

## Pentagon Mall Terrace Utilities Arlington, VA



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw Construction completed a project for the Pentagon Renovation Office that was needed for a storm sewer drain relocation. The scope of the project included 1,234 linear feet of 84 inch inner diameter of reinforced concrete pipe and two rib and lagging jacking shafts that were 30 feet and 36 feet in diameter and 57 vertical feet deep at man hole locations. The tunneling was performed by a Lovat tunnel boring machine with an Akkerman jacking frame. An 84 inch bend was added to the project during construction that was within the 100 foot zone of the Pentagon.



### PROJECT INFORMATION - 354

**OWNER:**

Pentagon Renovation Office

**ENGINEER:**

Sverdrup Civil, Inc.  
Tom Meinhart  
703-790-9730

**CONTRACTOR:**

Flippo Construction Company, Inc.

**COMPLETION DATE:**

2/21/2000

**GEOLOGY:**

Soft Ground

**EXCAVATION METHOD:**

99" Lovat TBM

**MINING DIMENSIONS:**

1234' x 101"Ø

**FINAL LINING:**

84" Reinforced Concrete Pipe

**FOR MORE INFORMATION:**

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Refer to Project 354