Transportation

PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

March 1, 2016

ADDENDUM # 2

To: Plan Holders

From: Jeffrey E. Alspaugh
Division 14 Proposal Engineer

RE:	**Wall Plans and Letters of Intent Due Date**
Contract ID:	DN00455
County:	Polk
Letting Date:	March 22, 2016

The above contract has experienced the following changes:

- **Retaining Wall Plans have been added as part of the plan set.**
- **Letters of Intent are due no later than Noon, Wednesday, March 23, 2016.**

Please insert this letter and the attached wall plan sheet into the addendum section of the proposal and sign the verification. Thank you for your attention to this matter.

3-7-16 Revision

Sheet 1/2

CONSTRUCTION NOTES & SPECIFICATIONS

A. GENERAL

1. BACKFILL MATERIAL SHALL NOT CONTAIN ORGANIC MATERIAL AND FROST SUSCEPTIBLE SOILS.
2. THE PROVIDED DRAWINGS ARE LIMITED TO THE ITEMS SPECIFIED HEREIN. NO OPINION IS OFFERED, AND NONE SHOULD BE INFERRED REGARDING OTHER ASPECTS OF THIS STRUCTURE, OR THE STRUCTURES TAKE AS A WHOLE. ANY ASSOCIATED REMEDIES EXPRESSED OR REFERENCED ARE EXCLUSIVE TO THE ITEMS SPECIFIED HEREIN. NO WARRANTY IS EXPRESSED OR IMPLIED.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL BUILDING CODE, AS ADOPTED AND SUPPLEMENTED BY LOCAL REGULATIONS.
4. IF RUBBER TIRED EQUIPMENT NEEDS TO BE USED FOR BACK FILLING, DO NOT TURN EQUIPMENT WHILE STANDING STILL ON GEOGRID.
5. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO START OF CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
6. NO CHANGES TO THE INFORMATION SHOWN ON THE DRAWINGS OR SUBSTITUTIONS OF MATERIALS SHALL BE MADE WITHOUT THE SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.
7. DESIGN INFORMATION SHOWN ON THE DRAWINGS PROVIDE OVERALL DIMENSIONAL PARAMETERS AND DESCRIBE ELEMENTS TO BE CONSTRUCTED.
8. THE ENGINEER SHALL BE NOTIFIED OF ANY PROPOSED MODIFICATIONS.

B. FOUNDATIONS

1. SEE TABLE 1/S2
2. FOUNDATION CONDITIONS DIFFERENT TO THE ASSUMED DESIGN PARAMETERS OR TO A GEOTECHNICAL REPORT SHALL BE REPORTED TO THE STRUCTURAL AND GEOTECHNICAL ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
3. THE BOTTOM OF ALL WALLS SHALL BEAR ON COMPETENT VIRGIN MATERIAL.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENG. UNIT-WRO

X ACCEPTED
___ ACCEPTED AS NOTED
___ RETURNED FOR CORRECTIONS
___ SEE LETTER

BY: Shane Clark, PE
DATE: March 7, 2016

SITE NOTES / SEQUENCE:

1. LOCATE/VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION
2. TREE REMOVAL BY OWNER/CONTRACTOR PRIOR TO CONSTRUCTION
3. DEMOLITION OF EXISTING WALLS BY CONTRACTOR
4. NEW WALL TO BE INSTALLED PER SITE PLAN/SURVEY. VERIFY ALL SETBACKS, EASEMENTS, PROPERTY LINES PRIOR TO CONSTRUCTION
5. SURFACE DRAINAGE, WATER CONVEYANCE AND DISCHARGE PER PROPERTY OWNER OR CONTRACTOR
6. GEOGRID ELEVATION MEASURED FROM BASE OF WALL
7. GEOGRID LENGTH MEASURED FROM OUTER FACE OF WALL
8. BASE ELEVATION SHALL BE MIN. 24" BELOW GRADE

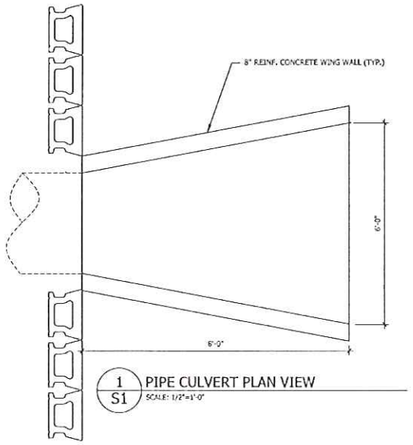
WALL DESIGN DATA:

RETAINED SOIL FRICTION ANGLE $\varnothing$ = 32°
SOIL UNIT WEIGHT, γs = 120 PCF
COHESION, C = 0

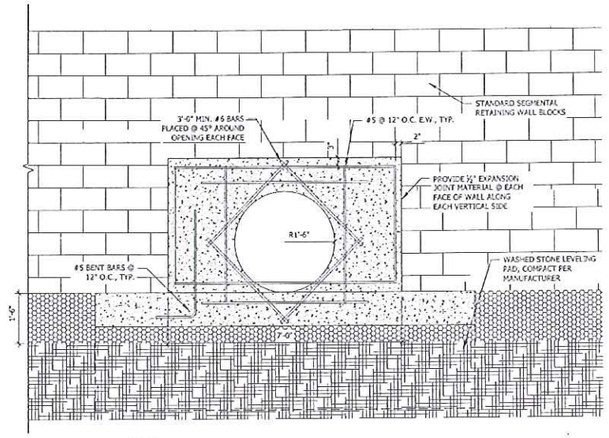
BULK UNIT WEIGHT, γb = 120 PCF
REINFORCED BACKFILL, $\varnothing$ = 40°
REINFORCED BACKFILL, γr = 115 PCF

MINIMUM CUT SLOPE FOR DESIGN PURPOSES ONLY. ACTUAL CUT SLOPE EATTER MAY BE GREATER.

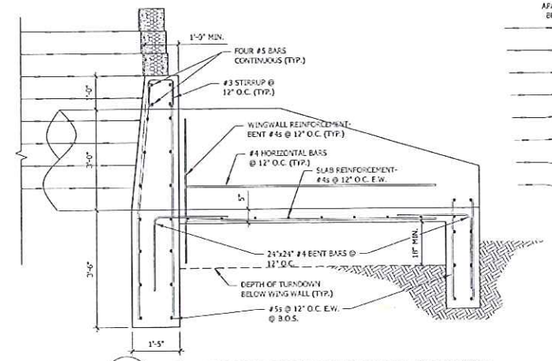
NOTE:
1. ALL RETAINING WALL BLOCKS TO BE MESA STANDARD BLOCKS FOR SRW WALL.
2. ALL GRID MATERIAL TO BE GEOGRID UX1400 MSE. INSTALL PER MANUF. SPECS AND TO PRESCRIBED DIMENSIONS.



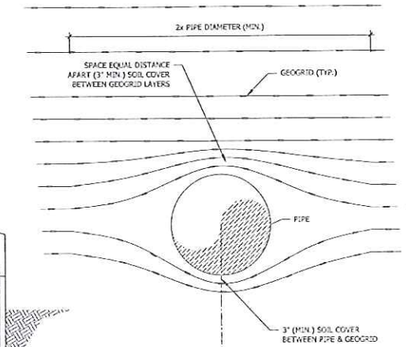
1 / S1 PIPE CULVERT PLAN VIEW
SCALE: 1/2"=1'-0"



2 / S1 PIPE CULVERT SECTION
SCALE: 1/2"=1'-0"

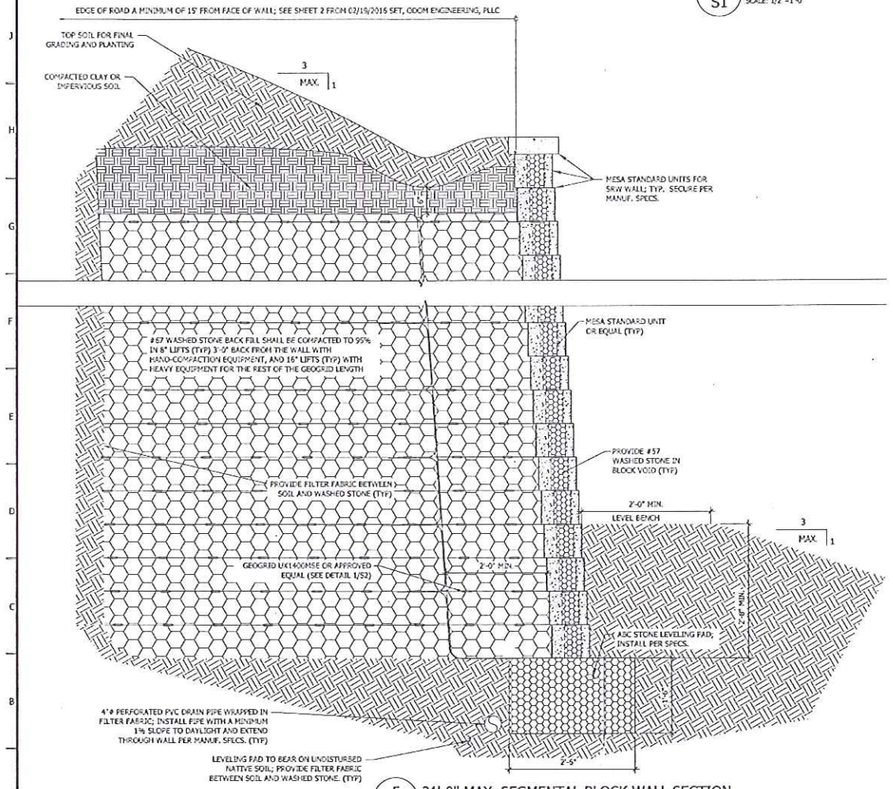


3 / S1 RETAINING WALL ELEVATION SECTION @ CULVERT
SCALE: 1/2"=1'-0"

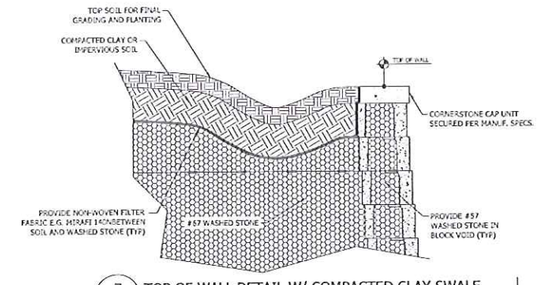


4 / S1 GEOGRID PLACEMENT AT PIPE CULVERT
SCALE: 1/2"=1'-0"

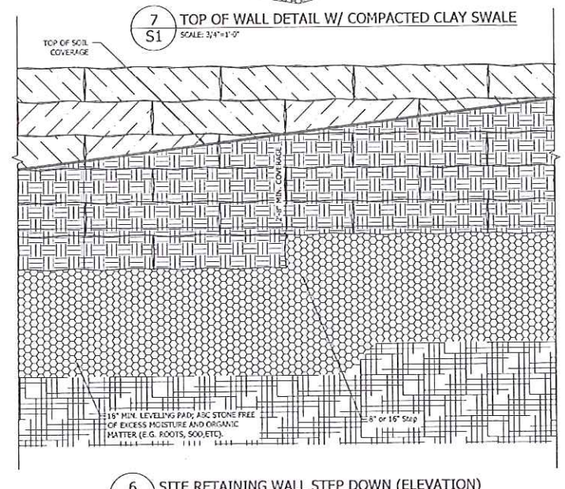
EDGE OF ROAD A MINIMUM OF 15' FROM FACE OF WALL; SEE SHEET 2 FROM 02/19/2016 SET, ODOM ENGINEERING, PLLC



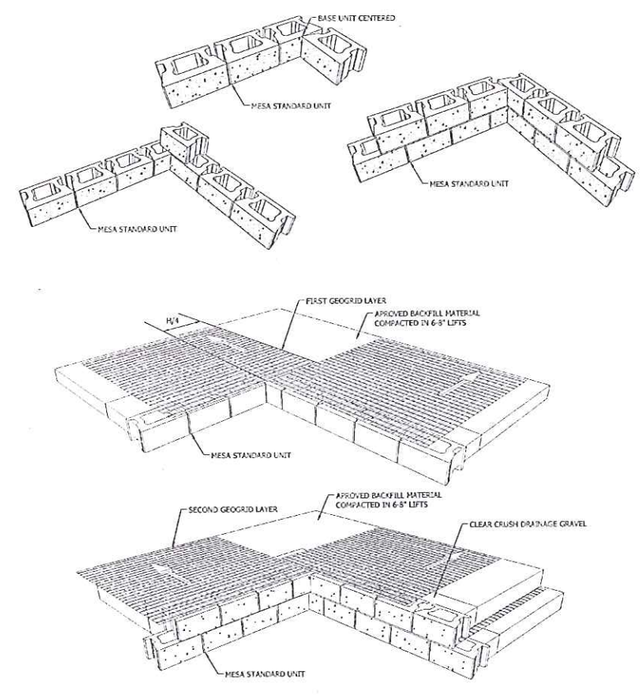
5 / S1 21'-0" MAX. SEGMENTAL BLOCK WALL SECTION
SCALE: 3/4"=1'-0"



7 / S1 TOP OF WALL DETAIL W/ COMPACTED CLAY SWALE
SCALE: 3/4"=1'-0"



6 / S1 SITE RETAINING WALL STEP DOWN (ELEVATION)
SCALE: 3/4"=1'-0"



A / S1 TYPICAL INSIDE CORNER DETAILS
Scale: NTS

No.	REVISIONS/SUBMISSIONS	Date
-	--------	--/--/--

03-01-16

CONSTRUCTION SET

MEDLOCK & ASSOCIATES
ENGINEERING, PA
STRUCTURAL • CONSULTING • CONSTRUCTION ASSISTANCE
53 Ashland Avenue, Suite 101
Asheville, NC 28801
Phone#: (828)232-4448
Fax#: (828) 232-5224

Designed: FUN
Drawn: CTD
Checked: EKM
Reviewed: FUN
Scale: AS NOTED
Date: 03-01-2016

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
STATE PROJECT REF. NO. R-5756
POLK COUNTY
NORTH CAROLINA

Drawing Title: SEGMENTAL RETAINING WALL SECTIONS & DETAILS

Project No: 420415

S1
OF 2

3-7-16 SHEET 2/2
REVISION

ALIGN-RETAIN WALL-1 PROFILE

TABLE 1/S2 : SOIL BEARING PRESSURE		
WALL HEIGHT (FEET)	ACTUAL BEARING PRESSURE BELOW WALL (KSF)*	REMARKS
21.33	4.00	
18.00	4.00	
15.33	4.00	
12.67	4.00	
9.33	3.00	

* ACTUAL PRESSURES TAKING INTO ACCOUNT SURCHARGE, SURCHARGE & WALL GEOMETRY

1 / S2 FACE OF WALL / GEOGRID CROSS SEC.
SCALE: 1/8" = 1'-0"

SEE DETAIL S/S3 FOR COVERAGE @ BOTTOM OF WALL

No.	REVISIONS/SUBMISSIONS	Date
-		-/-/-

03-01-16

CONSTRUCTION SET

DESIGNED FJH
DRAWN CTD
CHECKED CAM
REVIEWED TLR
SCALE AS NOTED
DATE 01-01-2016

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
STATE PROJECT REF. NO. R-5756
COUNTY NORTH CAROLINA

RETAINING WALL ELEVATION & LOCATION