

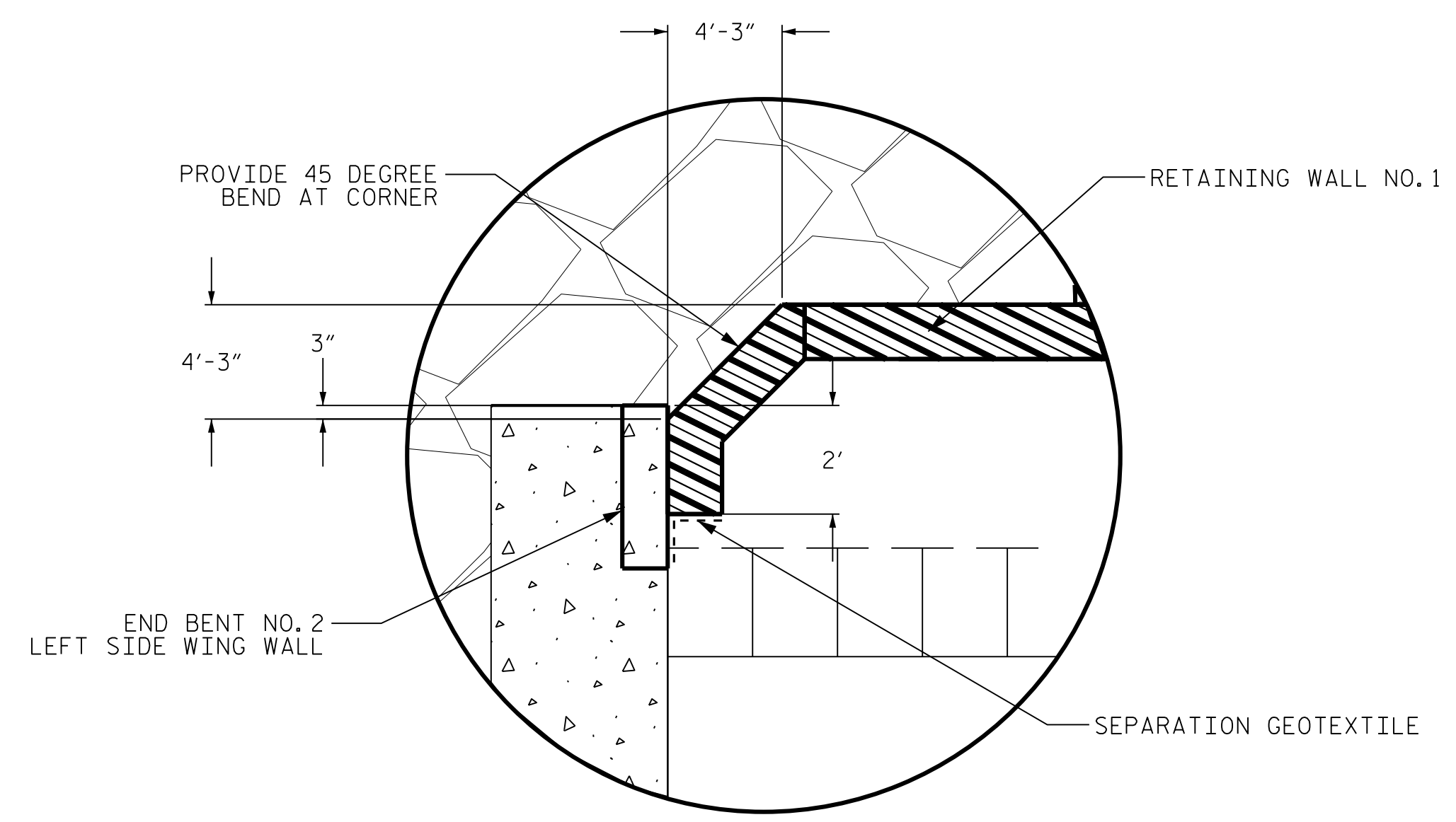
GEOTECHNICAL ENGINEER

ENGINEER

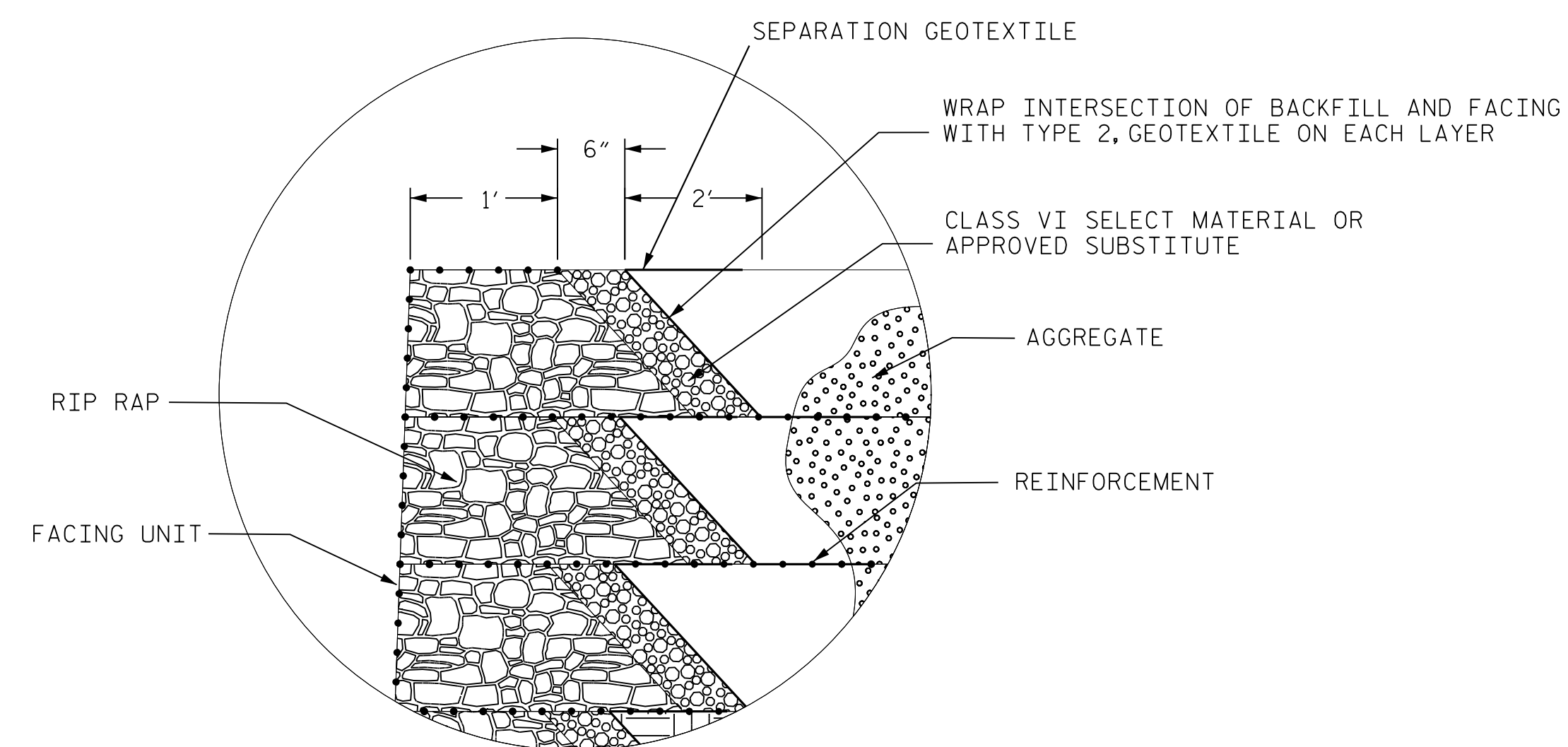
Michael H. Stephens  
4478529231400...  
4/18/2016

SIGNATURE      DATE      SIGNATURE      DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



DETAIL A - END BENT CORNER (NTS)



DETAIL B (NTS)

**NOTES:**

FOR WIRE FACED MSE RETAINING WALLS, SEE WIRE FACED MSE RETAINING WALL PROVISION.

SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS. CONTRACTOR TO IDENTIFY ALL GUARD RAIL POST LOCATIONS AND ISOLATE THE MSE WALL REINFORCEMENT FROM THE GUARD RAIL POST. THE CONTRACTOR CAN INSTALL LEEVES AT NO ADDITIONAL COST TO THE NCDOT.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO. 1.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO.1 WHEN COARSE AGGREGATE IS USED.

A DRAIN IS REQUIRED FOR RETAINING WALL NO. 1.

GALVANIZED AND PVC-COATED FACING UNITS ARE REQUIRED FOR RETAINING WALL NO. 1.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO.1, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

DESIGN RETAINING WALL NO.1 FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 3,300 LB/SF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 1.0H OR 6 FT, WHICHEVER IS LONGER
- 5) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE	UNIT WEIGHT (gamma) PCF	FRICTION ANGLE (phi) DEGREES	COHESION (c) PSF
COARSE	110	38	0
FINE	115	34	0

\*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.

6) IN-SITU ASSUMED MATERIAL PARAMETERS

MATERIAL TYPE	UNIT WEIGHT (gamma) PCF	FRICTION ANGLE (phi) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	115	28	0

DESIGN RETAINING WALL NO.1 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALL NO.1. SEE WIRE FACED MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.

WHERE THE WIRE FACED RETAINING WALL INTERSECTS DRAINAGE PIPES, SUBMIT PENETRATION REINFORCEMENT DETAILS FOR APPROVAL PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. SEE DRAINAGE PLANS FOR ADDITIONAL INFORMATION.

THE TOP OF WALL LOCATION, AS SHOWN IN DETAIL, CORRESPONDS TO THE TOP OF EXPRESSWAY GUTTER ELEVATION AS SHOWN IN ROADWAY PLANS.

ADJUST THE OFFSET OF THE BOTTOM FACING UNIT TO ACCOUNT FOR WALL BATTER AND MEET THE TOP OF OFFSET SHOWN OF THE PLANS.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL POSTS, PAVEMENTS, PIPES, INLETS, OR UTILITIES MAY INTERFERE WITH THE REINFORCEMENT FOR WIRE FACED RETAINING WALLS.

DO NOT PLACE LEVELING LAYER STONE, AGGREGATE OR REINFORCEMENT UNTIL OBTAINING APPROVAL OF THE EXCAVATION DEPTH AND FOUNDATION MATERIAL.

PROJECT NO.: B-4766

IREDELL COUNTY

STATION: 16+28.00 -L-

SHEET 4 OF 4

PREPARED BY: MHS      DATE: 4-7-2016

REVIEWED BY: SCC/JDH      DATE: 4-7-2016

**NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**GEOTECHNICAL  
ENGINEERING UNIT**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-4
2			4			