

PAVEMENT OPTIMIZATION

For serious pavement designers, Tensar® TriAx® Geogrids have undergone the testing recommended by the experts for proper design and risk reduction. Pavement Optimization uses geogrid to improve the performance of aggregate layers within a pavement structure over the expected service life of the pavement. This improvement is different for each pavement design methodology and is dependent on specific failure mechanisms and aggregate properties. Proper development of a pavement design methodology consists of many tests, calibration, performance validation, and independent review by authoritative experts.

Pavement Optimization
(Firm soils or stabilized subgrade – CBRs from ~3-10%)

Testing & Validation	Tensar TriAx Geogrid	Tensar BX Geogrid	Other Punched & Drawn Geogrid	Geotextile
Small Scale Testing	✓	✓	✓	✓
Local Case Histories	✓	✓	✓	✓
Full-scale testing <u>not</u> in accordance with NCHRP Report 512	✓	✓	✓	✓
Asphalt Reduction and Base Reduction Validated Using Full-Scale APT (NCHRP 512) Testing over stiff soils	✓			
3rd Party Review (ARA) of Design Methodology – In Compliance with AASHTO R50-09	✓			
Letter from ARA verifying SpectraPave design software compliance with AASHTO R50-09	✓			
3rd Party Automated Plate Load Testing performed across the US & in Canada. Testing performed has included many material types.	✓			
3rd Party review of M-E Methodology. Review performed by ARA	✓			
Local calibration for M-E Design	✓			
Manufacturer able to draw up and stamp designs	✓			

SUBGRADE STABILIZATION

Subgrade Stabilization uses a geogrid to create a working platform over soft soils improving constructability and providing better pavement support characteristics for the pavement structure. Verification is performed in the field by proof rolling. It should be noted that this application does not address the benefits or failure mechanisms associated with a pavement design methodology. Instead it provides the subgrade strength required to construct a competent pavement.

Subgrade Stabilization (Soft soils – CBRs less than ~ 3%)

Testing & Validation	Tensar TriAx Geogrid	Tensar BX Geogrid	Other Punched & Drawn Geogrid	Geotextile
Small Scale Testing	✓	✓	✓	✓
Local Case Histories	✓	✓	✓	✓
Full-scale testing	✓	✓	✓	✓
Large-scale cyclic plate-load testing for subgrade improvement	✓	✓		✓
Products have been calibrated and validation testing performed in accordance with the Giroud-Han Methodology (outlined in the FHWA 2008 manual)	✓	✓		
Letter from Dr. Han (one of the authors of the method) verifying proper calibration and validation have been performed	✓	✓		
Manufacturer able to draw up and stamp designs	✓	✓		