

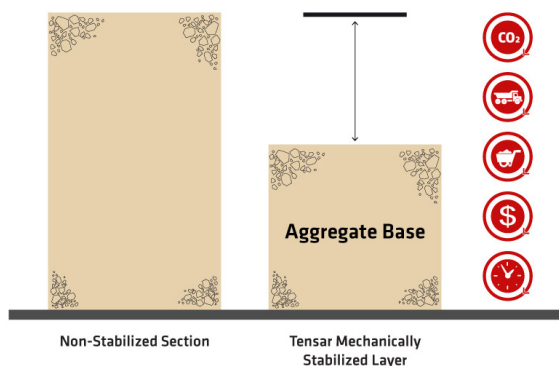
TriAx®

Using Tensar TriAx Geogrids for Transmission Line Projects For Subgrade Stabilization, Haul/Access Road Stabilization and Pavement Optimization

The U.S. electrical grid is the largest interconnected machine on Earth. It consists of over 450,000 miles of high-voltage transmission lines and over 5.5 million miles of local distribution lines, linking thousands of generating plants to factories, homes and businesses.

In many cases, the haul/access roads to these lines have underlying soil conditions are unfavorable, characterized by soft clay, silt or peat with high groundwater tables.

This presents a particular challenge to the contractor when constructing access roads with heavy vehicle traffic. An even greater test occurs in areas where the transmission towers are located. Heavy lifting equipment, required to position the towers, exerts high pressures on the underlying soft subgrade.



THE TRIAX® ADVANTAGE

By incorporating Tensar TriAx Geogrids, a mechanically stabilized layer is created for the haul/access roads and working areas. This results in less excavated material needed to be taken away from the site, and less aggregate needed to be imported, placed and compacted.

- **Less Aggregate:** The latest Giroud-Han design methodology has demonstrated that the required aggregate thickness can be reduced by up to 60% for roads reinforced with Tensar TriAx Geogrids with no loss in performance.



- **Increased Speed of Construction:** The installation process for geogrids is extremely straightforward. Using less aggregate leads to quicker installation when compared to other solutions that use conventional soil stabilization techniques.
- **Avoid Over-Excavation:** Traditional stabilization often involves over-excavation and disposal of the uppermost subgrade soils.
- **Eliminate Uncertainties Associated with Chemical Stabilization:** Apart from the obvious environmental concerns, chemical treatment of the subgrade requires that optimum temperatures and dry weather conditions be met. This can lead to delays in the construction process.
- **Lower Costs:** Using less aggregate with an increased speed of construction yields significant cost savings. These cost savings increase with greater traffic loads and weaker subsoil conditions.

HEAVILY LOADED AREAS

The locations where transmission line components are unloaded and lifted into position often present the greatest challenge to avoiding subgrade failure. In these areas, multiple layers of Tensar TriAx Geogrids can be used to strengthen the aggregate section.

The stiffened aggregate results in an enhanced load distribution beneath the large static and dynamic loads imposed by the lifting equipment. This increases the factor of safety against a bearing capacity failure in the subgrade.

MAXIMIZE TIME AND COST SAVINGS WITH SPECTRAPAVE4-PRO™ SOFTWARE

The Giroud-Han design method was published in the August 2004 edition of the ASCE Geotechnical Journal. The paper reveals the most significant advancement in the design of geosynthetic-reinforced roads within the last 10 years. Tensar developed SpectraPave4-PRO Software in order to offer *Engineered Solutions* compliant with the latest design methodology.

Available free of charge, the SpectraPave4-PRO Software allows the removal of uncertainties associated with the cost and reliability of access road construction. This is particularly important when dealing with heavy loads and weak soils, as it also allows the developer to minimize the cost of these components.



EXPERIENCE YOU CAN RELY ON

Tensar International, the leader in geosynthetic soil stabilization, offers a variety of solutions for paved surfaces and roadway projects. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Our support services include site evaluation, design consulting and site construction assistance.

For more information on Tensar TriAx or other Tensar Systems, please call **800-TENSAR-1**, e-mail info@TensarCorp.com, or visit us online at www.TensarCorp.com.



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