

# ROUTE 27/244

ARLINGTON, VIRGINIA



**CLIENT:**

Virginia Department of Transportation (VDOT)

**CONTRACT AMOUNT:**

\$31.4 million

**DELIVERY METHOD:**

Design-Build

**CONTRACTOR:**

Shirley Contracting Company

**DESIGNER:**

Dewberry Consultants LLC

**COMPLETION DATE:**

In Progress

In August 2011, the Shirley Design-Build Team was awarded the Route 27/244 Interchange Design-Build Project by the Virginia Department of Transportation (VDOT). The \$31.4 million project replaces the existing Washington Boulevard concrete arch bridge over Columbia Pike in Arlington. The new bridge will be wider, longer and include significant aesthetic features including decorative parapets and abutment walls, memorial pylons at the bridge corners, and haunched girders with a two-tone paint scheme to mimic the arch structure of the old bridge. A light well will separate westbound and eastbound lanes. The new bridge will accommodate Columbia Pike widening and will provide enough clearance for the future Columbia Pike streetcar line being planned by Arlington County.

Another significant element of the project will be the replacement of an existing 10' x 7.5' box culvert that currently conveys Long Branch through the center of the project and is integral with the substructure of the existing bridge. The team developed a culvert and bridge design concept with a new double 10' x 10' culvert aligned through the new bridges while maintaining structural independence between the design elements. This alignment optimized the culvert length, eliminated the need to tunnel large diameter pipes under Washington Boulevard, and minimized the impacts to the Long Branch Flood Plan. This concept also modified the location of the culvert outfall to minimize erosion that has been a maintenance concern for VDOT and Arlington County for many years.

The Project scope also includes modifications to the interchange ramps to improve safety and address multi-modal transportation issues. Our Team worked closely with VDOT to optimize the ramp alignment while balancing the need to upgrade the existing interchange to current design standards with the need to minimize the right-of-way impacts outside of the current tight urban footprint. Through this effort our team was able to eliminate design exceptions and 21 of the 32 design waivers that VDOT's Request For Proposal indicated would be required.