A successful pilot project conducted in 1997 proved to the City of Houston, TX the value and strong performance of HDPE pipe. In June 2004 the city experienced a catastrophic failure in its old water lines and discovered that it needed to replace 25,000’ feet of pipe within 10 months. HDPE was brought in to save the water system.

The existing prestressed concrete cylinder pipe (PCCP) serviced over 75 square miles in the city and was failing from deterioration. The city needed to restore the pipes on such a short time span before water usage reached its peak levels in the summer months. To make a quick but effective fix, the city decided to slipline the existing pipe with HDPE. This option allowed the city to utilize the existing structure of the old pipe and use trenchless instead of open cut installation.

Crews sliplined the 42” PCCP line with 39.37” DR17 HDPE. Before installing the HDPE line, the contractor pulled a test mandel with a 40’ length of HDPE to ensure the pipe would not be damaged or get stuck in the old line. Once pre-installation tests were finished, the HDPE was pulled smoothly through PCCP in lengths ranging from 300’-1700’. Crews used 500’ runs in areas with traffic and businesses to avoid closure of intersections. An average of 6250’ were installed every month, and the entire project was completed four months after receiving approval.

In the end, this project saved the City of Houston an estimated $2-4 million on construction costs. Thanks to the corrosion resistance, leak free seal and durability of HDPE, the city will reap even more benefits in decades to come.

Source: