



## Case Study

**application** Subgrade Improvement  
**location** Ashland, MO  
**product** Mirafi® RS580i

**job owner**  
**engineer**  
**contractor**  
**date of installation**

**City of Ashland**  
**Central Missouri Professional Services**  
**GBH Builders**  
**May 2012**

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

The City of Ashland, MO was building a new library. During construction of the library it was discovered that the parking lot area was going to have very soft and saturated soils. Even during one of the worst droughts in the region's history, a small stream of water could be seen running through the site. The contractor and engineer both agreed that the asphalt parking lot would not be able to be constructed until the subgrade was improved first.



Small stream running through the planned parking lot.



Very saturated soils during early construction.

### THE DESIGN

The initial recommendation for the poor soils was to have the contractor remove the top 36" of rock and replace it with a higher quality aggregate fill. The engineer also asked TenCate Geosynthetics to give an alternate recommendation to reduce costs and also increase structural integrity of the section. TenCate's engineering department was able to provide an alternative section of 18" of stone on top of Mirafi® RS580i\* woven geosynthetic. Due to the cost savings associated with 18" less of soil removal and additional stone the owner agreed to the proposal.



Stabilized site using Mirafi® RS580i geotextile and stone.



Proof rolling of stabilized section.

**THE CONSTRUCTION**

The contractor began by dewatering the site as best as possible. Mirafi® RS580i was then rolled out onto the soft soils and overlapped by two feet to prevent the material from spreading apart. The first 12" lift of stone was then back dumped, spread and compacted on the fabric to gain immediate stabilization. After that, the process was repeated with the remaining 6" lift to complete the stabilization process. The site was then proof rolled and immediately passed that test.

**THE PERFORMANCE**

During the construction, Mirafi® RS580i made an immediate difference with its ability to separate and reinforce the stone and soil. The contractor had never worked with high strength woven geotextiles before and was apprehensive about using them on this project. Craig Schullte was the site superintendent for the onsite general contractor and commented after the installation, "I'm now a believer." It has been 6 months since the fabric was installed and library parking lot is in great shape.



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\*Patent pending

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