

RESIDENTIAL STREAMBANK SLOPE NORTH CANTON, OH



Problem



Solution



Result

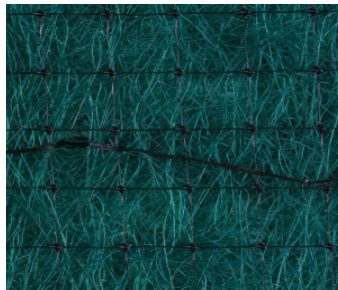
Application: Streambank Stabilization
Product: PP5-10 + Anchors

Site Issues: Sandy fill soils • Steep slopes • Structural reinforcement • Shaded environment

Problem: Sandy fill soils created erosion problems for a residential property with steep slopes and a natural streambed. Protection on site was needed imminently to protect the pool and decking atop the slope. While the subsoils were stable, the sandy fill soils created a slip plane which destabilized the slope. To stop the damage and to help provide a permanent solution, an anchor reinforced vegetated system (ARVS) incorporating deep driven structural percussion driven anchors was coupled with a poly-fiber filled turf reinforcement mat (HPTRM).

Solution: In early fall the site was prepped by removing large vegetation and debris and seeding the site with a rye/fescue blend. First a triangle geogrid was installed down the slope for offer structural slope restraint, then a mid-weight permanent turf reinforcement mat with poly-fibers was selected to hold in the sandy surface soils. To anchor the grid and TRM, Gripple TL606-TLA3 anchors were installed to a 6 ft depth, to reach beyond any future slip plane, and smaller T1100-TA2 percussion anchors were installed with the TRM to offer mat to soil conformance and provide further slope restraint. For further toe protection, logs from the site were recycled to create a natural revetment. The log revetment was held in place with wire lashing and large Gripple TA4 sized anchors.

Result: The integrated design was installed in the fall along with the seed blend. Within a few weeks the annual rye established to allow for vegetation development prior to winter. To date, the installation has weathered the winter snows and spring snow melt, and the vegetation is reclaiming the slope for long-term stabilization, aesthetics, and habitats.



PRODUCT HIGHLIGHTS

- The PP5-10 permanent TRM quickly establish vegetation through the mat, providing both an anchor for vegetation and the ability to filter fines during inclement weather.
- The permanent design creates a shear plane that deflects flowing water away from the soil surface while still allowing ground cover and moisture retention.