

## **AUTHORIZATION OF THE NATION'S SURFACE TRANSPORTATION PROGRAM A BLUEPRINT FOR SUCCESS**

In 2009, Congress must authorize the federal law that funds the nation's surface transportation programs. The American Society of Civil Engineers, representing more than 146,000 civil engineers, believes the authorization should focus on four goals: expanding infrastructure investment; maximizing infrastructure effectiveness; building for the future; and enhancing infrastructure delivery.

ASCE's 2009 Report Card for America's Infrastructure graded the nation's infrastructure a "D" based on 15 categories, the same overall grade as ASCE's 2005 Report Card. In 2009, roads received a grade of D- as compared to a grade of D in 2005; bridges received a grade of C, the same as in 2005; transit received a D as compared to a D+ in 2005; and rail received a grade of C-, the same as in 2005. These grades are a clear indication that the nation's infrastructure is worsening with each passing day.

The failure to achieve higher grades is caused by actors, such as deferred maintenance on aging systems and decreased funding from all levels of government, as well as a lack of compelling national leadership. Throughout the twentieth century, our nation's leaders envisioned large scale infrastructure plans that inspired the public and contributed to unprecedented economic growth. Now much of that infrastructure is reaching the end of its design life, and we are seeing increasing problems with deterioration across all public infrastructure. From the Works Progress Administration projects completed during the Great Depression to the creation of the Interstate Highway System in the Fifties, the twentieth century will be remembered as a time when Americans took pride in building a strong and lasting foundation. An equivalent to those examples has yet to arise in the twenty-first century.

The nation continues to under invest in infrastructure at the national level. The total of all federal spending for infrastructure as a share of all federal spending has steadily declined over the last 30 years, according to the Congressional Budget Office (CBO). The CBO has estimated that America's investment in surface transportation infrastructure by all levels of government in 2004 was \$191 billion (in 2006 dollars), or 1.5 percent of gross domestic product (GDP). In comparison, the Chinese government invested an estimated 2.5 percent of GDP in highway construction in 2001. The United States must invest more in infrastructure to stay competitive in the global marketplace.

The cost of inaction is significant for the nation and its citizens. Inaction will lead to a further deterioration of the nation's surface transportation assets, a continuation of high levels of traffic casualties, wasted time and fuel and increased air pollution due to increasing congestion, a drag on the economy due to problems with goods movement, and a continuing waste of public and private funds due to excessive delays in delivering transportation projects.

If we are going to rise above the nation's crumbling state and build an infrastructure that will serve the needs of the new century, we will need bold leadership and a compelling vision. We must be certain to preserve and maintain the foundations those past generations have built for

us, but at the same time recognize a new, overarching approach is needed. The authorization of the nation's surface transportation is an excellent place to start. Throughout this document, we refer to the new law as an *authorization* as opposed to a *reauthorization* to indicate the need for a new approach.

This document focuses on surface transportation specifically, but the needs reach across all aspects of the nation's infrastructure. To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure.

## I. Expanding Infrastructure Investment

### Key Components:

- **Increasing Infrastructure Investment**
- **Long-term Viability of Fuel Taxes for Transportation Finance**
- **Innovative Financing**

ASCE supports a reliable, sustained user fee approach to building and maintaining the nation's highways and transit systems.

Establishing a sound financial foundation for future surface transportation expansion and preservation is an essential part of authorization. Despite increased funding levels in the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the nation's surface transportation system requires even more investment. The current spending of \$70.3 billion per year for highway capital improvements is well below the estimated \$186 billion needed annually to substantially improve conditions.

For transit, the Department of Transportation (DOT) has estimated that an investment of \$15.8 billion per year is needed to maintain the current conditions and performance of transit systems, and ~~\$21.8~~ that \$21.6 billion annually is needed to improve conditions and performance. Demand for freight rail transportation is projected to nearly double by 2035 requiring an estimated \$148 billion in improvements to accommodate the projected rail freight demand increase. The Passenger Rail Working Group (PRWG), estimates that an annual investment of \$7.4 billion through 2016, totaling \$66.3 billion, is needed to address the capital cost of a proposed intercity rail network. With funding as the cornerstone of any attempt to authorize the nation's surface transportation programs, it is imperative that a variety of funding issues be advanced as part of ASCE's overall strategy.

### **Increasing Infrastructure Investment**

ASCE supports the following items for infrastructure investment:

- **A 25 cent per gallon increase in the motor fuels user fee.** To maintain the current conditions of the surface transportation infrastructure, as defined by the U.S. Department of Transportation's Conditions and Performance (C&P) Report, a 10 cent increase is necessary. The additional 15 cent increase would go towards system improvement including congestion relief, freight mobility, and traffic safety.
- **A maintenance of effort requirement** to ensure that all levels of government are making comparable financial commitments to improve the nation's surface transportation system.
- The user fee on motor fuels should be **indexed to the Consumer Price Index (CPI)**, in order to preserve the purchasing power of the fee.

- All **motor fuels**, including alternative fuels, **should be taxed equitably**.
- The Highway Trust Fund **balances should be managed to maximize investment** in the nation's infrastructure.
- Congress should **preserve the current firewalls** to allow for full use of trust fund revenues for investment in the nation's surface transportation system.
- The authorization should **maintain funding guarantees**.
- Tolling, vehicle taxes, state sales taxes, congestion pricing, container fees, and transit ticket **fees must all be considered in the development of revenues** for the maintenance and improvement of the surface transportation system.
- The current **flexibility provisions should be maintained**. The goal of the flexibility should be to establish an efficient multi-modal transportation system for the nation.
- The **development of a freight mobility program** to guarantee the efficient movement of freight and reduce system congestion.
- The creation of a **permanent commission to determine the levels at which motor fuel user fees should be set**, and when those fees should be increased.
- **Efficiency in delivering infrastructure projects** to shorten delivery times and decrease costs.

While the motor fuels user fees are an important element of the current revenue stream feeding the Federal Highway Trust Fund, that revenue continues to erode in value due to its inherent inelastic nature. Three strategies must be advanced to remedy this condition. First, raise the motor fuels user fee by 25 cents per gallon. This would provide a much needed infusion of funding towards the \$186 billion per year need. In tandem with raising the motor fuels user fee, ASCE believes that it is important to shore up the weakness of the motor fuels user fee and its inability to retain value over the long term by adding a provision to the law that would index it based on the Consumer Price Index (CPI). This would allow the rate to adjust, thus reflecting the current economic conditions of the nation. Finally, motor fuels other than gasoline (diesel, ethanol, bio-diesel, etc.) must be taxed in a manner equitable to the gasoline user fee.

With the establishment of firewalls on the Federal Highway Trust Fund, a condition was created wherein the states could count on their funds in a long term investment strategy. These firewalls must be maintained to ensure the integrity and viability of the Trust Fund. This will be especially important as user fees are increased and Trust Fund levels rise.

Positive, proactive management of these larger trust fund balances will be essential to addressing the critical transportation needs facing our nation today.

### **Long-term Viability of Fuel Taxes for Transportation Finance**

ASCE supports the need to address the issue of future sources of revenue for surface transportation funding. Congress should allow for the exploration of the feasibility of the most promising funding options that will maintain the viability of the Trust Fund. In particular, the impacts of increased fuel efficiency and alternate fuel technologies such as fuel cells should be studied. A mileage-based system for funding our nation's surface transportation systems also needs further study, and the recommendation of the National Surface Transportation Infrastructure Financing Commission calling for a transition to a vehicle miles traveled (VMT) fee system must be considered. A large scale demonstration project, to follow up on the work done in Oregon, should be executed to determine the practicality of such a program. This data will be critical in determining how to generate Trust Fund revenue as the nation's dependence on gasoline as a fuel source for automobiles is reduced.

## **Innovative Financing**

While recognizing that innovative financing is not a replacement for new funding, ASCE supports innovative financing programs and advocates making programs available to all states where appropriate. Additionally, the federal government should make every effort to develop new programs. These types of programs include the Transportation Infrastructure Finance and Innovation Act, State Infrastructure Banks, and Grant Anticipation Revenue Vehicles. It should be noted, however, that innovative financing does not produce revenue, and should not be seen as an alternative to increasing direct user fee funding of surface transportation infrastructure.

Innovative financing techniques can greatly accelerate infrastructure development and can have a powerful economic stimulus effect compared to conventional methods. This is the current approach in South Carolina, Georgia, Louisiana, Florida, and Texas, where expanded and accelerated transportation investment programs have been utilized.

ASCE recognizes Public Private Partnerships (PPPs) as one of many methods of financing infrastructure improvements. ASCE supports the use of PPPs only when the public interest is protected and the following criteria are met:

- Any public revenue derived from PPPs must be dedicated exclusively to comparable infrastructure facilities in the state or locality where the project is based;
- PPP contracts must include performance criteria that address long-term viability, life cycle costs, and residual value;
- Transparency must be a key element in all aspects of contract development, including all terms and conditions in the contract. There should be public participation and compliance with all applicable planning and design standards, and environmental requirements; and
- The selection of professional engineers as prime consultants and subconsultants should be based solely on the qualifications of the engineering firm.

ASCE supports the development of criteria by governing agencies engaging in PPPs to protect the public interest. Examples of criteria include input from affected individuals and communities, effectiveness, accountability, transparency, equity, public access, consumer rights, safety and security, sustainability, long-term ownership, and reasonable rate of return.

## **II. Maximizing Infrastructure Quality/Effectiveness/Efficiency**

### **Key Components:**

- **Transportation System Safety**
- **System Preservation**
- **Operations and Maintenance**

### **Transportation System Safety**

Current safety practices and incremental improvements do not go far enough in addressing the need to reduce the toll that highway crashes have on our nation. ASCE advocates a significant, sustained effort to reduce traffic crashes and related deaths and injuries through improvements in all aspects of highway system performance. The further development of highway safety professionals is essential to achieving any type of improvement in the safety of the surface transportation system.

ASCE supports a program where significant enhancements in highway safety and the resulting reduction of highway crashes can be achieved by:

- Establishing a national highway safety goal;
- Fully implementing State Highway Safety Plans required to be developed under SAFETEA-LU;
- Establishing and maintaining complete, current and accurate traffic crash data systems;
- Inspecting and auditing existing roadway systems to identify roadway hazards and safety improvement opportunities, and implementing highway and other engineering-related improvements proven effective in reducing the potential for, and severity of, traffic crashes;
- Enhancing the organizational prominence of highway safety within federal, state, and local transportation agencies to provide a more effective voice in agency administration, leadership development, and program direction;
- Improving work zone safety and mobility;
- Continuing to improve understanding of motor vehicle performance characteristics, as well as the interaction between vehicle standards and highway system design on highway safety, and to improve the overall effectiveness of existing motor vehicle standards;
- Encouraging universities to continue to include highway safety issues in educational programs for engineering and other highway professionals;
- Incorporating new technology, better management practices, and a better understanding of the effect of human factors into all levels of transportation systems;
- Supporting additional funding for highway safety research and for the education of highway safety professionals;
- Expanding the development and application of Intelligent Transportation Systems (ITS) programs to enhance highway traffic safety;
- Increasing law enforcement to address driver behavior and other factors contributing to accident causation;
- Improving and expanding public education programs to increase driver awareness of attitudes and behavior that affect highway safety; and,
- Providing flexibility in federal aid funding programs for high priority highway safety improvement programs, and to continue targeting national safety problems through categorical funding.

The highway death toll is equivalent to a jet airliner crashing and killing everyone on board *every day of the year*. In the last century, as a result of highway accidents, America has lost more than *five times* the number of citizens killed in all wars since 1775 – a total of 3.3 million lives lost to traffic crashes.

While a March 2009 National Highway Traffic and Safety Administration (NHTSA) statistical projection forecasts that fatalities in motor vehicle traffic crashes are estimated to have dropped 9.1% from 2007 to 2008, preliminary data from the Federal Highway Administration shows that vehicle miles traveled in 2008 dropped by about 3.6%. According to The Road Information Project, motor vehicle crashes cost the U.S. \$230 billion per year--\$819 for each resident in medical costs, lost productivity, travel delays, workplace costs, insurance and legal costs, and that Americans spend 4.2 billion hours a year stuck in traffic at a cost of \$78.2 billion a year--\$710 per motorist. Our nation's economy and our quality of life require a highway and roadway

system which provides a safe, reliable, efficient and comfortable driving environment, and 37,000-plus fatalities annually is unacceptable.

### **System Preservation**

While the surface transportation system must be authorized in a new and innovative way that meets the demands future generations will put on it, current conditions are not meeting today's demands. ASCE's 2009 *Report Card for America's Infrastructure* graded the nation's roads at D-, bridges at a C, transit at a D and rail a C-. The average daily percentage of vehicle miles traveled under congestion rose from 25.9% in 1995 to 31.6% in 2004, with congestion in large urban areas exceeding 40%. Current spending of \$70.3 billion per year for highway capital improvements is well below the \$186 billion needed annually to substantially improve these conditions. At a minimum, a major goal of the surface transportation program must be to protect the investments that have been made through timely repair and maintenance of transportation assets.

Compounding those system deficiencies are the combined factors of project delivery delay and possible effects due to climate change. While any new model for the authorization must include expedited and streamlined project delivery methods, the reality is that many of the proposed intermodal solutions are decades away. The current state of the infrastructure is such that we cannot wait to replace existing structures and so must be committed to timely repair and maintenance. Further, possible effects due to climate change such as extreme temperature swings, higher sea levels, and increases of extreme weather including hurricanes will continue to diminish the quality of the nation's surface transportation infrastructure. Embedded in any plans for future improvements to the nation's surface transportation system should be a strong component aimed at preserving the current system.

### **Operations and Maintenance**

ASCE strongly endorses federal leadership in increasing the focus on transportation operations and maintenance and thereby enhancing performance, in particular by addressing congestion relief, and preserving our investment in the transportation system.

There is a clear and present need for an increased focus on transportation operations and maintenance at all levels – federal, state, regional, and local. This need is based on several factors:

- An aging transportation infrastructure;
- Growing congestion and incident problems are causing transportation system performance to be a top priority in many areas of the country;
- Capacity constraints and costs of new construction are forcing the examination of alternative solutions and place a premium on maintaining and improving the existing transportation system;
- Customers desire travel choices, better information, and increased reliability to meet their mobility needs; and
- An efficient and responsive transportation system is critical to meeting homeland security priorities.

An increased focus on transportation operations functions, and application of intelligent transportation systems can enhance performance of the transportation system in terms of:

- Improved traffic and transit operations including reduced congestion and improved mobility;
- Improved safety and public safety responses;
- Incident management;
- Improved economic competitiveness, including interstate commerce;
- Network and facility management;
- Energy conservation and reduced environmental impact;
- Traveler and shipper information; and
- Bicycle and pedestrian mobility.

ASCE considers it essential that the following issues regarding Operations and Maintenance be considered in the authorization bill:

- Support and assist homeland security initiatives. Transportation operations and homeland security share many of the same goals and functions. Resource sharing (e.g. communications infrastructure, traffic control centers) and joint planning are appropriate. Transit security and preparedness, international border security, asset security and tracking, vulnerability assessment, planning, and creation of system redundancy are important transportation priorities for homeland security.
- Support and assist state and local agencies. Beyond establishing transportation operations and maintenance as a national priority, the Federal role should be to support and assist state and local entities in accomplishing related goals. This includes support of research and development, provision of tools, promotion of best practices, and enhancement of education and training at all levels.
- Provide flexible funding. A flexible funding approach is an important component to supporting operations and maintenance needs. Expanding funding eligibility for operations and maintenance programs, enabling direct funding to local and regional operating agencies, public-private partnerships or outsourcing, and simplifying and clarifying federal funding processes are important actions.
- Recognize that the private sector has much to offer in management and technical skills in operations and maintenance. PPPs may provide enhanced operations and management programs.

The DOT should encourage local matching and innovative funding. The federal government has a role in exploring and promoting best practices related to innovative funding for operations and maintenance.

### **III. Building for the Future: System Expansion and Intermodality**

#### **Key Components:**

- **System Expansion**
- **Freight Mobility**
- **Rail Systems**
- **Transportation Research Programs**

#### **System Expansion**

To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure. Faced with that task, the nation must begin with a significantly improved and expanded surface transportation system. The surface transportation system authorization must be founded on a new paradigm; instead of focusing on the movement of cars and trucks from place to place, it must be based on moving

people, goods, and services across the economy. Beyond simply building new roads or transit systems, an intermodal approach must be taken to create a new vision for the future. Included in this new vision must be plans to deal with the possible effects of climate change, a strong link to land use, sustainability of the system, the use of commodities, and anticipation of the expected changes in the population's demographics especially age and urbanization.

ASCE supports the vision of a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy and will move people and freight in an energy efficient manner. Support for partnerships among the federal, state and local governments, with various citizens, groups and firms from the private sector, are essential to further develop a truly intermodal system.

ASCE supports government policies that encourage anticipation of and preparation for possible impacts of climate change on the built environment. Global or local climate change could pose a potentially serious impact on the nation's surface transportation system. According to the Transportation Research Board, "the greatest impact of climate change for North America's transportation systems will be flooding of coastal roads, railways, transit systems, and runways because of global rising sea levels, coupled with storm surges and exacerbated in some locations by land subsidence." Long-term transportation plans should consider climate change impacts and their effect on infrastructure investments particularly in vulnerable areas. Today's investment decisions will affect how well the infrastructure adapts to climate change far into the future.

Programs of the Federal, state and local governments must emphasize the need to consider a wide range of multimodal options and new technologies in the development of transportation plans, programs and projects, and in the comprehensiveness and usability of information systems available to individuals and others engaged in the movement of people and freight.

A primary emphasis of passenger intermodalism is to facilitate connections between the private automobile and other access modes and public transportation systems. For example, park-and-ride facilities provide critical connections for mass transit commuters using automobiles for a portion of their trips. Another example is the use of intelligent transportation systems to generate on-demand information on door-to-door multi-modal trip options, thus providing convenient opportunities for people to evaluate and choose more efficient routes and mode choices. Of course, the best example of intermodalism is linking land use and transportation; designing our communities so that people have the option of leaving their automobiles at home and using walking, biking, and public transportation to meet their mobility needs.

Specifically, ASCE would support plans that strive to meet these goals:

- Increased safety;
- Reduced congestion;
- Increased security;
- Improved environmental stewardship;
- Improved incident response;
- Improved mobility and mode choice;
- Facilitated interstate commerce;
- Increased employment opportunities;
- Improved international competitiveness; and
- Energy conservation.

## **Freight Mobility**

As the U.S. economy has expanded to global markets, the movement of goods and services has concurrently increased its reach. Freight must now move across vast distances, usually through a combination of modes. The Interstate Highway System was built on a truck-dependent model, and thus goods do not always move seamlessly from one mode to the next. To meet the demands of the global economy, the surface transportation authorization must enhance and improve connectivity and level of service to the major intermodal terminals including seaports, airports, rail terminals, ports of entry, and inland intermodal terminals. Inherent in the authorization must be a paradigm shift that focuses on the movement of people, goods, and services, rather than simply cars and trucks.

The volume of freight being moved on the nation's roadways continues to increase and is expected to double by 2035, requiring an estimated \$148 billion in improvements to accommodate the projected rail freight demand increase. Freight and passenger rail generally share the same network, and a significant potential increase in passenger rail demand will add to freight railroad capacity challenges. Interstate commerce remains the historic cornerstone in defining the federal role in the nation's transportation system. The authorization of the surface transportation program must provide for a strong federal role in freight mobility and intermodal connectors. This should include the creation of a program funded with new dedicated revenue to provide new capacity and operational improvements focused on securing safe, efficient movement of freight.

## **Rail Systems**

Additionally, ASCE supports the development, construction and operation of an expanded passenger rail transportation system within the United States, including advanced technology high speed ground transportation (HSGT) systems. As regional and intercity transportation corridors in the United States become increasingly congested, investments in intercity passenger rail systems, including HSGT, are increasingly attractive as part of an overall transportation mobility strategy to provide added capacity and high quality service. Investments in this technology are cost effective, environmentally responsive and energy efficient and should be considered as companion investments to traditional highway and air modes. These investments include both conventional wheel-on-rail systems and new technologies. Other nations, in Europe and Asia in particular, have invested heavily in the development and construction of new HSGT systems and intercity passenger rail networks over the past four decades. While the U.S. has spent substantial sums in highway and air passenger networks, North America has lagged in the development and implementation of efficient, relatively low-polluting, and high-capacity intercity passenger rail and HSGT networks.

The Passenger Rail Working Group (PRWG) estimates that an annual investment of \$7.4 billion through 2016, totaling \$66.3 billion, is needed to address the capital cost of a proposed intercity rail network. It is further estimated that an additional \$158.6 billion is needed between 2016 and 2030 and, and that an additional \$132.2 billion must be invested between 2031 and 2050 to achieve the ideal inter-city network proposed by PRWG.

The DOT has estimated that an investment of \$ 15.8 billion per year is needed to maintain the current conditions and performance of transit systems, and that \$21.6 billion annually is needed to improve conditions and performance. A federal rail trust fund should be developed to fund rail improvements, using the 80/20 match formula to encourage state participation. Revenues for this trust fund could come from sources such as a tonnage fee, mileage fee, ticket tax, and/or

general treasury funds. ASCE also encourages the use of innovative financing methods like revenue bonds and tax exempt financing at the state and local levels, public-private partnerships, and state infrastructure banks.

### **Authorization of Transportation Research Programs**

Research and technology are critical to achieving national transportation goals in infrastructure performance and preservation, safety, quality of life, economic health, environmental impacts, sustainability, and security. Funding for research and technology activities should be increased to levels that will continue to provide high returns on research and investment. Total research and technology funding for activities corresponding to Title V in SAFETEA-LU should be at least \$750 million per year.

The Highway Trust Fund has been an essential source of funding for surface transportation research and technology (R&T) for decades. Research results have led to many benefits including: materials that improve the performance and durability of pavements and structures; design methods that reduce scour (and consequent threat of collapse) of bridges; intelligent transportation systems technologies that improve safety and reduce travel delay; methods and materials that radically improve our ability to keep roads safely open in severe winter weather; innovative management approaches that save time and money; analytical and design approaches that reduce environmental impacts and improve the aesthetic and cultural aspects of transportation facilities; and many more.

One key way to reduce the investment gap (the difference between Highway Trust Fund revenues and funding needs as outlined by the Conditions and Performance Report) is through research. Research outcomes can improve the performance and durability of transportation infrastructure, the results being reduced operations and maintenance costs and less frequent replacement of infrastructure elements. This can only be accomplished through strong federal leadership in transportation research. The Exploratory Advanced Research Program funded in SAFETEA-LU has the potential to be the lead program in providing improved materials, designs, and processes that can transform the performance of the nation's surface transportation infrastructure.

Other research programs that can continue to contribute to the improvement of the highway system include the Federal Highway Administration's (FHWA) program, the National Cooperative Highway Research Program (NCHRP), and state department of transportation programs largely funded through State Planning and Research (SPR) funds. In the transit area the main programs are that of the Federal Transit Administration (FTA) and the Transit Cooperative Research Program (TCRP). The University Transportation Centers (UTC) program supports research across most transportation modes.

As originally passed, the Surface Transportation Research, Deployment and Development and the University Transportation Research sections in SAFETEA-LU were both completely programmed or earmarked and overauthorized, creating a difficult environment within which FHWA and the Research and Innovative Technology Administration (RITA) had to allocate funds. An additional effect was that FHWA had no discretionary funds to maintain certain core research programs, which meant that such critical efforts as the biannual Conditions and Performance Report struggled for funding. These problems were partially relieved by the SAFETEA-LU Technical Corrections Bill in 2008. However, the research programs continue to be adversely impacted by the level of programming and earmarking. These events speak to the

need for minimal earmarking and free and open competition among non-federal entities performing research utilizing federal funding.

Within the context of the general principles set out above, ASCE supports the following actions regarding specific surface transportation R&T programs:

- Funding for the research and technology portion of the State Planning and Research (SPR) program should be maintained to help support state-specific activities while continuing to encourage the states to pool these resources to address matters of mutual interest.
- University research should continue to be supported through the UTC program. However, the size of the program has grown to a robust level that requires no increase in investment. The existing multiple levels of the program should also be simplified. Funds authorized for this program should be entirely subject to free and open competition.
- FHWA's program should continue to follow the recommendations of Transportation Review Board (TRB) *Special Report 261 The Federal Role in Highway Research and Technology* and TRB Special Report 295 *The Federal Investment In Highway Research 2006-2009, Strengths and Weaknesses*, to focus on fundamental, long-term research; to perform research on emerging national issues and on areas not addressed by others; to engage stakeholders more consistently in their program; and to employ open competition, merit review, and systematic evaluation of outcomes.
- The transfer of technology from the research stage to the application stage must be emphasized among all participants in surface transportation research. The application of improved or new technologies is the ultimate goal, and must be emphasized to the point of being supported by research funding.
- The Federal Transit Administration's research program should be given sufficient funding and flexibility to work with its stakeholders to develop and pursue national transit research priorities.
- The Transit Cooperative Research Program should be funded at a minimum of \$20 million per year.
- The private sector should be encouraged to participate in surface transportation research by providing incentives for private investment in research.
- The application of new technologies (materials, design or processes) must be encouraged by eliminating the roadblocks to their implementation and reducing the risk to states. Federal research funds should be used, at a minimum, to cover the difference in costs for using new technology. It could even be used to fund 100 percent of projects that apply new technologies in a significant way.

## **IV. Enhancing Infrastructure Delivery**

### **Key Components:**

- **Expedited Project Decision Making**
- **Expedited Project Delivery**
- **Procurement of A/E Services**
- **Core Competencies of Government Agencies**

ASCE supports a review of the existing surface transportation programs to determine how reforms could be implemented to create a small, more efficient number of programs to expedite project decision making and delivery.

### **Expedited Project Decision Making**

To accelerate the process through which surface transportation projects are examined for their viability and appropriateness, several issues could be addressed through legislation.

ASCE supports the following actions that would improve the project decision making process and assist in more rapidly delivering surface transportation projects:

- Revamp and simplify the regulatory regime affecting infrastructure planning and implementation to be less prescriptive and confining and more performance-based and flexible.
- Reform the rules to be more concise, outcome oriented, plainly written, common sense oriented and supplemented by best practice models that encourage continuous improvement.
- Require only the application of relevant Federal guidelines to specific projects. Though other Federal guidelines may exist, if they are extraneous and would only slow the project decision making process, they should not be utilized.

ASCE supports concurrent reviews, and the designation of a lead agency to manage the process. In addition, State and Metropolitan Planning Organization (MPO) transportation planning requirements need to be reconciled with the National Environmental Policy Act (NEPA) process to eliminate redundancy and streamline the decision making process, and should be combined with better coordination of federal agencies in the NEPA process.

### **Expedited Project Delivery**

With structural, safety and service issues spurring the need for renewing, replacing and expanding an aging infrastructure, the nation's long-term economic vitality and quality of life will be affected by whether project planning, financing, and delivery systems can keep up the necessary pace.

The answer lies in reinventing processes for planning, financing, and delivery of infrastructure, and doing so in a way that retains and builds upon vitally important and successful principles and practices. For example, improving the environmental review process cannot be at the expense of protecting and enhancing environmental quality; streamlining project delivery cannot be at the price of weakening market forces or reducing competition.

In order to expedite the delivery of surface transportation projects ASCE would support the following recommendations as put forward by the ***National Surface Transportation Policy and Revenue Study Commission***:

- Revise Council of Environmental Quality regulations to allow additional factors to narrow the number of alternatives considered as “reasonable alternatives”:
  - Alternatives should be appropriate for project-level (rather than planning-level) decisions;
  - Alternatives should reflect community values; and
  - Alternatives should reflect funding realities.
- Handle impact identification and mitigation issues early by considering them in an integrated fashion, looking at overall resources rather than in a sequential, project-by-

project basis. This might involve addressing these issues at the programmatic level earlier in the planning process.

- Standardize the “risk design” approach under federal regulations so that project sponsors can proceed with design activities for any project during the environmental impact statement (EIS) process.
- Require greater coordination among Federal agencies reviewing transportation project permits, including:
  - Setting time limits for review; and
  - Using federal transportation funds to pay for regulatory staff to speed reviews and comply with time limits.

### **Procurement of A/E Services**

ASCE believes that the selection of professional engineers as prime consultants and subconsultants should result from competition based on the qualifications best suited to complete the work successfully. Cost of engineering services, while important and meriting careful negotiations and performance accountability, should be secondary to professional qualifications.

Accordingly, ASCE supports qualifications-based selection (QBS) procedures such as those specified by the 1972 Brooks Act (P.L. 92-582) and the American Bar Association's *Model Procurement Code for State and Local Governments* for the engagement of engineering services.

For design-build procurement, ASCE strongly supports the use of the two-phase competitive source-selection process required by the Federal Acquisition Reform Act of 1996 (Pub.L. 104-106) for design-build contracts awarded by government agencies. The design-build team must be selected using the modified qualifications-based selection (QBS) criteria specified by the Act.

### **Core Competencies of Government Agencies**

The American Society of Civil Engineers (ASCE) believes it is proper and desirable that civil engineers employed both in the public and private sectors are allowed to perform engineering functions and tasks for government agencies. It is in the best public interest for federal, state and local government agencies performing engineering to maintain expertise within their organizations by employing civil engineers and providing for their professional development. It is also in the best public interest for publicly supported institutions and agencies not to compete with engineers in private practice. Public sector engineering projects that can be accomplished more efficiently by private engineering firms should be contracted out with proper oversight by the public agency. The resulting ratio of in-house to contracted engineering services should be based upon the agency's on-going project and policy requirements rather than rigid rules or percentages fixed by legislation or regulation.

---

**Approved by the National Transportation Policy Committee on June 1, 2009**

Approved by the Policy Review Committee on June 2, 2009

Adopted by the Board of Direction on July 25, 2009.

