Construction

How the bridge will be constructed will be decided by the contractor chosen to build it. However, the designers have determined a scheme whereby the steel structure and the concrete deck are assembled separately on falsework. Once each subassembly is complete and the post-tensioning is applied to the deck, the falsework supporting the deck would be gradually lowered across the entire length of the bridge, or at least on a span-by-span basis, so that the hanger cables are uniformly loaded. The objective is to avoid tedious situations where each cable is tensioned one-by-one, which inevitably leads to secondary effects in adjacent cables which must then be readjusted repeatedly.

Installation of temporary supports will be facilitated by a regulatory agency approved temporary gravel berm across two-thirds of the river. The primary conditions for the berm are that it be installed and removed during the approved in-river work periods and that it be monitored and repaired if needed during high flows. Small temporary bridge structures will be required to span the openings in the berms if deemed necessary.

In order to ensure a quality built project, CMLC held a public prequalification process for potential contractors. Prequalification categories included General Contractor, Steel Fabricator, Precast Concrete Fabricator, and Bridge Erector. On the basis of this process, four general contractors were prequalified along with a range of subcontractors for the other three categories. Once the design was complete, a call for tenders was initiated, with the restriction that only prequalified contractors could be on the bidding teams. The results of the tender process will be made public shortly with construction expected to begin in late 2011 and to be finished in 2013.

Figure 15 - Photograph of physical model; model courtesy of Replicate Designs, photo courtesy of Mike Palmer

Figure 16 - Rendering showing proposed design in the winter, © 2010 RFR

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