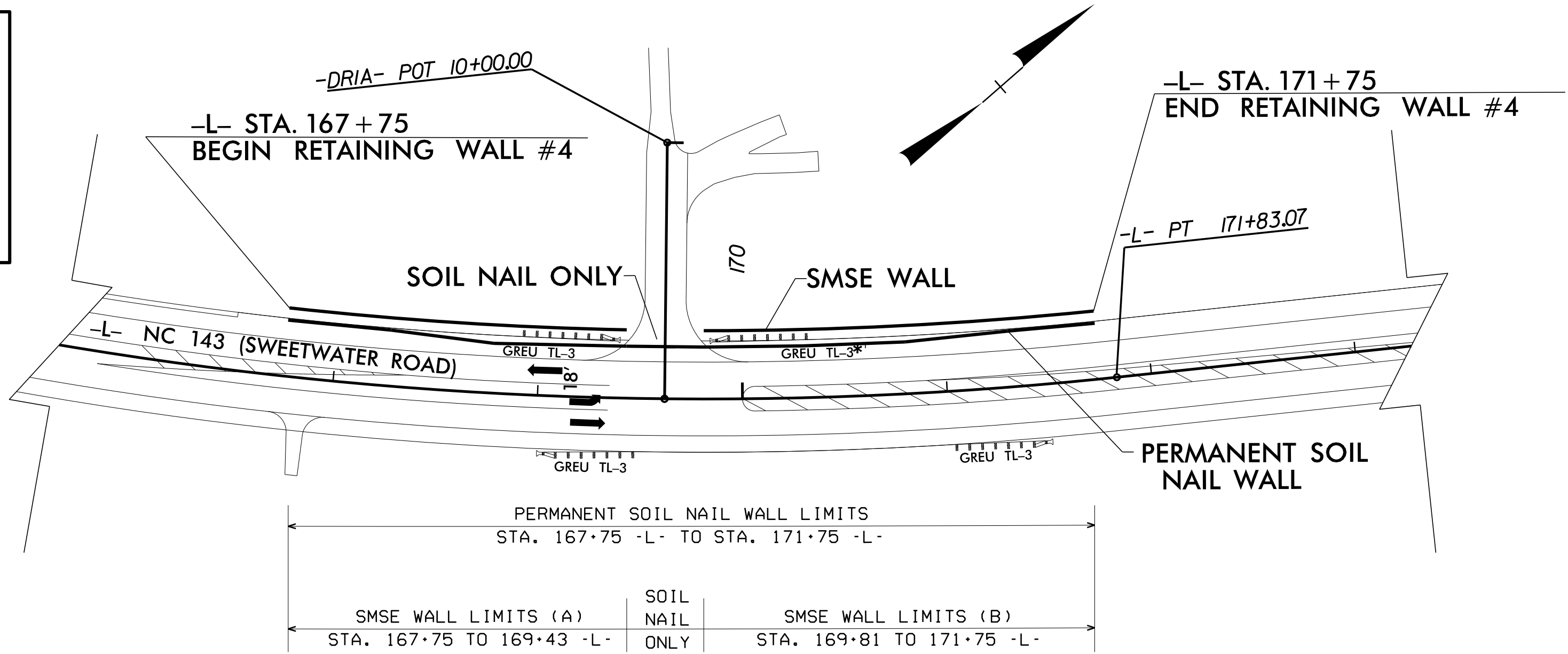
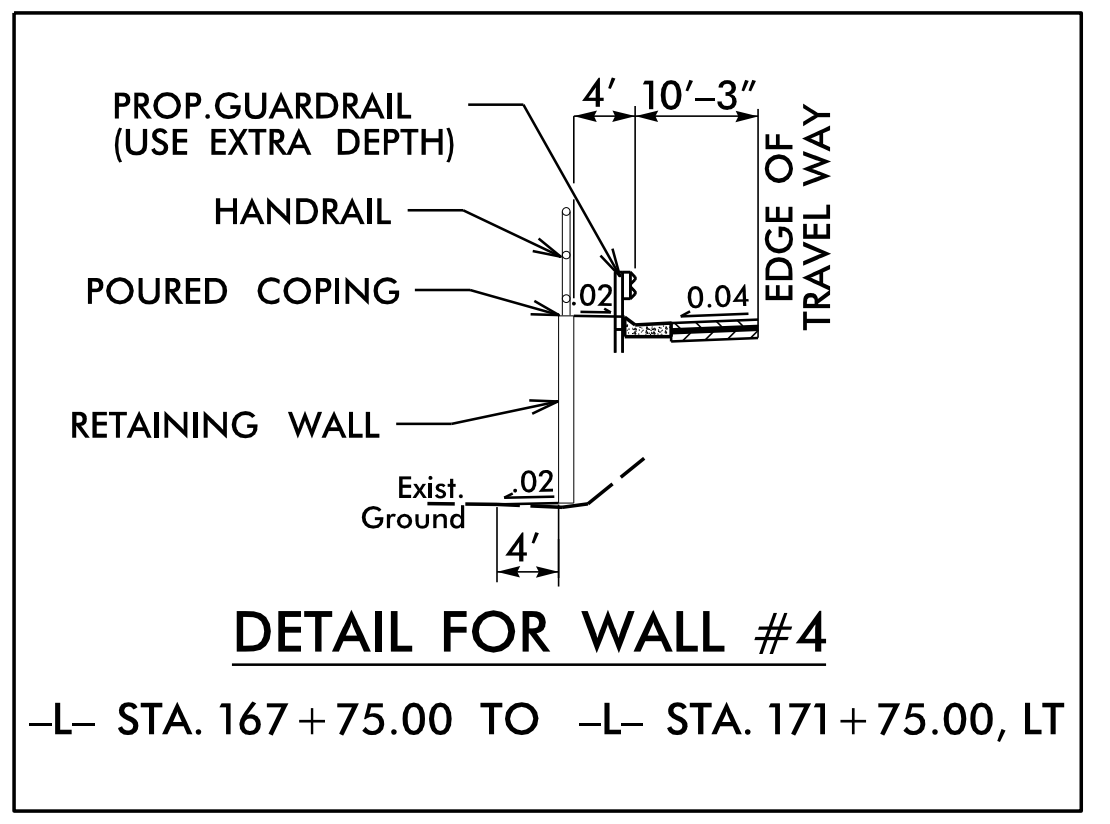


NOTE:
 THE SOIL NAIL WALL LIMITS ARE FROM STA. 167+75 -L- TO STA. 171+75 -L-.
 THE SMSE WALL LIMITS ARE FROM STA. 167+75 -L- TO STA. 169+43 -L- AND FROM STA. 169+81 -L- TO STA 171+75 -L-.



WALL LIMITS SKETCH
 NOT TO SCALE

GEOTECHNICAL ENGINEER
 ENGINEER
 PROFESSIONAL SEAL
 041986
 D. Matthew Brewer
 DATE: 4/28/2022
 SIGNATURE: [Signature]
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TYPICAL WALL SECTION
 NOT TO SCALE

SMSE RETAINING WALL #4 INFORMATION									
STA. -L-	OFFSET LT FROM CL TO WALL FACE	TOP OF WALL	BOTTOM OF WALL	MINIMUM TOP OF LEVELING PAD	ESTIMATED MINIMUM SMSE WALL EMBEDMENT	* DESIGN SMSE WALL HEIGHT "H"	TOP OF SOIL NAIL WALL	APPROX. SOIL NAIL WALL HEIGHT	WALL REINFORCEMENT (MSE STRAP) LENGTH 'L'
167+75.00	33.33	2165.04	2165.04	2160.04	5.00	5.00	2162.72	2.68	0.7XH OR 6 FT (MIN)
167+87.50	33.33	2165.58	2160.24	2155.24	5.00	10.34	2162.72	7.48	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
168+00.00	33.33	2165.89	2155.44	2105.44	5.00	15.45	2162.72	12.28	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
168+50.00	33.33	2166.75	2156.12	2151.12	5.00	15.63	2163.67	12.55	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
169+00.00	33.33	2167.60	2155.87	2150.87	5.00	16.73	2164.55	13.68	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
169+43.00	33.33	2168.33	2157.55	2152.55	5.00	15.78	2165.73	13.18	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
169+81.10	33.33	2168.98	2159.02	2154.02	5.00	14.96	2166.77	12.75	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
170+00.00	33.33	2169.31	2159.76	2154.76	5.00	14.55	2167.29	12.53	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
170+50.00	33.33	2170.16	2159.10	2154.10	5.00	16.06	2168.52	14.42	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
171+00.00	33.33	2171.02	2161.27	2156.27	5.00	14.75	2169.35	13.08	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
171+50.00	33.33	2172.23	2162.03	2157.03	5.00	15.20	2170.81	13.78	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
171+53.95	33.33	2172.34	2162.39	2157.39	5.00	14.95	2171.09	13.70	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
171+62.00	33.33	2172.51	2166.41	2161.41	5.00	11.10	2171.09	9.68	LOWER: 0.5XH OR 6 FT (MIN) UPPER: 0.7XH OR 10 FT (MIN)
171+75.00	33.33	2172.91	2172.91	2167.91	5.00	5.00	2171.09	3.18	0.7XH OR 6 FT (MIN)

* FOR DESIGN WALL HEIGHT "H" AND ADDITIONAL CONSTRUCTION DETAILS, SEE SHEETS 3 THRU 5
 ALL TABLE DIMENSIONS ARE GIVEN IN FEET

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 4.0 FT IN FRONT OF THE WALL FOR ITS ENTIRE LENGTH.
 2) MINIMUM EMBEDMENT DEPTH OF 5 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.
 5) FRONT SLOPE OF WALL SHALL HAVE GABION EROSION PROTECTION FROM BOTTOM OF WALL TO STREAM WATER ELEVATION ALONG FULL LENGTH OF WALL. REFERENCE ROADWAY RECOMMENDATIONS REPORT FOR SPECIAL PROVISION, DETAILS, AND QUANTITIES.
 REFERENCE SPECIAL PROVISION GT-3 FOR SMSE WALL.

PROJECT NO.: A-0009CA
 GRAHAM COUNTY
 STATION: -L-167+75, 33' LT TO 171+75, 33' LT
 SHEET 2 OF 5

Prepared in the Office of:

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

SHORED MECHANICALLY STABILIZED EARTH (SMSE) RETAINING WALL #4					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. W4-2

PREPARED BY: DMB	DATE: 4/28/2022
REVIEWED BY: REK	DATE: 4/28/2022