

Granite Construction completes timeline-intense I-15 project



Granite Construction's work on the I-15 direct access ramp project included constructing bridge foundations and realigning almost 600 feet of 60-inch cement mortar lined and coated steel waterline pipe.

Granite Construction was awarded the Caltrans I-15 direct access ramp project in the Mira Mesa area in 2012. The majority of this work involved the construction of a cast-in-place post-tension concrete girder bridge with cast-in-drilled holes pile foundations. In order to construct the bridge foundations, 570 feet of 60-inch cement mortar lined and coated steel waterline pipe had to be re-aligned. The construction of this pipeline was critical to project timeline and was overseen by both Caltrans and the City of San Diego.

The depth of the pipe varied from 12-15 feet and was excavated with 1:1 slopes (top photo). The 40-foot steel and cement-lined/coated sections of pipe were placed in the trench with a CAT 385 excavator. The pipe was joined through welding and concrete diaphragms and was backfilled with high SE sands and native non-expansive soils (center photo).

The scope of this work also included a weekend waterline tie-in and abandonment of the existing line. Granite and the city had to drain 500,000 gallons of potable drinking water, shutting down 25% of the city's drinking water in order to perform the tie-in. From one Friday night through Sunday night, Granite's crews removed 80 feet of existing 60-inch line, placed two tie-in pieces (bottom photo) and approximately 80 cubic yards of rapid-strength PCC. The line was energized Monday morning.

Upon the completion of the installation and tie-in, the existing line was abandoned. Four sections of the old 60-inch pipe were removed due to utility and foundation conflicts during a three-day period. The remainder of the line was pressure-grouted with cellular concrete by a subcontractor in a one-day period.

The main span box girder bridge over I-15 is complete, as false-work came down in early November. Construction on the ramp bridges and retaining walls is moving per schedule with the entire job scheduled for completion next spring.

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