GEOFOAM OPENS POSSIBILITIES FOR CONSTRUCTION

BY SEAN O’KEEFE  
Layer Cake Creative

Construction challenges come in all shapes and sizes, and much like the nearly limitless diversity of potential challenges, solutions can be equally unique. For general contractors W.W. Clyde of Springville, Utah, one such challenge and innovative solution recently presented itself on a road and bridge project in Pocatello. For W.W. Clyde, a fourth generation family-owned business focused on heavy civil infrastructure projects, a willingness to confront challenges through innovation has been a hallmark of the firm’s success since 1926.

The project, known as the Cheyenne South Valley Connector, is composed of a mile of new two-lane roadway that when complete, will connect the east and west sides of Pocatello. The project’s main feature is a 430-foot long bridge that will traverse the Portneuf River, six sets of active railroad tracks, South 2nd Avenue in Pocatello and several local bike sets of active railroad tracks, South 2nd Avenue in Pocatello and several local bike

The Cheyenne South Valley Connector will be a real community asset when it opens toward the end of 2015," remarked Clyde. "In almost every construction project cost, schedule and resources are the three primary variables, and as the project manager it’s my responsibility to balance the allocation of each, which often requires some innovative thinking."

On the construction of the Cheyenne South Valley Connector, innovation came in the form of an unusual application of ACH Foam Technologies’ Foam-Control EPS Geofoam. An engineered lightweight material made of expanded polystyrene (EPS) foam with high compressive strengths and predictable material performance, Foam-Control EPS Geofoam is frequently used as a structural-fill on roadway and embankment projects. In the case of the project’s large bridge, W.W. Clyde’s structures manager, Rich Lowe, suggested that the Geofoam be used to create the form work required to shape the bridge’s three concrete piers.

"We had never used foam as concrete forms before, but this project really opened our eyes to the possibilities of this dynamic product and its ability to help us solve construction challenges in the future," Clyde said. Typically, builders use either wood or metal to construct concrete forms, which in custom applications such as the bridge forms can be very time consuming and fairly expensive. Clyde calculated that using Geofoam as the concrete form material saved the project an estimated $7,800 in material costs alone. Add to that a projected 200 man hours saved by not having to build wooden forms by hand to meet the design specifications for the concrete piers supporting the overall structure.

The W.W. Clyde team carefully reviewed the engineering plans for the piers and then worked closely with ACH Foam Technologies’ in-house engineering department to develop drawings for the form work, which required state approval before being used. Once the drawings were approved, the foam blocks were cut and shaped to the engineering specifications of the pier radii. Curved fillets were attached to the foam blocks to create the finished concrete’s fluted surfaces, adding a smooth, aesthetic flair to the final surface. The foam blocks were then delivered to the site, secured in place, and the concrete was poured from the top to fill the carefully constructed void of each pier.

"Using ACH Foam Technologies’ Foam-Control EPS Geofoam not only saved money, but it also saved a lot of time," Clyde said. "We shaved more than a week off of a very tight construction schedule by using EPS Geofoam to make the concrete forms. Truthfully, most of the form work itself was done by ACH Foam Technologies in shaping the product to our specifications. When it arrived on site, putting it in place was quite easy and things were very efficient."

When asked to name the greatest benefit of using Geofoam as a concrete form material, Clyde said that beyond the benefits directly related to the project budget and schedule, the ease of use, smooth finish and ACH Foam Technologies’ customer service all exceeded his own expectations. While construction challenges will continue to come in all shapes and sizes, when it comes to concrete form work, thanks to innovative products like Foam-Control EPS Geofoam solving those challenges is getting a little easier.

"Bringing people home for 4 generations."