PROJECT: I-15 Corridor Expansion (CORE)

LOCATION: Utah County, Utah

OWNER: Utah DOT

DESIGNER: Provo River Constructors (PRC)

CONTRACTOR: PRC

COST: $1.725 billion

START DATE: January 2010

COMPLETION DATE: December 2012

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The CORE of history

I-15 rebuilding largest road project ever in Utah

By Jeff Zagoudis
Associate Editor

When Provo River Constructors and the Utah DOT decided to undertake the I-15 Corridor Expansion project in January 2010, they knew it was an ambitious endeavor.

They wanted to completely reconstruct and widen 24 miles of the major north-south route, a stretch of almost 390 lane-miles. The original highway was constructed in the 1960s, with wear and tear from years of salt for snow control on top of regular usage by a current capacity of 100,000 vehicles per day.

This particular span includes 10 freeway interchanges and 63 bridges. Upon completion it will be, according to UDOT records, the largest highway construction project in state history.

To top it off, UDOT wanted to complete the project in less than three years—which, according to the agency, would make it the fastest billion-dollar highway project in the history of U.S.
road construction.

"The challenge obviously has been how to rebuild all of this and still maintain traffic," Todd Jensen, UDOT project director, told ROADS & BRIDGES, "because there's really no other north-south contiguous route nearby." This meant that at least three lanes had to be open to traffic at all times throughout construction.

Work started with what Jensen calls "Phase 0," widening the outer lanes of the existing roadway first; traffic was then moved to those outer lanes so crews could begin resurfacing the inside. They also split the lanes, creating two in each direction on the same side of the highway.

These and other strategies allowed PRC and UDOT to limit the number of daytime lane closures—in fact, as of the end of June, PRC had only used 50% of their allotted daytime closures. "Our longest closure has been 90 days," Jensen said.

Poor soil conditions posed some challenges, especially on the southern end of the project limits near Utah Lake where issues like settlement, groundwater and liquefaction were prevalent. PRC employed a number of geotechnical techniques in the area, including replacing some of the soil with geofoam to reduce soil settlement time. On the bridge side, six of the total 63 were built using accelerated bridge construction techniques, which allowed crews to build them on the side of the road and then move the spans into place. This sped up the process considerably.

"We were able to move the Sam White Bridge [now the longeset two-span bridge in the Wesetern Hemisphere to be moved] over five hours," Jensen said.

The CORE project is still on track for completion in December—35 months from the start date. R&B