This two-lane, three-span bridge boasts a 240-ft center span, the longest simple span precast, post-tensioned spliced concrete girder bridge in the U.S. The main span is anchored by a pair of 120-ft-long adjacent box beam spans. The center span includes five modified New England bulb tee girder lines, each consisting of three individual segments, 64 ft, 108 ft, and 64 ft respectively. The precaster was required to produce a 10,000-PSI self-consolidating concrete mix to meet the design demands on the large girders. Girder segments were erected using a single Manitowoc crane with 160 ft of boom capable of hoisting the 93-ton segments into place. The approach spans each feature 10 adjacent box beams cast using 8,000-PSI self-consolidating concrete. Use of a design-build project delivery system, the first such use on a major transportation project within the state, greatly accelerated completion.

(continued on page 2)
Cross Street Bridge Project (continued from page 1)

Project Data: Bridge Length: 480 ft; Longest span: 240 ft; Bridge Width: 44 ft 8 in. fascia to fascia; Deck area: 21,440 sf. Components: 20 120-ft box beams, 42-in. deep and 48-in. wide; 5 240-ft New England bulb tees 9.84 ft tall; cast in three segments per girder line and post-tensioned in place.

Project Credits: Owner: Town of Middlebury, VT; Engineer: Vanasse Hangen Brustlin Inc. (VHB), North Ferrisburgh, VT; Contractor: Kubricky Construction Corp, Wilton, NY; Precaster: J. P. Carrara & Sons Inc., Middlebury, VT. Photos and story taken from PCI Design Awards Website.
For the replacement bridge over Sinclair Creek in Bath, NY, Steuben County, who was the owner, project designer and contractor, installed 8 prestressed concrete voided slabs, each 35'-0" x 4'-0" x 1'-3" deep. Lakelands Concrete Products, Inc., Lima, NY supplied the 7000 psi beams, produced in accordance with the NYSDOT PCCM manual. Thanks to Laurie Amer, Lakelands Concrete Products, for the photo and story.

Design-Build Speeds Repair on New York's Route 42

By Johanna Knapschaefer

Thanks to an executive order from New York's governor, the New York State Dept. of Transportation is using design-build on emergency reconstruction of six miles of state Route 42. The Catskills-area stretch suffered flooding during Hurricane Irene and Tropical Storm Lee.

Restoring Route 42 for Ulster and Greene counties by February is a top priority, says NYSDOT Commissioner Joan McDonald. Gov. Andrew Cuomo (D) issued Executive Order 19, allowing NYSDOT to use design-build.

Halmar International and McLaren Engineering Group won the best-value contract of $14.1 million, beating out four other teams. The work includes replacement of two bridges, 150 ft and 100 ft long, respectively, between Route 23A to the north and Route 28 to the south. The team will repair the three miles between the steel-deck-girder and concrete bridges, says Chris Larsen, Halmar principal.

The team will use precast-concrete decks. “Although the precast system is 20% to 30% more costly than the traditional cast-in-place system, it will provide better quality since the bridge decks will be built indoors in a controlled environment,” Larsen says. The precast system also avoids costs for temporary heating during winter construction, he says.

Crews are working six days a week to mobilize the preliminary design phase. “The key thing is to get the steel into fabrication. We almost had the steel designed before we started fabrication,” Larsen says. “For me, it is really important that we show everyone design-build is really a good solution that benefits the DOT.”

The state is still assessing the full cost of damage from the hurricane and storm. Seven bridges and 14 highway segments were still closed as of Oct. 10, including the ones in the design-build contract.

The Fort Miller Company will be manufacturing the panels for this first design-build project in New York State. Taken from ENR 10/17/2011, thanks to Scott Harrigan.
Precast Concrete Arched Culvert

- 14 sections 6’ x 42’ x 10’ rise
- 2 detached headwalls
- 4 precast wingwalls
- 20 loads installed in two days
- Precast Supplier - Kistner Concrete Products

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