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ARC Wildlife Crossing Project Names Winner of Design Competition

The [ARC International Wildlife Crossing Infrastructure Design Competition](#) today announced that HNTB with Michael Van Valkenburgh Associates, Inc. (HNTB+MVVA) has won the first international wildlife crossing structure design competition. ARC was designed to solve the problem of ensuring the safe mobility of humans and wildlife by allowing them to coexist through innovative engineering and architecture. [Five design firms from around the world](#) competed to develop the next-generation wildlife crossing.

Announced at the National Academies' Transportation Research Board's 90th Annual Meeting held in Washington, D.C., HNTB+MVVA, a New York City design firm, was unanimously chosen by a jury of five leading experts in landscape architecture, engineering, transportation, and ecology for its use of ordinary materials, such as concrete, in an extraordinary way. HNTB+MVVA's design is cost effective, modular, easy to construct, provides greater material control, and uses a unique built-in drainage system. [Click here to view HNTB+MVVA's winning design.](#)

"The winning design combines complex ecology and engineering with practical intelligence by taking ordinary technology and recasting it in a new way," says Nina-Marie Lister, the ARC competition adviser and professor at Ryerson University in Toronto. "Using a simple, modular approach to construction, the HNTB+MVVA design deploys familiar, everyday materials with elegance and cost-effectiveness. The jury chose this design not only because it is feasible, but because it has the capacity to transform what we think of as possible—a novel design solution to a growing problem that could serve as a model for the world."

Growing scientific research shows the importance of wildlife crossings and their effectiveness at reducing wildlife-vehicle collisions. In Banff National Park in Alberta, Canada, a continuous series of 22 underpasses and two overpasses has resulted in an 80 percent reduction in total wildlife fatalities because wildlife was allowed to roam free uninterrupted by human transportation. As a result, there have been approximately 240,000 crossings (and counting) of 11 species of large mammals, including wolf, grizzly bear, elk, lynx, mountain lion, and moose, across these paths.

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“This competition demonstrates that we have the technical expertise and the know-how to overcome design challenges and implement cutting-edge survival practices,” said Charles Waldheim, chair of the ARC jury. “What we really need now is the political, economic, and social leadership to bring this design to life.”

The HNTB+MVVA design includes a single span across the highway with no center pier as opposed to the Banff overpasses, which comprise two single spans with a median in the center. This single span is a unique feature that will provide a much safer experience for drivers by creating a more open experience. There are also significant benefits to wildlife in the winning design as it is approximately four times wider than the structures in Banff. This provides an ideal setting to accommodate wildlife movement and a diversity of habitats on top of the bridge. One of the more promising design features from a constructability and engineering standpoint is that the winning design can be built without closing the highway in both directions.

“The international competition both establishes and inspires a new category of public infrastructure that is both responsive and responsible to environmental concerns,” says Rep. Jared Polis (D-CO), “The ARC competition addresses a global problem with a Colorado-based solution that will demonstrate the importance of international cooperation.”

The jury was impressed by the caliber of all five of the finalist designs. The finalists were chosen to compete from 36 team submissions across nine countries, representing more than 100 firms worldwide. The jury was looking not only for sustainable, beautiful, compelling designs that met the needs of people and respected wildlife, but also those using materials that make infrastructure more affordable in terms of capital cost, maintenance, and long-term sustainability and, ultimately, make our roads safer.

The site of the design competition was West Vail Pass on I-70 in Colorado, about 90 miles west of Denver. West Vail Pass was chosen as the site of the wildlife crossing from among 25 candidates from 16 states across North America. Colorado’s I-70 corridor is considered to be a significant barrier to wildlife movement because it is the only east–west interstate providing for the movement of people, goods, and services across the state and bisects a critical habitat linkage in the Southern Rocky Mountain region.

Each finalist received an honorarium of \$15,000, and the winning design team received \$40,000. Robert Rock, senior associate for Michael Van Valkenburgh Associates, Inc., and Ted Zoli, technical director of bridges for HNTB and MacArthur Fellow (nicknamed the “Genius Award”), presented the winning design.

Comments

raphael_justewicz@yahoo.com February 1, 2011 1:06 PM

For the sake of enlightenment, mention and photos of the graphics would have been fair to all the teams! (speaking with some bias from a place on the JRA finalist)

tpoltrack@asla.org February 1, 2011 1:43 PM

Duly noted. We did cover the finalists in the this issue:

<http://www.asla.org/land/landarticle.aspx?id=29270&terms=arc+finalists>. But it should have been included in the copy.

nm.lister@ryerson.ca February 2, 2011 9:11 AM

Watch the ARC video at: <http://www.arc-competition.com/video.php> for more information on wildlife crossings and features of all the finalist designs.

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