



Case Study

application	Filtration, Drainage, & Vegetation Inhibitor
location	Fort Bliss, El Paso, TX
product	Mirafi® 160N

job owner	USACE
engineer	USACE
contractor	Various
date of installation	2007 - present

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

Fort Bliss is located in the arid climate of El Paso, TX. Sustainable vegetation growth within this region is difficult and costly. For decades, landscape architects have developed new alternatives to vegetating landscapes. The U.S. military's strategic expansion of the Fort Bliss military base developed new challenges for landscape architects. The new construction of military housing and infrastructure to sustain growth of the base has created enormous swaths of land needing to be landscaped. The most cost effective and aesthetically pleasing alternative to vegetative growth is covering the large areas with different types

of crushed rock from the surrounding mountainous region. The landscape architects knew the crushed rock alone would not be sufficient for low maintenance and long-term sustainability for counteracting unplanned weed growth. TenCate Mirafi® 160N nonwoven geotextile was ultimately selected for use underlying the crushed rock.

THE DESIGN

The landscape architects' main challenge utilizing the crushed rock landscape was inhibiting vegetative growth through the rock. Years ago, the standard product used in this application was a thin sheet of impermeable polyethylene liner. The liner worked to keep vegetation from growing through the rock, but during rain events this product would collect water. Occasionally, the water and gravity would cause the crushed rock to move downhill, thus

creating maintenance problems. The landscape architects' realized they needed a permeable product that was thick enough and strong enough to inhibit vegetative growth and not create some of the long term maintenance issues from the past. They ultimately decided to utilize Mirafi® 160N, which is a moderate weight 5 oz./sy minimum, nonwoven, permeable geosynthetic.

THE CONSTRUCTION

The construction of the landscape areas was relatively simple. The landscape area subgrade was leveled. Mirafi® 160N was placed on the subgrade with a 2 inch overlap at adjoining panels of the geosynthetic. The crushed rock was then evenly spread across Mirafi® 160N geosynthetic in a 3 inch moderately compacted lift.



Installation of Mirafi® 160N in the landscape areas.



Installation of Mirafi® 160N in the landscape areas.

THE PERFORMANCE

The project has been a huge success. With millions of square yards of Mirafi® 160N installed over the last decade, the landscape architects in El Paso, TX have continued to specify Mirafi® 160N nonwoven geotextile, inside Fort Bliss as well as in the surrounding El Paso metropolitan areas, for use as a permeable vegetation inhibitor.



Finished landscape area.



Finished landscape area.

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