

FROM THE PAGES OF



# CountyNews

**Hot Topics**

## THE ROAD AHEAD FOR COUNTIES: Transportation Challenges and Opportunities

JULY 14, 2014



# Counties need federal partners to keep traffic moving, economies humming

**By CHARLES TAYLOR**  
SENIOR STAFF WRITER

With two clocks ticking to uncertain countdowns, counties — among other constituencies — are in full-court-press mode this summer, urging Congress to shore up the nation's transportation infrastructure funding.

The Highway Trust Fund could run out of money as soon as August, and the current transportation law, Moving Ahead for Progress in the 21st Century (MAP-21), is set to expire Sept. 30.

Instead of another short-term extension, counties want the certainty that a six-year bill would bring. The Obama Administration's top transportation official agrees.

"America needs a long-term, sustainable transportation bill," said U.S. Secretary of Transportation Anthony Foxx. "The problem is that Congress can't agree on how to fund the bill — and time is running out."

Rep. Bill Shuster (R-Pa.), chairman of the House Transportation and Infrastructure Committee, favors a funding patch to the trust fund and a short-term extension of MAP-21 — to give Congress more time to craft multi-year legislation. He sees both as "critical to getting states through the summer construction

season" without disrupting programs and projects underway.

This special *Hot Topics* report provides perspectives from the front lines, and interviews with top House and Administration officials: Shuster, Rep. Nick Rahall (D-W.Va.) and Foxx.

County elected officials and county engineers share their funding priorities and transportation innovations — and their options should MAP-21 expire and the Highway Trust Fund become insolvent. If the latter happens, it would mean the loss of nearly \$10.5 billion in the next year for urban areas alone — and a crippling blow to counties' ability to plan for future needs. Regardless, counties are already exploring innovative financing mechanisms — and that, they say, won't stop.

It's more than an elevator speech that counties are responsible for building and maintaining 45 percent of America's public roads and nearly 40 percent of bridges.

Counties are also involved in the operations of a third of the nation's transit systems and airports. In addition to moving goods and people, these modes of transportation are economic drivers; if funding needs go unmet, local economies will suffer the consequences.

Jim Healy, DuPage County, Ill. board member and chairman of NACo's Transportation Steering Committee (TSC), said: "Freight corridors will not be improved to handle the

**While counties struggle to maintain existing roads, bridges and transit systems, they are also finding innovative ways to get the most bang for their limited bucks.**

movement of goods and people across America. Congestion and commuting times will increase as roads and bridges fall into disrepair.

“It will take longer for our goods to reach our ports for export, for our manufacturers to receive the raw materials that they need, and for the products

to reach our final consumers,” he added. “And every delay in the transportation chain adds to the increase in the cost to the consumer.”

New NACo research, *Strong Economies, Resilient Counties: The Role of Counties in Economic Development*, drives home that point (Page 24). Using local case studies, it highlights the interdependency of transportation infrastructure and economic development activities.

### Counties Innovate to Do More with Less

While counties struggle to maintain existing roads, bridges and transit systems, they are also finding innovative ways to get the most bang for their limited bucks.

From bundling bridge projects with similar design characteristics to tolling highways to forming public-private partnerships to deliver transit systems, everything is on the table as counties work to keep the transportation engines that drive their economies running — even if on fumes.

So far, Healy and other county officials said, local communities have been willing to pick up the slack.

“We county commissioners and other local officials have turned to our residents and said give us additional sales taxes, give us additional funding .... They’ve granted those things.” But that might not be a bottomless well.

Peter McLaughlin, a Hennepin County, Minn. commissioner and vice chair of TSC, said this is true for transit as well as for highways and bridges. Voters in his county approved a 0.4 percent sales tax to help expand a light rail system serving Hennepin and neighboring Ramsey counties.

Far from urban DuPage and Hennepin counties, transportation funding is equally important to rural communities. Counties like Buchanan County, Iowa are thinking outside the “boxcar” to find solutions to some of their pressing bridge needs. County Engineer Brian Keierleber said they’re using surplus railroad flat cars as a foundation structure for low-volume bridges. (Page 21)

### Rural Communities Also Need Help

In rural America, road fatality rates are consistently twice the magnitude of urban rates, according to Lee Munnich, a senior fellow at the University of Minnesota’s Humphrey School of Public Affairs. He served as director of the national Center for Excellence in Rural Safety from 2006–2013.

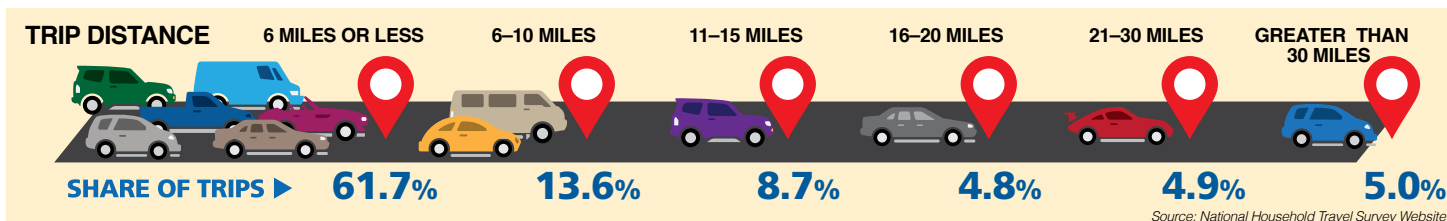
In an article on reducing rural fatalities, he recommends six proven legislation-based safety measures, including automated speed enforcement (using roadside technologies that combine radar and image capturing capabilities) and primary seatbelt law enforcement. (Page 14)

### NACo Presidential Initiative to Focus on Transportation, Infrastructure

As First Vice President Riki Hokama prepares to assume NACo’s presidency at the Annual Conference in Orleans Parish, La., he is making transportation and infrastructure the top priority of his term in office.

His “Transportation and Infrastructure Initiative” will focus on the role counties play in promoting investment to support economic competitiveness, improve passenger travel, foster innovative partnerships, ensure safety and enhance community quality of life (Page 4). ■

## Share of Vehicle Trips by Trip Distance (2009)



# Transportation decisions shape communities, influence nation's prosperity

By COUNCIL MEMBER RIKI HOKAMA

NACO FIRST VICE PRESIDENT  
MAUI COUNTY, HAWAII



Counties play an essential role in America's transportation and infrastructure networks. Investing more than \$100 billion each year in roads, bridges, transit, water systems and other public facilities, counties facilitate everything from Americans' daily commutes to the shipping of goods around the globe.

They are responsible for building and maintaining 45 percent of public roads and nearly 40 percent of bridges, and are involved in the operations of a third of the nation's transit systems and airports that connect residents, communities and businesses.

The decisions that county leaders make every day about transportation, land use and economic development influence local and national prosperity, shape how communities grow and contribute to Americans' quality of life.

This is why I have decided to focus my term as NACO president on strengthening the capacity of counties to make important transportation and infrastructure decisions.

The *Transportation and Infrastructure Initiative* will address the county role in promoting investments that support economic

competitiveness, improve passenger travel, foster creative partnerships, ensure safety and enhance community quality of life.

This initiative will focus on the fundamentals of today's county transportation and infrastructure needs as well as explore the future of America's infrastructure advancements, including broadband expansion and technology innovations.

I want to encourage my fellow county leaders to think about these topics in the coming months.

**First, an efficient, reliable and cost-effective transportation system will allow counties and regions to compete in the global marketplace.**

Counties play an important role in identifying and funding major investments critical to regional and national growth.

For example, Miami-Dade County worked with the City of Miami's Department of Transportation and several private firms to design, build, finance, operate and maintain the Port of Miami Tunnel.

This complex, multi-million dollar project opened in May to provide direct access from the seaport to Interstate highways and is projected to support increased port activity and future economic development, relieve the congested downtown of cargo truck traffic, accommodate population growth and improve quality of life in Miami-Dade County.

## The Transportation and Infrastructure Initiative

Within the *Transportation and Infrastructure Initiative*, NACO will convene public- and private-sector stakeholders, produce special reports, develop webinars and podcasts, facilitate peer learning and host symposiums, workshops and roundtable events.

Topics will address freight and the role of counties in the global supply chain; innovative financing techniques; tech innovation and new models of public-private travel options; quality of life and public health considerations; safety; broadband expansion and energy infrastructure. Check *County News* and NACO.org for updates!



## Second, decisions about transportation, economic development and land use influence where businesses and workers choose to locate.

Counties that tie infrastructure investments to complementary community goals will be well positioned to grow businesses, create quality jobs, retain and attract skilled workers and support families to build lasting communities for generations.

For example, Hennepin and Ramsey counties in Minnesota worked with local and regional partners to develop a new light rail line anchored by new mixed-use, high-amenity developments.

The METRO Green Line light rail opened in June 2014, connecting the central business districts of Minneapolis and St. Paul and the University of Minnesota.

Target Field Station in Hennepin County and Union Depot in Ramsey County, the two anchor points on the Green Line, not only offer multimodal transportation options, but also provide new retail and office space and community gathering spaces, hallmarked by high-quality design.

Both counties recognized that this new transit line opened the door to leverage new private investment and create dynamic urban spaces that will spark new growth downtown.

## Third, counties must innovate new ways to pay for transportation and infrastructure projects.

A combination of federal budget cuts, the effects of the economic recession on state government budgets and a fixed gas tax to finance state and federal highway development have all reduced the amount of transportation dollars available to counties.

As a result, counties are seeking new paths to address transportation-funding shortfalls and ways to best deliver infrastructure services to their communities.

For example, in 2013 Dauphin County became the first county in Pennsylvania and one of the first in the country, to create an infrastructure bank. This forward-thinking concept leverages the county's share of the state gas tax revenue to create a more significant pool of funding to solve local transportation issues.

Using a competitive application process, Dauphin County provides low-interest loans for transportation projects to the county's 40 municipalities, enabling municipalities to finance transportation improvements that serve the residents and promote economic development throughout the county.

I encourage each of you to consider what transportation and infrastructure opportunities exist in your region and how you can contribute new ideas and strategies to keep America moving.

NACo is committed to providing cutting-edge research, new tools and guidance on this subject.

We are building strong partnerships with federal agencies, corporate partners and national experts in the transportation and infrastructure field to be sure that counties are keyed into the most current information available.

But we can't do it without your involvement. I encourage you to get involved in this initiative, to offer your ideas and experiences, and help us share those lessons across NACo and with our federal and state partners.

I hope you will work with us on these issues in the coming months! And please don't hesitate to contact me with your ideas: [riki.hokama@mauicounty.us](mailto:riki.hokama@mauicounty.us). ■

## NACo guidelines for parade safety planning

Parades are a great way for communities all across the country to come together and celebrate holidays, festivals or special commemorations. Proper planning to ensure that these events are safe and fun for all is complex, requiring collaboration and communication between city and county staff, parade participants, transportation and rail officials, and emergency personnel.



Following a tragic accident in 2012 when a freight train crashed into a parade float, the National Transportation Safety Board recommended that NACo, the National League of Cities (NLC) and the International City/County Management Association (ICMA) provide recommendations to their members for how to put together a written safety plan that addresses risk mitigation, contingency planning and communication channels for all involved in the event.

In response to this recommendation, NACo, NLC and ICMA collaborated to publish *Top 12 Things to Include in Parade Safety Plans*. This guide will help counties, cities and local governments develop ordinances and regulations to ensure the safety of all involved in their events. It addresses a number of key elements to consider, including important local officials and emergency personnel contacts, route planning and parade vehicle and driver requirements. These guidelines are based on best practices currently used in parades and other events. It is available for download at [www.naco.org](http://www.naco.org).

# Counties set the trend in innovative transportation project financing

By JOHN HORSLEY

NACo PAST PRESIDENT (1986-87)

Innovative financing is being used in some of the fastest growing counties in America to build transportation projects that will provide badly needed traffic relief.

Projects in metropolitan areas like Dallas County, Texas; Mecklenburg County, N.C.; and Riverside County, Calif. are showing that tolling and public-private partnerships can make billions of dollars in new projects possible — years before they could be built with conventional funding.

Another exciting development attracting county interest is the practice of “bridge bundling” being pioneered in Missouri and Pennsylvania.

These states are showing that by bundling hundreds of bridge replacement projects in a single contract, millions of dollars can be saved. While innovative financing seems to favor urban counties, bridge bundling can be helpful to counties of any size.

## More Financing Options

For decades the two ways transportation projects had been funded were through tax revenues or municipal bonds.

Projects were designed, put out to bid and built by the winning contractor. Over this last decade, new options are expanding ways to finance projects.

Many agencies have turned to design-build contracts where a contractor handles both design and construction. This shifts more of the responsibility for the project to the private sector, gives them more room for innovation and often results in a project built faster and at lower cost.

Highway agencies are turning to tolls to finance major projects because large projects are difficult to fund through taxes. The most significant innovation has been the turn to public-private partnerships (P3s) where a contract is let to a single contractor to design, build, finance, operate and maintain a road or transit line, through concessions of 50 years or more. This technique has resulted in projects built sooner and

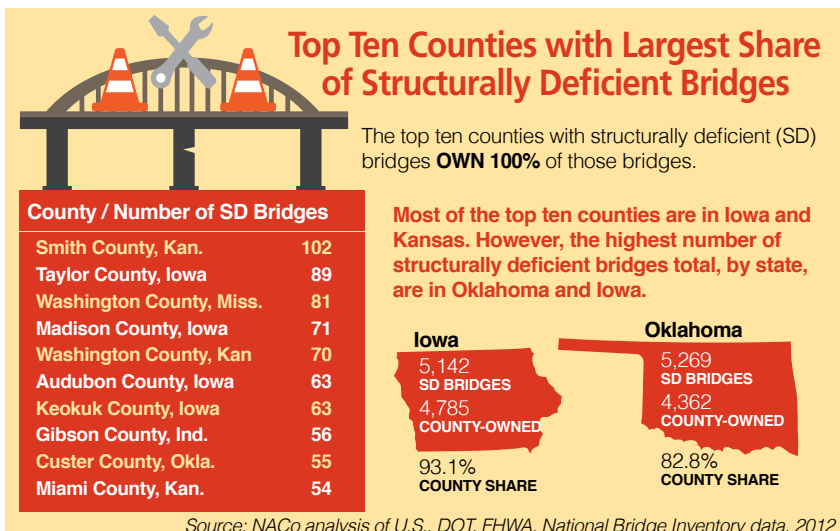
at lower cost, with the risk for outcomes shifted to the private sector.

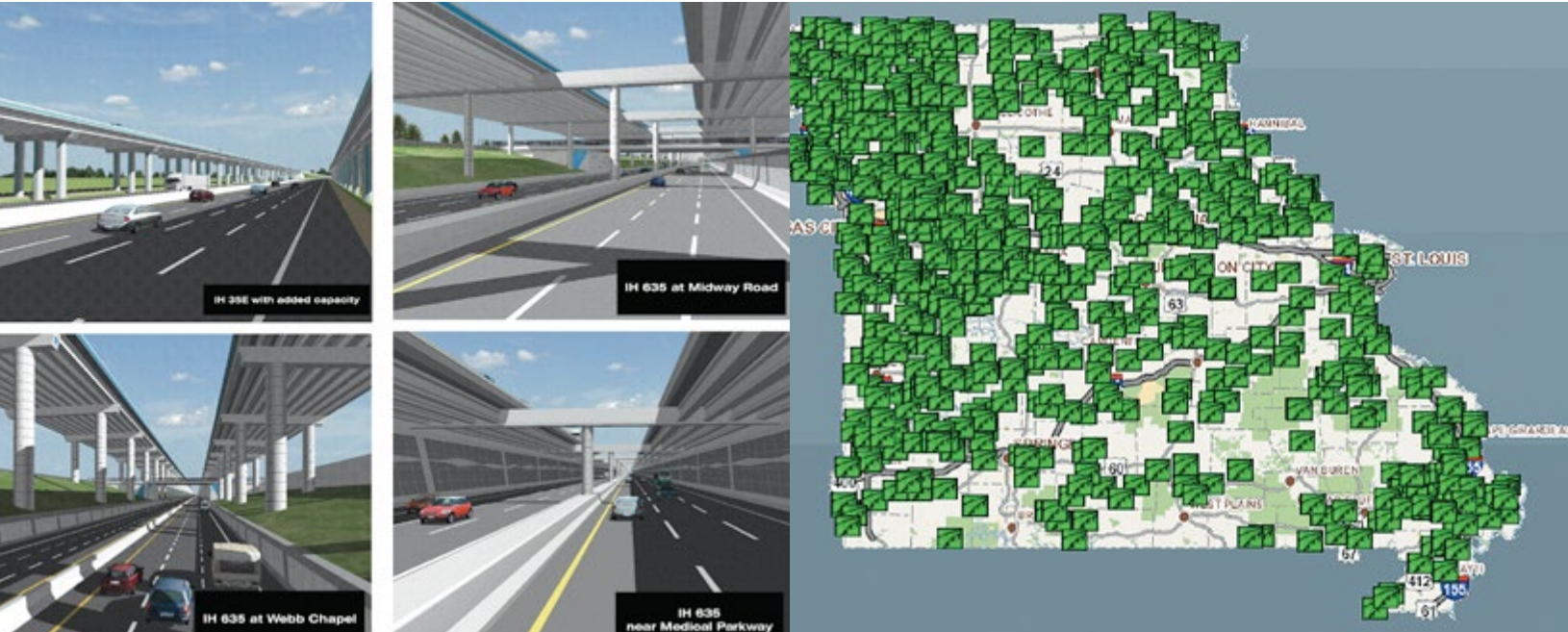
Finally, pension funds are now being invested in P3-managed projects because investing in transportation infrastructure has proven to be a safe investment with a good rate of return.

## Dallas County, Texas

As NACo past president and Tarrant County, Texas Judge Glen Whitley can attest, the Dallas/Tarrant County Metroplex, with a current population of 6.7 million, is the fastest growing region in the country, and Texas with a population of 26.5 million is the fastest growing state.

The 16 counties in that metro area know they





(Left) Renderings depict views of the LBJ Expressway in Dallas County, Texas. (Right) Bundled bridge projects affected every county in Missouri.

need substantial funding and innovation to build a transportation system that can keep up with traffic. Remarkably, they have found ways to produce both.

There are several major freeway expansions built recently around Dallas paid for by tolls and built through P3s, including the \$2.5 billion North Tarrant Expressway, which is being completed ahead of schedule. The one project that has saved taxpayers in Texas the most was the 16.5-mile LBJ Expressway built by Cintra, U.S. Its bid came in \$1.3 billion lower than its closest competitor.

There are three innovations Cintra brought to this project that gave Texans such a good deal.

Rather than building a tunnel to add the extra capacity called for by TXDOT as their competitors proposed, Cintra designed a cut and cover project, which reduced excavation costs and cantilevered the old lanes over new ones.

They improved connecting interchanges with other nearby highways to make it convenient for more drivers to use the LBJ express lanes, which increased revenues. And they relied on substantial long-term equity funding, which lowered their cost of financing.

### Mecklenburg County, N.C.

Mecklenburg County, where Charlotte is located, is the largest county in North Carolina. Since 1990 its population has nearly doubled to one million.

Two of North Carolina's metropolitan areas, including Charlotte, are among the 10 fastest growing in the country. So we are looking at a state with a lot more people and a lot more traffic.

Several years ago the North Carolina DOT (NCDOT) concluded that the only way it could add the needed highway capacity was through toll roads.

In April 2014, NCDOT launched its first toll road built through a P3 on Interstate 77, one of the most congested

roadways in the state. Like Texas they chose a team led by Cintra to design, build, finance, operate and maintain the project for \$655 million.

The concession period is for 50 years from the date the new highway opens to traffic. The project includes road widening along 26 miles of I-77 in the metropolitan area north of Charlotte. To improve traffic, the existing highway will be rebuilt and capacity will be increased by creating managed lanes.

Since the tolls will be electronic, vehicles will not need to stop for tollbooths. Drivers will have the choice to pay for the faster speeds guaranteed in the managed lanes, or go more slowly in the free lanes.

### Tolling Revenues and Public-private Partnerships to Triple in Next Decade?

As reported in the March, 2014 issue of *Public Works Financing (PWF)*, toll collections in the U.S. could increase from \$10 billion today to \$30 billion over the next 10 to 15 years.

In its February issue, *PWF* reported that the law firm of Nossaman, LLP, which represents many states and local governments doing P3 deals, sees an annual deal flow of up to \$30 billion for P3s in the next few years.

Other industry leaders were less bullish, but overall they agreed that the dollar volume of deals produced through P3s is growing.

While partisan gridlock continues to block sustained funding for highways and transit by the federal government, at the state level progress is being made to increase transportation funding.

In 2013 and 2014 gas taxes were increased by 10 cents in Wyoming and 4 cents in New Hampshire. Pennsylvania increased its transportation funding by \$2.4 billion annually, Virginia by \$1.4 billion and Maryland by \$800 million.

# California interstate highway improvements funded by local taxes

Other states are also finding ways to increase transportation revenues. But for the scale of the mega projects many states need to build, which cost \$500 million to \$1 billion and up, funding them through annual tax revenues is just not feasible. That's why many states are turning to tolling and P3s.

One thing Congress did in 2012 to provide help for such projects was to increase its TIFIA Loan Funding from \$120 million a year to \$1 billion. Over the next several years this will make nearly \$40 billion in low interest TIFIA loans available.

## Riverside County and Orange County, Calif.

Southeast of Los Angeles are two major counties: Riverside County with a population of 2.2 million and Orange County with a population of 3.1 million. With growth in these counties expected to continue, finding solutions to regional traffic problems requires that the counties work together. Nearly 280,000 vehicles daily travel State Route (SR) 91, which connects traffic east and west between Riverside, Orange and Los Angeles counties. By 2035, that number is expected to grow to 420,000.

The Orange County Transportation Authority (OCTA), Caltrans and the City of Corona are partnering with the Riverside County Transportation Authority (RCTA) to expand

choices along SR 91. Their project will add regular lanes, tolled lanes and auxiliary lanes in the eight miles between the Orange-Riverside County line and Interstate 15. The project will also improve interchanges, bridges, ramps and surface streets. RCTA entered into a design-build contract with a contractor team of Atkinson and Walsh to build the project at a savings of \$130 million.

The overall project cost of \$1.3 billion will be paid through a combination of county sales taxes and tolls. In the urban areas of California, the funding provided for major highway and transit projects, even on state-owned Interstate highways, is being provided by half-cent sales taxes approved by county voters.

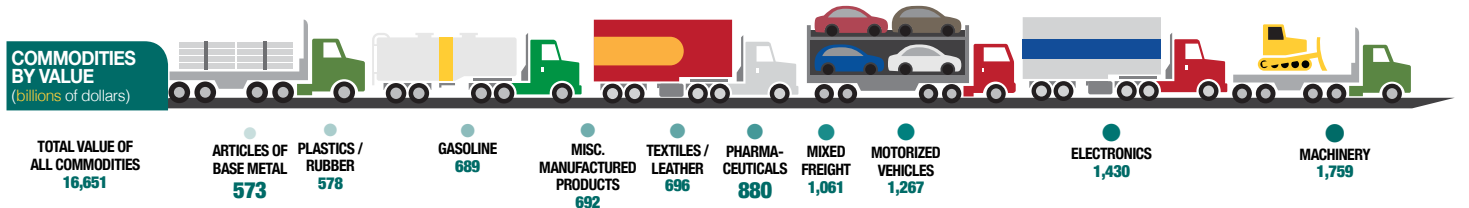
A \$421 million TIFIA loan for this project was received from the U.S. Department of Transportation to help reduce project-borrowing costs. RCTA has contracted with the firm of Cofiroute, USA to operate the tolled lanes once the improvements are completed in 2017.

## Bridge Bundling

Missouri launched its Safe and Sound Bridge Improvement Program in September 2008. By mid-2012, 802 bridges had been replaced or rebuilt. As a result, Missourians in every

## Top Freight Commodities moved in 2007 (BY VALUE AND WEIGHT)<sup>1</sup>

The **TOP 10 COMMODITIES** by value account for **58%** of total value but only **18%** of the tonnage of goods moved.



The **TOP 10 COMMODITIES** by weight account for **65%** of total tonnage but only **16%** of the value of goods moved.



Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 3.2, 2011.



county of the state are driving across new and improved bridges that will serve their needs for years to come.

The \$685 million project had two parts: 248 bridge rehabilitation projects to be done in multiple contracts and 554 bridge replacements, all to be accomplished through a single design build contract.

A joint venture partnership of Kiewit Western, Traylor Brothers and United Contractors won that contract with a commitment to finish the project by Dec. 31, 2013. They beat that goal by 13 months.

Pennsylvania is putting the final touches on a Request for Proposals (RFP) for a bridge bundling contract to replace 560 bridges over three years. PennDOT hopes to issue an RFP this fall, select a contractor and have work under way in 2015.

In 2013, Pennsylvania county bridges were included together with state bridges in a series of demonstration projects built to perfect their strategy. Pennsylvania's program concept is to contract with a P3 who will be responsible for financing the project. During the construction phase the contractor will receive milestone payments as projects are completed.

During the 30 years that the contractor is to maintain the bridges, compensation will be provided through availability payments, which is a form of reimbursement similar to the payment of rents. At the end of the 30 years, the bridges are to be returned to the state in a state of good repair pre-specified in the contract.

The Pennsylvania bridge bundling program is expected to achieve substantial savings through economies of scale.

Of the 560 bridges to be replaced, many will be able to be clustered with other bridges of like dimensions: 20 or more of 50-foot long bridges, another 20 of 75 foot bridges, another 20 of 100 foot bridges and so on. A single design would be used for all of the bridges in a cluster. Components would be prefabricated and trucked to the site of the bridge's replacement.

PennDOT plans to focus the program on bridges on relatively low volume roads which can be replaced over the summer, so no detours will be required for school buses. ■

# ACRONYM Decoder

When the history of this era is written there will need to be much Cloud capacity devoted to de-scrambling acronyms. Here's a start on the process with acronyms in common use among surface transportation planning and policy practitioners (so you can understand them, too.)

<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>APTA</b>	American Public Transportation Association
<b>ASCE</b>	American Society of Civil Engineers
<b>BRT</b>	Bus Rapid Transit
<b>CA</b>	Contract Authority
<b>CBO</b>	Congressional Budget Office
<b>CE</b>	Categorical Exclusion
<b>CMAQ</b>	Congestion Mitigation and Air Quality
<b>COG</b>	Council of Governments
<b>DBE</b>	Disadvantaged Business Enterprise
<b>FHWA</b>	Federal Highway Administration
<b>FTA</b>	Federal Transit Administration
<b>HBRR</b>	Highway Bridge Rehab and Replacement
<b>HTF</b>	Highway Trust Fund
<b>HPMS</b>	Highway Performance Monitoring System
<b>HSIP</b>	Highway Safety Improvement Program
<b>ITS</b>	Intelligent Transportation System
<b>LRT</b>	Light Rail Transit
<b>L RTP</b>	Long-range Transportation Plan
<b>LTAP</b>	Local Technical Assistance Program
<b>MAP-21</b>	Moving Ahead for Progress in the 21st Century
<b>MPO</b>	Metropolitan Planning Organization
<b>NBI</b>	National Bridge Inventory
<b>NBIS</b>	National Bridge Inspection Standards
<b>NEPA</b>	National Environmental Policy Act
<b>NHPP</b>	National Highway Performance Program
<b>NHTSA</b>	National Highway Traffic Safety Administration
<b>NHS</b>	National Highway System
<b>NPRM</b>	Notice of Proposed Rule Making
<b>NTSB</b>	National Transportation Safety Board
<b>OST</b>	Office of the Secretary of Transportation
<b>PPP, P3</b>	Public-Private Partnerships
<b>RFP</b>	Request for Proposal
<b>RFQ</b>	Request for Qualifications
<b>RIP</b>	Regional Improvement Plan
<b>SIP</b>	State Infrastructure Bank
<b>STIP</b>	State(wide) Transportation Improvement Plan/Program
<b>STP</b>	Surface Transportation Program
<b>TAP</b>	Transportation Alternatives Program
<b>TCM</b>	Transportation Control Measures
<b>TIFIA</b>	Transportation Infrastructure Finance and Innovation Act
<b>TIGER</b>	Transportation Investment Generating Economic Recovery
<b>TIP</b>	Transportation Improvement Program
<b>TMA</b>	Transportation Management Area
<b>TOD</b>	Transit Oriented Development
<b>VMT</b>	Vehicle Miles Travelled

# MAP-21 Reauthorization

## WHAT COUNTIES NEED TO KNOW

The current federal surface transportation law, Moving Ahead for Progress in the 21st Century Act (MAP-21), was signed into law in the summer of 2012 and is set to expire Sept. 30. MAP-21 made several changes to federal highway and transit programs that were positive for counties, such as reforms to reduce costs and expedite project delivery.

However, MAP-21 also made changes to the federal surface transportation programs that reduced the amount of funding available for the infrastructure owned by counties and their local government partners.

In anticipation of the expiration of MAP-21, the Obama Administration provided its blueprint for the bill's reauthorization called the Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America Act (GROW AMERICA) in April.

Shortly thereafter, the Senate Environment and Public Works Committee introduced and marked up the MAP-21 Reauthorization Act (S.2322), which would reauthorize the federal highway programs contained in MAP-21.

For the past several months, NACo has been advocating to have county priorities addressed in the legislation that will succeed MAP-21. Several of these priorities have been addressed in the bills offered by the Administration and the Senate Environment and Public Works Committee. The chart below compares the two pieces of legislation and how they address NACo's key transportation priorities.

Since the Senate EPW bill only authorizes the highway programs, the chart excludes NACo's priorities related to federal transit and rail programs.

NACo Priority	MAP-21 (Current Law)	Grow America Act (Administration)	MAP-21 Reauthorization Act (Senate)
<b>"Provide long-term funding certainty"</b>	<ul style="list-style-type: none"> <li>Two-year bill (expires September 30, 2014) providing \$105 billion total for surface highway and transit programs.</li> </ul>	<ul style="list-style-type: none"> <li>Four-year bill that would provide increased funding for federal surface transportation programs, including a 22 percent increase for highway and road safety programs.</li> </ul>	<ul style="list-style-type: none"> <li>Six-year bill that would provide level funding plus inflation for federal highway programs, which would equal a 7.5 percent increase from MAP-21 levels.</li> </ul>
<b>"Increase funding for county road and bridge projects"</b>	<ul style="list-style-type: none"> <li>MAP-21 decreased the funding available for locally owned highways and bridges by 30 percent.</li> </ul>	<ul style="list-style-type: none"> <li>Would provide increased funding for "Higher Performing Metropolitan Planning Organizations (MPOs)" in areas with a population of 200,000 and above.</li> <li>Would provide funding for two discretionary programs, including \$1.25 billion for a TIGER-like program and \$1 billion for a program called the Fixing and Accelerating Surface Transportation (FAST) program.</li> </ul>	<ul style="list-style-type: none"> <li>Would increase the sub-allocation of Transportation Alternatives funding to local areas from 50 percent to 66.67 percent.</li> <li>Would make additional funding available for locally owned bridges by giving states the ability to spend more of their funds on non-interstate bridges that are "on-system."</li> <li>Would provide \$400 million annually for the Projects of National or Regional Significance Program — a discretionary program similar to the TIGER program.</li> <li>Would establish a new formula-based National Freight Program, which would support projects that strengthen the nation's movement of freight, including investments on locally owned infrastructure (rural and urban) that play a key role in the nation's domestic energy and agriculture production, and overall movement of freight.</li> </ul>
<b>"Build on reforms from MAP-21 that strive to expedite project delivery"</b>	<ul style="list-style-type: none"> <li>MAP-21 made significant reforms aimed at reducing regulatory burdens and expediting project delivery, which included establishing a categorical exclusion for projects receiving limited federal funding or having a low total project cost.</li> </ul>	<ul style="list-style-type: none"> <li>Would establish an Infrastructure Permitting Improvement Center housed at DOT for the purpose of reducing project delivery time.</li> <li>Directs USDOT to establish a process for concurrent reviews during the National Environmental Policy Act (NEPA) process.</li> <li>Expands applicability of the multimodal categorical exclusion established under MAP-21.</li> </ul>	<ul style="list-style-type: none"> <li>Builds on the critical categorical exclusion for projects of limited federal assistance by indexing the amount (\$5 million or less) to the National Highway Construction Cost Index.</li> <li>Expands applicability of the multimodal categorical exclusion established under MAP-21.</li> <li>Would encourage USDOT to provide regulatory relief and flexibility for certain rural road and bridge projects.</li> </ul>
<b>"Make safety a priority on all roads and bridges"</b>	<ul style="list-style-type: none"> <li>MAP-21 eliminated the mandatory set-aside for High Risk Rural Roads (HRRR) and replaced it with a special rule that only requires states to make safety improvements on HRRRs if the fatality rate on those roads increases over a two-year period.</li> <li>MAP-21 also requires states to maintain minimum thresholds for bridges that are a part of the designated National Highway System (NHS) which are typically state-owned bridges but did not address conditions on non-NHS bridges, which include most county-owned bridges.</li> </ul>	<ul style="list-style-type: none"> <li>Would establish a Critical Immediate Investments Program to target critical investments, including investments on non-state owned roads.</li> </ul>	<ul style="list-style-type: none"> <li>Would make changes to the special rule for High Risk Rural Roads by targeting states with the highest rural road fatality rates and focusing on the need to "decrease" rural road fatality rates rather than "not increase."</li> </ul>
<b>"Support innovative funding and financing methods"</b>	<ul style="list-style-type: none"> <li>MAP-21 substantially increased the amount available for the Transportation Infrastructure Finance and Innovations Act (TIFIA) program and provided up to a 100 percent federal share on projects incorporating innovative delivery methods.</li> </ul>	<ul style="list-style-type: none"> <li>Would make changes to the TIFIA program aimed at getting more TIFIA assistance to rural and small communities.</li> </ul>	<ul style="list-style-type: none"> <li>Would support the bundling of bridge projects, by offering states and local governments the flexibility to use federal dollars to bundle projects and allowing for an increased federal share (up to 100 percent) for bundled bridge projects.</li> <li>Would make changes to the TIFIA program, including efforts to better support rural infrastructure projects and allow credit assistance for the capitalization, or deposit into, state infrastructure banks.</li> </ul>

# NACo asks: What is counties' role in facing transportation challenges?

REP. BILL SHUSTER (R-PA.) • REP. NICK RAHALL (D-W.VA.) • SEC. ANTHONY FOXX

## REP. BILL SHUSTER (R-PA.)

CHAIRMAN, HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE



Rep. Bill Shuster (R-Pa.)

### Q: What are the greatest transportation challenges facing the nation?

Our greatest challenge is ensuring that we can build and maintain a safe, efficient transportation system that allows the U.S. to remain competitive in an increasingly global marketplace.

The condition of our transportation infrastructure directly impacts the flow of commerce

amongst the states and to other nations.

Congestion, bottlenecks and insufficient capacity increase the cost of doing business and moving materials and products. If other countries can provide better transportation than we can, that gives those nations a competitive advantage over the U.S., resulting in fewer jobs and higher prices, domestically.

At the federal, state, and local level, we must invest our resources in the most fiscally-responsible manner in order to strengthen our highway, transit, rail, aviation, and waterborne transportation networks.

### Q: How do you propose addressing these challenges?

Congress successfully passed the Water Resources Reform and Development Act, which was signed into law on June 10. The Transportation and Infrastructure Committee developed this legislation with input from many stakeholders, and the committee worked in a bipartisan manner to build consensus around this important legislation.

This measure will improve our water resources infrastructure and has provided the committee with a model for our other legislative priorities.

We are working on a surface transportation reauthorization bill that continues to streamline the project delivery process, cut red tape, reduce regulatory burdens, provide greater flexibility for states and local partners, enhance the movement of freight, and promote innovation.

While this bill remains a top priority, we also recognize there is an immediate need to address a looming shortfall in the Highway Trust Fund and to extend federal surface transportation programs. Passing an extension and Trust Fund patch will be critical to getting states through the summer construction season without shutting down programs, projects, and progress and it will give Congress time to complete a long-term bill.

Other legislative priorities for the committee include a bill that reforms and improves passenger rail programs and a bill that reauthorizes the Federal Aviation Administration and lays the groundwork for the future of our aviation system.

### Q: How can counties help support your efforts?

Counties can continue to make the case to members of Congress and the American people that transportation is important to our quality of life. It's about how we get to work, get our children to school, get to the store to buy food and clothing, and how we visit our families and friends. It's also about doing business efficiently and providing an avenue for economic growth.

Because much of the federal surface transportation programs are implemented at the county level, the committee would benefit from the perspectives and experiences counties have with these programs.

Counties should recommend policies for the committee to consider as we continue to work on the surface transportation reauthorization bill.

## REP. NICK RAHALL (D-W.VA.)

RANKING MEMBER OF HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE



Rep. Nick Rahall (D-W.Va.)

### Q: What are the greatest transportation challenges facing the nation?

The solvency of the Highway Trust Fund (HTF) is our biggest challenge — in both the short term and the long run. First, we need to ensure that the HTF doesn't go belly up later this summer — something that would severely impact your members and cause significant ripple effects throughout our nation's economy.

In the long term, we need to fully reauthorize our nation's surface transportation programs, which are so critical to the economic growth and international competitiveness of our nation. In reauthorizing these programs, we must identify a sustainable long-term revenue source to support increased levels of investment.

I'm concerned with the current discussions, which seem to limit the next bill to "baseline" investment levels. All that would do is lock in the status quo for six more years.

While this is better than doing nothing, I think we can and should do better.

We need to be investing well above the current insufficient levels. We must go above baseline or our nation is going to be stuck treading water. A nation just trying to stay afloat isn't going to be in a position to compete in the global economy against other countries that are rapidly increasing their infrastructure investment.

I believe that we must think bigger to truly get America back on the road to prosperity. We can continue to lead the worldwide economy and win the future, but we must be willing to at least invest as much in our transportation network as our competitors are investing in their own futures.

### Q: How do you propose addressing these challenges?

Congress is currently working to pass a solution to the immediate problem of the HTF's ability to reimburse states. The United States Department of Transportation estimates that it will run short on funding in August, and I'm confident Congress will address it before any shortfall occurs.

Chairman Shuster and I have said that in both the short and long term that we need to look at all options

to address our surface transportation investment needs.

The user-financed model has been critical to the success of these programs and it's something we shouldn't walk away from. But we are currently operating in a challenging legislative environment that requires us to think outside the box to come up with innovative solutions to our funding challenges.

While our committee is leading the charge on these issues, the House Ways and Means Committee has jurisdiction over the funding mechanism used to address the challenges we face.

Chairman Shuster and I will be working closely with our colleagues on that committee and our respective leadership to ensure that we come up with a robust bill, not one that simply locks in the status quo.

### Q: How can counties help support your efforts?

As the owners of major aspects of the nation's federal-aid surface transportation network, counties can and must play a critical role in communicating the importance of transportation investment with your members of Congress.

Members need to understand the important role counties play in maintaining and operating a safe intermodal transportation network. They also need to understand how important sustained, long-term surface transportation infrastructure investments are to your communities.

You can also play an important role in communicating with your residents on the importance of these issues — the more Congress hears from the people they represent, the more willing they will be to do what's necessary to truly build a modern, 21st century transportation network.

## ANTHONY FOXX

SECRETARY OF TRANSPORTATION



Sec. Anthony Foxx

### Q: What are the greatest transportation challenges facing the nation?

America is hungry for transportation investment. In my meetings with members of Congress and in my travels across the country, everyone I've spoken with agrees that we need to invest in transportation. I have been encouraged to hear both Republicans and Democrats speak about

the need for transportation investment.

America needs a long-term, sustainable transportation bill. The problem is that Congress can't agree on how to fund the

bill — and time is running out. This is particularly true at the local level, when people see transportation investment less as an abstract policy and more as the physical bus line, bridge or commuter rail that will actually help their neighbors get where they need to go.

As the former mayor of Charlotte, I've seen firsthand how infrastructure projects can be a catalyst for good jobs and economic development. There's a lot of room for agreement when you start there, and I hope that keeping that in mind will help everyone as we tackle the larger questions in Washington.

The Obama Administration has made unprecedented investments in our national infrastructure — improving safety and putting people to work on our roads, bridges, runways and railways. We know the American people want transportation choices. President Obama knows — and I know — the work we do today will help shape our national transportation systems for the 21st century and beyond. We must build this country's infrastructure to meet the needs of the next generation of Americans.

### Q: How do you propose addressing these challenges?

The biggest challenge, of course, is determining how to pay for transportation investment. We have put forward the GROW AMERICA Act that would create millions of jobs and lay the foundation for long-term competitiveness, all without adding to the deficit. The \$302 billion, four-year surface transportation reauthorization proposal would replenish the Highway Trust Fund through pro-growth business tax reform. Americans deserve a multi-year bill that provides the certainty that businesses and communities deserve, creates jobs, and lays the foundation for lasting economic growth.

We're also preparing for a potential shortfall in the Highway Trust Fund and have posted the Highway Trust Fund Ticker online at [www.dot.gov/highway-trust-fund-ticker](http://www.dot.gov/highway-trust-fund-ticker), which is updated every month, so the American people have the same information that we give Congress.

If a shortfall does occur, the department is ready to manage the situation, but there's no good option here. If the Trust Fund becomes insolvent, it will have a devastating impact on our nation's transportation — not only on current projects that may be delayed or cancelled, but on critical, long-term projects that may never get started in the first place.

As we prepare for a potential shortfall, we are continuing to work with members of Congress and third-party stakeholders to do everything possible to keep the fund solvent.

### Q: How can counties help support your efforts?

As a mayor, I experienced first-hand the successes but also the challenges and frustrations that go along with obtaining and coordinating federal funding of local transportation priorities. When it comes to our transportation crisis — and it is a crisis — folks at the local level are the canaries in the coal mine.

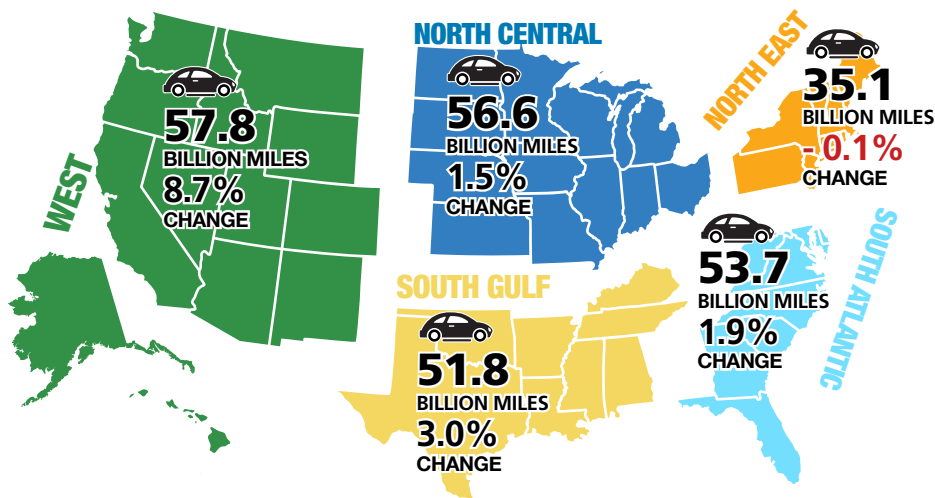
Our transportation infrastructure is too essential to suffer continued neglect, and I hope that Congress will work tirelessly to avert this crisis before it is too late. There is still time for Congress to act.

I urge everyone to stand with me in calling on Congress to ensure the solvency of the trust fund while committing themselves to a sound, bipartisan, and long-term solution that will ensure the stability of our surface transportation funding for our nation for the next several years. ■

## Vehicle Miles Travelled in April 2014

(ESTIMATED IN BILLIONS

• PERCENT CHANGE  
COMPARED TO APRIL 2013)



Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information



A crash in Dunn County, Wis. June 19 claimed one victim.

# Closing the Gap in Rural and Urban Road Deaths

By **LEE MUNNICH**  
UNIVERSITY OF MINNESOTA



Despite the decline in overall motor vehicle fatalities in the U.S., the difference between urban and rural fatality rates has stayed relatively consistent.

There are four main causes of rural crashes based on an analysis of 1994 to 2011 data from the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS)—driver behavior, roadway environment, vehicle design and emergency services.

In all cases, rural road fatality rates are consistently twice the magnitude of urban rates. The fatality rate in 2011 for rural areas is still higher than the overall fatality rate in 1994.

Driver behavior, which includes alcohol-impaired driving, no restraint or protective use (e.g. helmets, seat belts), speeding and teen driving, remains the leading contributor to the frequency and severity of motor vehicle crashes.

Addressing driver behavior is complex because it involves fundamentally changing a driver's attitude, which is further

complicated due to cultural differences between urban and rural areas, the apparent unpopularity or effectiveness of policies and a perceived infringement of rights.

Therefore, ways to reduce fatalities — given different driver behaviors — are varied, and effective change often depends on innovative integration of several different strategies (education, enforcement and engineering).

## Roadway Environment

Roadway environment includes the width and number of lanes, lighting and other engineering factors that may affect driving, and in comparison to policies influencing behavior factors, represents a less controversial measure to reduce rural fatalities. Effective strategies include cable median barriers, rumble strips and dynamic warning systems.

However, despite the availability of proven countermeasures, the main challenge to the rural environment remains the sheer number of roadways and the substantial cost required to outfit the rural network.

Large portions of the rural road network fall under the jurisdiction of counties, townships, and municipalities, which lack the funding and resources necessary to make significant

safety improvements. In addition, rural fatalities rates remain the highest on local and collector roads, which prior to 2005 received limited federal funding aid.

Passage of a high-risk rural road provision in SAFETEA-LU and extended to MAP-21 now allows federal funding to be allocated to collectors and local roads with “significant safety risks.”

### Vehicle Design

Vehicle design plays a significant role in rural vehicle crashes. The rural roadway environment coupled with characteristics associated with rural driving (e.g. speeding) increases the likelihood of rollover occurrences.

The odds of a rollover in a fatal rural crash are more than three times greater than in urban fatal crashes. The rural vehicle rollover fatality rate was over five times greater than the urban rollover fatality rate in 2011 according to FARS data.

Improvements in vehicle design, especially in technologies such as electronic stability control, have benefits to both urban and rural scenarios and can result in a higher survival probability after the crash.

### Emergency Medical Service

Emergency medical service (EMS) is an integral component in reducing motor vehicle deaths.

Rural areas are characterized by fewer health care and trauma facilities combined with increased severity in motor vehicle crashes.

In the analysis of FARS data, a higher rural fatality rate is observed for crash victims who died on the scene than in urban areas, displaying the fact that rural road crashes

are oftentimes more severe.

In addition, the rate of occupants who died on route to a primary care facility is at least twice the rate in rural areas than in urban areas, possibly due to the increased travel time and limited access to EMS in rural areas.

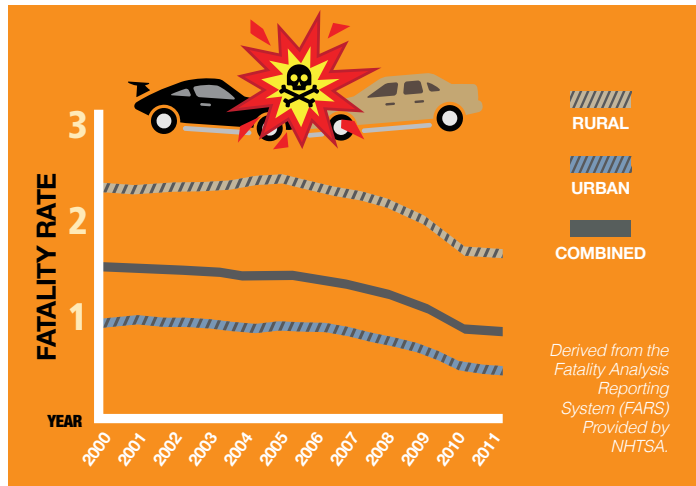
Extensive research has shown the relationship between increased mortality and the additional time required

to initiate emergency care. Improvements to rural EMS communication, operations and transport are needed to reduce motor vehicle fatalities.

**However, despite the availability of proven countermeasures, the main challenge to the rural environment remains the sheer number of roadways and the substantial cost required to outfit the rural network.**

## Traffic Accident Fatality Rate

(PER 100 MILLION VEHICLE MILES TRAVELLED • 2000–2011)



### Six Ways to Decrease Rural Fatalities

Despite inherent differences between states (e.g. size of rural road network), there are several strategies that are proven to decrease rural fatalities.

Strategies include the adoption of six proven legislation-based safety improvement measures: 1) primary seatbelt law enforcement; 2) regular application of sobriety checkpoints; 3) universal motorcycle helmet laws; 4) graduated license requirements for teenage drivers; 5) automated speed enforcement; and 6) breathalyzer-ignition interlocks for those convicted of drunk driving.

Extensive research has been conducted on the effectiveness and viability of these six safety improvement measures in reducing rural fatalities.

A national survey also indicated high-levels of public support for these policies despite common misperceptions of the “controversial” or “unpopular” nature of the policies.

Future efforts to reduce traffic fatalities should focus on reducing the rural-urban fatality gap. Closing the disparity will require strategies that include adopting proven legislation-based safety improvement measures; state leadership and allocation of resources to the local level; local level interest and involvement; innovative integration of all four E’s (engineering, enforcement, education, emergency response) of traffic safety; and collaborative inter-agency and public-private participation.

*(Lee Munnich is a senior fellow at the Humphrey School of Public Affairs at the University of Minnesota. He served as the director of the national Center for Excellence in Rural Safety from 2006 to 2013. He can be reached at [munni001@umn.edu](mailto:munni001@umn.edu))* ■

# Counties build, explore new mass transit options in uncertain times

By CHARLES TAYLOR  
SENIOR STAFF WRITER

When you hear the words mass transit, what comes to mind? Those big-city buses that bend at the middle? San Francisco's BART subways? Or maybe the Long Island Railroad's trains hustling suburban commuters into New York City?

Transit is those giant systems and — well, less.

There's the JAUNT bus system that operates in six of Virginia's rural Piedmont-region counties.

Riders in Pitkin and Eagle counties in Colorado can take rapid-transit VelociRFTA buses whose name brings to mind something out of Jurassic Park.

Kitsap County, Wash. has its pedestrian-only ferries that ply the waters that feed Puget Sound.

Counties are involved in 27 percent of the nation's public transit systems. In addition to local support and fare box collections, these systems' survival depends on state and federal monies, and private sector investment and partnerships.

In 2013 Americans took 10.7 billion trips on public trans-

portation, according to the American Public Transportation Association — the highest annual ridership number in 57 years. Contrarians say that's not a true national indicator, arguing that the lion's share of growth has been in "legacy transit cities" such as New York, Boston and Chicago.

Whether this is a new "golden age" for transit — ridership-wise — projects appear to be on the upswing. "We're in a renaissance of public transit in this country," said Peter McLaughlin, a Hennepin County, Minn. commissioner and a vice chair of NACo's Transportation Steering Committee. "There is investment going on across the country and a great demand for new transit investment dealing with the aging infrastructure...."

A new Green Line light rail link between Minneapolis and St. Paul began operating in June 2014 in Hennepin and Ramsey counties and is already spurring transit-oriented development along the route, county official say.

The many modes that comprise public transit include bus, para-transit, light rail including trolleys, commuter rail, subways, ferries and water taxis, and intercity and high-speed passenger rail. Some have fixed routes; others are demand-response

(Left) End to end, riders of the new Green Line light rail link between Hennepin and Ramsey counties can travel from Target Field in Minneapolis to a newly restored Union Depot in St. Paul.

(Right) A pedestrian ferry captain navigates the route between Kitsap County, Wash. and downtown Seattle during a pilot to test a new type of vessel that causes less wake damage to the shoreline.





systems, providing door-to-door service, dispatched on a per need basis to take passengers to medical appointments and social services, as well as to jobs.

For county transit operators, persistence, innovation and, perhaps, a little luck are enabling them to modernize existing modes and pioneer new ones.

### JAUNT-ing through the Piedmont

Donna Shaughnessey has been with JAUNT for more than 30 years. During that time, the system has grown from 12 vehicles to 82. It's owned by Albemarle, Fluvanna, Louisa and Nelson counties, and the city of Charlottesville, and also serves Buckingham and parts of other neighboring counties. A demand-response system, it has set schedules but not set routes.

**“Money is the number one challenge ... We see a huge need, but there's just not enough money to make it happen.”**

“We go to some pretty remote areas and some challenging roads. We carry a fair number of people who are pretty frail, so they need a lot of care,” she said. “Now we're carrying about 330,000 trips per year, which is a lot for us, especially since most of it is demand-response

and therefore crazy-complicated and just labor intensive. Every day, we have to reinvent what we're doing and figure out who's picking up whom.”

The system has an annual operating budget of about \$6 million and uses vehicles that carry 16 to 28 passengers, “a good 50 percent” of whom have some type of disability. About 25 percent of its budget is from federal sources, 16 percent from the state, 42 percent from the participating jurisdictions. Fares and agencies each account for 9 percent.

Money is the number one challenge, said Shaughnessey, JAUNT's executive director. “We see a huge need, but there's just not enough money to make it happen.”

Willie L. Gentry Jr., a Louisa County supervisor who serves on the JAUNT board, said, “It's really the only transit we have. We have a lot of people out in the county, and as they get older, they don't have any way to get around.”

### Artsy and Rural

Pitkin County (pop. 17,100) is considered rural. “We're on the Western Slope of Colorado, but we are an internationally known resort with the Aspen and Snowmass area, so we've got visitors from around the world,” Pitkin County Commissioner George Newman said. In that regard, public transit meets two needs — transporting tourists and moving the employees who work at the region's attractions.

Despite its rural character, the area has pioneered what the White House has touted as the nation's first rural bus rapid transit (BRT) system. BRT buses can travel in priority lanes, avoiding traffic congestion. Passengers pay their fares and board at stations, similar to light- and heavy-rail systems. Service is frequent and operates on a schedule.

The Roaring Fork Transportation Authority (RFTA), known as “rafta,” which also serves Eagle County, began operating its VelociRFTA BRT system in 2013. Its history dates to November 2008, when voters in Pitkin and Eagle counties approved a 0.4 percent sales and use tax increase and \$44.55 million bonding authority to fund RFTA's Regional Transportation Improvement Plan. And additional money from the Federal Transit Administration's Very Small Starts program covered \$25 million of VelociRFTA's \$46.2 million cost.

“It took until 2011 to get the grant funding committed by FTA,” RFTA CEO Dan Blankenship said, “and then we went into full-scale real estate acquisition, equipment acquisition, construction and so forth and delivered the project on time and on budget in September 2013.”

### Water, Water Everywhere

In Washington state, public transit for Kitsap County Commission Chair Charlotte Garrido can mean hopping on a “foot ferry” to shuttle from meetings in Port Orchard, the county seat, across Sinclair Inlet to Bremerton, its largest city.

Boats have been a form of intra-county — and cross-sound transit to Seattle and King County — since before non-Native Americans settled the area.

The state-operated Washington State Ferries transport cars and walk-on passengers, but the trip across the Sound to Seattle takes about an hour. About 10 years ago, the state also operated a high-speed, passenger-only ferry from Bremerton to Seattle but eventually ceased operations because of complaints about

wake damage to beaches and bulkheads as the vessels transited a narrow passage, according to John Clauson, Kitsap Transit's executive director.

"Fast forward to last year, we, after much research and study of many different hull designs, developed and actually had a vessel constructed that had very, very low wake characteristics," Clauson said; it cost about \$5 million.

The transit agency is currently soliciting public input and putting together a business plan for how such a service might operate, said Garrido, who serves on the transit agency's board. "Governance is one of the big questions — how will it be governed and who would operate it? And it doesn't have to be

Kitsap Transit. That's a question that's out there." The board hopes to have a business plan by September.

Among the factors sure to be considered is the potential economic impact on the county. "If you can get to downtown Seattle within 30 minutes, it opens up Kitsap County to be more of a potential area either for business to locate here or for people to move here and commute into downtown Seattle," Clauson said. "When the state was operating a number of years ago, the city of Bremerton almost immediately noticed there was an influx of folks that wanted to live in Kitsap County and commute into the Seattle King County area." ■

## Public Transit – boon or boondoggle?

Public transit can be a hard sell in some quarters. Nearly four years ago, a then-state senator from Florida complained that the Legislature was trying to pass "a billion-dollar boondoggle called SunRail," a commuter rail line that eventually will serve three central Florida counties.

With support of the state's Republican governor, funding for phase one of SunRail was approved. A 32-mile segment through Orange, Volusia and Seminole counties began operating in June to largely favorable reviews.

In July 2011, the Federal Transit Administration committed to pay half of the system's phase one capital costs. The \$615 million project also derives 25 percent funding from the state and 25 percent from the counties and the city of Orlando. Funding for phase two is included in President Obama's FY15 budget.

"SunRail is the perfect example of our local, state and federal partners planting the seeds to bring a monumental transportation project to our region," Orange County Mayor Teresa Jacobs said at its grand opening.

Future development — including residential, hotels, retail and offices — around SunRail's 17 station stops is projected to attract billions of dollars in investment and create an

additional 250,000 jobs. But whether it proves the boon to development and smart growth some proponents envision — or a taxpayer-fleeing boondoggle, as some opponents fear — remains to be seen.

Critics of public transit say that even with federal and state subsidies, it can't pay its own way. From 1983 to 2009, total expenditures on transit in the United States rose about 300 percent—more than the rate of inflation (190 percent) during the same period — according to a 2013 Heritage Foundation publication, *Transit Policy in an Era of the Shrinking Federal Dollar*.

In Arlington County, Va., controversy over a proposed new \$358 million, 7.4-mile streetcar line helped bring about the almost unthinkable: the election of a Republican-leaning independent to the County Board in April to fill the unexpired term of the board's leading smart growth advocate. It was the first time a non-Democrat had been elected to the board in 15 years. Another election for a full four-year term will be held in November, so his tenure might be short-lived.

The new County Board member, John Vihstadt, had campaigned against the county's spending on projects like the streetcar.

Vihstadt characterized his election as a referendum "on the wisdom of Arlington streetcars," in an interview with *The Washington Post*.

Two of the County Board's five members oppose the streetcar, and there has been a growing call for county officials to let the voters decide the issue in a referendum. But that appears unlikely.

Virginia counties have no authority to place advisory measures on the ballot.

Orange County, Fla. Mayor Teresa Jacobs addresses those gathered for the launch of SunRail, a new commuter rail system. Local planners expect it to generate billions of dollars in transit-oriented development benefits.





# Innovations stretch budgets, imagination

By CHARLIE BAN  
STAFF WRITER

Without a steep increase in transportation infrastructure funding, county engineers and public works departments can still enhance their effectiveness using new innovative techniques.

“Technology is how we’re going to overcome these problems,” said David Brand, county engineer in Madison County, Ohio. “If the money isn’t going to be there, we have to find a new way to do things. Technological developments can help make what money we have stretch farther.”

## Stronger, Lighter, Longer-lasting Beams

The American Society of Civil Engineers recognized the Hybrid-Composite Beam as an innovation deserving exploratory analysis in 2013.

The beam, developed by the HC Bridge Company, comprises a concrete arch, tied at the bottom with 22 steel strands, which are encased in a fiber-reinforced polymer box that protects the inner components from the elements. That protection, especially of the steel components, is crucial because the U.S. Department of Transportation estimates that the annual direct cost of corrosion at \$276 billion.

The resulting beam is one-tenth the weight of a cement beam the same size and one-third the weight of a steel beam. They’re in place in 24 bridges in eight states.

“They were originally developed for railroad bridges, so they’re designed for heavy loads,” said John Hillman, the beam’s inventor. “Most of the beams in place now are on large highway bridges.”

The lighter beams mean decreased transportation costs, which lower the cost of an overall project.

## A Different Kind of Multimodal

For low-volume bridges, a replacement might be available in a local junkyard. That’s where Buchanan County,

Iowa, County Engineer Brian Keierleber finds defunct railroad flat cars.

“For the most part, you can just use them to replace the superstructure,” he said of the part of the bridge that supports the deck. “Most people don’t realize what they’re driving over.”

An Iowa Department of Transportation study found flat cars are less expensive than building a new superstructure and the construction time to install them is shorter. Iowa State University’s Bridge Engineering Center found they are strong enough to support Iowa legal traffic loads.

Each flat car can replace a single bridge lane.

## Bundled and Bunched

Missouri’s Safe and Sound Bridge Improvement Program made use of a popular contracting technique — bridge bundling, by which 554 bridge replacements were done on a single design-build contract.

The difference in the Show-Me State was the decision to close roads where bridges were being replaced and doing both lanes at the same time.

Closing the road eliminated the traffic-control staffing that comes with retaining use of one lane during the replacement and cuts the average closure time to 42 days, half the length of typical closures for bridge replacement projects.

The temporary inconvenience to motorists paid off when the project was completed 13 months ahead of schedule.

## Uncrossed Signals

If the primary objective of transportation is to get passengers and goods from place to place safely, one of the wild cards is a speeding emergency response vehicle, like a fire truck or ambulance.

● INNOVATION *continues on page 23*

# Ports – where many modes of transportation converge

By CHARLES TAYLOR  
SENIOR STAFF WRITER

Where rail, air, highways and waterways intersect — at ports — economic activity can buoy a region's fortunes. The Cleveland-Cuyahoga County Port Authority provides one example of the public's faith in its ability to deliver.

Last November, Cuyahoga County, Ohio voters overwhelmingly approved the renewal of a five-year, 0.13 mill levy.

That translates to a homeowner's paying \$3.50 a year for every \$100,000 of assessed valuation, which generates about \$3.1 million annually — about 35 percent of budget for the Port Authority. A previous levy was set to expire at the end of 2013.

Three statistics speak to the port's impact on northeast Ohio, according to the Port of Cleveland: Nearly 18,000 jobs and \$1.8 billion in annual economic activity are tied to the roughly 13 million tons of cargo that move through Cleveland Harbor's Port-and-River system on average each year.

County Executive Ed FitzGerald and Cleveland Mayor Frank Jackson urged county voters to support the levy extension in a published newspaper column last August 2013 — by touting the port's value to the region and the Midwest.

"The Port Authority serves as our 'Jobs and Competitiveness

Toolkit.' It connects local businesses to the global marketplace through its maritime operations and connects key projects to crucial private investment through its development finance program," they wrote in *The Plain Dealer*. "The Port provides us with economic development services we can't find anywhere else."

In April, the Port of Cleveland welcomed the first vessel of the Cleveland-Europe Express cargo service from Antwerp, Belgium via the Saint Lawrence Seaway. On the vessel's first round trip voyage, it carried cargo moving between five states and seven countries.

"The express service is the most direct route to Europe from America's heartland," said Will Friedman, president and CEO of the Port of Cleveland. "It allows businesses to cut down on transport time, and increase the time their products are available to sell on the market."

Similar examples from elsewhere in the United States are highlighted in a recent NACo research publication, *Strong Economies, Resilient Counties: The Role of Counties in Economic Development*. In Bryan County, Ga., the Belfast Commerce Centre — a partnership between the county the CSX Corporation — includes a rail system that provides businesses in the park direct access to the Port of Savannah. ■

A Great Lakes self-unloading bulk carrier ship negotiates a sharp curve in the Cuyahoga River with the downtown Cleveland, Ohio skyline in the background.

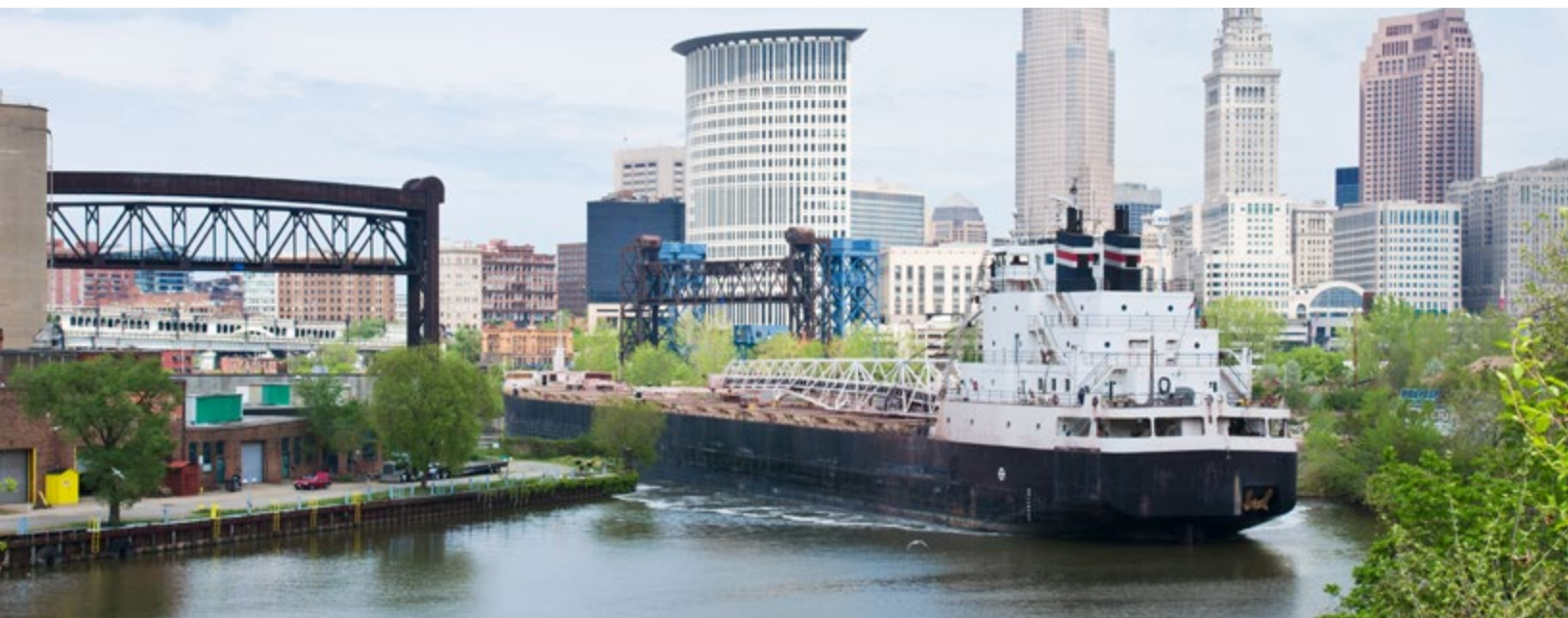




Photo courtesy of Buchanan County, Iowa

A railroad flatcar forms the superstructure for this bridge in Buchanan County, Iowa.

# Bridges add complexity to public works responsibilities

By **CHARLIE BAN**  
STAFF WRITER

Funding for bridge repair became even harder to come by in 2012, when MAP-21 eliminated the dedicated funding source for maintaining and replacing bridges. It may sound desperate, but truth be told, many of them can be used without incident.

That is, until they can't.

"We struggle to have enough money to keep the bridges in good repair," said David Brand, county engineer in Madison County, Ohio. "A bridge doesn't stay new for too long. Then it's in constant decline until it's ultimately repaired or replaced. Our focus, throughout, is making sure we provide safe trips over these bridges."

Bridges are a challenge because of the time, cost and inconvenience involved in replacing or repairing them, several county engineers said.

The 2013 National Bridge Inventory listed 34,498 county-owned bridges as structurally deficient, 15 percent of the nation's 230,690 complement of county-owned bridges.

Bridges compare favorably to all other modes of transporta-

tion on the 2013 American Society of Civil Engineers (ASCE) Report Card for America's Infrastructure. The association's grade for bridges has risen steadily since they were first evaluated in 1998 (C-), to C in 2001, 2005 and 2009 and C+ in 2013.

ASCE found, from 2004 to 2009, the number of structurally deficient bridges increased in urban areas by more than 650, while those in rural areas decreased by more than 7,000.

A University of Kansas study found that the number of structurally deficient bridges was much higher for steel bridges than any other material, largely due to water infiltration. All materials — steel, cement, wood — are vulnerable to the elements 24 hours a day, and in regions that see a lot of snowfall, the mass amounts of salt that goes onto the bridge decks accelerates their deterioration.

"Structurally deficient" means one component of a bridge — the deck, superstructure, substructure, or culvert — is rated in "poor" condition by the Department of Transportation's (DOT) National Bridge Index rating scale. A bridge can also be classified as structurally deficient if its load carrying capacity is significantly below current design standards or if a waterway frequently floods over.

### Deficiency is Far from a Death Sentence

In Pennsylvania, Washington County shares the lead for most structurally deficient bridges—61—with Montgomery County.

“Many of these bridges that are deficient aren’t going to see a big change as a result,” said Vincent Ley, a Washington County project engineer. “For the type of bridge, their location and the volume they handle, they could be entirely appropriate and not need rehabilitation for a while. It could be a bridge serving a neighborhood and it just sees some cars that don’t stress it.”

Thirty-six percent of Pennsylvania’s county-owned bridges are rated structurally deficient, but only 12 percent of the state’s bridges are owned by counties.

For many counties, the demand for immediate repairs makes routine preventive maintenance a fantasy.

“If we went through and repaired all the bridges on the list, we’d never do anything else,” said Rick Capps, roads supervisor for Phillips County, Kan. “We pretty much have to address problems that come up, when they come up.”

Funding has been a challenge for counties, a notion the NACo research study *The Road Ahead: County Transportation Funding and Financing* confirmed. Most are hamstrung by their states, only 12 of which allow counties to collect

their own gas taxes and 43 limit property taxes. Counties are increasingly using local option sales taxes to fund transportation projects, and 29 states allow that.

“We’ve been spending the last 20 years to try to catch up, but we’ll always be a year behind the bridges,” Brand said. “We’re at the mercy of somebody else for funding,

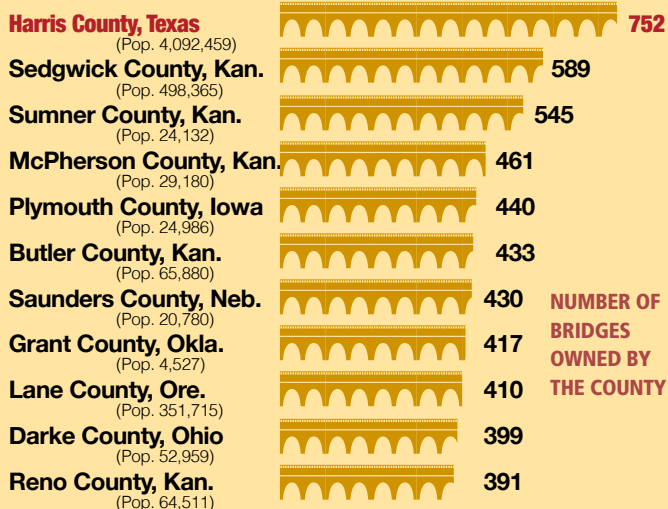
someone who doesn’t have to face these issues. County commissioners have a lot of people angling for funding, and bridges don’t always stand out.”

### Where is This Bridge Going?

In Buchanan County, Iowa, County Engineer Brian Keierleber crosses wooden spans that could have carried Gen. George Custer.

“They were built before the Model T, and most of them are still working, but there’s always a concern that someday they won’t,” he said. “The vehicles using them are changing,

## Counties that own the most bridges



Source: National Bridge Index (2013)

**With a large number of the structurally deficient bridges being found in rural areas with low average daily traffic, counties face a decision whether to repair or replace a bridge or close it permanently.**

and when they aren’t up to the task anymore, then you have a problem.”

Of the 250 bridges that Buchanan County tends to, 49 were rated structurally deficient in the 2013 inventory. Many are seeing increased traffic and heavier loads in a largely agricultural region east of Cedar Rapids. Iowa counties’ bridges make up 79 percent share of the total public bridges statewide, the highest in the nation. Only 25 percent are rated structurally deficient.

“You have to build for the future, not the present,” Keierleber said. “Twenty years ago I was building 30-foot bridges; we’re building them 40 feet wide now. The new combines are 19 feet wide, tire-to-tire. We’re seeing farm equipment get larger and heavier and the agricultural output is getting much higher.”

### Having Closure

When the loads get heavy enough that they exceed a bridge’s posted weight limit, or bridges deteriorate to the point where few vehicles can cross them, the detours can get costly.

“That’s an extra five, 10 miles out of the way, each direction,” Keierleber said. “You start adding up the fuel and time lost because of a detour and you start to see things add up, especially if someone routinely makes several trips a day.”

With a large number of the structurally deficient bridges being found in rural areas with low average daily traffic, counties face a decision whether to repair or replace a bridge or close it permanently.

The Kansas study compared cost to drivers and the cost of replacing a bridge and found that with low-use bridges, roughly 10 crossings or fewer per day, if the detour is less than nine miles, counties are justified in closing the bridge and not replacing it.

That isn't always an option though.

"It's safe to say there are locations in every county where there's only one way in, and that's across a bridge," Keierleber said.

### Curveballs

Many public works departments replacing or rehabilitating bridges encounter issues that were not prioritized when the original structures went up. Environmental protection regulations have added a layer of complexity to construction projects, especially if the bridges cross waterways.

"You can't just replace a bridge with a similar bridge," said Roman Gavarrete, the Highland County, Fla. engi-

neer. "Environmental requirements add time and cost to a project."

Contra Costa County, Calif. Engineer Julie Bueren said the construction windows for many projects are constrained because of environmental concerns. Despite a mild, dry climate, construction season for bridges over water is limited to between May and September to avoid disrupting fish migrations.

"Not that it's a bad thing, it's all for a positive outcome; it's just another factor in getting things done," she said. "We seem to have a lot of endangered species habitats in our county."

The Contra Costa County public works department has trained maintenance personnel to recognize those habitats and do assessments.

"They know to call the fish and wildlife department and bring them in when they suspect they'll be working in an endangered habitat," Buren said. ■

### ● INNOVATION *from page 19*

Maricopa County, Ariz. has developed a vehicle-to-vehicle and vehicle-to-infrastructure communications program that allows emergency vehicles to communicate with traffic signal networks.

In doing so, Maricopa County's Department of Transportation became the first agency in the country to successfully run a multimodal intelligent priority system using connected vehicle technology.

Standard emergency pre-emptive technology for traffic signals will simply display all-red, leading to confusion as to who has the right of way, which escalates into danger when an emergency vehicle is headed into the intersection. This has also been an issue between two different emergency vehicles.

The traffic signals have two-way communication with other emergency vehicles and transit vehicles. When more than one approaches an intersection, the system will prioritize and signal each vehicle when it has the right of way.

Maricopa County tested this technology on a 2.3 mile stretch and is working on extrapolating the system beyond that test corridor.

### Think of the Fish

When Contra Costa County, Calif. crews were working to replace the only bridge to Bethel Island, they noticed

that after doing pile driving, large numbers of fish were floating to the top of Dutch Slough, the body of water that the bridge traversed.

"The California Delta is a sensitive habitat," said County Engineer Julie Bueren. "The smelt and sturgeon were dying because of the vibrations. They disorient the fish."

The county found a solution practically next door. A "bubble curtain" would protect aquatic life from the vibrations, in addition to keeping them away from the work site. Air compressors at the bottom of the pole blow air into the water, which sends bubbles rising toward the surface. Those bubbles serve as a buffer, absorbing sound waves.

"Air provides an effective barrier to sound propagating through water, because of the difference in density between air and water," a report from the GeoResearch Group wrote about the first deployment of a bubble curtain during a bridge replacement between San Francisco and Oakland in 2000.

"Use of the air bubble curtains during pile driving has reduced sounds substantially. Biologists from Caltrans (California's department of transportation) have not identified any injured fish with the air bubble curtains in use during pile driving."

The report found that using the bubble curtain, rather than restricting the pile driving to times the fish would have been migrating through the area, avoided a seven-month delay that would have caused irrevocable funding problems for the project. ■



# NACo Report underscores importance of transportation to county economies

By **EMILIA ISTRATE**  
RESEARCH DIRECTOR

Now, more than ever, it is essential to keep the engine of the U.S. economy running, and transportation and infrastructure play major roles in supporting economic growth for both the short and long term.

That's why NACo released *Strong Economies, Resilient Counties: The Role of Counties in Economic Development* on July 7, detailing the links between economic development activities such as counties' providing infrastructure and transportation assets and the resiliency of county governments.

NACo developed this research in partnership with the Lyndon B. Johnson (LBJ) School of Public Affairs at the University of Texas at Austin. The report, together with interactive data maps and 35 case studies of county economic development initiatives, delves into county economic development opportunities and challenges across the nation's 3,069 counties.

Counties often view economic development through a different lens than other local governments, dictated by state law and their functions in health services, criminal justice and public welfare.

They are the social safety net on the ground; they outspend cities at a rate of 3 to 1 on health services or public welfare for their residents. Counties are also an essential part of the transportation networks that connect residents, businesses and communities. They build and maintain 45 percent of the public roads, 39 percent of all bridges (230,690 bridges) and are involved in a third of the nation's transit and airport systems.

Counties sponsor local economic development initiatives, as

the 2013 survey conducted by NACo for this research found out.

Funding is the most common county contribution to economic development partnerships. While infrastructure problems vary by the specific circumstances of a county, finding the necessary funding for capital projects is a common challenge across counties.

For example, Clermont County, Ohio, formed a Transportation Improvement District (TID) in 2006 to fund critical transportation improvements needed to keep pace with population growth.

In Texas, where the state allows counties few funding mechanisms for transportation, Harris County created the Harris County Toll Road Authority (HCTRA) in 1983. In an environment of limited authority for counties, HCTRA provided Harris County with the finance and development vehicle for planning and prioritizing road and other transportation projects.

As major owners of infrastructure, counties deal directly with infrastructure challenges that affect the development and competitiveness of their local economies.

The 2013 NACo survey shows that workforce challenges are at the top of the county economic development agenda, but counties also experience infrastructure challenges as well. Small counties have an issue with inadequate access to major highways, lack of air service or shortage of broadband in their area, while two-thirds of large counties encounter insufficient transit service.

More and better trade infrastructure (ports, roads and transshipment facilities) is one common need across counties of different sizes.

Freight patterns cross the country from goods-producing



counties to consumer counties, connecting local economies into the U.S. and global economies.

Counties are active in addressing this challenge to the growth of their economies. In Bryan County, Ga., the Belfast Commerce Centre — developed by the county in partnership with the CSX Corporation — features a rail system that gives companies in the park direct access to the Port of Savannah. Harvey County, Kansas' Logistics Park, connects companies directly to rail, highway, port and air transport hubs.

Counties work with networks of public, nonprofit and private partners to create and deliver successful economic development initiatives. The 35 case studies developed for this report showcase how counties collaborate in economic development, including promoting broader resiliency goals.

A robust economy needs a county ready to invest in the infrastructure necessary to be resilient in the face of natural and man-made disasters.

Henrico County, Va., for example, after a historic drought in 2002, began to explore options for meeting the county's long-term demands for access to fresh water. It is now leading

the development of the Cobbs Creek Reservoir — expected to be operational in 2021.

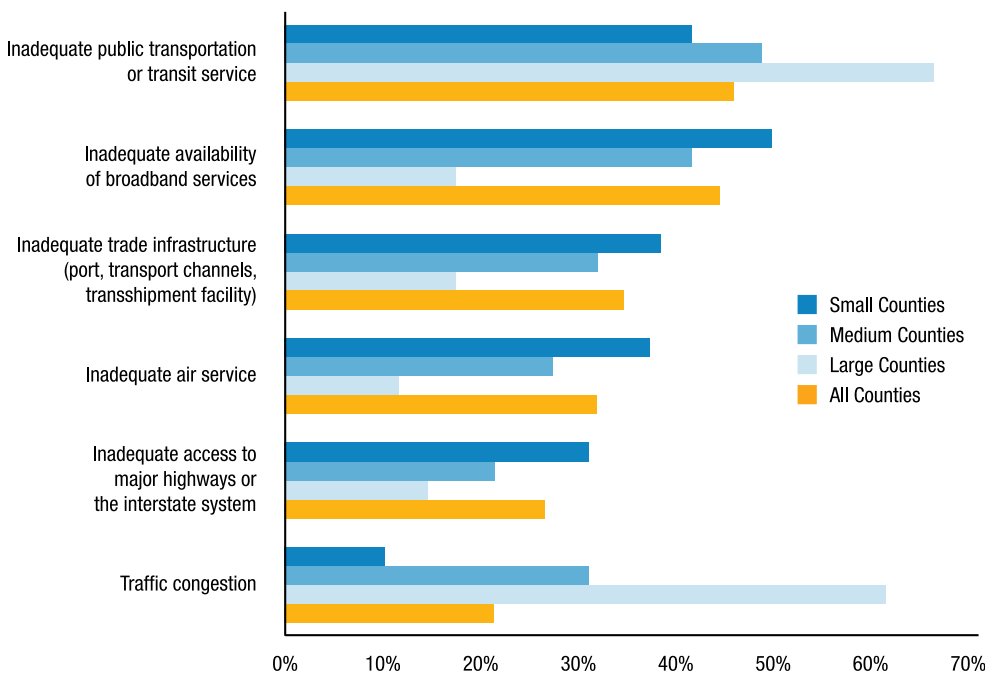
This project is a partnership with neighboring Cumberland, Goochland and Powhatan counties. Henrico County will provide 100 percent of the funding for the project through the county's Department of Public Utilities Enterprise Fund, which generates revenue through rates and fees.

The Cobbs Creek Reservoir project is expected to meet local demand for water for the next 50 years. With future water supply secured, Henrico County will be able to attract new companies to the area or retain current businesses for expansion.

Strong local economies enable counties to improve the quality of life for their residents, create the right environment for local businesses to flourish and reduce county costs for public welfare and criminal justice while supporting the county tax base.

County provision of infrastructure and transportation is a major part of this support framework for local economies, the building blocks of the U.S. economy. ■

## Infrastructure Challenges for Counties, Percent of Responding Counties by County Population Size, 2013



Notes: Large counties have more than 500,000 residents. Medium-sized counties have between 50,000 and 500,000 residents. Small counties are counties with less than 50,000 residents.

Sources: NACo survey, October 2013; 2012 population data-U.S. Census Bureau, Population Estimates, 2013

## Affiliate Spotlight

# County engineers key to transportation, infrastructure



By **BRIAN ROBERTS**

EXECUTIVE DIRECTOR

NATIONAL ASSOCIATION OF COUNTY ENGINEERS



By now, you are probably well aware of the role counties play in our nation's roads and bridges. According to the most recent research conducted by NACo, counties own 45 percent of roads and 230,690 of the country's bridges.

Counties truly provide a vital link in the country's infrastructure. Just like NACo, the National Association of County

Engineers (NACE) works to improve county influence and recognition.

NACE, NACo's largest affiliate, was formed in 1956 as a way to improve the coordination and communication between the various state county engineer associations.

Many of the state affiliates have celebrated their 100-year anniversaries and are well established with staff and substantial budgets.

Among other things, NACE works to connect these affiliates thereby achieving national recognition and influence. NACE currently has 31 state affiliates and a Canadian affiliate in Ontario. Tennessee is our newest affiliate, joining in 2013. In total, NACE represents more than 1,350 counties, county engineers and road officials.

NACE has both urban and rural counties as members. Road ownership and responsibilities also vary tremendously throughout the nation. Just ask Mark Servi, NACE past president and Barron County Wis. Highway commissioner.

"In Wisconsin, the counties are responsible for their individual county highway systems, and we also have maintenance responsibilities for the state and federal highways within our counties," he said. "Maintenance on the state and federal system is through a cost reimbursement contract with the state. Many counties self-perform

maintenance and construction on their own systems, as well as providing these types of services for the other local government units within the county," he added.

"For example, Barron County operates an asphalt production plant, and performs paving projects for many towns, cities and villages as well as all the paving on our system."

NACE provides a forum for this diverse membership to exchange ideas and information.

Just as the relationship between NACE and NACo can lead to success, the individual relationship between the county engineer or road official and their elected leadership is also critical.

I asked Brian Stacy, NACE secretary/treasurer and county engineer of Pierce County, Wash. how he benefits from this relationship. "As a county engineer I take the information I get from NACE and NACo and share — or utilize in some way — that information to better inform our elected body. I think the national perspective is highly critical in what I do and helps me make more informed decisions with my board."

Brian Keierleber, NACE South Central vice president and county engineer, Buchanan County, Iowa, also values the relationship with his elected officials. "I am a strong believer that there needs to be very open communication with the board. One-on-one field trips are very productive," he said. "Whether you are talking about projects, funding or personnel, educating them on the issue makes life easier. Open chains of communication help keep problems from developing."

As you can see, county engineers and road officials play a vital and diverse role in U.S. infrastructure, and we pledge to continue working with NACo in its efforts to build safe, reliable and resilient transportation networks for all Americans.

*For more information about NACE, go to [www.countyengineers.org](http://www.countyengineers.org).*





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### About NACo

The National Association of Counties (NACo) assists America's counties in pursuing excellence in public service by advancing sound public policies, promoting peer learning and accountability, fostering intergovernmental and public-private collaboration, and providing value-added services to save counties and taxpayers money. Founded in 1935, NACo provides the elected and appointed leaders from the nation's 3,069 counties with the knowledge, skills and tools necessary to advance fiscally responsible, quality-driven and results-oriented policies and services to build healthy, vibrant, safe and fiscally resilient counties. For more information about NACo, visit [www.naco.org](http://www.naco.org).