

## Pipe Bursting Water Lines in Limited Access Locations

*Completed on schedule, at a lower cost, and with minimal disruption*

The Town of Highland Park, Texas, is a 100-year old community. In the older areas of the Town, the water lines lie within narrow easements, and for nearly 75 years, vegetation, trees, fences, and other structures have encroached into these easements. In some cases, the working space was restricted to less than eight 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 sanitary sewer study showed that a portion of the planned sewer line replacements was located in the same easements the water lines occupied. 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.

Trenchless technology (pipe bursting) was utilized, minimizing disruption and access to the lines. Tasks included:

- Placement of temporary water mains to serve residents during construction
- Insertion and exit pits for the bursting equipment were constructed at the ends of the easements in easily accessible locations
- A cable was strung through the old pipe connecting the bursting tool to the exit pit winch
- Pipe bursting was initiated and HDPE was pulled into place behind the bursting tool as it progressed through the old pipe
- The process progressed at 3 feet per minute and was completed in 4 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.

