

Pipe Bursting Water Lines in Limited Access Locations

*Trenchless
technology was
used successfully*

The Town of Highland Park is a 100-year-old community. For nearly 75 years, vegetation, trees, fences and other structures have encroached the easement of the water distribution system. In some cases, the working space was restricted to 8 feet. Due to numerous water line breaks and increased water demand from new, larger homes, the Town was faced with replacing these water lines.



A 1997 SSES showed that a portion of the planned sewer line replacements for this project was located within the same easements that the water lines occupy. The need to replace the water lines due to condition, as well as to increase the size from 6- to 8-inches, was addressed by inclusion of the water main replacements with the sewer replacement projects.

In other areas of the Town, trenchless technology had been used successfully to replace sewer lines. Trenchless technology would cause minimal disruption and access would be less of a factor. The Town decided to utilize pipe bursting for the water line and sewer line replacement.

Tasks for the pipe bursting project included:

- Temporary water mains were installed prior to beginning replacement
- Insertion and exit pits for the bursting equipment were constructed at the ends of the easements
- HDPE was attached to the bursting tool and put in place
- A cable was strung through the old pipe that connected the bursting tool to the winch at the exit pit
- Pipe bursting was initiated, and the tool progressed at approximately three feet per minute
- The entire bursting operation was completed in four hours



New service connections were made at each meter location. The new main was connected to the existing water main, and services changed over from the temporary water line. The entire installation was completed in 15 working days, exclusive of lab testing.

By using trenchless technology, noise pollution was reduced, there was no trench spoil to store, and no embedment to truck into the easement. The project was completed on schedule, at a lower cost per foot than previous open cut projects, and with minimal disruption.