

# SHELTER ISLAND, NEW YORK DEPENDS ON FUSIBLE PVC® CONDUIT

## HDD project on Long Island provides energy reliability

By: Ed Lobello, Underground Solutions, Inc.



*First of 3 conduits is pre-assembled for installation*

**B**efore Hurricane Sandy hit the New York coastline in 2012, the residents of Shelter Island, an idyllic community at the easternmost tip of Long Island, felt that their power infrastructure was well protected. At the time, Shelter Island had three circuits providing power - one of which was known to be inadequate but provided some back up capability at peak power

use. Sandy destroyed one of the two remaining circuits and left the island with no adequate back up circuit. This was especially problematic in the summer months when demand was at its peak.

Shelter Island officials acted quickly to resolve the issue and obtained the funding and permissions to replace the line under the Peconic River and Pipers Cove using horizontal directional drilling (HDD)

methods. The HDD process would be used to install three conduits under the water, each 3,300 feet long, from Southold to Shelter Island. However, this initial installation was a failure. The original drilling contractor used a high-density polyethylene (HDPE) conduit and attempted to install all three conduits in a bundle in the same 36-inch bore hole which got stuck during the installation.

**“IN EARLY MEETINGS WITH PSEG, CARSON CORPORATION WAS DETERMINED TO REDUCE THE RISK. IN ORDER TO ACCOMPLISH THIS, WE CHOSE TO DRILL THREE SEPARATE BORE HOLES AND USED 8-INCH FUSIBLE PVC® PIPE DUE TO THE SAFE PULL FORCE AVAILABLE AND CALCULATED PULL FORCE NEEDED TO ENSURE A SUCCESSFUL DRILL.”**

**- BOB CARSON, VP BUSINESS DEVELOPMENT, CARSON CORPORATION**



*Insertion of first conduit is almost complete*

The HDD had to be abandoned, and the project had to be shut down. A new approach was necessary.

There were delays for several years while the failed installation was dealt with and a new plan was considered. Shelter Island officials brought in one of the premier drilling contractors in the nation, Carson Corporation, to help them complete the project. Carson partnered with Underground Solutions, makers of Fusible PVC® pipe, to tackle this challenging project. Carson chose to use Fusible PVC® conduit because of its superior safe pull force and strength to weight ratio compared to HDPE. With the cooperation of the power company, Heights Property Owners Corporation (HPOC), Shelter Island Town and the Town of Greenport, drilling began in Fall/2016.

At the recommendation of Carson Corporation, three separate bores were performed instead of a single bundled installation. A single 8-inch diameter Fusible PVC® conduit was installed in each bore, approximately 3,300 feet in length. The bores were drilled from

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Work continues through winter to meet project schedule



Power supply needed to cross below Pipers Cove from Greensort to Shelter Island

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Greenport to Shelter Island, up to 120 feet below water body. Of the three conduits installed, only one currently carries an active circuit, while the other two will provide options for future reliability and capacity expansion projects.

According to Bob Carson, VP Business Development at Carson Corporation, "In early meetings with PSEG, Carson Corporation was determined to reduce the risk. In order to accomplish this, we chose to drill three separate bore holes and used 8-inch Fusible PVC® pipe due to the safe pull force available and calculated pull force needed to ensure a successful drill."

In the end, the second attempt at the project was delivered on time and on budget. Thanks to the experience and diligence of Carson Corporation and the use of Fusible PVC® conduit, Shelter Island has the energy capacity and system resiliency needed for the future. †

### ABOUT THE AUTHOR:



**Ed Lobello** is responsible for Sales in VA, DC, MD, DE, NJ and Eastern PA. He has 18 years of experience in consultative sales, business development,

and product development in the civil engineering community. Previously Ed served as Business Development Manager for Water Reclamation Solutions. Additionally, he served as Sales Engineer and Plant Manager for Lane Enterprises, Inc. in the Mid Atlantic area. Ed earned a Bachelor of Science Degree from Virginia Tech.