

Vegetating Vertical Walls

Custom seed mixture adheres to an imposing MSE

By Joan Williams

Tasked with vegetating 2.2 acres of a vertical mechanically stabilized earthen (MSE) wall stretching up to 46 ft at its highest point, contractor Carolina Outdoor Services searched for a “one-time” vegetative solution. The imposing earthen walls in Raleigh, N.C., were established on a former golf course that will become a mixed-use shopping center with a pedestrian greenway area.

Already under tight time constraints, Carolina Outdoor Services brought in Susan Keen, P.E., of Trajan Inc. to vegetate the earthen basket walls. Keen contacted Brian Free, business development manager with Pennington Seed, to determine the best seed and

amendment solution that would adhere to the vertical wall—and work right the first time without costly reapplications.

Living in Raleigh and having completed many other projects in the Southeast, Free was familiar with the soil conditions and challenges the heavy clay and lack of topsoil created. He suggested the use of a specially formulated seed mixture combined with agronomic soil solutions to increase organic matter and bring the soil pH up into the range of 6.3 to 7, ideal levels for ultimate nutrient uptake.

Seed-to-Soil Contact

Site challenges included soft ground at the base of the slopes, which limited vehicle access, and finding a favorable

method of applying the seed mix to ensure it adhered to the geotextile element on the wall’s face.

“I suggested a two-step hydroseeding process,” Free said. “First, we would apply seed, fertilizer and soil amendments with a trace amount of Profile’s Flexterra Flexible Growth Medium (FGM), followed by a second capping application of the remaining Flexterra.”

Free had consulted with Sandy House, technical associate for Profile Products, on the use of amendments. It was decided that when mixed with the best seeds for the region, they would rejuvenate the soil for ideal seed-to-growth establishment.

Free specified a custom-blended



An aerial view of the entire golf course-to-shopping center project (Photo courtesy of Trajan Inc.)