



GREATER ROCHESTER INTERNATIONAL AIRPORT ROCHESTER, NEW YORK

Application: The County of Monroe operates the Greater Rochester International Airport as a medium hub for 16 air transportation providers. It handles 220 flights a day to cities in the northeast and major hubs in the Midwest. In 1995, the airport authority began investigating options for using interlayers to improve the condition and performance of its secondary-use runway for better overall performance.

The Challenge: With an average high temperature of 82°F in the summer and an average low temperature of 15°F in the winter, thermal cycling as well as movement in the underlying Portland Cement Concrete (PCC) joints was causing serious cracking and surface degradation to the asphalt surfacing on Runway 10-28. Earlier attempts to rehabilitate reflective cracking with asphalt overlays had been unsuccessful.



Using the GlasGrid 8502 Detail Repair System for spot reinforcement provides a strong interlayer solution.

Site Conditions: The runway was becoming extremely oxidized and brittle because of the harsh climate. As a result, the surface layer distress included thermal and transverse cracks. The airport owners were concerned these defects might affect aircraft movement and safety.

Alternative Solution: The owners considered adding a new 4 inch thick asphalt overlay to the runway, however, this approach would have proven to be very expensive. Experience also suggested that it would provide only a temporary solution to the problem since thermal stresses were likely to cause the cracks to reflect back through to the surface at a rate of 1 inch per year.

The Solution: The GlasGrid® Pavement Reinforcement System was recommended as a lower cost, longer lasting alternative to a thicker asphalt overlay. Spot reinforcement of transverse cracks using the GlasGrid 8502 product would provide a strong interlayer solution capable of resisting the migration of reflective cracking.

The general contractor's crew began the installation process by cleaning the runway with pressurized air and then filling the largest cracks with rubberized crack sealer. They next installed a 1 inch thick asphalt leveling course over the existing PCC pavement.

With the leveling course in place, they placed the GlasGrid 8502 reinforcement over each PCC joint. A pressure-activated adhesive on the back

CASE STUDY

PROJECT HIGHLIGHTS

Project:
Greater Rochester International Airport

Location:
Rochester, New York

Installation:
August 1995

Product/System:
GlasGrid 8502, Detail Repair System

Owner:
County of Monroe, New York

Design Engineer:
Clough, Harbour & Associates

Materials Supplier:
RAMSCO



REINFORCED ASPHALT OVERLAY

CASE STUDY

of the mesh kept it in place while the crew installed the asphalt wearing course. A follow-up report from the Monroe County of Aviation indicated that the GlasGrid Pavement Reinforcement System is delivering very good performance after more than 11 years of service.

System Advantage: Introduced in 1989, the GlasGrid System consists of stiff environmentally friendly fiberglass material coated with an elastomeric polymer. The open aperture grid is rolled out over a thin leveling course placed before the main asphalt overlay. With its pressure-sensitive adhesive backing, installation of the GlasGrid material for reinforcement is easy and widely considered the most expedient installed interlayer system available. The GlasGrid System has been successfully used

within asphalt overlays throughout the world to combat reflective cracking initiated by one or more of the following:

- Concrete pavement longitudinal and transverse joints
- Thermal loading
- Lane widening
- Cement treated or stabilized layer shrinkage cracks
- Block cracks
- Asphalt construction joints

Additional Information and Services:

Tensar International Corporation, the leader in geosynthetic soil reinforcement, offers systems for improving structures such as roadways, railroads, construction platforms and parking lots. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Highly adaptable, cost-effective and installation-friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance.

For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.



The crew installs the GlasGrid System over transverse joints on Runway 10-28.

For more information on the GlasGrid System or other Tensar Systems, call **800-TENSAR-1**, e-mail info@tensarcorp.com or visit www.tensar-international.com.

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