

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.
 FOR BRIDGE APPROACH FILLS, SEE SPECIAL BRIDGE APPROACH FILL PROVISION AND SHEETS 2G-5 THROUGH 2G-7 OF THE ROADWAY PLANS.
 FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.
 FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.
 AN ASHLAR STONE ARCHITECTURAL FINISH IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALLS NO. W3A AND W3B.
 A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS NO. W3A AND W3B.
 A DRAIN IS REQUIRED FOR RETAINING WALLS NO. W3A AND W3B.
 PILE SLEEVES ARE REQUIRED AROUND PILES FOR SITE 3 END BENT NO.1 LOCATED AT STATION 28+71.69 -Y3-.
 PILE SLEEVES ARE REQUIRED AROUND PILES FOR SITE 3 END BENT NO.2 LOCATED AT STATION 31+36.53 -Y3-.
 BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS NO. W3A AND W3B, 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 WALLS NO. W3A AND W3B FOR THE FOLLOWING:
 1) DESIGN HEIGHT (H) = WALL HEIGHT + WALL EMBEDMENT
 2) DESIGN LIFE = 100 YEARS
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL FOR RETAINING WALL NO. W3A = 5,603 PSF
 4) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL FOR RETAINING WALL NO. W3B = 5,339 PSF
 5) MINIMUM REINFORCEMENT LENGTH (L) = 0.85H OR 6 FT, WHICHEVER IS LONGER
 6) MINIMUM EMBEDMENT DEPTH = 2 FT OR H/10, WHICHEVER IS GREATER
 7) REINFORCED ZONE AGGREGATE PARAMETERS:

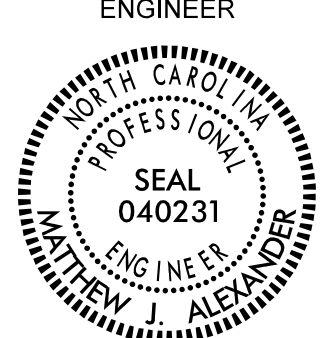
AGGREGATE TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (C) PSF
COARSE	110	38	0

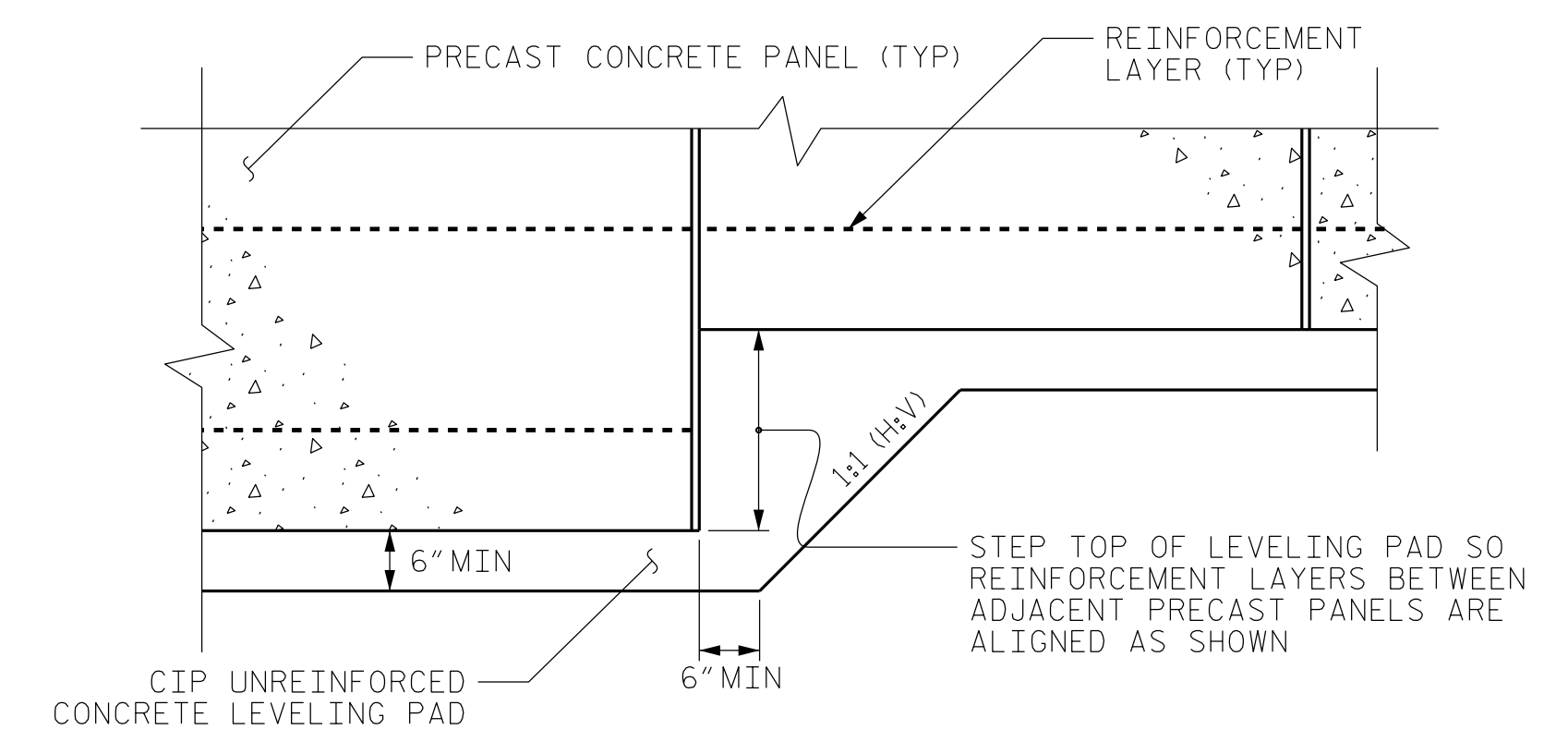
*SEE MSE RETAINING WALLS PROVISION FOR COARSE AGGREGATE MATERIAL REQUIREMENTS.

8) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (C) PSF
RETAINED	115	34	0
FOUNDATION	110	27	0

THE WALL SITES FOR RETAINING WALLS NO. W3A AND W3B LOCATED AT STATION 28+71.69 -Y3- AND STATION 31+36.53 -Y3-, RESPECTIVELY, ARE CLASSIFIED AS AASHTO SITE CLASS E.
 DESIGN RETAINING WALLS NO. W3A AND W3B FOR A LIVE LOAD (TRAFFIC) SURCHARGE.
 FOUNDATIONS FOR SIGNS WILL BE LOCATED BEHIND RETAINING WALLS NO. W3A AND W3B AND MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.
 FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO. W3A AND W3B.
 FOUNDATIONS FOR END BENT NO.1 LOCATED AT STATION 28+71.69 -Y3- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. W3A. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.
 FOUNDATIONS FOR END BENT NO.2 LOCATED AT STATION 31+36.53 -Y3- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. W3B. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.
 DESIGN RETAINING WALLS NO. W3A AND W3B FOR A LATERAL LOAD FROM FOUNDATIONS LOCATED BEHIND THE MSE WALL APPLIED AS A FACTORED UNIFORM PRESSURE OF 200 PSF TO THE BACK OF PANELS.
 INSTALL PILE SLEEVES FOR END BENT NO.1 LOCATED AT STATION 28+71.69 -Y3- AND END BENT NO.2 LOCATED AT STATION 31+36.53 -Y3- WHILE CONSTRUCTING RETAINING WALLS NO. W3A AND W3B, RESPECTIVELY. OBSERVE A 4 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL AND THE BRIDGE APPROACH FILL. INSTALL PILES THROUGH THE PILE SLEEVES AND FILL PILE SLEEVES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.
 USE SPECIAL BRIDGE APPROACH FILL AT END BENT NO.1 LOCATED AT STATION 28+71.69 -Y3- AND END BENT NO.2 LOCATED AT STATION 31+36.53 -Y3- TO CONSTRUCT THE EMBANKMENT TO FINISHED GRADE BEFORE OBSERVING THE BRIDGE WAITING PERIODS. SEE SPECIAL BRIDGE APPROACH FILL PROVISION AND SHEETS 2G-5 THROUGH 2G-7 OF THE ROADWAY PLANS FOR BRIDGE APPROACH FILL DETAILS.
 DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS NO. W3A OR W3B UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.
 "TEMPORARY SHORING" MAY BE REQUIRED FOR RETAINING WALLS NO. W3A AND W3B IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.

GEOTECHNICAL ENGINEER  SEAL 040231 MATTHEW J. ALEXANDER ENGINEER	ENGINEER
DocuSigned by: Matt Alexander 04/19/2022 DEB0038EAP06450 SIGNATURE DATE	SIGNATURE DATE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PRECAST PANELS
LEVELING PAD STEP DETAIL**

PROJECT NO.: 47533.1.2 (I-5987A)
 ROBESON COUNTY
 STATION: VARIES
 SHEET 11 OF 11 WALL ID NO. W3A, W3B

PREPARED BY: ALEXANDER, M. J.	DATE: 04/2022
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NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**GEOTECHNICAL
ENGINEERING UNIT**

**MSE ABUTMENT RETAINING
WALLS NO. W3A AND W3B
NOTES AND LEVELING
PAD DETAILS**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-11
2			4			