

## Lack of public funds will change what the “open road” really means

by Scott Smith, PE

(NAPSA)—It's clear all of us who rely on healthy infrastructure to effectively move people and goods need to adjust to life with-



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out a strong federal transportation program in place. With the declining purchasing power of the gasoline tax and a prevailing political desire to shrink the role of government, many state and local departments of transportation do not have the means to pay for the simple cost of upkeep, let alone meaningful expansion, of the nation's congested highways.

To “do more with less,” roads and bridges will be built with:

• **Private funding and management.** Money has to come from somewhere, and strategic alliances will be made between public road agencies and private investors to design, build, lease, manage and/or operate highways and bridges. State infrastructure banks will provide seed money to encourage investors to participate.

• **Transportation technology.** Advancements are providing new ways for elected and appointed officials, planners and engineers to add value, speed project development and collect revenue to support transportation projects. For example, modern transponder and video technology are making tolling a more acceptable option for motorists and opening up opportunities for congestion pricing. Bridge design and analysis software and 5-D modeling and animation tools can identify construction challenges early in the development process, reducing risk and responding to the unique needs of each community.

• **Triage.** Limited dollars will be applied where they are needed most to keep existing bridges functional and highway lanes open. It may no longer be possible for the federal Highway Trust Fund to provide up to 80 percent of the funds necessary to complete projects. Federal funds will focus on complex multimodal facilities, tying together different modes of transportation and more effectively using the capacity that already exists. States also will

expand alternative funding strategies, such as increased licensing fees, property taxes, roadside advertising and/or leasing or selling unused right-of-way.

• **Ready-made sustainability.** Our roads will go green, with innovative design and construction materials that allow highways and bridges to be more resilient, last longer and have less impact on the environment. Road surfaces and bridge components will be made from recycled materials. Pavement will be permeable, cleaning runoff and better handling drainage. Auto-healing epoxy will fill tiny concrete cracks as quickly as they appear.

• **Alternative delivery.** Design-build construction streamlines project delivery through a single contract between the owner and the design-build team. To date, 47 states and Puerto Rico have adopted the process as a way to deliver large, complex projects faster and within extremely constrained budgets. And with the construction manager/general contractor model, the owner hires a dedicated project adviser who provides input that ultimately results in higher constructability.

• **Accelerated delivery.** Rather than designing most roads and bridges from scratch, some projects will use standardized designs and generically made components to simplify and speed delivery. The Missouri Department of Transportation used such a strategy in its Safe and Sound program to replace more than 550 bridges through a design-build construction process. It's become a model for other state DOTs.

America also will see a shift in what constitutes real value for public and private owners. The lowest price will no longer be the primary measure of worth. Addressing critical institutional, cultural, political and technical risks early and often in the development process will not only be rewarded, but required for selection. Firms with the technical solutions and innovative ideas that effectively address those risks will thrive.

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