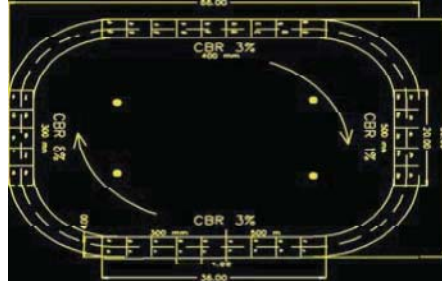


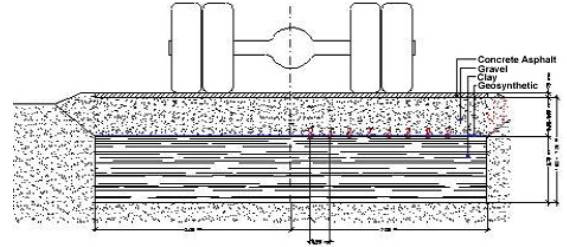
MS MULTI-LAYER GEOGRIDS IN THE FIELD: In Ground Test for Geosynthetic Reinforced Flexible Paved Roads



MS Multi-Layer Geogrids have been installed and tested for performance in comprehensive in-ground testing



Plan view of the in-ground test track



Research results indicated that MS Multi-Layer Geogrids performed and provided the required structural contribution to effectively reinforce or stabilize poor soil

- Full-scale in-ground tests were conducted to evaluate the structural contribution of geosynthetic reinforcement to pavement systems.
- Up to 56 different sections were constructed, including reinforced and control sections, different subgrade CBR, and base thickness.
- Surface rut depth and strain in geogrid were measured. Post test excavation was also conducted to evaluate the construction damage.

The tests show that...

Rut Depth Vs. Number Of Cycles For Different Cross Sections - CBR = 3%

PRODUCT CBR, % Base, mm	U.R. MS220 BX 1100			U.R. MS220 BX 1100			U.R. MS220 BX 1100		
	3	3	3	3	3	3	3	3	3
	300	300	300	400	400	400	500	500	500
CYCLE, N	Max Rut Depth, mm			Max Rut Depth, mm			Max Rut Depth, mm		
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	-	#N/D	#N/D	-20.06	#N/D	#N/D	-7.21	#N/D	#N/D
100	26.55	-6.75	-9.47	-22.66	-2.25	-1.64	-7.91	-4.00	-5.63
300	44.36	-8.13	-11.80	-27.20	-3.06	-2.55	-8.06	-4.75	-7.02
500	90.53	-8.81	-12.53	-29.83	-3.33	-2.93	-10.35	-5.38	-8.25
1000	141.7	-10.21	-14.88	-34.27	-4.19	-3.96	-12.61	-6.12	-10.36
2000	#N/D	-11.31	-17.24	-38.20	-4.78	-3.78	-12.59	-8.02	-10.90
4000	#N/D	-13.18	-18.35	-44.41	-5.51	-5.25	-13.74	-8.91	-11.57
8000	#N/D	-14.34	-19.55	-47.62	-6.81	-6.59	-14.96	-11.33	-12.75

Rut Depth Vs. Number Of Cycles For Different Cross Sections - CBR = 1%

PRODUCT CBR, % Base, mm	U.R.	MS220	BX 1100	MS330	BX 1200
	1	1	1	1	1
	1000	500	500	500	500
CYCLE, N	Max Rut Depth, mm				
0	0.00	0.00	0.00	0.00	0.00
50	#N/D	#N/D	#N/D	#N/D	#N/D
100	-5.13	-10.20	-9.86	-2.29	-3.93
300	-5.38	-12.79	-11.27	-2.56	-4.14
500	-5.76	-13.21	-11.37	-3.16	-4.96
1000	-7.24	-15.38	-15.74	-5.02	-6.33
2000	-8.09	-16.52	-16.83	-6.19	-8.10
4000	-9.67	-18.18	-19.79	-8.54	-10.46
8000	-12.35	-21.00	-24.87	-11.58	-15.95

Rut Depth Vs. Number Of Cycles For Different Cross Sections - CBR = 3%

PRODUCT CBR, % Base, mm	U.R.	MS220	BX 1100	MS330	BX 1200
	3	3	3	3	3
	400	400	400	400	400
CYCLE, N	Max Rut Depth, mm				
0	0.00	0.00	0.00	0.00	0.00
50	-20.06	#N/D	#N/D	#N/D	#N/D
100	-22.66	-2.25	-1.64	-1.24	-1.87
300	-27.20	-3.06	-2.55	-1.57	-2.04
500	-29.83	-3.33	-2.93	-2.01	-2.40
1000	-34.27	-4.19	-3.96	-2.35	-2.61
2000	-38.20	-4.78	-3.78	-2.76	-3.34
4000	-44.41	-5.51	-5.25	-3.72	-4.01
8000	-47.62	-6.81	-6.59	-6.25	-5.42

Multilayer Geogrids are manufactured by Tenax Corporation, 4800 E. Monument Street, Baltimore, MD 21205; represented exclusively by Syntec, LLC