

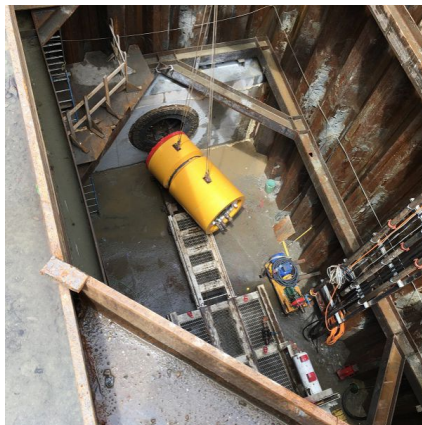
## Virginia Beach Boulevard FM - Phase VI

Virginia Beach, VA



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw Construction installed three 60" steel casing tunnels totaling 1,360' LF in Virginia Beach, VA as part of a new force main installation. The tunnels were installed through congested commercial areas underneath roads and rivers, with multiple utility conflicts. The ground conditions consisted of sand, silt and organic materials, underneath the water table. The longest drive of 740' was installed underneath of London Bridge Creek with high water head pressure. Challenges included safely navigating around the utilities and preventing settlement and/or heaving of the roadways while tunneling through the large particle organics. The tunnels were successfully installed, hitting the targets on line and grade with no impact to the utilities.



### PROJECT INFORMATION - 602

#### OWNER:

Hampton Roads Sanitation District  
Laura Kirkwood  
757-460-2491

#### ENGINEER:

Kimley-Horn  
Scott Funk  
757-355-6677

#### CONTRACTOR:

Bridgeman Civil, Inc

#### COMPLETION DATE:

9/4/2020

#### GEOLOGY:

Sand, Silt, Organics

#### EXCAVATION METHOD:

Herrenknecht AVN-1200 MTBM

#### MINING DIMENSIONS:

1,360' x 60" Ø

#### FINAL LINING:

48" HDPE

#### FOR MORE INFORMATION:

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Refer to Project 602