Title 49, enacting provisions set out as notes under sections 101, 112, and 307 of this title and sections 111 and 301 of Title 49, and amending provisions set out as notes under section 1608 of former Title 49] and strengthening the manufacturing capabilities of United States firms in order to produce products for surface transportation systems.

''(6) CONFORMANCE WITH PLAN.—All surface transportation research and development within the Department of Transportation shall be included in the plan and shall be evaluated in accordance with the plan.

''(7) COORDINATION.—In developing the plan and carrying out this part, the Secretary shall consult with and, where appropriate, use the expertise of other Federal agencies and their laboratories.

''(8) TRANSMITTAL.—On or before January 15, 1993, and annually thereafter, the Secretary shall transmit the plan to Congress, together with the Secretary's comments and recommendations. The Secretary shall review and update the plan before each transmittal under this paragraph.

''(9) RECOMMENDATIONS FOR ALTERNATIVES.—In the event a different technology or alternative program can be identified that would accomplish the same or better results than those described in this part, the Secretary may make recommendations for an alternative, and shall promptly report such alternative recommendations to Congress.''

§ 509. National cooperative freight transportation research program

(a) ESTABLISHMENT.—The Secretary shall establish and support a national cooperative freight transportation research program.

(b) AGREEMENT.—The Secretary shall enter into an agreement with the National Academy of Sciences to support and carry out administrative and management activities relating to the governance of the national cooperative freight transportation research program.

(c) ADVISORY COMMITTEE.—The National Academy of Sciences shall select an advisory committee consisting of a representative cross-section of freight stakeholders, including the Department of Transportation, other Federal agencies, State transportation departments, local governments, nonprofit entities, academia, and the private sector.

(d) GOVERNANCE.—The national cooperative freight transportation research program established under this section shall include the following administrative and management elements:

(1) NATIONAL RESEARCH AGENDA.—The advisory committee, in consultation with interested parties, shall recommend a national research agenda for the program. The agenda shall include a multiyear strategic plan.

(2) INVOLVEMENT.—Interested parties may—

(A) submit research proposals to the advisory committee;

(B) participate in merit reviews of research proposals and peer reviews of research products; and

(C) receive research results.

(3) OPEN COMPETITION AND PEER REVIEW OF RESEARCH PROPOSALS.—The National Academy of Sciences may award research contracts and grants under the program through open competition and merit review conducted on a regular basis.

(4) EVALUATION OF RESEARCH.—

(A) PEER REVIEW.—Research contracts and grants under the program may allow peer review of the research results.

(B) PROGRAMMATIC EVALUATIONS.—The National Academy of Sciences may conduct periodic programmatic evaluations on a regular basis of research contracts and grants.

(5) DISSEMINATION OF RESEARCH FINDINGS.—The National Academy of Sciences shall disseminate research findings to researchers, practitioners, and decisionmakers, through conferences and seminars, field demonstrations, workshops, training programs, presentations, testimony to government officials, the World Wide Web, publications for the general public, and other appropriate means.

(e) CONTENTS.—The national research agenda required under subsection (d)(1) shall include research in the following areas:

(1) Techniques for estimating and quantifying public benefits derived from freight transportation projects.

(2) Alternative approaches to calculating the contribution of truck and rail traffic to congestion on specific highway segments.

(3) The feasibility of consolidating origins and destinations for freight movement.

(4) Methods for incorporating estimates of international trade into landside transportation planning.

(5) The use of technology applications to increase capacity of highway lanes dedicated to truck-only traffic.

(6) Development of physical and policy alternatives for separating car and truck traffic.

(7) Ways to synchronize infrastructure improvements with freight transportation demand.

(8) The effect of changing patterns of freight movement on transportation planning decisions relating to rest areas.

(9) Other research areas to identify and address emerging and future research needs related to freight transportation by all modes.

(f) FUNDING.—

(1) FEDERAL SHARE.—The Federal share of the cost of an activity carried out under this section shall be up to 100 percent.

(2) USE OF NON-FEDERAL FUNDS.—In addition to using funds authorized for this section, the National Academy of Sciences may seek and accept additional funding sources from public and private entities capable of accepting funding from the Department of Transportation, States, local governments, nonprofit foundations, and the private sector.

(3) PERIOD OF AVAILABILITY.—Amounts made available to carry out this section shall remain available until expended.

(Added Pub. L. 109–59, title V, §5209(a), Aug. 10, 2005, 119 Stat. 1800.)

PRIOR PROVISIONS

A prior section 509, added Pub. L. 90–495, §30, Aug. 23, 1968, 82 Stat. 833, related to relocation assistance programs on Federal highway projects, prior to repeal by Pub. L. 91–646, title II, §220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

MOTOR CARRIER EFFICIENCY STUDY

Pub. L. 109–59, title V, §5503, Aug. 10, 2005, 119 Stat. 1821, provided that:

''(a) IN GENERAL.—The Secretary [of Transportation], in coordination with the motor carrier and wireless technology industry, shall conduct a study to—

''(1) identify inefficiencies in the transportation of freight;

''(2) evaluate the safety, productivity, and reduced cost improvements that may be achieved through the use of wireless technologies to address the inefficiencies identified in paragraph (1); and

''(3) conduct, as appropriate, field tests demonstrating the technologies identified in paragraph (2).

''(b) PROGRAM ELEMENTS.—The program shall include, at a minimum, the following:

''(1) Fuel monitoring and management systems.

''(2) Radio frequency identification technology.

''(3) Electronic manifest systems.

''(4) Cargo theft prevention.

''(c) FEDERAL SHARE.—The Federal share of the cost of the study under this section shall be 100 percent.

''(d) ANNUAL REPORT.—The Secretary [of Transportation] shall prepare and submit to Congress an annual report on the programs and activities carried out under this section.

''(e) FUNDING.—Of the amounts made available under section 5101(a)(1) of this Act [119 Stat. 1779], the Secretary [of Transportation] shall make available $1,250,000 to the Federal Motor Carrier Safety Administration for each of fiscal years 2006 through 2009 to carry out this section.''

§510. Future strategic highway research program

(a) ESTABLISHMENT.—The Secretary, in consultation with the American Association of State Highway and Transportation Officials, shall establish and carry out, acting through the National Research Council of the National Academy of Sciences, the future strategic highway research program.

(b) COOPERATIVE AGREEMENTS.—The Secretary may make grants to, and enter into cooperative agreements with, the American Association of State Highway and Transportation Officials and the National Academy of Sciences to carry out such activities under this section as the Secretary determines are appropriate.

(c) PROGRAM PRIORITIES.—

(1) PROGRAM ELEMENTS.—The program established under this section shall be based on the National Research Council Special Report 260, entitled ''Strategic Highway Research: Saving Lives, Reducing Congestion, Improving Quality of Life'' and the results of the detailed planning work subsequently carried out in 2002 and 2003 to identify the research areas through National Cooperative Research Program Project 20–58. The research program shall include an analysis of the following:

(A) Renewal of aging highway infrastructure with minimal impact to users of the facilities.

(B) Driving behavior and likely crash causal factors to support improved countermeasures.

(C) Reducing highway congestion due to nonrecurring congestion.

(D) Planning and designing new road capacity to meet mobility, economic, environmental, and community needs.

(2) DISSEMINATION OF RESULTS.—The research results of the program, expressed in terms of technologies, methodologies, and other appropriate categorizations, shall be disseminated to practicing engineers for their use, as soon as practicable.

(d) PROGRAM ADMINISTRATION.—In carrying out the program under this section, the National Research Council shall ensure, to the maximum extent practicable, that—

(1) projects and researchers are selected to conduct research for the program on the basis of merit and open solicitation of proposals and review by panels of appropriate experts;

(2) State department of transportation officials and other stakeholders, as appropriate, are involved in the governance of the program at the overall program level and technical level through the use of expert panels and committees;

(3) the Council acquires a qualified, permanent core staff with the ability and expertise to manage the program and multiyear budget; and

(4) there is no duplication of research effort between the program and any other research effort of the Department.

(e) REPORT ON IMPLEMENTATION OF RESULTS.—

(1) REPORT.—The Transportation Research Board of the National Research Council shall complete a report on the strategies and administrative structure to be used for implementation of the results of the future strategic highway research program.

(2) COMPONENTS.—The report under paragraph (1) shall include with respect to the program—

(A) an identification of the most promising results of research under the program (including the persons most likely to use the results);

(B) a discussion of potential incentives for, impediments to, and methods of, implementing those results;

(C) an estimate of costs of implementation of those results; and

(D) recommendations on methods by which implementation of those results should be

conducted, coordinated, and supported in future years, including a discussion of the administrative structure and organization best suited to carry out those recommendations.

(3) CONSULTATION.—In developing the report, the Transportation Research Board shall consult with a wide variety of stakeholders, including—

(A) the Federal Highway Administration;

(B) the National Highway Traffic Safety Administration; and

(C) the American Association of State Highway and Transportation Officials.

(4) SUBMISSION.—Not later than February 1, 2009, the report shall be submitted to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(f) FUNDING.—

(1) FEDERAL SHARE.—The Federal share of the cost of an activity carried out using amounts made available under a grant or cooperative agreement under this section shall be 100 percent, and such funds shall remain available until expended.

(2) ADVANCE PAYMENTS.—The Secretary may make advance payments as necessary to carry out the program under this section.

(g) LIMITATION OF REMEDIES.—

(1) SAME REMEDY AS IF UNITED STATES.—The remedy against the United States provided by sections 1346(b) and 2672 of title 28 for injury, loss of property, personal injury, or death shall apply to any claim against the National Academy of Sciences for money damages for injury, loss of property, personal injury, or death caused by any negligent or wrongful act or omission by employees and individuals described in paragraph (3) arising from activities conducted under or in connection with this section. Any such claim shall be subject to the limitations and exceptions which would be applicable to such claim if such claim were against the United States. With respect to any such claim, the Secretary shall be treated as the head of the appropriate Federal agency for purposes of sections 2672 and 2675 of title 28.

(2) EXCLUSIVENESS OF REMEDY.—The remedy referred to in paragraph (1) shall be exclusive of any other civil action or proceeding for the purpose of determining liability arising from any such act or omission without regard to when the act or omission occurred.

(3) TREATMENT.—Employees of the National Academy of Sciences and other individuals appointed by the president of the National Academy of Sciences and acting on its behalf in connection with activities carried out under this section shall be treated as if they are employees of the Federal Government under section 2671 of title 28 for purposes of a civil action or proceeding with respect to a claim described in paragraph (1). The civil action or proceeding shall proceed in the same manner as any proceeding under chapter 171 of title 28 or action against the United States filed pursuant to section 1346(b) of title 28 and shall be subject to the limitations and exceptions applicable to such a proceeding or action.

(4) SOURCES OF PAYMENTS.—Payment of any award, compromise, or settlement of a civil action or proceeding with respect to a claim described in paragraph (1) shall be paid first out of insurance maintained by the National Academy of Sciences, second from funds made available to carry out this section, and then from sums made available under section 1304 of title 31. For purposes of such section, such an award, compromise, or settlement shall be deemed to be a judgment, award, or settlement payable under section 2414 or 2672 of title 28. The Secretary may establish a reserve of funds to carry out this section for making payments under this paragraph.

(h) IMPLEMENTATION.—Notwithstanding any other provision of this section, the Secretary may use funds made available to carry out this section for implementation of research products related to the future strategic highway research program, including development, demonstration, evaluation, and technology transfer activities.

(Added Pub. L. 109–59, title V, § 5210(a), Aug. 10, 2005, 119 Stat. 1801; amended Pub. L. 111–322, title II, § 2203(d), Dec. 22, 2010, 124 Stat. 3526.)

PRIOR PROVISIONS

A prior section 510, added Pub. L. 91–605, title I, § 117(b), Dec. 31, 1970, 84 Stat. 1724, related to construction of replacement housing, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

Another prior section 510 was renumbered section 511 of this title and subsequently repealed.

AMENDMENTS

2010—Subsec. (h). Pub. L. 111–322 added subsec. (h).

§ 511. Multistate corridor operations and management

(a) IN GENERAL.—The Secretary shall encourage multistate cooperative agreements, coalitions, or other arrangements to promote regional cooperation, planning, and shared project implementation for programs and projects to improve transportation system management and operations.

(b) INTERSTATE ROUTE 95 CORRIDOR COALITION TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS.—The Secretary shall make grants under this subsection to States to continue intelligent transportation system management and operations in the Interstate Route 95 corridor coalition region initiated under the Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102–240).

(Added Pub. L. 109–59, title V, § 5211(a), Aug. 10, 2005, 119 Stat. 1804.)

REFERENCES IN TEXT

The Intermodal Surface Transportation Efficiency Act of 1991, referred to in subsec. (b), is Pub. L. 102–240, Dec. 18, 1991, 105 Stat. 1914, as amended. For complete classification of this Act to the Code, see Short Title of 1991 Amendment note set out under section 101 of Title 49, Transportation, and Tables.

PRIOR PROVISIONS

A prior section 511, formerly 510, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 834; renumbered § 511, Pub. L. 91–605, title I, § 117(a), Dec. 31, 1970, 84 Stat. 1724, related

to authority of Secretary, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

Another prior section 511 was renumbered section 512 of this title and subsequently repealed.

§ 512. National ITS program plan

(a) IN GENERAL.—

(1) UPDATES.—Not later than 1 year after the date of enactment of the SAFETEA–LU, the Secretary, in consultation with interested stakeholders (including State transportation departments) shall develop a 5-year National Intelligent Transportation System (in this section referred to as ''ITS'') program plan.

(2) SCOPE.—The National ITS program plan shall—

(A) specify the goals, objectives, and milestones for the research and deployment of intelligent transportation systems in the contexts of—

(i) major metropolitan areas;

(ii) smaller metropolitan and rural areas; and

(iii) commercial vehicle operations;

(B) specify the manner in which specific programs and projects will achieve the goals, objectives, and milestones referred to in subparagraph (A), including consideration of a 5-year timeframe for the goals and objectives;

(C) identify activities that provide for the dynamic development, testing, and necessary revision of standards and protocols to promote and ensure interoperability in the implementation of intelligent transportation system technologies, including actions taken to establish standards; and

(D) establish a cooperative process with State and local governments for—

(i) determining desired surface transportation system performance levels; and

(ii) developing plans for accelerating the incorporation of specific intelligent transportation system capabilities into surface transportation systems.

(b) REPORTING.—The National ITS program plan shall be submitted and biennially updated as part of the transportation research and development strategic plan developed under section 508.

(Added Pub. L. 109–59, title V, § 5301(a), Aug. 10, 2005, 119 Stat. 1804.)

REFERENCES IN TEXT

The date of enactment of the SAFETEA–LU, referred to in subsec. (a)(1), is the date of enactment of Pub. L. 109–59, which was approved Aug. 10, 2005.

PRIOR PROVISIONS

A prior section 512, formerly 511, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 834; renumbered § 512, Pub. L. 91–605, title I, § 117(a), Dec. 31, 1970, 84 Stat. 1724, related to definitions for chapter, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

INTELLIGENT TRANSPORTATION SYSTEM PROGRAM

Pub. L. 109–59, title V, §§ 5303–5310, Aug. 10, 2005, 119 Stat. 1806–1813, provided that:

''SEC. 5303. GOALS AND PURPOSES.

''(a) GOALS.—The goals of the intelligent transportation system program include—

''(1) enhancement of surface transportation efficiency and facilitation of intermodalism and international trade to enable existing facilities to meet a significant portion of future transportation needs, including public access to employment, goods, and services and to reduce regulatory, financial, and other transaction costs to public agencies and system users;

''(2) achievement of national transportation safety goals, including the enhancement of safe operation of motor vehicles and nonmotorized vehicles and improved emergency response to a crash, with particular emphasis on decreasing the number and severity of collisions;

''(3) protection and enhancement of the natural environment and communities affected by surface transportation, with particular emphasis on assisting State and local governments to achieve national environmental goals;

''(4) accommodation of the needs of all users of surface transportation systems, including operators of commercial motor vehicles, passenger motor vehicles, motorcycles, bicycles and pedestrians, including individuals with disabilities; and

''(5) improvement of the Nation's ability to respond to security-related or other manmade emergencies and natural disasters and enhancement of national defense mobility.

''(b) PURPOSES.—The Secretary [of Transportation] shall implement activities under the intelligent system transportation program to, at a minimum—

''(1) expedite, in both metropolitan and rural areas, deployment and integration of intelligent transportation systems for consumers of passenger and freight transportation;

''(2) ensure that Federal, State, and local transportation officials have adequate knowledge of intelligent transportation systems for consideration in the transportation planning process;

''(3) improve regional cooperation and operations planning for effective intelligent transportation system deployment;

''(4) promote the innovative use of private resources;

''(5) facilitate, in cooperation with the motor vehicle industry, the introduction of vehicle-based safety enhancing systems;

''(6) support the application of intelligent transportation systems that increase the safety and efficiency of commercial motor vehicle operations;

''(7) develop a workforce capable of developing, operating, and maintaining intelligent transportation systems; and

''(8) provide continuing support for operations and maintenance of intelligent transportation systems.

''SEC. 5304. INFRASTRUCTURE DEVELOPMENT.

''Funds made available to carry out this subtitle [subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title] for operational tests—

''(1) shall be used primarily for the development of intelligent transportation system infrastructure; and

''(2) to the maximum extent practicable, shall not be used for the construction of physical highway and public transportation infrastructure unless the construction is incidental and critically necessary to the implementation of an intelligent transportation system project.

''SEC. 5305. GENERAL AUTHORITIES AND REQUIREMENTS.

''(a) SCOPE.—Subject to the provisions of this subtitle [subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title], the Secretary [of Transportation] shall conduct an ongoing intelligent transportation system program to research, develop, and operationally test intelligent transportation systems and to provide technical assistance in the nationwide application of those systems as a component of the surface transportation systems of the United States.

''(b) POLICY.—Intelligent transportation system research projects and operational tests funded pursuant to this subtitle shall encourage and not displace public-private partnerships or private sector investment in such tests and projects.

''(c) COOPERATION WITH GOVERNMENTAL, PRIVATE, AND EDUCATIONAL ENTITIES.—The Secretary shall carry out the intelligent transportation system program in cooperation with State and local governments and other public entities, the private sector firms of the United States, the Federal laboratories, and colleges and universities, including historically Black colleges and universities and other minority institutions of higher education.

''(d) CONSULTATION WITH FEDERAL OFFICIALS.—In carrying out the intelligent transportation system program, the Secretary shall consult with the heads of other Federal departments and agencies, as appropriate.

''(e) TECHNICAL ASSISTANCE, TRAINING, AND INFORMATION.—The Secretary may provide technical assistance, training, and information to State and local governments seeking to implement, operate, maintain, or evaluate intelligent transportation system technologies and services.

''(f) TRANSPORTATION PLANNING.—The Secretary may provide funding to support adequate consideration of transportation systems management and operations, including intelligent transportation systems, within metropolitan and statewide transportation planning processes.

''(g) INFORMATION CLEARINGHOUSE.—

''(1) IN GENERAL.—The Secretary shall—

''(A) maintain a repository for technical and safety data collected as a result of federally sponsored projects carried out under this subtitle (including the amendments made by this subtitle); and

''(B) make, on request, that information (except for proprietary information and data) readily available to all users of the repository at an appropriate cost.

''(2) AGREEMENT.—

''(A) IN GENERAL.—The Secretary may enter into an agreement with a third party for the maintenance of the repository for technical and safety data under paragraph (1)(A).

''(B) FEDERAL FINANCIAL ASSISTANCE.—If the Secretary enters into an agreement with an entity for the maintenance of the repository, the entity shall be eligible for Federal financial assistance under this section.

''(3) AVAILABILITY OF INFORMATION.—Information in the repository shall not be subject to sections 552 and 555 of title 5, United States Code.

''(h) ADVISORY COMMITTEE.—

''(1) IN GENERAL.—The Secretary shall establish an Advisory Committee to advise the Secretary on carrying out this subtitle.

''(2) MEMBERSHIP.—The Advisory Committee shall have no more than 20 members, be balanced between metropolitan and rural interests, and include, at a minimum—

''(A) a representative from a State highway department;

''(B) a representative from a local highway department who is not from a metropolitan planning organization;

''(C) a representative from a State, local, or regional transit agency;

''(D) a representative from a metropolitan planning organization;

''(E) a private sector user of intelligent transportation system technologies;

''(F) an academic researcher with expertise in computer science or another information science field related to intelligent transportation systems, and who is not an expert on transportation issues;

''(G) an academic researcher who is a civil engineer;

''(H) an academic researcher who is a social scientist with expertise in transportation issues;

''(I) a representative from a nonprofit group representing the intelligent transportation system industry;

''(J) a representative from a public interest group concerned with safety;

''(K) a representative from a public interest group concerned with the impact of the transportation system on land use and residential patterns; and

''(L) members with expertise in planning, safety, and operations.

''(3) DUTIES.—The Advisory Committee shall, at a minimum, perform the following duties:

''(A) Provide input into the development of the Intelligent Transportation System aspects of the strategic plan under section 508 of title 23, United States Code.

''(B) Review, at least annually, areas of intelligent transportation systems research being considered for funding by the Department, to determine—

''(i) whether these activities are likely to advance either the state-of-the-practice or state-of-the-art in intelligent transportation systems;

''(ii) whether the intelligent transportation system technologies are likely to be deployed by users, and if not, to determine the barriers to deployment; and

''(iii) the appropriate roles for government and the private sector in investing in the research and technologies being considered.

''(4) REPORT.—Not later than February 1 of each year after the date of enactment of this Act [Aug. 10, 2005], the Secretary shall transmit to the Congress a report including—

''(A) all recommendations made by the Advisory Committee during the preceding calendar year;

''(B) an explanation of how the Secretary has implemented those recommendations; and

''(C) for recommendations not implemented, the reasons for rejecting the recommendations.

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

''(i) REPORTING.—

''(1) GUIDELINES AND REQUIREMENTS.—

''(A) IN GENERAL.—The Secretary shall issue guidelines and requirements for the reporting and evaluation of operational tests and deployment projects carried out under this subtitle.

''(B) OBJECTIVITY AND INDEPENDENCE.—The guidelines and requirements issued under subparagraph (A) shall include provisions to ensure the objectivity and independence of the reporting entity so as to avoid any real or apparent conflict of interest or potential influence on the outcome by parties to any such test or deployment project or by any other formal evaluation carried out under this subtitle.

''(C) FUNDING.—The guidelines and requirements issued under subparagraph (A) shall establish reporting funding levels based on the size and scope of each test or project that ensure adequate reporting of the results of the test or project.

''(2) SPECIAL RULE.—Any survey, questionnaire, or interview that the Secretary considers necessary to carry out the reporting of any test, deployment project, or program assessment activity under this subtitle shall not be subject to chapter 35 of title 44, United States Code.

''SEC. 5306. RESEARCH AND DEVELOPMENT.

''(a) IN GENERAL.—The Secretary [of Transportation] shall carry out a comprehensive program of intelligent transportation system research, development, and operational tests of intelligent vehicles and intelligent infrastructure systems and other similar activities that are necessary to carry out this subtitle [subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title].

''(b) PRIORITY AREAS.—Under the program, the Secretary shall give higher priority to funding projects that—

''(1) enhance mobility and productivity through improved traffic management, incident management, transit management, freight management, road weather management, toll collection, traveler information, or highway operations systems and remote sensing products;

''(2) utilize interdisciplinary approaches to develop traffic management strategies and tools to address multiple impacts of congestion concurrently;

''(3) address traffic management, incident management, transit management, toll collection traveler information, or highway operations systems with goals of—

''(A) reducing metropolitan congestion by not less than 5 percent by 2010;

''(B) ensuring that a national, interoperable 5–1–1 system, along with a national traffic information system that includes a user-friendly, comprehensive website, is fully implemented for use by travelers throughout the United States by September 30, 2010; and

''(C)(i) improving incident management response, particularly in rural areas, so that rural emergency response times are reduced by an average of 10 minutes; and

''(ii) improving communication between emergency care providers and trauma centers;

''(4) incorporate research on the impact of environmental, weather, and natural conditions on intelligent transportation systems, including the effects of cold climates;

''(5) enhance intermodal use of intelligent transportation systems for diverse groups, including for emergency and health-related services;

''(6) enhance safety through improved crash avoidance and protection, crash and other notification, commercial motor vehicle operations, and infrastructure-based or cooperative safety systems; and

''(7) facilitate the integration of intelligent infrastructure, vehicle, and control technologies.

''(c) FEDERAL SHARE.—The Federal share of the cost of operational tests and demonstrations under subsection (a) shall not exceed 80 [sic].

''SEC. 5307. NATIONAL ARCHITECTURE AND STANDARDS.

''(a) IN GENERAL.—

''(1) DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE.—Consistent with section 12(d) of the National Technology Transfer and Advancement Act of 1995 [Pub. L. 104–113] (15 U.S.C. 272 note; 110 Stat. 783), the Secretary [of Transportation] shall develop, implement, and maintain a national architecture and supporting standards and protocols to promote the widespread use and evaluation of intelligent transportation system technology as a component of the surface transportation systems of the United States.

''(2) INTEROPERABILITY AND EFFICIENCY.—To the maximum extent practicable, the national architecture shall promote interoperability among, and efficiency of, intelligent transportation system technologies implemented throughout the United States.

''(3) USE OF STANDARDS DEVELOPMENT ORGANIZATIONS.—In carrying out this section, the Secretary shall use the services of such standards development organizations as the Secretary determines to be appropriate.

''(4) USE OF EXPERT PANEL.—

''(A) DESIGNATION.—The Secretary shall designate a panel of experts to recommend ways to expedite and streamline the process for developing the standards and protocols to be developed pursuant to paragraph (1).

''(B) NONAPPLICABILITY OF ADVISORY COMMITTEE ACT.—The expert panel shall not be subject to the Federal Advisory Committee Act (5 U.S.C. App.).

''(C) DEADLINE FOR RECOMMENDATION.—Not later than September 30, 2007, the expert panel shall provide the Secretary with a recommendation relating to such standards development.

''(b) PROVISIONAL STANDARDS.—

''(1) IN GENERAL.—If the Secretary finds that the development or balloting of an intelligent transportation system standard jeopardizes the timely achievement of the objectives identified in subsection (a), the Secretary may establish a provisional standard, after consultation with affected parties, using, to the extent practicable, the work product of appropriate standards development organizations.

''(2) PERIOD OF EFFECTIVENESS.—A provisional standard established under paragraph (1) shall be published in the Federal Register and remain in effect until the appropriate standards development organization adopts and publishes a standard.

''(c) CONFORMITY WITH NATIONAL ARCHITECTURE.—

''(1) IN GENERAL.—Except as provided in paragraphs (2) and (3), the Secretary shall ensure that intelligent transportation system projects carried out using funds made available from the Highway Trust Fund, including funds made available under this subtitle to deploy intelligent transportation system technologies, conform to the national architecture, applicable standards or provisional standards, and protocols developed under subsection (a).

''(2) SECRETARY'S DISCRETION.—The Secretary may authorize exceptions to paragraph (1) for—

''(A) projects designed to achieve specific research objectives outlined in the national intelligent transportation system program plan or the surface transportation research and development strategic plan developed under section 508 of title 23, United States Code; or

''(B) the upgrade or expansion of an intelligent transportation system in existence on the date of enactment of this Act [Aug. 10, 2005] if the Secretary determines that the upgrade or expansion—

''(i) would not adversely affect the goals or purposes of this subtitle [subtitle C (§§5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title];

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

''(iii) is cost-effective as compared to alternatives that would meet the conformity requirement of paragraph (1).

''(3) EXCEPTIONS.—Paragraph (1) shall not apply to funds used for operation or maintenance of an intelligent transportation system in existence on the date of enactment of this Act.

''SEC. 5308. ROAD WEATHER RESEARCH AND DEVELOPMENT PROGRAM.

''(a) ESTABLISHMENT.—The Secretary [of Transportation] shall establish a road weather research and development program to—

''(1) maximize use of available road weather information and technologies;

''(2) expand road weather research and development efforts to enhance roadway safety, capacity, and efficiency while minimizing environmental impacts; and

''(3) promote technology transfer of effective road weather scientific and technological advances.

''(b) STAKEHOLDER INPUT.—In carrying out this section, the Secretary shall consult with the National Oceanic and Atmospheric Administration, the National Science Foundation, the American Association of State Highway and Transportation Officials, nonprofit organizations, and the private sector.

''(c) CONTENTS.—The program established under this section shall solely carry out research and development called for in the National Research Council's report entitled 'A Research Agenda for Improving Road Weather Services'. Such research and development includes—

''(1) integrating existing observational networks and data management systems for road weather applications;

''(2) improving weather modeling capabilities and forecast tools, such as the road surface and atmospheric interface;

''(3) enhancing mechanisms for communicating road weather information to users, such as transportation officials and the public; and

''(4) integrating road weather technologies into an information infrastructure.

''(d) ACTIVITIES.—In carrying out this section, the Secretary shall—

''(1) enable efficient technology transfer;

''(2) improve education and training of road weather information users, such as State and local transportation officials and private sector transportation contractors; and

''(3) coordinate with transportation weather research programs in other modes, such as aviation.

''(e) FUNDING.—

''(1) IN GENERAL.—In awarding funds under this section, the Secretary shall give preference to applications with significant matching funds from non-Federal sources.

''(2) FUNDS FOR ROAD WEATHER RESEARCH AND DEVELOPMENT.—Of the amounts made available by section 5101(a)(5) of this Act [119 Stat. 1779], $5,000,000 for each of fiscal years 2006 through 2009 shall be available to carry out this section.

''SEC. 5309. CENTERS FOR SURFACE TRANSPORTATION EXCELLENCE.

''(a) ESTABLISHMENT.—The Secretary [of Transportation] shall establish 4 centers for surface transportation excellence.

''(b) GOALS.—The goals of the centers for surface transportation excellence are to promote and support strategic national surface transportation programs and activities relating to the work of State departments of transportation in the areas of environment, surface transportation safety, rural safety, and project finance.

''(c) ROLE OF CENTERS.—To achieve the goals set forth in subsection (b), the Secretary shall establish the 4 centers as follows:

''(1) ENVIRONMENTAL EXCELLENCE.—To provide technical assistance, information sharing of best practices, and training in the use of tools and decision-making processes that can assist States in planning and delivering environmentally sound surface transportation projects.

''(2) SURFACE TRANSPORTATION SAFETY.—To develop and disseminate advanced transportation safety techniques and innovations in both rural areas and urban communities. The center will use a controlled access highway with state-of-the-art features, to test safety devices and techniques that enhance driver performance, examine advanced pavement and lighting systems, and develop techniques to address older driver and fatigue driver issues.

''(3) RURAL SAFETY.—To provide research, training, and outreach on innovative uses of technology to enhance rural safety and economic development, assess local community needs to improve access to mobile emergency treatment, and develop online and seminar training needs of rural transportation practitioners and policy-makers.

''(4) PROJECT FINANCE.—To provide support to State transportation departments in the development of finance plans and project oversight tools and to develop and offer training in state-of-the-art financing methods to advance projects and leverage funds.

''(d) FUNDING.—

''(1) IN GENERAL.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $3,750,000 for each of fiscal years 2006 through 2009 shall be available to carry out this section.

''(2) ALLOCATION OF FUNDS.—Of the funds made available under paragraph (1) the Secretary shall use such amounts as follows:

''(A) $1,250,000 to establish the Center for Environmental Excellence.

''(B) $750,000 to establish the Center for Excellence in Surface Transportation Safety at the Virginia Tech Transportation Institute.

''(C) $875,000 to establish the Center for Excellence in Rural Safety at the Hubert H. Humphrey Institute, Minnesota.

''(D) $875,000 to establish the Center for Excellence in Project Finance.

''(3) APPLICABILITY OF TITLE 23.—Funds authorized by this section shall be available for obligation in the same manner as if such funds were apportioned under chapter 1 of title 23, United States Code, except that the Federal share shall be 100 percent.

''(e) PROGRAM ADMINISTRATION.—

''(1) COMPETITION.—A party entering into a contract, cooperative agreement, or other transaction with the Secretary, or receiving a grant to perform research or provide technical assistance under subsections (d)(2)(A) and (d)(2)(D) shall be selected on a competitive basis, to the maximum extent practicable.

''(2) STRATEGIC PLAN.—The Secretary shall require each center to develop a multiyear strategic plan that describes—

''(A) the activities to be undertaken; and

''(B) how the work of the center is coordinated with the activities of the Federal Highway Administration and the various other research, development, and technology transfer activities authorized by this title [see Tables for classification]. Such plans shall be submitted to the Secretary by January 1, 2006, and each year thereafter.

''SEC. 5310. DEFINITIONS.

''In this subtitle [subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title], the following definitions apply:

''(1) INCIDENT.—The term 'incident' means a crash, a natural disaster, workzone activity, special event, or other emergency road user occurrence that adversely affects or impedes the normal flow of traffic.

''(2) INTELLIGENT TRANSPORTATION INFRASTRUCTURE.—The term 'intelligent transportation infrastructure' means fully integrated public sector intelligent transportation system components, as defined by the Secretary [of Transportation].

''(3) INTELLIGENT TRANSPORTATION SYSTEM.—The term 'intelligent transportation system' means electronics, photonics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

''(4) NATIONAL ARCHITECTURE.—The term 'national architecture' means the common framework for interoperability that defines—

''(A) the functions associated with intelligent transportation system user services;

''(B) the physical entities or subsystems within which the functions reside;

''(C) the data interfaces and information flows between physical subsystems; and

''(D) the communications requirements associated with the information flows.

''(5) PROJECT.—The term 'project' means an undertaking to research, develop, or operationally test intelligent transportation systems or any other undertaking eligible for assistance under this subtitle.

''(6) STANDARD.—The term 'standard' means a document that—

''(A) contains technical specifications or other precise criteria for intelligent transportation systems that are to be used consistently as rules, guidelines, or definitions of characteristics so as to ensure that materials, products, processes, and services are fit for their purposes; and

''(B) may support the national architecture and promote—

''(i) the widespread use and adoption of intelligent transportation system technology as a component of the surface transportation systems of the United States; and

''(ii) interoperability among intelligent transportation system technologies implemented throughout the States.

''(7) STATE.—The term 'State' has the meaning given the term under section 101 of title 23, United States Code.

''(8) TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS.—The term 'transportation systems man-

agement and operations' has the meaning given the term under section 101(a) of title 23, United States Code [section 101(a) of this title does not define the term].''

ENVIRONMENTAL REVIEW OF ACTIVITIES THAT SUPPORT DEPLOYMENT OF INTELLIGENT TRANSPORTATION SYSTEMS

Pub. L. 109–59, title VI, § 6010, Aug. 10, 2005, 119 Stat. 1877, provided that:

''(a) CATEGORICAL EXCLUSIONS.—Not later than one year after the date of enactment of this Act [Aug. 10, 2005], the Secretary [of Transportation] shall initiate a rulemaking process to establish, to the extent appropriate, categorical exclusions for activities that support the deployment of intelligent transportation infrastructure and systems from the requirement that an environmental assessment or an environmental impact statement be prepared under section 102 of the National Environmental Policy Act of 1969 (42 U.S.C. 4332) in compliance with the standards for categorical exclusions established by that Act [42 U.S.C. 4321 et seq.].

''(b) NATIONWIDE PROGRAMMATIC AGREEMENT.—

''(1) DEVELOPMENT.—The Secretary [of Transportation] shall develop a nationwide programmatic agreement governing the review of activities that support the deployment of intelligent transportation infrastructure and systems in accordance with section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and the regulations of the Advisory Council on Historic Preservation.

''(2) CONSULTATION.—The Secretary shall develop the agreement under paragraph (1) in consultation with the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation established under title II of the National Historic Preservation Act (26 U.S.C. 470i et seq.) and after soliciting the views of other interested parties.

''(c) INTELLIGENT TRANSPORTATION INFRASTRUCTURE AND SYSTEMS DEFINED.—In this section, the term 'intelligent transportation infrastructure and systems' means intelligent transportation infrastructure and intelligent transportation systems, as such terms are defined in subtitle C of title V of this Act [subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, enacting this section and section 513 of this title and provisions set out as a note above].''

§ 513. Use of funds for ITS activities

(a) IN GENERAL.—For each fiscal year, not more than $250,000 of the funds made available to carry out this[1] subtitle C of title V of the SAFETEA–LU shall be used for intelligent transportation system outreach, public relations, displays, tours, and brochures.

(b) APPLICABILITY.—Subsection (a) shall not apply to intelligent transportation system training, scholarships, or the publication or distribution of research findings, technical guidance, or similar documents.

(Added Pub. L. 109–59, title V, § 5302(a), Aug. 10, 2005, 119 Stat. 1805.)

REFERENCES IN TEXT

Subtitle C of title V of the SAFETEA–LU, referred to in subsec. (a), is subtitle C (§§ 5301–5310) of title V of Pub. L. 109–59, Aug. 10, 2005, 119 Stat. 1804–1813, which enacted this section and section 512 of this title and provisions set out as a note under section 512 of this title.

CHAPTER 6—INFRASTRUCTURE FINANCE

Sec.
601. Generally applicable provisions.
602. Determination of eligibility and project selection.
603. Secured loans.
604. Lines of credit.
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610. State infrastructure bank program.

CODIFICATION

This chapter, consisting of sections 601 to 610 of this title, was previously set out as subchapter II, consisting of sections 181 to 190, of chapter 1 of this title.

§ 601. Generally applicable provisions

(a) DEFINITIONS.—In this chapter, the following definitions apply:

(1) ELIGIBLE PROJECT COSTS.—The term ''eligible project costs'' means amounts substantially all of which are paid by, or for the account of, an obligor in connection with a project, including the cost of—

(A) development phase activities, including planning, feasibility analysis, revenue forecasting, environmental review, permitting, preliminary engineering and design work, and other preconstruction activities;

(B) construction, reconstruction, rehabilitation, replacement, and acquisition of real property (including land related to the project and improvements to land), environmental mitigation, construction contingencies, and acquisition of equipment; and

(C) capitalized interest necessary to meet market requirements, reasonably required reserve funds, capital issuance expenses, and other carrying costs during construction.

(2) FEDERAL CREDIT INSTRUMENT.—The term ''Federal credit instrument'' means a secured loan, loan guarantee, or line of credit authorized to be made available under this chapter with respect to a project.

(3) INVESTMENT-GRADE RATING.—The term ''investment-grade rating'' means a rating of BBB minus, Baa3, bbb minus, BBB (low), or higher assigned by a rating agency to project obligations.

(4) LENDER.—The term ''lender'' means any non-Federal qualified institutional buyer (as defined in section 230.144A(a) of title 17, Code of Federal Regulations (or any successor regulation), known as Rule 144A(a) of the Securities and Exchange Commission and issued under the Securities Act of 1933 (15 U.S.C. 77a et seq.)), including—

(A) a qualified retirement plan (as defined in section 4974(c) of the Internal Revenue Code of 1986) that is a qualified institutional buyer; and

(B) a governmental plan (as defined in section 414(d) of the Internal Revenue Code of 1986) that is a qualified institutional buyer.

(5) LINE OF CREDIT.—The term ''line of credit'' means an agreement entered into by the Secretary with an obligor under section 604 to provide a direct loan at a future date upon the occurrence of certain events.

(6) LOAN GUARANTEE.—The term ''loan guarantee'' means any guarantee or other pledge

[1] So in original.