Project Profile: SHAFT CONSTRUCTION

BRADSHAW CONSTRUCTION CORPORATION TUNNELING SPECIALISTS

Upper Jones Falls Interceptor Sewer - Phase 2
Baltimore, MD

PROJECT OVERVIEW AND CHALLENGES

As part of a 6,000 foot microtunnel sewer project, Bradshaw installed a 40’ wide x 70' long x 35’ deep elliptical shaft over an existing 42” sewer and manhole. This shaft was large enough to allow a gravity by-pass of the existing 42” sewer so a unique cross-over structure could be constructed to tie this existing sewer into the new microtunneled 48” sewer. The shaft was excavated by the NATM (New Austrian Tunneling Method) which uses reinforcing steel and sprayed shotcrete to support the shaft walls. Ground conditions were silt and sand over weathered rock. The challenges on the job were protecting the existing sewer, managing flood level flows and constructing the shaft within feet of Interstate I-83.

PROJECT INFORMATION - 434

OWNER:
City of Baltimore
Department of Public Works
Jonathan Scott
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ENGINEER:
Patton, Harris, and Rust Associates
Graeme Lake, PE
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CONTRACTOR:
Bradshaw Construction Corporation

CONTRACT VALUE:
$23,000,000

COMPLETION DATE:
6/30/2007

GEOLOGY:
Silts and Sands over Weathered Rock

EXCAVATION METHOD:
NATM - Sprayed Shotcrete

MINING DIMENSIONS:
40' x 70' x 35VF

FINAL LINING:
48" Polycrete Pipe & Manholes

FOR MORE INFORMATION:
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Refer to Project 434