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Press Release

For immediate release

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### **ASCE recognizes TTCI in winning project**

*Pueblo, Colo.* Led by Principal Engineer Duane Otter, TTCI's work with John Hillman, inventor of the Hybrid-Composite Beam and recipient of the 2013 Charles Pankow Award for Innovation, was recognized by the American Society of Civil Engineers early this month. Dr. Otter received a plaque honoring TTCI "As a collaborator on the winning project" and will represent TTCI at a gala this spring in Washington, D.C. honoring Mr. Hillman and other civil engineering leaders.

"Introducing a new technology in the transportation industry is a daunting task," said Hillman. "I am very grateful for the support we have received from everyone at TTCI. In particular, Duane Otter, who did an exemplary job serving as an advocate for new technology and encouraging the support from the Association of American Railroads' Bridge Technical Advisory Group to have the first HCB bridge deployed to the Transportation Technology Center for installation and testing."

TTCI tested the prototype HCB<sup>®</sup> span for 1.5-million load cycles under heavy freight railroad traffic and recently completed follow-up testing of a commercially produced HCB<sup>®</sup> span. Future plans call for monitoring of this span in revenue service on a nearby railroad line.

Hillman describes the HCB<sup>®</sup> as a new type of structural member developed for use in highway and railroad bridges as well as marine facilities and other structures. The HCB<sup>®</sup> is comprised of three main subcomponents: shell, compression reinforcement, and tension reinforcement. In its most simplistic embodiment, the shell is comprised of a fiber reinforced polymer box beam. The compression reinforcement consists of concrete, pumped into a profiled conduit (generally an arch) within the beam shell. The tension reinforcement consists of carbon, glass, or steel fibers anchored at the ends of the compression reinforcement. The HCB<sup>®</sup> combines the strength and stiffness of conventional concrete and steel with the lightweight and corrosion advantages of advanced composite materials. The result is a new alternative for rebuilding our nation's infrastructure with state-of-the-art sustainable structures.

Click here to see a photo of the HCB<sup>®</sup> bridge and to read about other recipients of the Charles Pankow Award.

<http://www.asce.org/asce/news/featured.aspx?id=25769811481&blogid=25769815007&terms=OPAL+award>

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