

Applied Polymer Systems, Inc.

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Innovations

In Soil Stabilization

City of Bartlett, TN Richland Valley Subdivision Soft Armoring Slope Repair Fall 2006

In September of 2006, the City of Bartlett used part of a subdivision development to test the performance of the soft armoring stabilization technique.

Soft Armoring uses soft pliable matting such as jute, coir, coconut, hemp or burlap and an application of the correct soil-specific polymer to stabilize the soil. The polymer binds the soil together with the matting, creating a highly erosion-resistant surface. It provides crucial stabilization while the vegetation establishes.



The test slope had previously been stabilized with sod, but a portion of it had been undercut, the sod had failed and washed away. Massive rills and gullies had formed in the exposed slope. After consulting with Jason Painter of Jen Hill, it was decided to try a Soft Armoring application to repair the slope.

Just 3 days after installation of the jute matting and application of seed and soil-specific polymer powder, a large rainstorm dropped over two inches of rain on the site.

As shown in the photos below, even before the grass had germinated the slope is stabilized and showing no erosion or plumes of turbidity in the stormwater running through the silt fence and into the nearby stream.



How it was done

1) Grade Surface

Fill in any rills or gullies caused by erosion. This ensures that the surface of the work area is even and the matting will lay flush to the surface.

Preparation work on the site involved re-grading the slope and filling in the rills. Since the area was very small, this was done by hand.



Over four months after the application, the grass in the area of soft armoring was well-established and showed no signs of erosion. The areas of sod on either side of the soft armoring had dried out and died. The polymer allows for better water penetration and retention in the soil, helping to ensure healthy, lush vegetation.

2) Apply matting

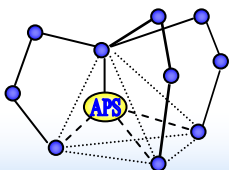
Install open-weave geotextile matting (coir, jute, or other natural fiber) flush to the soil surface and secure in place.

3) Apply Silt Stop powder + Seed + Fertilizer

The Silt Stop powder was added to the seed and fertilizer mix and applied as a dry spread with a hand seed/fertilizer spreader.



For more information on this or other Polymer Enhanced BMPs contact:



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