

Case Study



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Presto Geo-Web Slope Protection Interstate 70 & Mo Highway 23 Concordia, MO

One of the problems faced by County and State Highway Departments is erosion around and under many of the highway overpasses. The Missouri Department of Transportation faced this problem at the interchange of I-70 and State Hwy. 23, in Concordia, MO.

The side slopes of the interchange were vegetated, but the problem was at the edges and underneath the overpass where there were only sparse weeds and eroding soil. Bill Billings, Maintenance Superintendent for MoDOT (Missouri Department of Transportation) District 4 of Kansas City needed to find a solution for the problem. He wanted to beautify the slopes with plantings as well as fix the erosion problem under the overpass. For the erosion problem he had three requirements: 1.) It had to be aesthetically pleasing, 2.) It had to be palatable to the community of Concordia, & 3.) The solution could not be concrete.



The solution MoDOT decided on utilizing was the Presto Perforated Geoweb Cellular Confinement System filled with washed rainbow river gravel.

Geoweb cellular confinement system is an engineered, polyethylene, honeycomb like cellular structure that provides solutions to soil stabilization

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problems. In this case the perforated cell structure was selected. The perforations improve the lateral drainage through the cell walls and it increases the frictional interlock of the fill material up to 30%. It is also certified to ISO 9002, specifically engineered in accordance with established geosynthetic industry guidelines, and backed by a warranty for materials and workmanship.



The contract for the landscaping and the GeoWeb installation was awarded to Scott Swartz with Sunset Landscape of Lee's Summit, Missouri. A total of 13,572 sf. of slope was to be covered and stabilized.

This was the contractor's first experience with GeoWeb. The plans and specifications called for grading of the slope, installation of a Mirafi 140N non-woven fabric for a separation and drainage layer between the GeoWeb and the ground, and the installation of the Perforated GeoWeb. The GeoWeb was anchored to the slope with 16 inch #4 rebar with Presto's Atra Clip anchoring device attached to the top. Thirty anchors per section were used. The final stage was the infilling with the clean rainbow gravel that was specified for aesthetics.

The installation time for the GeoWeb system was one and a half weeks. "Each day our production doubled for my four man crew", says Mr. Swartz. "Like any other material there is a learning curve to the installation. Once the concept and steps were learned the GeoWeb System was easy to install."



Bill Billings the Maintenance Superintendent of MoDOT District 4 is well pleased with the final result. According to Mr. Billings, "The GeoWeb Cellular Confinement System offered us an engineered, flexible, and easy to install solution to our problem."

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