

CASE STUDY

CENTRALIA AIRPORT

EXTER, ONTARIO, CANADA

Condition of the airport apron in 2007 after more than 13 years of use.



BACKGROUND

The Ontario Development Corporation operates Centralia Airport at the site of a former Royal Canadian Air Force training base. The base was converted to civilian aviation use in 1966. In 1992 the Ontario Development Corporation, which had recently acquired the airport, decided to undertake a rehabilitation effort to bring the facility up to current standards.

A combination of irregular maintenance and harsh weather was causing serious cracking of the airport's paved surfaces. The airport apron was becoming extremely oxidized and brittle due to the harsh climate. Centralia's highest recorded monthly average temperature was 80°F in July while the lowest was 15°F in January. The surface layer included thermal, alligator, transverse and longitudinal cracks. Further surface degradation was likely to affect aircraft movement and safety.

The owners considered adding a thicker overlay to the apron, however this approach would have proved very expensive. Experience also suggested that an overlay without reinforcement would provide only a temporary solution since thermal stresses were likely to cause the cracks to eventually reflect back through to the surface.

THE SOLUTION

The GlasGrid® Pavement Reinforcement System was recommended as a lower cost, longer lasting alternative to installing a thicker overlay. Reinforcing the apron with GlasGrid 8501 would produce a strong interlayer solution capable of resisting the migration of reflective cracking.

A return site visit in February 2007 revealed that the GlasGrid System reinforced pavement had experienced only minor cracking after more than 13 years of post-rehabilitation service. Brad Pryde, the design engineer of record on the project stated, "We incorporated GlasGrid 8501 into Centralia Airport's concrete apron rehabilitation to mitigate the reflective cracking that was anticipated to reoccur in

AN OVERVIEW OF 30 YEARS OF SERVICE:

PROJECT HIGHLIGHTS

Project:

Centralia Airport

Location:

Ontario, Canada

Installation:

1992-1993

Product:

GlasGrid 8501

Owner:

Ontario Development Corporation

Design Engineer:

Paragon Engineering

General Contractor:

Cox Construction



Severe cracking of the airport apron in 1992 at the Centralia Airport was likely to affect aircraft movement and safety.

CASE STUDY: CENTRALIA AIRPORT



Condition of the Centralia Airport apron 30 years later.

in the proposed 3 in. thick asphalt pavement overlay. After 13 years of Canadian weather, the cracking is minimal. We are satisfied with the performance of the GlasGrid product in this application.”

30 YEARS AFTER INSTALLATION

In November of 2022, the site was visited again. After 30 years of enduring harsh Canadian weather, the airport apron had experienced cracking. Dean Pettitt, who is a local engineer familiar with the harsh winters and GlasGrid products commented, “That’s pretty impressive for 30 years considering the original condition.”

THE GLASGRID SYSTEM ADVANTAGE

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

GlasGrid 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, a division of CMC, is the leader in geosynthetic soil stabilization, offers systems for improving structures such as roadways, railyards, 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.



Need Assistance?

Contact your Tensar representative:

Website: [TensarCorp.com](https://www.tensarcorp.com)

Phone: 800-TENSAR-1

Email: info@tensarcorp.com

