

## Interstate 5 Reconstruction

A HOCHTIEF Company

### Owner

California Department of Transportation

### Location

Buena Park, CA

### Value

\$203,000,000

### Market

Highways & Interchanges

### Start - Completion Dates

4/2006 – 9/2010

- Upgrade of two miles of Interstate 5 with four major interchanges
- Six bridge improvements and three miles of retaining walls
- Portland cement and asphalt concrete paving
- Mainline roadbed below the perched water table
- New water and sewer lines
- Extensive traffic maintenance

## Project Description

Flatiron reconstructed a two-mile portion of Interstate 5 from Orangethorpe to Artesia Avenue in Buena Park, Calif. This project was comprised of six bridge improvements, both widening and complete reconstruction, three miles of retaining walls to accommodate the extended right-of-way on either side of the existing highway and a storm water pumping plant. The project also included replacing more than 10,000 linear feet of water and sewer lines, all within the public right-of-way.

This project had two unique features. First, two-thirds of the mainline roadbed was below the perched water table, requiring construction of the subgrade in highly saturated soils. The mainline design therefore incorporated two layers of waterproof membrane in between cement treated base (CTB). Second, as the team removed an existing bridge to build a new bridge, they utilized a rare technique of bridge jacking to lower the superstructure into its final position.

The adjacent live freight track presented a major challenge as it required extensive and difficult shoring methods. This shoring method required 36-inch-deep welded wide flange beams for 24-foot-high cantilevered shoring adjacent to an active Union Pacific Railroad line. Complex traffic staging was also required, mainly associated with the following four major interchanges: a reconstructed undercrossing at Artesia Avenue; the complete removal and reconstruction of the Western Avenue ridge over I-5; bridge widening over I-5 at Beach Boulevard; and the complete removal and reconstruction of the bridge at Stanton Avenue.

This was the third largest highway construction contract in the California Department of Transportation's history. This is the final section of Orange County's original Interstate 5 to be upgraded to 10 lanes.

### Company Role

Flatiron managed this joint venture.

### Awards

- California Transportation Foundation - Freeway/Expressway Project of the Year, 2010
- California Department of Transportation - Partnering Success in Motion Award, 2008

