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GEOTECHNICAL ENGINEER
DocuSigned by:
Scott Gutowski
040555
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7/11/2023
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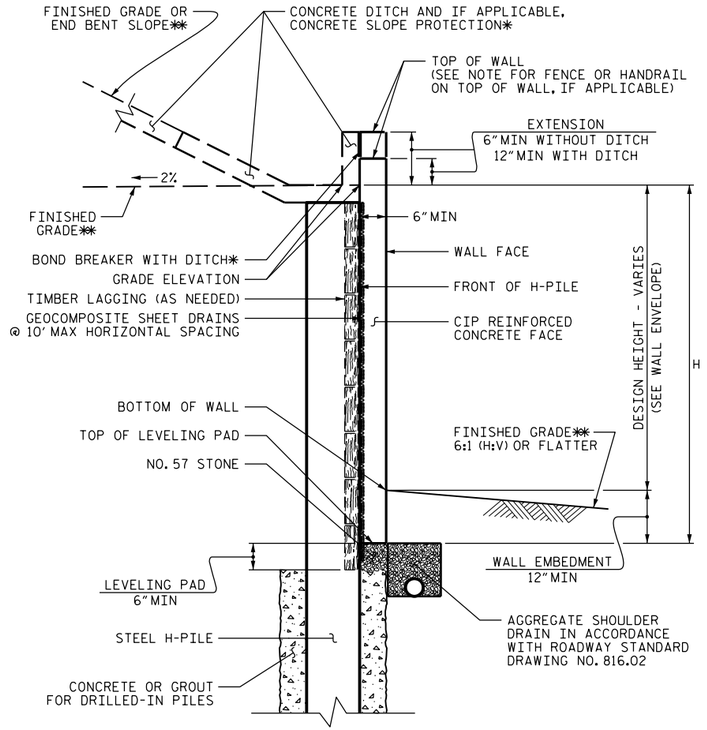

SOLDIER PILE WALL WITH CIP FACE - TYPICAL SECTION

*SEE CONCRETE DITCH BEHIND WALL DETAILS.
**SEE PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.

NOTES:

FOR SOLDIER PILE RETAINING WALLS, SEE SOLDIER PILE RETAINING WALLS PROVISION.

A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL NO. 4. SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

USE A SOLDIER PILE RETAINING WALL WITH A CIP REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 4.

A ROCK FACADE ARCHITECTURAL FINISH IS REQUIRED FOR THE CIP REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 4.

FOR THE ROCK FACADE ARCHITECTURAL FINISH, SEE THE ROCK WALL FACADE SPECIAL PROVISION.

BEFORE BEGINNING SOLDIER PILE WALL DESIGN FOR RETAINING WALL NO. 4, 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 + WALL EMBEDMENT
2) DESIGN LIFE = 100 YEARS
3) MINIMUM WALL EMBEDMENT ELEVATION = 1 FT
4) MINIMUM PILE PENETRATION INTO DENSE RESIDUAL SOIL = 2 FT
5) IN-SITU ASSUMED MATERIAL PARAMETERS ABOVE ELEVATION 2126 FT:
   UNIT WEIGHT, γ = 120 PCF
   FRICTION ANGLE, ϕ = 28 DEGREES
   COHESION, c = 0 PSF
6) IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION 2126 FT:
   UNIT WEIGHT, γ = 105 PCF
   FRICTION ANGLE, ϕ = 0 DEGREES
   COHESION, c = 400 PSF
7) IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION 2118 FT:
   UNIT WEIGHT, γ = 125 PCF
   FRICTION ANGLE, ϕ = 32 DEGREES
   COHESION, c = 0 PSF

PROJECT NO.: 44984 (R-5799)
TRANSYLVANIA COUNTY
STATION: 11+69.81 -Y5- TO 29+36.72 -L-
SHEET 2 OF 2

PREPARED BY: G. F. THILL	DATE: 10/28/19
REVIEWED BY: A. F. RIGGS	DATE: 10/28/19

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NC REGISTERED GEOLOGIC FIRM: C-367

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SOLDIER PILE WALL
TYPICAL SECTION AND NOTES

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1	JPM/GFT	6/15/20	3		
2	SWG/EJK	7/10/23	4		

SHEET NO. W-7