



IMPERIAL COUNTY AIRPORT EL CENTRO, CALIFORNIA

Application: The Imperial County government operates an airport with two runways that support general aviation and commercial aircraft. In 2009 the county needed to rehabilitate a taxiway to maintain its capability of serving this traffic.

The Challenge: The county wanted an affordable option for creating a new taxiway with a superior projected design life.

Site Conditions: The subgrade soils consisted of lacustrine deposits, which varied from lean to fat clay (CL to CH) and silt (ML). Shallow groundwater also created pockets of extremely soft soils.



The Spectra® System delivered an affordable option to a site with challenging soil conditions.

Alternative Solution: The county considered using a 19 in. thick aggregate base with and without lime stabilization. Both of these options were rejected because of concerns over cost, construction scheduling and life cycle performance.

The Solution: The county decided to use the Spectra® Roadway Improvement System, a mechanically stabilized layer incorporating TriAx™ Geogrid, as a lower cost, longer lasting alternative to installing a very thick base layer or remediating the subgrade with lime.

“Our client had used geogrid on another airport project,” says Geotechnics, Inc., Project Engineer Matt Fagan. “The client believed that the use of geogrid could improve the lifespan of the new taxiway without adding substantial costs to the pavement section.”

Granite Construction completed the installation by removing the existing pavement section and 15 in. of soil. Next, they leveled and rolled the subgrade and covered it longitudinally with TriAx Geogrid. To complete the installation, they installed 15 in. of aggregate base and 4 in. of asphalt concrete. In areas with significant groundwater, they excavated the saturated material, installed a lower layer of TriAx Geogrid, and covered it with recycled asphalt (stockpiled when the original

PROJECT HIGHLIGHTS

Project:

Imperial County Airport

Location:

El Centro, California

Installation:

June 2009

Product/System:

Spectra® Roadway Improvement System

Quantity:

30,000 sq yds of Tensar® TriAx™ Geogrid

Owner/Developer:

Imperial County, California

Design Engineer:

Geotechnics, Inc.

General Contractor:

Granite Construction

Materials Supplier:

CONTECH Construction Products, Inc.



taxiway was removed) to return the subgrade to required profile depth.

"The TriAx Geogrid's rib has a higher profile and a unique hexagonal shape that gives 360° load distribution," says Tensar International Corporation regional manager Lars Nelson. "These properties allowed the taxiway designer to reduce the aggregate layer by 4 in. while still providing superior base confinement and strength."

"The use of TriAx Geogrid helped us establish a firm and unyielding subgrade throughout the site, which translated to improved relative compaction in the aggregate base and asphalt concrete," Fagan says.

The Spectra System Advantage: More owners are selecting the Spectra System to:

- Simplify and speed construction while increasing the performance of pavement structures.

- Reduce aggregate fill thickness.
- Decrease labor and equipment requirements.
- Reduce undercut, overexcavation and removal requirements.
- Improve durability by changing the dynamics of load interaction with the subgrade and more evenly distributing load pressures.
- Enable construction to proceed even in difficult working conditions.

Additional Information and Services:

Tensar International Corporation, the leader in geosynthetic soil reinforcement, 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.

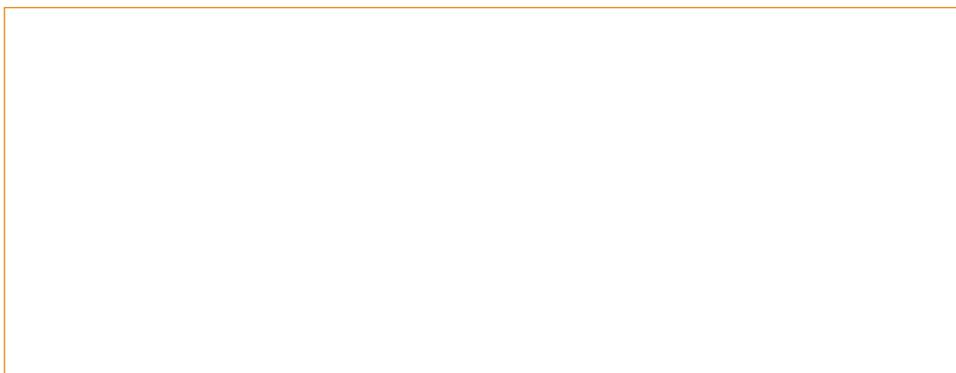
For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.



The Spectra System provided a new taxiway with a superior design life.

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

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