

Pacific Street Bridge

A HOCHTIEF Company

Owner

City of Oceanside

Location

Oceanside, CA

Value

\$18,000,000

Market

Bridges

Start - Completion Dates

10/2006 - 12/2008

- Cast-in-place box girder bridge
- Bridge design reduces environmental impact to area
- Modified construction method for faster and safer construction

Project Description

The San Luis Rey River flows from the inland mountains of Southern California west to meet the Pacific Ocean in Oceanside. Pacific Street carries coastal traffic over this river and provides access via an “Arizona crossing” to Oceanside Harbor on the north bank of the river.

This Arizona crossing consists of culverts through an earthen dam and has been washed away five times in the last 25 years during floods, resulting in environmental damage as well as disruption to traffic in Oceanside. The Army Corps of Engineers mandated that the Pacific Street Arizona crossing could only be rebuilt one more time, and if it washed away again after that, it could not be rebuilt again. The resulting permanent closure of Pacific Street would have a devastating effect on the businesses in Oceanside Harbor; therefore, the City created a plan to replace the Arizona crossing with a bridge.

The new bridge spans the entire river and has two main benefits: 1) it does not impede the river’s flow and 2) it is not vulnerable to washouts. The use of a bridge rather than an Arizona crossing allows the river to return to its natural state and reduces the crossing’s environmental impacts. The new bridge was designed as a cast-in-place post-tensioned box girder structure built parallel to the existing Pacific Street Arizona crossing.

The City had developed a plan to build the bridge using a temporary 600-foot-long piled access trestle, and the permits for construction were written to support this method. However, Flatiron proposed pushing fill into the river from both banks to provide the necessary access for the construction of the new bridge. Flatiron still needed to build a trestle, but the new trestle only required 12 piles — about 7 percent of what was required by the original design — and is only one-fourth as long as the original trestle.

By using this method Flatiron shortened the construction duration for the bridge dramatically, minimizing the environmental impacts associated with pile driving. Flatiron also improved the ability to contain spoils from the foundation by utilizing fill rather than a trestle. This method also allows for safer and easier access and egress for equipment and crews. It greatly reduces the safety risks associated with working from a



trestle — work that would have been very difficult given the type of equipment required for the foundation work.

The biggest challenge that Flatiron faced was obtaining the necessary permit modifications to allow the change in construction method. Permit modifications were needed to address the revised work method as well as to address work window restrictions due to nesting and breeding seasons of migratory birds. The reduction in environmental impacts of Flatiron's revised construction method was valued by the five permitting agencies involved, and the required permit modifications were quickly issued. Time savings during construction have more than compensated for the minor delays caused by re-permitting.

Company Role

Flatiron is the prime contractor for this project.

Awards

- American Society of Civil Engineers, San Diego Section - Outstanding Project, 2009
- California Construction - Award of Merit (Transportation/Bridges category), 2008