



Case Study

application Retaining Walls
location Lawrenceville, GA
product Mirafi® HS400PP, HS600PP, HS900PP

job owner Gwinnett Convention & Visitors Bureau
civil engineer Planners & Engineering Collaborative
contractor Wall Technologies Company, Inc.
mse wall engineer Fitzpatrick Engineering Associates, P.C.

TenCate™ develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

THE CHALLENGE

The challenge was to design and build a 59 million dollar, 10,200 seat ballpark and surrounding infrastructure in one year utilizing mechanically stabilized earth walls. Of course, saving time and money were the main objectives while ensuring aesthetics would not be compromised in designing and building the retaining structures. Also, the typical design phase on a project of this size is 6 months, but this was truncated to 2 months by utilizing Wall Technology's design and installation services and Fitzpatrick Engineering's design.

THE DESIGN

Wall Technologies Co. and Fitzpatrick Engineering offered several value engineering ideas: convert the massive 40 foot tall retaining wall along the existing stream into a reinforced slope (utilizing galvanized wire baskets rather than modular block), utilize Newcastle modular block to support the vehicular bridge at the entrance to the ballpark and to construct the 25 foot tall outfield wall using Newcastle Block instead of the proposed cast-in-place concrete.

THE CONSTRUCTION

In order to meet the aggressive construction schedule, Wall Technologies' crews worked 15 hour shifts, 6 days a week installing on the average 1,200 square feet of wall per day. Many challenges were overcome, such as protection of sensitive natural stream buffers (Wall Technologies and Fitzpatrick Engineering redesigned the proposed cast-in-place concrete wall into a reinforced slope). This offered the owner a "green" solution while also saving money.



Construction of the existing wall into a reinforced slope.



Construction of the outfield retaining wall.



Reinforced slope outside of the Gwinnett Braves Stadium.

THE PERFORMANCE

The project needed a reinforcement that could support the loads imposed by 30 to 40 foot tall retaining walls, so Mirafi® HS/PP products were utilized. These products are high strength woven geotextiles comprised of polyester and polypropylene fibers and provide excellent connection properties as well as excellent long-term design strengths.

Due to the fact no delay in construction would be tolerated, a reinforcement vendor that would deliver large quantities of high strength reinforcement with little to no warning was needed. TenCate™ Geosynthetics delivered.



Completed retaining wall at the Gwinnett Braves Stadium.



Reinforced slope outside of the Gwinnett Braves Stadium.



Play ball with the 25-ft Newcastle/TenCate wall dominating left field. Its not Fenway's "Green Monster", but its close.

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