



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

May 19, 2015

Lance Carter, P.E.
Technical Director
Strata Global GeoSolutions
380 Dahlonega Road
Suite 200
Cumming, GA 30040

Subject: Approval of Stratagrid Geogrids

Dear Mr. Carter:

The Materials and Tests Unit has reviewed the submittal dated December 31, 2014 for Stratagrid geogrids in accordance with the “NCDOT Guidelines for the Geogrid Evaluation Program”. The submittal included NTPEP Report (August, 2014) and supplemental document with additional test results provided by STRATA. Based on this information, Stratagrid geogrids listed in the table below are approved for use on North Carolina Department of Transportation projects in accordance with the applicable contract and the following:

Geogrid and Direction (MD, CD)	Polymer (PET, HDPE, PP)	Aperture Size (inches)	T _{ult} (lb/ft)	T _{2%} (lb/ft)	T _{5%} (lb/ft)	J _{ave} (lb)	J (m-N/deg)	RF _{CR}			RF _D
								3-yr	75-yr	100-yr	
								26280 - hrs.	657000 - hrs.	876000 - hrs.	
								4.419 62536	5.8175 6537	5.94250 4106	
SG150 (MD, CD)	PET	0.95 x 0.90	1875					1.46	1.58	1.60	1.30
SG200 (MD)	PET	0.75 x 0.65	3400					1.43	1.54	1.55	1.30
SG350 (MD)	PET	(0.85 / 0.60) x 0.55	4800					1.43	1.54	1.55	1.30
SG500 (MD)	PET	2.4 x 0.95	6300					1.43	1.54	1.55	1.30
SG550 (MD)	PET	(0.85 / 0.35) x 0.95	7800					1.43	1.54	1.55	1.30
SG600 (MD)	PET	2.4 x 0.95	8700					1.43	1.54	1.55	1.30
SG700 (MD)	PET	2.4 x 0.95	11750					1.43	1.54	1.55	1.30

MAILING ADDRESS: NC Department of Transportation Materials and Tests Unit 1563 Mail Service Center Raleigh, NC 27699-1563	TELEPHONE: 919-329-4150 FAX: 919-733-8742 https://connect.ncdot.gov/resources/Materials/Pages/default.aspx	LOCATION: 1801 Blue Ridge Road Raleigh, NC 27607
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Geogrid and Direction (MD, CD)	Borrow ($\phi = 30^\circ$)										
	RF _{ID}	RF			T _{al} (lb/ft)			C _i	F*	C _{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
SG150 (MD, CD)	1.25	1.83	2.57	2.60	1027	730	721	0.8	0.462	0.8	24.79
SG200 (MD)	1.25	1.79	2.50	2.52	1902	1359	1350	0.8	0.462	0.8	24.79
SG350 (MD)	1.25	1.79	2.50	2.52	2685	1918	1906	0.8	0.462	0.8	24.79
SG500 (MD)	1.10	1.57	2.20	2.22	4005	2861	2842	0.8	0.462	0.8	24.79
SG550 (MD)	1.10	1.57	2.20	2.22	4959	3542	3519	0.8	0.462	0.8	24.79
SG600 (MD)	1.10	1.57	2.20	2.22	5531	3951	3925	0.8	0.462	0.8	24.79
SG700 (MD)	1.10	1.57	2.20	2.22	7470	5336	5301	0.8	0.462	0.8	24.79
SG150 (MD, CD)	Fine Aggregate ($\phi = 34^\circ$)										
	RF _{ID}	RF			T _{al} (lb/ft)			C _i	F*	C _{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
SG150 (MD, CD)	1.25	1.83	2.57	2.60	1027	730	721	0.8	0.5396	0.8	28.35
SG200 (MD)	1.25	1.79	2.50	2.52	1902	1359	1350	0.8	0.5396	0.8	28.35
SG350 (MD)	1.25	1.79	2.50	2.52	2685	1918	1906	0.8	0.5396	0.8	28.35
SG500 (MD)	1.10	1.57	2.20	2.22	4012	2864	2838	0.8	0.5396	0.8	28.35
SG550 (MD)	1.10	1.57	2.20	2.22	4968	3545	3514	0.8	0.5396	0.8	28.35
SG600 (MD)	1.10	1.57	2.20	2.22	5541	3955	3919	0.8	0.5396	0.8	28.35
SG700 (MD)	1.10	1.57	2.20	2.22	7484	5341	5293	0.8	0.5396	0.8	28.35
SG150 (MD, CD)	Coarse Aggregate ($\phi = 38^\circ$)										
	RF _{ID}	RF			T _{al} (lb/ft)			C _i	F*	C _{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
SG150 (MD, CD)	1.55	2.26	3.18	3.22	829	590	582	0.8	0.625	0.8	32.01
SG200 (MD)	1.55	2.22	3.10	3.12	1534	1097	1090	0.8	0.625	0.8	32.01
SG350 (MD)	1.55	2.22	3.10	3.12	2166	1548	1538	0.8	0.625	0.8	32.01
SG500 (MD)	1.25	1.79	2.50	2.52	3524	2517	2501	0.8	0.625	0.8	32.01
SG550 (MD)	1.25	1.79	2.50	2.52	4364	3117	3097	0.8	0.625	0.8	32.01
SG600 (MD)	1.25	1.79	2.50	2.52	4867	3477	3454	0.8	0.625	0.8	32.01
SG700 (MD)	1.25	1.79	2.50	2.52	6573	4695	4665	0.8	0.625	0.8	32.01

If you have any questions, please contact C. K. Su at (919) 329-4150 or Jack Cowser at (919) 329-4000.

Sincerely,



Christopher A. Peoples, P.E.
 State Materials Engineer

cc: John Pilipchuk, P.E., State Geotechnical Engineer