Project Profile: TBM TUNNELING

Sanitary Sewer Improvements; Goff Brook Overflow Closure
Wethersfield, CT

PROJECT OVERVIEW AND CHALLENGES

Bradshaw completed a 60” microtunneling/conventional TBM project in Wethersfield, Connecticut for 30” and 48” CCFRPM sanitary sewer installations. The first tunnel (650’) was installed by an Akkerman WM480 tunnel boring machine in stiff, wet clay. The 2nd (420’), 3rd (855’), 4th (152’), and 5th (450’) tunnels were completed behind a Herrenknecht AVN 1200 microtunnel boring machine. An additional drive of 48” RCP was added to the project by change order to avoid a congested intersection and utility conflicts. This 510’ drive was installed on an 1,168’ radius curve. Ground conditions for microtunneling operations were predominantly siltstone, with occasional decomposed rock and dense alluvium. Major challenges for the project included installing the alignments on shallow slopes (.14%) with tight tolerances (+/- 1” on grade, no reverse flow), as well as limited construction footprints.