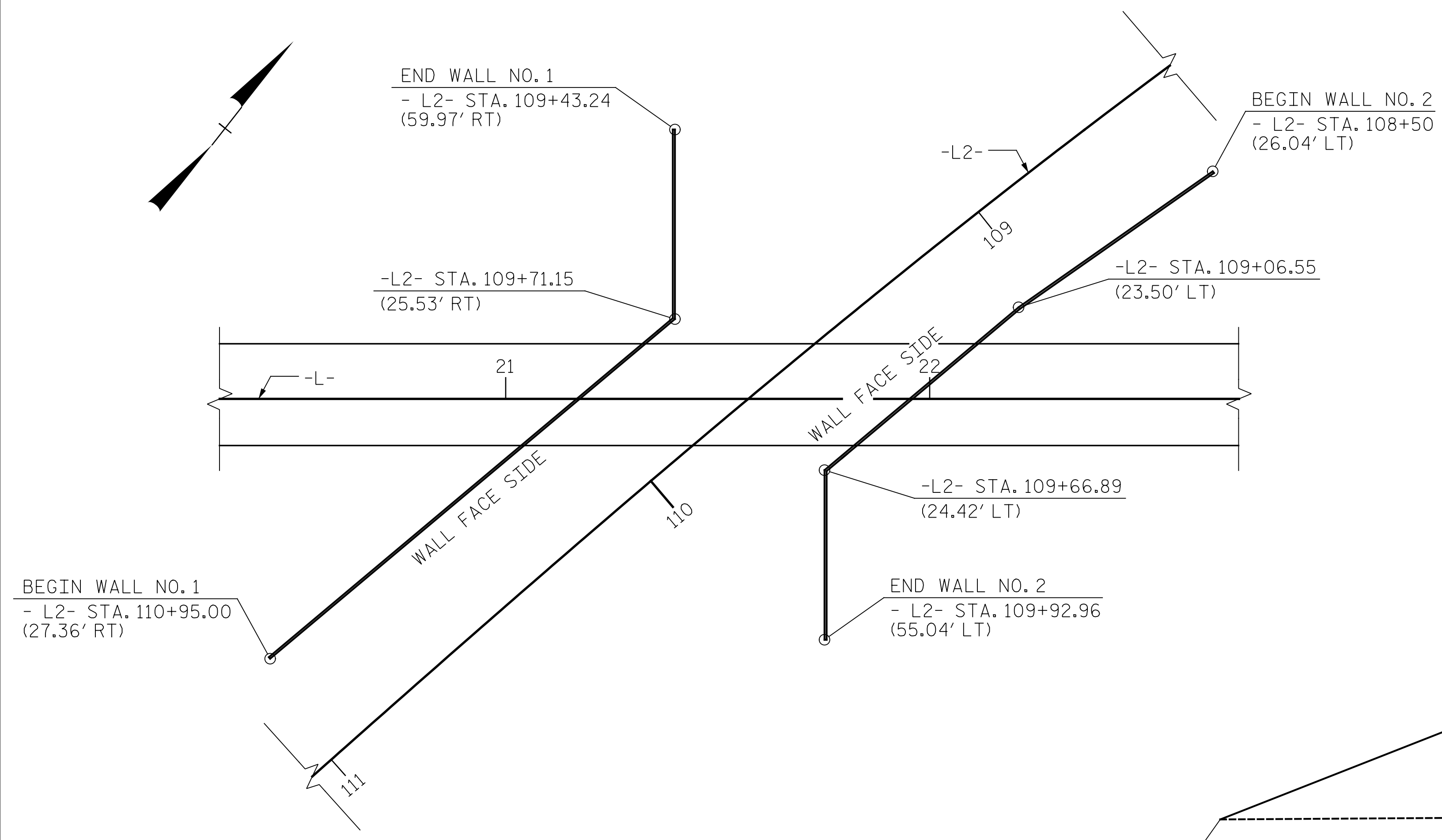


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and is Not a Certified Document –**

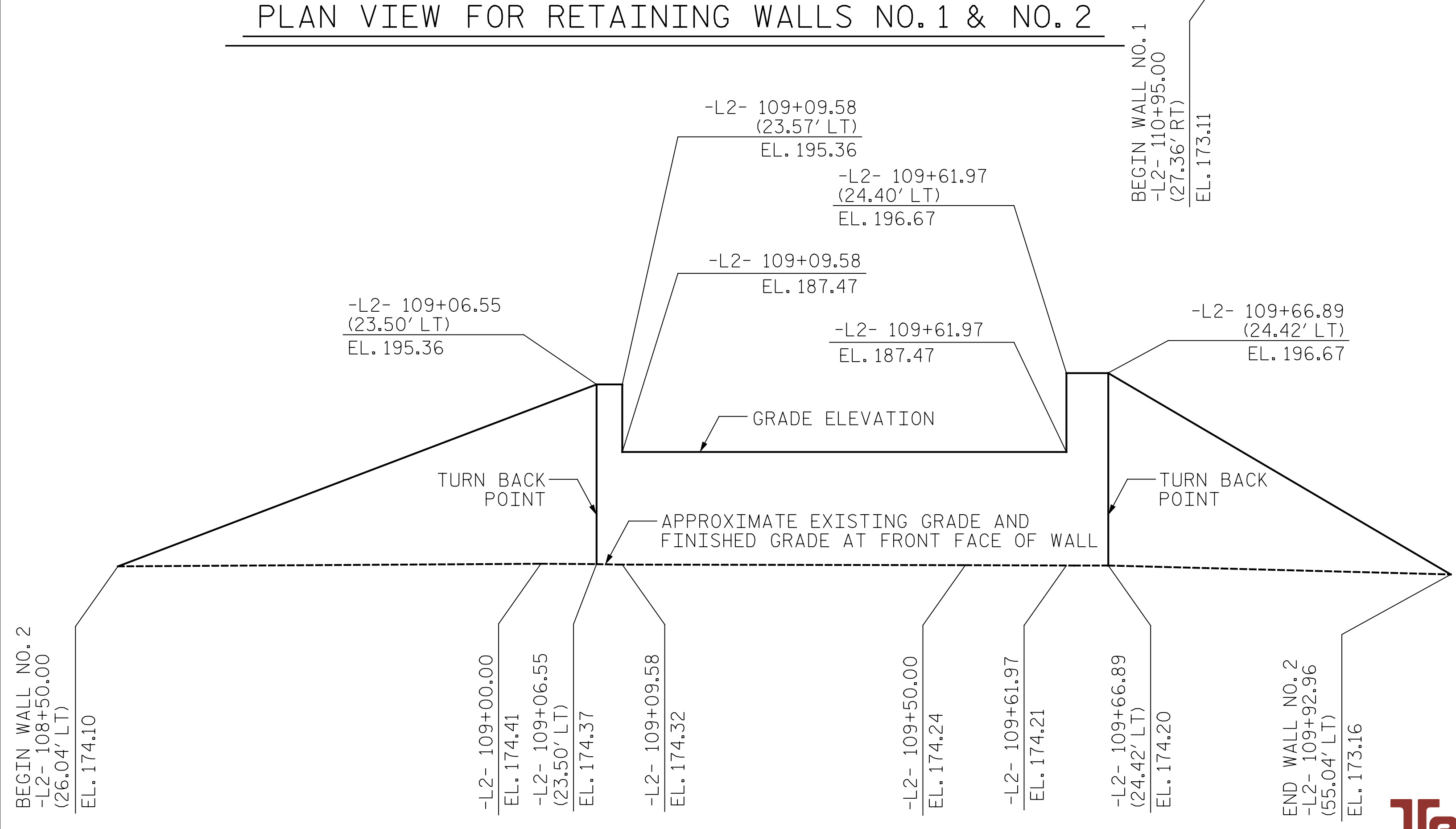
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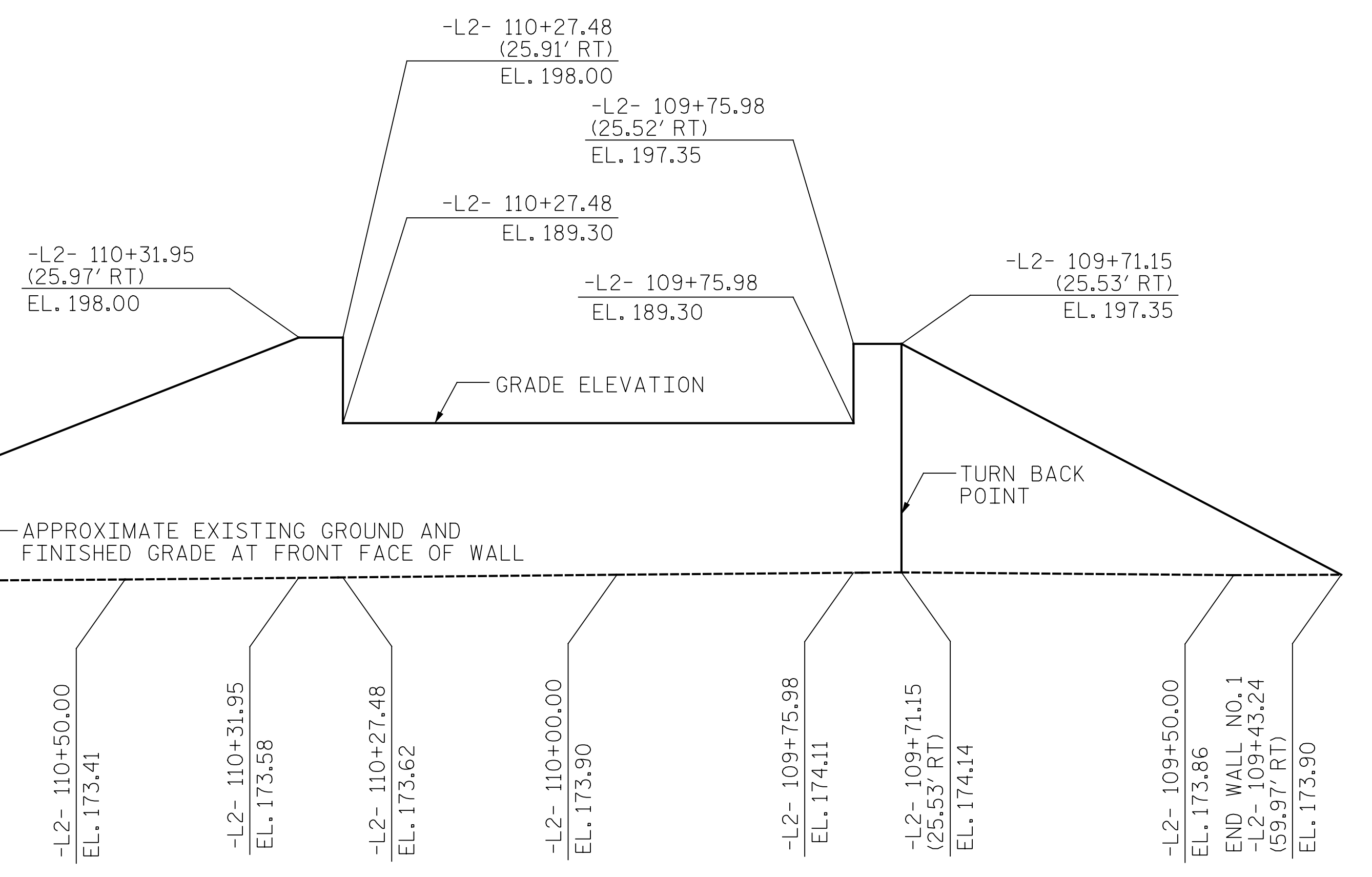
PLAN VIEW FOR RETAINING WALLS NO. 1 & NO. 2

ESTIMATED MSE WALL QUANTITIES (SQUARE FEET)	
MSE RETAINING WALL NO. 1	2,670 SF
MSE RETAINING WALL NO. 2	2,300 SF



WALL ENVELOPE FOR RETAINING WALL NO. 2

EXPOSED WALL FACE VIEW, SEE PROVISION AND NOTES FOR EMBEDMENT



WALL ENVELOPE FOR RETAINING WALL NO. 1

EXPOSED WALL FACE VIEW, SEE PROVISION AND NOTES FOR EMBEDMENT

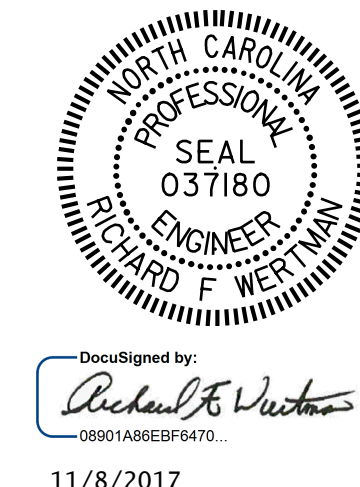
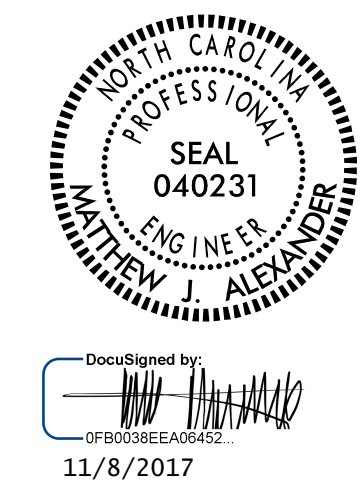
PROJECT NO. 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 21+57.23 -L-  
 109+69.94 -L2-

NOTE: OFFSETS ARE TO FRONT FACE OF MSE WALL.

DRAWN BY : J.A. BOYER DATE : 09/22/17  
 CHECKED BY : R.F. WERTMAN DATE : 09/24/17  
 DESIGN ENGINEER OF RECORD : M. J. ALEXANDER DATE : 10/31/17

**Terracon**  
 Consulting Engineers & Scientists  
 2401 BRENTWOOD ROAD, SUITE 107  
 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-8555  
 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367

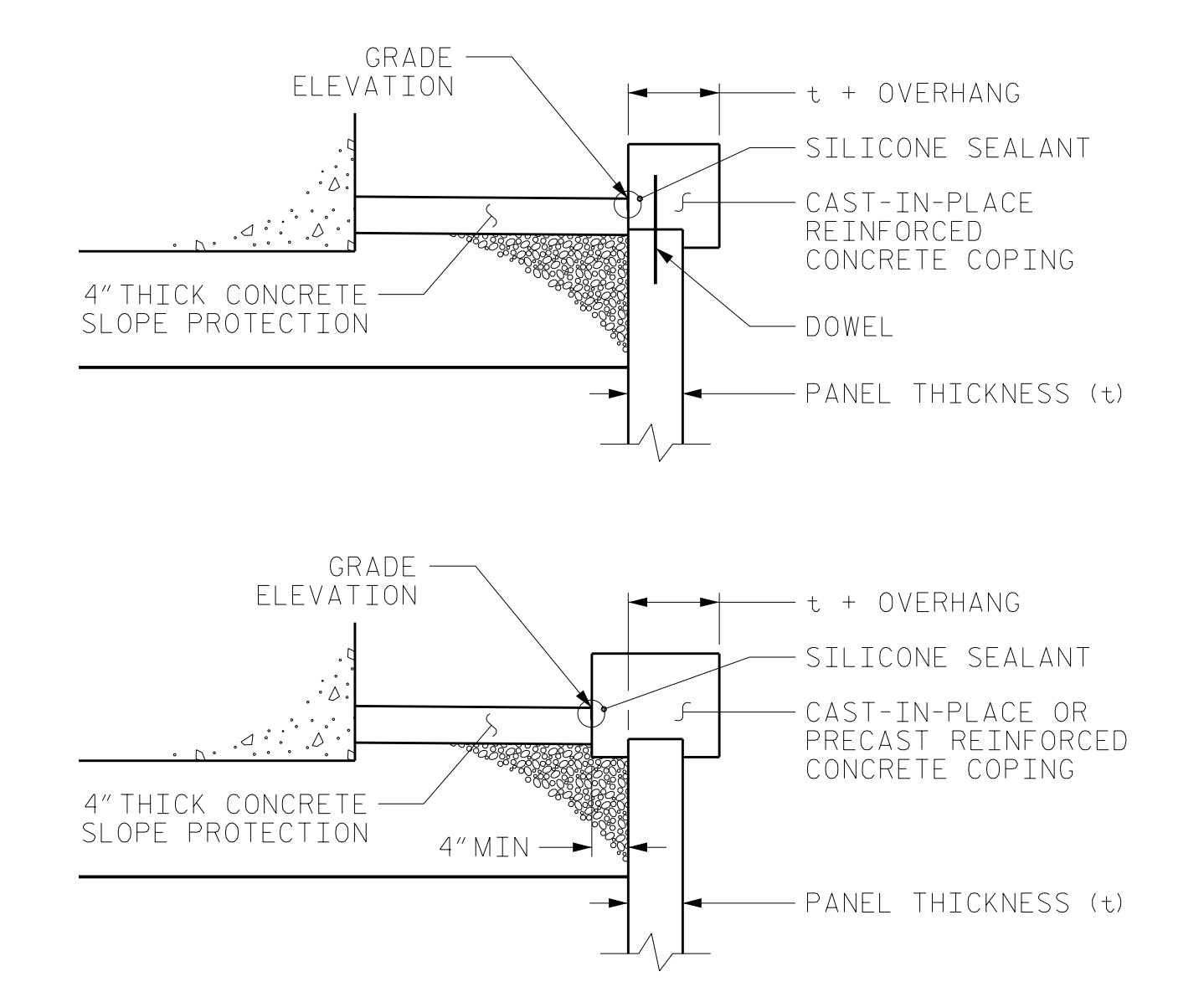
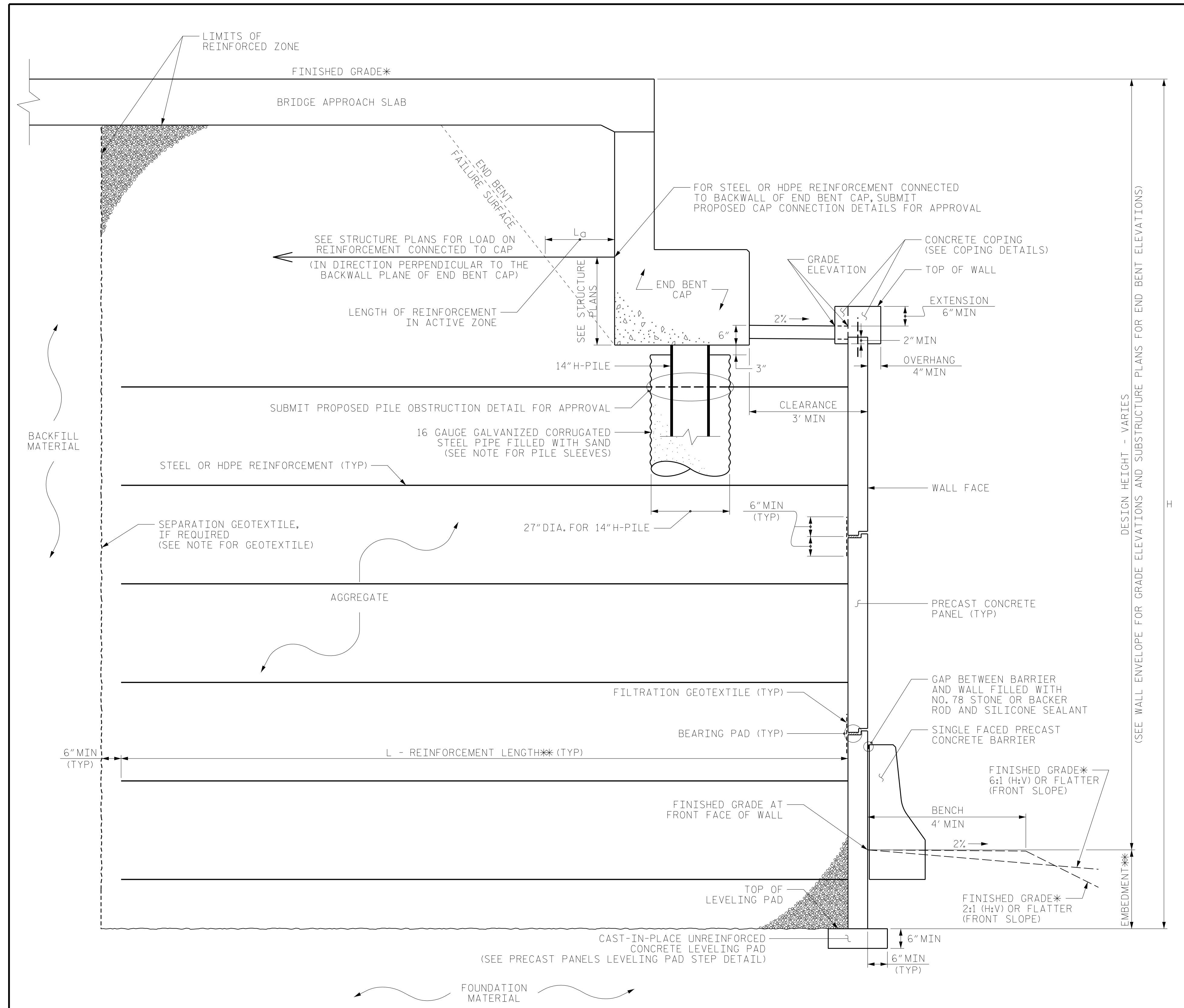
PLANS PREPARED BY:  
**Gannett Fleming**  
 Excellence Delivered As Promised  
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 Suite 102  
 Raleigh, NC 27607-3073  
 (919) 420-7660  
 NC Lic. No. F-0270



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

MSE RETAINING WALLS  
 NO. 1 AND NO. 2  
 PLAN VIEW AND  
 WALL ENVELOPES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	W-1
1			3			TOTAL SHEETS
2			4			1 OF 4



**COPING DETAILS**

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.

**MSE ABUTMENT WALL WITH PRECAST PANELS - TYPICAL SECTION**

\*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.  
 \*\*SEE MSE RETAINING WALLS PROVISION AND MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 21+57.23 -L-  
 109+69.94 -L2-  
 SHEET 2 OF 4

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

Prepared in the Office of:

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 Consulting Engineers & Scientists  
 2401 BRENTWOOD ROAD, SUITE 107  
 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-9555  
 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367

**NORTH CAROLINA**  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**GEOTECHNICAL**  
 ENGINEERING UNIT

**MSE RETAINING WALLS**  
**NO. 1 AND NO. 2**  
**TYPICAL SECTION AT**  
**ABUTMENTS**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
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2			4			

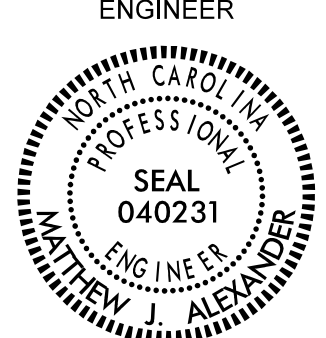

GEOTECHNICAL ENGINEER

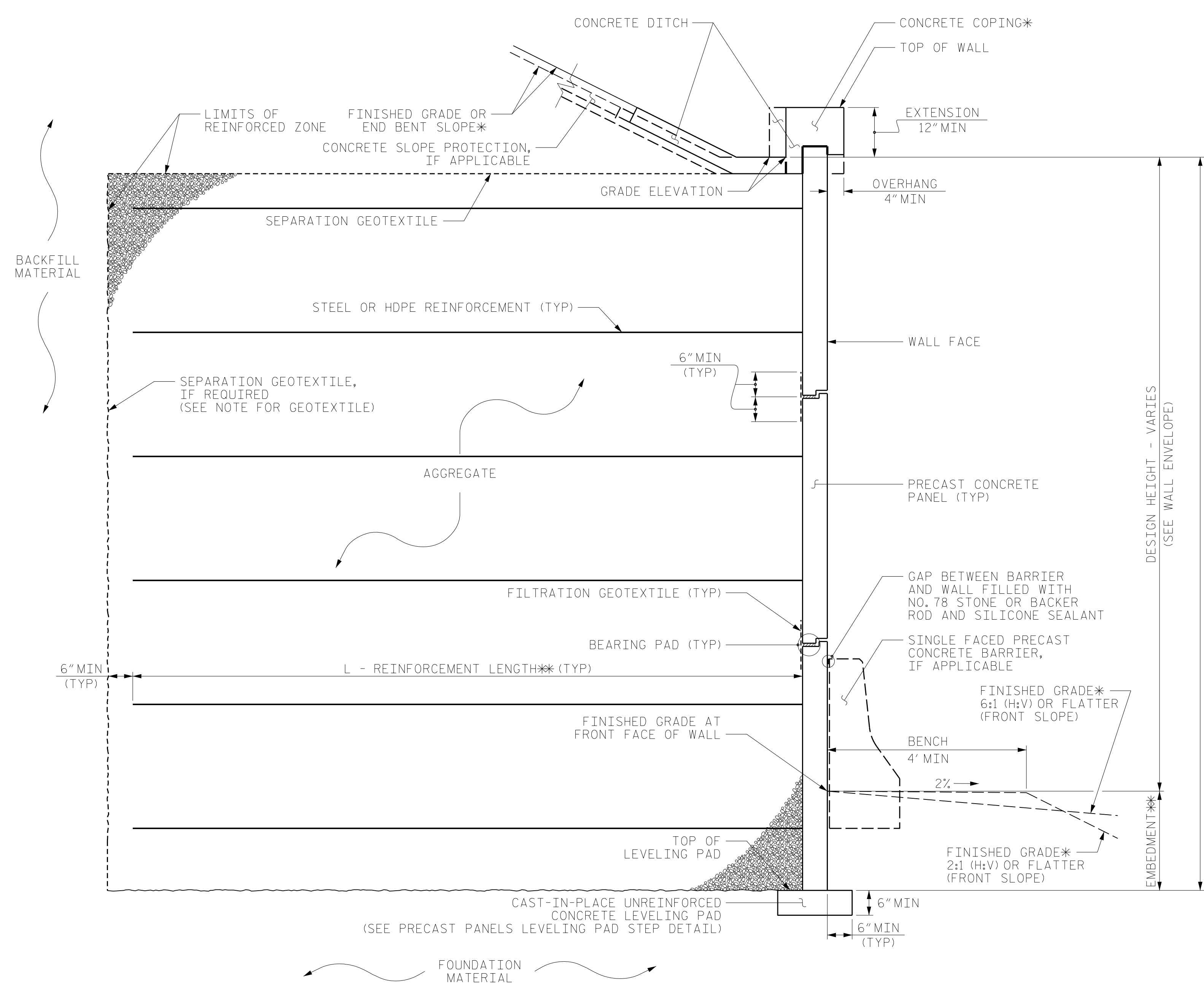
ENGINEER

SEAL 040231

11/8/2017

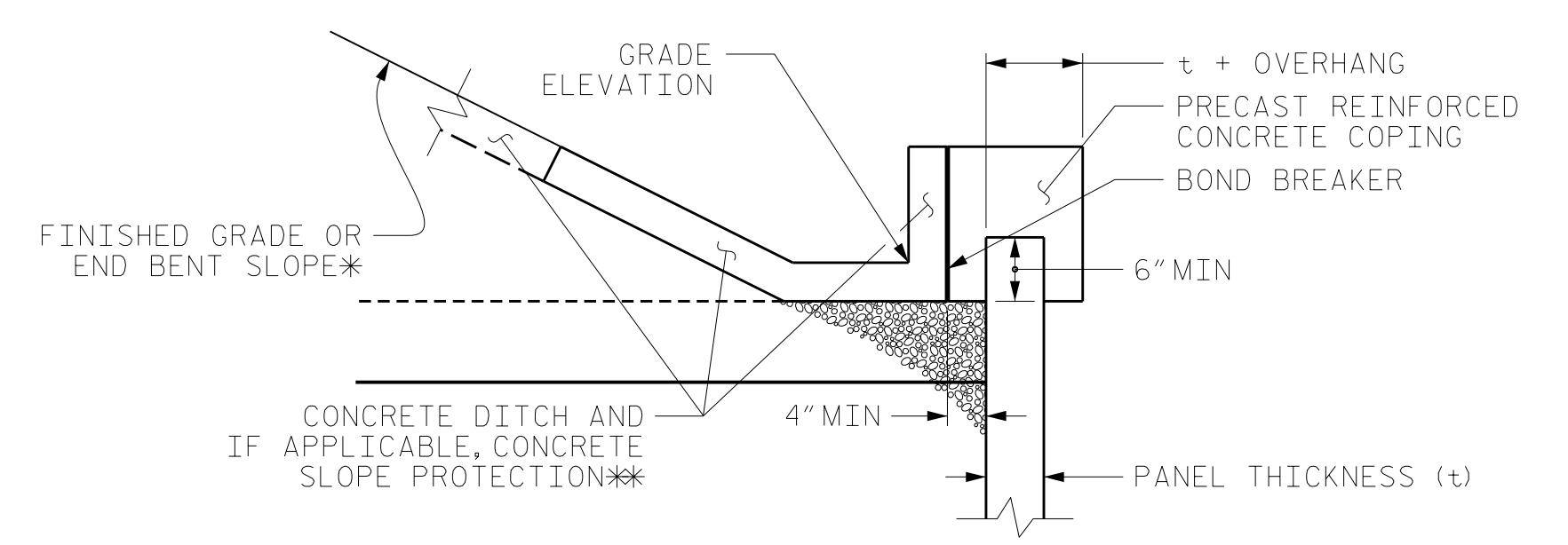
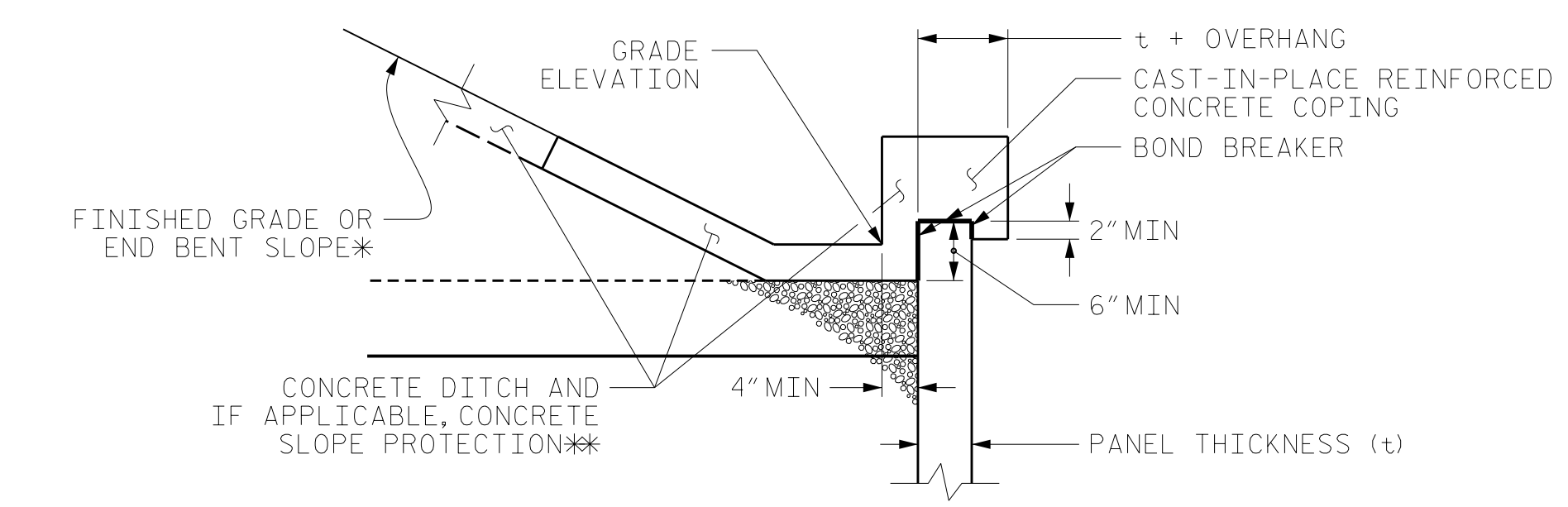
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Documented by:  DATE: 11/8/2017	SIGNATURE: _____ DATE: _____
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



**MSE WALL WITH PRECAST PANELS - TYPICAL SECTION**

\*SEE COPING DETAILS AND PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.  
 \*\*SEE MSE RETAINING WALLS PROVISION AND MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.



**COPING DETAILS**

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

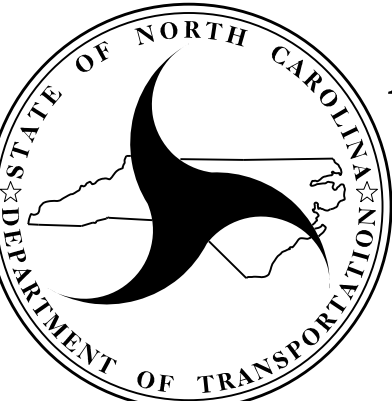
PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 21+57.23 -L-  
 109+69.94 -L2-  
 SHEET 3 OF 4

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

Prepared in the Office of:

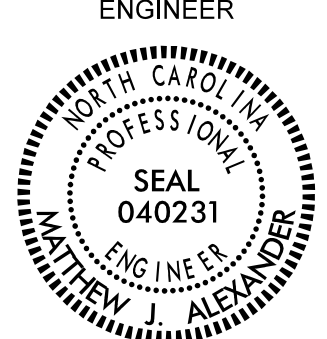
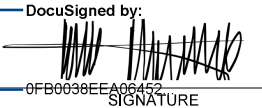
**Terracon**  
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 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-9555  
 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367

NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS



**GEOTECHNICAL  
 ENGINEERING UNIT**

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

GEOTECHNICAL ENGINEER  SEAL 040231 ENGINEER MATTHEW J. ALEXANDER	ENGINEER     _____ SIGNATURE      DATE
DocuSigned by:  DATE: 11/8/2017	_____ SIGNATURE      DATE
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**NOTES:**

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS SPECIAL PROVISION.  
 FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.  
 AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALLS NO.1 AND NO. 2.  
 A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS NO.1 AND NO. 2.  
 A DRAIN IS NOT REQUIRED FOR RETAINING WALLS NO.1 AND NO. 2.  
 PILE SLEEVES ARE REQUIRED AROUND PILES FOR END BENTS NO.1 LOCATED AT STATION 21+06.62 -L- AND NO.2 LOCATED AT STATION 22+06.12 -L-.  
 BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS NO.1 AND NO.2, 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.

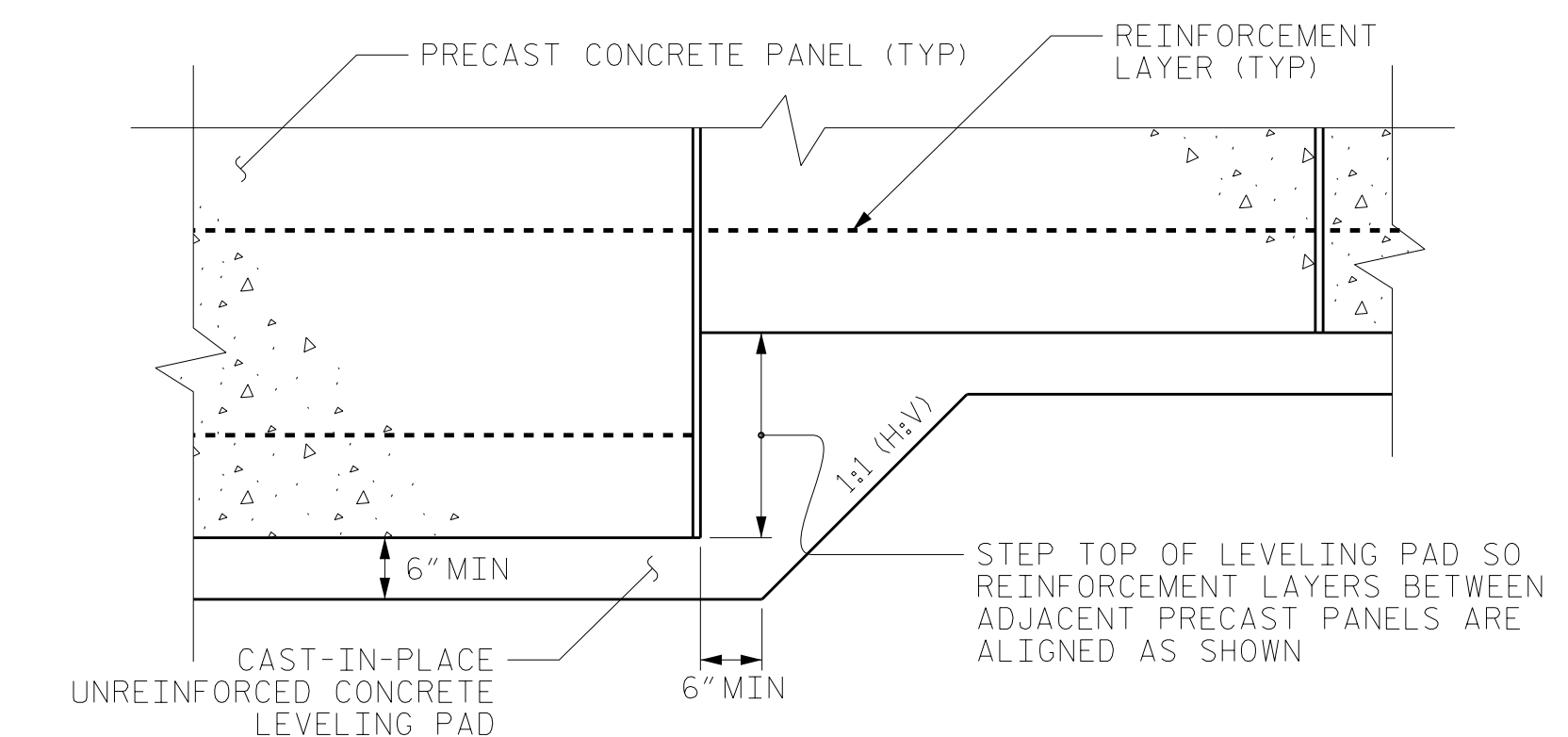
- DESIGN RETAINING WALLS NO.1 AND NO.2 FOR THE FOLLOWING:  
 1) H = DESIGN HEIGHT + EMBEDMENT  
 2) DESIGN LIFE = 100 YEARS  
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 6,200 LB/SF  
 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H OR 19 FT, WHICHEVER IS LONGER  
 5) MINIMUM EMBEDMENT DEPTH = 2 FT BELOW PROPOSED FINISHED GRADE  
 6) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
COARSE	110	38	0
FINE	115	34	0
*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.			

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
BACKFILL	125	34	0
FOUNDATION	110	30	0

DESIGN RETAINING WALLS NO.1 AND NO.2 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.  
 DESIGN REINFORCEMENT CONNECTED TO END BENT CAPS FOR FACTORED LOAD AND LENGTH OF REINFORCEMENT IN ACTIVE ZONE (L) SHOWN IN THE STRUCTURE PLANS. CAST REINFORCEMENT OR CONNECTORS INTO CAP BACKWALL FOR END BENT NO.1 LOCATED AT 21+06.62 -L- AND END BENT NO.2 LOCATED AT STATION 22+06.12 -L-. MAINTAIN A CLEARANCE OF AT LEAST 3" BETWEEN REINFORCEMENT OR CONNECTORS AND REINFORCING STEEL IN CAP.  
 EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO.1 AND NO. 2.  
 FOUNDATIONS FOR END BENT NO.1 LOCATED AT STATION 21+06.62 WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.1. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.  
 FOUNDATIONS FOR END BENT NO.2 LOCATED AT STATION 22+06.12 WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.2. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.  
 INSTALL PILE SLEEVES FOR END BENT NO.1 LOCATED AT STATION 21+06.62 -L- WHILE CONSTRUCTING RETAINING WALL NO.1. OBSERVE A 1 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.  
 INSTALL PILE SLEEVES FOR END BENT NO.2 LOCATED AT STATION 22+06.12 -L- WHILE CONSTRUCTING RETAINING WALL NO.2. OBSERVE A 1 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.  
 DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS NO.1 AND NO. 2 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.  
 AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALLS NO.1 AND NO.2. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.



**PRECAST PANELS  
LEVELING PAD STEP DETAIL**

PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 21+57.23 -L-  
 109+69.94 -L2-  
 SHEET 4 OF 4

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

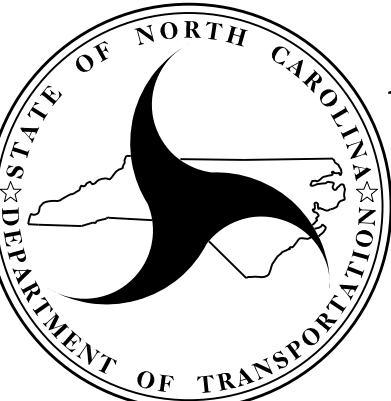
*Prepared in the Office of:*

Terracon

Consulting Engineers & Scientists

2401 BRENTWOOD ROAD, SUITE 107  
 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-9555  
 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367

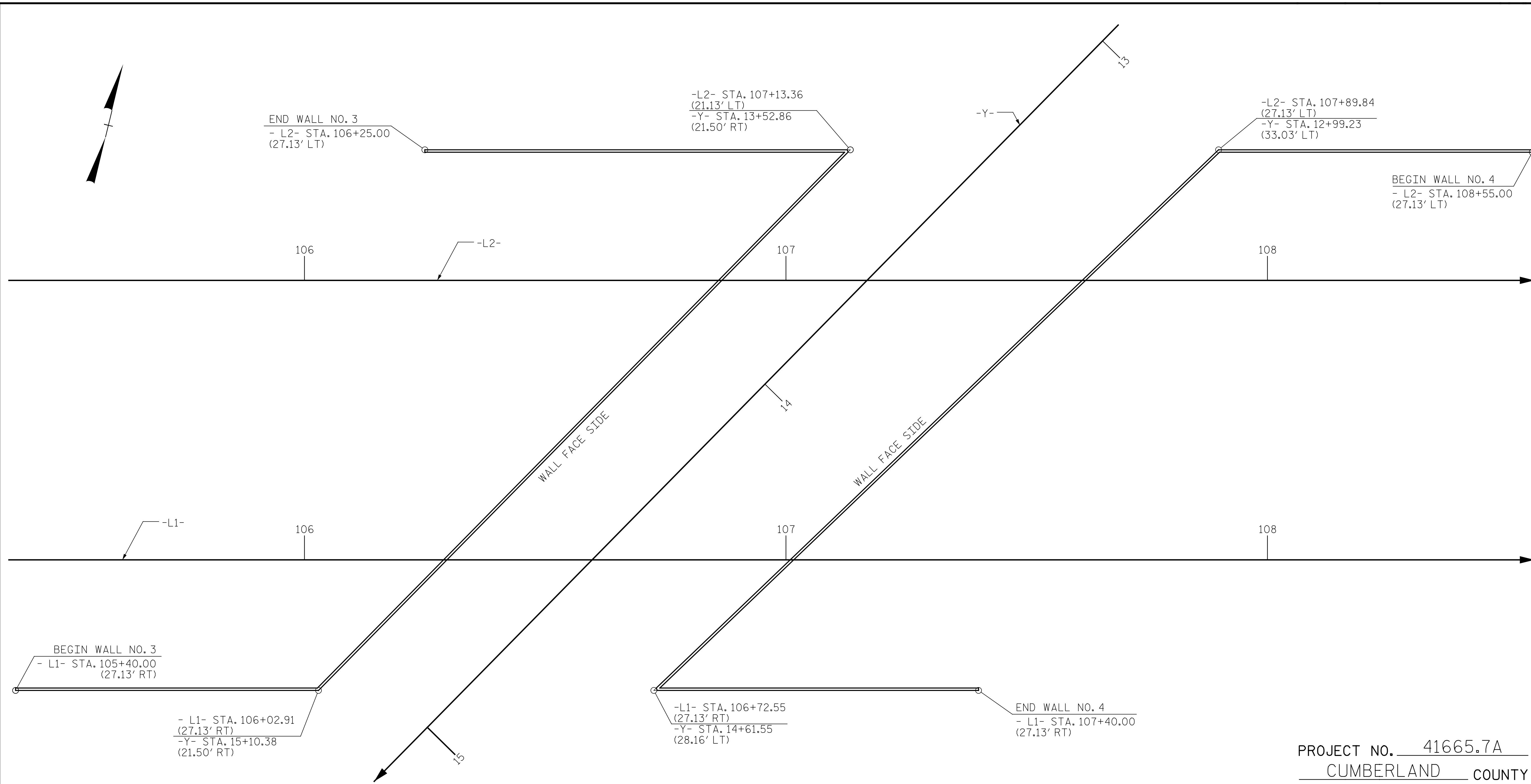
NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS



GEOTECHNICAL  
ENGINEERING UNIT

MSE RETAINING WALLS  
NO. 1 AND NO. 2  
NOTES AND STEP DETAILS

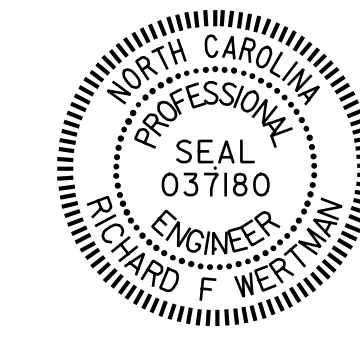
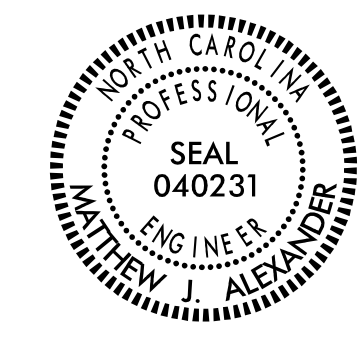
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NO.	BY	DATE	NO.	BY	DATE	
1			3			W-4
2			4			



PROJECT NO. 41665.7A  
CUMBERLAND COUNTY  
 STATION: 14+10.22 -Y-

**PLAN VIEW FOR RETAINING WALLS NO. 3 & NO. 4**

NOTE: OFFSETS ARE TO FRONT FACE OF MSE WALL.



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

MSE RETAINING WALLS  
 NO. 3 AND NO. 4  
 PLAN VIEW

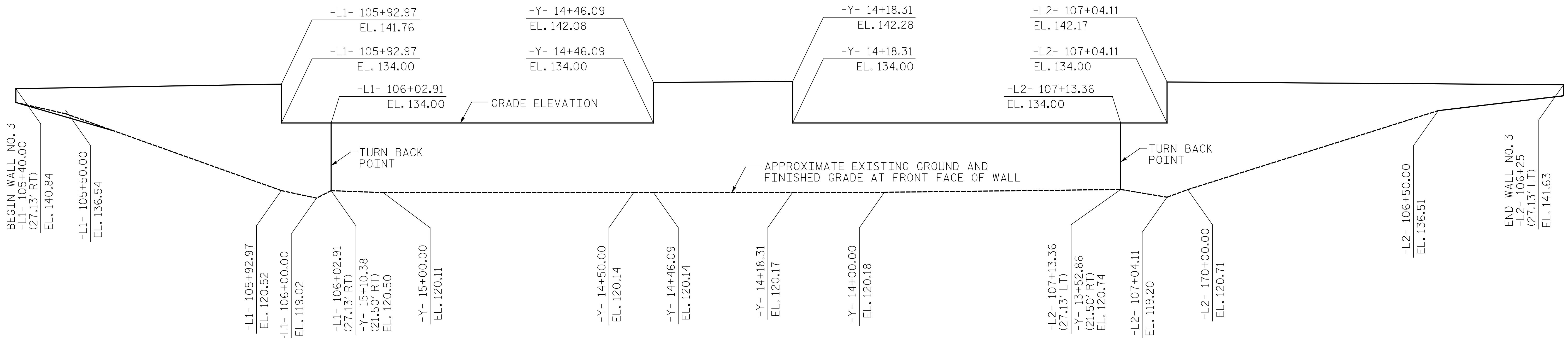
DRAWN BY : J.A. BOYER DATE : 10/16/17  
 CHECKED BY : R.F. WERTMAN DATE : 10/17/17  
 DESIGN ENGINEER OF RECORD : M. J. ALEXANDER DATE : 10/31/17

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PLANS PREPARED BY:  
  
**Gannett Fleming**  
 Excellence Delivered *As Promised*  
 2610 Wycliff Road  
 Suite 102  
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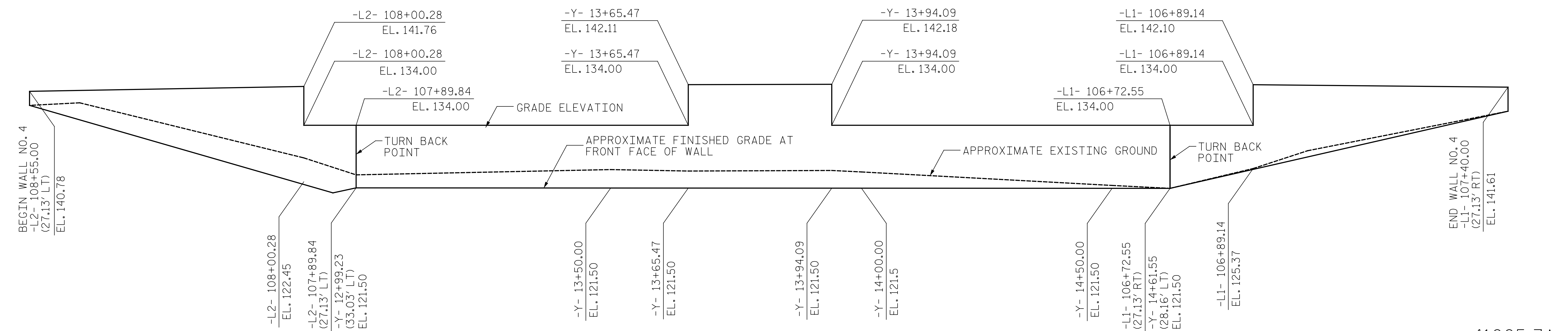
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	W-5
1			3			TOTAL SHEETS
2			4			1 OF 5



**WALL ENVELOPE FOR RETAINING WALL NO. 3**

EXPOSED WALL FACE VIEW, SEE NOTES AND PROVISION FOR EMBEDMENT

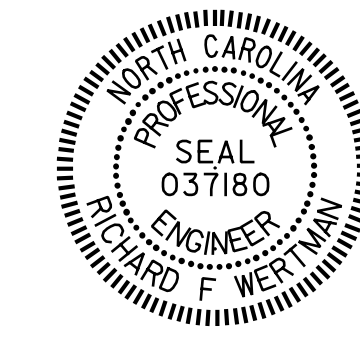
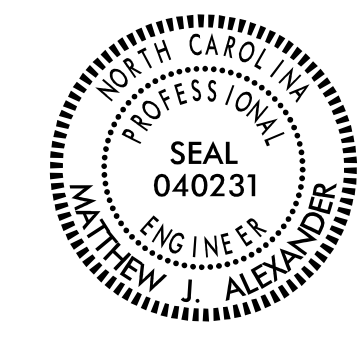


**WALL ENVELOPE FOR RETAINING WALL NO. 4**

EXPOSED WALL FACE VIEW, SEE NOTES AND PROVISION FOR EMBEDMENT

PROJECT NO. 41665.7A  
CUMBERLAND COUNTY  
 STATION: 14+10.22 -Y-

ESTIMATED MSE WALL QUANTITIES (SQUARE FEET)	
MSE RETAINING WALL NO. 3	4,760 SF
MSE RETAINING WALL NO. 4	4,340 SF



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

MSE RETAINING WALLS NO. 3 AND NO. 4 WALL ENVELOPES

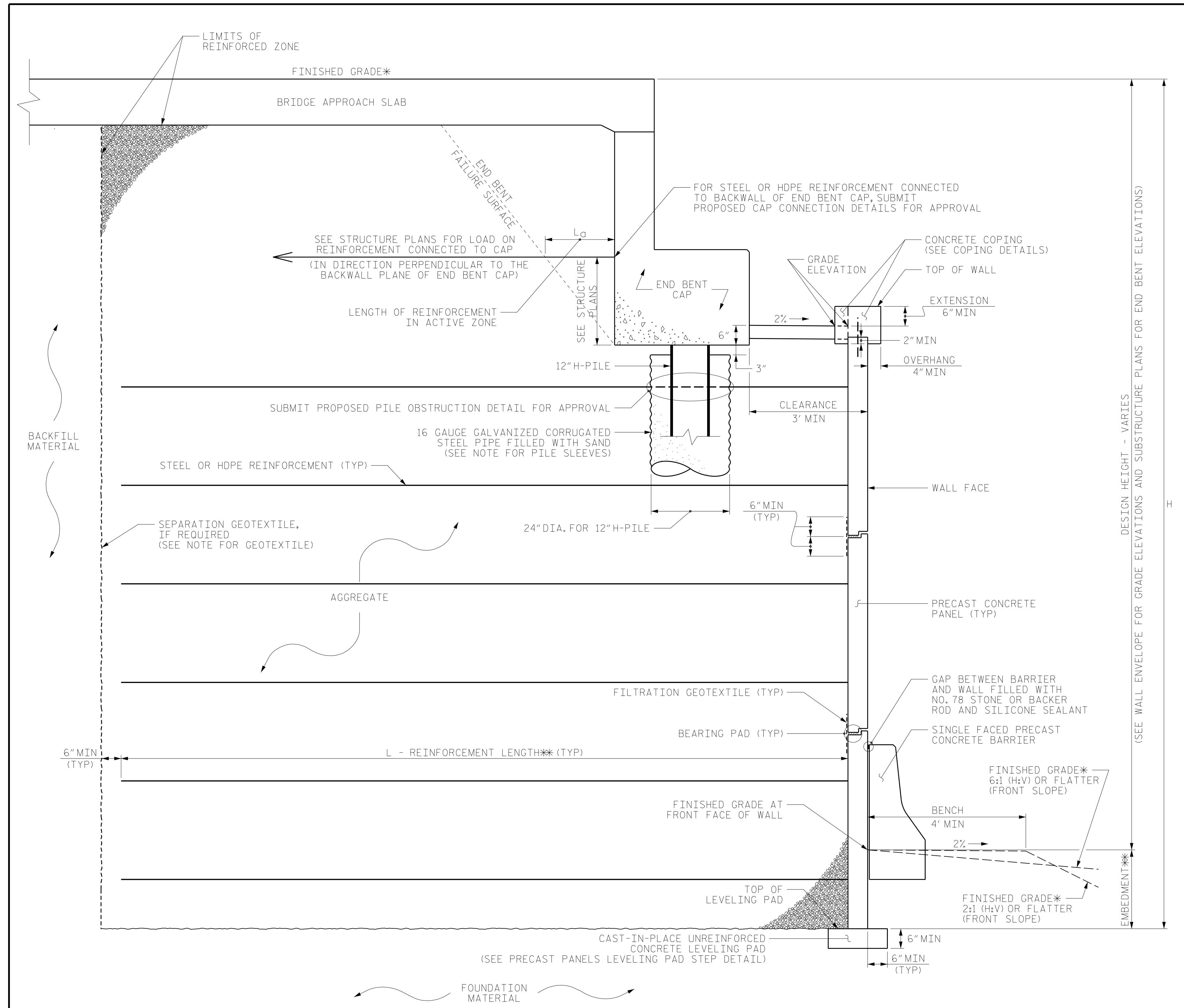
DRAWN BY : J.A. BOYER DATE : 10/16/17  
 CHECKED BY : R.F. WERTMAN DATE : 10/17/17  
 DESIGN ENGINEER OF RECORD : M. J. ALEXANDER DATE : 10/31/17

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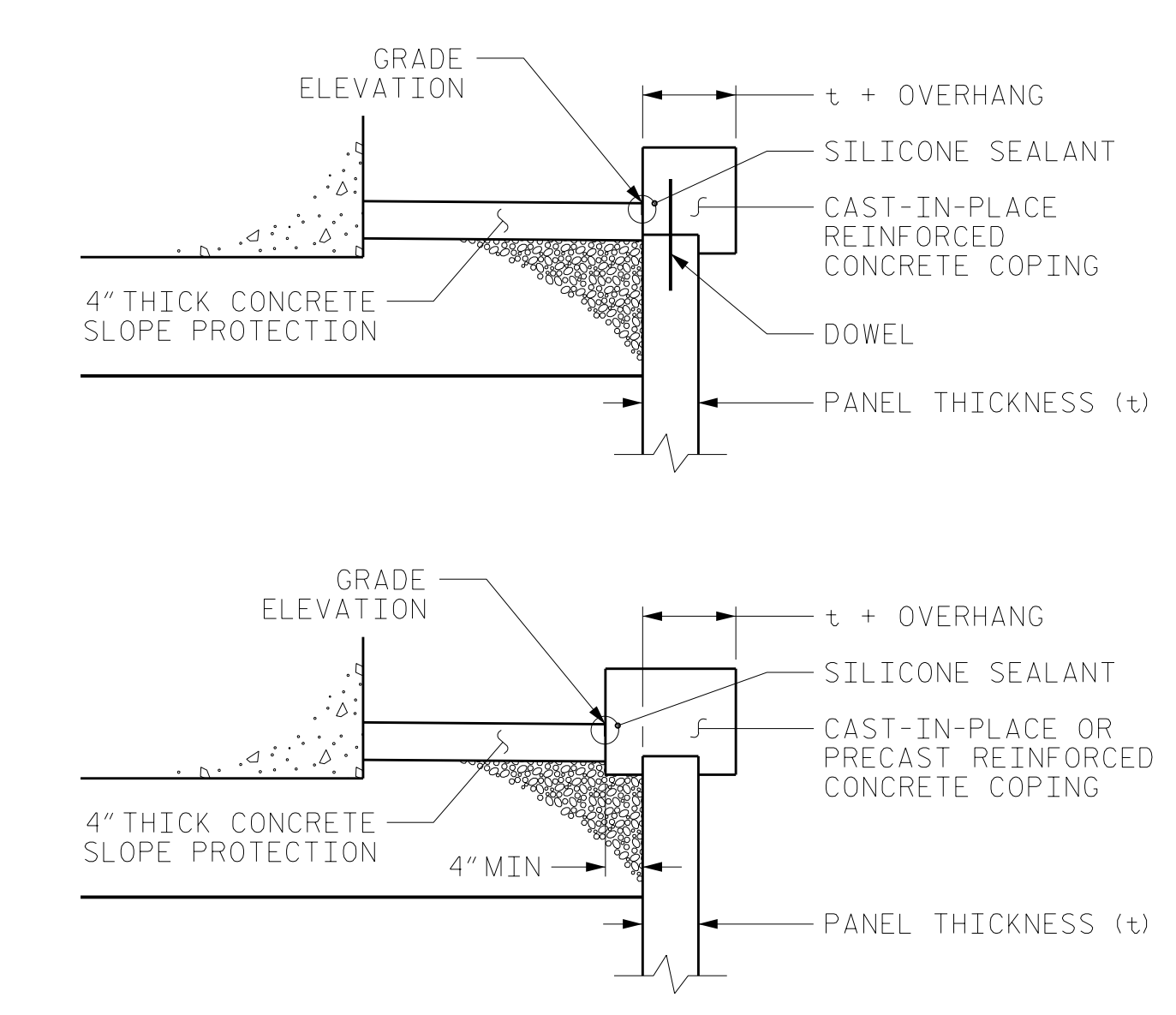
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NO.	BY:	DATE:	NO.	BY:	DATE:	W-6
1			3			TOTAL SHEETS
2			4			2 OF 5



**MSE ABUTMENT WALL WITH PRECAST PANELS - TYPICAL SECTION**

\*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.  
 \*\*SEE MSE RETAINING WALLS PROVISION AND MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

GEOTECHNICAL ENGINEER  SEAL 040231 M. J. ALEXANDER ENGINEER	ENGINEER _____ DATE
DocuSigned by:  DATE	11/8/2017 DATE
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**COPING DETAILS**

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.

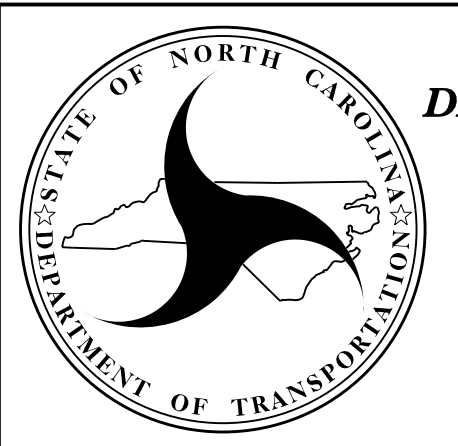
PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 14+10.22 -Y-

SHEET 3 OF 5

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

Prepared in the Office of:

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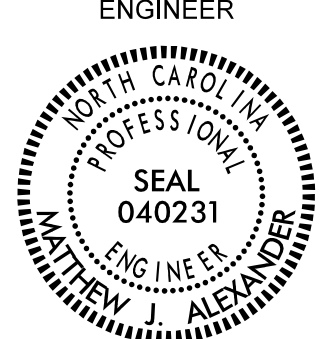


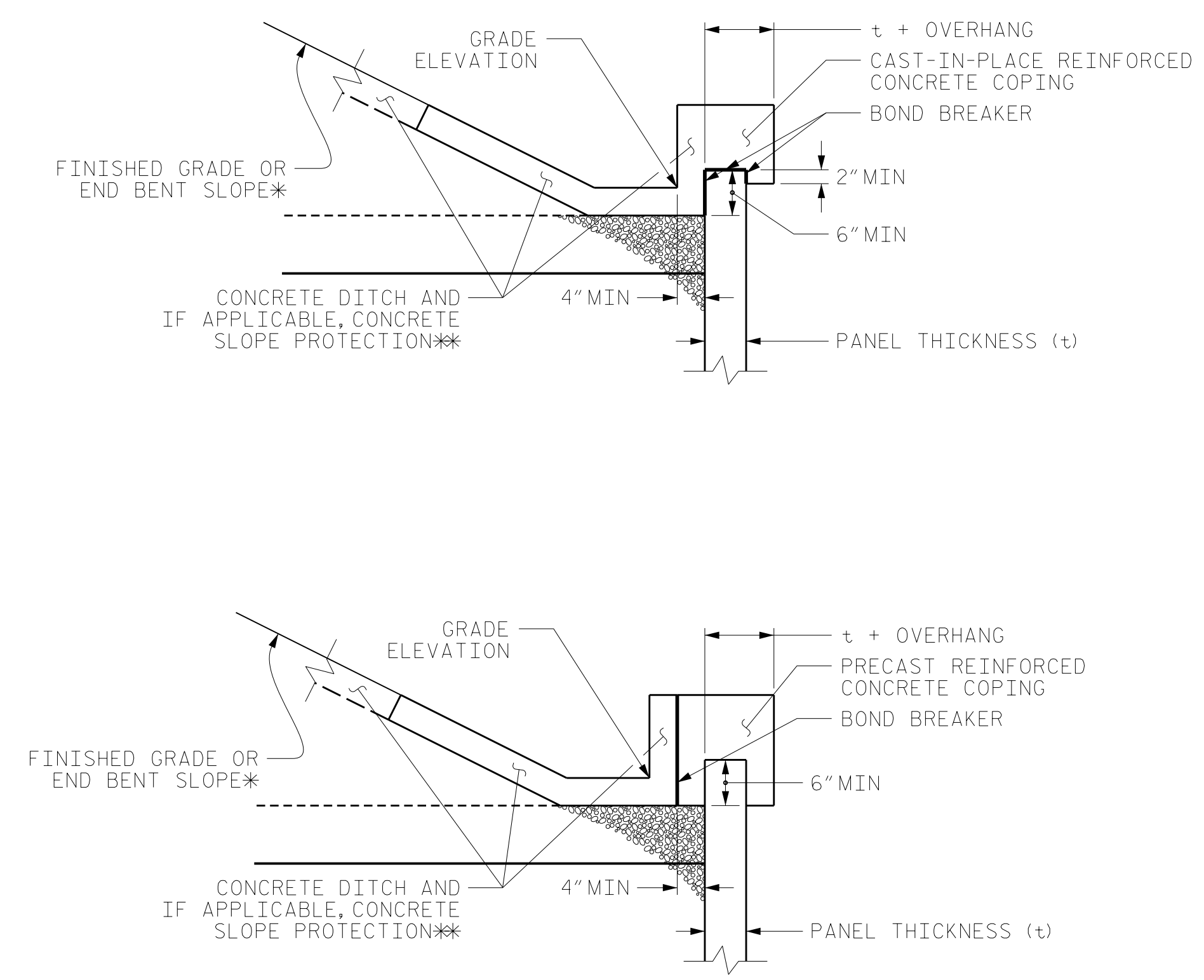
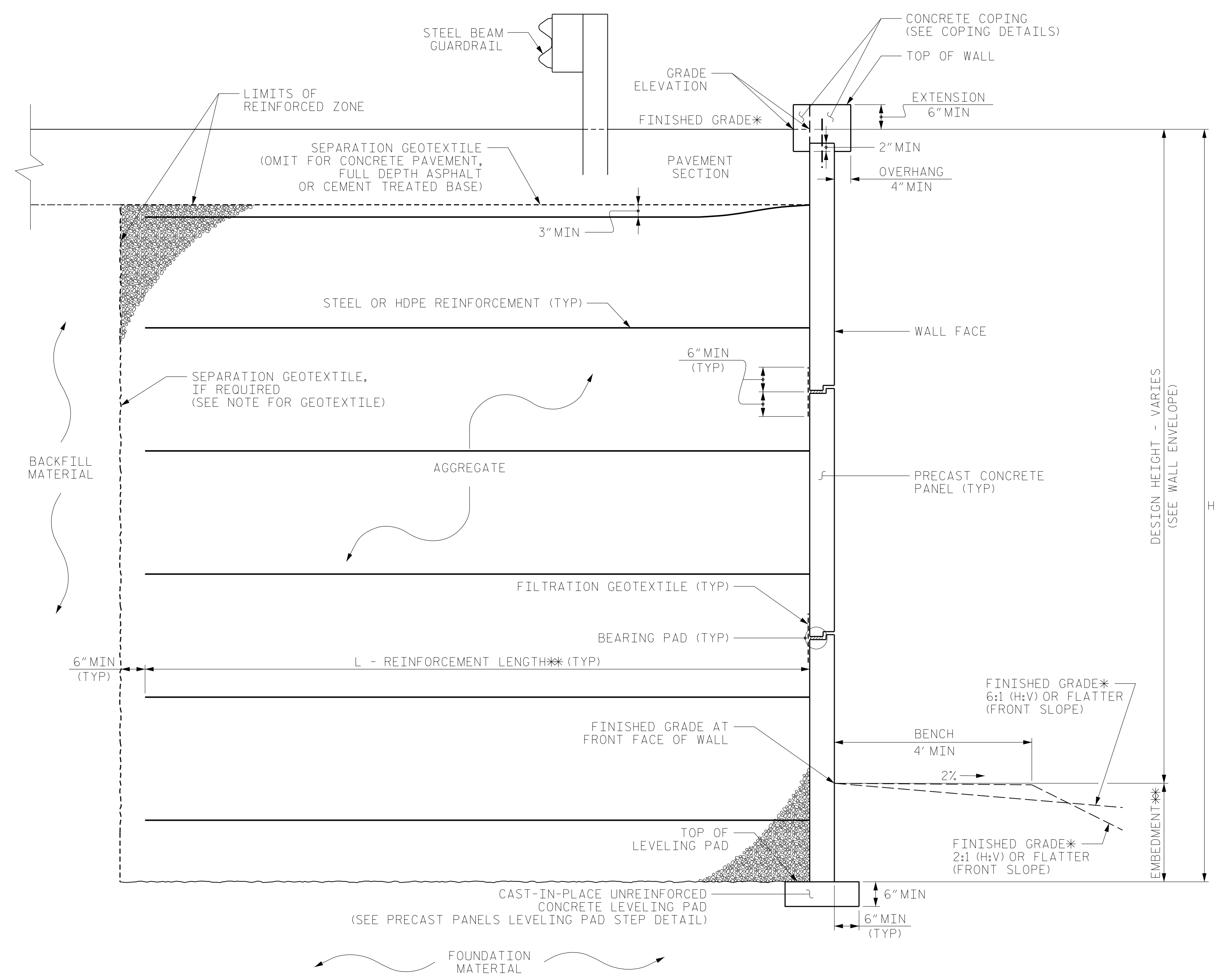
**NORTH CAROLINA  
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 DIVISION OF HIGHWAYS**

**GEOTECHNICAL  
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REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-7
2			4			



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**COPING DETAILS**

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

**MSE WALL WITH PRECAST PANELS - TYPICAL SECTION**

\*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.  
 \*\*SEE MSE RETAINING WALLS PROVISION AND MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

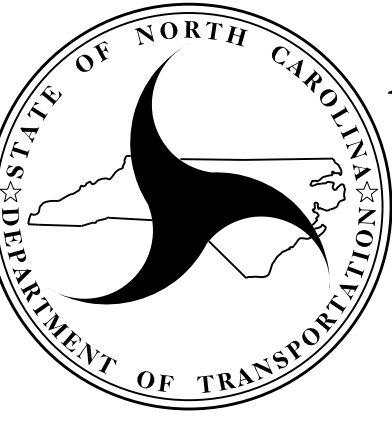
PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 14+10.22 -Y-

SHEET 4 OF 5

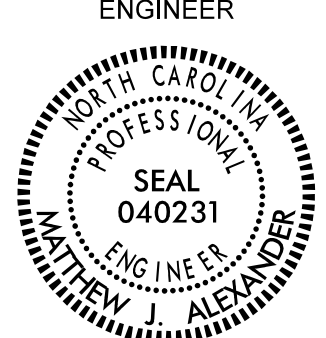

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

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 2401 BRENTWOOD ROAD, SUITE 107  
 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-9555  
 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367

  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
**GEOTECHNICAL  
 ENGINEERING UNIT**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-8
2			4			

GEOTECHNICAL ENGINEER  SEAL 040231 ENGINEER MATTHEW J. ALEXANDER	ENGINEER
DocuSigned by:  DATE: 11/8/2017	SIGNATURE: _____ DATE: _____
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

**NOTES:**

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS SPECIAL PROVISION.  
 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.  
 AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALLS NO. 3 AND NO. 4.  
 A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS NO. 3 AND NO. 4.  
 A DRAIN IS NOT REQUIRED FOR RETAINING WALLS NO. 3 AND NO. 4.  
 PILE SLEEVES ARE REQUIRED AROUND PILES FOR END BENTS NO. 1 LOCATED AT STATION 106+18.10 -L1- AND NO. 2 LOCATED AT STATION 107+17.10 -L1-.  
 PILE SLEEVES ARE REQUIRED AROUND PILES FOR END BENTS NO. 1 LOCATED AT STATION 106+76.15 -L2- AND NO. 2 LOCATED AT STATION 107+75.15 -L2-.  
 BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS NO. 3 AND 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 + EMBEDMENT  
 2) DESIGN LIFE = 100 YEARS  
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 6,010 LB/SF  
 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H OR 17.5 FT, WHICHEVER IS LONGER  
 5) MINIMUM EMBEDMENT DEPTH = 2 FT BELOW FINISHED GRADE  
 6) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
COARSE	110	38	0
FINE	115	34	0

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

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	32	0
FOUNDATION	110	28	0

DESIGN RETAINING WALLS NO. 3 AND NO. 4 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

DESIGN REINFORCEMENT CONNECTED TO END BENT CAPS FOR FACTORED LOAD AND LENGTH OF REINFORCEMENT IN ACTIVE ZONE (L) SHOWN IN THE STRUCTURE PLANS. CAST REINFORCEMENT OR CONNECTORS INTO CAP BACKWALL FOR END BENT NO. 1 LOCATED AT 106+18.10 -L1- AND END BENT NO. 2 LOCATED AT STATION 22+06.12 -L-. MAINTAIN A CLEARANCE OF AT LEAST 3" BETWEEN REINFORCEMENT OR CONNECTORS AND REINFORCING STEEL IN CAP.

DESIGN REINFORCEMENT CONNECTED TO END BENT CAPS FOR FACTORED LOAD AND LENGTH OF REINFORCEMENT IN ACTIVE ZONE (L) SHOWN IN THE STRUCTURE PLANS. CAST REINFORCEMENT OR CONNECTORS INTO CAP BACKWALL FOR END BENT NO. 1 LOCATED AT 106+76.15 -L2- AND END BENT NO. 2 LOCATED AT STATION 107+75.15 -L2-. MAINTAIN A CLEARANCE OF AT LEAST 3" BETWEEN REINFORCEMENT OR CONNECTORS AND REINFORCING STEEL IN CAP.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO. 1 AND NO. 2.

FOUNDATIONS FOR END BENTS NO. 1 LOCATED AT STATION 106+18.10 -L1- AND NO. 2 LOCATED AT 107+17.10 -L1- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO. 3 AND NO. 4. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

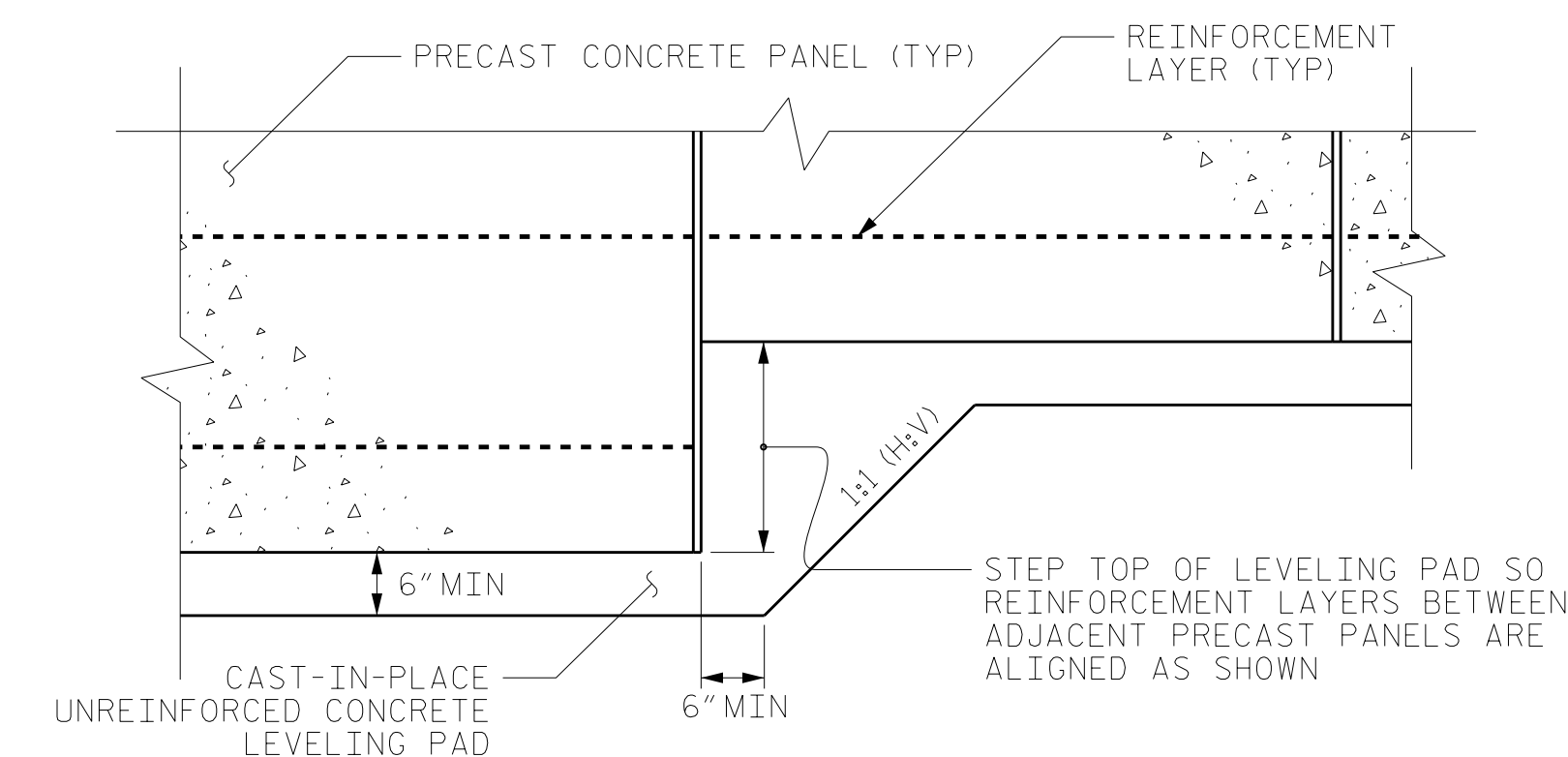
FOUNDATIONS FOR END BENTS NO. 1 LOCATED AT STATION 106+76.15 -L2- AND NO. 2 LOCATED AT 107+75.15 -L2- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO. 3 AND NO. 4. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

INSTALL PILE SLEEVES FOR END BENTS NO. 1 LOCATED AT STATION 106+18.10 -L1- AND NO. 2 LOCATED AT STATION 107+17.10 -L1- WHILE CONSTRUCTING RETAINING WALLS NO. 3 AND NO. 4. AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.

INSTALL PILE SLEEVES FOR END BENTS NO. 1 LOCATED AT STATION 106+76.15 -L2- AND NO. 2 LOCATED AT STATION 107+75.15 -L2- WHILE CONSTRUCTING RETAINING WALLS NO. 3 AND NO. 4. AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS NO. 3 AND NO. 4 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALLS NO. 1 AND NO. 2. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.



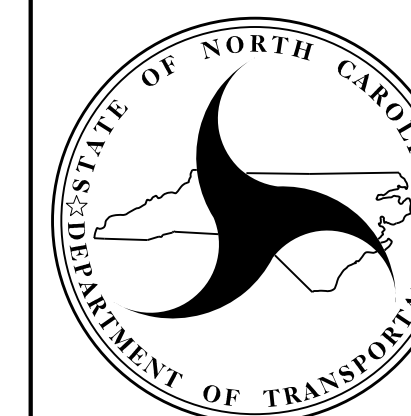
**PRECAST PANELS  
LEVELING PAD STEP DETAIL**

PROJECT NO.: 41665.7A  
 CUMBERLAND COUNTY  
 STATION: 14+10.22 -Y-

SHEET 5 OF 5

PREPARED BY: M. J. ALEXANDER	DATE: 10/31/17
REVIEWED BY: A. F. RIGGS	DATE: 11/1/17

Prepared in the Office of:  
**Terracon**  
 Consulting Engineers & Scientists  
 2401 BRENTWOOD ROAD, SUITE 107  
 RALEIGH, NORTH CAROLINA 27604  
 PHONE: (919) 873-2211 FAX: (919) 873-9555  
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**MSE RETAINING WALLS  
NO. 3 AND NO. 4  
NOTES AND STEP DETAILS**

REVISIONS						SHEET NO. W-9
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			