Project Profile: MICROTUNNELING

BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Chesapeake Avenue Sewer
Edgemere, MD



PROJECT OVERVIEW AND CHALLENGES

In 1991, Bradshaw Construction Corporation (formerly L M Bradshaw Contracting, Inc.) installed the first jacked pipe using slurry microtunneling in the US mid-Atlantic region. An Iseki “Unclemole” microtunnel system was used to jack 212' of 30" steel casing for a 12' DIP sewer (two pass method) under a Chesapeake Bay estuary in extremely soft tidal marsh sand and silt. Bradshaw dewatered and installed a 21' ID jacking pit and 12' ID receiving pit supported with liner plates and steel ribs. The project challenges were: 1) unexpected buoyancy of the MTBM and casing under the estuary; 2) 18" of site flooding from a Nor'easter storm; and 3) organic debris (wood) in the soil causing the MTBM slurry system to plug up and limit production. In spite of these challenges, the sewer was installed to design line and grade and completed on time.





PROJECT INFORMATION - 231

OWNER:
Baltimore County
Department of Public Works
410-887-3300

ENGINEER:
Baltimore County
Department of Public Works
410-887-3300

CONTRACTOR:
Cossentino Contracting, Inc.

COMPLETION DATE:
5/1/1991

GEOLOGY:
Sand & Tidal Marsh Silts

EXCAVATION METHOD:
Iseki Unclemole Slurry
Microtunneling - 30" Ø

MINING DIMENSIONS:
212' x 30" Ø

FINAL LINING:
12" Ductile Iron Pipe

FOR MORE INFORMATION:
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Refer to Project 231