



Creativity

John S. Dick, *Executive Editor*

Photo: Ted Lacey Photography.

Bridge engineers create solutions to safely move traffic over obstacles or to separate intersecting traffic. Most often today, this design process has moved beyond routine. That's when "create" becomes "creativity." Today, design requires imagination, inspiration, ingenuity, innovation, and inventiveness—creativity. The need for creativity results from constraints such as having to accomplish more with less time or money; reducing impacts to the traveling public; extending the lifespans of structures with more durable concrete materials and methods; and working in less space, to name just a few boundaries.

This issue of *ASPIRE*[™] offers a host of creative projects and ideas. To bring you more solutions, we developed a new feature called **Creative Concrete Construction**. You'll find these one-page articles on pages 15, 31, and 48. The articles convey creative techniques and methods that may be unique to your area. We think the ideas are worth sharing. We plan to include one or more in each issue. That's where you can help. Have you designed, built, or experienced a unique solution or technique on your project? Can you share it with us? Drop me a note at JDick@PCI.org or select "Contact Us" in the upper right corner at www.aspirebridge.org. We want to hear from you.

Project delivery using design-build methods demands creativity. Even though we didn't plan it, three project profiles in this issue resulted from design-build contracts. Another project article reports on a value-engineering change proposal.

The Federal Highway Administration encourages creativity. The FHWA Highways for LIFE Pilot Program provides incentive funding for states to try innovative approaches. The second part of a two-part article on the program, beginning on page 42, reports on three such approaches.

In the Fall 2010 issue of *ASPIRE*, we featured two creative intersection redesigns. One was the massive relocation of the South Medford interchange on I-5 in Oregon (page 36). The second, a set of six

interchanges on the Keystone Parkway in Carmel, Ind., feature the nation's most compact double-drop interchanges (page 24).

In this issue, we highlight one of the first diverging diamond interchanges (DDI) in the United States. The DDI causes traffic to cross briefly into opposite lanes to reduce conflict points and increase safety. Traffic flows more smoothly with less time spent waiting at signals. In addition to its unique intersection design, this project had the bridges built at a staging area and moved into place with self-propelled modular transporters. Each bridge needed only an 8-hour traffic closure. The article begins on page 16.

Creativity pays off in administrative offices as well as design offices. If functionally obsolete and structurally deficient bridges are to be replaced and repaired with longer-lasting, state-of-the-art creative concrete designs, adequate funding must be allocated through the agencies' funding mechanisms. Accurate and graphic reports of timely repairs and replacements have been used effectively by the Office of Structures at the Maryland State Highway Administration. The way they do this is reported in the PERSPECTIVE on page 12.

Finally, a note to all who have contacted us seeking the more extensive articles and presentations on Eugène Freyssinet and the Minnesota local bridge scanning tour mentioned in the Fall 2010 issue. Those references are now on the *ASPIRE* website. Go to www.aspirebridge.org and select "Resources."

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