



PCCP BEST OPTION FOR COMBINED SEWER OVERFLOW

Rigid with testable joints, AWWA C301 withstands harsh environments



PROJECT OVERVIEW

Combined Sewer Overflow (CSO) is a common problem. When heavy rainfall overwhelms pipes that carry sewer and stormwater, this untreated wastewater is driven into rivers and streams. According to the Environmental Protection Agency, nearly 800 U.S. cities have combined sewage systems. Louisville, Kentucky, is one of them. However, the arrangement of this combined sewer pipeline presented uncommon challenges.

A UNIQUE PROJECT

To reduce CSO engineers designed a new pipeline to collect and divert wastewater to a new storage tunnel. When floodwaters subside, water is pumped out and sent to a nearby treatment plant. When specifying pipe engineers considered three primary factors:

- ▶ The new pipeline is located directly under a concrete creek bed with shallow pipe cover available.
- ▶ Prior to installation pipe is stored in or near the frequently flooding creek bed.
- ▶ Nearby railroad tracks limited pipe material options; only rigid pipe is permitted.



THE CONCRETE SOLUTION

To prevent floating, flexible pipe requires at least 4'-6' of cover and cannot be stored in areas where flooding occurs. Prestressed cylinder concrete pipe (PCCP) was the clear choice. AWWA C301 holds up to harsh installation conditions and does not require special bedding and backfill procedures.



Thompson Pipe Group manufactured 4,434 linear feet of 84"-102" diameter pipe with testable joints. Testable joints are leak free and allow zero infiltration. A post construction hydrostatic test was not feasible in this situation, but with testable joints contractors can air test joints in the field at the time of installation and confirm leak-free joints. Harness clamp joints provided restraint where necessary. The two-part harness clamp is positioned around the joint and secured simply by tightening drawbolts on each side of the pipe. All of the joints are covered in thick cement-rich mortar coating. No welding or cathodic protection required.