



## For years, engineers around the world have trusted Tensar's SpectraPave design software to evaluate design options and optimize pavement performance.

SpectraPave Software provides design engineers the most powerful tool available for evaluating roadway design options and optimizing pavement performance using Tensar Geogrids. This free program specializes in the optimization of paved roadways as well as the stabilization of unpaved roadways over soft subgrades.

This comprehensive, systems-based design software suite offers the full benefits of Tensar's knowledge and experience in analyzing both subgrade stabilization and pavement optimization applications. These applications incorporate the entire range of Tensar TriAx Geogrids.

### SpectraPave enables users to:

- ▶ Design for a specific level of performance
- ▶ Analyze a variety of support and loading conditions and serviceability limits
- ▶ Evaluate and compare designs and costs for both unbound aggregate and mechanically stabilized aggregate layers (MSL)

While it is recommended for users to view Tensar's brief training video prior to download and installation, no previous knowledge or experience in pavement design is required to benefit from using the software.

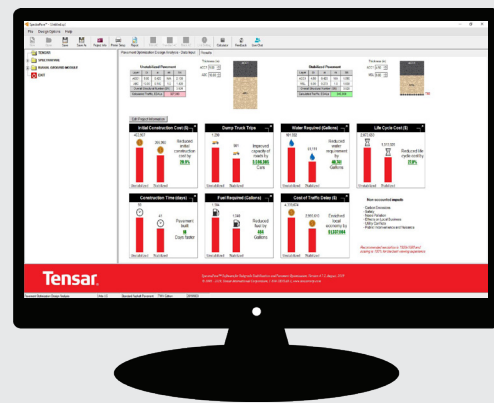
### PROTECTING DESIGN INTEGRITY

SpectraPave includes detailed design parameters and input values with the output of each analysis module. This allows design specific data to be included in the project documents. More importantly, it provides a reliable method for generating detailed specifications, which will ensure the integrity of a design.

### SUBGRADE STABILIZATION MODULE FILLS IN THE DETAILS

The Subgrade Stabilization module relies on the latest performance-based Giroud-Han methodology for the design of haul and access roads as well as temporary working surfaces. It allows the user to analyze a variety of subgrade and traffic loading conditions. A cost estimating tool is included to compare costs of unstabilized and TriAx stabilized sections.

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[www.TensarCorp.com/SpectraPave](http://www.TensarCorp.com/SpectraPave)



### PAVEMENT OPTIMIZATION MODULE

The newly updated Pavement Optimization module is intended to help engineers, public agencies, owners, and contractors better understand *the true value of using TriAx Geogrids* in their pavement sections. That value can be determined through pavement life extension, reduced initial and life cycle costs, shorter construction time, and less fuel and water consumption during construction, just to name a few.

Calculations undertaken in SpectraPave's Pavement Optimization module are based on AASHTO's 1993 Flexible Pavement Design Method. Geogrid is incorporated into the design as recommended in the AASHTO Standard Practice document R 50-09 (2009). Enhanced aggregate layer coefficients are used to account for the improved aggregate stiffness resulting from the inclusion of TriAx Geogrid.

The Pavement Optimization module has been reviewed and validated by pavement design experts. Applied Research Associates has verified that the benefits of TriAx Geogrid are properly incorporated into AASHTO pavement design methodology, is consistent with AASHTO R 50-09, and that SpectraPave utilizes sound pavement engineering practices.

## LEVERAGING SOLID DATA AND FIELD RESEARCH

The Pavement Optimization module was developed based on the test results obtained from full-scale research conducted at the U.S. Army Corps of Engineers – Engineering Research & Development Center (ERDC) in Vicksburg, MS. The testing at ERDC yielded performance data necessary to create an analysis tool for evaluating TriAx Geogrid stabilized pavements.

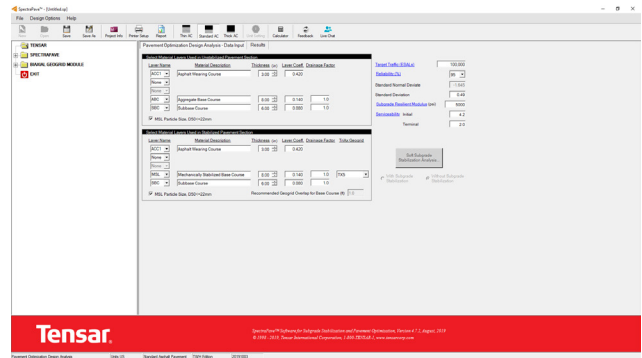
**SpectraPave also contains a cost analysis function for both modules. This helps calculate initial and life cycle costs for both unstabilized and stabilized pavements, allowing the user to better understand the immediate and long term benefits of using TriAx Geogrid.**

## 360° SYSTEM ADVANTAGE APPROACH TO ROADWAY DESIGN

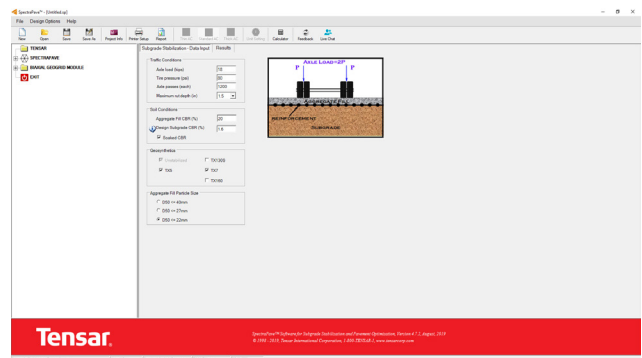
Now, roadway design and construction have never been easier. SpectraPave Design Software is only a small part of the 360° System Advantage that consists of the components you need from project start to finish, including:

- ▶ **Tensar® TriAx® Geogrid:** Quickly and easily installed, TriAx Geogrid interacts with aggregate to create a mechanically stabilized layer (MSL) within the base course or subgrade to improve the road's performance.
- ▶ **Site Assessment:** At the beginning of the project, Tensar can analyze the site conditions and recommend a geogrid solution that optimizes project budgets and construction schedules.
- ▶ **Design Services and Assistance:** Along with the SpectraPave Software, Tensar also offers an in-house engineering team ready to evaluate your options and determine the most cost-effective design for your project.
- ▶ **Specification:** Tensar provides material and performance based specifications to meet the needs of the end-user to ensure design integrity of the TriAx stabilized pavement.
- ▶ **Site Support:** A Tensar representative can be on site when needed to advise on proper installation procedures.

Experience the convenience of having everything you need for a successful roadway project all from one company – Tensar International Corporation, which has set the industry standard for more than 30 years.



*The Pavement Optimization module can compare thicknesses of an unstabilized pavement with a TriAx Geogrid stabilized pavement and show the associated savings in initial cost, life cycle cost, construction time, fuel and water use, and more.*

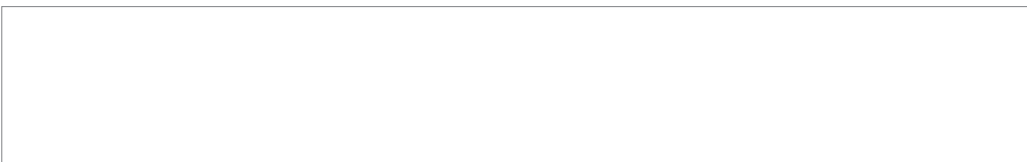


*The Subgrade Stabilization module allows the user to determine MSL thickness over a soft subgrade to pass a proof roll or reach the design traffic level.*

For more information on Tensar® TriAx® Geogrid, call **800-TENSAR-1**, visit **www.tensarcorp.com** or email **info@tensarcorp.com**.

We are happy to supply you with additional information on our geogrid products, installation guidelines, system specifications, design details, conceptual designs, preliminary cost estimates, case studies, software and much more.

Distributed by:



# Tensar®

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