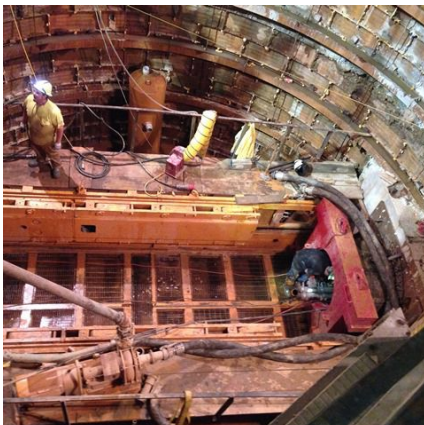


## 36" Southwest Transmission Main Relocation Elkridge, MD



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw Construction microtunneled 380 linear feet of 60 inch steel casing under I-195 in Elkridge, MD. The subsurface conditions consisted of silt, sand, and gravel below the groundwater table. Bradshaw also installed two 32' OD liner plate shafts to depths of 24 VF & 32 VF for the launch & receiving shafts. The 36" PCCP carrier pipe was installed with the assistance of the general contractor, who made the pipe connections in the jacking shaft. The mining was performed on a 24/7 basis as required. The major challenge was in the installation of the jacking pipe, which weighed approximately 14,000 lb per joint.



### PROJECT INFORMATION - 549

**OWNER:**

Howard County  
Department of Public Works  
Daniel Davis  
410-313-2414  
ddavis@howardcountymd.com

**ENGINEER:**

O'Brien & Gere  
Louis Ragozzino  
410-771-3005  
Louis.Ragozzino@obg.com

**CONTRACTOR:**

Marona Construction Company

**COMPLETION DATE:**

8/20/2015

**GEOLOGY:**

Sand, Silt, Gravel

**EXCAVATION METHOD:**

Herrenknecht AVN-1200 MTBM

**MINING DIMENSIONS:**

380' x 60" Ø

**FINAL LINING:**

36" Prestressed Concrete Cylinder  
Pipe

**FOR MORE INFORMATION:**

Doug Piper, Project Manager  
410-970-8300  
dpiper@bradshawcc.com  
Refer to Project 549