

DC Clean Rivers: CSO-021 Diversion Facilities

Owner:

DC Water
Washington, DC

Client:

Greeley & Hansen

Role:

Program Management
Construction Management

Key Characteristics:

- 90-ft deep 20-ft drop shaft, diversion structure, and ventilation structure built to intercept the existing Combined Sewer Outfall.
- \$30M project built concurrently with a \$100M+ expansion of Kennedy Center of the Performing Arts (KCPA)
- Combined Support-of-excitation system consisting of secant piles and rock
- Design-Bid-Build Project Delivery
- Designed to connect to the future Potomac River Tunnel

Professional Services:

From: November 2016
To: July 2018



CSO-021 Project (foreground) and concurrent Kennedy Center and Expansion Project (background)

When the Kennedy Center for the Performing Arts (KCPA) announced plans to expand their facility over the top of existing critical DC Water infrastructure, DC Water fast-tracked a plan to design and construct upgrades to its CSO-021 outfall in preparation for a future connection to the proposed Potomac River Tunnel. The work included the construction of a 90-foot-deep drop shaft through soft ground and rock, a diversion structure, and ventilation structures. The project required detailed coordination with KCPA's design and construction team while construction of each project progressed concurrently. Construction of the support-of-excitation and shared foundation system included secant piles, rock mass grouting, and 40-ft of rock blasting to reach the final depth.



Aerial Rendering of Finished KCPA Expansion

In the final stages of the project, DC Water worked with KCPA to seamlessly integrate the CSO-021 Diversion Facility structures into the final finished landscape architecture.

As part of the Owner's Advisor Team, JCK Underground provided Construction Management and Resident Engineering services for the project.