

RiverRenew Tunnel System Project

Owner:

Alexandria Renew Enterprises
(AlexRenew) Alexandria, VA

Client:

Brown and Caldwell

Role:

Program Management
Construction Management

Key Characteristics:

- \$460M Program
- 2-miles of 12-ft dia. Conveyance and Storage Wastewater Sewer Tunnel 110- to 160-ft deep
- 0.5-miles of 6-ft dia. Diversion Sewer 10- to 30-ft deep
- Four Shafts, 35- to 65-ft dia. with depths ranging from 120- to 150-ft.
- Ancillary Diversion Structures
- Pumping Station (40 mgd Tunnel Dewatering & 130 mgd Wet Weather)
- Design-Build Project Delivery

Professional Services:

From: Nov 2017
To: Present

In response to a 2017 Virginia State Law, AlexRenew has implemented a plan to address the discharge of combined sewer overflows (CSO's) to Alexandria, Virginia's waterways. The plan, referred to as RiverRenew, has the following major components: a storage and conveyance tunnel system linking the existing CSO's to a new pumping station located at AlexRenew's Water Resource Recovery Facility; relocation of facilities and decommissioning of former administrative buildings; increase in pumping capacity and a wet weather treatment system.

The schedule stipulated by the 2017 Virginia State Law requires the tunnel system be completed by July 1, 2025. To accommodate this schedule, JCK Underground, as part of the Owner's Advisory (OA) team, assisted AlexRenew with critical decision-making required to advance the program including development of conceptual designs and alignments, garnering stakeholder support to construct the tunnel system in historic Alexandria Virginia and obtaining regulatory permission to proceed. In parallel, Design-Build contracting was selected to fast-track the Project procurement. Construction began in October 2020 and the project is expected to finish on time.



Assembling TBM at the bottom of Screening Shaft

As part of the OA team, JCK Underground's full-spectrum of services have included: concept planning; alternatives analysis; alignment selection; planning and overseeing geotechnical investigations; developing program management processes; preliminary engineering; generating RFQ/P documents; geotechnical and structural design reviews; constructability reviews; scheduling and estimating; mentoring and training; public outreach, project risk

management, organizing and construction management overseeing resident engineering and inspections services.

Link: <https://riverrenew.com>

“...JCK Underground’s understanding and expertise of the complexities of tunneling/underground work is an incredible asset to our team and has been instrumental in AlexRenew’s ability to swiftly launch our program ...”

-Caitlin Feehan, AlexRenew Program Manager