

GEOTECHNICAL  
ENGINEER



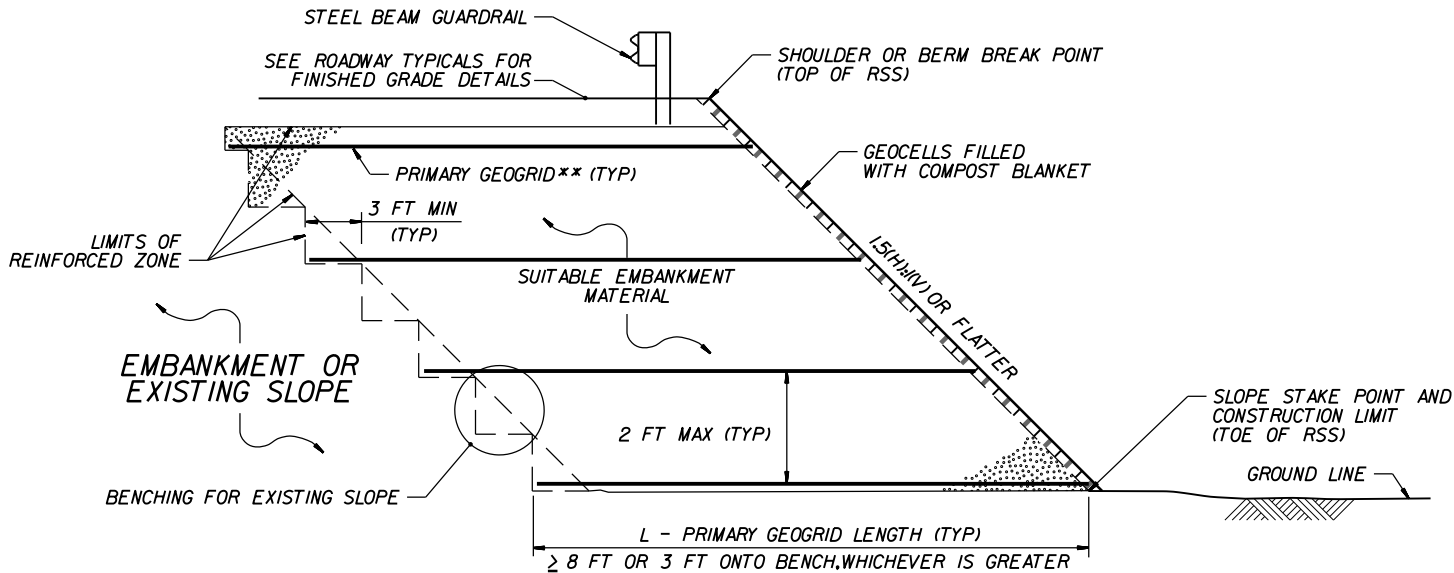
DocuSigned by:  
**J. Dean Hardister**  
09/28/2017 10:54:04 AM

ENGINEER

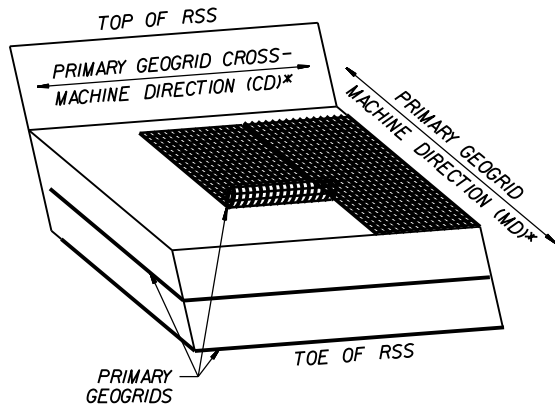
SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



REINFORCED SOIL SLOPE (RSS)  
GEOCELLS WITH COMPOST BLANKET



GEOGRID PLACEMENT DETAILS  
(% COVERAGE = 100%)

NOTES:

SEE EROSION CONTROL AND ROADWAY PLANS FOR REINFORCED SOIL SLOPE (RSS) AND SLOPE EROSION CONTROL LOCATIONS.

FOR REINFORCED SOIL SLOPES, SEE REINFORCED SOIL SLOPES PROVISION. FOR STEEL BEAM GUARDRAIL, SEE SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR GEOCELLS, SEE CELLULAR CONFINEMENT SYSTEMS PROVISION. FOR COMPOST BLANKET, SEE EROSION CONTROL PROVISIONS.

RSS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:  
UNIT WEIGHT,  $\gamma$  = 120 LB/CF  
FRICTION ANGLE,  $\phi$  = 30 DEGREES  
COHESION,  $c$  = 0 LB/SF

INSTALL PRIMARY GEOGRIDS WITH A 75-YEAR MINIMUM LONG-TERM DESIGN STRENGTH (LTDS) FOR THE BORROW CATEGORY OF 1,000 LB/FT IN THE MACHINE DIRECTION (MD). INSTALL PRIMARY GEOGRIDS WITH 100% COVERAGE.

THE LIST OF APPROVED GEOGRIDS WITH DESIGN STRENGTHS IS AVAILABLE FROM:  
[connect.ncdot.gov/resources/Materials/Pages/SoilsLaboratory.aspx](http://connect.ncdot.gov/resources/Materials/Pages/SoilsLaboratory.aspx)

IF THE WEBSITE DOES NOT LIST A LONG-TERM DESIGN STRENGTH FOR AN APPROVED GEOGRID IN THE MD, DO NOT USE THE GEOGRID FOR PRIMARY GEOGRID.

DO NOT OVERLAP PRIMARY GEOGRIDS IN THE MD SO OVERLAPS ARE PARALLEL TO THE TOE OF RSS. POLYOLEFIN (e.g., HDPE OR PP) GEOGRIDS MAY BE SPLICED ONCE PER PRIMARY GEOGRID LENGTH IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S INSTRUCTIONS. USE POLYOLEFIN GEOGRID PIECES AT LEAST 4' LONG. DO NOT SPLICE POLYESTER TYPE (PET) GEOGRIDS.

DO NOT PLACE ANY GEOGRIDS UNTIL EXCAVATION DIMENSIONS AND IN-SITU MATERIAL ARE APPROVED.

TOTAL RSS QUANTITY = 240 SQ.YD.

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|-------------------------------|--------------|
| PREPARED BY: D. HARDISTER, PE | DATE: 9/2017 |
| REVIEWED BY:                  | DATE:        |



NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

GEOTECHNICAL  
ENGINEERING UNIT

REINFORCED SOIL SLOPE  
SR 1353 - WATAUGA CO.  
STA. 2+50 to STA. 3+30 -L-

| REVISIONS |    |      |     |    |      |
|-----------|----|------|-----|----|------|
| NO.       | BY | DATE | NO. | BY | DATE |
| 1         |    |      | 3   |    |      |
| 2         |    |      | 4   |    |      |