MONROE AVENUE BRIDGE REPLACEMENT

ALEXANDRIA, VIRGINIA

CLIENT:

Potomac Yard Development, LLC

CONTRACT AMOUNT:

$43 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Jacobs Engineering Group

COMPLETION DATE:

2008

Shirley was awarded the $43 million contract for the design and construction of a new 840-foot long, six lane wide bridge to carry US Route 1 over a very heavily traveled rail corridor. The bridge was erected, and the existing bridge was demolished, over the heaviest traveled rail corridor on the East Coast. Coordination with CSX and its subcontractors was critical to the path of the project.

Due to the heavily traveled roadway that the bridge carried, daily maintenance of traffic was required to limit the impacts to the traveling public. The phased construction was sequenced with the eastern span of the new bridge opening mid-way through the project. All traffic was removed from the existing bridge, placed on the new span, and the existing bridge demolished and the second phase constructed in its place. Due to limited width on the three-lane bridge deck, the development and installation of the reversible center lane traffic signals were vital in the maintenance of traffic. They allowed for two lanes (the original width of Route 1) to flow in the direction of rush hour.

Minimizing the impact of the construction on the surrounding neighborhood played a significant role in the construction. Driving pile within 100 feet of private residences, installing deep (16 feet) utility lines within eight feet of existing businesses, and demolishing retaining walls within five feet of retail stores required constant attention and demanded thorough communication between Shirley and the community. This was accomplished through monthly project update meetings at the local recreation center. Progress reports were followed by question and answer sessions where questions were answered and input was received.

For the project, 37,600 linear feet of pile was driven; 8,700 cubic years of structural concrete poured; 1.4 million pounds of reinforcing steel placed; six million pounds of structural steel erected; 16,000 tons of stone and 18,000 tons of asphalt placed; 220,000 cubic yards of earthwork; and 23,000 feet of utilities installed over the course of the project.

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SHIRLEY
CONTRACTING COMPANY, LLC