Pilot Tube Method the Little Brother to Micro tunneling

PTM of the guided boring method originated in Europe nearly 2 decades ago as a method of installing 4 & 6-inch house connections using trenchless technologies. Today, this technology has grown to installations with sizes up to 48-inch outside diameter and drive lengths in the 400-ft range.

Case Study: Pilot Tube Guided Boring project (currently under construction): 10 Mile Road Sanitary Sewer Relief Owner: City of St. Clair Shores, MI Engineer: Anderson, Eckstein & Westrick, Inc., Shelby Twp., MI Contractor: M K Contractors. Trenton, MI The City of St Clair Shores is a major Detroit metropolitan Community located in approximately 10 miles from the Detroit Business District. The purpose of this project was to separate sanitary flow from an existing 10-inch line and increase to 21-inch line that is located in the North-bound lane of 10 Mile Road. This project consists of the installation of approximately 5,300 LF of 21-inch gravity sanitary sewer installed at depths up to 18-ft. Minimizing impact and maintaining traffic flow was critical to the Urban Households and adjacent major arterial streets, such that the City of St, Clair Shores allowed trenchless technology to be an alternate technology during the bidding process. Pilot Tube Guided Boring was selected as the installation method due to its smaller surface lay-down requirements and smaller jacking and receiving shafts. The contractor selected Squared (Sheet-Pile) shafts and a 3-step installation process utilizing a powered cutter head due to existing soil conditions. Even with handling these soils conditions, the final product pipe has been successfully installed to 1/4 inch or better line and grade accuracy at distances up to 380 LF. This case study will discuss the specific process of Pilot Tube Guided Boring utilized, the reasons that it was chosen as the installation method, design considerations, construction process and the social-impact that it had on the City of St. Clair Shores and surrounding area.