

Southerly Wastewater Treatment Plant Chemically Enhanced Disinfection Project



Project Overview & Background

The City of Columbus' Division of Sewerage and Drainage "operates two wastewater treatment plants, Jackson Pike and Southerly," (City of Columbus). The Southerly Wastewater Treatment Plant (SWWTP) in Columbus, Ohio provides wastewater collection and treatment services primarily for the eastern and northern parts of Franklin County.

The facility had a hydraulic capacity of 330 (three hundred and thirty) Million Gallons per Day (MGD) during wet weather events. During high-flow wet weather events over 330 MGD, the flow would "send untreated wastewater into the environment, creating concern for public health and wildlife," (Burgess & Niple). As a result, the City commissioned a SWWTP Chemically Enhanced Primary Treatment (CEPT) Disinfection Project.

CEPT is a "treatment solution that removes total suspended solids," (Burgess & Niple), and allows the facility to handle "increased, unexpected wet weather flows," (Burgess & Niple). Implementing CEPT at the SWWTP would increase capacity by 110 (one hundred and ten) MGD, preventing the facility from becoming overwhelmed during extreme wet weather events, and is a more cost-effective solution than other alternatives.

The contractor, Shook Construction, had the option to choose between profile wall pipe, concrete pipe, prestressed concrete cylinder pipe (PCCP), and centrifugally cast fiberglass reinforced polymer mortar (CCFRPM). The pipe chosen needed to be leak free at normal operating pressures of 5 (five) psi and able to perform during short-term events of higher pressures with each joint being tested to 15 (fifteen) psi.

Shook selected Weholite® because of its leak-free reliable joints, lightweight design, and ease of fabrication which provided the contractors an easy installation process.

System, Partners & Timeline

| Owner | Engineer | Contractor | Installation Timeline |
|------------------------|-----------------|--------------------|---------------------------|
| City of Columbus, Ohio | Burgess & Niple | Shook Construction | July 2018 - November 2018 |

STORAGE SYSTEM REQUIREMENTS

- 3,600'/1097m of 96"/2.44m RSC160 Weholite® pipe
- 7 Manholes
- 9 Elbows

