

AMERICA'S INFRASTRUCTURE CRISIS

CAN WE COME BACK ★ ★ ★ FROM THE BRINK?

Honest dialogue, strong opinions mark a series of roundtables

In a country as vast as the U.S., with such great geographical, historical and political diversity, one challenge seems sadly universal: the infrastructure we rely on to live and thrive is rapidly coming unraveled. Roads, bridges, public transit, airports, water and sewage systems—most are failing to keep pace with the expanding needs of a burgeoning population, and some are virtually on the brink of collapse.

The American Society of Civil Engineers assesses these challenges on a national scale every four years, issuing a comprehensive “Report Card” on the state of our infrastructure (see page 2). In ASCE’s most recent *Report Card*, released in March 2009, no category of infrastructure achieved a grade higher than C+, and the grades for infrastructure that touches lives every day—our roadways, schools, water systems and airports—ranged from C to D-

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The fundamental challenge in virtually every part of the country is persistent underinvestment—what’s been spent

on infrastructure in recent years, and what’s slated to be spent in the years to come. In its March 2009 *Report Card*, ASCE estimated that in the next five years the nation will invest around \$1 trillion in infrastructure—both new projects and improvements, as well as repairs to existing infrastructure. Yet, ASCE estimates that more than double that amount—\$2.2 trillion—actually needs to be invested over five years to address these needs.

The leaders and analysts who created the 2009 *Report Card* advanced Five Key Solutions to spur conversation and debate about better ways to address the nation’s urgent infrastructure needs.

In January 2010, ASCE hosted three days of meetings in Washington, D.C. with a range of infrastructure leaders to discuss the efficacy of the Five Key Solutions. The participants in the meetings validated the solutions and delivered significant insights into the hurdles that stood in the way to success.

These meetings also highlighted the need to delve more deeply into state and local infrastructure issues to understand the entire continuum of challenges and opportunities. As a result, ASCE partnered with *Governing* magazine to host another series of roundtables, this time spread across the nation—in Houston; Sacramento, California; Boston; Raleigh, North Carolina; and Omaha, Nebraska.

According to Blaine Leonard, P.E., 2010 ASCE President, the roundtables aimed to bring some of the best minds from government and the private sector together to discuss concrete ways to solve the nation’s growing infrastructure crisis.

“ASCE has been reporting on and evaluating the condition of the nation’s infrastructure for the past 12 or 15 years,” said Leonard, who is an engineer with the Utah Department of Transportation. “But it has become evident that it’s not enough to highlight the problem. What we need to start doing is really engage people in discussing solutions, and since most of these problems are going to be solved at the state and local level, we thought it was important to convene groups of state and local officials and experts and try to drill down and get at some potential solutions.”

ASCE President-elect Andrew Herrmann, P.E., who is a principal with Hardesty & Hanover, noted that ASCE wanted to “hear from the field whether or not those five key solutions were the right ones, and what strategies we might pursue for getting action on them.”

Attending the five roundtables were more than 100 individuals, coming from a range of backgrounds: civil engineers, DOT leaders, state senators, mayors, city council members, state environmental officials, planners, consultants and others. While there was considerable diversity of opinion about certain details and approaches, there also was great unanimity about the need to take action now to preserve the nation’s infrastructure—now and for future generations.

2009
**REPORT
 CARD**
 ★ for ★
**america's
 INFRASTRUCTURE**

Aviation	D
Bridges	C
Dams	D
Drinking Water	D-
Energy	D+
Hazardous Waste	D
Inland Waterways	D-
Levees	D-
Public Parks and Recreation	C-
Rail	C-
Roads	D-
Schools	D
Solid Waste	C+
Transit	D
Wastewater	D-

A = Exceptional
B = Good
C = Mediocre
D = Poor
F = Failing

Each category was evaluated on the basis of capacity, condition, funding, future need, operation and maintenance, public safety and resilience

**AMERICA'S
 INFRASTRUCTURE G.P.A.**

D

**ESTIMATED 5 YEAR
 INVESTMENT NEED**

**\$2.2
 TRILLION**

FIVE KEY SOLUTIONS

RAISING THE GRADES

ASCE's 2009 *Report Card* for America's Infrastructure highlights serious needs of the nation's infrastructure—including focused, visionary leadership and adequate funding—that can and must be addressed. To respond to the *Report Card's* findings, ASCE advanced the Key Solutions as a starting point for discussion and real, positive change.

1

INCREASE FEDERAL LEADERSHIP IN INFRASTRUCTURE

During the 20th Century, the federal government led the way in building our nation's greatest infrastructure systems. Since that time, federal leadership has decreased, and the condition of the nation's infrastructure has suffered. A strong national vision must originate with strong federal leadership and be shared by all levels of government and the private sector.

2

PROMOTE SUSTAINABILITY AND RESILIENCE

America's infrastructure must meet the ongoing needs for natural resources, industrial products, energy, food, transportation, shelter and effective waste management, and at the same time protect and improve environmental quality. Sustainability and resiliency must be an integral part of improving our infrastructure.

3

DEVELOP FEDERAL, REGIONAL, AND STATE INFRASTRUCTURE PLANS

Infrastructure investment at all levels must be prioritized and executed according to well-conceived plans that both complement the national vision and focus on system-wide outputs. The plans must reflect a better defined set of federal, state, local, and private sector roles and responsibilities and instill better discipline for setting priorities and focusing funding to solve the most pressing problems.

4

ADDRESS LIFE-CYCLE COSTS AND ONGOING MAINTENANCE

As infrastructure is built or rehabilitated, life-cycle cost analysis should be performed for all infrastructure systems to account for initial construction, operation, maintenance, environmental, safety and other costs reasonably anticipated during the life of the project, such as recovery after disruption from natural or manmade hazards.

5

INCREASE AND IMPROVE INFRASTRUCTURE INVESTMENT FROM ALL STAKEHOLDERS

All levels of government, owners, and users must renew their commitment to infrastructure investments in all categories. All available financing options must be explored and debated. The longer critical investments to improve the operability, safety, and resilience of the nation's infrastructure are withheld, the greater the future cost and risk of failure.

★ JANUARY 14, 15, 19, 2010 | Washington, DC

TOMORROW'S NEEDS

- “Some of the vision that the federal government has provided in the past has been century-level vision—it has looked past several generations and asked, what are the long-term needs of the country that are going to be met by this basic infrastructure that we build?”

David Conrad, National Wildlife Federation

COMMUNICATE SUCCESS

- “Over the years I believe we’ve done really well in addressing environmental issues and sustainability issues, but we simply have not done a very good job of communicating that to the taxpayer. Our ability to communicate with policy makers or the taxpayer really needs to be improved so that people understand what we have been able to accomplish.”

Victor Mendez, P.E., M.ASCE, administrator, Federal Highways Administration

ALL HAVE A ROLE

- “How does ASCE help shape and influence the American public and the senior elected leadership so that everybody in America feels they have an obligation to future generations to build an America that is built on the lowest life-cycle costs?”

VADM Michael Loose (Ret.), P.E., M.ASCE

NATIONAL SIGNIFICANCE

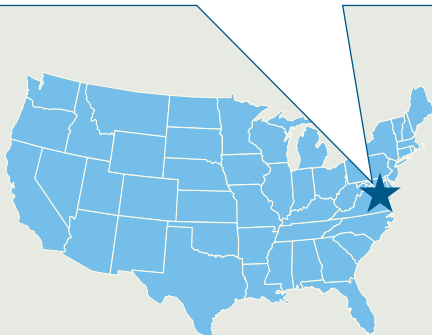
- “Given the fact that we’ve talked about the lack of leadership, the lack of a national vision, the whole depoliticizing of the process, public-private partnerships, innovative financing, if what we do believe we’re missing on the national level is this vision and this mechanism for funding those projects that are truly of national significance—whether they are port projects, freight projects—all of these things matter to the national government.”

Robert Puentes, Brookings Institution

NATIONAL VS. LOCAL

- “At the local level, referendums carry strongly because of specific project lists, and I think that lesson has been learned well because earmarking has grown dramatically because of that translation. The problem is it doesn’t address the national needs in any clear way. What that argues for is that there are different strokes for different folks.”

Jack Basso, American Association of State Highway and Transportation Officials



SPEAKING OUT ★

“There is direct impact on the public, but there are very few who really understand the intricacies of infrastructure, and somehow there needs to be leadership providing the basis of public education and public awareness.”

Richard Capka, P.E., M.ASCE, former administrator, Federal Highway Administration

In every roundtable, participants expressed frustration with the federal government for failing to step up to its

role as an infrastructure leader. Some noted that the federal government has taken a positive approach in key areas of infrastructure planning and funding, and recent steps toward increasing funding for infrastructure projects was welcomed.

On the other hand, participants almost uniformly condemned the “strings attached” to federal funds, citing situations where micromanagement or unreasonable regulations are getting in the way. For example, in Omaha a participant lamented that federal regulations demanded formal assessments of each plot of land being donated for right-of-way for a water project—yet the assessment fees were up to 10 times more than the value of the land rights.

Another Omaha participant suggested Washington adopt a performance-based policy that takes into consideration the challenges facing local communities. These would consist of broad guidelines and specifications, from which the local governments would develop detailed plans.

Tight strictures on spending also were a concern. In the Boston roundtable, it was pointed out that Massachusetts’ transportation needs and priorities were vastly different from those in other states, and that more money should be provided by the federal government in the form of unrestricted grants.

Meanwhile, virtually all roundtable participants agreed that the federal government could be a stronger leader in the areas of innovation, research and best practices. Due to their bird’s-eye-view of all the innovations across the country, they could act efficiently as a clearinghouse for information on advances in materials and construction techniques, and facilitate better, more coordinated regional planning.

In Houston, for example, participants pointed out that a cookie-cutter plan for the country is unlikely to work because issues vary so widely. And despite the fact that local problems are typically better understood at the local or regional levels, federal restrictions in the form of “strings attached” to funding only serve to hinder progress.

FEDERAL LEADERSHIP



★ JULY 28, 2010 | Houston

BUILDING THE CASE

“Too often, government doesn’t work enough on communicating the value proposition. People think you’re going to ask them for more money, but that nothing is going to change. You need to start building a case so people can see the value in doing something.”

George Greanias, President and CEO, METRO

SHOW WHAT YOU DID

“The city raised water rates significantly. The public is okay with this, though, because we keep reminding them of what we did with their money. People will pay for what they perceive is a better product.”

David Harris, Assistant Division Director of Public Works, Brownswood, Texas

THE UPFRONT VISION

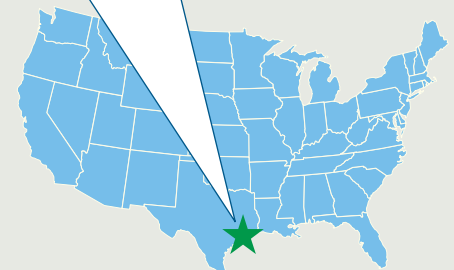
“Should maintenance cost over the life of the project be included as an item in the proposal? [That’s perhaps the next step we should take.] We need to inform the owners of what should be done. Otherwise they will continue to lack a long-term vision. And they’ll continue to look for the cheapest possible methods.”

Steve Costello, P.E., M.ASCE, Council Member, City of Houston

THE BASICS AND MORE

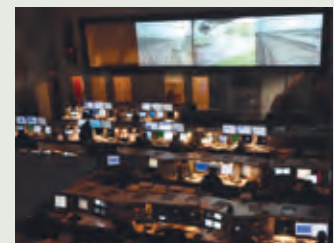
“For economic development (of a city), infrastructure must provide a platform on which companies can operate freely, quickly and efficiently... ultimately, the goal is to focus on things that are an enhancement to the city, not just providing a base level of services that we must have in order to operate.”

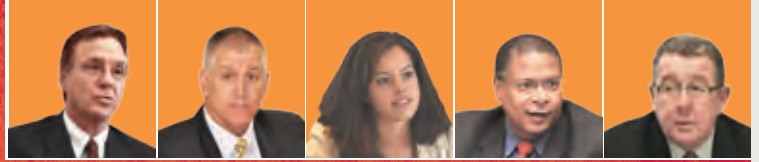
Annise Parker, Mayor of Houston, Texas



★ CASE STUDY | A Multi-Agency Command Center

HOUSTON, TX | The Houston TranStar consortium is a partnership between four government agencies responsible for providing transportation and emergency management services to the Southeast Texas Region. The facility uses state-of-the-art technologies to reduce traffic congestion and improve roadway safety. In addition, TranStar serves as a command center during flood emergencies, working to mitigate injuries, fatalities and property damage. When created in 1994, TranStar was the first of its kind in the nation; it now serves as a model organization for regional cooperation and providing a safe and mobile community.





PROMOTING SUSTAINABILITY



At every roundtable, participants agreed that investing carefully—and with the right foresight—would now, in most cases,

deliver a project that would last longer and be less costly to maintain.

Several roundtable participants brought up the issue of low-bid requirements, which they said were forcing them to choose contractors that they knew would deliver poorer quality and that would likely bring only greater expense and maintenance woes down the road. Such regulations, participants said, should be amended to include quality metrics as well as initial price.

One potential solution mentioned is qualifications-based selection (QBS), which requires architectural and engineering firms to compete based on skills, experience and ability to perform the required services—not just price. As one participant pointed out in Omaha, the hidden costs of low bids often lie in the litany of change orders, or in the long-term maintenance needed to keep sub-par work from unraveling over the years.

At several roundtables, participants also pointed to public education as a weak spot in achieving more sustainable infrastructure. Especially in tough economic times, citizens tend to focus on the initial price tag associated with construction. And few politicians are eager—or well prepared—to stand up and argue

for “spending more” even if the merits of doing so are compelling. Engineers can and should play a significant role in building the case for a longer-term view, participants said.

Several participants at the Raleigh roundtable called for establishment of sustainability standards for various types of infrastructure. Such standards would allow proposals and bids to be assessed in light of their potential resilience and longevity.

In Houston, participants provided some practical ideas that would be “green and cheap.” One idea is to synch up road and water system repairs, so you can fix both at the same time in ways that reduce environmental impact and cost. Another idea is to improve traffic management—such as using blinking yellow lights at off-peak times—to move traffic and reduce emissions.

Several roundtable participants touched on the need to balance multiple factors in seeking to build sustainable infrastructure. Some highlighted their own approaches, while others focused on “the triple bottom line” approach, which measures sustainability based on its environmental, economic and social impacts.

There is strong public support for multiple-use and multiple benefit projects and for focusing on the livable community. What this means is creatively looking at using the public infrastructure as a way to promote the livable community strategy—for example, to look at putting trails on any utility corridors.

Richard Dolesh, National Recreation and Parks Association

★ AUGUST 16, 2010 | Sacramento

IT'S ABOUT EDUCATION

- “Funding is only half of the solution. There is absolutely no sense of continuity or agreement in terms of what must be done. We need to do a better job educating people on what infrastructure means to the country.”

Jim Earp, Executive Director, California Alliance for Jobs Sacramento

NO RIBBON CUTTINGS

- “Maintenance isn't sexy. We know that politicians are drawn to projects with ribbon cuttings. But we have to focus on maintenance. It's not efficient to only go in and fix it when the project is about to fail.”

Rick Land, P.E., M.ASCE, Chief Engineer & Deputy Director for Project Delivery, California DOT

GAINING ALIGNMENT

- “If we don't know where we're going collectively, we'll just end up in a big knot in the middle. Before we start spending more money we need to bring governance and institutional structures into line.”

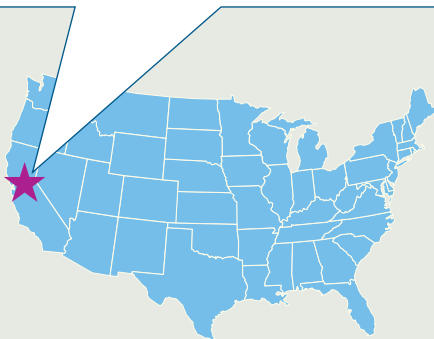
Dale Bonner, Secretary, Business, Transportation & Housing Agency, California

THE BIG PICTURE

- “We are looking at what-if scenarios for future funding. For example, if [California] is successful at pushing electric cars, then Caltrans is out a certain percentage of gas tax revenue. In essence, 10 percent success with electric cars, means minus 10 percent for Caltrans.”

Julia Burrows, Managing Partner, Valley Vision, Inc.

SPEAKING OUT ★



★ CASE STUDY | FloodSAFE California

SACRAMENTO, CA | FloodSAFE California is a sustainable integrated flood management and emergency response system operating throughout California that improves public safety, protects and enhances environmental and cultural resources, and supports economic growth by reducing the probability of destructive floods, promoting beneficial floodplain processes and lowering the damages caused by flooding. Created in 2006 by the California Department of Water Resources, FloodSAFE coordinates the efforts of state, local and federal partners, and it is funded by a \$5 billion state bond. The program's goal is to bring 200-year flood protection to the Sacramento-San Joaquin Valley by the end of 2025.

“
Most infrastructure issues are local issues and constitutionally we have a federal role and then the rest of it goes back to the states, and the piece that’s missing is the regions.... I think how we need to think about it in terms of roles and responsibilities is, what can local government do with regional government?
”

Roger Millar, P.E., F.ASCE, Missoula, MT

Across the roundtables, there was enthusiasm about the potential synergies and benefits of more integrated planning

across states and regions, and even nationally. However, the realities of political drivers and jurisdictional complexity often make integrated infrastructure projects and planning hard to execute.

A frequent theme was the fragmented nature of federal-to-state and state-to-local relationships. For example, in the Boston roundtable, leaders of a land use commission on Cape Cod, Mass., lamented the difficulty of trying to coordinate land use and infrastructure planning for 15 extremely autonomous towns. Two-thirds of the nitrogen-sensitive watersheds cross town lines, making a regional approach essential for making headway in preservation.

Participants at several roundtables suggested that help with promoting a more regional approach should be, and has been, a role for the federal government. In Omaha, it was noted that when the Clean Water Act was first passed, the Environmental Protection Agency strongly encouraged and supported regional planning. This planning came with financial incentives, an approach the federal government might use successfully in other areas.

Not all infrastructure projects require regional planning though, noted a Houston roundtable participant. Projects should be tiered—local, state, regional—to reflect the breadth of their impact. Planners should analyze which projects require broader regional or statewide planning and which don’t, so that officials can focus their energy on the right partnerships.

In Sacramento, a participant noted that science and technology move so quickly that they are usually ahead of policy and that “rigid plans” can do little to keep pace. Thus a solution might be to focus on priorities at the national, state and local levels, rather than be hemmed in and held back by too much planning.

3

**INTEGRATED
PLANNING**



★ AUGUST 31, 2010 | Boston

WRONG FOCUS

“People are driving down a highway that’s falling apart. And they look, and sound walls are going up. They wonder: Is that what’s happening—is that how they’re spending money—instead of repairing the roads?”

Tom Kinton, Jr., CEO and Executive Director, Massachusetts Port Authority.

TUG OF WAR

“It’s a matter of too many people touching too few dollars. As a result, people lack confidence that projects will be executed properly. The federal government’s role should be to provide funding, but then localities should be empowered to decide how to distribute it.”

Jeffrey Simon, Director, Massachusetts Recovery and Reinvestment Office

LOOK AT THE SYSTEM

“Sustainability is not just about the environment. It’s about the economy as well—and about how people access their jobs and get good services. For example, it doesn’t make sense to put in permeable pavement if it has to be shipped here from the other side of the globe.”

Tabitha Harkin, Special Projects Coordinator, Cape Cod Commission

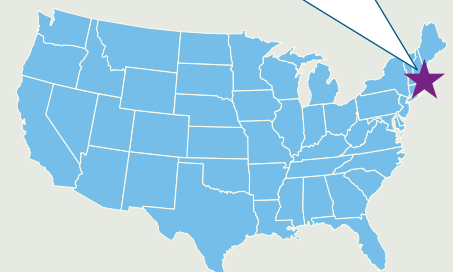
THE SOCIAL NETWORK

“The fact is that most of the public doesn’t care about these issues. So, public outreach needs to change. Right now, it’s geared toward advocacy organizations and people with extra time. So, how do you reach people who are busy? We have to take advantage of social networking and other tools.”

Adam Ploetz, AICP, Deputy Director or Sustainable Development, 495/ MetroWest Partnership

★ CASE STUDY | From Dirty to Green

BOSTON, MA | Boston’s harbor was once known as one of America’s dirtiest waterways, but thanks to a substantial state investment and engineering breakthroughs, it is now one of the nation’s most notable environmental success stories. Conceived in the late 1980s and in operation since 1995, the Deer Island Treatment Plant is the key component in the Massachusetts Water Resources Authority’s \$3.85 billion harbor clean-up project. Deer Island is notable for using state of the art technologies, such as distinctive egg-shaped digesters and a 9.5-mile-long discharge pipe, and for providing excess capacity during wet weather. In addition, the island features trails and recreation areas, as well its own power plant and energy-generating windmill.





Across the roundtables, participants agreed that there is continuing tension between the funding needs for old and

new infrastructure. Several participants pointed out that the public and politicians alike are drawn to ribbon-cuttings and fanfare, which makes it more difficult to draw attention to the need for investments for ongoing maintenance across the life-cycle of the infrastructure.

In Raleigh, one participant cited sewer and water system maintenance as particularly challenging to elevate in the public debate. Such invisible infrastructure is, too often, “out of sight and out of mind,” which clearly impedes efforts to win financial support for system preservation or upgrades.

The consensus across the roundtables was that officials must do a better job of educating the public on the needs of ongoing maintenance—before a system failure draws lingering inadequacies into the spotlight.

A participant in Boston pointed out that maintenance funding would be less of an issue if the federal government would change its existing policies, which focus exclusively on new infrastructure. This is one reason that Massachusetts spends ten times as much on new highway construction as it does on maintenance (\$1.1 billion vs. \$100 million*). The ideal would be to have access to a greater array of funding options to meet core maintenance requirements across the state.

Roundtable participants generally agreed that the key to winning public support for maintenance expenditures was formulating detailed maintenance schedules and then persistently making the case. Also, when considering new infrastructure, officials must consider what it will add to maintenance and operation costs. When such matters are taken into account at the front end of the process, decision-makers are able to move forward with their eyes wide open.

*SOURCE Jeff Mullan, Secretary and CEO, MassDOT

“I would say, very simply, that maintenance projects don’t get people elected. There are common themes in all of these questions of separating the political decision from the right decision, and I think that’s fundamental to anything that we’re going to do that’s going to solve the problem. The reason why maintenance budgets are where they are is because you can’t cut a ribbon on a maintenance project.”

Alex Herrgott, professional staff, U.S. Senate Committee on Environment and Public Works

★ SEPTEMBER 16, 2010 | Raleigh

LOOK UNDERNEATH

“The essence of our issues can be summarized as “out of sight, out of mind.” [If you can’t see it, it doesn’t exist. But, a lot of our infrastructure is underground.] So, the question is: What do we have to do now to preserve sewer systems and water systems.”

Greg Turner, Assistant City Manager, Winston-Salem

GET A MOVE ON

“All infrastructure projects are based on having the financing to pay for the project. Now, the Highway Trust Fund has gone broke twice in the last five years. They’ve got to do something on the big-ticket infrastructure projects. It’s taking eight to 12 years to get permits. In that time you lose your ability to finance.”

David Joyner, Executive Director, NC Turnpike Authority

ADVOCACY OR CHECK?

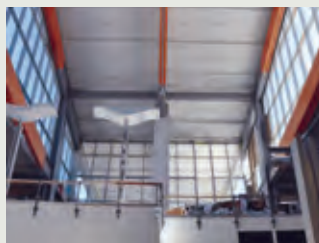
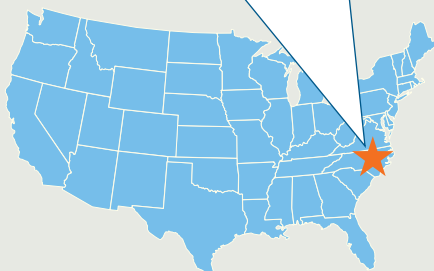
“When it comes to federal leadership, are we asking them for advocacy, or are we asking them to write a check? Small towns want the check, but there’s too much red tape that goes along with it, and that’s frustrating.”

Randy Voller, Mayor, Town of Pittsboro

DESIGN YIELDS SAVINGS

“High performance design is a slam dunk for government. We own buildings for the long term. We can see return within a few years, in terms of energy and other savings.”

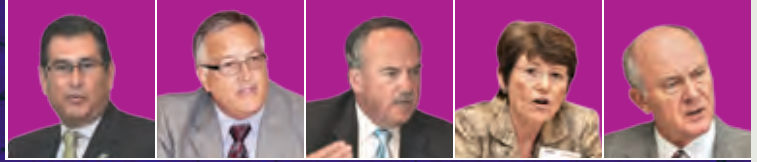
Ellen Reckhow, Vice Chairman, Durham County Board of Commissioners



★ CASE STUDY | A “Future-Proof” Terminal

RALEIGH, NC | Once a major airline hub, the Raleigh-Durham Airport Authority was faced with maintaining an aging and empty Terminal C. Instead of leasing the space to another airline, the authority in 2002 voted to replace the outdated terminal with a new, state-of-the-art facility. Engineers designed an energy-efficient terminal and added features to help passengers navigate the area easily and comfortably. In addition, the authority established a “common use” program, allowing airlines to use any part of the facility and protecting the airport from inconsistencies in the airline industry.

SPEAKING OUT ★



INCREASING INVESTMENT

5

The extreme shortage of infrastructure funding represented a frustrating roadblock for participants at every roundtable.

The nation's inadequately low gas tax was noted by a range of individuals, but there was a consensus that efforts to increase the tax may continue to be futile. Two reasons for this were raised the most often. The first is that few Washington leaders are willing to step up and propose or support an increase in the gas tax, for fear of being labeled as tax-raisers when reelection time returns. The second reason is that, even if such an increase were on the table, Americans are increasingly skeptical that the money would actually make it to the roads, bridges and other infrastructure they use every day.

This second sentiment was echoed across the roundtables in various forms, most often as: "Send a tax dollar to Washington and get (not very many) cents back" in infrastructure funding for the state or local government's specific needs.

Several roundtable participants said that state and local governments have stepped up and either funded priority projects themselves, or worked with local federal officials on ensuring that priority projects received funding. For example, continuing levee repairs around Sacramento, funded primarily at the state level, are an ongoing project that state and local officials have worked on closely with the U.S. Army Corps of Engineers.

The key to garnering support for increased infrastructure funding, according to most roundtable participants, is to better educate the public. Cities have had much greater success in passing infrastructure bond proposals when the public has known specifically what the money was going to produce—and what the benefit would be.

Roundtable participants agreed that public-private partnerships had potential as a means to find funding for infrastructure. Examples of these

partnerships ranged from toll roads, to asking developers to contribute to the cost of project amenities like parks and sidewalks.

It was suggested that bringing the private sector to the table has other advantages. For example, by bringing companies in to discuss prospective projects, the focus tends to be long term—that is, potential private partners will focus on the costs of building and maintaining an asset over 30 years. If a project doesn't promise an advantageous return on investment, the private partner will decline—and it may mean that the project itself needs rethinking to be financially viable.

In all of the roundtables, the matter of political courage arose as a necessary ingredient to focus more funding on infrastructure maintenance and improvement. For example, one of Annise Parker's first official acts as the new mayor of Houston was to fortify the city's water and sewer system with a 35 percent water rate hike. A city council member who voted for the rate hike credited the mayor's courage, adding that straightforward, clear communications with policymakers and the public helped to make the change more understandable and acceptable.

In Sacramento, the federal government was criticized for making funding decisions on a too-narrow view of infrastructure project—focusing on big-fix, single-purpose solutions. For example, restoring a bridge might be the primary mission, but there is a range of associated factors to consider. A broader view would take into account the potential creation of local construction jobs, increased tourism and other benefits. The key is to pull all the benefits together to build a compelling case for investment.

★ SEPTEMBER 29, 2010 | Omaha

TAKEN FOR GRANTED

“It’s a tough challenge to raise revenues. The public is not attuned. We’re spoiled as Americans. We turn on a light switch, or drive somewhere and we take it for granted. As policy-makers we don’t do a good enough job of communicating the cost to make all of this happen.”

Tim Gay, Nebraska State Senator

LEAVE DETAILS TO US

“Every project has a focus and a mission. As long as we’re mission focused, the federal government should give us the leeway to do it—not worry about the size of the manhole cover, or the easement—as long as things are fair.”

Thomas Hanafan, Mayor of Council Bluffs, Iowa

LOOK AT LIABILITIES

“You have to ask, ‘How is that infrastructure vulnerable?’ From weather, terrorist event, and other factors? Is there a vulnerability analysis put together when considering a plan? It’s not done universally.”

Paul Johnson, Director, Emergency Management Agency, Omaha

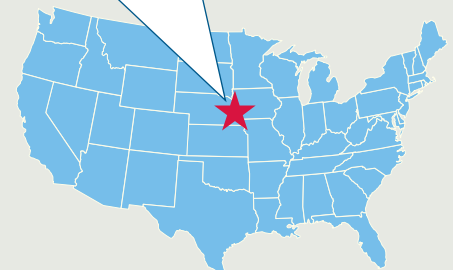
LOW-BID PARADOX

“Contractors know to get the low bid in, so they get the project. But, if we had a metric for quality, it would be different. Right now, we can see the low quality that some contractor delivers. We look at a trench and say, ‘Here’s another nasty project we’re going to have to spend 20 years doing maintenance on.’”

Mark Christiansen, Public Works Director, York, Nebraska

★ CASE STUDY | Clean Solutions for Omaha

OMAHA, NE | After decades of dumping untreated sewage into the Missouri River during combined sewer overflows, the City of Omaha was required by the U.S. Environmental Protection Agency to implement a major overhaul of the sewer and stormwater systems. The city implemented a \$1.66 billion program that will include some sewer separation, the construction of two new treatment plants, a stormwater conveyance sewer, and overflow storage tanks and a tunnel. The program, Clean Solutions for Omaha (CSO) seeks to improve the quality of life for Omahans by 2024 by providing a cleaner environment, job training and opportunities on the construction of projects.



★ roundtable PARTICIPANTS

Raleigh

Jonathan Barfield, COUNTY COMMISSIONER, NEW HANOVER COUNTY

William Bell, MAYOR, CITY OF DURHAM

John Carman, DIRECTOR, CITY OF RALEIGH, PUBLIC UTILITIES

Carl Dawson, PUBLIC WORKS DIRECTOR, CITY OF RALEIGH

Victoria Garland, SOLID WASTE SERVICES DIRECTOR, CITY OF CHARLOTTE

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