

LOCATION

CVS Pharmacy
LEBANON, PENNSYLVANIA

PRODUCT

Anchorplex™ retaining wall system, incorporating Vertica® wall units

MANUFACTURER

EP Henry
Woodbury, New Jersey

DESIGNER

Shippee Engineering, Inc.
Doylestown, Pennsylvania

INSTALLER

Pickering Valley Landscapes
Glenmore, Pennsylvania

WALL AREA

1,830 square feet



This Anchorplex™ retaining wall system next to a busy state highway was constructed with Vertica® wall units.

THE CHALLENGE

A prime location, but a difficult site adjacent to a busy state highway, presented a particular challenge in the development of a new CVS Pharmacy. A retaining wall was needed to make space for the required parking lot. Using a conventional geosynthetic-reinforced segmental wall was ruled out because the needed geogrid lengths extending into a PennDOT right-of-way would not be allowed.

Because of this restriction, the wall was originally designed as a soldier pile and precast-panel wall. After that design was deemed too expensive, Harrisburg, Pennsylvania-based project developer John DiSanto of Triple Crown Corporation looked for another solution.

“This was a very difficult job because the road was right above where the parking lot needed to be, and Lebanon Township had some strict regulations about where we could and couldn’t build,” DiSanto said. He turned to Bart Shippee, P.E. of Doylestown, Pennsylvania-based Shippee Engineering Inc. to create a new design.

THE SOLUTION

Shippee proposed two options to DiSanto. The first was a reverse-cantilever concrete retaining wall and the second used the Anchorplex™ system, incorporating Vertica® products. The Anchorplex™ system is a retaining wall built with Anchor™ products and self-compacting structural backfill that meet Anchor Wall Systems, Inc.’s specifications.

“Using the Anchorplex™ system created \$160,000 in savings compared to the reverse-cantilever wall and over \$200,000 in savings compared to the original soldier pile and precast-panel wall design,” Shippee said. “There were no issues designing the wall to stay out of the right-of-way and to meet the PennDOT traffic loading requirements. It was the best option for the 1,830-square-foot wall.”

DiSanto pointed out, “When you’re working with a national chain, they often want things done in a very quick manner, and we needed a solution that would be cost-effective, quick to install



Using the Anchorplex™ system made it possible to build this wall next to a state highway without extending reinforcement into the right-of-way.

and would work with the space constraints we were facing. The Vertica® product and the Anchorplex™ system were perfect.”

Shippee agreed. “We wanted the Vertica® product for two main reasons. First, the product has been proven very effective in Anchorplex™ systems. Second, it is the most upright system (2-degree system batter), which allowed for the required sidewalk and handrail to be installed behind the wall along the road.”

Because the Anchorplex™ system can be installed with smaller equipment, such as a skid-type loader, the roadway could remain open and the limited site access posed no problems for the contractor, Pickering Valley Landscapes of Glenmoore, Pennsylvania.

“Working with the Vertica® product went really well for us,” DiSanto said. “I wasn’t very familiar with Anchor™ products prior to this job, and I was very impressed with the ease of installation and how quickly the wall went up.”



Using the Anchorplex™ retaining wall system with Vertica® products created a vertical structure with room behind for the required sidewalk and handrail along the state road.

THE RESULT

Despite challenges posed by heavy rains and tight working quarters, the project was ultimately a success. DiSanto was particularly pleased with not only the final wall once it was constructed, but the entire construction process.

“Building the wall went very smoothly, in part because of the support offered by Anchor Wall Systems. Having professionals from Anchor on site helped all of us working on the construction to feel comfortable with the products we were using.”

Good planning, a dedication to hard work and meticulous attention to safety details helped the project run smoothly, and incorporating the Vertica® retaining wall system into the Anchorplex™ system helped create an attractive, functional and value-engineered retaining wall for the site.



The structural backfill was poured in lifts behind the wall and into open areas in the blocks.

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