Our Infrastructure Crisis
Your Turn to Act

A White Paper of the ACEC Management Practices Committee

The extended and substantial under-investment in our national transportation, energy, and water infrastructure has dire long- and short-term consequences for the United States. Over the long-term we are degrading our ability to keep pace in the increasingly competitive global marketplace. The burden for this failure will fall on future generations to overcome. In the short term, we are missing out on the high-value job creation that infrastructure investment provides.

> The 2010 report of The National Commission on Fiscal Responsibility and Reform (Simpson Bowles Plan) stated "We must invest in education, infrastructure, and high- value research and development to help our economy grow, keep us globally competitive, and make it easier for businesses to create jobs."

ACEC members and our colleagues in the business sector should take the lead in tackling the lack of funding for infrastructure, particularly at the state and local level. An outstanding record of success has been achieved when local infrastructure initiatives are well planned and executed. A recent example is the Renew Houston charter amendment passed in 2010, an initiative conceived and led by ACEC members. The engineering industry brings public credibility, proven project delivery and a commitment to sustainability essential to winning public support. This paper documents the lessons learned from Houston and other case studies across the country, laying a foundation for ACEC member action to address the investment needs in their states and local communities.

How Serious Is It?

Numerous national and international organizations have tracked how our country's failure to adequately invest in infrastructure and to develop a national infrastructure policy is taking a toll.

16th World Ranking	In the 2012-2013 World Economic Forum's Global Competitiveness Report, the United States ranked 16th in infrastructure competitiveness; in the 2011-2012 report, the United States ranked 14th.
D+	ASCE's 2013 Infrastructure Report Card gave the nation a grade of D+ and asserted that $3.6 trillion must be invested by 2020 to maintain and upgrade the nation's infrastructure to meet our growing needs—that is approximately double our current rate of investment.
50% Decline	According to The Progressive Policy Institute's Building America's 21st Century Infrastructure, the U.S. invests only 2 percent of GDP in infrastructure, a 50 percent decline since 1960. The current average for infrastructure investment in developed economies is approximately 3 percent of GDP.
Gas Tax Shortfall	Since 2008, the Highway Trust Fund, the nation's primary source of funding for transportation, has failed to generate sufficient revenue to fully fund our highway transportation infrastructure costs. This shortfall will continue to widen without a major change in the method for funding transportation investments.
400 Million People	The U.S. Census Department estimates that the nation's population will increase to more than 400 million by 2050. The majority of this growth will be in cities, which places significant additional pressure on our already strained infrastructure systems.

What is the Impact?

The consequences of this under-investment are wide-ranging.

Lower productivity, which increases operating costs for businesses and depresses GDP and personal income growth.
Inefficient use of scarce energy and water resources due to overburdened transportation systems, aging and outdated energy infrastructure, and leaking and inefficient water infrastructure.
Increased public safety risk.
Decreased access to necessary public services, such as public transportation and clean drinking water.
Increased liability risk to the industry as exhibited by the recent court decision on the I-35 Bridge in Minneapolis.
Decreased international competitiveness which hurts local and national economies.
Negative impacts on the nation's health, quality of life, and environment.

Job Creation

Infrastructure investment provides the added benefit of creating large numbers of high-value jobs. According to the Congressional Budget Office, infrastructure spending is one of the most cost-effective ways the federal government can stimulate job creation. A Jobs Council report indicates that each $1 billion in government infrastructure spending creates as many as 18,000 jobs. Furthermore, according to a Department of Treasury report, 90 percent of those jobs provide middle-class incomes.

In the 2012 book, The Book of Jobs, economist Joseph Stiglitz states that the current economic environment of historically low interest rates and high unemployment/underemployment in the construction industry is an opportunity to maximize the benefits of infrastructure investment. Not only will the job creation propel the economy, but because of years of under-investment, the return on additional investment in infrastructure will be high.

Local Infrastructure Initiatives

While the federal government plays an important leadership role in infrastructure investment, state and local governments account for approximately 75 percent of all transportation and water infrastructure funding.

Infrastructure investment has proven to be very popular at the state and local level. When voters are presented with well planned initiatives that identify high priority needs, they have been very supportive. From 2000 through mid-2012, 71 percent of state and local transportation infrastructure ballot initiatives were approved by voters.

Following are several case studies of communities that have successfully tackled their infrastructure challenges. These case studies reveal several common themes that were crucial for their success.

- ✓ Well-documented needs.
- ✓ Public credibility, including fiscal responsibility, responsiveness to community input, and demonstrated project delivery.
- ✓ Commitment to public education with specific project plans.
- ✓ Support from business and industry groups, particularly when infrastructure issues are negatively impacting the business environment.
- ✓ Positive impact on broad parts of the community and meeting high priority needs, rather than isolated interests.
- ✓ Aftermath of a natural disaster.
- ✓ Commitment to ongoing communication after the vote to reinforce accountability.
- ✓ Leadership by the engineering community.

A Sustainability Perspective

Sustainability has become a core criterion in designing infrastructure projects. With public input playing an increasingly important role in infrastructure planning, projects that meet a specific need, minimize life-cycle resource consumption, enhance the natural environment, and are resilient to man-made and natural disasters receive greater public support.

To measure the sustainability of infrastructure projects, the Institute for Sustainable Infrastructure (ISI), a partnership of ACEC, APWA, and ASCE, developed the Envision rating system. By rating infrastructure projects against a full slate of infrastructure sustainability objectives, Envision incentivizes holistic planning, encourages more efficient resource allocation and enhances effective infrastructure investment.

For more information on ISI and Envision, go to *www.sustainableinfrastructure.org.*

RENEW HOUSTON CHARTER AMENDMENT

Purpose

Secure the future of infrastructure funding in Houston for decades. Reduce risk of flooding and make streets safe for the driving public.

Goals of Initiative

1. Dedicated, reliable source of funding – Charter Amendment as opposed to annual budget battle.
2. Adequate funding to address drainage and street needs.
3. Focus on capital projects - limit percentage of funding used for maintenance.

End Result

- ☑ Charter Amendment – passed 51% - 49% in Fall 2010 election.

Background & History

- ☑ Initiative was based on independent study of needs.
  - Funded by donations from Houston area ACEC firms.
- ☑ Funding need - $500 million / year compared to current spending of approximately $100 million / year.
- ☑ Funding Sources.
  - Conversion of existing bond program supported by property taxes to "pay-as-you-go" system.
  - Existing 3rd Party Sources – state, federal, etc.
  - New drainage utility fee.
  - New development drainage impact fee.

Political Strategy

- ☑ Emphasis on education of the public and elected officials regarding the crisis in under-funding infrastructure.
- ☑ Polled public regarding how much they would be willing to pay.
- ☑ Petition drive to place charter amendment on ballot.
- ☑ Identified City Council candidate from coalition and funded successful election campaign.
- ☑ Extensive outreach campaign – presentations, print, website and social media.
- ☑ Well-planned political campaign including professional political consultants.
- ☑ Faced organized opposition, whose strategy included charges of self-interest.
- ☑ Long-term commitment – 4 years from initiation of idea to election day.
- ☑ Total expenses of approximately $2 million - funded mainly by engineering community (70%).

Lessons Learned

1. Work does not end when the election is over!
2. Engineering community filled a leadership void.

OKLAHOMA CITY METRO AREA PROJECTS (MAPS)

Purpose

Enhance the quality of life in Oklahoma City and create economic growth.

Goal of Initiative

1. Provide local sales tax funding for variety of community enhancement projects:

18,000-seat arena	Improvements to State Fair Park
Downtown baseball stadium	57 miles of hiking/biking trails
Canal project that served as centerpiece for redevelopment of former warehouse district	Aquatic centers
	New convention center
Improvements to the Oklahoma River	World class destination park
57 miles of hiking/biking trails	Downtown street car system

End Result

Since 1993 four separate initiatives have received voter approval.

Background & History

- ☑ Initial five-year initiative (MAPS 1) passed in 1993 with 54% voter approval.
- ☑ Secured more than $350 million in funding for nine projects focused on sports, recreation, entertainment, cultural and convention facilities.
- ☑ Extension of campaign (MAPS 2) passed in 1998 with 68% voter approval.
- ☑ Additional campaign (MAPS For Kids) approved in 2001 provided $153 million in funding for public school facility improvements.
- ☑ Third extension of program (MAPS 3) passed in 2009 and generated additional $777 million in revenue.

Political Strategy

- ☑ Extensive public communication on components of plan – what specific projects would be built, how much projects would cost and when projects would be completed.
- ☑ Communicated that projects could be built with no long-term public debt.
- ☑ Public input on plan.

Lessons Learned

1. Public support can be achieved for specific, well-communicated project plans.
2. Delivery of projects matched campaign promises.

SOUTH CAROLINA LOCAL OPTION SALES TAX

Purpose

Provide additional funding for transportation infrastructure.

End Result

1. Since 1996, 13 counties in South Carolina have voted in favor of local option sales tax increases to fund transportation infrastructure.
2. Several counties have extended original initiatives.

Background & History

- ☑ Since 1987 South Carolina has not had any increase in state gas tax.
- ☑ Statewide bonding initiative accelerated completion of 200 road and bridge projects across the state, but limited state funding to counties.
- ☑ York County – original program and two extensions have provided over $400 million in funding for over 40 projects.
    - Latest extension approved in 2011 with 82% voter approval.
- ☑ Charleston County – 25-year program passed in 2004 and expected to generate in excess of $1.3 billion in funding.
- ☑ Horry County –Hospitality fee program (RIDE I & RIDE II) funded 19 projects at a cost of more than $1 billion.
    - Additional capital improvement one-cent sales tax initiative passed in 2006 with 67% voter approval and generated additional $450 million in funding.

Political Strategy

- ☑ Citizen involvement in project identification and prioritization.
- ☑ Citizen education.
- ☑ Organized political campaign.
    - Specifically identified projects.
    - Campaign signs on roads to be improved.
    - Campaign slogans that successfully branded programs – Riding on a Penny, Pennies for Progress.
    - Chamber of Commerce leadership.
- ☑ Coordinated projects with state DOT through inter-governmental agreements.

Lessons Learned

1. Lead by example – if other states and counties have done it, why can't we?
2. Citizen involvement is critical.
3. Need for identification of specific projects included in initiative.
4. Need to impact the lives of all citizens in the county, not just metropolitan areas.
5. Don't over-commit in terms of number of projects.

MONTANA RESORT TAX

Purpose

Funding of infrastructure in resort communities and resort areas in Montana through local option sales tax.

Goals of Initiative

1. Allows resort communities and resort areas in Montana with population less than 5,500 to levy local sales taxes.
2. Funds infrastructure such as water / wastewater systems, streets, trails, parks, and other municipal services.

End Result

Currently being utilized in communities / areas of Whitefish, Red Lodge, Virginia City, West Yellowstone, St. Regis, Big Sky, Cooke City and Craig.

Background & History

- ☑ Authorizing legislation passed in 1985.
- ☑ Requires voter approval.
- ☑ Tax applies to retail value of goods and services related to tourism.
- ☑ Tax cannot exceed three percent.
- ☑ Locally administered.

Political Strategy

- ☑ Primary support from Montana League of Cities and Towns.

Lessons Learned

1. Great success in generating revenues for tourist areas.
2. Prevents tourist areas from encroaching on national parks and rural areas.
3. Importance of clearly identifying how funds will be used in gaining voters' approval.

BATON ROUGE LOUISIANA GREEN LIGHT PLAN

Purpose
Comprehensive transportation program to improve road infrastructure and citizen safety throughout East Baton Rouge Parish.

Goals of Initiative
1. Provide stable long-term local funding source that allows acceleration of badly needed transportation system improvements.
2. Complete 36 projects on accelerated schedule.

End Result
Long-term sales tax increase passed in October 2005.

Background & History
- ☑ Beginning in 1990 Baton Rouge began collection of half-cent sales tax known as the "pothole tax."
- ☑ Taxes were only authorized for three-to-five year periods, and funds were not adequate to address large-scale transportation projects.
- ☑ Green Light Plan was conceived in 2005 through engineering community and citizen input.
- ☑ Main component of plan was to extend the sales tax through 2030 allowing bonding of larger projects.
- ☑ In the aftermath of Hurricane Katrina, population in Baton Rouge increased 50% and traffic problems increased to intolerable levels.

Political Strategy
1. Engagement of local business community.
2. Public input on original plan and again following Hurricane Katrina.
3. Re-communication of program background and status to incoming elected officials after each election to maintain continuity.
4. Projects specifically identified - voter approval required to add or delete projects.

Lessons Learned
1. Overwhelming public support following the impacts of natural disaster (Hurricane Katrina).
2. Coordination of transportation projects with large sanitary sewer overflow control program to insure continued public support.
3. Ongoing provision of up-to-date, reliable information via the program website is critical to maintaining public support.

LAWRENCE KANSAS LOCAL SALES TAX INITIATIVE

Purpose
Funding of local transportation and stormwater projects through local sales tax.

Goals of Initiative
1. 0.55% sales tax with 0.30% dedicated to infrastructure.
2. Funds several local transportation projects and a stormwater pump station project.

End Result
Approved November 2008 with 70% approval.

Political Strategy
- ☑ Convinced the public that current funding sources were not adequate to keep up with needs.

Lessons Learned
1. Identification of specific projects allowed the voters to hold the City accountable.

Commonwealth of Virginia New Transportation Funding

Purpose

Transportation funding reform legislation that will generate new sustainable revenue for roads, rail, and mass transit.

Goals of Initiative

1. Revenue increases substantial enough to 'solve' the problem and avoid similar legislative battles in the near future.
2. New revenue must not come from a gas tax increase.
3. Transportation is a core government responsibility and taxes to fund should have broad basis.

End Result

- ☑ General Assembly passed legislation that raises $3.4 Billion in dedicated state-wide transportation funding over a five year period.
- ☑ Bill also provides an additional $1.5 billion in Northern Virginia and $1 billion in Hampton Roads for local transportation projects.
- ☑ New revenue comes from increases in the statewide sales tax, motor vehicles sales tax, and transient and occupancy taxes.
- ☑ Final bill passed the House in a 64-35 bipartisan vote and the Senate in a 26-12 bipartisan vote.

Background & History

- ☑ Last previous increase in the gas tax was in 1986. Since that time, there has been little to no new transportation revenue generated at the state level.
- ☑ Projections indicated that by 2017 Virginia would be unable to match federal construction dollars and all state transportation revenue would go towards maintenance of existing roadways.
- ☑ Despite additional funding provided through efficiency improvement and maximizing bond potential, Virginia still faced major revenue shortfalls, which was recognized nationally when a major publication dropped Virginia's "best state for business" ranking due to transportation congestion and lack of funding.

Political Strategy

1. Unlike past transportation funding reform bills, this proposal had the backing of both the Governor and the Speaker of the House.
2. Proposal raised state-wide revenue but also raised taxes and dedicated the funding within regions that needed it most: Northern Virginia and Hampton Roads.
3. Concentrated lobbying effort by the Governor's staff utilizing stakeholder groups that provided pressure on members of the General Assembly.
4. Dedicated funding for "pet projects" helped sweeten the deal for key legislators and constituents in rural areas not likely to see a major influx of new funding.
5. Advocates leveraged national "best state for business" reports citing a crumbling transportation infrastructure as a reason for Virginia's drop in the national rankings.

Lessons Learned

1. Major tax reform or funding legislation must be supported by a wide array of business and industry groups.
2. Outside stimuli, like a drop in national business environment rankings, can be a catalyst for major reform.

Keep Washington Rolling Oppose Initiative 912

Purpose
Protect 9.5 cent gas tax increase passed by Washington's legislature in 2005.

Goal of Initiative
1. Oppose repeal effort of Initiative 912.

End Result
- ☑ Initiative 912 failed to pass with 54.5% of voters voting against repeal.

Background & History
- ☑ In May 2005 Washington enacted a comprehensive transportation funding package to address safety, maintenance and congestion relief.
- ☑ Major revenue contributor was a 9.5 cent gasoline tax increase to be phased in over four years.
- ☑ Initiative 912, on the ballot for the following November, would have repealed the gasoline tax increase and stripped $5.5 billion from the $8.5 billion highway plan.

Political Strategy
1. Keep Washington Rolling, a coalition of business, labor and environmental groups, launched a multi-media blitz to sell the new tax and 250+ safety and congestion relief projects as imperative to a healthy future for the state.
2. Campaign raised approximately $4 million, with over $500,000 from the engineering community.
3. Utilized a well-planned, well-coordinated campaign with professional political and media consultants, pollsters and key business people and engineers as spokespersons .
4. The engineering community also coordinated and staffed a major telephone campaign aimed at likely voters in key districts.

Lessons Learned
1. Public will support a gas tax increase if they know what they will get for their money.
2. Use professionals to plan and run the campaign.
3. Engineers are critical communicators of this message.

Maryland Transportation Funding

Purpose
Implement recommendation of the Blue Ribbon Commission on Maryland Transportation Funding.

Goals of Initiative
1. Increase transportation funding.
2. Index transportation funding revenues to inflation.
3. Ensure that revenues are only used for transportation purposes.

End Result
- ☑ Additional transportation funding measures approved during 2013 General Assembly session.
    - New sales tax on retail price of fuel.
    - Fuel excise tax indexed to CPI beginning 7/1/2013.
    - Any proposed transfer from the Transportation Trust Fund requires super majority of standing committees.
    - Regional study of mass transit.
    - Beginning 7/1/2014 MTA fares will be adjusted based on CPI.
    - Increase in bonding authority to $4.5 billion.

Background & History
- ☑ ACEC/MD members have worked for many years to secure additional transportation funding.
- ☑ With signals of support from Governor O'Malley it became apparent that 2013 would be the best opportunity to secure additional funding.

Political Strategy
1. Maryland ACEC members provided testimony at hearings in support of increased transportation funding.
2. Maryland ACEC members committed to hours of individual contacts with elected officials.

Lessons Learned
1. ACEC/MD demonstrated the political clout necessary to make this long sought after revenue increase a reality.

Denver FasTracks Campaign

Purpose

Passage of $4.2 billion regional public transportation initiative with funding from regional sales tax increase.

Goals of Initiative

1. Improve transportation options in the entire Denver metro area.
2. Secure voter approval from throughout metro area for regional sales tax increase.

End Result

- [x] Initiative passed in 2004 with 58% voter approval.

Background & History

- [x] Studies indicated the critical need for enhanced public transportation to addressing existing and future traffic congestion.
- [x] An earlier effort in 1997 resoundingly failed with majority of opposition coming from suburban counties.
- [x] In 1999 collaborative efforts by business, local government and transportation agencies resulted in passage of a bond issue to build a light-rail line to the southeastern part of the Denver metro area.
- [x] Mayor John Hickenlooper lead even greater collaboration efforts related to 2004 vote.
- [x] Cost increases and sales tax revenue shortfalls may require voter approval of additional funding.

Political Strategy

1. Increased collaboration by business, local government leaders and transportation agencies following the failed effort in 1997.
2. Even greater collaboration and broad regional support for 2004 vote.

Lessons Learned

1. Voters gained experience regarding the benefits of enhanced public transportation from lines built after 1999 initiative that were funded by means other than tax increases.
2. Business and political leaders from the entire region firmly, unanimously and vocally aligned behind FasTracks.
3. The leadership coalition remains engaged in addressing funding problems.