



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 8, 2011

Ms. Ann Tyler
Tricon Precast, Ltd.
15055 Henry Road
Houston, TX 77060

Subject: Approval of Tricon's Retained Soil Wall System

Dear Ms. Tyler:

The Geotechnical Engineering Unit (GEU) has reviewed the renewal submittal dated December 29, 2010 for Tricon's Retained Soil Wall System in accordance with the "NCDOT Policy for Mechanically Stabilized Earth Retaining Walls" and the GEU Standard Mechanically Stabilized Earth (MSE) Retaining Walls Provision. In addition to the December 29th submittal, a Tricon panel submittal and several subsequent revised design calculations were received. Based on this information, Tricon's wall system is approved for use on North Carolina Department of Transportation (NCDOT) projects in accordance with the MSE wall policy and standard provision. This policy and provision may be obtained from:

<http://www.ncdot.org/doh/preconstruct/highway/geotech/msewalls/>

For your reference, the approved steel reinforcements and corresponding design parameters to be used for future NCDOT MSE wall design submittals are listed in the table on the following page.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH NC 27699-1589

TELEPHONE: 919-707-6850
Fax: 919-250-4237
www.ncdot.gov/doh/preconstruct/highway/geotech

LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Reinforcement	S_t , Trans. Spacing (in.)	F_y (ksi)	b (in)	A_c (in ²)	R_c	F^*_{top}	F^*_{20ft}	α
W9.0xW9.0	6	65	12	0.159	0.3 - 0.5	1.128	0.564	1
W9.0xW9.0	12	65	12	0.159	0.3 - 0.5	0.564	0.282	1
W9.0xW9.0	18	65	12	0.159	0.3 - 0.5	0.376	0.188	1
W9.0xW9.0	24	65	12	0.159	0.3 - 0.5	0.282	0.141	1
W9.0xW9.0	30	65	12	0.159	0.3 - 0.5	0.226	0.113	1
W9.0xW9.0	36	65	12	0.159	0.3 - 0.5	0.188	0.094	1
W11xW9.0	6	65	12	0.205	0.3 - 0.5	1.128	0.564	1
W11xW9.0	12	65	12	0.205	0.3 - 0.5	0.564	0.282	1
W11xW9.0	18	65	12	0.205	0.3 - 0.5	0.376	0.188	1
W11xW9.0	24	65	12	0.205	0.3 - 0.5	0.282	0.141	1
W11xW9.0	30	65	12	0.205	0.3 - 0.5	0.226	0.113	1
W11xW9.0	36	65	12	0.205	0.3 - 0.5	0.188	0.094	1
W12xW9.0	6	65	12	0.229	0.3 - 0.5	1.128	0.564	1
W12xW9.0	12	65	12	0.229	0.3 - 0.5	0.564	0.282	1
W12xW9.0	18	65	12	0.229	0.3 - 0.5	0.376	0.188	1
W12xW9.0	24	65	12	0.229	0.3 - 0.5	0.282	0.141	1
W12xW9.0	30	65	12	0.229	0.3 - 0.5	0.226	0.113	1
W12xW9.0	36	65	12	0.229	0.3 - 0.5	0.188	0.094	1
W13xW9.0	6	65	12	0.253	0.3 - 0.5	1.128	0.564	1
W13xW9.0	12	65	12	0.253	0.3 - 0.5	0.564	0.282	1
W13xW9.0	18	65	12	0.253	0.3 - 0.5	0.376	0.188	1
W13xW9.0	24	65	12	0.253	0.3 - 0.5	0.282	0.141	1
W13xW9.0	30	65	12	0.253	0.3 - 0.5	0.226	0.113	1
W13xW9.0	36	65	12	0.253	0.3 - 0.5	0.188	0.094	1
W14.0xW9.0	6	65	12	0.278	0.3 - 0.5	1.128	0.564	1
W14.0xW9.0	12	65	12	0.278	0.3 - 0.5	0.564	0.282	1
W14.0xW9.0	18	65	12	0.278	0.3 - 0.5	0.376	0.188	1
W14.0xW9.0	24	65	12	0.278	0.3 - 0.5	0.282	0.141	1
W14.0xW9.0	30	65	12	0.278	0.3 - 0.5	0.226	0.113	1
W14.0xW9.0	36	65	12	0.278	0.3 - 0.5	0.188	0.094	1

Also, Tricon locking rods are required and defined as miscellaneous components in accordance with the GEU standard MSE wall provision.

If you have any questions, I can be reached at (919) 707-6850.

Sincerely,



Njoroge W. Wainaina
 State Geotechnical Engineer

cc: K. J. Kim, Ph.D., P.E., Eastern Regional Geotechnical Manager (w/ submittal)
 John Pilipchuk, L.G., P.E., Western Regional Geotechnical Manager (w/ submittal)

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Mohammed Mulla, P.E., Geotechnical Contracts & Statewide Services Manager (w/ submittal)
Greg Perfetti, P.E., State Bridge Design Engineer (w/ submittal)
David Chang, P.E., State Hydraulics Engineer
Chris Peoples, P.E., State Materials Engineer
Rodger Rochelle, P.E., Transportation Program Management Director
Dewayne Sykes, P.E., State Utilities Manager
Randy Garris, P.E., State Contract Officer
Mike Robinson, P.E., State Bridge Construction Engineer
Dan Holderman, P.E., State Bridge Management Engineer

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