



Case Study

application | Asphalt Resurfacing
location | Groton, NY - Route 38
product | TruPave® Paving Mat

job owner | State of New York, District 3
engineer | Stan Birchenough
contractor | RAMSCO, Inc; Watervliet, NY

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

Faced with heavy truck traffic and being the main thoroughfare through Groton, NY, the New York State Department of Transportation (NYDOT) had to re-pave Route 38 approximately every two years. Built originally in the 1930's using brick and concrete base pavement, coupled with cold weather conditions and over 100 inches of snow annually, the road surface is subjected to extreme conditions that have caused pavement deterioration at an accelerated rate. Average daily traffic on Rt. 38 is approximately 4,500 vehicles per day with 8% heavy truck traffic.



Asphalt showing fatigued pavement surface

THE DESIGN

In order to combat the necessity for repetitive re-construction and rehabilitation of Rt. 38; the State of New York Region 3 offices were contacted by RAMSCO, in Watervliet, NY; the authorized Dealer for Owen's Corning's TruPave® Engineered Paving Mat, to consider in their next paving project. The key purpose for using TruPave® is to limit the effects of water intrusion into the pavement section along with mitigating thermal and reflective cracking. The State resident engineer, Stan Birchenough was convinced this new innovative technology was exactly what was needed to extend the pavement life and performance in Groton, NY. The design of the overlay project would incorporate TruPave® into the proposed wearing course surface, forming a moisture barrier between the old and new pavement sections. In addition, with TruPave's high tensile strength at low elongation strain forces, the fiberglass mat worked to keep the effects of thermal and reflective cracking minimized. The road surface was prepared by removing the deteriorated pavement down to the brick-paver base and

gutter line milling was done to improve cross-section gradient for improved water drainage. A leveling course was installed over the brick paver section prior to the installation of the final wearing course.



Pavement milled and prepped for leveling.



THE CONSTRUCTION

The NYDOT District 3 self-performed the entire project along with technical guidance provided by RAMSCO.

After securing TruPave® Engineered Paving Mat, the District modified their Case backhoe and installed the TruPave® mat on the pavement section on freshly applied AC 20. Approximately 1 mile (2 lanes) of Rt. 38 were covered with TruPave® totaling 15,000 sy of material. The TruPave® mat installed on this project was 12.5' wide x 360' roll length material. The final wearing course was a NYDOT 9.5mm Super-pave mix.



Installing in liquid asphalt ensures the mat will provide necessary moisture protection from water intrusion.

THE PERFORMANCE

Since the installation of the new asphalt wearing surface and TruPave® Engineered Paving Mat in July 2005, the surface performance has exceeded all expectations. As stated earlier, major pavement rehabilitation had to be done every two years, and now, by incorporating TruPave® into the pavement, the surface of the roadway is intact. "The pavement with TruPave® was worth the investment and extended the pavement life of our traditional mill & fill pavement application" Stan Birchenough said in a recent conversation regarding the performance of Rt. 38.



Midway through construction of the roadway and spur.

Photos taken in May of 2009 show how the road surface has maintained integrity and has kept thermal and reflective cracking minimized. Truck traffic continues to be a major concern, but the pavement section with TruPave® Engineered Paving Mat has outperformed traditional paving methods and has proven a worthwhile investment.



Completed road.

TenCate™ Geosynthetics North America assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. TenCate™ Geosynthetics North America disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.

Mirafi® is a registered trademark of Nicolon Corporation.

06.09