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REFERENCE: 34518.1.4

PROJECT: R-2915C

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY ASHE
PROJECT DESCRIPTION US 221 FROM NORTH OF
OF SOUTH FORK NEW RIVER TO SOUTH OF NC
194
SITE DESCRIPTION RETAINING WALL #1
-L- STA 321+25 LT 51' TO STA 322+40 LT 51'

CONTENTS

| SHEET NO. | DESCRIPTION |
|-----------|-----------------------|
| 1 | TITLE SHEET |
| 2 | LEGEND |
| 3 | SITE PLAN AND PROFILE |
| 4 | BORE LOGS |

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-------|-----------------------------|-----------|--------------|
| N.C. | 34518.1.4 | 1 | 4 |

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

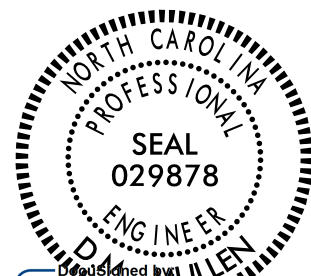
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 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

DCE
DOC
CJC

INVESTIGATED BY DMM
DRAWN BY DMM
CHECKED BY SCC ^{DS}
SUBMITTED BY JCK ^{Jk}
DATE 7.27.2015



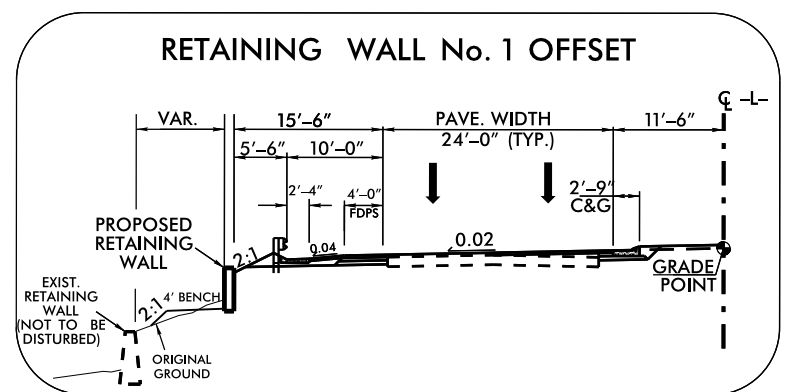
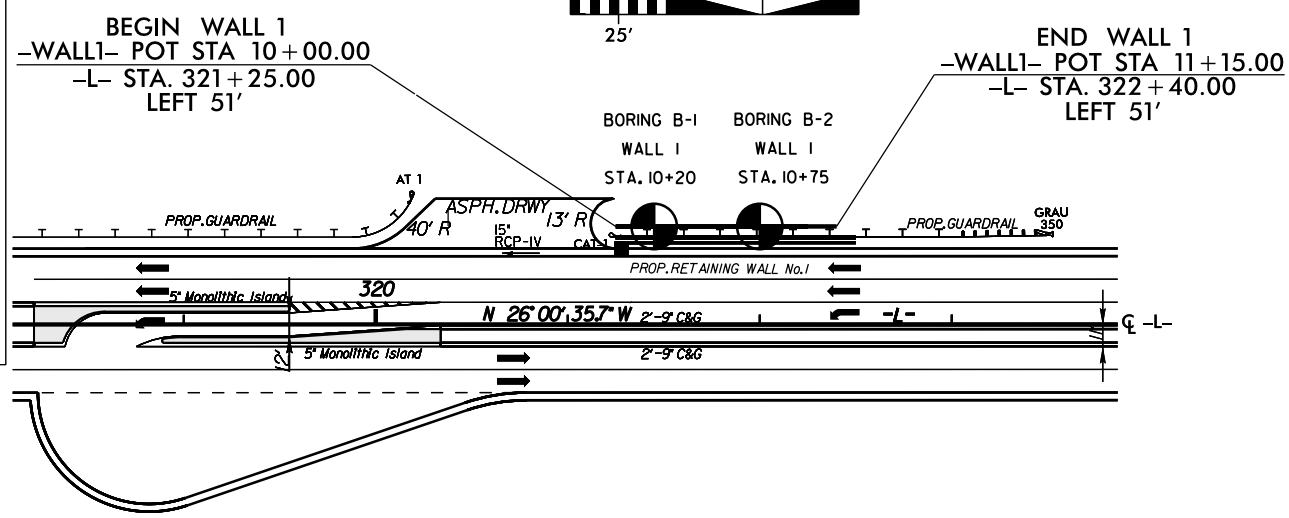
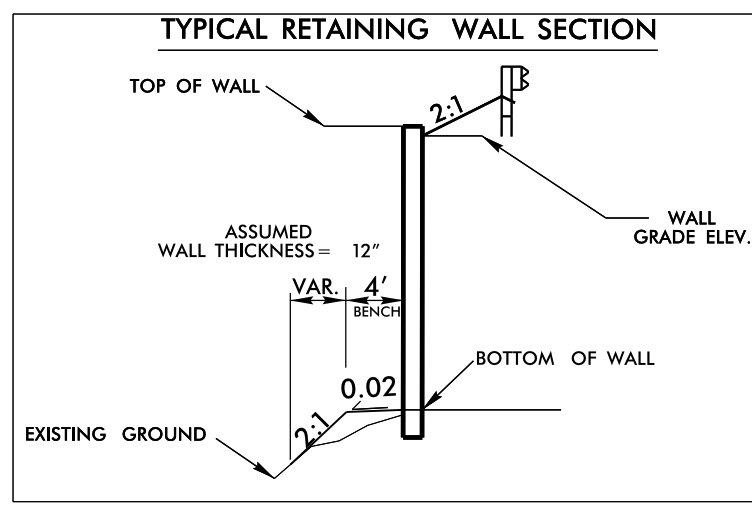
D. Matthew Mullen
18909BD3CD5440C...

7/28/2015
SIGNATURE DATE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

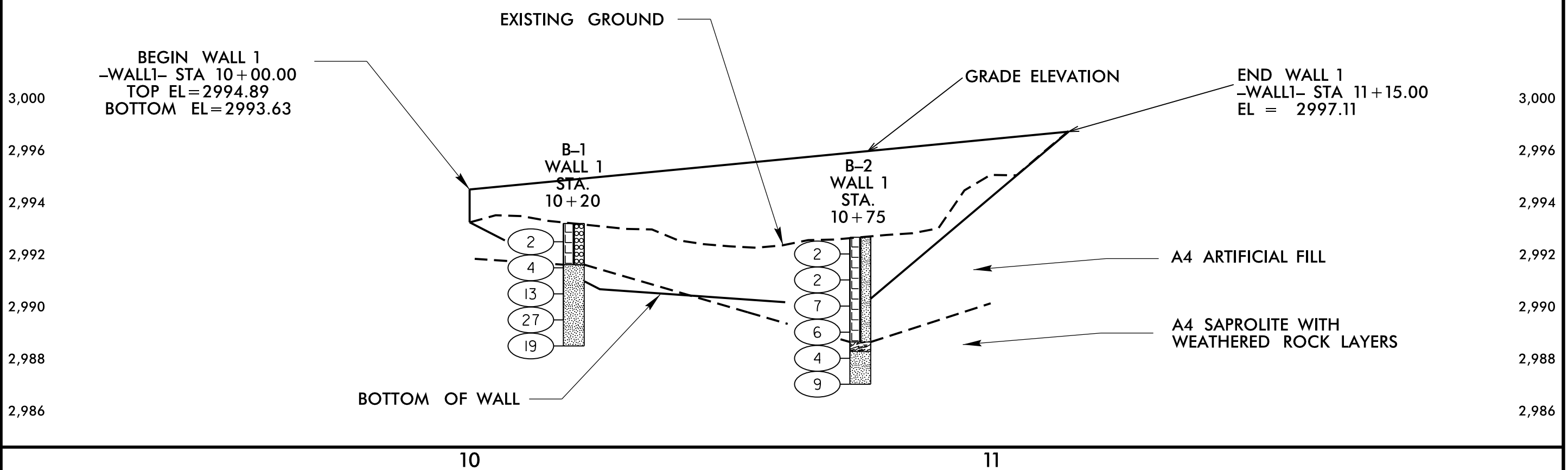
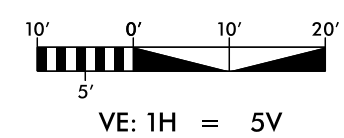
Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, and BENCH MARK.

WALL NO. 1 ENVELOPE



USE DETAIL AS FOLLOWS:
 -L- STA. 321+25.00 TO STA. 322+40.00 LT.

-WALL1-
 APPROXIMATE WALL
 FACE AREA = 835 SF



REVISIONS

8/17/99

27-JUL-2015 16:28 C:\GEO\PROJECTS\STRUCTURES\RP2915C.GEO\WALL1\WALL1_PSH_PFL.dgn



NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

| WBS 34518.1.4 | | TIP R2915C | | COUNTY ASHE | | GEOLOGIST Elliott, D. C. | | | | | | | | | |
|---|-----------------|---------------------|------------|--------------------------|-------|--------------------------|-----------------|----|----|-----|-----------|---------|---------------------------|--|------|
| SITE DESCRIPTION N/A | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. B-1 | | STATION 10+20 | | OFFSET N/A | | ALIGNMENT WALL 1 | | | | | | | | | |
| COLLAR ELEV. N/A | | TOTAL DEPTH 25.0 ft | | NORTHING N/A | | EASTING N/A | | | | | | | | | |
| DRILL RIG/HAMMER EFF./DATE AFO9394 CME-45C 88% 05/14/2014 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Cheek, D. O. | | START DATE 07/20/15 | | COMP. DATE 07/20/15 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG MOI | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | 3.5 | woh | 1 | 1 | | | | | | | | M | ROADWAY EMBANKMENT Brown, slightly micaceous clayey sandy silt roadway embankment with a few organics | 0.0 |
| | | 8.5 | | 1 | 2 | | | | | | | | M | SAPROLITE Brown slightly micaceous fine sandy silt of saprolite with a trace of MnO | 7.9 |
| | | 13.5 | | 6 | 6 | | | | | | | | | | |
| | | 18.5 | | 7 | 13 | | | | | | | | | | |
| | | 23.5 | | 5 | 9 | | | | | | | | | | |
| | | | | | | | | | | | | | | | 25.0 |
| Boring Terminated at Depth 25.0 ft IN SAPROLITE | | | | | | | | | | | | | | | |

| WBS 34518.1.4 | | TIP R2915C | | COUNTY ASHE | | GEOLOGIST Elliott, D. C. | | | | | | | | | |
|---|-----------------|---------------------|------------|--------------------------|-------|--------------------------|-----------------|----|----|-----|-----------|---------|---------------------------|---|------|
| SITE DESCRIPTION N/A | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. B-2 | | STATION 10+75 | | OFFSET N/A | | ALIGNMENT WALL 1 | | | | | | | | | |
| COLLAR ELEV. N/A | | TOTAL DEPTH 29.7 ft | | NORTHING N/A | | EASTING N/A | | | | | | | | | |
| DRILL RIG/HAMMER EFF./DATE AFO9394 CME-45C 88% 05/14/2014 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Cheek, D. O. | | START DATE 07/20/15 | | COMP. DATE 07/20/15 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG MOI | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | 3.2 | woh | 1 | 1 | | | | | | | | M | ROADWAY EMBANKMENT Brown slightly micaceous fine sandy silt roadway embankment with a few angular pebbles | 0.0 |
| | | 8.2 | | 1 | 1 | | | | | | | | M | | |
| | | 13.2 | | 3 | 3 | | | | | | | | M | | |
| | | 18.2 | | 2 | 3 | | | | | | | | M | | |
| | | 23.2 | | 6 | 7 | | | | | | | | M | SAPROLITE Dark red / tan slightly micaceous fine sandy silt with a trace of MnO and a weathered rock layer from 20.1 to 21.9 | 20.1 |
| | | 28.2 | | 2 | 3 | | | | | | | | M | | 29.7 |
| Boring Terminated at Depth 29.7 ft IN SAPROLITE | | | | | | | | | | | | | | | |