



I-15 BRIDGE RECONSTRUCTION

CASE STUDY



GROUNDING IN STRENGTH

Forterra

Your project is functional in record time.

Project Description

Forterra Structural Precast was the main subcontractor on the award winning I-15 Bridge Reconstruction project. Forterra produced and erected the girders and partial depth deck panels used to reconstruct this four lane bridge on I-15 over the Virginia River in St. George, Utah. This is one of many projects that Forterra has worked with the Utah Department of Transportation on and it showcases innovation in construction and how these innovations have improved transportation projects in Utah.

This project utilized precast concrete partial depth deck panels. These deck panels replace the formwork and half of the concrete and rebar that has historically been cast-in-place on the job site. The time and work that was traditionally spent forming and stripping deck forms caused schedules to be weeks longer. This innovative design saves time on schedule and makes the process much more efficient and safe. The public's exposure to the construction zone is greatly reduced, along with travel safety issues that are inherent in road construction.

Products

Forterra supplied (450) precast concrete partial depth deck panels and (42) UBT82 precast concrete girders at 138'-7.5" long. This bridge reconstruction project was split into two phases for construction. Two lanes were constructed at a time to keep I-15 open during the entire construction process. Erection also took place at night to minimize traffic disturbances.

Challenges

Forterra worked with UDOT to design the bridge in three spans, giving the bridge a total length of 416 feet. During erection of the precast girders, a 750 ton crane had to be brought in to lift the girders to the center section of the three span bridge. This crane had to sit on the abutment of the Virgin River. Erecting a bridge over water is a feat on its own, but doing it while leaving I-15 open was even more impressive.

Project Name:	I-15 Bridge Reconstruction Road
Project Type:	Widening
Location:	Brigham Road to Dixie Drive, St George, UT
Engineer:	Utah Department of Transportation (UDOT)
General Contractor:	Meadow Valley Contractors, Inc.
Precaster:	Forterra
Date Completed:	September 13, 2017
Key Products Used:	Precast Concrete Partial Depth Deck Panels, Precast Concrete Girders





Success

Schedule is one of the main drivers in today's projects and this project was no exception. Forterra had six deliveries for each phase of the project. Both phases, including erection, took 2.5 weeks each and the entire project was completed on September 13th, 2017. Due to the innovative design and seamless construction of the bridge, this project won the Excellence in Construction Award from the Associated Builders and Contractors of Utah for a Civil Road Construction Project over \$1 Million in 2017. It is a great representation of the entire design and construction team working together to safely and successfully keep Utah moving.

"Precast has been a major component of accelerated bridge construction in Utah. This bridge is a prime example of how even in traditional design bid build construction the construction process is greatly expedited," said Lee Wegner of Forterra Structural Precast.

Forterra has had many opportunities to work with UDOT on bridges. Lee Wegner is a nationally recognized expert in the use of precast concrete for accelerated bridges and pavement construction. He is able to work closely on all aspects of the project, from design to erection, to bring value engineering and innovative solutions to each bridge. This kind of expertise is very helpful in completing successful, safe projects in Utah.



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Forterra is a leading manufacturer of water and drainage pipe, and related products, as well as advanced structural and architectural pre-stressed and precast concrete solutions. With strategically located facilities across the United States, Mexico, and Canada, Forterra helps build and maintain the sustainable infrastructure of North America. Whether providing water to homes or ensuring safe roadways, Forterra innovative products and services are designed to improve quality of life and help communities grow and thrive.

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