Testimony of
The American Society of Civil Engineers
Before
The House Transportation and Infrastructure Committee
on
Infrastructure Investment and Economic Recovery
October 29, 2008

I. INTRODUCTION

Good morning, Mr. Chairman and Members of the Committee:

I am Andrew Herrmann. I am a senior partner at Hardesty & Hanover, LLP, a transportation consulting engineering firm headquartered in New York City. I am a registered Professional Engineer in 26 states and a member of the Board of the American Society of Civil Engineers* (ASCE), and I am pleased to appear before you today to testify on behalf of ASCE on the issue of infrastructure investment and economic recovery for the nation.

II. NEED FOR ECONOMIC RECOVERY

For a variety of reasons well known to this Committee the nation faces a severe economic slump in the coming months. Many economists already believe that the nation is in a recession. For example, the Congressional Budget Office (CBO) predicts that the country's real gross domestic product will decline noticeably in 2009. The CBO estimates that unemployment will exceed six percent next year nationally; in many parts of the country the job loss will be far steeper.

Recently Paul Krugman, a Nobel-Prize-winning economist, wrote in the New York Times that we may be in a steep recession already. "It could be very long," Mr. Krugman added.

This is grim news. It is clear that Congress and the president will have to work quickly to soften the worst of the slowdown. Just last week, Ben Bernanke, chairman of the Federal Reserve Board, testified before the House Budget Committee that further economic recovery legislation probably is required.

---

* ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 146,000 civil engineers individually in private practice, government, industry, and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Code.

"With the [economic] outlook exceptionally uncertain, the optimal timing, scale, and composition of any fiscal package are unclear," Mr. Bernanke said. "With the economy likely to be weak for several quarters, and with some risk of a protracted slowdown, consideration of a fiscal package by the Congress at this juncture seems appropriate. Any fiscal package should be structured so that its peak effects on aggregate spending and economic activity are felt when they are most needed, namely, during the period in which economic activity would otherwise be expected to be weak."

The U.S. Transportation Department reported in April that every $1 billion of federal highway investment (including the accompanying state match) supports 34,779 jobs. It is important to note the total number of jobs supported by highway investment-including construction-related jobs and dependent industries-rose about 12.5 percent from 1.65 million jobs in 1996 to 2.13 million jobs in 2007 as a result of increased highway investment from all levels of government.

Moreover, the National Association of Clean Water Agencies (NACWA) has estimated that each $1 billion invested in clean water infrastructure supports the creation of more than 47,000 jobs.

For these reasons, ASCE strongly supports efforts to pass legislation in this Congress to promote a national economic recovery in a time of financial distress.

III. NEED FOR INFRASTRUCTURE INVESTMENTS

As an initial matter, we firmly believe that any economic recovery legislation should contain significant new funding for many of the nation's aging infrastructure systems, which are the indispensable lifelines of our economy. The nation's surface transportation systems, wastewater treatment facilities, waterways, and airports are all in need of repair and updates. **We recommend $38.5 billion in new infrastructure spending as part of economic recovery legislation.**

In his New York Times column, Mr. Krugman was clear that public works investments are necessary to aid the recovery. "This is … a good time to engage in some serious infrastructure spending, which the country badly needs anyway," he said.

The Associated Press recently reported that a number of economists now believe that spending on new roads, bridges and other public works projects would create jobs and provide a more durable boost to the economy than more rebate checks.

The economists argued that a common concern about infrastructure spending — that it takes time to gear up and may not kick in until after the recession is over — is less compelling now because the U.S. economy "likely will experience an extended downturn."

Such investments are desperately needed. Three years ago, ASCE's *2005 Report Card for America's Infrastructure* gave an overall grade of "D" to 15 critical infrastructure

systems. We said then that it would take an estimated $1.6 *trillion* to upgrade the existing infrastructure.

This nation continues to under invest in infrastructure at the national level. Indeed, the total of all federal spending for infrastructure as a share of all federal spending has steadily declined over the last 30 years, the CBO reported earlier this year.

We need cite only a few of the more pressing infrastructure investment needs.

A. Surface Transportation System

The CBO recently 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).

The federal government provided about one-quarter of those funds, and states and localities provided the rest. Those funds were split about equally between spending for capital projects and operation and maintenance. Most of that spending was for roads. In comparison, the Chinese government invested an estimated 2.5 percent of GDP in highway construction in 2001, according to the American Road and Transportation Builders Association.

The National Surface Transportation Policy and Revenue Study Commission concluded this year: "We need to invest at least $225 billion annually from all sources for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation system to sustain and ensure strong economic growth for our families. We are spending less than 40 percent of this amount today."

In 2007, the Department of Transportation (DOT) reported that the cost to maintain the nation's highways would require an annual investment of $78.8 billion in 2004 dollars by all levels of government. Even at this level, however, congestion would worsen, according to the report, because it would finance too little new highway capacity. The U.S. DOT report calculates an annual investment of $89.7 billion in 2004 dollars would be required to achieve this policy goal. Most of the additional $11 billion investment each year would be for new capacity.

The DOT report, however, may understate the need. The American Road and Transportation Builders Association believes that federal highway funding in the next surface transportation bill would have to start at $54.5 billion in FY 2010 and grow to $61.5 billion by FY 2015 to provide the federal share of the annual highway investment needed to maintain both physical conditions and operating performance.

B. Wastewater Treatment Systems

In January, the Environmental Protection Agency (EPA) reported that we must invest at least $202.5 billion just to prevent combined sewer overflows and sanitary sewer

overflows at the nation's 16,000 publicly owned wastewater treatment works. But in 2002, the EPA estimated that the projected gap in what is spent on sewage treatment systems and what is needed was between $331 billion and $450 billion by 2019.

C. Waterways Infrastructure

The Corps of Engineers operates and maintains 240 locks at 195 locations along 12,000 miles of inland waterways. The average lock on these waterways is 53 years old—past the 50-year service life.

It costs on average about $600 million to replace a lock. If we were to replace just half of the 240 locks that are known to be beyond their design life, we would need to spend $72 billion. Simply to rehabilitate the other half of the system would cost another $30 billion.

That's more than $100 billion just to bring our antiquated waterways into the 21st century.

At the annual rate of spending of $180 million in the administration's budget proposal for FY 2009, it would take the Corps 20 years simply to fund all the inland waterways projects authorized in WRDA 2007.

D. Public Transit

In February, the Committee estimated that there are **$15.8 billion** in capital needs to maintain the nation's public transit systems in their present condition. The need increases to **$21.8 billion** if funds are authorized for transit improvements.

E. Aviation

The nation needs to invest **$17.5 billion** annually in airport capital improvement programs, the Committee reported this year.

F. Drinking-Water

The nation's drinking-water treatment systems face an *annual* shortfall of **$11 billion** to replace aging facilities that are near the end of their useful life and to comply with existing and future federal water regulations. The shortfall does not account for any growth in the demand for drinking-water over the next 20 years.

G. Dams

In 2005, we estimated that **$10.1 billion is needed by 2019** to address all critical non-federal dams--dams which pose a direct risk to human life should they fail.

IV. IMMEDIATE INVESTMENT PROPOSALS TO AID RECOVERY

A. Surface Transportation System

Recovery legislation should provide **$18 billion for necessary reconstruction projects for the nation's highway systems**. A number of state departments of transportation polled by the American Association of State Highway Officials earlier this year identified more than 3,000 highway projects totaling approximately $18 billion that could be implemented 30 to 90 days after enactment of federal economic recovery legislation.

B. Wastewater Treatment Systems

Congress should authorize **$6.5 billion for the repair and construction of publicly owned sewage treatment works (POTWs).** There are between $3 billion and $10 billion worth of upgrades for publicly owned treatment works now on the drawing boards and that could begin construction within weeks if Congress provides the required assistance. Under the program that passed the House in September (H.R. 7110), the EPA would have had the discretion to use only one and a half percent of the $6.5 billion in the bill (approximately $100 million) in the form of grants. Any new funds should be distributed primarily in the form of grants or negative-interest loans for ready-to-go POTW projects based on the local community's economic situation.

C. Waterways Infrastructure Repairs Pending

The Corps of Engineers has an enormous amount of infrastructure work that needs tending. **We estimate that the Corps requires approximately $7 billion in new funding** to:

- Substantially reduce the backlog of critical maintenance and repairs at an estimated 360 multiple purpose flood-control, hydropower, recreation, water-supply, and navigation projects and upgrade recreation facilities.

- Improve the safety of several high-risk dams.

- Restore and improve hydropower plants to meet an industry standard 98 percent plant availability.

- Recapitalize the oldest and most at-risk projects on the nation's 12,000 miles of inland waterways.

- Fully dredge to their authorized depth the nation's 296 highest use, deep-draft commercial ports. These ports manage approximately 2.6 billion tons or 94 percent of the nation's commercial import and export commerce.

- Fully dredge inland waterways to their authorized depth and width to ensure that the approximately 750 million tons of commercial goods that flow through these works annually reach their intended markets. Among the industries most affected by the aging waterways are agricultural exports and all of bulk commodities,

including iron ore for domestic steel plants, coal for power plants, and fertilizer as well as bulk road construction materials and others.

- Repair and upgrade critical coastal protection projects that defend key population centers from natural disasters.

While there are many other worthwhile infrastructure programs that concern us deeply, ASCE believes that the list above is a badly needed beginning to the problem of renewing our economy and preserving public health, safety, and welfare through a concentrated federal reinvestment in America's failing infrastructure.

D. Public Transit

There are **$4.6 billion** worth of transit projects ready to begin construction today, according to the American Public Transit Association (APTA). Congress also has authorized another **$800 million** in projects to avoid immediate service cuts throughout the country.

We recommend that Congress provide **$5.4 billion** for transit projects as part of the economic recovery legislation.

E. Aviation

There are **$600 million** worth of capital improvement projects ready to begin construction almost immediately, according to the Federal Aviation Administration. These involve important improvements to runways, lighting, and security. Congress should provide this amount for critical airport capital programs.

F. Drinking-Water

We recommend that Congress provide **$1 billion** in new financial aid to the nation's drinking-water treatment systems to begin critically needed upgrades.

G. Dams

We recommend that the economic recovery package contain **$50 million** for the dams in greatest need of repair.

V. LONG-TERM SOLUTIONS TO THE INFRASTRUCTURE CRISIS

A. National Infrastructure Bank

The National Infrastructure Bank Act of 2007 (S. 1926) would begin to address a problem that is rapidly approaching crisis levels—the physical deterioration of the nation's major public works systems.

Briefly, the legislation would establish a National Infrastructure Bank. The Bank would be an independent body designed to evaluate and finance "capacity-building" infrastructure projects of substantial regional and national significance.

Eligible infrastructure projects would be limited to publicly owned mass transit systems, public housing, roads, bridges, drinking-water systems, and sewage-treatment systems.

Sponsors— states, cities, counties, tribes, or an infrastructure agency such as a transit or wastewater treatment agency, or a consortium of these entities—would propose infrastructure projects. To be eligible, the projects would need a minimum federal investment of $75 million.

The National Infrastructure Bank would evaluate and finance "capacity-building" infrastructure projects of substantial regional and national significance, the bill would prime the pump to begin meeting the staggering investment needs for our infrastructure.

We believe the National Infrastructure Bank Act of 2007 is essential to beginning the long-term effort to maintain or replace economically vital infrastructure systems across the nation. This nation cannot afford to wait much longer to invest significant sums in its infrastructure, and this bill will help to lead the way.

B. Federal Capital Budget

ASCE supports the establishment of a federal multiyear capital budget for public works infrastructure construction and rehabilitation. This budget would be similar to those used by state and local governments. The capital budget must be separated from non-capital federal expenditures. The current budgeting process at the federal government level has a short-term, one- to two-year, focus. Infrastructure, by its very nature, is a long-term investment.

The current federal budget process does not differentiate between expenditures for current consumption and long-term assets. This causes major inefficiencies in the planning, design and construction process for long-term investments. A federal capital budget could create a mechanism to help reduce the constant conflict between short-term and long-term needs. It also would help increase public awareness of the problems and needs facing this country's physical infrastructure.

Without long-term financial assurance, the ability of the federal, state, and local governments to do effective infrastructure investment planning is constrained severely.

C. Public-Private Partnerships

We need to say a few words about the use of public-private partnerships (PPPs) in providing financial assistance to U.S. infrastructure.
ASCE recognizes PPPs as one of many methods of financing infrastructure improvements. PPPs are contractual relationships between public and private sectors in

infrastructure development. They have been defined as "a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards."

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.
- The selection of professional engineers as consultants and subcontractors by federal, state, and local agencies should be based solely on the qualifications of the firm.

ASCE supports the development of criteria by governing agencies 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.

D. Other Financing Options

In addition, ASCE supports:

- User fees (such as a motor fuel sales tax) indexed to the Consumer Price Index.
- Appropriations from general treasury funds, issuance of revenue bonds, and tax-exempt financing at state and local levels.
- Trust funds or alternative reliable funding sources established at the local, state and regional levels, including use of sales tax, impact fees, vehicle registration fees, toll revenues, and mileage based user fees be developed to augment allocations from federal trust funds, general treasuries funds and bonds.
- Public-private partnerships, state infrastructure banks, bonding and other innovative financing mechanisms as appropriate for the leveraging of available transportation program dollars, but not in excess of, or as a means to supplant user fee increases.
- The use of budgetary firewalls to eliminate the diversion of user revenues for non-infrastructure purposes.

Mr. Chairman, that concludes my statement. I would be pleased to answer any questions that you or the Committee may have.

# # #