

Trenchless TECHNOLOGY.

Rockland County Interceptor Sewer Rehabilitation

A scheduled five-year CCTV inspection of a 750-lf, 36-in. reinforced concrete pipe (RCP) sewer interceptor revealed near total failure of the interceptor's top half due to microbially induced corrosion (MIC). Even reinforcing rebar was entirely missing in stretches, leaving exposed soil held in place by very solid root masses. This interceptor is less than a mile upstream



of the region's wastewater treatment plant, so failure threatened to cause sewage backups and disrupt nearly all of Rockland County Sewer District No. 1.

Working with project contractors ACE Pipe Cleaning Inc. and National Water Main Cleaning Co. of New Jersey, the district devised a novel method of trenchless rehabilitation featuring the use of CentriPipe, a centrifugally cast concrete pipe (CCCP) solution, and the use of rolled and banded lengths of sheet steel that were inserted into the sewer, placed in the sewer's worst sections, allowed to expand, and then anchored. The expanded and anchored sheet steel inserts provided a smooth and clean substrate for PL-8000, the cementitious grout applied by the CentriPipe SpinCaster. This use of rolled and banded sheet steel inserts to provide CCCP substrate was entirely successful and appears to be an entirely new method of trenchless rehabilitation.

With a smooth pipe interior provided by the sheet steel inserts, the CentriPipe system was then used to cast a new, structurally sound, 1.5-in. concrete pipe that adhered tightly to the remnants of the original RCP sewer and the new sheet steel inserts. A total of three passes were used to cast this new pipe, and seamless manhole-to-manhole coverage was achieved.

ConShield, an anti-MIC concrete additive distributed by AP/M Permaform, was mixed onsite with PL-8000. Unlike coatings, ConShield provides integral anti-microbial protection throughout the concrete matrix for MIC prevention that does not fail as concrete wears.

Project of the Year

REHABILITATION — HONORABLE MENTIONS

PROJECT OWNER: Rockland County Sewer District No. 1, NY

ENGINEER: County Sewer District No. 1.
Engineer IV Martin J. Dolphin, P.E.

CONTRACTOR: ACE Pipe Cleaning Inc. and
National Water Main Cleaning Co. of New Jersey