

3. PERFORMANCE COMPARING TRIAX SECTION COMPARED TO BIAXIAL GEOGRID SECTION

No.	Research Study	Location	Section Description			Performance Comparison				
			TriAx Geogrid Section	Biaxial Geogrid Section	Control Section (no geogrid)	Subgrade	TriAx Enhanced Sub-base Resilient Modulus VS Biaxial	TriAx Reduction in Surface Deformation VS Biaxial	TriAx Reduction in Surface Deformation VS Control	Biaxial Reduction in Surface Deformation VS Control
			Feet	Feet		Type	% Improvement	% Reduction		
7	In-Situ Performance Comparison Testing of TriAx and BX1200 Stabilized Aggregate, 2018	Boone Test Bed, Boone, IA, USA, David J. White, Ph.D., P.E., Ingios Geotechnics, Inc.	0.50 Feet AS/ TriAx NSSP	0.50 Feet AS/ Biaxial Geogrid	N/A	3	35% better	45% less	N/A	N/A
		Laboratory/Plate Load	1.50 Feet AS/ TriAx NSSP	1.50 Feet AS/ Biaxial Geogrid	N/A	3	20% better	38% less	N/A	N/A
8	In-Situ Performance Comparison Testing of TriAx and BX1200 Stabilized Aggregate	Laboratory/Plate Load	0.70 Feet AS/ TriAx NSSP	0.70 Feet AS/ Biaxial Geogrid	N/A	3	30% better	65% less	N/A	N/A
9	NDOT Research Report No. 327-12-803, use of Geogrid for Strengthening and Reducing Roadway Structural Sections	UNLV Laboratory Tank Test for Nevada DOT	0.25 Feet HMA/ 1.0 Feet AS/ TriAx NSSP	0.25 Feet HMA/ 1.0 Feet AS/ TriAx NSSP	0.25 Feet HMA/ 1.0 Feet AS	3	Not Measured	13% Less	30% less	17% less
10	NCHRP 1-50	Various	Various			-	Not Measured	20% less	30%	12%

Research Studies (Numerical Modeling)		Comments
11	"Numerical Analysis of Tensile Behavior of Geogrids with Rectangular and Triangular Apertures", Jie Han et al, Geotextiles and Geomembranes, 2010	Triangular Shaped Geogrids perform better than square or rectangular shaped geogrids.
12	Discrete element modeling of a trafficked sub-base stabilized with biaxial and multi-axial geogrids to compare stabilization mechanisms", 2015 Geosynthetics Conference.	