



Case Study

application Base Reinforcement
location Eagle Mountain, UT
product Mirafi® RS580i

job owner
engineer
contractor
date of installation

City of Eagle Mountain
IGES
Kenny Seng Construction
October 2011

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

In Eagle Mountain City, UT, new middle and high schools were planned to be built adjacent to a new roadway. The engineer on the project wanted to stabilize the fine-grained subgrade soils which showed some potential to collapse (based on laboratory testing) and also to minimize the base aggregate requirements for the roadway. This road was expected to carry heavy traffic loads and high volume due to the new middle school and high school being constructed and also as an arterial roadway for Eagle Mountain City.

THE DESIGN

Using TenCate's MiraSpec Design Solutions Software, the engineer designed the roadway cross section and reduced the amount of granular borrow (engineered granular subbase material) that would be required by five inches and allowed a cost effective alternative that would eliminate the granular borrow completely.



Base material being spread on Mirafi® RS580i.



Mirafi® RS580i with base material.



Mirafi® RS580i rolled out and overlapped appropriately.

THE CONSTRUCTION

This was a new roadway! The contractor cleared and grubbed the roadway area to subgrade level, reworked the upper 12 inches of fine grained subgrade soils by scarifying and recom-pacting to a minimum dry density of 95 percent of ASTM D-1557 (modified proctor) near optimum moisture. Then, TenCate Mirafi® RS580i* was laid and the new pavement section was built. The installation went smoothly and exceeded expectations during construction. The contractor pointed out that the installation of the single layer of material was much easier and quicker than the double layer system which had been used previously in similar applications and under similar conditions.

THE PERFORMANCE

The roadway is performing better than expected. The contractor and the city are very happy with the installation and performance of the material and roadway section. The engineer is also very pleased with the ease of design that the web-based software offers.

*Patent pending



Phased construction - West lanes paved and open to construction traffic.



Final lift of asphalt will be placed before open to final service.

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