

Pipe Bursting using Certa-Lok® Cartridge-Style Assembly Speeds Repair to Water Line Services for Rowlett, Texas

In-house Pipe Bursting Maximizes Resources of City

By: Brian Goad P.E., NAPCO Pipe & Fittings

When a 2,300 LF section of existing 8-inch Cast Iron water line decayed too far to continue repairing, the City of Rowlett was tasked with finding a solution to restore the distribution line to homes with minimal disruption to the busy neighborhood.

CHALLENGE

The existing Cast Iron pipe supplying water to the affected community between Cheyenne and Lynnwood Drive, west of the George Bush Tollway, was originally installed in the 1970s. The challenge for the city was finding a low-impact means to replace the existing line without affecting the surrounding neighborhood which included homes, a school and a busy thoroughfare. It was critical the city keep the school entrance and exit accessible for daily activities and open for emergency vehicle access. Another task was ensuring that the streets were left open to support the continuous flow of local traffic to and from the homes located near the project.

APPLICATION

Considering the busy neighborhood location and amount of traffic, pipe bursting was the preferred method to install the new water line. The city served as the contractor on the repair using city-owned static pipe bursting equipment. Pipe bursting is a trenchless installation method that can be used to effectively replace installed pipe that has failed or

Certa-Lok® Restrained Joints are usually assembled in less than one minute.

no longer offers sufficient capacity all the while minimizing disruption to and impact on the local community. The repair plan included segmenting the pipe bursting into 500-foot lengths, and the entrance and exit pits were carefully staged to ensure the school was not blocked at any point during the trenchless installation.

SOLUTION

The replacement pipe selected for the job was NAPCO Pipe and Fittings' 8-inch Certa-Lok C900 RJIB (Restrained Joint Integral Bell) as the trenchless pipe solution for the City of Rowlett. The city has successfully installed Certa-Lok RJIB for water line and sewer bursting since 2013 and recognizes the product benefits including reduced installation time and crew size, and the elimination of the need for expensive machinery and its specially trained labor. Certa-Lok also saves time and money by eliminating the need for thrust blocks on lines repaired. The Certa-Lok Restrained Joint PVC system can be quickly assembled through cartridge-style loading with joints usually assembled in less than one minute; once the locking



Pipe is ready to go into service with minimal preparation time

Certa-Lok[®]

Integrally Restrained PVC Trenchless Solution



PVC Pipe Designed for Trenchless Construction

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- Used in the municipal industry since the 1980s
- Helps reduce project layout and jobsite footprint
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Pits were carefully staged to ensure school access was not blocked during the installation



Pipe bursting equipment has compact footprint. Installation was completed and service restored to residents on the same day

“*Pipe Bursting is much cheaper performed in-house.*”
 - MARK LEAL, UTILITY SUPERVISOR, CITY OF ROWLETT

spline is inserted the pipe is ready to go into service without additional preparation time.

The city, as contractor for the job, mobilized their bursting crew using the city-owned 80-ton Hammerhead Hydroburst equipment. They were able to complete the installation and restore service to residents the same day. “Pipe Bursting is much cheaper performed in-house vs using contractors,” said Mark Leal, utility supervisor with the City of Rowlett. “It provides significant cost savings vs. open cut and allows our team

to get hands-on construction experience. We maximize the resources of our city by alternating our staff so everyone can learn how to run this piece of equipment.” The city’s forward thinking in training allows them to have multiple crews ready to work on the bursting equipment in case emergency repairs are needed. This ensures consistent water and sewer service to the local residents without disruptions. Since late 2012, the city has bursted 18,346 LF of water pipe.

“Certa-Lok works great - if we are to going to use fused pipe we have to check every joint before installation. Fusion is a more complicated process while with Certa-Lok, all you have to do is insert the pipe and spline without worrying about the integrity of the joint,” Leal said. A fused solution would have taken an additional

day for the crew to fuse each pipe joint. The effectiveness of trenchless tools like pipe bursting and Certa-Lok help reduce the cost and time needed to replace failing infrastructure.

The City of Rowlett has a population of 63,000 and is located on Lake Ray Hubbard, 19 miles northeast of Dallas, Texas. 🇺🇸

ABOUT THE AUTHOR:



Brian Goad is a P.E. and Sales Engineer for NAPCO Pipe & Fittings based out of Houston, TX, with 8 years of consulting design experience in water and wastewater, and a focus on trenchless construction.