

# CITY OF FLOWOOD USES FUSIBLE PVC® PIPE FOR TRENCHLESS CONSTRUCTION

## Northeast Water Distribution Mains on MS 25 Project

### Overview

The City of Flowood is located in Rankin County on the east side of Jackson, the capital city of Mississippi. Over the past decade, Flowood has experienced tremendous growth with industrial, medical, retail, office and residential areas all flourishing. Flowood is regarded as one of the fastest growing commercial areas in the state. Much of this growth and development has occurred along Mississippi Highway 25, or Lakeland Drive, which is the main east-west corridor through the city.

As the city has grown, so has the need for infrastructure, including potable drinking water and fire protection. In order to provide the highest level of service to its citizens and visitors, Flowood has made extensive investments in its water supply system to sustain current and future growth. In 2012, a Water System Master Plan was developed for the city by Mississippi Engineering Group (MSEG) which identified the need for new water supply wells, storage tanks and distribution lines throughout the City.

In 2016, Flowood initiated the design of these improvements under the 2016 Water & Wastewater Improvements with MSEG. One of these improvements was the installation of approximately 10,000 linear feet of a 12-inch water main along Highway 25 to strengthen service to the northeast portion of the city. The water line was designed to be installed within the Mississippi Department of Transportation's right-of-way. Along the route, several creek and roadway crossings were required, presenting challenges for open-cut installation. The City of Flowood and MSEG identified Fusible C-900® PVC pipe as the material of choice to accomplish these crossings along one of the busiest roads in the state. Fusible PVC® pipe provided an uncased pipe material for installation using horizontal directional drilling (HDD) methodology, as well as the carrier pipe material for cased crossings that were installed by jack & bore. In both cases, Fusible PVC® pipe provided the lowest cost option, required downsized boreholes and casings and used standard ductile iron fittings to tie the system together.



12-inch Fusible PVC® pipe assembled for cased crossing

### Pipeline Details and Project Summary

<b>Project:</b>	Northeast Water Distribution Mains on MS 25
<b>Location:</b>	Flowood, Mississippi
<b>Length and Pipe Size:</b>	2,280 LF 12-inch DR 18 Blue Fusible PVC® pipe
<b>Pressure:</b>	150 psi
<b>Installation:</b>	Horizontal directional drill, jack & bore
<b>Owner:</b>	City of Flowood, Mississippi
<b>Engineer:</b>	Mississippi Engineering Group, Inc., Austin Moore, PE
<b>Contractor:</b>	Jay Bearden Construction, Inc.
<b>Driller:</b>	Darren Pittman & Company, LLC

The project was bid in February 2017. A contract was awarded to Jay Bearden Construction of Richland in March and a notice to proceed was issued in April. Construction was completed in September 2017 under budget, ahead of schedule and with no safety incidents.

“This was my first project to use Fusible C-900® pipe and won’t be my last. It was a great product to help overcome the design challenges associated with the project. Aegion was very supportive throughout design and construction. One of my favorite things about Fusible C-900® pipe is that, unlike other materials, it doesn’t require upsizing a pipe diameter in order to maintain the same inner diameter. This also allowed us to reduce casings sizes and save the owner money.”

*Austin Moore, PE, Project Manager  
Mississippi Engineering Group, Waggoner Engineering*



12-inch Fusible PVC® pipe assembled for HDD installation

Underground Solutions, Inc. provides infrastructure technologies for water, wastewater and power cable conduit applications. Underground Solutions’ Fusible PVC® pipe products, including Fusible C-900® pipe and FPVC® pipe, utilize patented technology to produce a fused monolithic, fully-restrained, gasket-free, leak-free piping system ideal for trenchless (horizontal directional drilling, pipe bursting and sliplining) or conventional “open-cut” installations and are available in 4-inch to 36-inch diameters. The combination of standard fittings and lower weight with higher flow for a given pressure class versus other thermoplastic pipes ensures that Fusible PVC® pipe brings greater economy to most pipeline projects.



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