GEOTECHNICAL ENGINEER	ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 027869 ENGINEER DAVID L. TEAGUE DocuSigned by: David Teague 8/29/2014 9D14EE4A6B9B4BE... SIGNATURE DATE	SIGNATURE DATE

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. 1. SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS.

WHEN USING AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL UNITS FOR RETAINING WALL NO. 1, FREEZE-THAW DURABLE SRW UNITS ARE REQUIRED IN ACCORDANCE WITH THE MSE RETAINING WALLS PROVISION.

A DRAIN IS 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 WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT (DIFFERENCE BETWEEN GRADE ELEVATION AND BOTTOM OF WALL ELEAVATION) PLUS EMBEDMENT (DIFFERENCE BETWEEN BOTTOM OF WALL ELEVATION AND TOP OF LEVELING PAD ELEVATION).

DESIGN RETAINING WALL NO. 1 FOR THE FOLLOWING:
1) MINIMUM DESIGN LIFE = 100 YEARS
2) MAXIMUM FACTORED RESISTANCE = 3,500 PSF
3) AGGREGATE PARAMETERS:

STANDARD SIZE NO. (IN ACCORDANCE WITH SECTION 1005 OF THE STANDARD SPECIFICATIONS)	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
1S, 2S, 2MS AND 4S (FINE AGGREGATE)	125	34	0
5, 57, 57M, 6M, 67 AND 78M (COARSE AGGREGATE)	110	38	0

4) IN-SITU ASSUMED MATERIAL PARAMETERS:

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

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

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 1 UNTIL OBTAINING APPROVAL OF THE EXCAVATION DEPTH AND FOUNDATION MATERIAL.

USE TYPICAL SECTION A OR B FOR RETAINING WALL NO. 1.

CONTRACTOR TO SUBMIT DETAIL OF HOW TO INCORPORATE DRAINAGE BOX INTO CONCRETE MOMENT SLAB.

PROJECT NO.: R-2519B (35609.1.1)

YANCEY/MITCHELL **COUNTY**

STATION: 78+50.00 -L- TO 87+50.00 -L-

SHEET 2 OF 2

GEOTECHNICAL ENGINEERING UNIT

☐ EASTERN REGIONAL OFFICE
☐ WESTERN REGIONAL OFFICE
☒ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

RETAINING WALL NO. 1
MSE WALL

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		W-2
1			3				TOTAL SHEETS
2			4				18

PREPARED BY:	D.TEAGUE	DATE:	6/11
REVIEWED BY:	E.WILLIAMS	DATE:	6/11