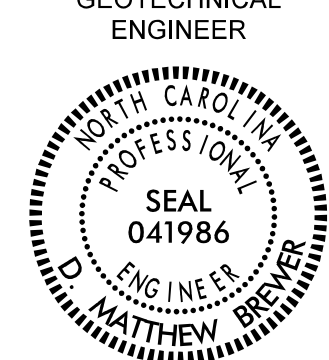
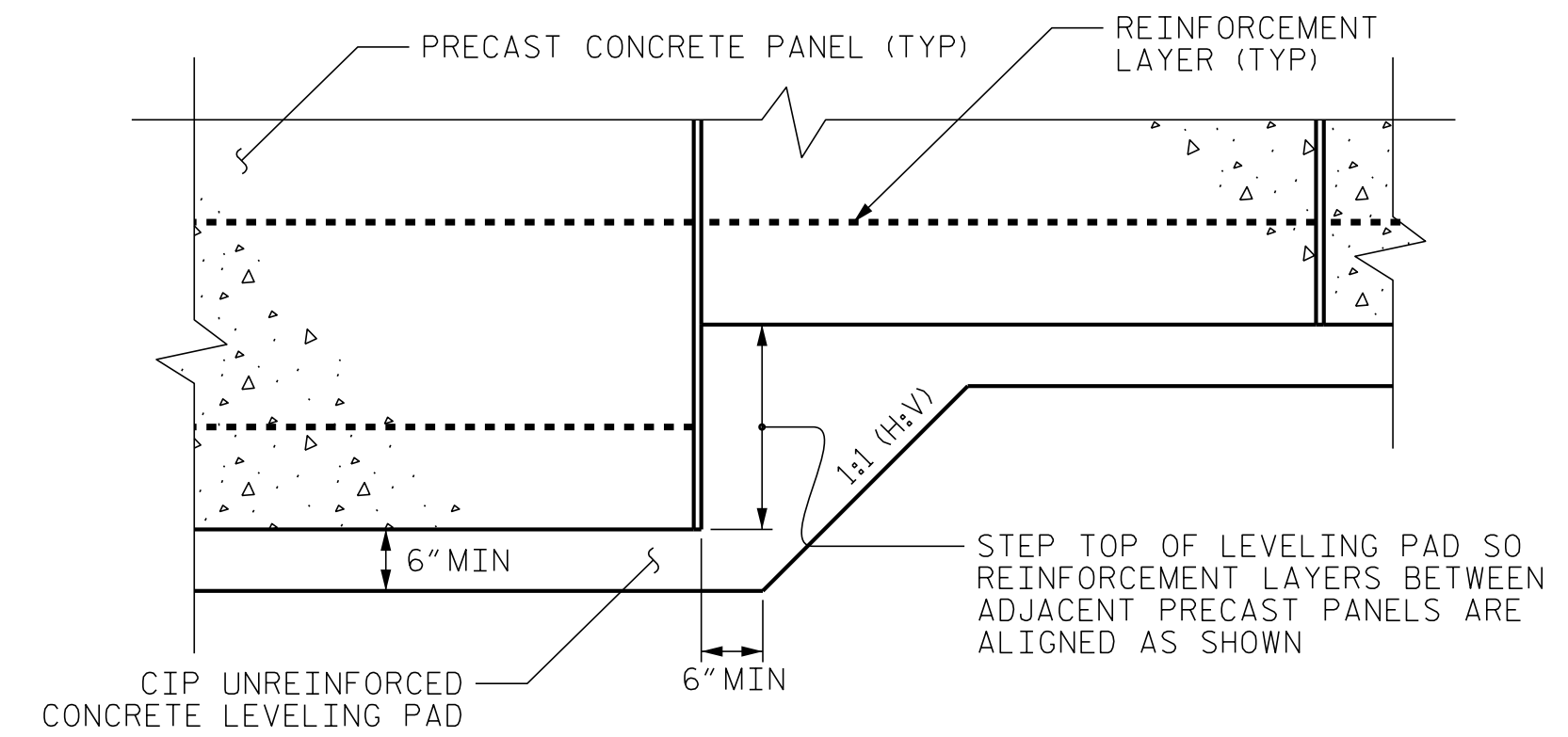


GEOTECHNICAL ENGINEER  SEAL 041986 ENGINEER MATTHEW BREWER	ENGINEER
DocuSigned by: D. Matthew Brewer 388120006041482 SIGNATURE	7/15/2022 DATE
SIGNATURE DATE SIGNATURE DATE	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

ESTIMATED SMSE WALL QUANTITIES			
SHORED MSE RETAINING WALL #28	2,310	SQ. FT.	
SHORED MSE RETAINING WALL #29	2,370	SQ. FT.	

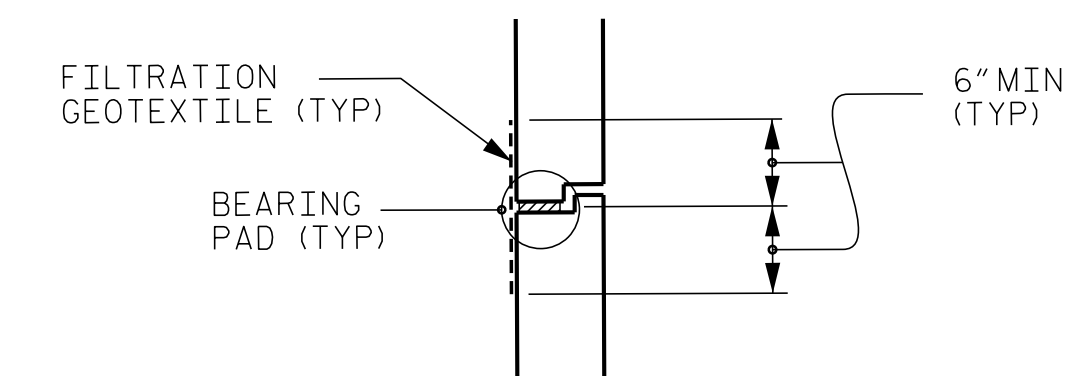
ESTIMATED SOIL NAIL WALL QUANTITIES			
RETAINING WALL #	SOIL NAIL RETAINING WALLS (SQUARE FEET)	SOIL NAIL VERIFICATION TESTS	SOIL NAIL PROOF TESTS
28	1,960*	2	7
29	2,110*	2	7

\*INCLUDES RETAINING WALL EMBEDMENT



**PRECAST PANELS  
LEVELING PAD STEP DETAIL**

NOT TO SCALE



**PRECAST PANEL  
JOINT DETAILS**

NOT TO SCALE

FRONT SLOPE WALL EMBEDMENT		
SLOPE IN FRONT OF STRUCTURES		MINIMUM EMBEDMENT DEPTH
HORIZONTAL	FOR WALLS	H/20
	FOR ABUTMENTS	H/10
3.0H:1.0V	WALLS	H/10
2.5H:1.0V	WALLS	H/8.5
2.0H:1.0V	WALLS	H/7
1.5H:1.0V	WALLS	H/5
1.25H:1.0V	WALLS	H/4
1.0H:1.0V	WALLS	H/3

- NOTE:
- 1) MAINTAIN A MINIMUM BENCH WIDTH OF 4 FT IN FRONT OF THE WALL FOR ITS ENTIRE LENGTH.
  - 2) MINIMUM EMBEDMENT DEPTH OF 2 FT, UNLESS LARGER DEPTHS DICTATED BY ABOVE TABLE.
  - 3) MAXIMUM SLOPE OF 1H:1V WILL BE MAINTAINED ON FRONT SLOPES FOR THE ENTIRE LENGTH OF THE WALL.
  - 4) SUBMIT WITH THE WALL DESIGN INTERNAL, EXTERNAL, AND GLOBAL STABILITY ANALYSES. REFERENCE SPECIAL PROVISION GT-7 FOR SMSE WALL.


PROJECT NO.: A-0009CB  
GRAHAM COUNTY  
 RETAINING WALL #28 STATION: -L-389+25, 47' RT TO 392+00, 39' RT  
 RETAINING WALL #29 STATION: -L- 393+90, 40' RT TO 395+90, 37' RT  
 SHEET 3 OF 10

PREPARED BY: DMB	DATE: 7/14/2022
REVIEWED BY: REK	DATE: 7/14/2022

Prepared in the Office of:



**CAROLINAS  
GEOTECHNICAL  
GROUP**  
 2400 CROWNPOINT EXECUTIVE DRIVE  
 SUITE 800  
 CHARLOTTE, NC 28227  
 (980) 339-8684



NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**GEOTECHNICAL  
ENGINEERING UNIT**

**RETAINING WALL #28 AND #29  
SHORED MECHANICALLY  
STABILIZED EARTH (SMSE) WALL**

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. W28\_29 -3