Transportation

Highways & Bridges

Client

U.S. Army Corps of Engineers

Location

Folsom, California, USA

Folsom Dam Bridge Construction

Project Highlights

- Accelerated bridge construction project that will be completed within 5 years, including planning and design
- New bridge structure allows traffic to bypass existing dam roadway, meeting security requirements for nearby communities and relieving traffic congestion
- Development of bridge alternatives for most suitable and cost-effective structure in a challenging site
- Design and construction minimize impacts on historic structures and ongoing dam operations

Project Description

Following a February 2007 groundbreaking of the new Folsom Dam Bridge, construction began on the project, marking a rare occurrence in transportation planning—a project that will be planned, designed, and built within 5 years.

The new Folsom Dam Bridge is a 1,000-foot, cast-in-place segmental-constructed bridge over the American River canyon below the Folsom Dam. CH2M HILL provided environmental document approval tasks, alternatives selection, and design, and served as a joint venture partner in the roadway and bridge design that will allow traffic to bypass the existing roadway on Folsom Dam.

The Folsom Dam Bridge replaces the existing two-lane Folsom Dam Road, which was a vital transportation artery, averaging 18,000 daily vehicle crossings. In February 2003, citing terrorism concerns—a dam breach would pose a threat to hundreds of thousands of downstream residents—the U.S. Bureau of Reclamation closed the road. The closure left local residents with a huge traffic problem.

As a result of the closure, nearby Folsom, located between El Dorado and Placer counties, suffered some of the region's worst cut-through traffic congestion on its residential streets. Commuters were detoured through town, clogging residential and commercial streets, and causing customers to stay away from Folsom businesses to avoid the traffic.

The new Folsom Dam Bridge, only 100 yards downstream of the dam, won federal support and financing as the alternative route. Because of the impacts to the local community, the new bridge was authorized by Congress in 2003 and was placed on an accelerated schedule. Typically, a bridge of this type could take up to 10 years for funding, planning, design, and construction. In contrast, the Folsom Dam Bridge is scheduled to be done in half that time.

In planning and designing the new bridge, CH2M HILL estimated that 26,000 cars per day will use the bridge when it opens in 2008. It was designed, however, to handle 40,000 vehicles to meet future needs and to accommodate bicyclists and pedestrians.

CH2M HILL worked closely with the U.S. Army Corps of Engineers, the City of Folsom, and other state and federal agencies to complete the planning and design for the bridge and a new 2-mile connector road. The bridge—described architecturally as clean and functional—will stand 200 feet above the American River.

CH2M HILL performed engineering work in support of the environmental document development and approval. This work included the development of bridge alternatives along with recommendations for the most suitable and cost-effective structure for this very challenging site. Alternatives selection analysis included investigations for foundation recommendations to minimize effects on historic structures in the canyon as well as construction methodologies that did not interfere with dam operations.

As the managing member of the design team, CH2M HILL's responsibilities included the management of multiple subconsultants and coordination of reviews and meetings with several stakeholders.