

## U.S. Route 29 Water Transmission Main Columbia, MD



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw recently completed the installation of 470 linear feet of 60 inch steel casing under U.S. Route 29 for a 36 inch water transmission main. Tunnel depths ranged from 6 to 30 feet below the surface, with the alignment passing beneath the water table through dense silty sands and partially weathered rock. Bradshaw constructed a 32 foot diameter, 27 foot deep steel rib-and-liner plate launch shaft to facilitate tunneling activities, and the MTBM was recovered out of a trench box on the far side of the highway. The access shaft was constructed in a potential flood zone within 10 ft of active sanitary sewer and water lines, and within 50 feet of the Little Patuxent River.



### PROJECT INFORMATION - 562

#### OWNER:

Howard County  
Department of Public Works  
Robert Bowins  
410-313-6375  
rbowins@howardcountymd.gov

#### ENGINEER:

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

#### CONTRACTOR:

Marona Construction Company

#### COMPLETION DATE:

11/18/2016

#### GEOLOGY:

Silty Sands, Partially Weathered  
Rock

#### EXCAVATION METHOD:

Herrenknecht AVN-1200 MTBM

#### MINING DIMENSIONS:

469' x 60"Ø

#### FINAL LINING:

36" Prestressed Concrete Cylinder  
Pipe

#### FOR MORE INFORMATION:

Jordan Bradshaw, Project Manager  
410-970-8300  
jordan.bradshaw@bradshawcc.com  
Refer to Project 562