The Situation

International Place, a six-story office building in Shelton, Connecticut needed additional parking. However, the pond detention configuration in use didn’t allow for the parking lot to be expanded.

The project faced the additional challenge of only being able to work from two sides of the building as the other areas extend into a wetland.

The Solution

Through its association with Environment 21, LLC, a Triton Stormwater Solutions retention system was selected by Connecticut Pre-Cast, the developer’s supplier for manhole storm systems. The Environment 21 design and engineer team worked with Connecticut Pre-Cast to develop a design and layout that met the project needs for stormwater hydraulics and site constraints.

The combination of the key features of the Triton Stormwater Solutions product and the engineering experience of the team at Environment 21, LLC, provided the owner and contractor with the perfect system for the project.

“Using a Triton system, we were able to put in underground storm water chambers and pave over them in order to get the space needed to expand the parking lot,” explains Rob Scinto, of R.D. Scinto Development, who oversaw the installation of the system.

“Triton’s ease of installation was the driving factor. The chambers could be put in quickly by manpower instead of equipment using just a few laborers and operators over a couple days.”

Rob Scinto, R.D. Scinto Development

Triton’s proprietary design and patented construction offers larger-capacity, lighter-weight, easier-to-install storm water chambers that are more than 50 percent stronger than traditional products. Triton storm water chambers have 46 percent greater capacity per linear foot and withstand 16,000 more pounds of pressure than traditional chambers, according to independent tests. A key feature is that the chambers weigh only 32 pounds each, enabling workers to carry two or three at a time.

Water Retention Case Study

International Place Office Building parking expansion made possible
The Installation

Two parking lots roughly 120’ by 200’ in size were built each adding 70 additional spaces. Over 650 chambers were used resulting in over 33,000 cubic feet of storage volume.

First, the crew dug down to elevation and put down a six inch base layer of stone. Next, the chambers were put in and the walls of the trench were lined with a class 2 non woven geo fabric. The site was backfilled with stones up to six inches past the crown of the chambers and the geo fabric was folded back down and backfilled with material to the desired elevation, with Triton needing to be placed under only 16” of cover.

The contractor originally requested having Triton and Environment 21 support staff on site to assist and support the installation as is done with the majority of Triton Stormwater Solutions projects; however, after reading the Triton installation manual and reviewing the design provided by Environment 21, LLC, he determined that he could accomplish the task on his own.

A team of four laid 657 chambers in less than a day. “You get a tremendous cost savings if you look at the cubic foot of storage laid per hour, plus the worker fatigue is greatly reduced because the installer is not carrying around several heavy cumbersome units all day long” says Joe Miskovich, president, Triton Stormwater Solutions, located in Brighton, Mich.

“It was very specific where we could place the chambers so we needed maximum amount of storage in a small space,” said Scinto. “I would definitely use Triton again.”

Summary

“Triton’s ease of installation was the driving factor,” explains Scinto. “The chambers could be put in quickly by manpower instead of equipment using just a few laborers and operators over a couple days.”

The project illustrates Triton’s mission to design a system that’s extremely user-friendly, says Joe Miskovich, president, Triton Stormwater Solutions, located in Brighton, Mich. “Being able to install it quickly is exactly what we set out to do. We wanted to make a better mousetrap that doesn’t require tedious, detailed installation.”

The chambers have been engineered to easily fit together and dropped into place without requiring having a second operator to guide it. “One person can install the system using one hand to steady the chamber and the other hand to place and drop it on the previous chamber, eliminating the need for a second crew member to lift and guide it in place,” says Miskovich.