

FIELD REPORT

SLIPLINING WITH HDPE SAVES BIG CITY UTILITY MILLIONS



Sliplining with 63-inch HDPE saves sewer force main sections critically close to failure.

Catastrophic Failure

In June 2010, Miami-Dade County experienced a massive and sudden failure in a 72-inch pre-stressed concrete cylinder pipe (PCCP) sewer force main. The critical line carries 79 million gallons/day and this incident exposed miles of pipe along the line also critically close to failure. Since then, sales Rep Bryan Fletcher and the team at ISCO Industries have been working with the Miami-Dade Water and Sewer Department (MDWASD) and Ric-Man Construction to provide 63-inch HDPE to slipline miles of the most severely weak sections of the main.

Slipline vs. CIPP: A multi-million dollar difference

Initially, the project was to be broken into two sections. The first would section would be sliplined along a canal and under an interstate. The second section, in a residential area, was to be

cured-in-place pipe (CIPP). During the bid submittal phase, Ric-Man proposed an alternate plan to slipline the entire project, saving the owner more than \$4 million.

"The slipling of 17,160 LF of 72" PCCP with 63-inch DR32.5 HDPE was accomplished in 11 individual pulls ranging in length from about 600 feet to more than 3,000 LF which were installed in a variety of locations from along a canal bank to underneath Interstate 95 and down the middle of a residential street," explained Dan LaCross, project manager with Ric-Man Construction. The pulls that were installed along the bank of the canal were fused together and then floated in the canal until they were ready to be pulled into the host pipe. Connections were made between pulls by flange-to-flange.



PROJECT

Miami-Dade Sewer Force Main Rehab

LOCATION

Miami-Dade County

PROBLEM

Emergency rehabilitation of 72-inch pre-stressed concrete cylinder pipe (PCCP) sewer force main.





“ISCO supplied a qualified fusion technician and open communication from order placement to production to delivery and a hands-on approach during the design phase for the required fittings and connection points between runs.”

On the ends of the line, connections were made by flange-to-valve. There were also 48 air release valves (ARVs) and access man ways that needed to be installed on the 63-inch line within the host pipe. ISCO worked hand-in-hand with Ric-Man Construction to provide the most efficient means of making the ARVs and access man way connections to the HDPE. Lacross said, “ISCO supplied a qualified fusion technician and open communication from order placement to production to delivery and a hands on approach during the design phase for the required fittings and connection points between runs.”

Elite Service in an Emergency

Excavating and replacing the pipe could have cost the county tens of millions of dollars. It would have required shutting down roads for months, possibly years, during construction causing massive inconvenience.

Sliplining the host pipe was a cost-effective, time-saving solution.

For ISCO’s work on the project, the company received the Project of the Year award in the Municipal & Industrial division from the Plastics Pipe Institute (PPI)!

Miami-Dade isn’t alone in staring down costly force main failures. The sheer number of customers served means that what happens to them gets the attention of municipalities across the country. Other utilities across the country and even the world have followed the progress of the project. The sewer line serves as a perfect example of how plastic pipe can be used to repair failing water and sewer systems all over the world.



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