

THE VILLAGES OF ELEVA AND STRUM SAVE WITH DIRECTIONAL DRILLING AND FUSIBLE PVC® PIPE

Overview

In 2011, the Wisconsin villages of Eleva and Strum joined forces to mitigate the costs of upgrading their aging wastewater infrastructure. About four miles apart, both communities had aging wastewater treatment plants (WWTP) in need of improvements. Both communities also faced significant financial investments in order to implement those repairs. By building a new, shared WWTP, Eleva and Strum reduced the overall capital and operating costs by 25 percent versus improving each existing plant separately. Davy Engineering of La Crosse, which designed and led the ambitious project to its successful completion, faced several challenges along the way.

One challenge associated with the combined plant was the transportation of wastewater from each village to the new facility. The proposed alignment of the new force main ran along an existing state recreational trail corridor next to the Buffalo River, as well as 13 private easements. Several obstacles along the alignment compelled Davy to consider horizontal directional drilling (HDD). These obstacles included stream crossings, road crossings, narrow right-of-ways, existing trees, easement and recreational trail permit restrictions, and protected wetlands areas. In addition to the difficulty of open-cut construction through these obstacles, the cost and time delays associated with acquiring permits for the disturbance of these areas made HDD a logical choice.

When construction began, the force main alignment involved seven separate HDD sections, with one section totaling approximately 1,800 LF. Fusible PVC® pipe was selected by the winning contractor for its durability and applicability on long drills. The remaining portions of the force main were installed with bell-and-spigot PVC pipe. Ultimately, the skills of the engineers and contractors helped deliver a project ahead of schedule and under budget. The project has been nominated for recognition by the funding agency, USDA Rural Development.



Fusion machine inside cold weather tent

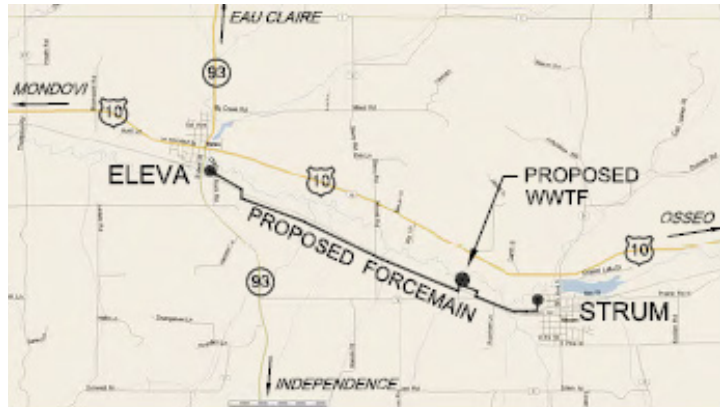
Pipeline Details and Project Summary

Project:	Eleva Strum Joint Sewerage Commission Project
Location:	Eleva and Strum, Wisconsin
Length and Pipe Size:	5,040 LF 8-inch DR18 FPVC® pipe, green
Installation:	Horizontal directional drilling
Owner:	Villages of Eleva and Strum, Wisconsin
Engineer:	Davy Engineering Co.
General Contractor:	Gerke Excavating Inc.
Trenchless Contractor:	Ground Effects Directional Drilling

“Being able to maintain a material consistency between the open-cut and the directionally drilled sections was really a benefit to using Fusible PVC® pipe.”

*Jim Liss
Davy Engineering*

General Project Location Map



Each joint is data logged and recorded



Layout and cold weather (December) fusion

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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