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## Back in Action

### Hoover Dam bridge project back on line after cableway completion

The work on Hoover Dam bridge is back in full swing. Crews last month began erecting a replacement cableway system for the \$240 million project. The long-anticipated bridge will create an alternate crossing over the Colorado River. Traffic along U.S. Highway 93 now travels over the two-lane crest of the dam, which has steep and windy approaches.

Bridge construction temporarily ground to a halt in September 2006 when a cableway system used to carry building materials over the Black Canyon collapsed amid 55-mile-per-hour winds. Work has since continued on other project portions while a replacement cableway system was readied as a replacement.

"Prior to the collapse the multiyear project was on track," said Dave Zanetell, project manager for the Federal Highway Administration. "Production work has since occurred on a limited basis using conventional cranes."

The project's general contractor, Obayashi Corp. of San Francisco, and PSM Construction USA of Brisbane, Calif., bought and refurbished a 42-year-old cableway system from American Bridge Co. of Coraopolis, Pa. The supplier had used the crane, built by manufacturer Skagit in 1964, to erect West Virginia's New River Gorge Bridge through 1977. After appearing on more projects, it was taken out of service in 1988.

The cableways, or "high lines" as crews call them, play a key role in the bridge's construction. Two pairs of 3-inch-thick wire cables are strung between Nevada and Arizona over the Colorado River. They hang from two 330-foot-tall steel towers that are anchored with backstays and concrete foundations. The cableways, which span 2,500 feet, are necessary to place the concrete and steel sections that make up the 1,960-foot-long, 88-foot-wide bridge structure.

The cableway erection method helped the contractor cinch the \$114 million contract in October 2004. The team has since designed, fabricated and constructed a replacement system from scratch. Unlike the previous system, the new one was specifically engineered for the Hoover Dam job. It's now in limited use until it's fully vetted, a process expected to finish by the end of this month.

"They are currently flushing out a few details like slack carriers, loan blocks, hydraulics and operational efficiency," Zanetell said. "These are the type of issues that can be expected when bringing such an integrated system online."



The cableway collapse and replacement has lengthened the project schedule. The bridge was scheduled to be completed later this year, but it's now on track to open in fall 2010. The contractor must pay for the replacement system.

The cause of the collapse is still under investigation.

The project should still finish within budget because of a \$6 million contingency cushion. But the contractor team faces \$8,000 per day in late fines after 1,217 working days, which could amount to more than \$5 million in penalties.

Las Vegas Paving Corp., meanwhile, has been awarded a \$7 million road paving project along the bridge approaches. Work is expected to finish this summer. A final \$8 million contract will be awarded in 2009 for remaining paving, final signing, striping and barriers.

The four-lane structure, dubbed the Mike O'Callaghan-Pat Tillman Memorial Bridge, will carry up to 17,000 vehicles a day. The U.S. 93 corridor is identified as an important trade thoroughfare in the North American Free Trade Agreement.

"This job is ready to rock and roll," Zanetell said. "We're really excited to bring this project on line."

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