Project Profile: HAND TUNNELING

BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Virginia General Assembly Building Pedestrian Tunnel
Richmond, VA

PROJECT OVERVIEW AND CHALLENGES

Construction for the new Virginia General Assembly Building in Richmond, included a pedestrian tunnel under 9th Street to connect a new parking garage. Bradshaw proposed a SEM tunnel for the passage that was accepted by the Owner. The tunnel excavation was 21.08' wide x 15.10 high and excavated by header & bench under 12' of cover. Groundwater was about 22' below the pavement. 4 dewatering wells were used to lower the groundwater near invert. Reinforced shotcrete was used for initial & final lining with a water barrier of PVC below springline & spray-on waterproofing above springline sandwiched between shotcrete applications. The alignment crossed under 16 existing utilities including a 16" clay pipe sewer running through the shotcrete roof initial lining. Settlement in 9th Street ranged from 0.04 to 0.09 feet with no damage to existing utilities.

PROJECT INFORMATION - 592

OWNER:
State of Virginia
Department of General Services

ENGINEER:
Aldea Services
Robert Goodfellow
301-355-9703
rgoodfellow@aldeaservices.com

CONTRACTOR:
Gilbane Construction Co.

COMPLETION DATE:
9/1/2019

GEOLOGY:
Alluvial sand & gravel below groundwater

EXCAVATION METHOD:
SEM

MINING DIMENSIONS:
21.08' W x 15.10' H

FINAL LINING:
Reinforced shotcrete

FOR MORE INFORMATION:
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Refer to Project 592