



Fact Sheet Shafts



Description

It is possible to construct tunnel alignments with one single bore from one end to the other. In this case, the shaft at one end would act as a working shaft and the shaft at the other end would serve as a retrieval shaft. Another option is to construct the tunnel in segments where a working shaft is constructed in the middle of the alignment with a retrieval shaft at each end. This approach could reduce the overall construction time by allowing more flexibility in tunnel operations. It also allows for placing the working shaft where community and environmental impacts would be less severe or could be more easily mitigated. In addition to these main shafts, an intermediate (riser) shaft would be required to make a connection to a shallow pipeline near the mid-point of the tunnel alignments. Specifically, a smaller-diameter riser shaft would be necessary along the alignment for connecting to an existing 30-inch diameter pipeline in or near Rock Creek Park.

Feature	Working Shaft	Retrieval Shaft	Riser Shaft
Purpose / activity	Installation of tunnel equipment. Removal of excavated materials. Tunnel pipeline installation. All major activities.	Removal of tunnel boring machine. Ventilation. Connection to existing watermains. Tunnel pipeline installation.	Connection to existing 30-inch watermain.
Diameter	30-40 feet	12-16 feet	5-8 feet
Disturbed area	2-3 acres	½ - 1 Acre	¼ - ½ Acres
Working time	Operations 24 hours per day for the duration of construction period.	Periodic activity during daytime operations Continuous ventilation.	Periodic activity during daytime operations.
Shaft construction	Blasting	Blasting	Depending of groundwater conditions. Typically use a Tension-Pulled boring machine.

WSSC recognizes the need for extensive community outreach during all phases of the project, especially during the alignment selection. For more information on this project visit www.wsscwater.com and click on "Projects" then "Major Construction Projects and Studies" or call our Hotline at 301-206-8184.