

National Center Sanitary Sewer Project Crystal City, VA



PROJECT OVERVIEW AND CHALLENGES

The primary jacking pit on the NCSS project was a 30' deep, 26' diameter shaft supported by steel ribs and wood lagging. The shaft was installed in primarily sandy, dry conditions with interspersed layers of hard clay. One of the main challenges involved in the shaft installation was the presence of a manhole intersecting the shaft. The manhole remained from a previous drilled shaft installation and was encased with flowable fill and surrounded by an 8' corrugated metal casing. During excavation, the portion of the casing impacting the shaft had to be removed and the backfill grout chipped away and remove to allow for the installation of the shaft supports. In addition to the jacking shaft, (2) 8' diameter intermediate shafts were installed for manhole connections and a final, 18' diameter receiving shaft was installed in the center of Rt. 1 to retrieve the TBM and perform the final sewer connection.



PROJECT INFORMATION - 478

OWNER:

Arlington County, VA
Department of Public Works
Jerry Kuo
703.228.3664

ENGINEER:

Patton, Harris, and Rust Associates
Graeme Lake, PE
410.997.8900

CONTRACTOR:

Bradshaw Construction Corporation

CONTRACT VALUE:

\$3,248,850

COMPLETION DATE:

2/15/2011

GEOLOGY:

Sand, Clay, Boulders

EXCAVATION METHOD:

Akkerman TBM, 68" Ø

MINING DIMENSIONS:

26'Ø x 30VF

FINAL LINING:

Steel Rib and Board

FOR MORE INFORMATION:

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Refer to Project 478