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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

LIST OF ROADWAY  
STANDARDS

EFF. 01-16-2024  
REV.

2024 ROADWAY STANDARD DRAWINGS

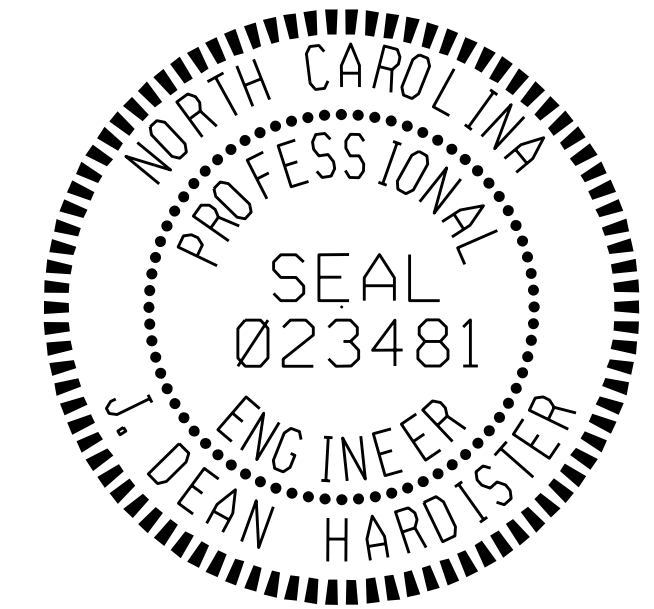
The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference here by are considered a part of these plans:

STD. NO.	TITLE
DIVISION 8 - INCIDENTALS	
862.01	Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 12, and 14 of 15)
862.02	Guardrail Installation (Use Details in Lieu of Standards for Sheets 5 of 9)
876.03	Drainage Ditches with Class 'A' Rip Rap
876.04	Drainage Ditches with Class 'B' Rip Rap

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

**HELENE  
 EMERGENCY REPAIRS**

COUNTY TRANSYLVANIA  
 PROJECT DESCRIPTION SITES ON FISH HATCHERY RD,  
 US 276 SOUTH AND BARCLAY RD



DocuSigned by:  
*J. Dean Hardister* 11/26/2024  
 6E970DAF0D0D403...

SIGNATURE DATE

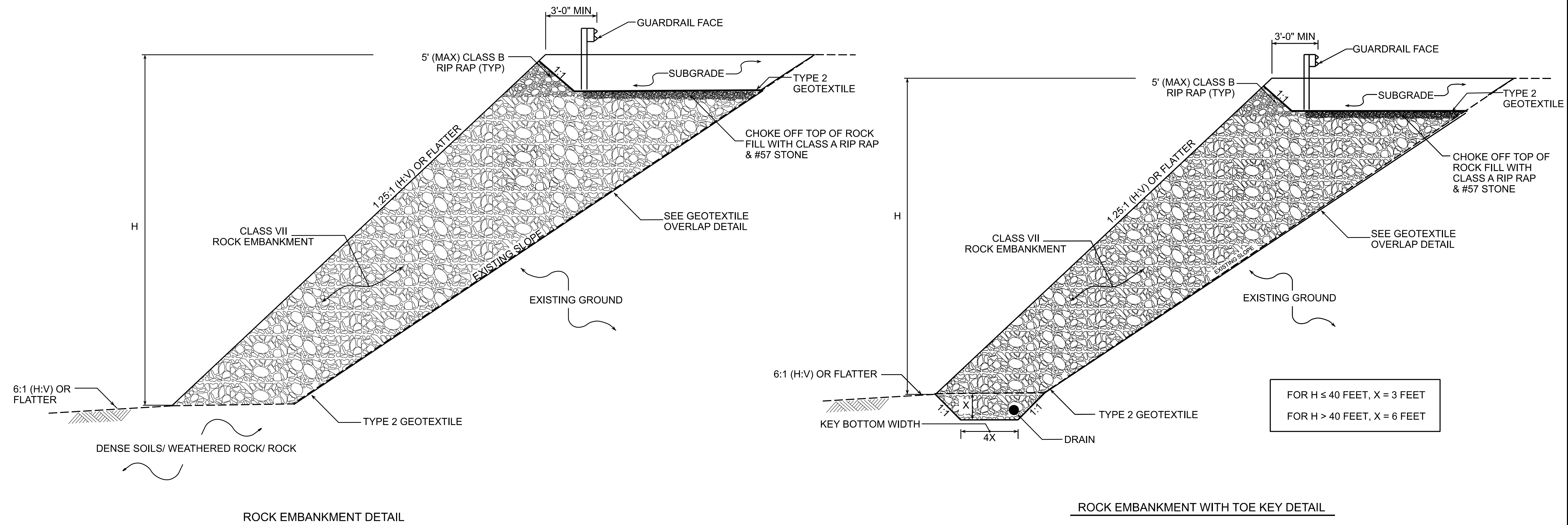
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 UNLESS ALL SIGNATURES COMPLETED

ROUTE	SITE #	SITE LATITUDE	SITE LONGITUDE	REPAIR OPTION 1	REPAIR OPTION 2	REPAIR OPTION 3
SR-1408 Fish Hatchery Road	30	35.28998862	-82.77815151	1.25:1 Rock Embankment with Toe Key		
US 276 South	702	35.18018258	-82.73290864	Seal Cracks in Asphalt & Regrade Slope + Wire Mesh Slope Stabilization		
SR-1207 Barclay Road	803	35.20066556	-82.739248	Soil Nail Retaining Wall with Shotcrete Face + 2x3 Micropile Grade Beam		

CONTRACT: DN01092

WHEN MULTIPLE REPAIR OPTIONS ARE AVAILABLE AT A SITE LOCATION,  
 THE CONTRACTOR SHALL PROCEED IN SEQUENTIAL ORDER AND  
 CHOOSE THE FIRST OPTION THAT FITS WITHIN SITE CONSTRAINTS

PRIOR TO CONSTRUCTING THE GEOTECHNICAL REPAIRS, AN ON-SITE MEETING  
 WITH THE PRIME CONTRACTOR, THE GEOTECHNICAL SPECIALTY SUBCONTRACTOR  
 (IF APPLICABLE), THE DIVISION CONSTRUCTION REPRESENTATIVE AND THE  
 GEOTECHNICAL OPERATIONS GROUP REPRESENTATIVE SHALL BE CONDUCTED

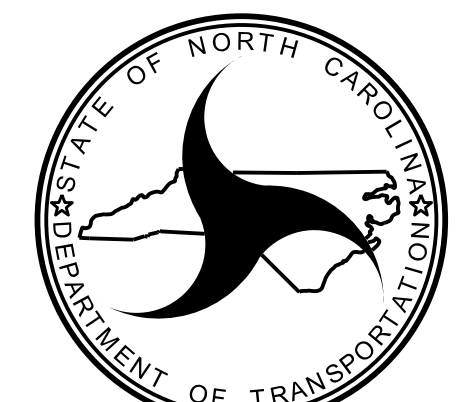


- NOTES:**
1. THE MAXIMUM ALLOWABLE HEIGHT FOR THE ROCK EMBANKMENT DETAIL IS 80'.
  2. FOR ROCK EMBANKMENT, BENCH EXISTING SLOPE IN ACCORDANCE WITH SECTION 235 OF THE STANDARD SPECIFICATIONS, WHERE POSSIBLE.

CONTRACT NO.: DN01092

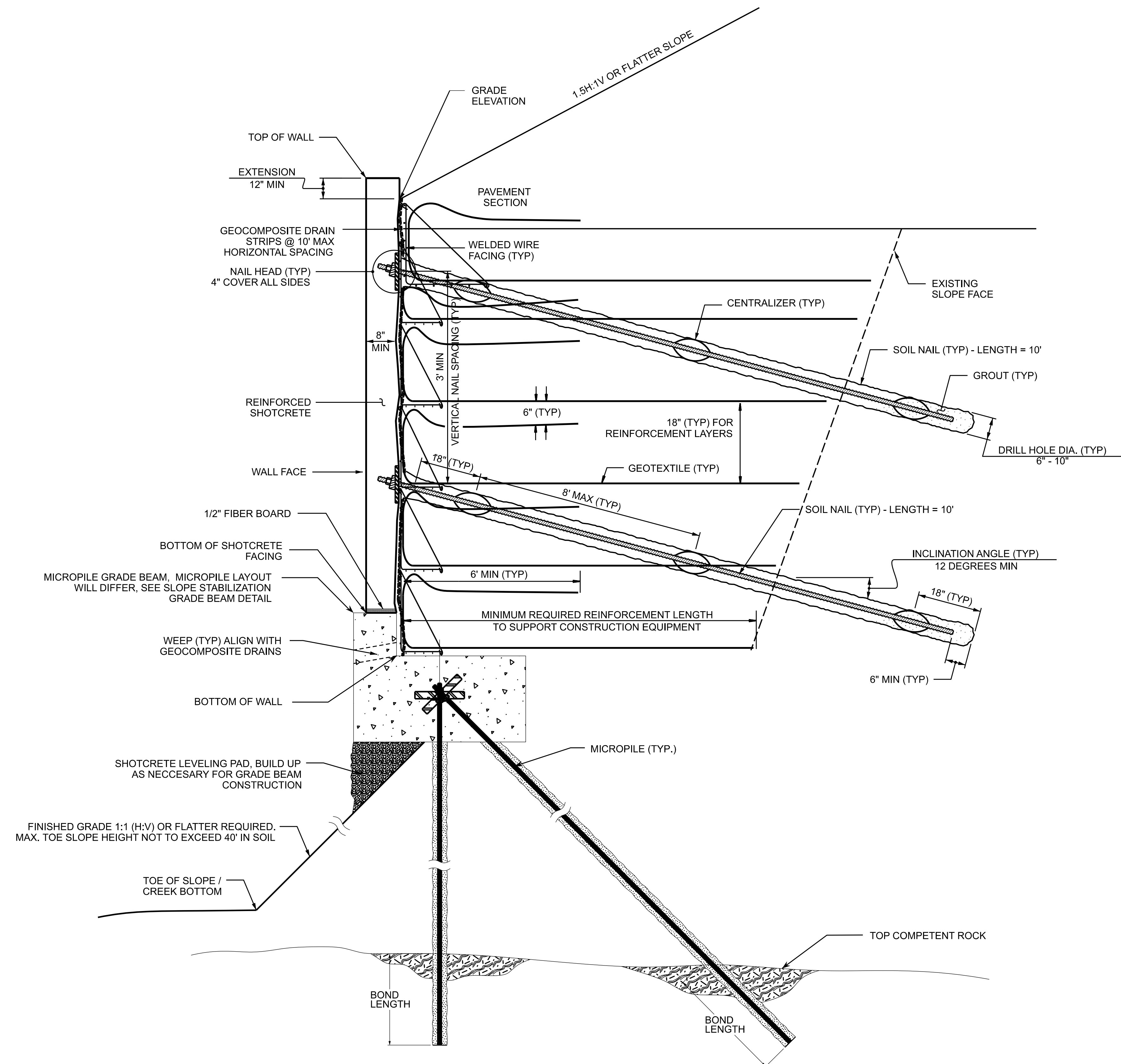
PREPARED BY: DP	DATE: 10/24
REVIEWED BY:	DATE:

**DO NOT USE THESE DETAILS UNLESS DIRECTED BY THE ENGINEER**


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

HURRICANE HELENE EMERGENCY REPAIRS					
ROCK EMBANKMENT					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. 1 OF 1



**NOTES:**

FOR SOIL NAIL WALL, SEE SOIL NAIL WALL PROVISION.

FOR MICROPILE GRADE BEAM, SEE SLOPE STABILIZATION GRADE BEAM PLANS AND MICROPILE PROVISION.

FOR MICROPILES, SEE MICROPILE PROVISION.

ESTIMATED SOIL NAIL AVERAGE LENGTH = 20'

ESTIMATED MICROPILE AVERAGE LENGTH = 15'

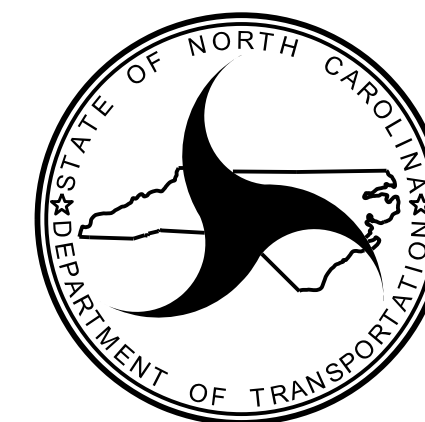
MINIMUM MICROPILE ROCK BOND LENGTH = 5'

MINIMUM SOIL NAIL ROCK BOND LENGTH = 5'

MINIMUM OVERALL SOIL NAIL AND MICROPILE LENGTH = 10'

CONTRACT NO.: DN01092

**DO NOT USE THESE DETAILS UNLESS DIRECTED BY THE ENGINEER**

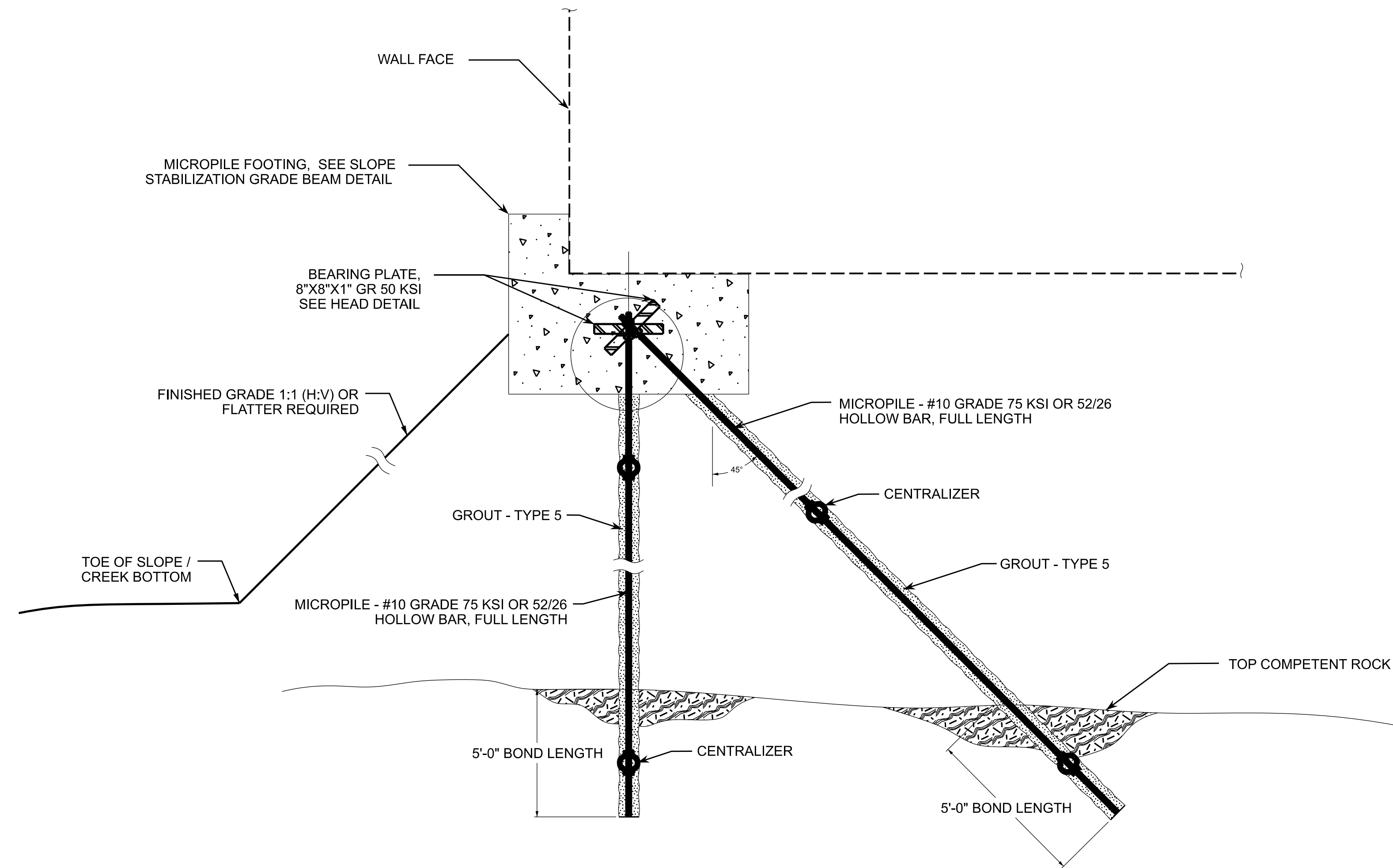


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

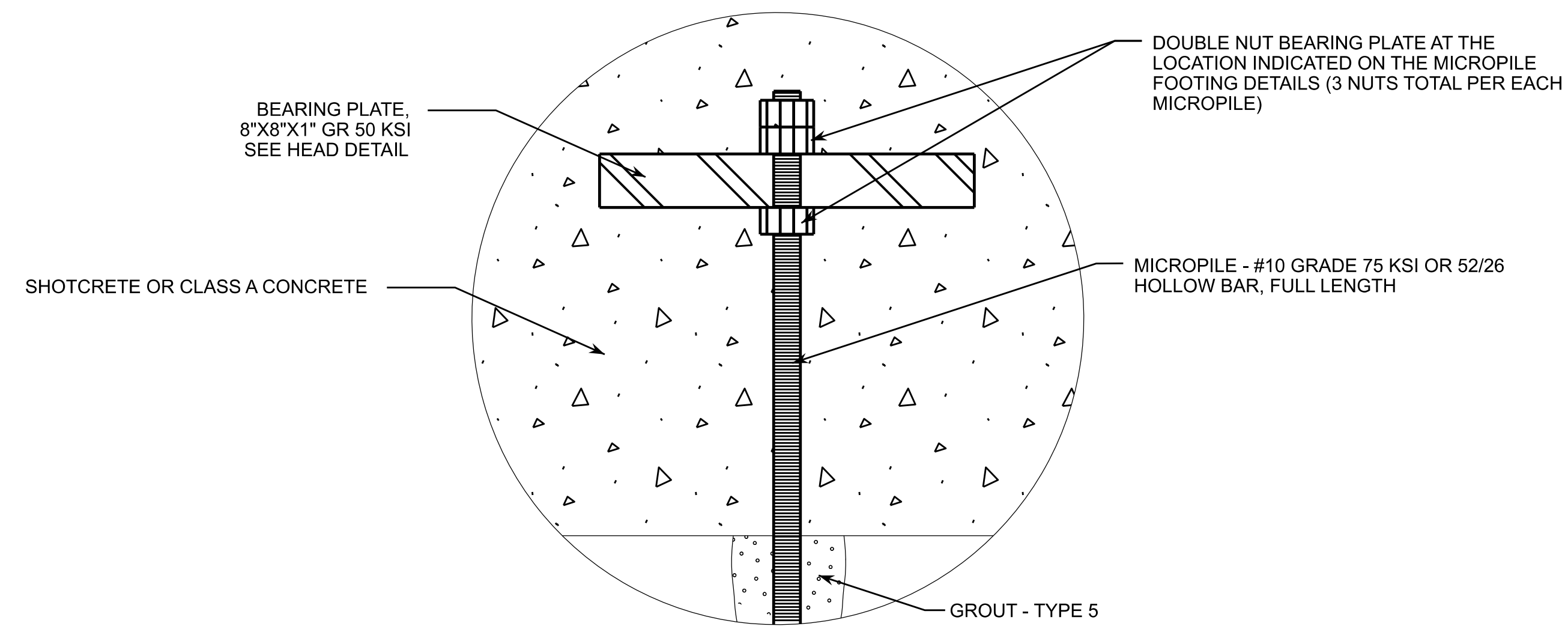
**GEOTECHNICAL ENGINEERING UNIT**

**HURRICANE HELENE EMERGENCY REPAIRS  
SOIL NAIL RETAINING WALL  
WITH SHOTCRETE FACING**

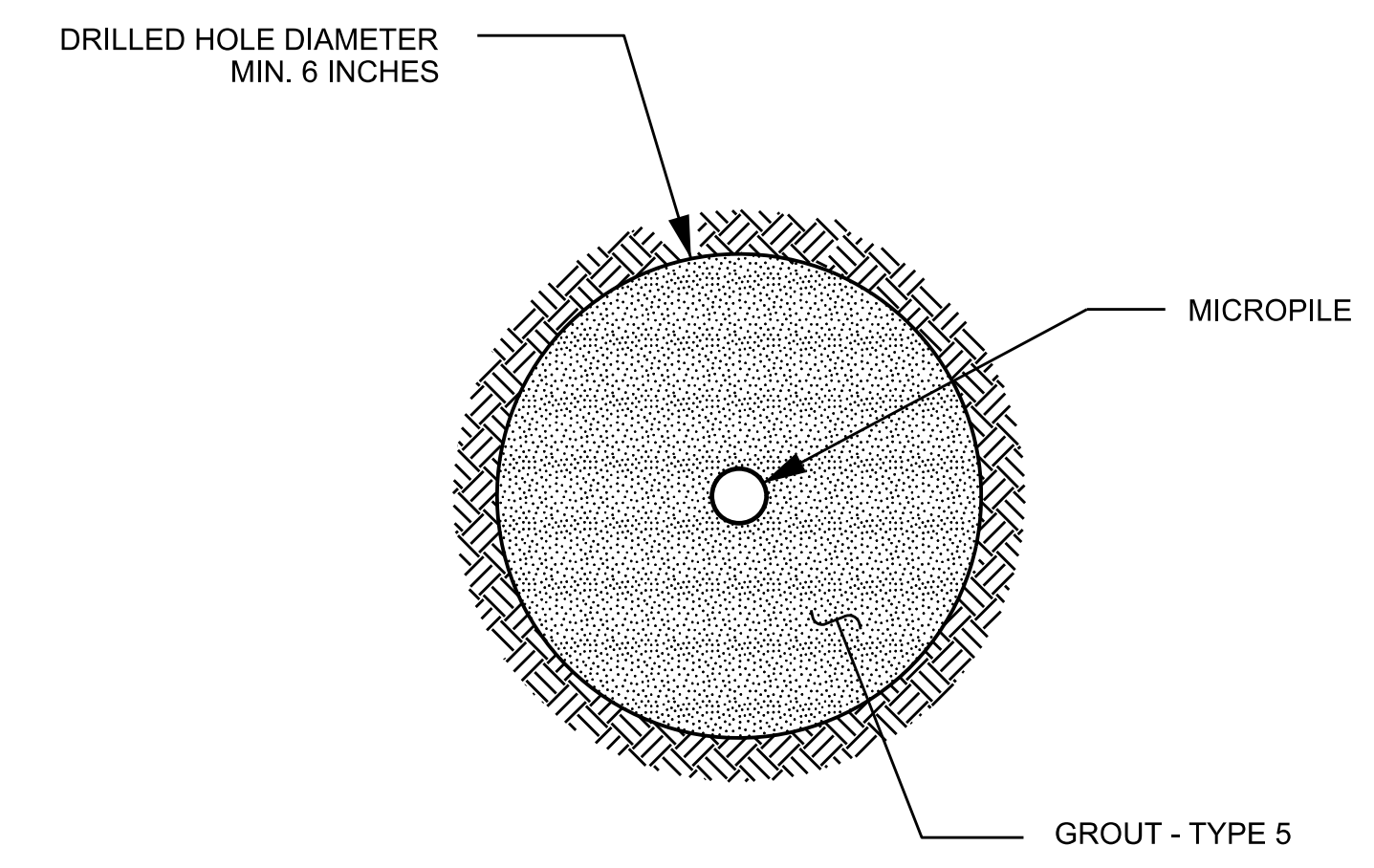
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		



**MICROPILE DETAIL**



**MICROPILE HEAD DETAIL**



**MICROPILE SECTION**

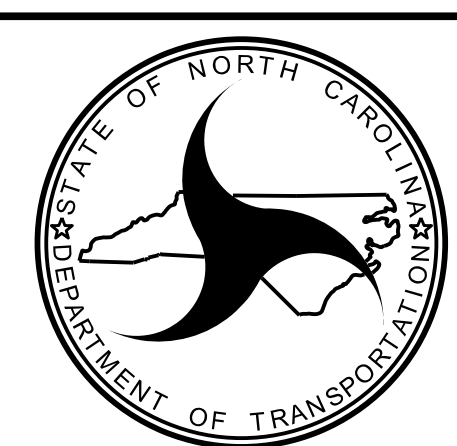
**NOTES:**

- GENERAL NOTES:**
- THE MICROPILES HAVE BEEN DESIGNED IN GENERAL ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE MICROPILE FOUNDATIONS HAVE BEEN DESIGNED TO SUPPORT A LOAD OF 60 KIPS IN COMPRESSION AND TENSION.
- LAYOUT OF THE PILES SHALL BE BY THE GENERAL CONTRACTOR. MICROPILE LAYOUT IS BASED ON PILE LOCATION AT THE BOTTOM OF THE MICROPILE CAP. GENERAL CONTRACTOR SHALL LAY OUT PILES BASED ON DRILLING ELEVATION SUCH THAT THE MICROPILE LOCATION WILL BE AT THE PLANNED LOCATION AT THE BOTTOM OF THE PILE CAP.
- MATERIAL SPECIFICATIONS:**
- FOR MICROPILE USE TYPE 5 GROUT, SEE SECTION 1003 OF THE STANDARD SPECIFICATIONS.
- PROVIDE STEEL PLATES THAT MEET ASTM A572 GRADE 50 KSI.
- ALL THREAD MICROPILE REINFORCEMENT SHALL BE MINIMUM GRADE 75 KSI.
- MICROPILE NUTS WILL BE MANUFACTURED BY THE BAR MANUFACTURER AND COMPATIBLE WITH THE BAR TYPE SPECIFIED.
- CENTRALIZERS- PLASTIC, STAINLESS STEEL, OR OTHER NON-DELETERIOUS MATERIAL WHICH WILL MAINTAIN SHAPE AND LOCATION TO KEEP REINFORCEMENT BAR IN CENTRAL PORTION OF THE DRILL HOLE.
- TYPICAL MICROPILE CONSTRUCTION SEQUENCE:**
- WHERE POSSIBLE LEVEL AREA OF MICROPILE FOOTING PRIOR TO DRILLING.
- IF REQUIRED, INSTALL AND TEST PILES IN ACCORDANCE AASHTO GUIDELINES AS DIRECTED BY THE ENGINEER.
- ROTARY FLUSH TEMPORARY CASING TO TOP OF ROCK USING AIR OR WATER AS FLUSHING MEDIUM. CARE SHALL BE TAKEN SO MINIMAL LOSS OF MATERIALS OUTSIDE THE THE TEMPORARY CASING OCCURS.
- USE ROTARY PERCUSSIVE DRILLING TO DRILL ROCK SOCKET TO REQUIRED DEPTH. MINIMUM BOND LENGTH IS 5 FEET INTO COMPETENT ROCK, WITH A MINIMUM OVERALL LENGTH OF AT LEAST 10 FT.
- PLACE GROUT FOR MICROPILES BY TREMIE METHOD FROM BOTTOM OF THE HOLE.
- FOR SOLID BAR MICROPILES, INSTALL CENTER CORE REINFORCEMENT STEEL (STEEL MAY BE PLACED PRIOR TO OR IMMEDIATELY AFTER GROUTING).
- CUT TOPS OF PILES TO FINAL ELEVATION AND INSTALL PLATES. FOR MICROPILES AND MICROPILE FOOTING, SEE MICROPILE SLOPE STABILIZATION PROVISION.

CONTRACT NO.: DN01092

PREPARED BY: MS	DATE: 10/24
REVIEWED BY:	DATE:

**DO NOT USE THESE DETAILS UNLESS DIRECTED BY THE ENGINEER**

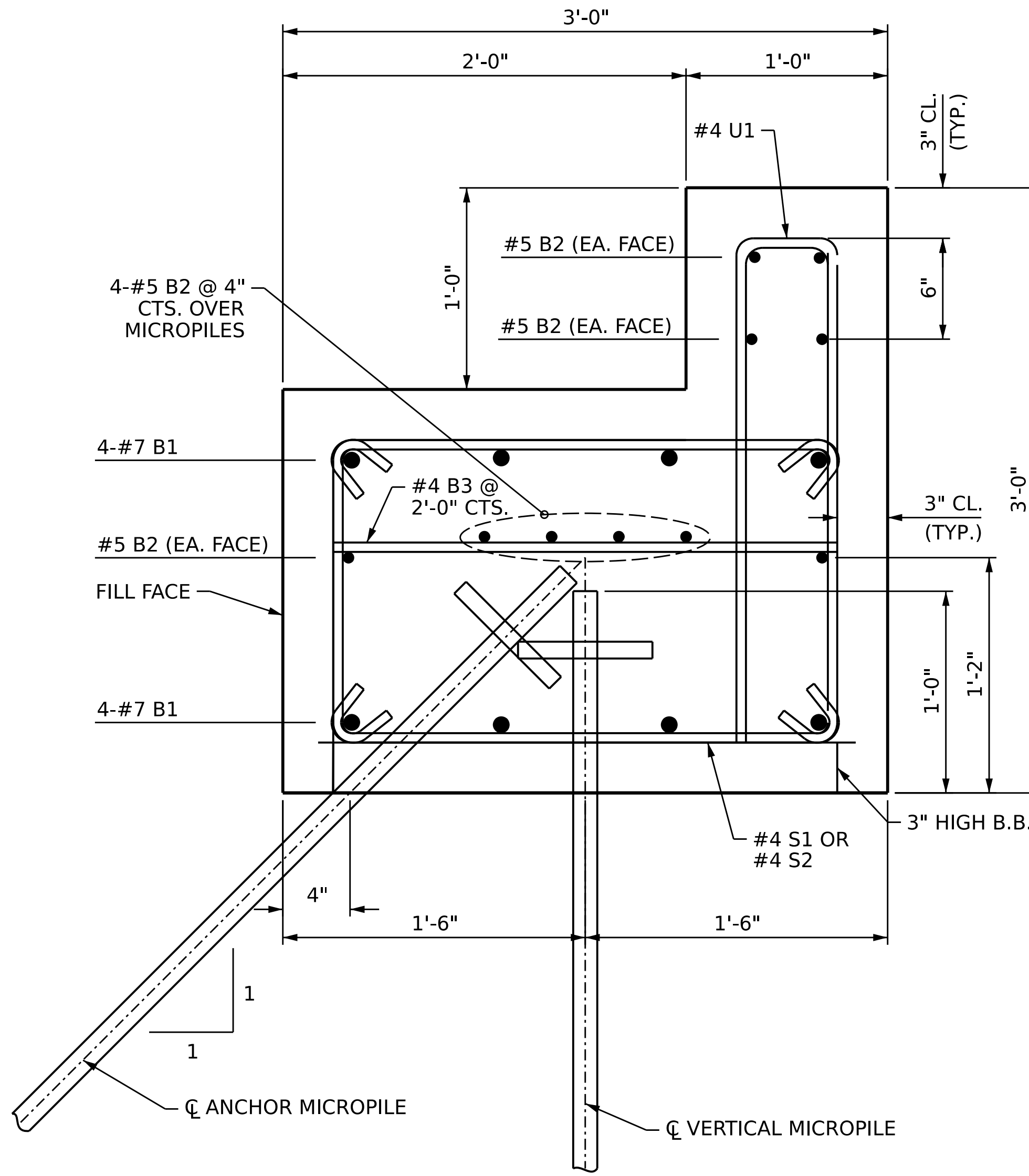


NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

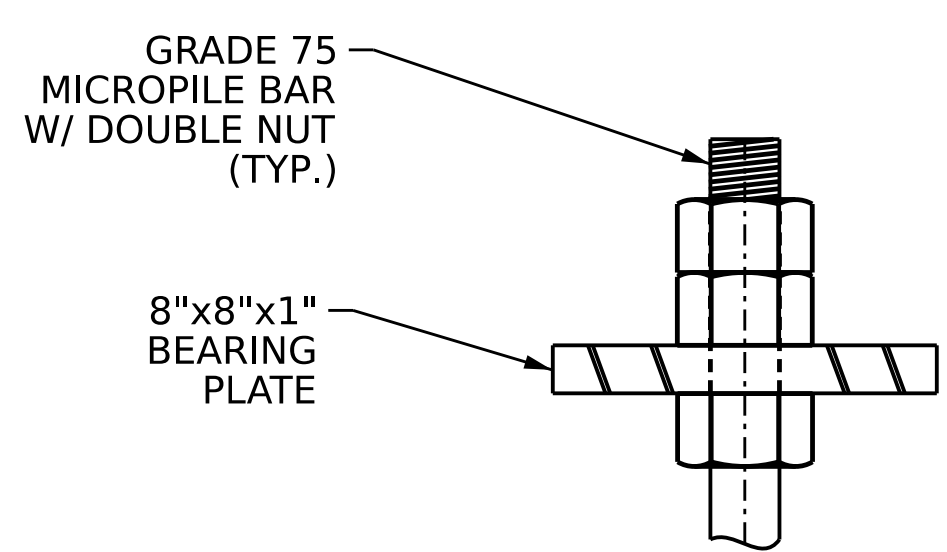
**GEOTECHNICAL  
ENGINEERING UNIT**

HURRICANE HELENE EMERGENCY REPAIRS					
MICROPILES					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

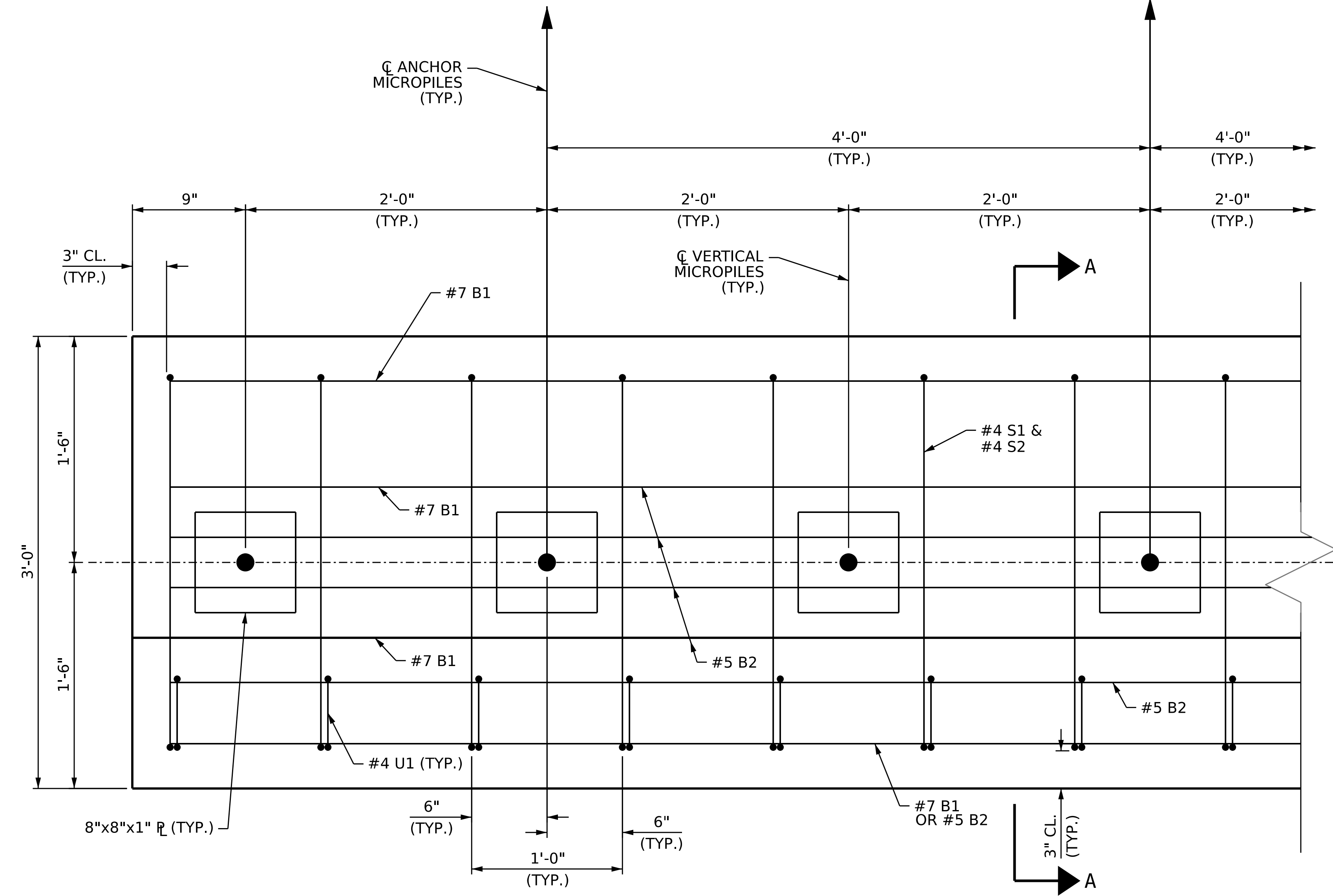
SHEET NO. 2 OF 2



**SECTION A-A**



**MICROPILE DETAIL**



**PLAN**

BAR TYPES			
	1	HK.	5 1/2"
	2	HK.	5 1/2"
	3		

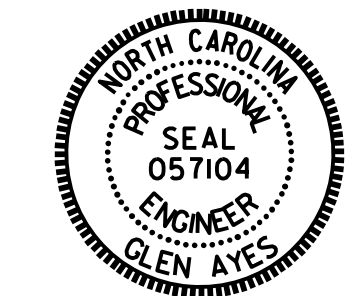
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL			
BAR	SIZE	TYPE	LENGTH
B1	#7	STR.	-
B2	#5	STR.	-
B3	#4	STR.	2'-6"
-	-	-	-
S1	#4	1	6'-5"
S2	#4	2	3'-5"
-	-	-	-
U1	#4	3	5'-6"
REINFORCING STEEL =			45 LBS./LIN.FT.
CLASS A CONCRETE =			0.3 CU.YD./LIN.FT.

**NOTES**

- DESIGN ASSUMPTIONS:
- ANCHOR/VERTICAL MICROPILE LOAD OF 55 KIPS.
  - VERTICAL LOAD OF 4.6 KIPS/SQFT.
  - LATERAL LOAD OF 4.9 KIPS/SQFT.
- INVERT ALTERNATE STIRRUPS AS SHOWN.
- STIRRUPS MAY BE SHIFTED SLIGHTLY AS NECESSARY TO CLEAR MICROPILES.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE MCP DETAILS.
- BEARING PLATES SHALL BE GRADE 50 STEEL.

CONTRACT NO.: DN01092



Designed by: *Glen Ayes*  
 11/25/2024  
 443432308448

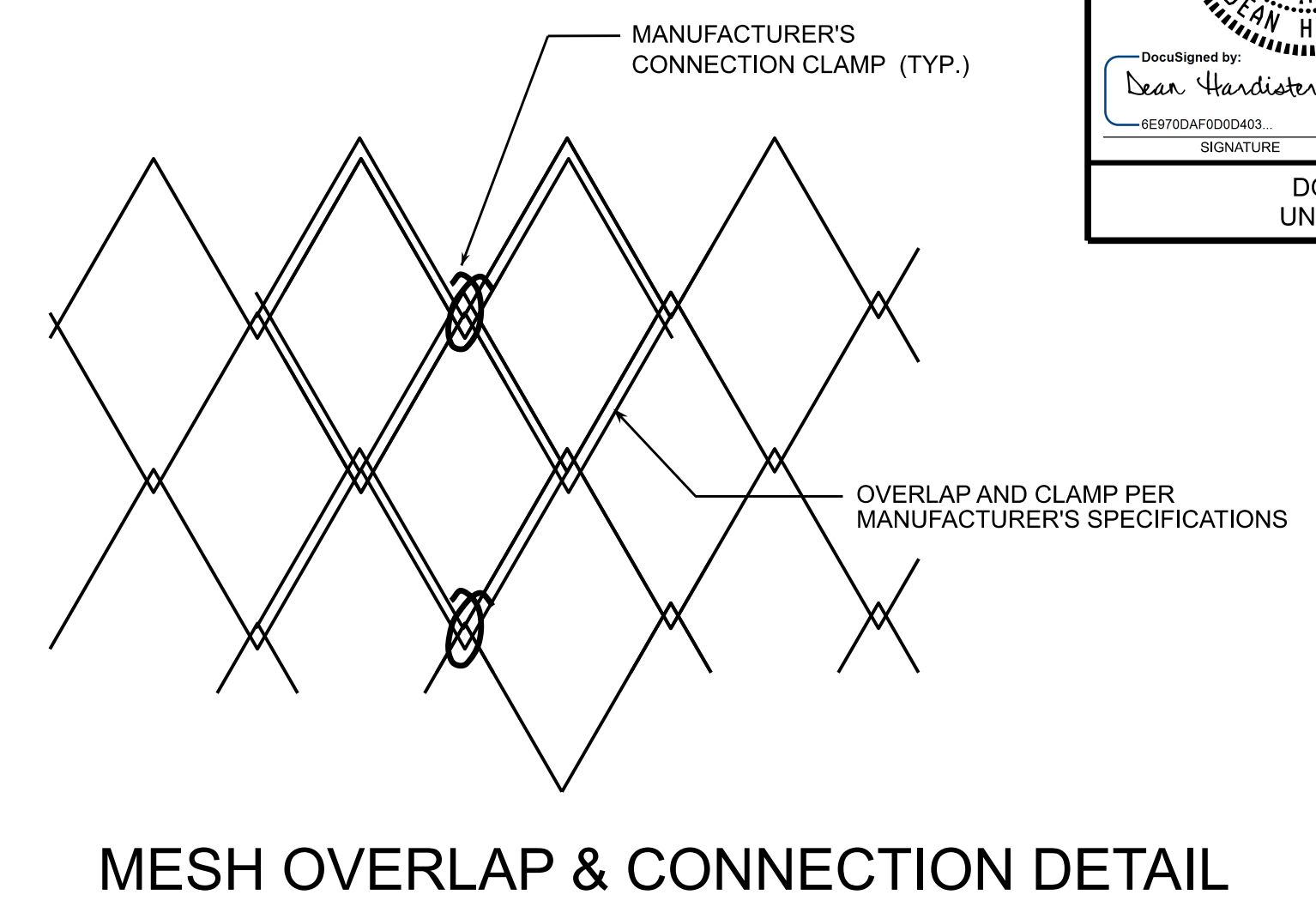
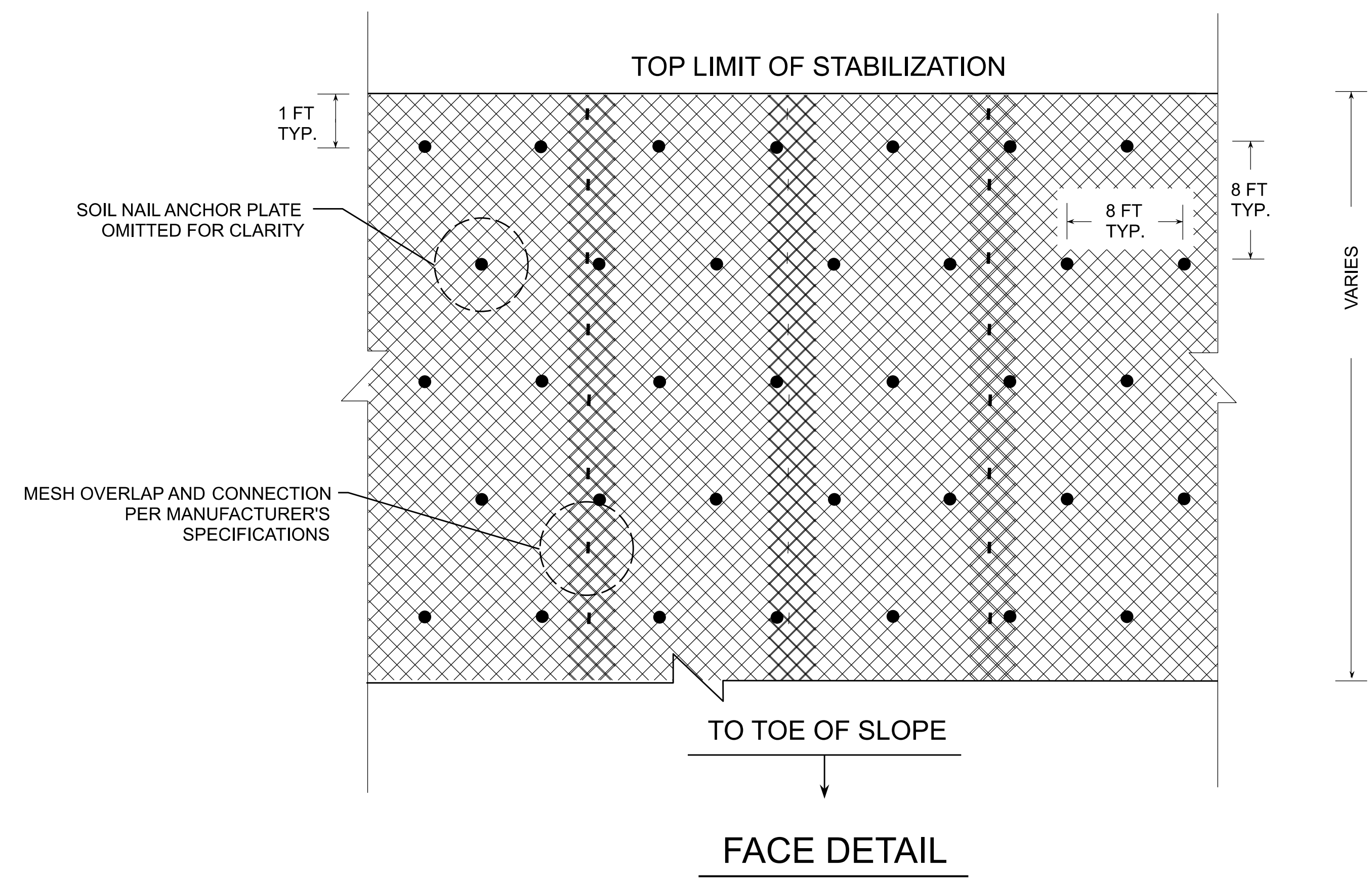
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**SLOPE STABILIZATION**  
**2'-0" X 3'-0"**  
**GRADE BEAM**

DRAWN BY : NAP DATE : 11/24  
 CHECKED BY : G. AYES DATE : 11/24  
 DESIGN ENGINEER OF RECORD : G. AYES DATE : 11/24

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MESH OVERLAP & CONNECTION DETAIL

NOTES:

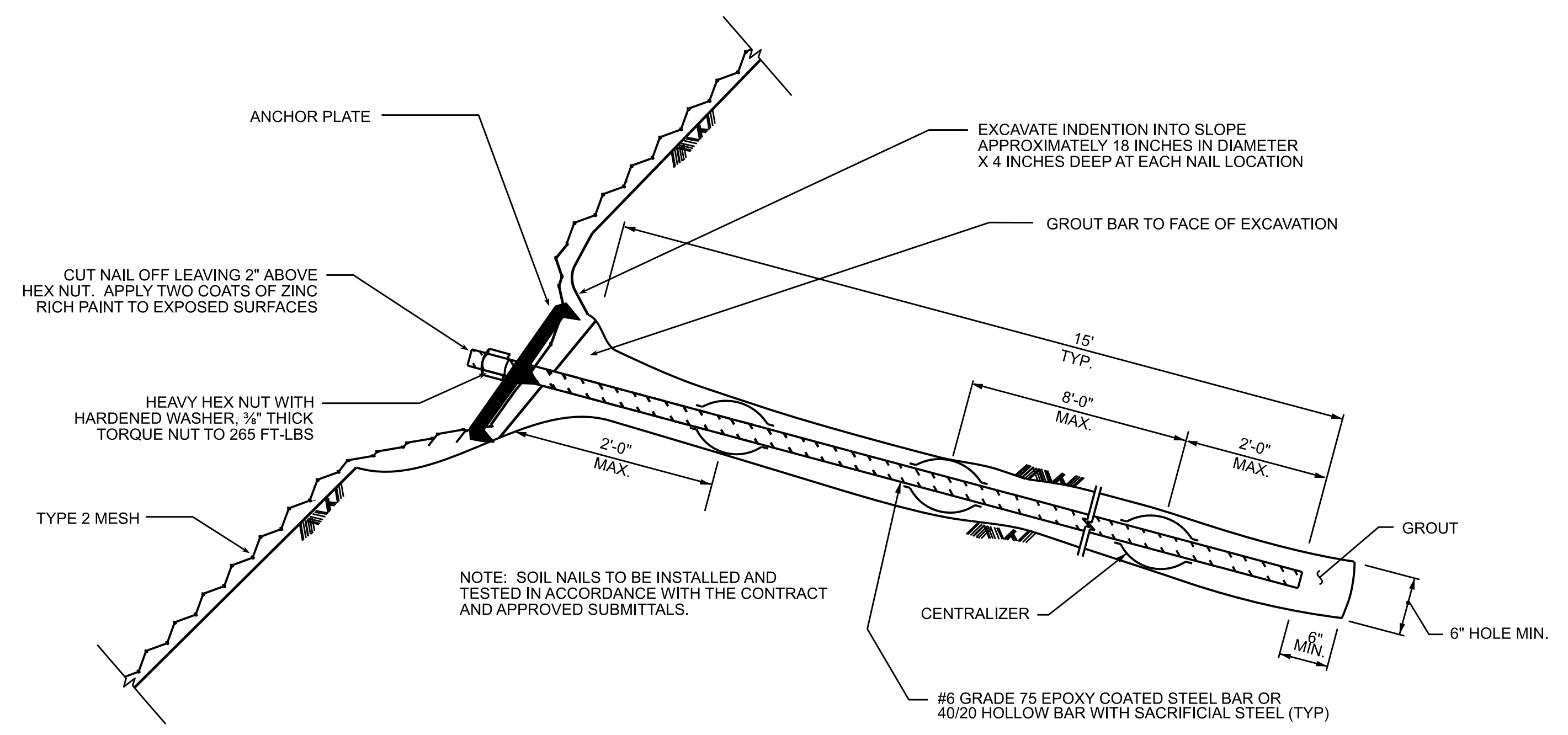
WIRE MESH SHALL BE INSTALLED ON SLOPES AS DIRECTED BY THE ENGINEER. AREAS TO BE ANCHORED MUST BE APPROVED BY THE ENGINEER PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION.

SOIL NAIL LENGTH = 15 FT (TYP)

DESIGN TEST LOAD (DTL) = 15 KIPS (1 k/ft)

INSTALL NAILS INTO SLOPE WITH AN INCLINATION OF 75 TO 90 DEGREES TO THE SLOPE.

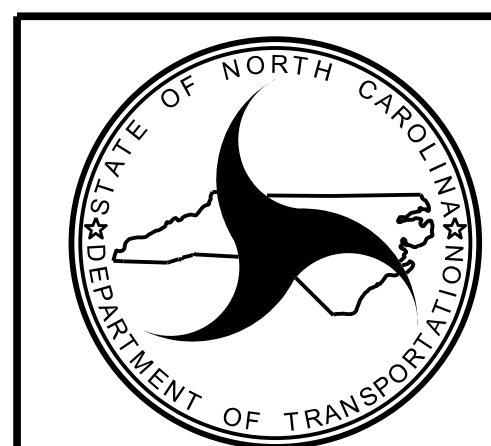
VERIFICATION TESTS ARE NOT REQUIRED.



TYPICAL SECTION

CONTRACT NO.: DN01092

PREPARED BY: DP	DATE: 10/24
REVIEWED BY:	DATE:



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
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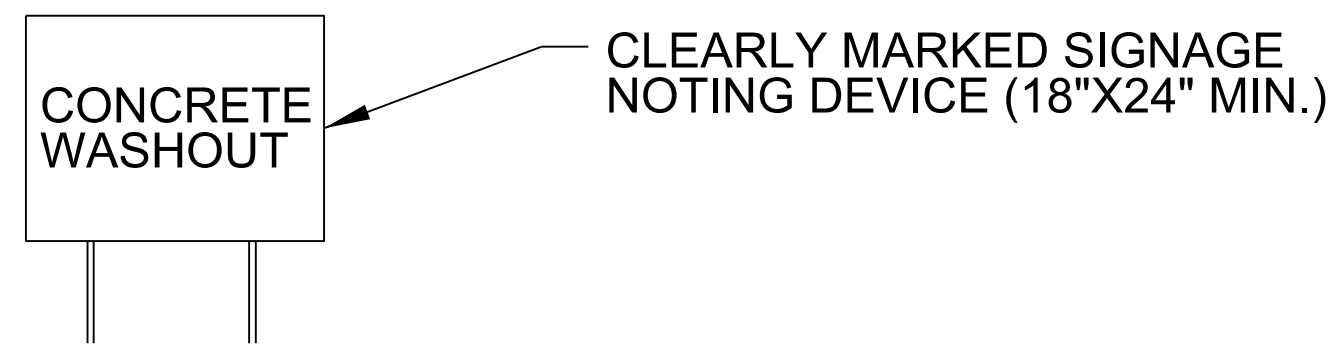
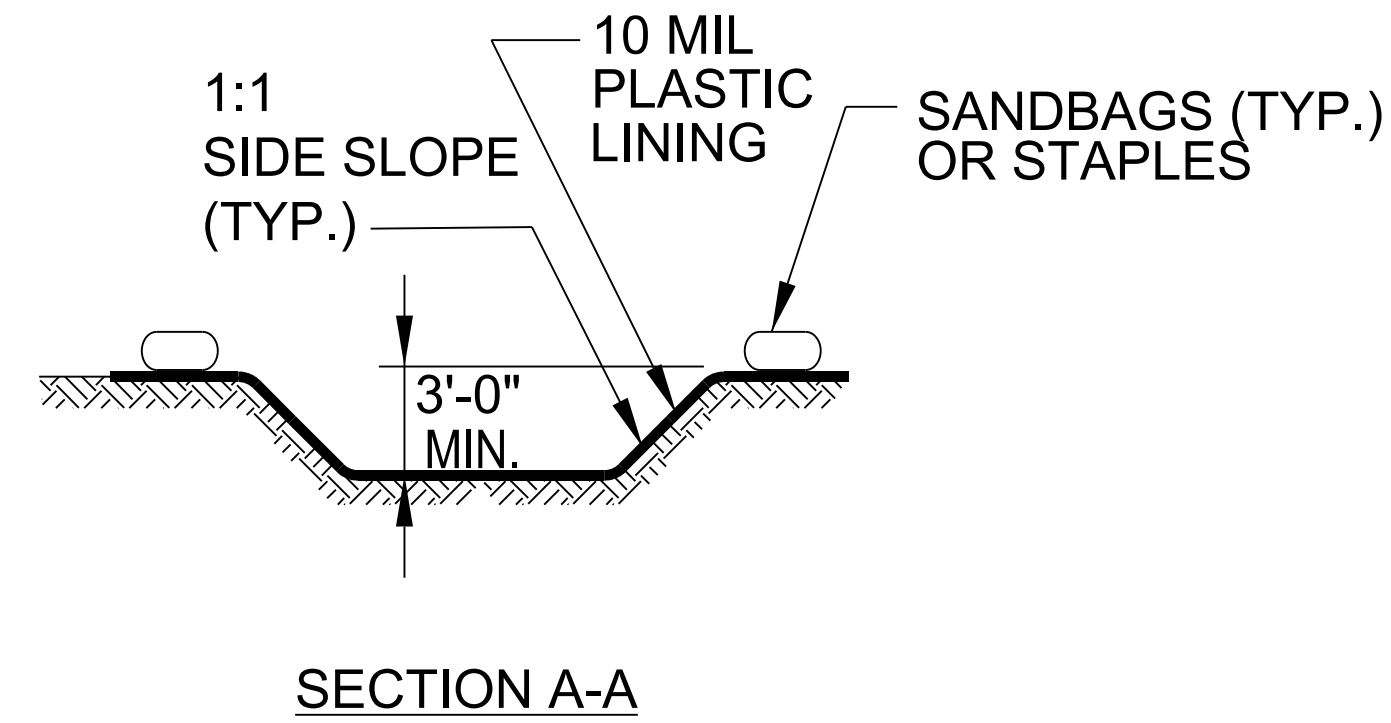
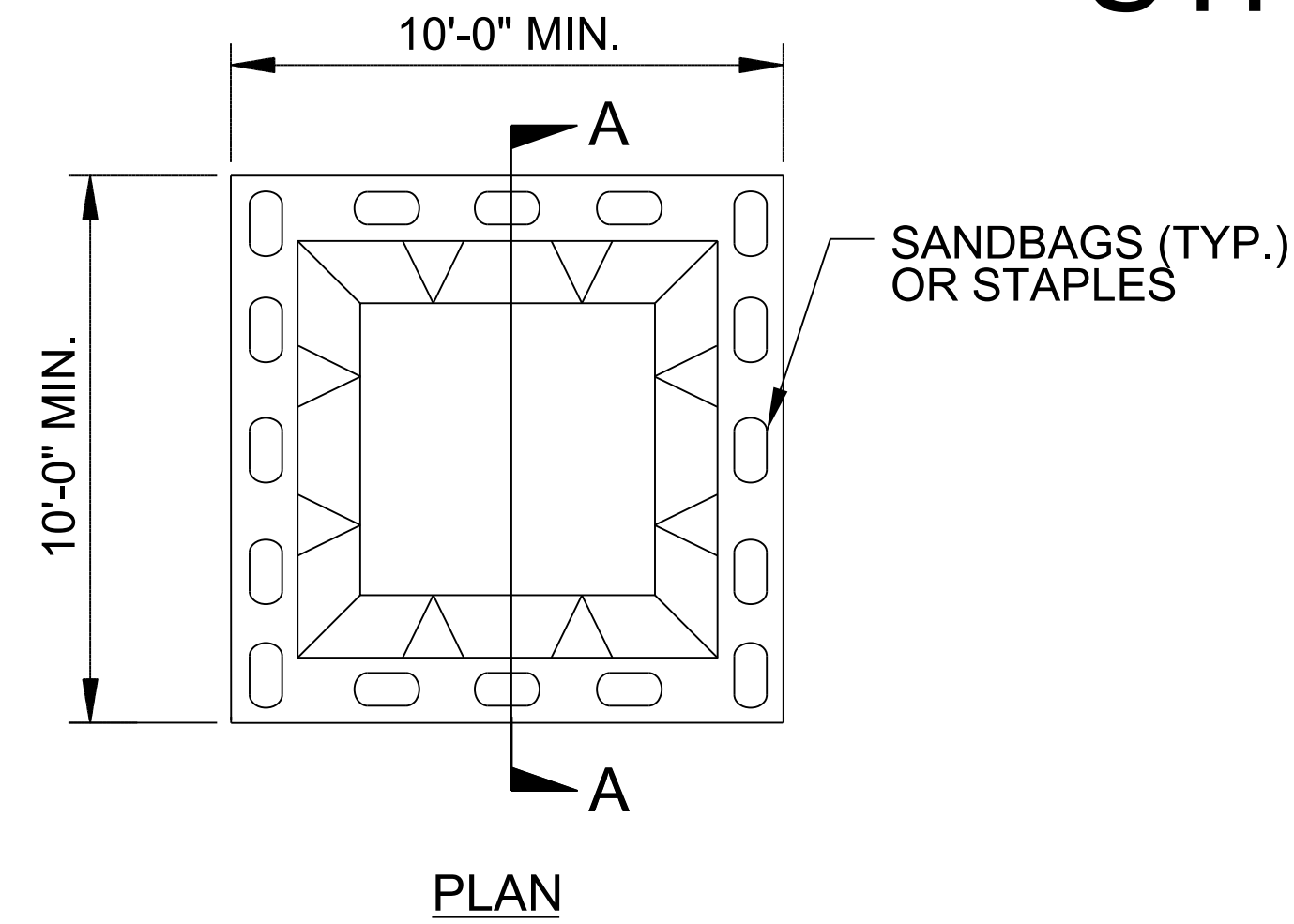
HURRICANE HELENE EMERGENCY REPAIRS

WIRE MESH SLOPE STABILIZATION

SHEET NO. 1 of 1

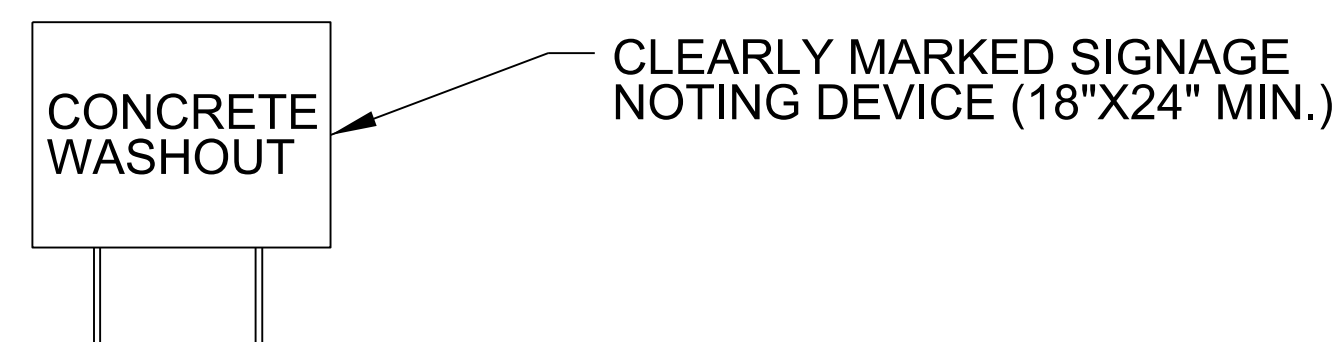
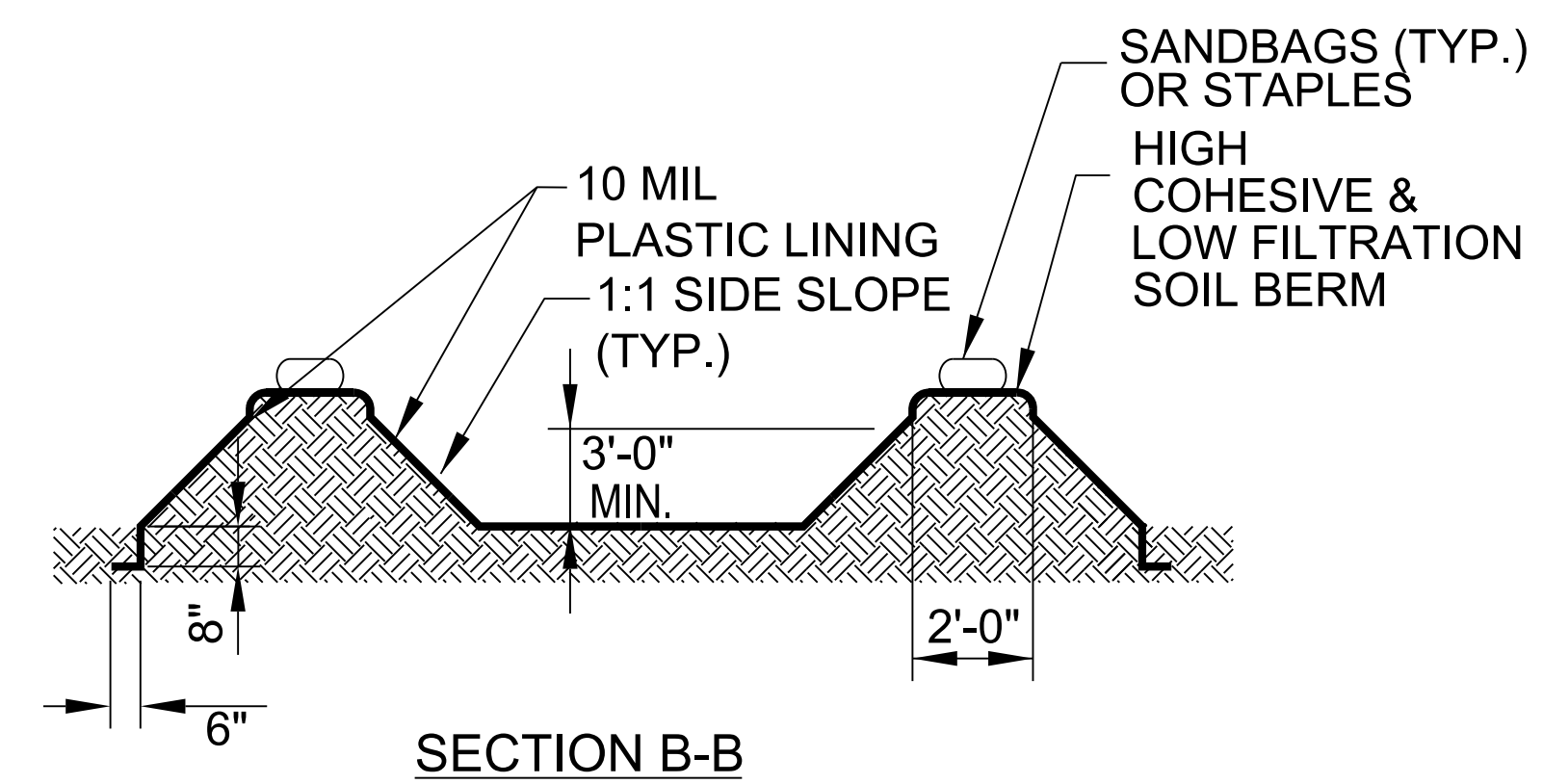
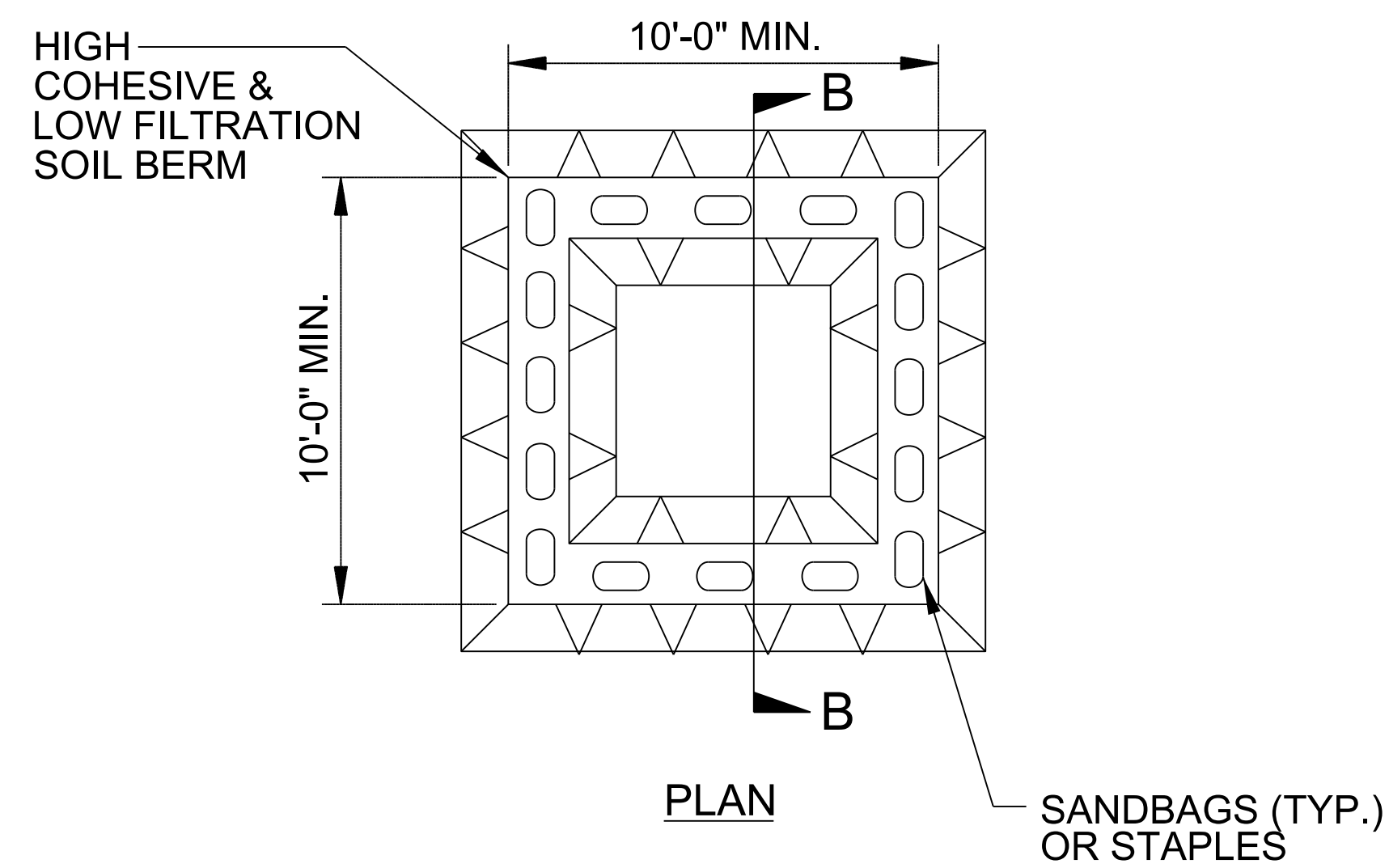
PROJECT REFERENCE NO. X-XXXX	SHEET NO. EC-XX
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



**BELOW GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



**ABOVE GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1523000000-E	1575000000-E	1704000000-E	1881000000-E	
											SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	8"x 6" ASPHALT CURB	
											TONS	TONS	TONS	LF	
18314.1088033	Transylvania	1	US-276	1	2	2WU	0.07	22	7.89	7.96	20	1		160	
<b>TOTAL FOR MAP NO. 1</b>							<b>0.07</b>				<b>20</b>	<b>1</b>		<b>160</b>	
<b>TOTAL FOR PROJ NO. 18314.1088033</b>							<b>0.07</b>					<b>20</b>	<b>1</b>		<b>160</b>
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	1	2	2WU	0.08	20	0.52	0.6			10		
<b>TOTAL FOR MAP NO. 2</b>							<b>0.08</b>							<b>10</b>	
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>							<b>0.08</b>							<b>10</b>	
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	1	2	2WU	0.07	18	1.47	1.54		1	15		
<b>TOTAL FOR MAP NO. 3</b>							<b>0.07</b>					<b>1</b>	<b>15</b>		
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>							<b>0.07</b>					<b>1</b>	<b>15</b>		
<b>GRAND TOTAL</b>							<b>0.22</b>					<b>20</b>	<b>2</b>	<b>25</b>	<b>160</b>

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	6000000000-E	6009000000-E	6012000000-E	6029000000-E	6036000000-E	6037000000-E	6042000000-E	6084000000-E	6117000000-N	6117500000-N
									TEMPORARY SILT FENCE	STONE FOR EROSION CONTROL, CLASS B	SEDIMENT CONTROL STONE	SAFETY FENCE	MATTING FOR EROSION CONTROL	COIR FIBER MAT	1/4" HARDWARE CLOTH	SEED & MULCHING	RESPONSE FOR EROSION CONTROL	CONCRETE WASHOUT STRUCTURE
					MI	FT			LF	TON	TON	LF	SY	SY	LF	AC	EA	EA
18314.1088033	Transylvania	1	US-276	2WU	0.07	22	7.89	7.96	300	20	20	100	100	70	20	0.20	1	1
<b>TOTAL FOR MAP NO. 1</b>					<b>0.07</b>				<b>300</b>	<b>20</b>	<b>20</b>	<b>100</b>	<b>100</b>	<b>70</b>	<b>20</b>	<b>0.20</b>	<b>1</b>	<b>1</b>
<b>TOTAL FOR PROJ NO. 18314.1088033</b>					<b>0.07</b>				<b>300</b>	<b>20</b>	<b>20</b>	<b>100</b>	<b>100</b>	<b>70</b>	<b>20</b>	<b>0.20</b>	<b>1</b>	<b>1</b>
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	2WU	0.08	20	0.52	0.6	300	20	20			70	20	0.10	1	
<b>TOTAL FOR MAP NO. 2</b>					<b>0.08</b>				<b>300</b>	<b>20</b>	<b>20</b>			<b>70</b>	<b>20</b>	<b>0.10</b>	<b>1</b>	
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>					<b>0.08</b>				<b>300</b>	<b>20</b>	<b>20</b>			<b>70</b>	<b>20</b>	<b>0.10</b>	<b>1</b>	
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	2WU	0.07	18	1.47	1.54	300	20	20	100	100	70	20	0.10	1	1
<b>TOTAL FOR MAP NO. 3</b>					<b>0.07</b>				<b>300</b>	<b>20</b>	<b>20</b>	<b>100</b>	<b>100</b>	<b>70</b>	<b>20</b>	<b>0.10</b>	<b>1</b>	<b>1</b>
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>					<b>0.07</b>				<b>300</b>	<b>20</b>	<b>20</b>	<b>100</b>	<b>100</b>	<b>70</b>	<b>20</b>	<b>0.10</b>	<b>1</b>	<b>1</b>
<b>GRAND TOTAL</b>					<b>0.22</b>				<b>900</b>	<b>60</b>	<b>60</b>	<b>200</b>	<b>200</b>	<b>210</b>	<b>60</b>	<b>0.40</b>	<b>3</b>	<b>2</b>

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	8252000000-E	8834000000-N						8839000000-E			8848000000-E		8853000000-E	8853000000-E	
									REINFORCING STEEL (RETAINING WALL)	SUPPLEMENTAL SOIL NAILS	SOIL NAIL, AVERAGE LENGTH	SOIL NAIL PROOF TESTS	MICROPILE, AVERAGE LENGTH	MICROPILE PROOF TESTS	WIRE BASKET FORMS	GEOCOMPOSITE DRAINS	SOIL NAIL, ADDITIONAL LENGTH OVER AVERAGE	MICROPILE, ADDITIONAL LENGTH OVER AVERAGE	WIRE MESH SLOPE STABILIZATION	GEOTEXTILE FOR TEMPORARY WALL	BORROW	SHOTCRETE	
									LB	EA	EA	EA	EA	EA	EA	LF	LF	LF	SY	SY	CY	CY	
					MI	FT																	
18314.1088033	Transylvania	1	US-276	2WU	0.07	22	7.89	7.96		40		1							270				
<b>TOTAL FOR MAP NO. 1</b>										40		1							270				
<b>TOTAL FOR PROJ NO. 18314.1088033</b>										40		1							270				
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	2WU	0.08	20	0.52	0.6															
<b>TOTAL FOR MAP NO. 2</b>																							
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>																							
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	2WU	0.07	18	1.47	1.54	8,430		70	6	50	2	175	200	100	25		2,000	500	72	
<b>TOTAL FOR MAP NO. 3</b>									8,430		70	6	50	2	175	200	100	25		2,000	500	72	
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>									8,430		70	6	50	2	175	200	100	25		2,000	500	72	
<b>GRAND TOTAL</b>						0.22				8,430	40	70	7	50	2	175	200	100	25	270	2,000	500	72

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	0000400000-N	0043000000-N	0195000000-E	0196000000-E	0222000000-E	0314000000-E	1077000000-E	1099700000-E	2044000000-E	2077000000-E	3642000000-E	3649000000-E	
									CONSTRUCTION SURVEYING	GRADING	SELECT GRANULAR MATERIAL	GEOTEXTILE FOR SOIL STABILIZATION	GEOTEXTILE FOR ROCK EMBANKMENTS, TYPE 2	SELECT MATERIAL, CLASS (VII)	#57 STONE	CLASS IV SUBGRADE STABILIZATION	6" PERFORATED SUBDRAIN PIPE	6" OUTLET PIPE	RIP RAP, CLASS A	RIP RAP, CLASS B	
									LS	LS	CY	SY	SY	TON	TON	TON	LF	LF	TON	TON	
18314.1088033	Transylvania	1	US-276	2WU	0.07	22	7.89	7.96	0.33	0.33		89				30					
<b>TOTAL FOR MAP NO. 1</b>					<b>0.07</b>				<b>0.33</b>	<b>0.33</b>		<b>89</b>				<b>30</b>					
<b>TOTAL FOR PROJ NO. 18314.1088033</b>					<b>0.07</b>				<b>0.33</b>	<b>0.33</b>		<b>89</b>				<b>30</b>					
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	2WU	0.08	20	0.52	0.6	0.34	0.34		55	720	4,000	100	80	80	40	40	40	40
<b>TOTAL FOR MAP NO. 2</b>					<b>0.08</b>				<b>0.34</b>	<b>0.34</b>		<b>55</b>	<b>720</b>	<b>4,000</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>					<b>0.08</b>				<b>0.34</b>	<b>0.34</b>		<b>55</b>	<b>720</b>	<b>4,000</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	2WU	0.07	18	1.47	1.54	0.33	0.33	50	55				50					30
<b>TOTAL FOR MAP NO. 3</b>					<b>0.07</b>				<b>0.33</b>	<b>0.33</b>	<b>50</b>	<b>55</b>				<b>50</b>					<b>30</b>
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>					<b>0.07</b>				<b>0.33</b>	<b>0.33</b>	<b>50</b>	<b>55</b>				<b>50</b>					<b>30</b>
<b>GRAND TOTAL</b>					<b>0.22</b>				<b>1</b>	<b>1</b>	<b>50</b>	<b>199</b>	<b>720</b>	<b>4,000</b>	<b>100</b>	<b>160</b>	<b>80</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>70</b>

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	LANE TYPE	LENGTH	WIDTH	BEGIN	END	3030000000-E	3360000000-E	4025000000-E	4072000000-E	4102000000-N
					MI	FT	MP	MP	STEEL BEAM GUARDRAIL	REMOVE EXISTING GUARDRAIL	CONTRACTOR FURNISHED, TYPE E SIGN	SUPPORTS, 3-LB STEEL U-CHANNEL	SIGN ERECTION, TYPE E
									LF	LF	SF	LF	EA
18314.1088033	Transylvania	1	US-276	2WU	0.07	22	7.89	7.96	200	200			
<b>TOTAL FOR MAP NO. 1</b>					<b>0.07</b>				<b>200</b>	<b>200</b>			
<b>TOTAL FOR PROJ NO. 18314.1088033</b>					<b>0.07</b>				<b>200</b>	<b>200</b>			
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	2WU	0.08	20	0.52	0.6	200	200			
<b>TOTAL FOR MAP NO. 2</b>					<b>0.08</b>				<b>200</b>	<b>200</b>			
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>					<b>0.08</b>				<b>200</b>	<b>200</b>			
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	2WU	0.07	18	1.47	1.54	150	150	8.5	30	2
<b>TOTAL FOR MAP NO. 3</b>					<b>0.07</b>				<b>150</b>	<b>150</b>	<b>8.5</b>	<b>30</b>	<b>2</b>
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>					<b>0.07</b>				<b>150</b>	<b>150</b>	<b>8.5</b>	<b>30</b>	<b>2</b>
<b>GRAND TOTAL</b>					<b>0.22</b>				<b>550</b>	<b>550</b>	<b>8.5</b>	<b>30</b>	<b>2</b>

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4424500000-N	4457000000-N	4465000000-N	4470000000-N	4490000000-E	4505000000-E	4810000000-E	4810000000-E
									TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM	TEMPORARY TRAFFIC CONTROL	TEMPORARY CRASH CUSHIONS	REMOVE & RESET TEMPORARY CRASH CUSHION	PORTABLE CONCRETE BARRIER (ANCHORED)	REMOVE & RESET PORTABLE CONCRETE BARRIER (ANCHORED)	4" WHITE PAINT	4" YELLOW PAINT
									EA	LS	EA	EA	LF	LF	LF	LF
18314.1088033	Transylvania	1	US-276	2WU	0.07	22	7.89	7.96	1	0.33		2		400	500	500
<b>TOTAL FOR MAP NO. 1</b>					<b>0.07</b>				<b>1</b>	<b>0.33</b>		<b>2</b>		<b>400</b>	<b>500</b>	<b>500</b>
<b>TOTAL FOR PROJ NO. 18314.1088033</b>					<b>0.07</b>				<b>1</b>	<b>0.33</b>		<b>2</b>		<b>400</b>	<b>500</b>	<b>500</b>
DF18314.2088023	Transylvania	2	SR-1408 / FISH HATCHERY RD	2WU	0.08	20	0.52	0.6	1	0.34	2		400		100	100
<b>TOTAL FOR MAP NO. 2</b>					<b>0.08</b>				<b>1</b>	<b>0.34</b>	<b>2</b>		<b>400</b>		<b>100</b>	<b>100</b>
<b>TOTAL FOR PROJ NO. DF18314.2088023</b>					<b>0.08</b>				<b>1</b>	<b>0.34</b>	<b>2</b>		<b>400</b>		<b>100</b>	<b>100</b>
DF18314.2088031	Transylvania	3	SR-1207 / BARCLAY RD	2WU	0.07	18	1.47	1.54	1	0.33		2		400	600	600
<b>TOTAL FOR MAP NO. 3</b>					<b>0.07</b>				<b>1</b>	<b>0.33</b>		<b>2</b>		<b>400</b>	<b>600</b>	<b>600</b>
<b>TOTAL FOR PROJ NO. DF18314.2088031</b>					<b>0.07</b>				<b>1</b>	<b>0.33</b>		<b>2</b>		<b>400</b>	<b>600</b>	<b>600</b>
<b>GRAND TOTAL</b>					<b>0.22</b>				<b>3</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>400</b>	<b>800</b>	<b>1,200</b>	<b>1,200</b>