

BUILDING MOMENTUM

TRB Workshop Seeks To Encourage Highway Innovation

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A key recommendation of the Transportation Research Board's 1996 Special Report 249, *Building Momentum for Change*, is the formation of a Strategic Forum for Innovation in Highway Infrastructure (see *TR News*, November–December 1996). The report's authors, drawn from both the public and private sectors, envisioned the forum as a mechanism to help reshape the way business is conducted in the highway sector. Government and industry leaders from across the country would come together "to provide a strong and continuing voice for changes in policies, practices, regulations, and other institutional factors that influence the market for innovation in highway technology." In 1997, TRB assembled a special steering committee to discuss the kinds of changes that might be beneficial and how they might be accomplished.

In October the steering committee hosted a workshop in Irving, Texas, on Alternative Contracting Approaches. Funded by the Federal Highway Administration, this workshop offered an opportunity for candid discussion by a select group of 25 construction and construction-management contractors and senior state transportation officials. The focus was on Virginia's contracting for comprehensive highway maintenance and on Florida's experiments with several construction and rehabilitation contracting techniques. The public- and private-sector participants were eager to learn more about not only these innovative approaches but also how their fellow participants viewed such changes in practice.

Maintenance Contracting

Andrew Bailey, chief maintenance engineer, Virginia Department of Transportation, and Nicolas Masucci, president of Virginia Maintenance Services, Inc. (VMS), described Virginia's ongoing

pilot program to secure the full range of highway maintenance services from private suppliers. Legislation recently passed by the Virginia Assembly encourages VDOT to contract with private companies for the acquisition, construction, improvement, maintenance, and operation of new and existing highways, and to undertake limited experiments with nontraditional contractual arrangements.

VMS, a joint venture formed by Louis Berger International, Inc., and Sverdrup Civil, Inc., submitted an unsolicited conceptual proposal to provide asset management services for a portion of the state's highway system. After reviewing two competing concepts, VDOT invited VMS to prepare a more detailed proposal. VMS ultimately signed a 5-year contract to provide total maintenance on approximately 250 miles of highway on several Interstate routes. The services to be provided include traffic incident management, pavement replacements, and bridge deck repairs, as well as roadside mowing, pavement patching, and snow and ice control.

The VDOT contract requires VMS to meet specific outcome and performance targets. For instance, 95 percent of the pavement must be "smooth, safe, and with adequate skid protection and durable." For asphalt pavements, this means the skid index must exceed 20, no cracks can be larger than 1.4 in., and no potholes can be more than 3 x 4 x 1 in. deep. Potholes that threaten safety require immediate response, and all potholes must be filled within 2 days of notification by VDOT. Periodic reviews by VDOT establish compliance. VMS receives fixed periodic payments.

The contract gives VMS broad latitude to determine what work is to be done and how. VMS is finding, for example, that doing more crack sealing and drainage upkeep than is required to meet immediate performance targets may be a

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profitable management strategy, reducing subsequent maintenance costs. In turn, VDOT is finding that it needs better tools to define desired outcomes and to estimate the department's cost of doing business in this new manner. VMS estimates that its fees are approximately 10 to 15 percent below what it would cost the agency to provide or procure equivalent services with conventional arrangements.

Alternative Contracting for Construction

Kenneth Leuderalbert, head of quality initiatives, Florida Department of Transportation, and Phenix Palmer, vice-president, Post, Buckley, Schuh & Jernigan, Inc. (PBSJ), described the Blackwater River Bridge design-build project and other aspects of the state's alternative contracting program. Enabling legislation has given FDOT authority to consider a range of innovative contracting methods in order to accelerate construction and rehabilitation projects, minimize traffic disruptions, maintain safety and quality, and control costs. For a portion of the agency's spending (up to \$60 million per year), FDOT can effectively set aside, with reasonable justification, any existing statute restricting an innovative bidding and contracting procedure. FDOT has been able to experiment with a number of new practices, such as A+B bidding, "no-excuse" completion bonuses, liquidated savings, lane rental, bid averaging, and warranties.

The Blackwater River Bridge project illustrates what can be achieved under the state's programs. When scour and settlement under an existing structure necessitated emergency replacement of that structure, FDOT consolidated virtually all the work into one contract for award using an adjusted-score balancing of proposed contract time

and lump-sum price. The contract features include a completion incentive-disincentive of \$10,000 per day and a requirement that the construction proceed without compromising safe traffic movement. The latter requirement posed substantial risks for the winning team. With PBSJ serving as the state's project administrator, four firms were invited to prepare bids; the contract was awarded within 34 days of the invitation. The cost portions of the bids ranged from \$28.4 to \$36.3 million. The winning team (with a bid of \$30.4 million), led by Traylor Bros., Inc., worked 6 days a week and 12 or more hours a day, completing the complex project in 20 months.

Assessment

The two presentations engendered lively discussion among workshop participants, who critiqued what they had heard and discussed how they might apply such practices. One clear lesson emerging from the workshop, participants agreed, is the importance of legislation and regulations that enable transportation agencies to explore new contracting approaches. It was also agreed, however, that there must be more open discussion about such approaches, both to reduce misperceptions and to identify the most suitable applications.

There was a clear consensus that workshops of this type are an effective means of transferring information about innovative practices to potential users. Participants urged that similar activities be undertaken in the future, perhaps involving the leadership of national industry and professional associations. By encouraging such constructive engagement, the Strategic Forum for Innovation in Highway Infrastructure can be an effective force in building momentum for change in the highway sector.