

## CASE STUDY

# PIPE BURSTING USING CERTA-LOK® CARTRIDGE-STYLE ASSEMBLY SPEEDS REPAIR TO WATER LINE SERVICES FOR ROWLETT, TEXAS

When a 2,300 LF section of existing 8" 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 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 Westlake Pipe & Fittings' 8" 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 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



**Project Type:**  
Water Main

**Application:**  
Static Pipe Bursting

**Owner:**  
City of Rowlett, Texas

**Product Used:**  
Certa-Lok® C900 RJIB  
PVC Pipe

**Contractor:**  
City of Rowlett

**Engineering:**  
City of Rowlett

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' 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.