



## **THE PIVOTAL ROLE OF FEDERAL INFRASTRUCTURE INVESTMENT IN OUR ECONOMY**

Investing in U.S. infrastructure stimulates economic growth. Infrastructure investment also addresses many critical environmental and public health needs and is an integral component to national and international competitiveness. Infrastructure is one of our nation's greatest assets, as well as one of our most important responsibilities. Infrastructure that benefits from federal investment include our highways, bridges, tunnels, transit systems, airports, drinking and clean water facilities, dams, water conservation projects, defense facilities, site preparation/utilities installation and multi-family housing projects.

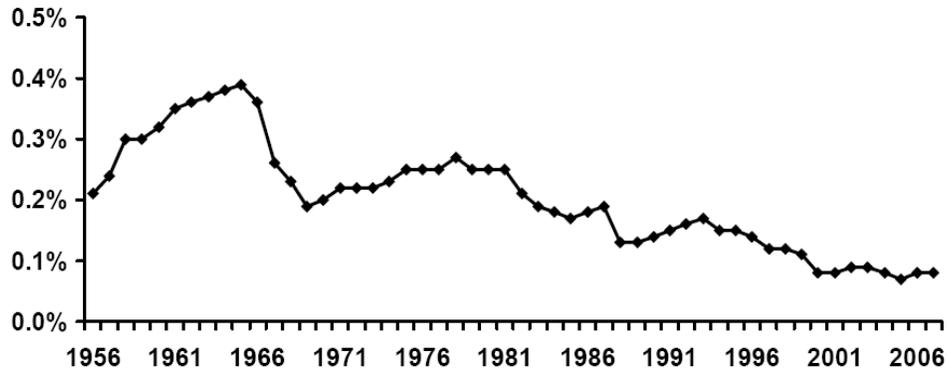
### **FOUNDATION FOR AMERICA**

Our forbearers made the investments necessary to provide our nation with a first rate infrastructure system that allowed our nation to prosper. President Eisenhower took up that challenge by working to vastly improve our transportation infrastructure with the passage of the Federal Aid Highway Act of 1956, the Transportation Act of 1958 for railroads, and the approval of the St. Lawrence Seaway in 1954. This generation has a responsibility to pass onto future generations infrastructure systems that are well maintained, well functioning and meet the needs of a growing country, just as they were provided for us.

### **FEDERAL INVESTMENT IN INFRASTRUCTURE HAS SIGNIFICANTLY DECREASED**

The federal government has traditionally played a strong role in financing transportation projects in partnership with state and local governments. During an unprecedented time of post-World War II economic expansion, the United States devoted three percent of its gross domestic product (GDP) to infrastructure spending, however, since 1980 spending on infrastructure has been cut by a third, to just two percent of GDP. The result has been a huge shortfall in needed investments. The federal government has also shifted its share of infrastructure spending from the national budget to local budgets. While the federal share of infrastructure spending rose from 17 percent in 1956 to 40 percent in 1977, the federal government then cut back its contributions, leaving state and local governments responsible for approximately 75 percent of public infrastructure outlays by the end of the 1980s, according to *Trends in Public Infrastructure Spending*, a 1999 report from the Congressional Budget Office (CBO).

## Federal investment in structures as a % of GDP (1956 – 2007)



America's infrastructure is an integral component to our national and international economic competitiveness. Our government must be willing to rethink the interconnectivity of transportation modes and systems, and interface requirements between airports, highways, ports, railroads, transit systems and waterways important for freight movement and economic expansion. The obvious importance of our infrastructure to the nation's economy requires a renewed emphasis on developing a comprehensive strategy to ensure our continued economic prosperity in the 21<sup>st</sup> century.

### **GOVERNMENT PARTNERSHIP**

Infrastructure development is an inherently governmental function. Much of our public infrastructure was created through a partnership between all three levels of government in cooperation with the private sector. We must refocus the way in which the federal/state/local/private sector partnerships are carried out so that we get the best return on our infrastructure investment dollars. Roles and responsibilities at all levels of government and the private sector should be redefined to more clearly identify investment priorities and more predictable revenue streams to better meet the nation's infrastructure needs. However, it is critical for the federal government to set priorities and develop and fund strategies that ensure the nation's needs are met.

## CLOSING THE INFRASTRUCTURE INVESTMENT GAP

The U.S. population was 152 million in 1950. It jumped to 252 million in 2000 and is 301 million today. By 2050, the total U.S. population is projected to reach 420 million, a 50 percent increase over 50 years. This growing society will demand higher levels of goods and services, and must rely on a state-of-the-art infrastructure system to serve as the solid foundation for this evolving economy.

The inability of our nation's aging infrastructure to meet the needs of our growing population threatens our economic security. According to the American Society of Civil Engineers' *Report Card for America's Infrastructure*, there is an estimated \$1.6 trillion funding gap in our nation's infrastructure:

- **Highways:** The National Surface Transportation Infrastructure Financing Commission estimated that we need to spend an average of at least \$225 billion annually to improve the condition and performance of our nation's surface transportation system – to meet the needs of a growing society. Road congestion in our cities caused citizens to lose 4.2 billion hours of productive time and waste 2.9 billion gallons of precious fuel.
- **Freight Rail:** International trade fuels the U.S. economy and is growing at a rate that is doubling every ten years. Trade currently represents 25 percent of US Gross Domestic Product (GDP) compared to 12.5 percent of GDP in 1970. Shipment of containerized cargo in and out of the U.S. will increase by more than 350 percent by 2020. The inability to quickly move imported products from ports to final distribution locations will negatively impact U.S. competitiveness.
- **Intermodal Connectors:** Intermodal connectors are the public roads leading to major intermodal terminals. Although they account for less than 1 percent of national highway system mileage, intermodal connectors are key conduits for the timely and reliable delivery of goods.
- **Flood Control:** To complete ongoing infrastructure projects in a timely and efficient manner and to prevent future costly repairs by adequately addressing the existing backlog of critical deferred maintenance, we must increase investment in funding for the U.S. Army Corps of Engineers' Civil Works program to at least \$6.8 billion for FY 2009. In subsequent years, annual increases of at least \$400-600 million will be required to keep the Civil Works program on schedule and save the nation the costs of paying for more expensive "crisis" repairs in the future.
- **Wastewater and Drinking Water:** After over 35 years of federal involvement in safe and clean water, the U.S. Environmental Protection Agency estimates over \$500 billion in unmet drinking and wastewater treatment, collection, and distribution needs over the next 20 years. If neglected, we could reverse the water quality gains we've enjoyed and threaten our public health and the environment.
- **Aviation:** Current funding for the Airport Improvement Program (AIP) is not meeting the identified needs. According to data from Federal Aviation Administration (FAA) and the Airport Council International/North America, the gap between current spending and projected needs for AIP-eligible and other airport capital improvement projects ranges from \$7.9 to \$14.3 billion per year. Current funding for the AIP program is \$3.5 billion per year. It is estimated by the Congressional Research Service that the cost to build the Next

Generation Air Transportation System (NGATS) is estimated between \$69 and \$76 billion, which is roughly \$5 to \$12 billion above current annual FAA facilities and equipment spending levels. Congress should consider appropriate increases to the aviation user fee structure and the AIP, and facilities and equipment accounts to meet airport capital investment needs while also providing for air traffic control modernization.

- **Building Infrastructure.** Federal office buildings are not designed for today's high-tech work environment. The General Accountability Office (GAO) reported that 903 federal buildings are in need of repairs and alterations at an estimated cost of approximately \$4 billion. GAO also reported that 44 of the 903 buildings need urgent attention because they have an average age of 49 years, and need over \$20 million per building in repairs and alterations. Investment in our federal facilities is an essential investment in our future.
- **Military Construction:** Agencies such as the Army Corps of Engineers, the Naval Facilities Engineering Command and the Air Force design and manage construction for homes, schools, hospitals, day care centers, office buildings, airfields, warehouses and training facilities for members of the military and their families. Increased investment in these facilities will help complete implementation of the most recent round of the Base Realignment and Closure (BRAC) Commission, which will implement base closures and realignments, and support the re-stationing of 70,000 troops and their families from overseas to the United States. In addition, we must provide the best possible facilities for our service members and their families.
- **Border Security:** In 2005, Congress approved legislation authorizing the Department of Homeland Security to expedite the construction of border barriers. In 2008, the Congress provided \$775 million to fund these barriers and address problems with communications interoperability at the border. According to arrest statistics by the U.S. Border Patrol, the erection of the San Diego border fence has proven to be effective in reducing the flow of illegal immigration into southern California. Over the twelve year period between 1992 and 2004, overall apprehensions in the San Diego sector declined by 76 percent. Investment in these critical areas is key towards making our nation more safe and secure.
- **School Construction:** While school construction has generally been considered a state and local responsibility the needs are not being met. According to the National Center for Education and Statistics (NCES) the unmet need for school construction and renovation is estimated to be \$127 billion or \$2.2 million per school. The average age of a public school building is estimated to be over 40 years old, the same age that schools have documented to deteriorate.
- **Embassies:** The Department of State is responsible for providing safe facilities for over 62,000 embassy staff at 251 embassies and consulates around the world. Unfortunately, many of these facilities do not meet current security standards and are vulnerable to terrorist attacks. Due to the rapidly rising cost of construction materials and fuel, the State Department recently announced it is delaying for a year design and construction work on at least three new embassies.

## **INFRASTRUCTURE INVESTMENT GROWS OUR ECONOMY**

Investment in our nation's infrastructure has a long history of fostering economic development, facilitating trade and commerce, aiding our international competitiveness, stimulating employment, providing clean and safe drinking water, enhancing agricultural and industrial productivity, and augmenting our national defense.

In addition to its powerful role in producing structures that add to productivity and quality of life, infrastructure investment serves a key role in sustaining economic growth:

### **INFRASTRUCTURE INVESTMENT IS A SIGNIFICANT SOURCE OF JOB CREATION**

The industry provides jobs for 7.2 million employees—more than five percent of the total non-farm workforce. Nonresidential construction accounted for at least 4.3 million workers in August 2008. (As many as 500,000 additional specialty trade contractors may have been incorrectly counted as residential workers but are now employed in nonresidential work.) Seasonally adjusted hourly earnings in construction averaged \$20.43 per hour, 20 percent higher than the average for all private industry non-supervisory workers, according to the Bureau of Labor Statistics.

Finally, construction jobs are good for people who are concerned about losing their jobs to overseas competitors. Estimates of the effects of construction spending vary: the Federal Highway Administration estimates that every \$1 billion spent on transportation infrastructure creates 35,000 jobs and up to \$6 billion in additional gross domestic product. With the housing market in decline, construction employment fell by more than 360,000 jobs since March 2007, leaving a ready labor force to begin new projects.

### **IMPROVING OUR ECONOMY AND PROVIDING A SIGNIFICANT RETURN ON INVESTMENT**

#### Infrastructure Investment Stimulates the Purchase of U.S.-Manufactured Products

Shipments of construction materials and supplies in 2007 totaled \$518 billion—more than ten percent of all U.S. manufacturers' shipments. Construction machinery shipments totaled \$28 billion—eight percent of all machinery shipments.

#### Highway Transportation Infrastructure

- The US Chamber of Commerce reports that transportation infrastructure is vital to the success of the five major economic sectors that account for 84% of the US economy: services, manufacturing, retail, agriculture and natural resources, and transportation providers.
- FHWA reports that every dollar invested in the Nation's highways generated about 30 cents of production costs savings per year to businesses over the life of the improvement — generally exceeding the initial investment in four years. Highway investments were estimated to have contributed an average of 25 percent of total productivity growth nationwide during the interstate era. The average annual rate of return for highway

investments was estimated at 16 percent nationwide, with lower returns in later years as the network matured.

- Transportation improvements in the 1980s and 1990s reduced logistics costs of businesses by allowing “just in time” delivery of goods to consumers. Between 1980 and 2003, total logistics costs dropped from about 16 percent to 8.5 percent of Gross Domestic Product (GDP). However, since 2003 unreliable and congested roads have caused logistics costs to increase to 10 percent of GDP. Without capacity improvements that percent will continue to increase.
- According to the Federal Highway Administration (FHWA), in 2010 highways are estimated to handle 80 percent of domestic freight by weight and 84 percent of the total value.
- Every year Americans lose 3.7 billion hours and waste 2.3 billion gallons of fuel sitting in traffic according to the Texas Transportation Institute. The American Highway Users Alliance reports that relieving congestion at the Nation’s top 233 traffic bottlenecks will reduce travel times there by an average of 30 minutes per day.
- FHWA reports that every \$1 billion invested by the federal government in highway infrastructure, results in the creation of approximately 35,000 direct and indirect jobs.
- FHWA reports that every \$1 billion invested by the public in government-financed road projects since 1950, has helped prevent 1,400 premature deaths and nearly 50,000 injuries; and helped save the American society over \$2 billion in health care, insurance, lost wages, and productivity costs.

Conversely, a lack of investment in our infrastructure can bring great economic pain to our economy. For example, it is estimated that it cost \$400,000 per day to the state and local economies as a result of the I-35 bridge collapse in Minnesota.

Other types of infrastructure investment projects produce high returns:

### Waterways Infrastructure

The inland waterways system is a key component of the nation’s freight transportation network and includes about 12,000 miles of commercially navigable channels and some 240 lock sites. America’s “marine highways” move commerce to and from 38 states, from Canada to the Gulf, from the Atlantic almost to the Rockies and also in the Pacific Northwest.

- **Waterways Transport is an Integral Part of Our Infrastructure.** Every year, about 624 million tons of waterborne cargo transits the inland waterways, a volume equal to about 14 percent of all intercity freight. This commerce has an overall value of about \$70 billion, substantially contributing to America’s economic strength. Waterways transport more than 60 percent of the nation’s grain exports, about 22 percent of domestic petroleum and petroleum products, and 20 percent of the coal used in electricity generation. Barges are ideal for hauling bulk commodities and moving over-size equipment.
- **Waterways Ease Traffic Congestion.** The annual traffic on America’s inland navigation system, including the Mississippi River from Minneapolis to the Gulf of Mexico, the Ohio River and its navigable tributaries, the Gulf Intracoastal Waterway, and the Columbia-Snake

River system, carries the equivalent of 58 million truck trips each year. Hypothetically, if current waterway freight traffic were to be diverted to the nation's highways, heavy truck traffic on Interstate highways between cities would nearly double. The impact on urban Interstate highways through cities would be more severe. Or, if the current waterway freight traffic were diverted to rail, the tonnage on the nation's railroad system would increase by nearly 25%. The burden would not be evenly distributed; a heavier burden would be placed on the Eastern U.S. railroads, already operating at near capacity.

Improving and investing in core infrastructure not only enables the delivery of goods and services that people need; and reduces flood risks, it also provides direct job creation benefits to the middle class and stimulus to the overall economy. They are assets on the Federal government's balance sheet and produce long-term benefits throughout their life-cycle:

- Flood damage reduction projects alone have prevented an estimated \$706 billion in damages - an eight-to-one return on the federal government's investment;
- Operations and Maintenance work provides an average of \$14.10 return for every dollar invested, and;
- In the Mississippi Valley and Tributary System, more than \$24 in damages is saved for each dollar spent.

### Transit Infrastructure

Public transportation provides greater freedom, access, opportunity and choice for Americans. Transit systems around the U.S. provided 10.3 billion trips in 2007, handling the highest ridership level in 50 years. In just the first three months of 2008, Americans took 2.6 billion trips on public transportation. Maintaining our transit assets in light of the growing number of riders is no small task for our transit agencies. There are over 11,000 miles of transit system fixed guideway track, 3,000 transit rail stations, and more than 171,000 transit vehicles in service today.

Investing in our transit infrastructure provides key benefits to our economy:

- Every \$1 invested in public transportation projects generates approximately \$6 in local economic activity.
- Every \$10 million in capital investment in public transportation yields \$30 million in increased business sales.
- Every \$10 million in operating investment in public transportation yields \$32 million in increased business sales.
- Real estate -- residential, commercial or business -- that is served by public transportation is valued more highly by the public than similar properties not as well served by transit.
- Public transportation enhances local rural economic growth in many ways, increasing the local customer base for a range of services -- shopping malls, restaurants, medical facilities and other transportation services.

We must ensure that our older rail and bus systems, as well as our newer systems, are being maintained and upgraded on a regular basis. As we consider the infrastructure needs of our nation, we must provide the resources and support to ensure that our public transit systems are well-maintained and operational.

## IMPROVING OUR ENVIRONMENT

Investment in our nation's infrastructure can address many critical environmental and public health needs, by providing safe drinking water, improving water quality, and reducing mobile sources emissions, among other benefits to our nation's well-being.

### Clean Water Infrastructure

The nation has staggering needs for clean drinking water and wastewater treatment infrastructure. The U.S. Environmental Protection Agency's Clean Water and Drinking Water Gap Analysis found a \$535 billion gap between current spending and projected needs for water and wastewater infrastructure over 20 years.

Investments in water and wastewater systems pay substantial dividends not only to our economy, but to public health and the environment as well. It is well documented that wastewater treatment plants prevent billions of tons of pollutants each year from reaching America's rivers, lakes, and coastlines. In so doing, they help prevent water-borne disease; make our waters safe for fishing and swimming; and preserve our natural treasures such as the Chesapeake Bay, the Great Lakes, and the Colorado River.

Not meeting the investment needs of the next 20 years risks reversing the environmental, public health, and economic gains of the last three decades:

- In 1972, only between 30 and 40 percent of surface waters monitored met water quality goals. Now, between 60 and 70 percent of waters meet their goals and support basic uses such as fishing or swimming.
- More people than ever before have access to wastewater treatment facilities. In 1972, only 141.7 million people were served by wastewater treatment facilities, and only 60 percent of those people were served by secondary treatment or better. Today, 223 million people (over 1.5 times as many as 35 years ago) are served by wastewater treatment facilities; nearly 99 percent of those people are served by secondary treatment or better.

### Waterways Infrastructure

While our freight transportation system promotes economic development and national security, freight movements affect traffic congestion, air quality, energy usage, pavement and roadbed deterioration, and public safety.

- **A Standard Dry Cargo Barge Can Move as Much Cargo as 70 Trucks or 16 Rail Cars.** It is difficult to appreciate the carrying capacity of a barge until one understands how much tonnage a single barge can move. For example, one loaded covered hopper barge carries enough wheat to make almost 2.5 million loaves of bread. A loaded tank barge carries enough gasoline to satisfy the annual demand of about 2,500 people.
- **Moving Freight on America's Rivers is the Most Energy-Efficient Mode of Surface Transport.** Moving America's coal, grain, petroleum and chemical products, iron and steel,

aggregates, and containers on the nation's navigable rivers is the most energy-efficient way to transport freight. Barges can move 1 ton of cargo 576 miles for the same amount of fuel as it takes a rail car to carry the same amount of cargo 413 miles, and a truck to haul it 155 miles.

### Traffic Congestion Infrastructure

Americans are spending more time stuck in traffic, wasting both fuel and hours of productivity. Whereas operational improvements, including value-pricing schemes, may be useful in easing certain urban congestion, their applicability is limited. Alleviating traffic congestion through capacity improvements is necessary and it is imperative that we address critical congestion chokepoints and bottlenecks in both urban and rural areas. Such investment provides great benefits to our environment as well.

- **Fixing Bottlenecks Improves Air Quality.** Bottlenecks are reported to cause 50 percent of total congestion on the nation's freeways. In 2004, a study of the nation's most severely congested highways highlighted the fact that significant reductions in emissions require a reduction in vehicle time traveled, not vehicle miles traveled. The study concluded that modest improvements to traffic flow at 233 bottlenecks would reduce carbon dioxide emissions by as much as 77 percent and conserve more than 40 billion gallons of fuel over a 20-year period. Addressing congestion will also lead to reduced levels of CO, VOCs, and NOx, since vehicles caught in stop-and-go traffic emit far more of these pollutants than they do operating without frequent braking and acceleration.
- **Moving Cargo on America's River System Generates Fewer Emissions than Rail or Truck.** The Environmental Protection Agency's MOBILE6 model estimates mobile source emission factors for several hazardous air pollutants in grams per vehicle mile traveled. These air pollutants include hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM), and Carbon Dioxide (CO<sub>2</sub>). The emission comparison between inland towing, rail, and truck transportation shows that fewer emissions are generated by moving products on America's inland navigation system.

### Transit and Sustainability

Transit has the potential to provide the United States with the opportunity to support sustainability efforts, through environmental benefits and energy savings. Public transportation plays an important role in confronting environmental challenges by offering opportunities to:

- Improve air quality
- Reduce greenhouse gas emissions
- Facilitate compact development, conserving land and decreasing travel demand
- Save energy
- Minimize impacts

### Case Study: New York City Transit and the Environment

Every day, each person who chooses to travel by bus or train contributes to a cleaner environment by keeping approximately 700,000 cars out of New York City's central business district daily. It also means 400 million fewer pounds of soot, carbon monoxide, hydrocarbons, and other toxic substances released each year into the city's air.

## **IMPROVING OUR INTERNATIONAL COMPETITIVENESS**

In an increasingly connected world, our decaying infrastructure threatens the competitiveness of American employers, from our multinational manufacturers to the small businesses that are the bedrock of our communities. Although the decline in the condition of most infrastructure is insidious, and not noticed, symptoms are appearing like leaking dams, collapsing bridges and levees. These are important warning signs of a larger problem.

Unfortunately, today, America's investment in infrastructure pales in comparison to the investments made by other countries across the globe. The U.S. invests only two percent of GDP in infrastructure, Europe invests five percent, and China invests nine percent. In addition:

- China is spending \$750 billion annually over the period from 2005 to 2010 in infrastructure development.
- India is poised to spend \$500 billion annually in new infrastructure development over the next five years. This spending will increase the infrastructure investment share of its GDP from five percent to nine percent by 2012.

And it is not just developing countries that are stepping up to meet their nations' demands for infrastructure. In countries like Spain and France, significant investments are being made to maintain and replace 50-year-old roads, water pipes, and sewer systems.

- The Netherlands is considering a plan to spend \$11 billion and \$1.5 billion annually through 2100 for additional flood protection due to rising sea levels.

## **EFFICIENT AND EFFECTIVE INFRASTRUCTURE INVESTMENT PLAN**

In a time of economic weakness, public investments in the nation's infrastructure can provide short-term stimulus and build the foundation for long-term economic growth and prosperity. In a world of competing demands for taxpayer-provided public funding we must ensure that every dollar spent on infrastructure provides a maximum return on the investment.

The National Surface Transportation Infrastructure Financing Commission called for a strong federal role in surface transportation coupled with increased investment at all levels of government, to meet clearly defined national priorities. At the same time, it calls for a commitment to make more effective use of taxpayers' funds to avoid self-serving and wasteful spending. To achieve this, the Commission calls for linking federal funding with performance and cost-beneficial outcomes. That is, in order for a project to be eligible for federal funds, it must go through a rigorous analysis to ensure that it would meet certain performance-based criteria (e.g., congestion relief; freight mobility).

### **REFOCUS OUR NATIONAL PRIORITIES**

At the federal level we must ensure that our various infrastructure programs have identified national priorities and focus investment on meeting those priorities. We must develop an infrastructure strategic plan that establishes short-term and long-term goals, identifies investment necessary to meet those goals, assigns responsibility for achieving the goals and identifies the revenue sources that will provide the necessary funds.

#### Case Study - Defining the Federal Role in Surface Transportation:

Our surface transportation program lacks national investment priorities. The Commission recommends that surface transportation programs should be reconstructed from a "clean slate." The Commission recommends that federal funding should be directed to those program areas with the greatest national interest. In general, each level of government should contribute financial support for various surface transportation improvements in proportion to their relative interest compared with other levels of government. For instance, bridges on the Interstate System have a greater national interest than bridges on low-volume local roads. The scope of the federal program should be narrowed and alternatives examined for distributing funds to those program areas with the greatest national interest.

Another factor contributing to the lack of program focus is the fact that there is no overarching national plan for surface transportation. The Interstate System is perhaps the only example of a national plan to construct a specific system of facilities. Once the Interstate System was completed, however, there was no national plan for maintaining its condition and performance.

Another common theme expressed by the Commission was that inefficiency in the surface transportation investment decision-making process has caused a

significant misallocation of resources. Federal programs have evolved into what is now essentially a block grant model, with little accountability for specific outcomes.

The Commission recommended redesigning the federal surface transportation program into 10 program areas (replacing 108) for federal participation and funding. In each area, the Commission describes why a federal role is appropriate, how performance measures and standards would be set, potential strategies for meeting performance standards, and proposed federal funding shares for qualifying projects. An important element of many programs would be the development of national plans to accomplish key national program goals. These plans would serve the bases if apportioning funds to the states.

For example, one of the 10 programs the Commission recommends is named “Freight Transportation: A Program to Enhance U.S. Global Competitiveness.” The Commission defines the federal role by stating that “interstate commerce is the historic cornerstone defining the federal role in transportation...indeed, the development of the United States cannot be understood without knowledge of the federal role in promoting and funding freight transportation infrastructure.” Over the last several decades, however, this federal role has greatly diminished; at the same time, vast amounts of freight now move along our roads, rails, and waterways which are increasingly choked by a lack of adequate capacity. Without improvements, freight transportation will become less efficient and reliable, hampering the ability of American businesses to compete in the global marketplace.

The Commission states that the federal government must return to its historic role of ensuring that the transportation needs of interstate commerce are met. The Commission supports the creation and funding of a national freight transportation plan that would, in conjunction with states and metropolitan areas and consistent with a National Freight Transportation Plan, implement highway, rail, and other improvements that eliminate chokepoints and increase throughput.

## **ELIMINATE EARMARKS**

Federal infrastructure legislation should prohibit federal earmarks. Annual earmarks, non-existent two decades ago, now near 15,000. For example, the 1982 highway bill contained 10 earmarked pork projects; 150 earmarks in the 1987 bill helped provoke a veto by President Reagan; the number rose to 1,400 in 1998, and exploded to 6,300 in 2005.

Direct federal spending should only apply towards projects that have a clearly defined national interest, such as improving trade corridors, and meet certain performance-based criteria and achieve a certain cost-to-benefit ratio.

## **GOVERNMENT REFORM**

It is time to implement innovative approaches to project management and execution to provide the federal government the highest quality construction within budget and schedule. Project delivery times for major infrastructure projects should be completed more expeditiously. Reforms should be implemented to get environmental and planning agencies from all levels of government to coordinate their reviews and approvals and eliminate redundancies.

- Federal Highway Administration (FHWA) data shows that major highway projects take approximately 13 years to advance from project initiation to completion. A large part of this time is associated with the environmental review process. An environmental impact statement (EIS) can take 54-80 months or about 4-7 years on average.

### Case Study – The Louisville-Southern Indiana Ohio River Bridges Project

The FHWA Streamlining Task Force played a key role in expediting the environmental review process by making available assistance from Federal agencies and program specialists to address technical comments related to specific historic property effects, project contingency cost estimates, tribal coordination, wetlands and habitat preservation, traffic modeling, and fiscal constraint analysis. The review process included an intense period of face-to-face meetings among key players that allowed for timely resolution of issues. By having key resource agencies all treat the project as a priority, this team approach helped to keep the process moving forward. The assistance of the Task Force allowed the environmental review process to be completed in five years - a relatively short amount of time for such a large and comprehensive project. FHWA signed the Record of Decision in September 2003.

- All waterways projects undertaken by the U.S. Army Corps of Engineers already undergo unparalleled economic and environmental review. Corps environmental policies require a thorough cost/benefit analysis which seeks to maximize net national economic development benefits, consistent with protecting the environment. The data show that the Corps is meeting its obligations and complying with the law.

## **FURTHER DELAY WILL LEAD TO COSTLIER SOLUTIONS**

Inflation erodes the purchasing power of the construction dollar, so every delay adds to the overall cost of the project. For example: A project that starts in 2008 and is completed in 2011 is estimated to cost \$500 million, if completed in that 4-year timeframe. However, if the project completion date is delayed 3 years, the cost inflates to \$616 million, and if delayed 10 years, the cost balloons to \$1 billion, or double the original estimate. If the average environmental review takes between 4 to 7 years to complete, inflation can rapidly inflate the price tag of a transportation improvement project to a point at which the project may no longer be financially feasible for a state or local government.

## **BRING PREDICTABILITY TO THE FUNDING STREAM**

It is important to ensure base-level funding for critical programs that promote research and development, planning, and other critical objectives. In recent years, fiscal constraints have often left the Congress with limited means to adequately fund the needs of these programs. This undermines the ability of the federal government to have a consistent level of effort for functions that require programmatic, as opposed to project-by-project, funding.

For example, transportation investment needs are staggering and all available sources of revenue should be utilized to meet these needs. As the long-term viability of our current system of user fees becomes less reliable, funding the future needs of the system may require supplemental financing methods, such as privatization and other innovative financing mechanisms. In the meantime, a substitute for the current revenue source will have to be identified and implemented.

Given the current unpredictability of federal investment for clean and safe drinking water infrastructure, a long-term sustainable source of funding to finance these critical needs is essential. A clean water trust fund, modeled after existing trust funds financed through water quality-related revenue sources would provide a substantial source of funding to assist states and localities meet their water quality goals.

## **A NEW STRATEGY**

A new strategy and approach for infrastructure planning and development is imperative. Our nation's infrastructure is one of our greatest assets, as well as one of our most important responsibilities. As the system continues to age and reach the limits of its capacity, the federal government must provide leadership in developing and funding a well maintained, well functioning infrastructure system to meet the needs of our growing nation.