



## Anacostia River Tunnel Project DC Water

**Location:** Washington, D.C. USA

**Date:** 2012-Present

**Structure:** Mined Tunnel (TBM, SEM)

**Length:** 102 feet (31 meters)

**Cross-Section:** 27 feet 4 inches (8.3 meters)

**Geology:** Clay of the Patapsco / Arundel Formation

**Cost:** \$254 million

**Client:** Impregilo, Healey, Joint Venture, and Parsons (IHP)

**Owner:** District of Columbia Water and Sewer Authority



Figure 1. Anacostia River ISCT Excavation.

### Tunnel Design and Site Support Services:

The Anacostia River Tunnel Project is part of the clean rivers project for controlling discharges of combined sewer overflow to the Potomac River, Anacostia River, and Rock Creek within the District of Columbia. The project consists of a system of deep, large diameters underground storage tunnels and associated diversion and pumping facilities. When completed, the tunnel system will be used for the conveyance and storage of combined sewage overflow. The tunnel system consists of a series of three tunnels from the Blue Plains advanced wastewater treatment plant to the northeast boundary area in the vicinity of the Brentwood Reservoir.

Gall Zeidler Consultants (GZ) designed the Inter Shaft Connector Tunnel (ISCT) between CSO 019 North and South shafts, which are part of the Division C – CSO 019 Combined Sewer Overflow and Diversion Structures.

The ISCT has a diameter of approximately 27.3 feet (8.3 meters) and is located approximately 99 feet (30.2 meters) below ground level in clay soil of Patapsco/ Arundel Formation. The maximum and minimum groundwater level varies between 1 foot (0.3 meters) and 5 feet (1.5 meters) below the ground surface.

Services provided by GZ included the design of the excavation and support system, the final lining, and the waterproofing system. The excavation and support design of the tunnel was based on Sequential Excavation Method (SEM) principles. GZ also provided expert design consulting services and site support during construction.



Figure 2. Lowering TBM into the shaft at CSO 019N-DS.