

Szabo Parking Lot McMurray, Pennsylvania

This segmental wall project in McMurray, Pennsylvania, is remarkable for several reasons but primarily because it is an immense, tiered, near-vertical retaining wall rising 35.67 feet from the bottom of the base tier. Besides being exceptionally sturdy and high-functioning, it's also a very nice-looking wall made with Keystone Compac III - Victorian. These are pinned structural wall units with a chamfered edge on three sides and natural stone texture that renders an Old World cut stone look.

The monumental retaining structure became part of a larger Pennsylvania Department of Transportation intersection improvement/relocation when a business in the immediate vicinity, Stephen Szabo Salon, lost a significant portion of its parking lot due to additional land needs for the public project. PennDOT worked with the owners and Peters Township to extend the existing parking lot on a steeply sloped area of the property. Comprised of Compac III units, pins, and polyester geogrid, the Keystone wall system formed the geosynthetically reinforced soil mass that supported the parking lot and stabilized the additional fill that extended the existing lot to the required elevation.

Completed in the summer of 2014, the wall was designed and built as five close-set tiers having an overall length of 1,202 lineal feet and an area of 7,434 square feet. The tiered design with Compac III was necessary to conform with PennDOT's design requirements. Furthermore, the SRW system when compared to a big block system handles tighter radiuses and is more efficient and cost-effective in this scenario.

"The project posed unique design and architectural challenges," commented Anne Duggan of Kevcon, Inc., the company that provided the Keystone retaining wall product. "The workability and flexibility of the Keystone Compac III unit with the Victorian facing option allowed the contractor's capabilities to create something of lasting beauty that would appeal to the local municipality and satisfy PennDOT specifications."

The wall system's ease of installation was demonstrated by the fact that the general contractor/installer, Gulisek Construction LLC of Mt. Pleasant, Penn., successfully completed its first segmental wall installation without budget or execution issues. Clayton Stahl, PE, president of Gulisek, was pleased that the "easy, repetitive method of construction helped keep production rates steady and on schedule, and the system allowed us to build it during the winter months without any weather concerns."

Owner: Stephen Szabo Salon, PennDOT

Civil Engineer: McTish, Kunkel & Associates

Geotechnical Engineer: Raudenbush Eng.

Contractor: Gulisek Construction LLC

Keystone Producer: Kevcon, Inc & Bauer Company, Inc.

Technical Description:

- Keystone Compac® III - Victorian
- Total Wall Area: 1,202 s.f.
- Tallest Height: 35.67 ft.

Installation: Summer 2014

