

Main Street Bridge Replacement Temecula, CA

Water Crossing

Project / Team Members

Owner:
City of Temecula, CA

Engineer:
Simon Wong Eng.

Contractor:
Granite Construction

Technical Description:

•Width: 47'
•Span: 152'
•Style: Cambridge
•Finish: Weathering
•Decking: Concrete
•Sidewalk: 2 -9' Exterior

Installation Date: 2014



The City of Temecula, CA, founded in 1859, and incorporated in 1989, is in the heart of Southern California wine country. With a population of 106,000, the city constructed a new City Hall in 2010 in Old Town Temecula. A seven span cast in place concrete bridge

constructed in 1949 connected the Old Town of Temecula on the east side with the rest of the growing city on the west side. The bridge was classified as Functionally Obsolete (FO) by the California Department of Transportation (Caltrans), and did not meet the needs of the growing community. Crossing Murrieta Creek, the old Main Street Bridge included six concrete piers, which if not cleared of debris, exacerbated the flooding problems. Additionally, the old 2-lane bridge only had a 2' wide sidewalk.



The Army Corp of Engineers and the Riverside County Flood Control District were spearheading an initiative for improvements in the Murrieta Creek near the Main Street Bridge. While the replacement of the Main Street Bridge was a component of the overall project, the City of Temecula, as a result of earlier floods and the need to improve the waterway, decided to take the lead on the new bridge replacement program. This initiative would lead to a new single span structure that connects the new City Hall and commercial area in Old Town Temecula with the rest of the City.

According to Jon Salazar, Project Manager for the new Main Street Bridge, one of the key criteria in selecting the style and finish of the new bridge was that it had to be aesthetically in keeping with the feel of Old Town Temecula.



Main Street Weathering Truss Replacement Bridge Temecula, CA

U.S. Bridge worked with Simon Wong Engineering, now Kleinfelder, to develop a structure that would meet the needs of the city as well as keeping the Old Town look and feel. Post design, the City awarded the contract to Granite Construction who in turn selected U.S. Bridge / Contech Engineered Solutions to engineer and fabricate the structure.



The U.S. Bridge Cambridge style truss bridge with a weathering finish was designed to meet the live load standards of H20 Caltrans Permit Load. The bridge span was 152' with a width of the 47' that incorporated two 9' exterior sidewalks. As this span length is well within U.S. Bridge's capabilities, no piers were needed in the waterway so not only did the City of Temecula receive a modern, updated bridge structure, but also eliminated the cost and the potential of debris build-up on the piers. Unlike the old seven span cast in place concrete bridge, the new clear span bridge structure was designed to meet the 100-year flood conditions for the area.

Old Town Temecula includes many real wood walkways and the City wanted to maintain that appearance with the bridge decking and approach roads. Granite awarded a contract to T.B. Penick & Sons, Inc. to replicate the wood walkways on the approach roads and the bridge itself. T.B. Penick was able to achieve this by utilizing various lengths of Bomanite's Boardwalk pattern as well as Bomanite's Ashlar Slate Bomacron pattern on to the concrete. The deck construction was reinforced concrete on 2" SIP forms for the roadway and reinforced concrete on ½" floor plates for the sidewalks. The structure incorporated dual wooded railings. The structure included two 16' stone pillars on either end of the bridge and pedestrian walkway lighting. The demolition of the old bridge and construction of the new bridge was completed in 14 months.

As Jon Salazar stated "Everyone in the City of Temecula is thrilled with the new bridge structure, the appearance and the pedestrian walkways."

