

Highway 35 Road Reconstruction at Bridge Abutment

LOCATION:	Owatonna, MN
PRODUCT:	Roadrain™
APPLICATION:	Collection of water in base material and subgrade of roadway
DATE:	August 2002
OWNER:	Steele County, MN
ENGINEER:	Steele County Highway Department



CHALLENGE

After the initial construction of this roadway section, including an asphalt wearing course, significant deformation and rutting of the roadway surface was observed. Exploration by limited excavation of the road section revealed that underground springs and perched water within sand lenses surrounded by fatty blue clay was saturating the subgrade and road base materials, thereby reducing the bearing capacity and structural integrity of the roadway base. It was determined that a drainage system to collect water from the springs and sand lenses would be necessary to maintain the integrity of the roadway base material. Initially, a geotextile wrapped aggregate rock drain was considered, however, RoaDrain™ was suggested because it would do the job faster, better, and at significant cost savings.

SOLUTION

RoaDrain™ was specified due to its ability to efficiently collect all the water, and provide total coverage of the road section. It was determined that the collection capacity and high flow rate of RoaDrain™ would be sufficient to keep the base aggregates dry and that the compressive strength of RoaDrain™ would be sufficient for long term serviceability and installation stresses.

Benefits of Placing RoaDrain™:

Benefits of Placing RoaDrain™ in a high water table environment:

- Exceptional collection capacity and flow rates
- Excellent compressive strength
- Prefabrication allows for faster construction
- Provides Separation and Strength
- Significant Cost Savings over natural alternative

