



CASE STUDY



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LANSING, MI CASE STUDY

LOCATION:

Lansing, MI

PROJECT SCOPE:

Trenchless water main replacement using pipe bursting

APPLICATION:

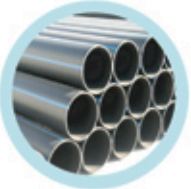
1600 linear feet of 14-inch high-density polyethylene (HDPE) pipe replaced a leaky 12-inch ductile iron water main prone to breaks

PROJECT DATES:

Fall of 2006

KEY CONTACTS:

William Erskine, Mechanical Engineer, Lansing Board of Water and Light
Troy Freed, utility contractor, Midwest Trenchless Services, Grant, MI



SUMMARY



In the fall of 2006, William Erskine, a mechanical engineer with the Lansing Board of Water and Light, managed a water main replacement project along the city's heavily traveled Martin Luther King Blvd. The mainline serviced a growing area of the city, which now houses nearly a half-million residents.



The existing 12-inch ductile iron water main was prone to breaks at the bottom of a hilly section of MLK Blvd. Residential basements in the immediate area had flooded several times during main breaks, and the prospect of digging and replacing the pipe – with resulting disruptions to traffic - was daunting.

Facing mounting budget pressures, Erskine supported a new idea: to use high-density polyethylene (HDPE) pipe and trenchless installation, thus eliminating the ductile iron breaking problems, minimizing gridlock and saving the city hundreds of thousands of dollars in restoration costs.



Erskine turned to Troy Freed of Midwest Trenchless Services (Grant, Mich.), a local utility contractor with over 25 years experience in the application of trenchless technology. The technique of pipe bursting was implemented to install nearly 1,600 linear feet of 14-inch high-density polyethylene (HDPE) pipe.

“We also were very sensitive to the traffic conditions in this densely populated part of the city. With an open cut pipe installation, the city was concerned about the significant disruption and anxiety it would cause. The pipe bursting method gave us more efficient installation with less surrounding disruption.”



Erskine estimated that the project was completed in about 60 percent of the time it would have taken with traditional excavating. Moreover, the resulting re-paving was completed with just two inches of asphalt instead of 10 inches of concrete and four inches of asphalt, due to almost no ground disruption.

The final price tag on this project was about one-third that of open cut excavating using another pipe material, according to Erskine. “When you're talking about a project like this, the dollars saved quickly reach the tens of thousands.”



See PPI's article for details: Lansing, MI PPI article in the Case Studies section at www.pepipe.org

*Please do not hesitate to contact the Alliance with any questions or comments.
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