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EPS geofoam enables rapid under-crossing construction

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The Nevada Department of Transportation (NDOT) and Granite Construction Company recently used expanded polystyrene (EPS) geofoam in place of sheet pile walls to expedite construction and protect wildlife during construction of an animal under-crossing on U.S. Highway 50 in Nevada.

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Life magazine once described this stretch of rural highway as the "The Loneliest Road in America." Not anymore. Rapid population growth in Carson City and other western Nevada towns required widening the two-lane highway to four lanes in 2012. As part of the project, NDOT built an under-crossing culvert for wild mustangs to safely get across the highway to their water source. Vehicle and horse collisions have historically been a major safety issue on U.S. 50. In 2011, more than 30 vehicle-horse crashes occurred during a 50-day period.

To avoid closing the highway, Granite Construction built a temporary wall for the culvert adjacent to the existing two-lane road. Once the culvert was completed, they switched traffic onto two additional lanes built over it, and then excavated the existing highway to expand the culvert.

Instead of using traditional, temporary sheet pile walls with tiebacks during the culvert construction, Granite installed EPS geofoam blocks from Insulfoam to carry the highway traffic. The team saved approximately three to four weeks during construction using geofoam. The factory-cut EPS blocks reduced installation time and are designed to be left in place as part of the finished road grade, allowing the busy highway to remain open during construction.

"The InsulFoam geofoam provided a time and cost savings to the owner," said Brian Roll, Nevada Region Construction Manager for Granite Construction. "We saved approximately \$20,000 without sacrificing quality, ultimately resulting in a more efficient operation."

InsulFoam GF (EPS geofoam) geo-synthetic fill is a closed-cell EPS foam that is about 100 times lighter than soil, yet is durable and offers high load-bearing capacities. Uses include soft soil remediation, slope stabilization, structural void fill, and engineered applications. The material does not typically require surcharging, preloading, or staging often necessary with other fills. It resists moisture, freeze-thaw damage, insects, mold, and decomposition so is well suited for construction applications.

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A promotional graphic for AEC Tech Strategies. It features the text 'AEC TECH STRATEGIES News and Resources for those designing and building the future'. Below this is the 'HUB DOT' logo (Transportation Hub for DOT) and the text 'Your source for DOT news and projects'. There is also a logo for 'INTEGRATED PROJECT DELIVERY' with the text 'IPD News, Projects and Perspectives' and a logo for 'GIS SOLUTIONS sponsored by esri' with the text 'GIS Solutions Sponsored by esri'.



To avoid closing the highway, Granite Construction built a temporary wall for the culvert adjacent to the existing road, switched traffic onto two lanes built over it, and then excavated the existing highway to expand the culvert.

Source: Insulfoam (www.insulfoam.com), a division of Carlisle Construction Materials.

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Exclusive



Combating CSO

Land, water, infrastructure, ambassadors, allies, and agency support: While these factors may bring to mind a complex plot from a number of recent war-themed cinematic adventures, they are also components of the City of Philadelphia's Office of Watersheds' plan for combating combined sewer overflow (CSO). Though the office, along with Director Marc Camaratta, isn't facing off against some cleverly named evil villain, its opponent is no less formidable.

News



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Upcoming Events

[ARTBA National Convention](#)

Date: September 8, 2013 - September 10, 2013

Location: Milwaukee

[IHEEP 2013](#)

Date: September 8, 2013 - September 11, 2013

Location: Overland Park Kan

[Dam Safety 2013](#)

Date: September 8, 2013 - September 12, 2013

Location: Providence RI

[Marketing in Today's World](#)

Date: September 12, 2013 - September 12, 2013

Location: Los Angeles California

[WateReuse Symposium](#)

Date: September 15, 2013 - September 18, 2013

Location: Denver

Events

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- » [The Principals Academy](#)
- » [Wastecon](#)
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