GEOTECHNICAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 0029869 ENGINEER JANE C CLARK

DocuSigned by: Shane C. Clark 4/22/2020
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SIGNATURE DATE

ENGINEER

SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.

A CONCRETE BARRIER RAIL WITH MOMENT SLAB IS REQUIRED ABOVE RETAINING WALL NO. 6. SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS AS RELATED TO SELECTED WALL TYPE.

AT THE CONTRACTOR'S OPTION, USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL (SRW) UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 6.

WHEN USING AN MSE WALL SYSTEM WITH SRW UNITS FOR RETAINING WALL NO. 6, FREEZE-THAW DURABLE SRW UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS ARE REQUIRED.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO. 6.

IF SELECTED, USE SRW UNITS WITH A DARK GRAY COLOR FOR RETAINING WALL NO. 6.

IF SELECTED, USE SRW UNITS WITH A WEATHERED FACE FOR RETAINING WALL NO. 6.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO. 6.

A DRAIN IS REQUIRED FOR RETAINING WALL NO. 6.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO. 6, 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. _FOR THE FOLLOWING:
1) H = DESIGN HEIGHT + EMBEDMENT
2) DESIGN LIFE = 75 YEARS
3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 7500 PSF
4) MINIMUM REINFORCEMENT LENGTH (L) = 0.8H OR 6 FT, WHICHEVER IS LONGER
5) MINIMUM EMBEDMENT ELEVATION = H/10 OR 2 FT, WHICHEVER IS DEEPER
6) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
COARSE	110	38	0
FINE	115	34	0
*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.			

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	115	29	0

DESIGN RETAINING WALL NO. 6 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

FOUNDATIONS FOR SIGNS, LIGHTING OR SIGNALS MAY BE LOCATED BEHIND RETAINING WALL NO. 6 AND MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 6 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

"TEMPORARY SHORING" MAY REQUIRED FOR RETAINING WALL NO. 6 IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALL NO. 6. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.

A SUBSURFACE INVENTORY HAS NOT BEEN PREPARED FOR RETAING WALL NO. 6. LIMITED INFORMATION IS AVAILABLE IN THE ROADWAY INVENTORY. IF ADDITIONAL INFORMATION IS REQUIRED, IT WILL BE THE RESPONSIBIILTY OF THE CONTRACTOR/DESIGNER TO OBTAIN IT AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROJECT NO.: 34400 (R-2233BB)
RUTHERFORD COUNTY
STATION: 26+60.00 -Y6- to 13+14.09 -DR4-
SHEET 2 OF 6

PREPARED BY: SCC	DATE: 4/9/20
REVIEWED BY: ENW	DATE: 4/9/20

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL NO. 6 NOTES

REVISIONS

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

SHEET NO. W-7