

**LOCATION**

FedEx® Ground Distribution Hub  
MIDDLETON, CONNECTICUT

**PRODUCT**

Vertica® Retaining Wall System  
Mirafi® Geosynthetic Reinforcement

**MANUFACTURER**

APG New England,  
an Oldcastle® company

**WALL DESIGNER**

Advantage Engineers, LLC  
Mechanicsburg, Pennsylvania

**CONTRACTOR**

Earth Retention Systems, LLC  
Sterling, Connecticut

**CIVIL ENGINEER/ARCHITECT**

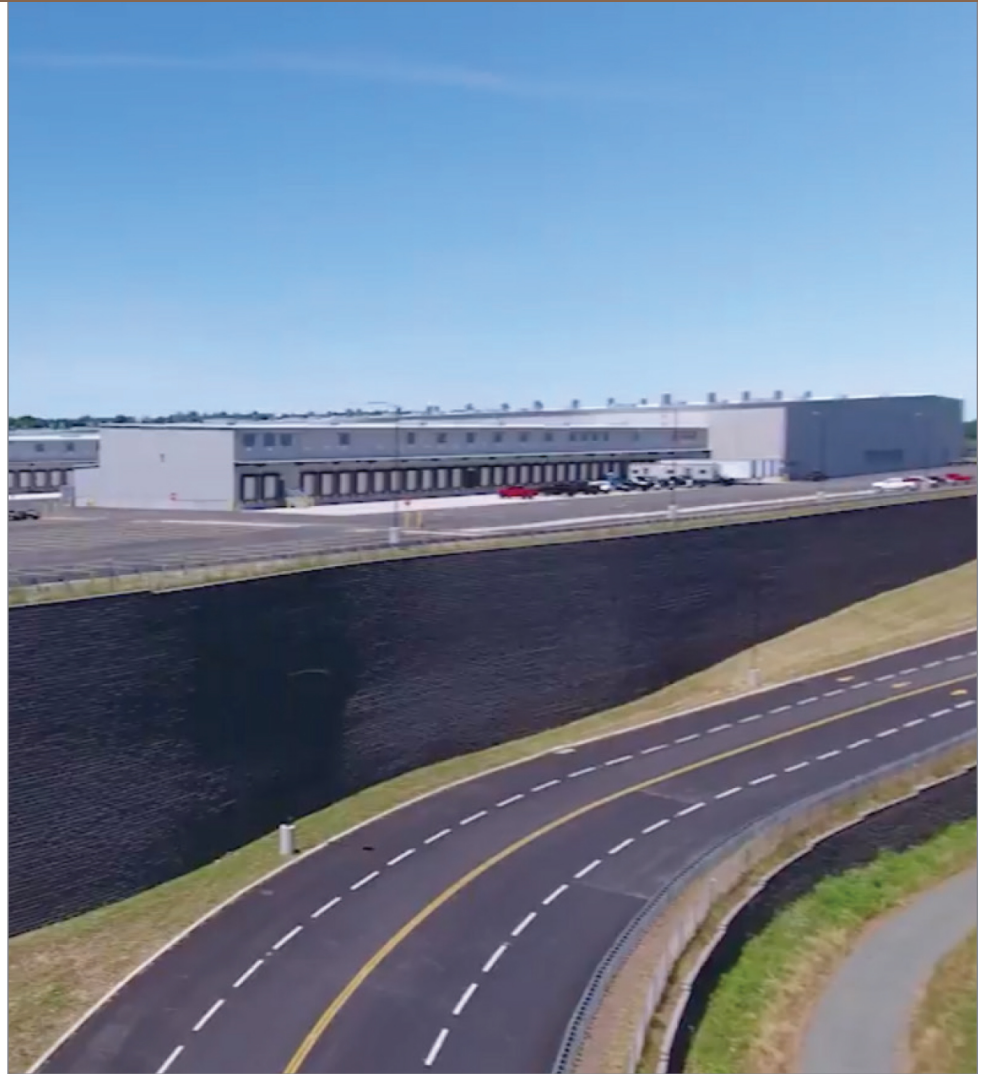
BL Companies  
Meriden, Connecticut

**GENERAL CONTRACTOR**

Manafort Brothers, Inc.  
Plainville, Connecticut

**WALL AREA**

300,000 square feet

**THE CHALLENGE**

The new FedEx® Ground Distribution Hub in Middletown, Connecticut, would be one of the largest construction projects in the state of Connecticut. The scope of the project included over 300,000 square feet of segmental retaining wall block built to **maximum heights of 60 feet**—making it one of the largest and tallest SRW projects in North America.

“Due to the size, complex installation and overall scope of the wall project, we knew right from the start it would have to be a collaborative effort by all to be a success story,” said Chip George, General Manager for Earth Retention Systems, LLC.

“The general contractor Manafort Brothers, Earth Retention Systems, Advantage Engineers and the ANCHOR DIAMOND<sup>SM</sup> team all worked together to make that happen.”

The project broke ground in May 2016 and according to representatives at FedEx is part of a nationwide expansion resulting from the exponential increase in the number of daily packages shipped over the last 10 years. The 260-acre site would house a 525,000-square foot main hub building, along with a maintenance garage and salt storage shed.

**THE SOLUTION**

The project involved an astounding 2.5 million cubic yards of earthwork that required six retaining wall structures, encompassing over 11,000 linear feet of SRW's to re-grade, stabilize and optimize the site. The project also called for over 650,000 square yards of Mirafi geosynthetic reinforcement.

Oldcastle worked with the project's retaining wall design engineers during the design phase to secure the Vertica® Retaining Wall System with Mirafi geosynthetic reinforcement as the basis of the SRW design for the project.

"The design of the massive walls needed a proven system such as Vertica Wall with Mirafi geogrid reinforcement," said Scott Vollmer, SRW Market Manager for APG New England, an Oldcastle company. "Vertica's four-degree batter was another advantage of the system and allowed for optimal site layout."

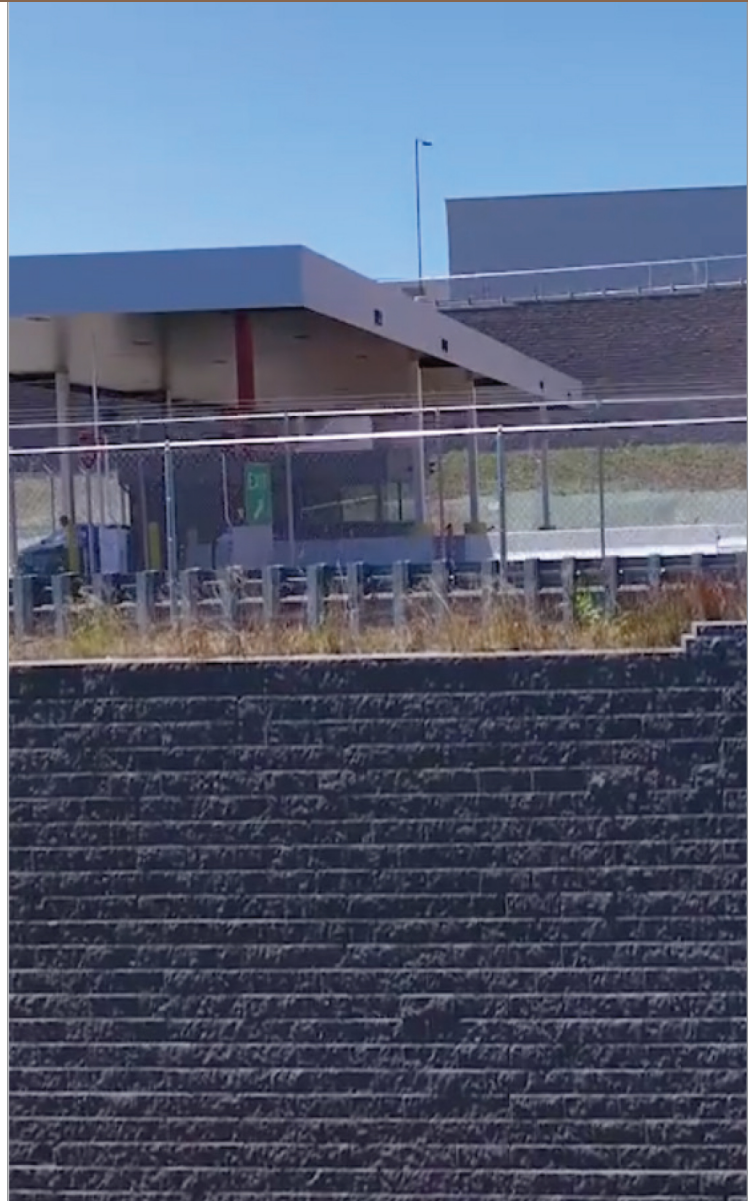
"Vertica Wall was shown to be a viable product that could hold up to the structural needs of the project, look good for the client, and hit all of the other marks in terms of competitive price and a demanding square-foot per-day delivery timeline," said Joshua Krebs, Advantage Engineers/Project Designer.

## THE RESULT

APG New England, an Oldcastle company, was selected as the exclusive supplier of the retaining wall and geogrid materials using the Cranston, Rhode Island, plant to manufacture the SRW units. "This selection was based on competitive price, proximity to the project, technical support, manufacturing capabilities, and the overall resources to supply such a large project on a tight time frame," Vollmer said.

"We worked closely with BL Companies (site civil engineer) to help optimize the retaining walls in context with the overall site design. APG New England was helpful in providing technical resources and were very responsive to everyone's needs throughout the process," Krebs added. "From a delivery standpoint, the materials were provided on the scheduled timeline that was needed."

As of July 1, 2018, the entire segmental retaining wall project was completed to the customer's satisfaction accomplishing one of the biggest and most complex SRW applications in North America. "I'm very proud of all the companies and individuals who helped make this one of the most successful SRW projects within the Oldcastle family," said Greg Piper, VP of Sales for APG New England.



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