

Battery Park Trunk Sewer Tunnel Richmond, VA



PROJECT OVERVIEW AND CHALLENGES

Bradshaw responded to the City of Richmond, Virginia's emergency flooding caused by Tropical Storm Ernesto by installing 3,400' of 110" fiberglass pipe in tunnel to permanently by-pass a collapsed combined sewer. Bradshaw used an Akkerman BS-120 digger shield and ribs and boards to construct the tunnel. Bradshaw pipe jacked 1,000' of 48" RCP in one run and 260' of 60" RCP in another run using Akkerman TBMs. Finally, Bradshaw hand tunneled 200' of 96" liner plate for a 72" fiberglass storm sewer pipe. Multiple shafts for TBM launch and recovery were installed with NATM and soldier pile and wood lag shoring. The major challenges were the extremely accelerated schedule, solid waste from the City dump that crossed the tunnel, and constant risk of flooding during operations until the new pipeline was put into service. Bradshaw's value engineering saved the owner \$1.8 million.



PROJECT INFORMATION - 457

OWNER:

City of Richmond
Department of Public Utilities
Robert Stone, Project Manager
804.646.8557
robert.stone@richmondgov.com

ENGINEER:

Greeley and Hansen Engineers
Kurt Stykemain
804.355.9993
kstykemain@greeley-hansen.com

CONTRACTOR:

Bradshaw Construction Corporation

CONTRACT VALUE:

\$23,698,300

COMPLETION DATE:

4/16/2008

GEOLOGY:

Miocene Clay, Solid Waste

EXCAVATION METHOD:

Akkerman Excavator Shield and
Wheeled TBMs
Liner Plate by Hand Mining

MINING DIMENSIONS:

3,400' x 144" Ø

FINAL LINING:

110" FRP

FOR MORE INFORMATION:

Todd Brown, Project Manager
410-970-8300
TBrown@Bradshawcc.com
Refer to Project 457