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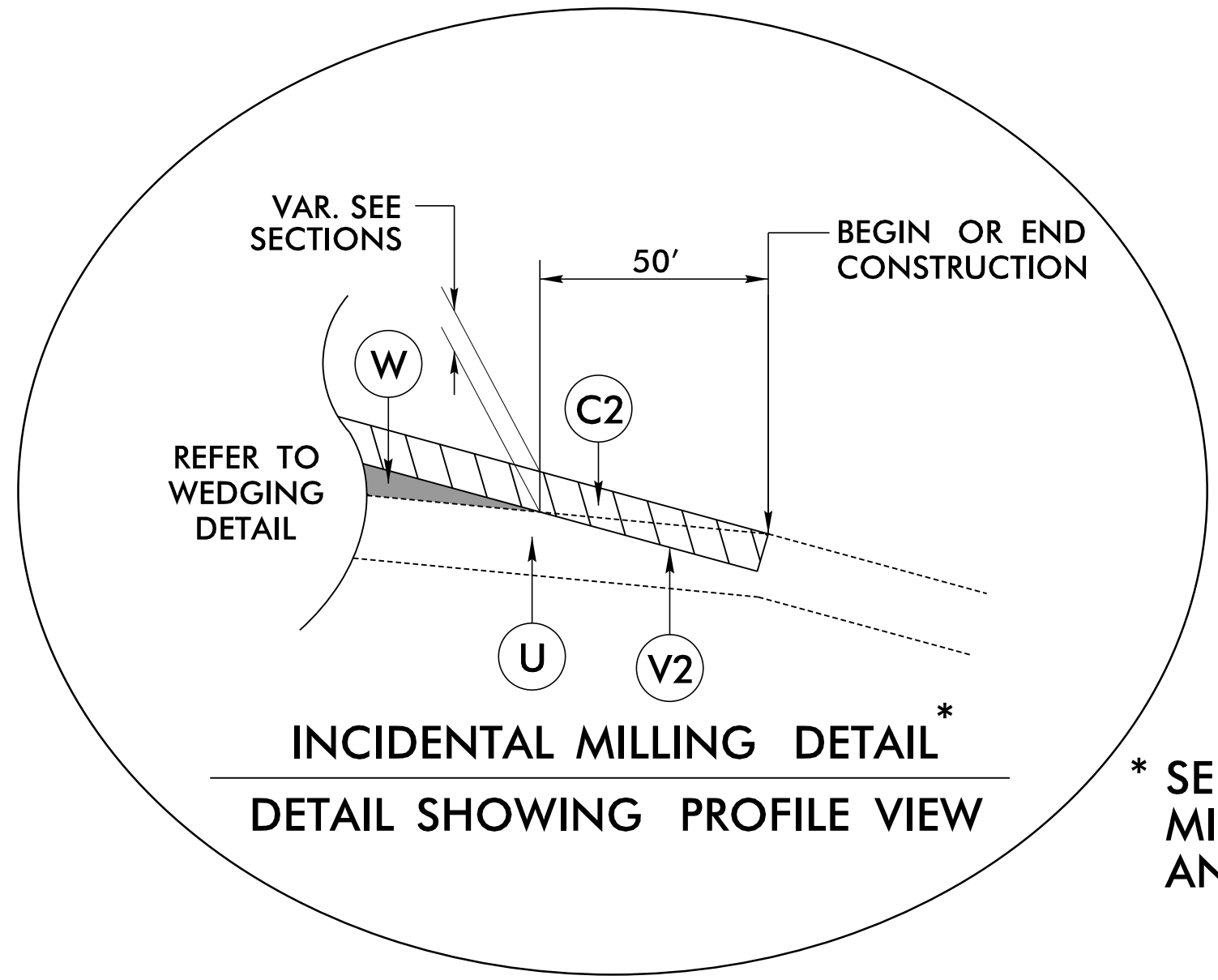
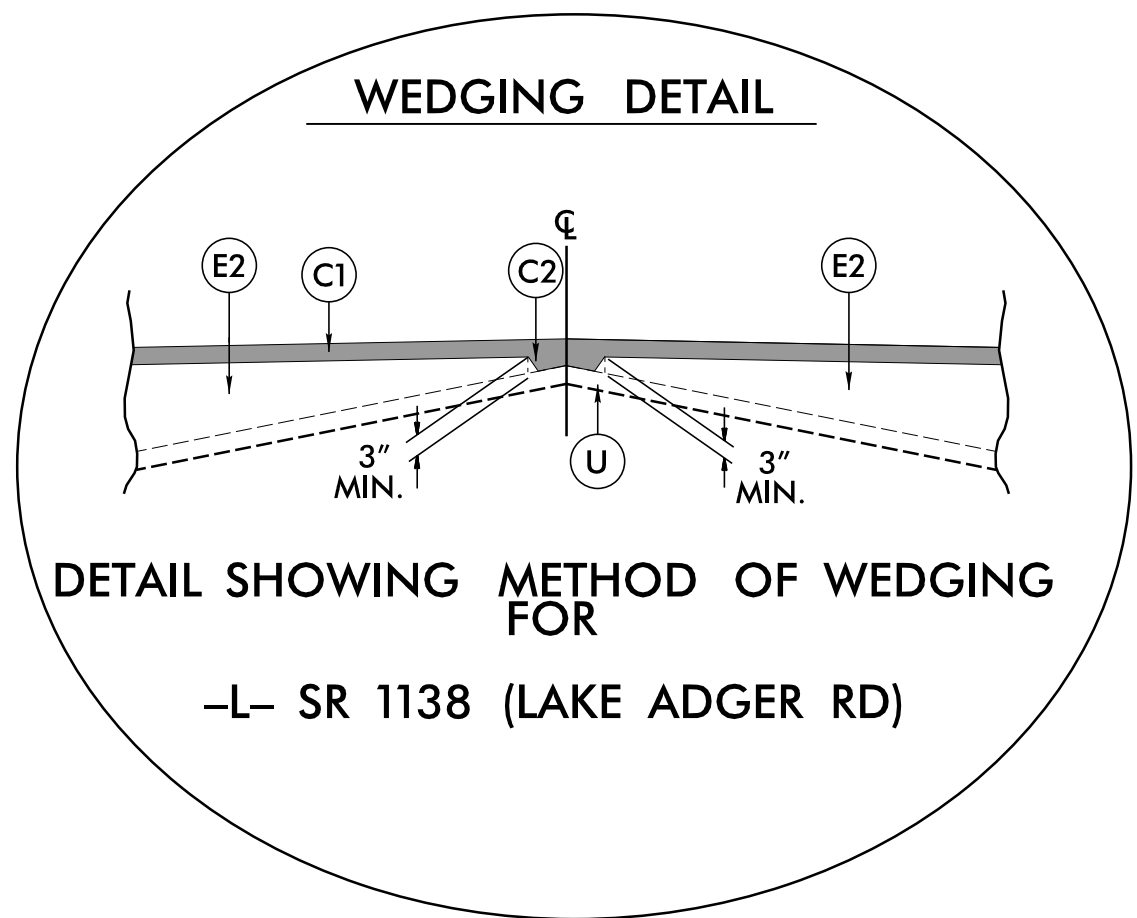
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5/14/25

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1.5" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 4" IN DEPTH.
J1	PROP. 8" AGGEGRATE BASE COURSE
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL 1)
V1	1.5" MILLING
V2	INCIDENTAL MILLING

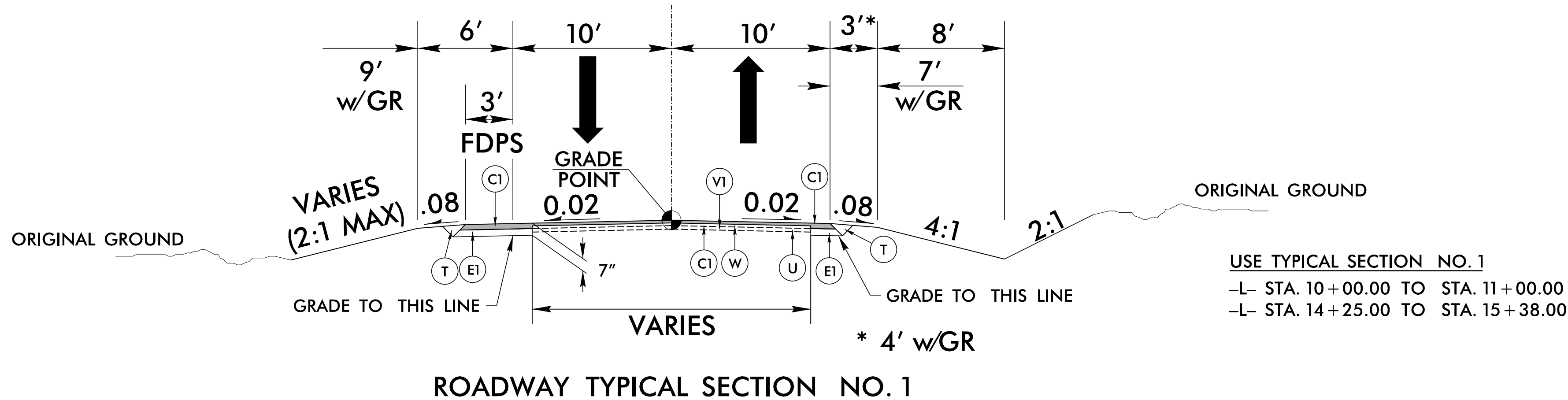
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



* SEE TYPICAL SECTIONS FOR DEPTHS OF MILLING, SURFACE COURSE THICKNESS AND WEDGING METHOD.

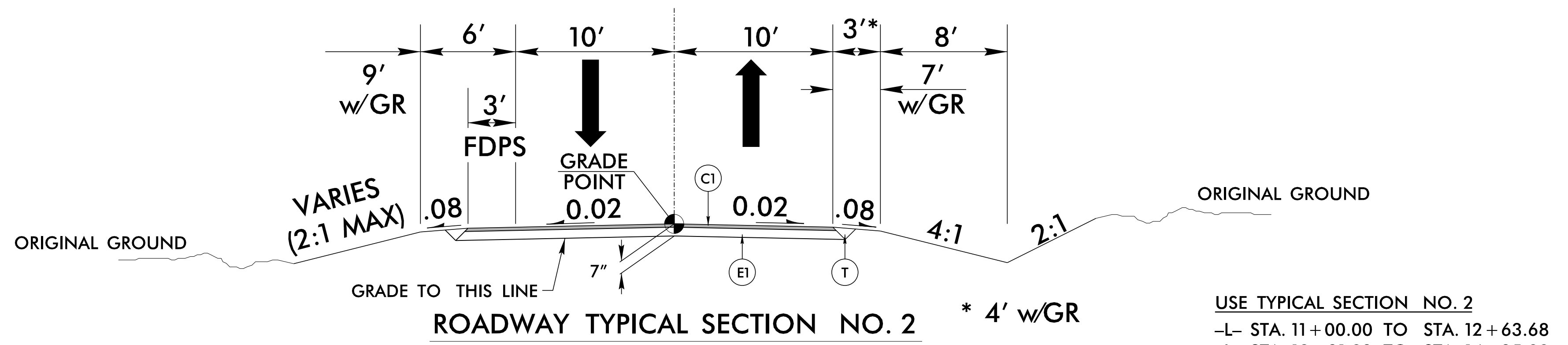
PROJECT REFERENCE NO. BPI4.R006	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 10/9/2025 SEAL 024416 W. SCOTT CLARK	PAVEMENT ENGINEER 10/9/2025 SEAL 024964 JOSEPH T. HOLLAND
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

CL -L- SR 1138 (LAKE ADGER RD)

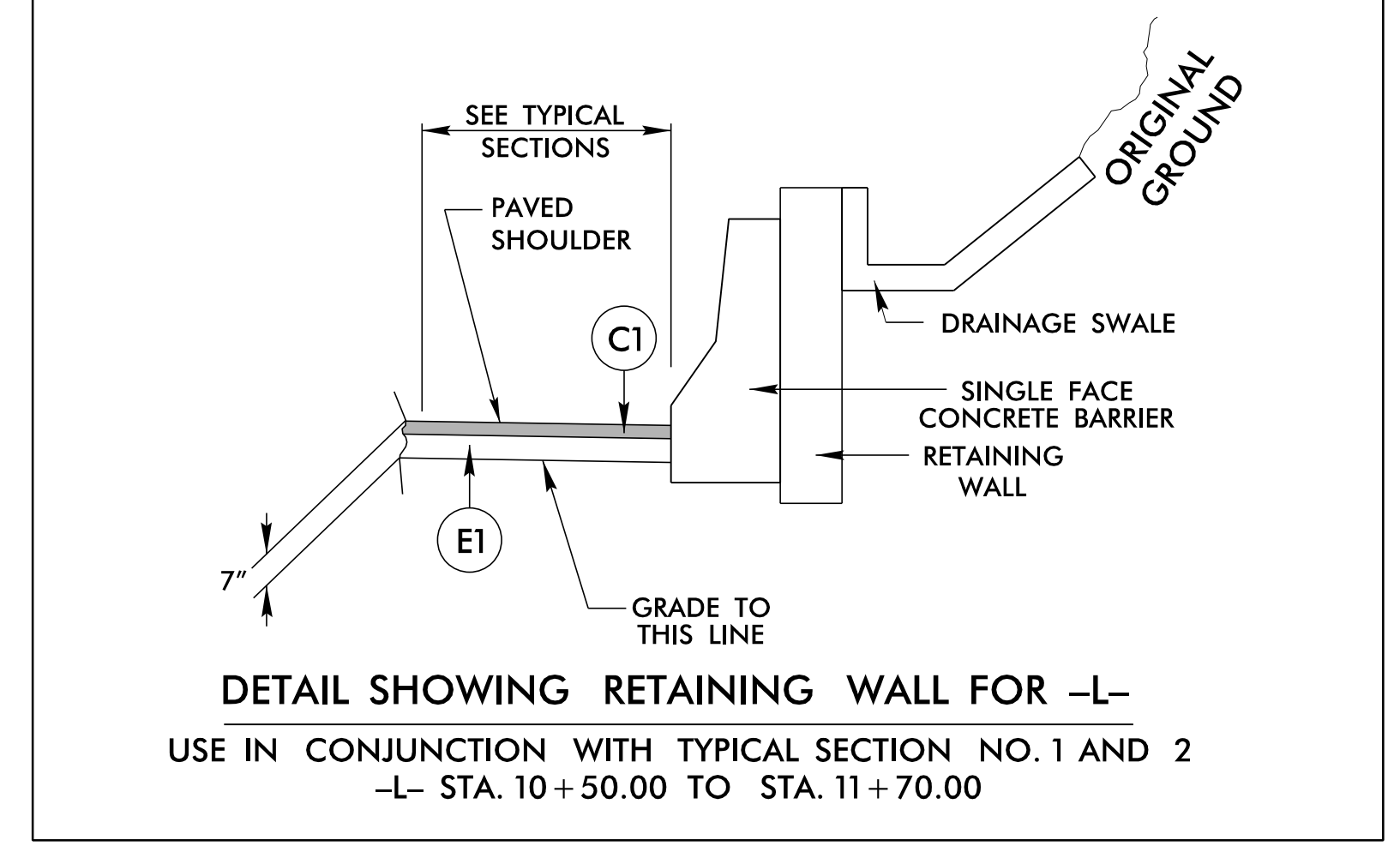
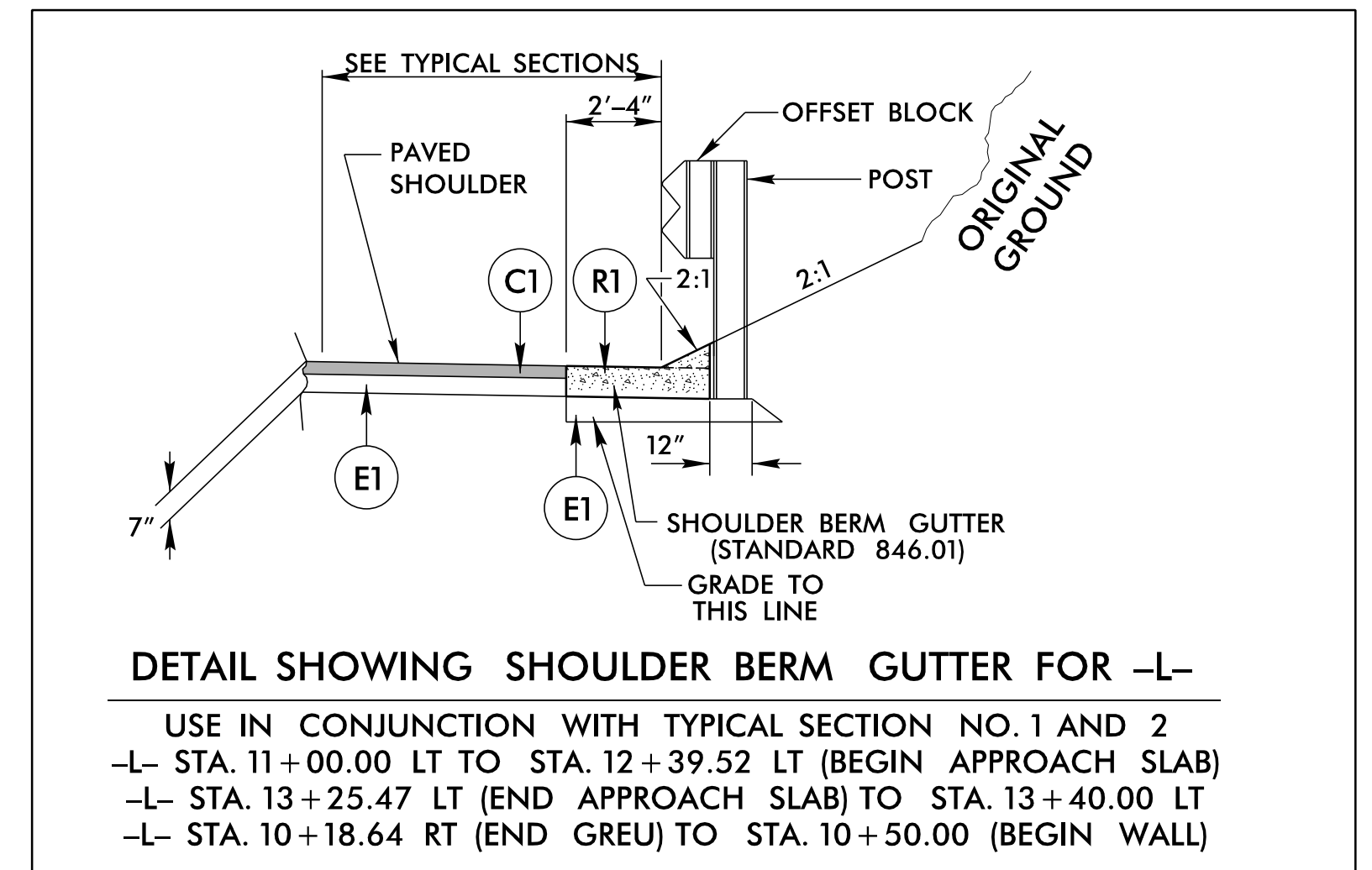


USE TYPICAL SECTION NO. 1
-L- STA. 10+00.00 TO STA. 11+00.00
-L- STA. 14+25.00 TO STA. 15+38.00

CL -L- SR 1138 (LAKE ADGER RD)



USE TYPICAL SECTION NO. 2
-L- STA. 11+00.00 TO STA. 12+63.68
-L- STA. 13+21.32 TO STA. 14+25.00

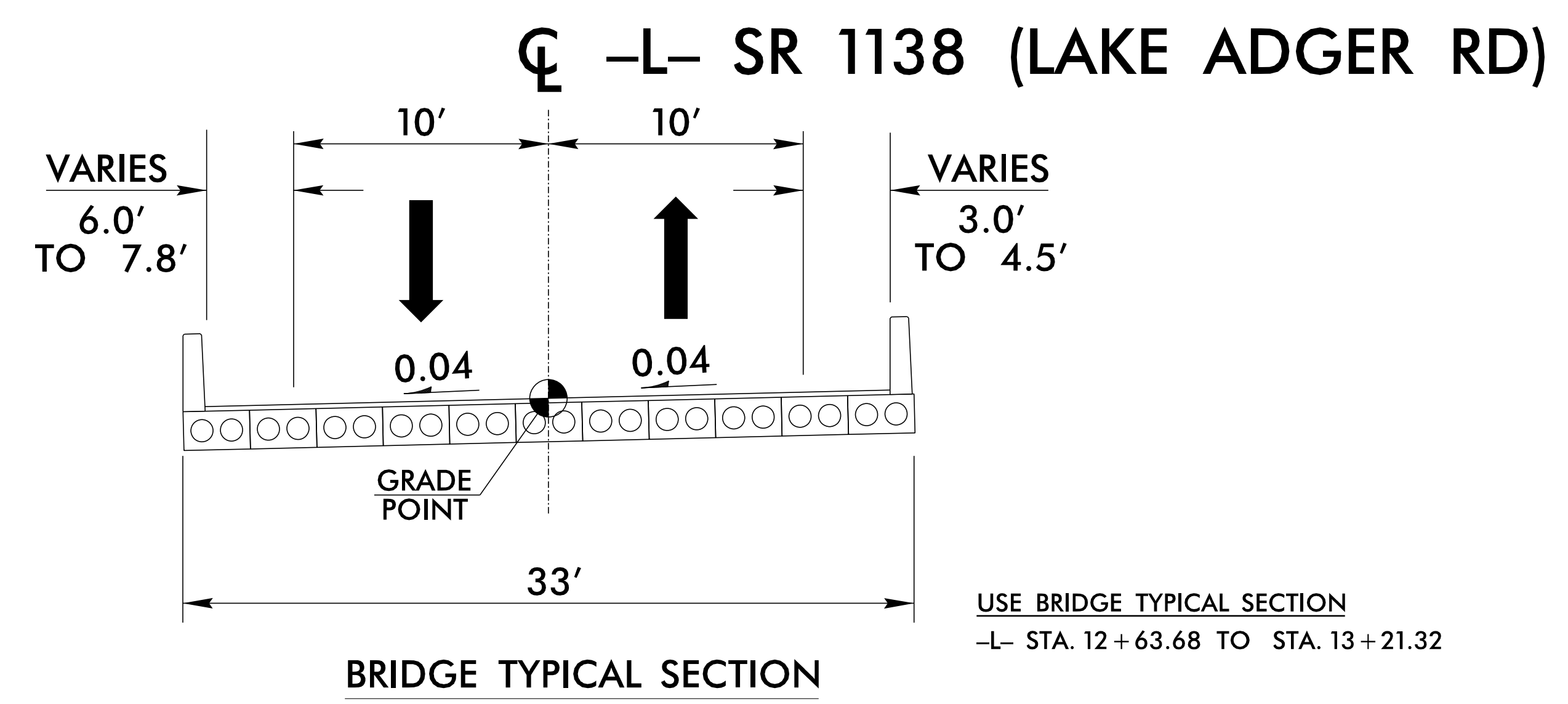
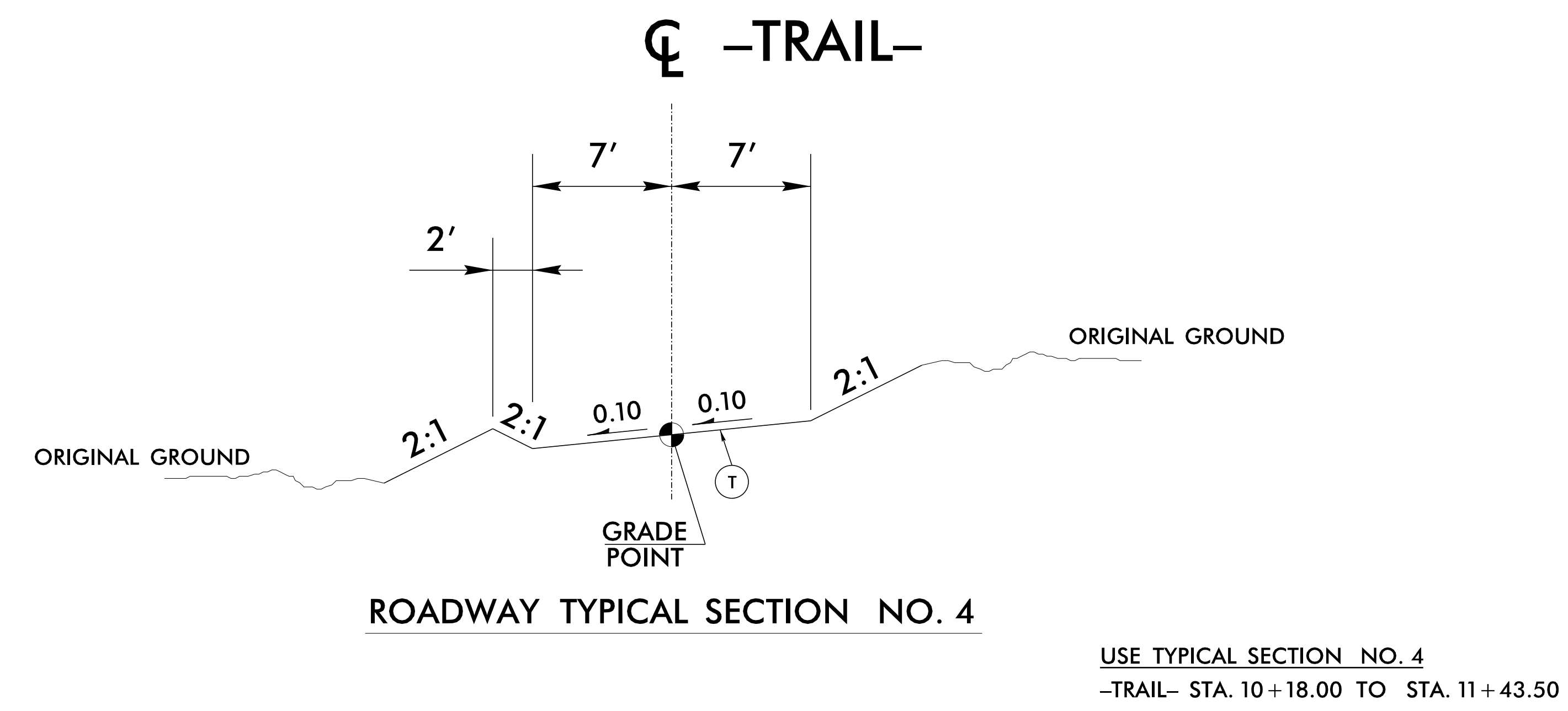
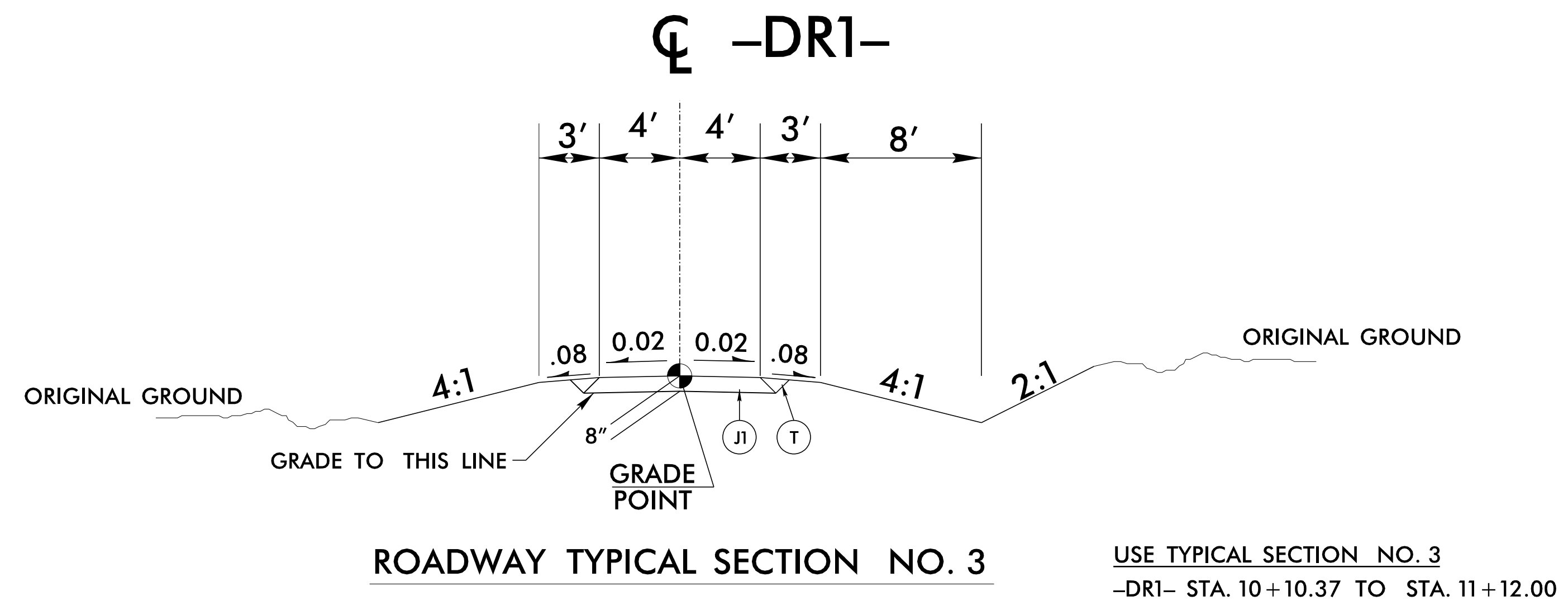


NOTES:
SEE PLANS FOR TAPERS.
MILL AS NEEDED.

9/30/2025
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5/14/25

PROJECT REFERENCE NO. <i>BPI4.R006</i>	SHEET NO. <i>2A-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 10/9/2025	PAVEMENT ENGINEER 10/9/2025
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FINAL PAVEMENT SCHEDULE	
C1	3" S9.5B
C2	VAR. S9.5B
E1	4" B25.0C
E2	VAR. B25.0C
J1	8" ABC
R1	SBG
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING
V1	1.5" MILLING
V2	VAR. MILLING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

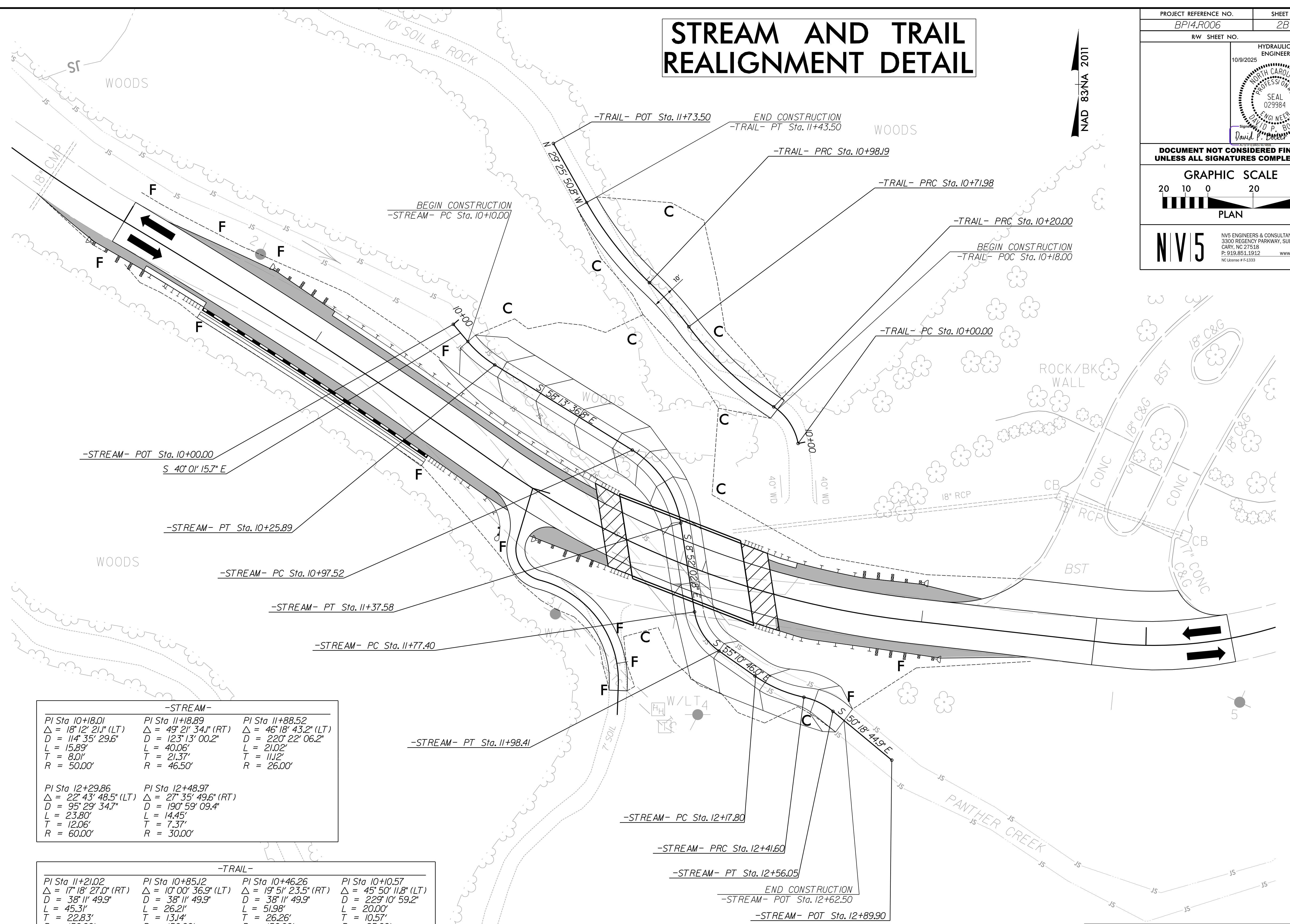
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8/17/99

STREAM AND TRAIL REALIGNMENT DETAIL

PROJECT REFERENCE NO. BPI4.R006	SHEET NO. 2B-1
RW SHEET NO.	
HYDRAULICS ENGINEER 10/9/2025 NORTH CAROLINA PROFESSIONAL SEAL 029984 DAVID P. BUCKER David P. Bucker	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
GRAPHIC SCALE 20 10 0 20 40 PLAN	
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NAD 83/NA 2011



-STREAM-		
PI Sta 10+18.01	PI Sta 11+18.89	PI Sta 11+88.52
$\Delta = 18' 12' 21.1''$ (LT)	$\Delta = 49' 21' 34.1''$ (RT)	$\Delta = 46' 18' 43.2''$ (LT)
$D = 114' 35' 29.6''$	$D = 123' 13' 00.2''$	$D = 220' 22' 06.2''$
$L = 15.89'$	$L = 40.06'$	$L = 21.02'$
$T = 8.01'$	$T = 21.37'$	$T = 11.12'$
$R = 50.00'$	$R = 46.50'$	$R = 26.00'$
PI Sta 12+29.86	PI Sta 12+48.97	
$\Delta = 22' 43' 48.5''$ (LT)	$\Delta = 27' 35' 49.6''$ (RT)	
$D = 95' 29' 34.7''$	$D = 190' 59' 09.4''$	
$L = 23.80'$	$L = 14.45'$	
$T = 12.06'$	$T = 7.37'$	
$R = 60.00'$	$R = 30.00'$	

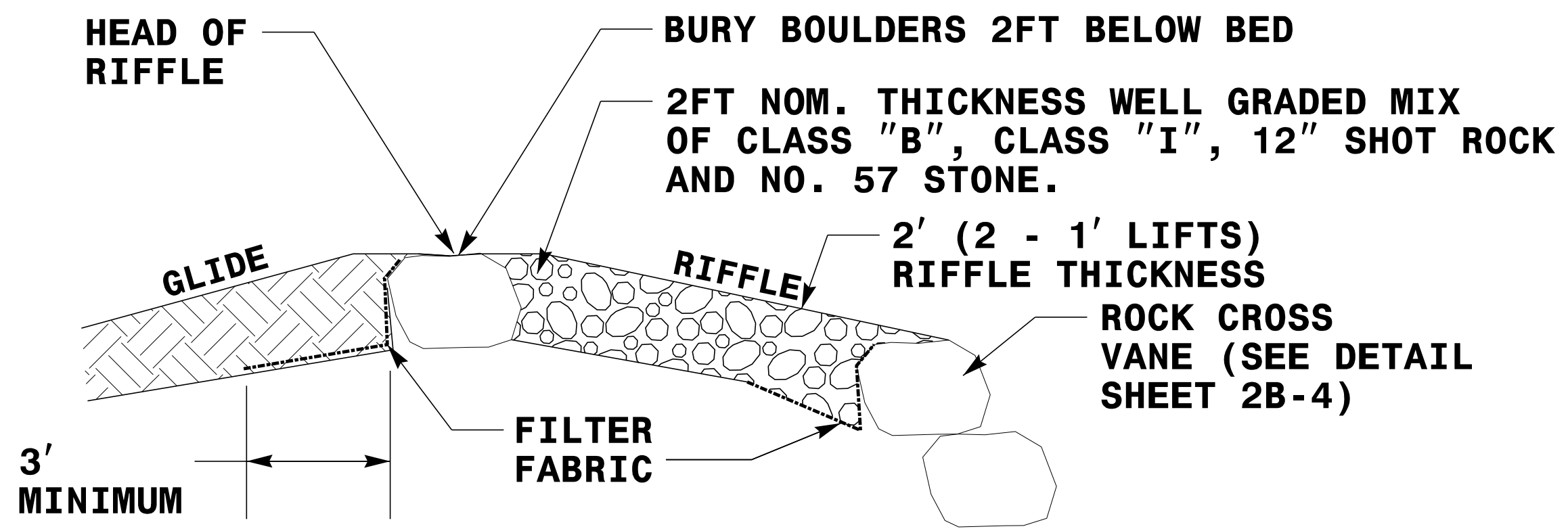
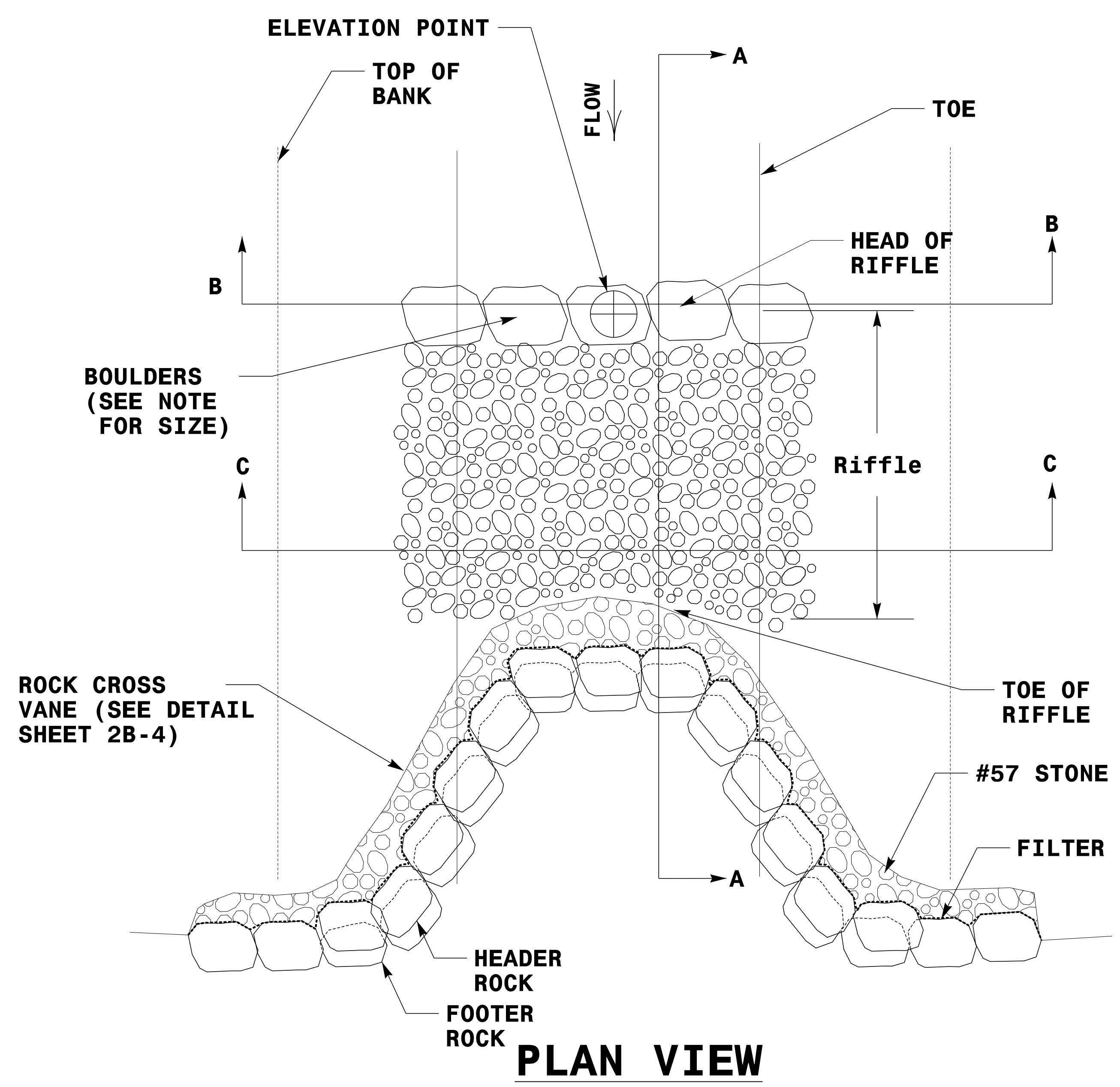
-TRAIL-			
PI Sta 11+21.02	PI Sta 10+85.12	PI Sta 10+46.26	PI Sta 10+10.57
$\Delta = 17' 18' 27.0''$ (RT)	$\Delta = 10' 00' 36.9''$ (LT)	$\Delta = 19' 51' 23.5''$ (RT)	$\Delta = 45' 50' 11.8''$ (LT)
$D = 38' 11' 49.9''$	$D = 38' 11' 49.9''$	$D = 38' 11' 49.9''$	$D = 229' 10' 59.2''$
$L = 45.31'$	$L = 26.21'$	$L = 51.98'$	$L = 20.00'$
$T = 22.83'$	$T = 13.14'$	$T = 26.26'$	$T = 10.57'$
$R = 150.00'$	$R = 150.00'$	$R = 150.00'$	$R = 25.00'$

SEE SHT. 4 FOR ROADWAY AND HYDRAULIC DESIGN
 FOR -TRAIL- PROFILE SEE SHT. 5
 FOR -STREAM- PROFILE SEE SHT. 5

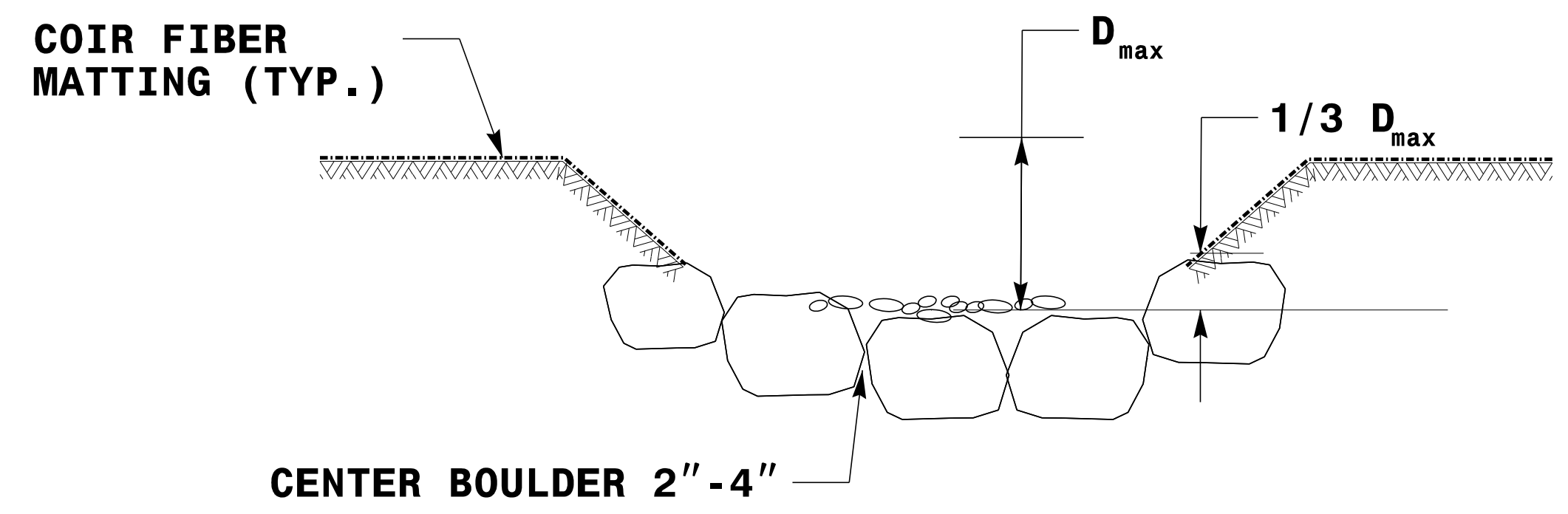
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 David P. Bucker

8/17/99

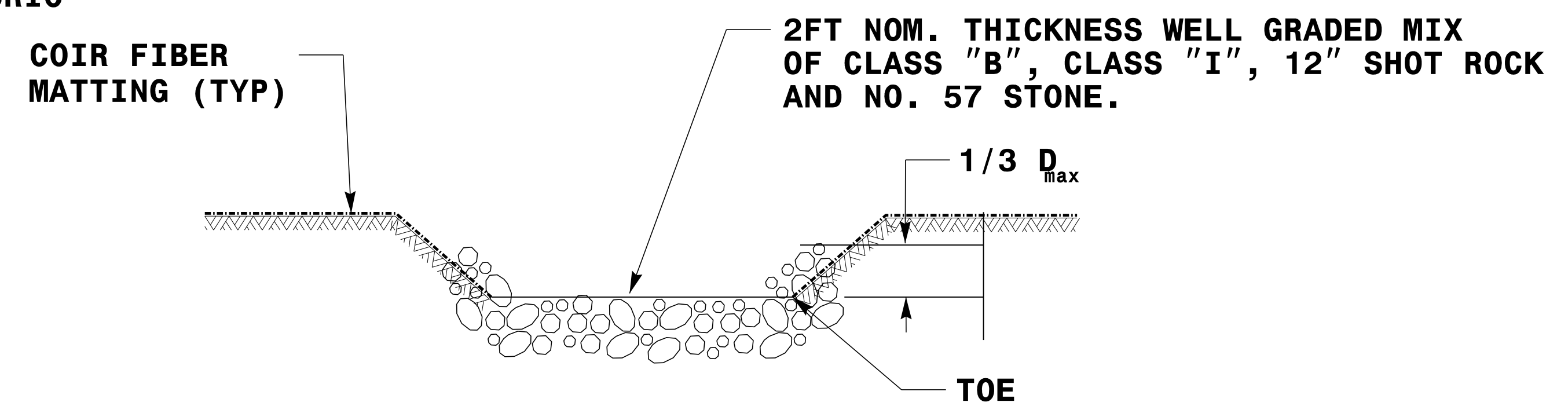
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HYDRAULICS ENGINEER 10/9/2025 NORTH CAROLINA PROFESSIONAL SEAL 029984 DAVID P. BOCKER	
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GRAPHIC SCALE 20 10 0 20 40 PLAN	
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SECTION A-A



SECTION B-B



SECTION C-C

STRUCTURE TYPE	START STATION	END STATION	LENGTH
RIFFLE	10+57.52	10+97.52	40
CROSS VANE	10+97.52	11+19.52	22
RIFFLE	11+32.58	11+77.58	45
CROSS VANE	11+77.58	11+98.41	21
RIFFLE	11+98.41	12+38.41	40
CROSS VANE	12+38.41	12+60.41	22


CONSTRUCTED RIFFLE DETAIL

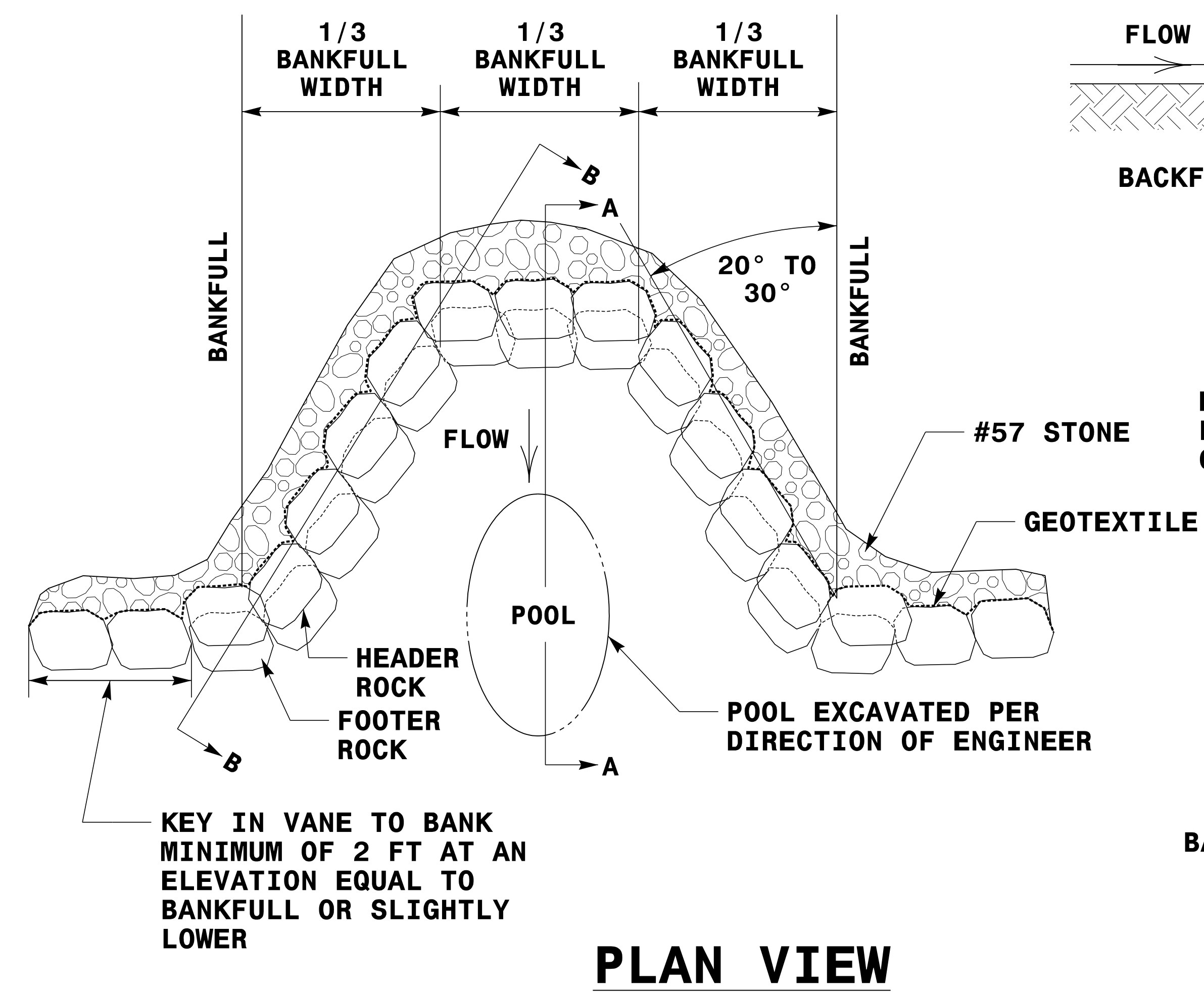
NOT TO SCALE

NOTE:
BOULDER SHOULD BE NATIVE STONES OR SHOT ROCK, ANGULAR AND OBLONG, WITH AN AXIS APPROXIMATELY 3FT L_x, 2FT W_x, 2FT D

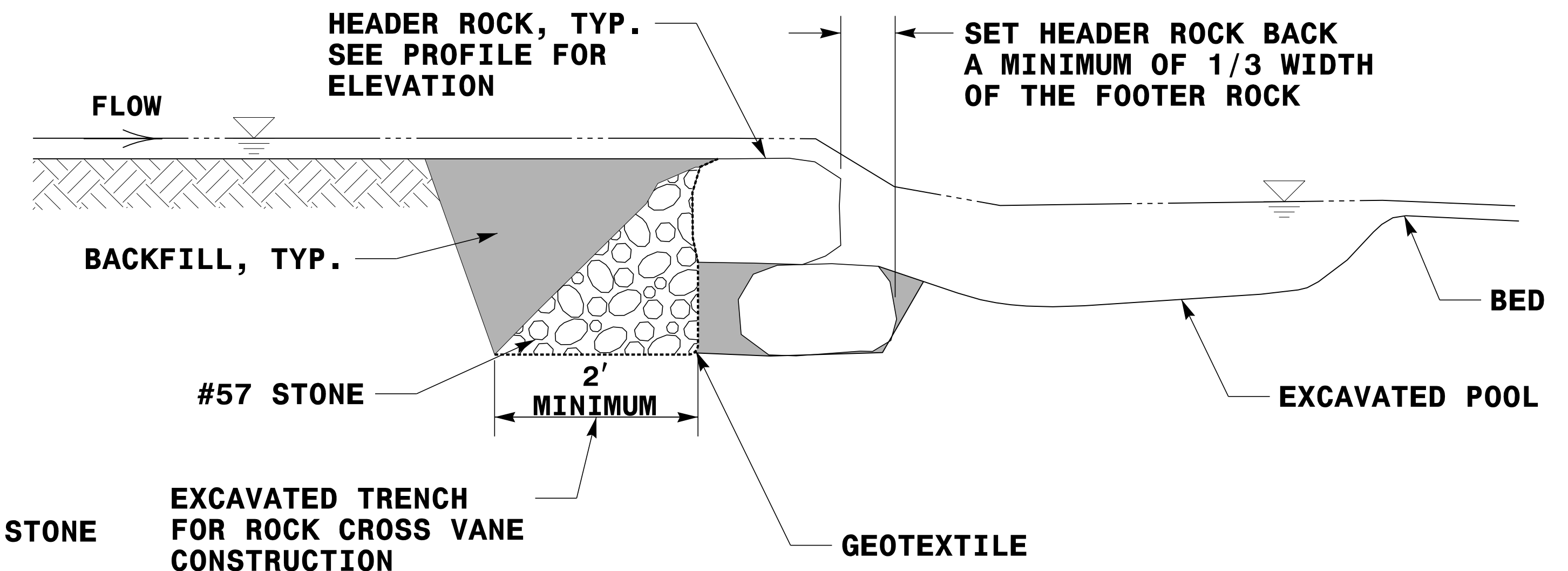
QUANTITIES:
75 TONS - #57 STONE
45 TONS - RIPRAP, CLASS I
60 TONS - RIPRAP, CLASS B
50 TONS - BOULDERS
300 SY - GEOTEXTILE FOR DRAINAGE

8/18/2025 R:\Projects\2025\BPI4.R006\Drawings\2B-3.dgn

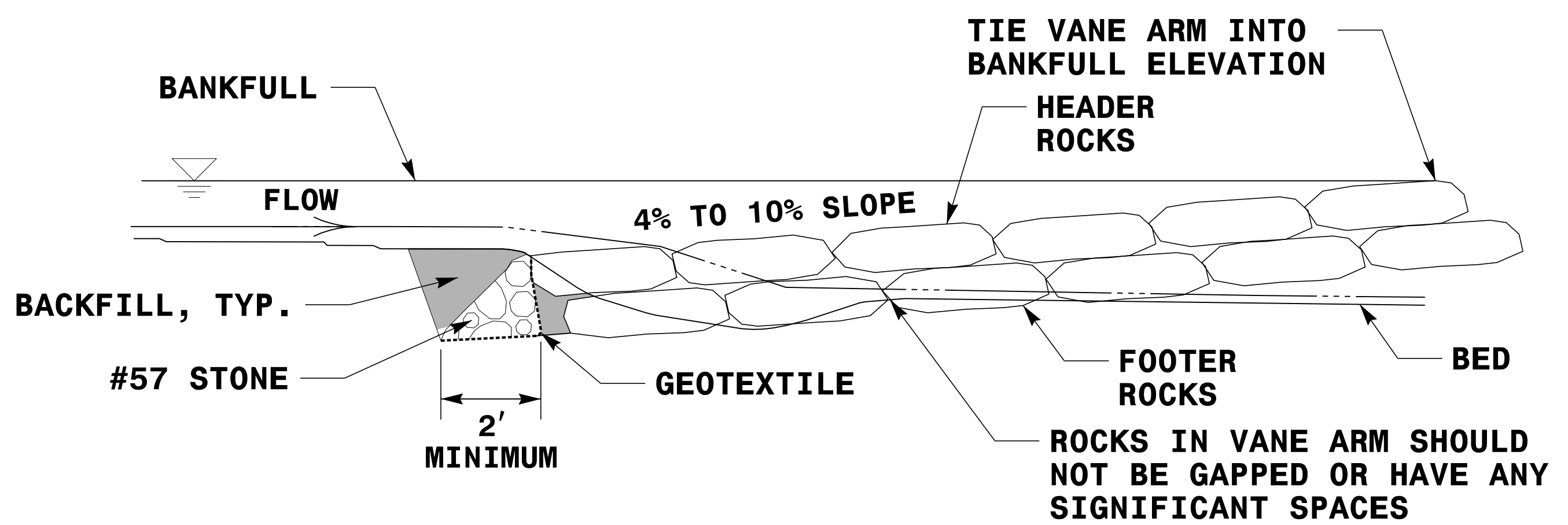
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PLAN VIEW



SECTION A-A




SECTION B-B

ROCK CROSS VANE DETAIL
NOT TO SCALE

- NOTES:**
- 1) DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
 - 2) DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
 - 3) CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
 - 4) COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
 - 5) POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

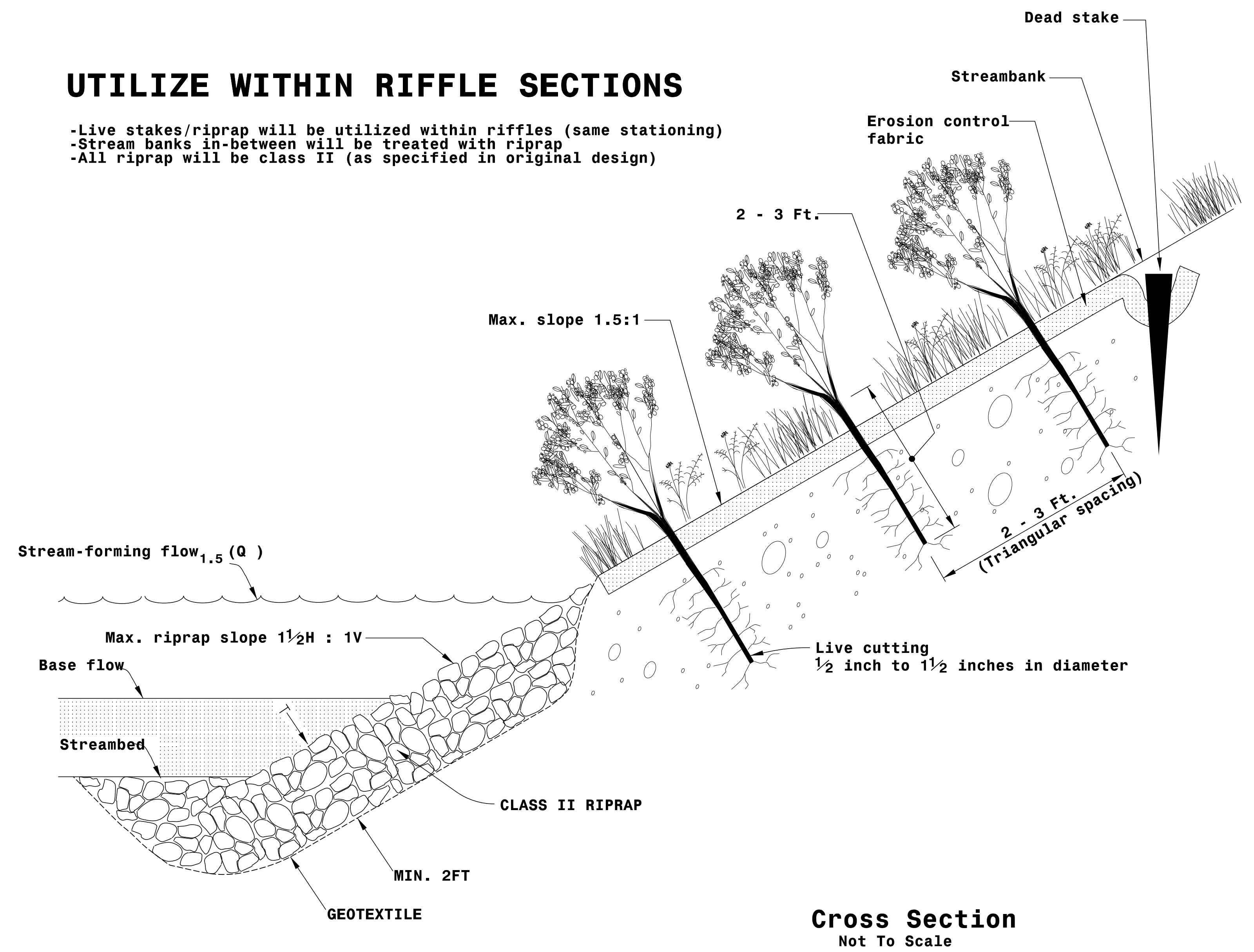
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HYDRAULICS ENGINEER 10/9/2025 NORTH CAROLINA PROFESSIONAL SEAL 029984 DAVID P. BOCKER David P. Bocker	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
N.T.S	
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LIVE STAKE

UTILIZE WITHIN RIFFLE SECTIONS

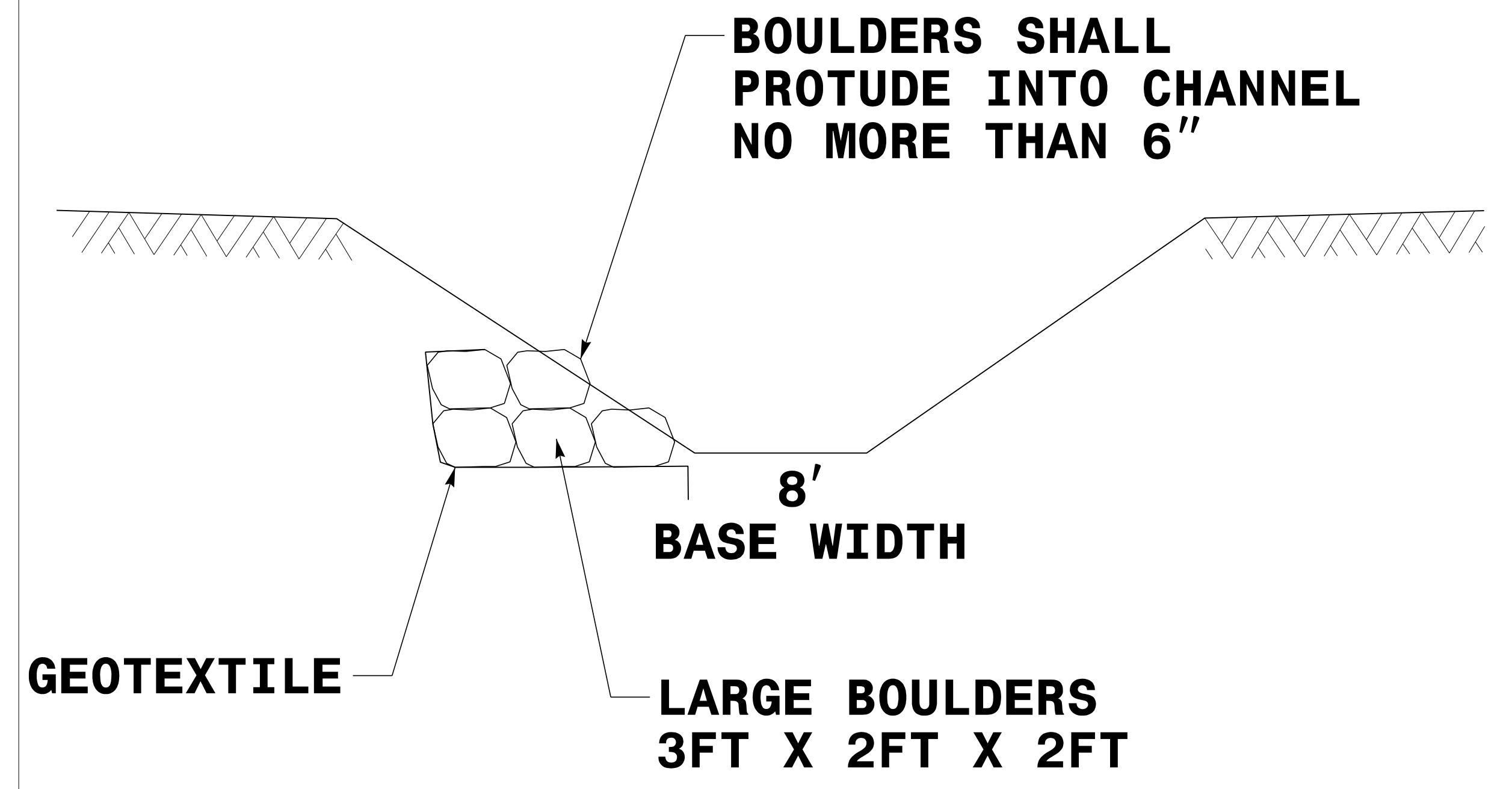
- Live stakes/riprap will be utilized within riffles (same stationing)
- Stream banks in-between will be treated with riprap
- All riprap will be class II (as specified in original design)



- Notes:**
1. Rooted/leafed condition of the living plant material is not representative of the time of installation.
 2. This drawing is concept only. All applications must be engineered to meet site conditions.
 3. Adapted from USDA, NRCS, Engineering Field Handbook, chapter 16.
 4. Matting shall consist of Native willow or Dogwood species (including Black Willow - *Salix nigra* and Dogwood - *Cornus sericea*). Cuttings shall be harvested and installed when dormant.
 5. Total length of cuttings: 8-10 ft, with 2/3 buried.

QUANTITIES:
600 SY - LIVE STAKING
600 SY - COIR FIBER MAT

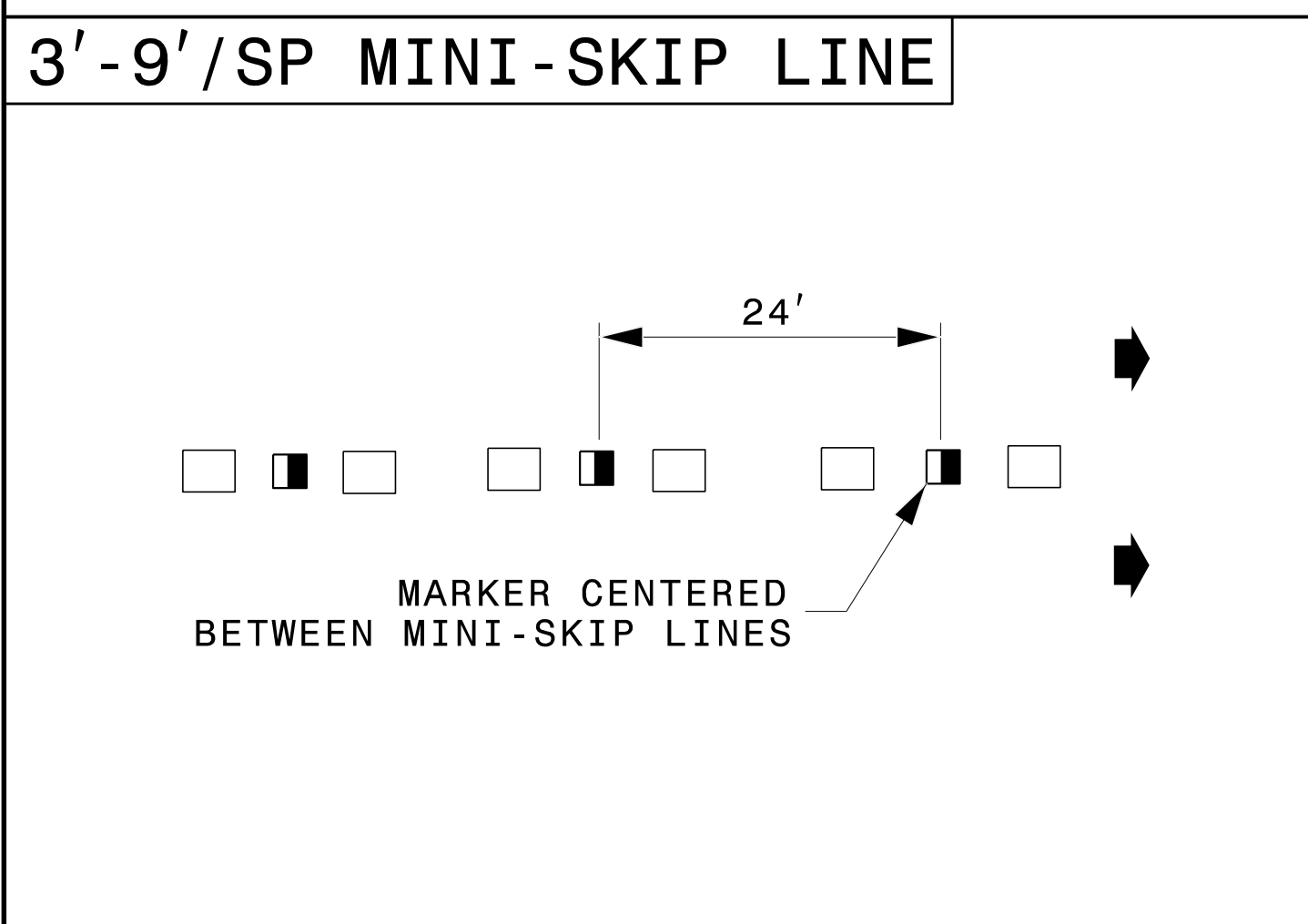
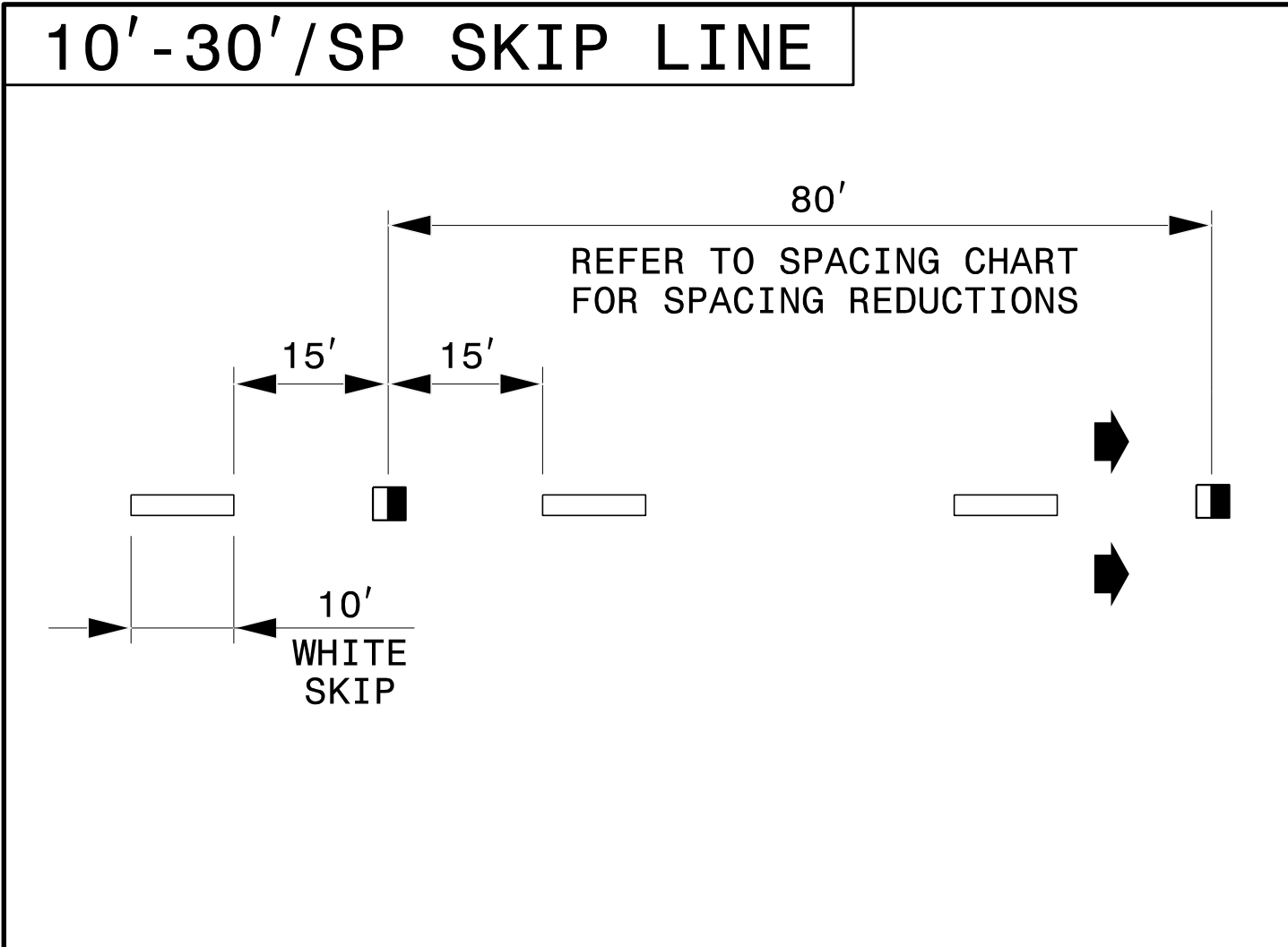
BOULDER TOE PROTECTION



NOTE:
UPPER BOULDER TOE: -STREAM- STA. 11+07 TO 11+18
LOWER BOULDER TOE: -STREAM- STA. 11+85 TO 11+96

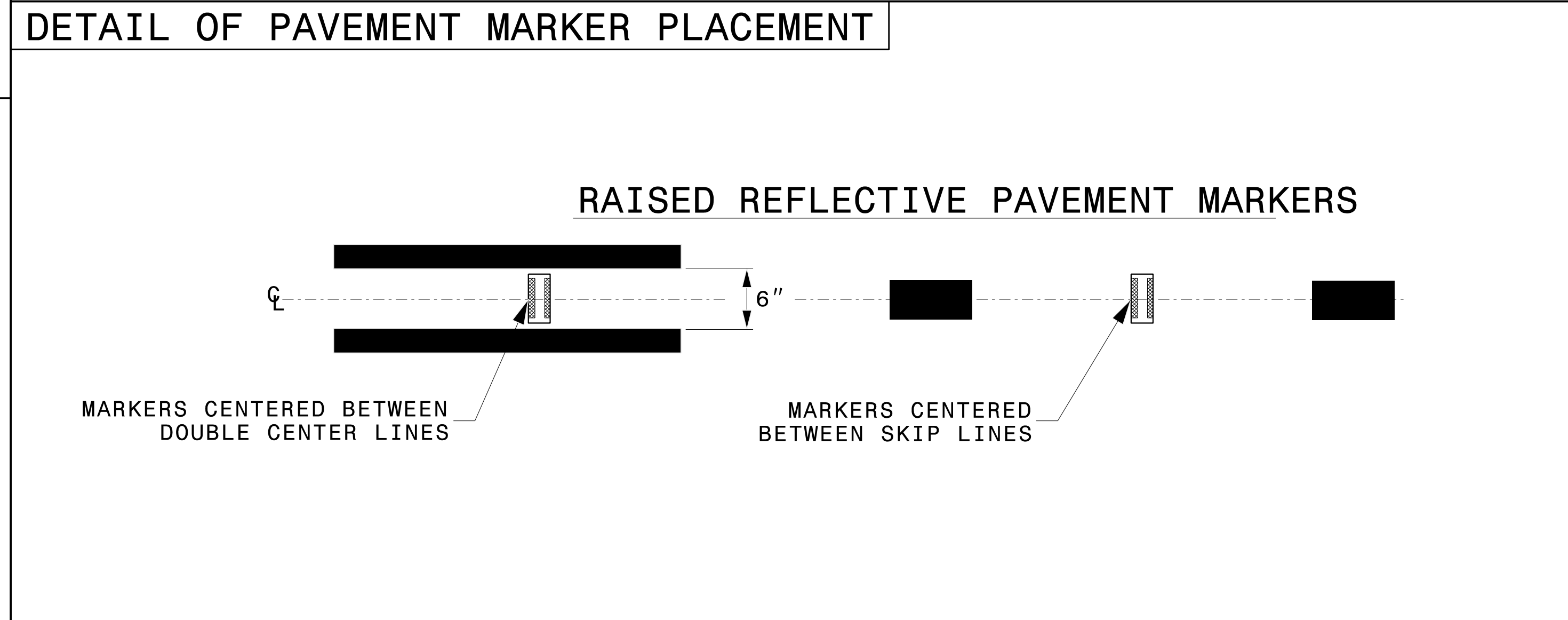
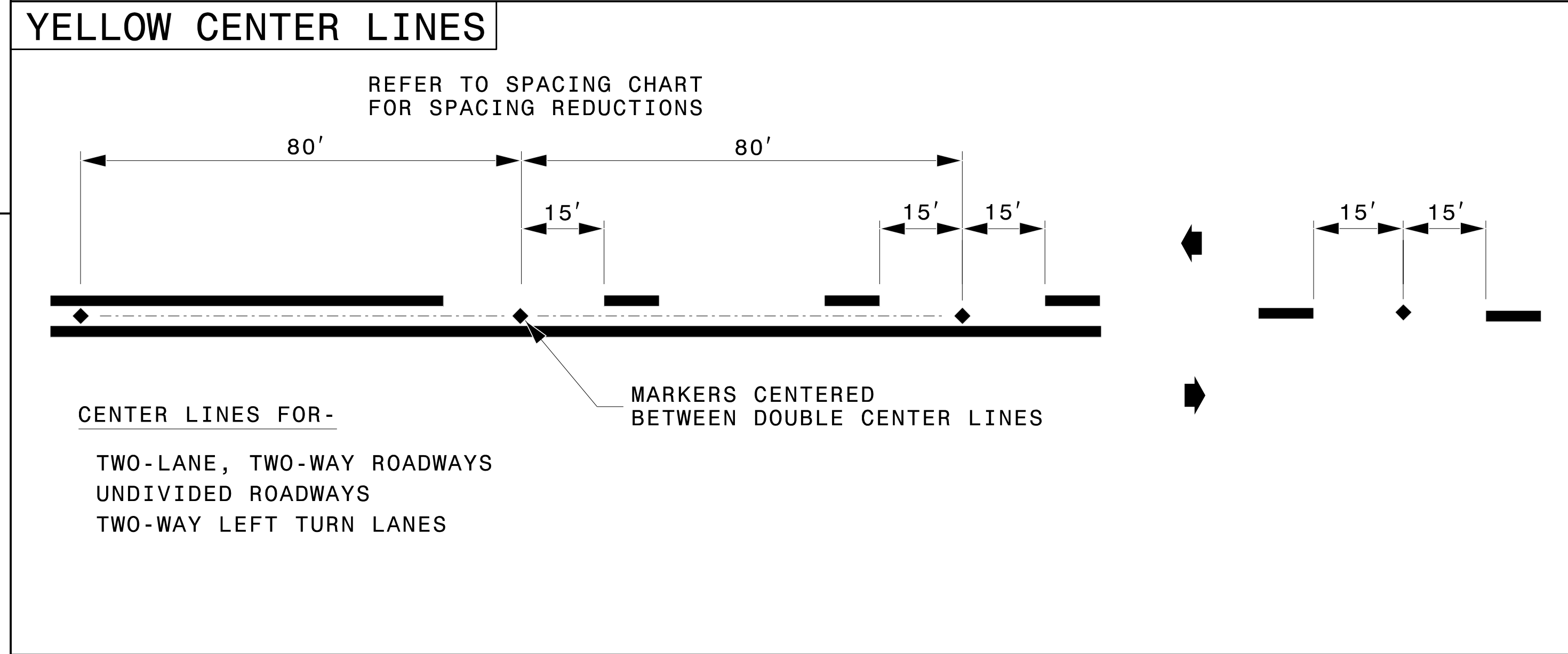
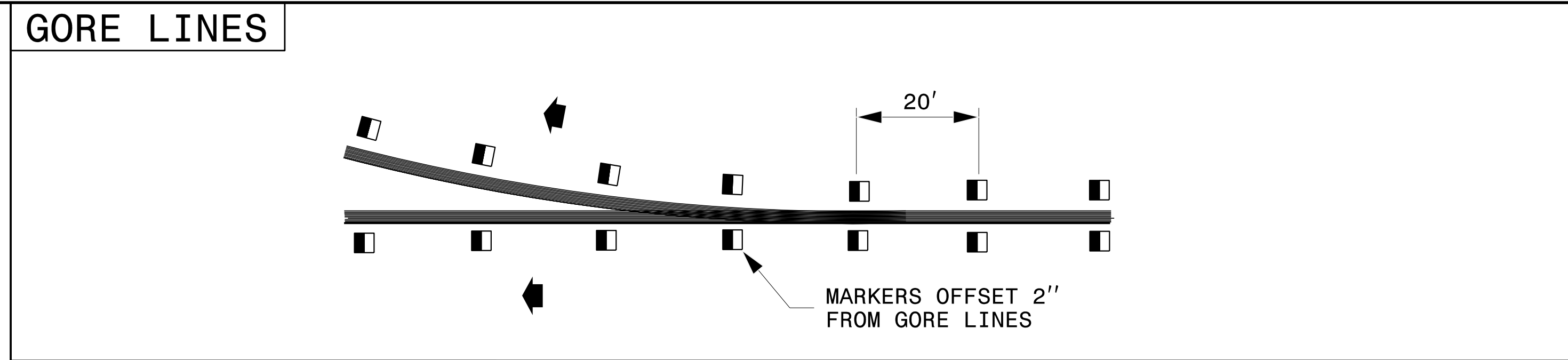
QUANTITIES:
50 TONS - BOULDERS

8/18/2025
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LEGEND

	CRYSTAL/RED PAVEMENT MARKER
	YELLOW/YELLOW PAVEMENT MARKER
	DIRECTION OF TRAFFIC FLOW



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
RAISED PAVEMENT MARKERS
INSTALLATION SPACING

SHEET 2 OF 3
1250D01

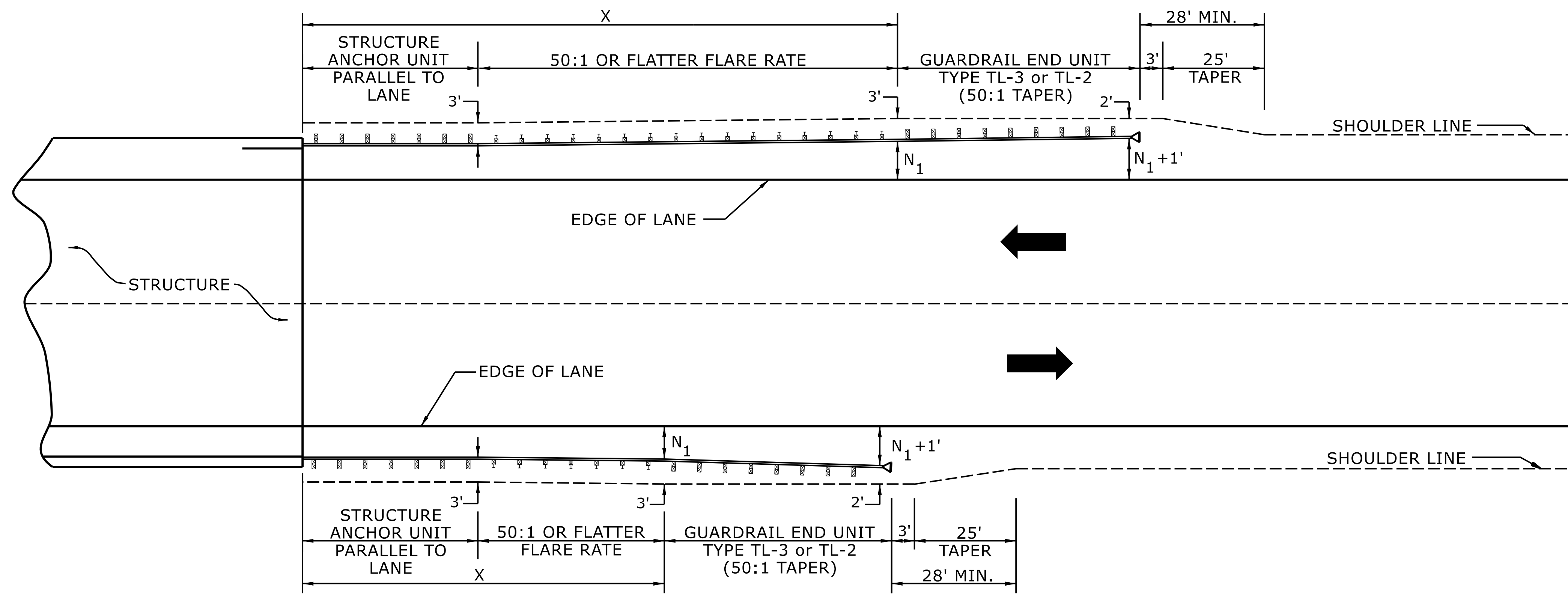


Signed by: Matthew V. Springer, PE
10/10/2025

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: M.V. SPRINGER DATE: 2-15-24
MODIFIED BY: DATE: _____
CHECKED BY: DATE: _____
FILE SPEC.: _____



USE FLARE RATE AS THE CONTROL IF THE " N_1 " DISTANCE IS NOT OBTAINED.
 (" N_1 " IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)
 SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS
 FOR POSTED SPEEDS \geq 45MPH USE GREU TYPE TL-3
 FOR POSTED SPEEDS $<$ 45MPH USE GREU TYPE TL-2
 GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



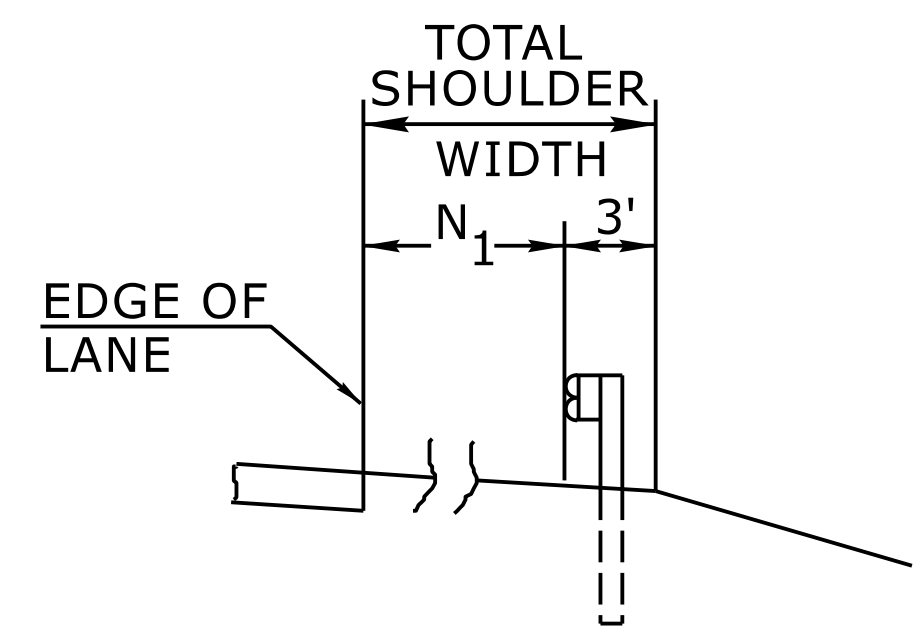
SHEET 4 OF 15
862D01

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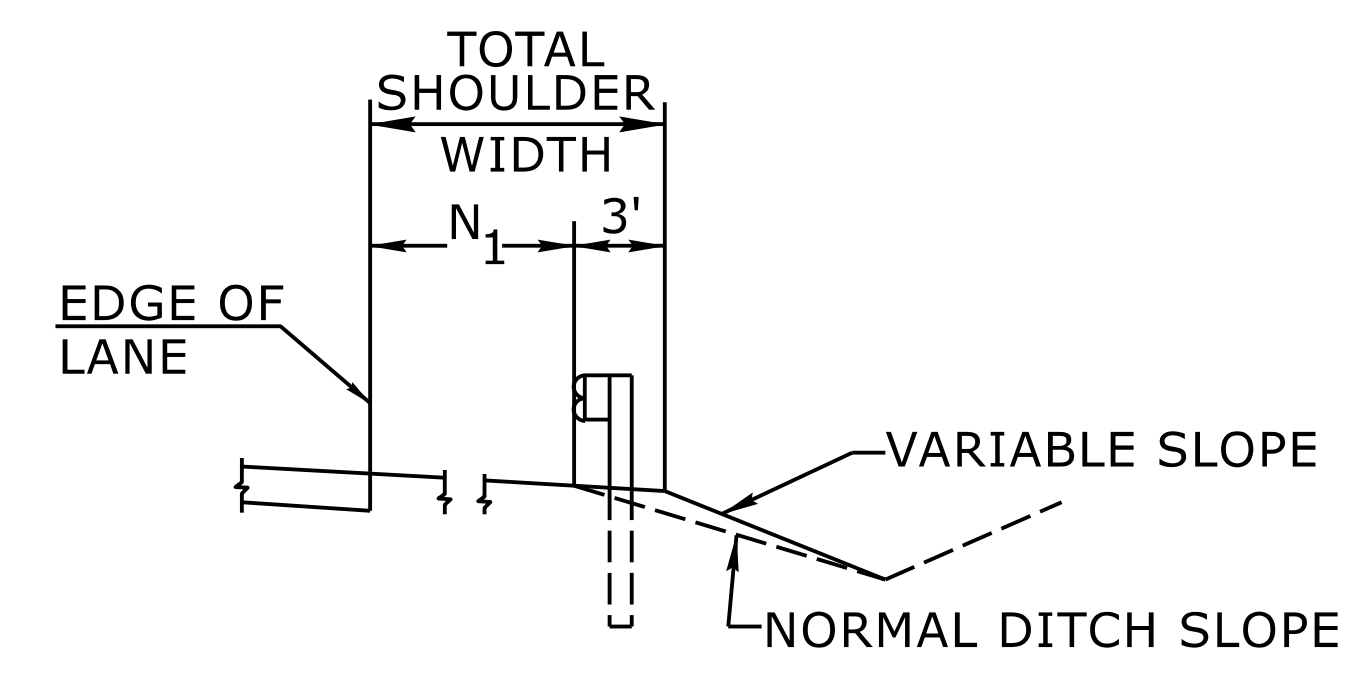
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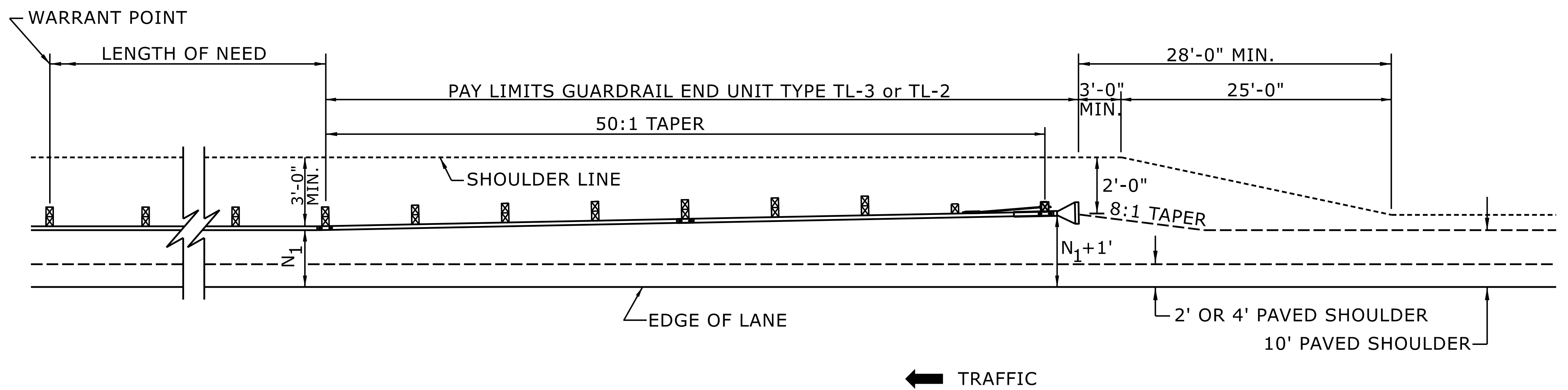


FILL SECTION



CUT SECTION

"N₁" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



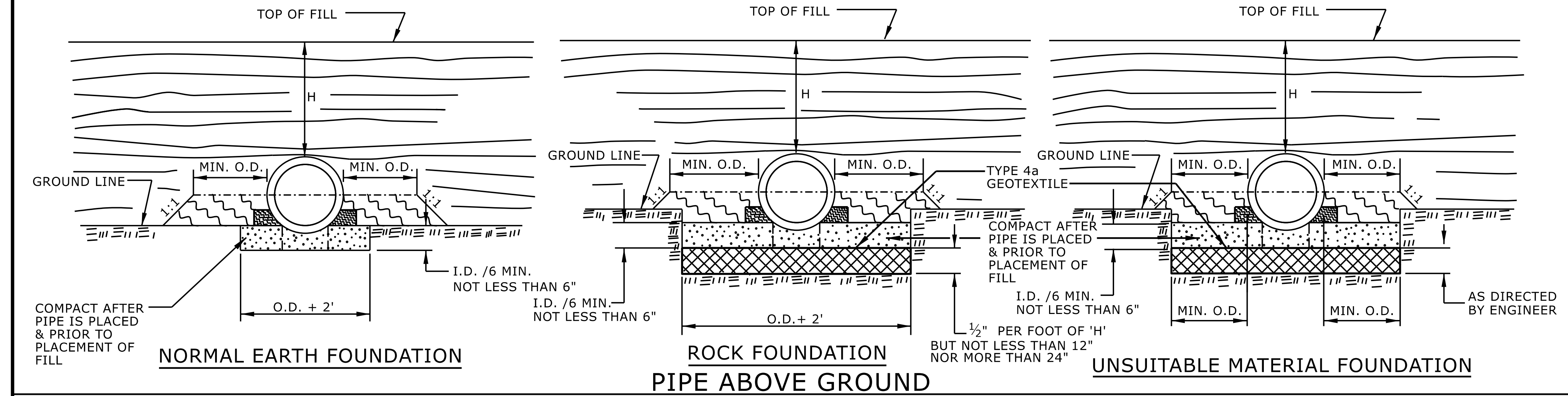
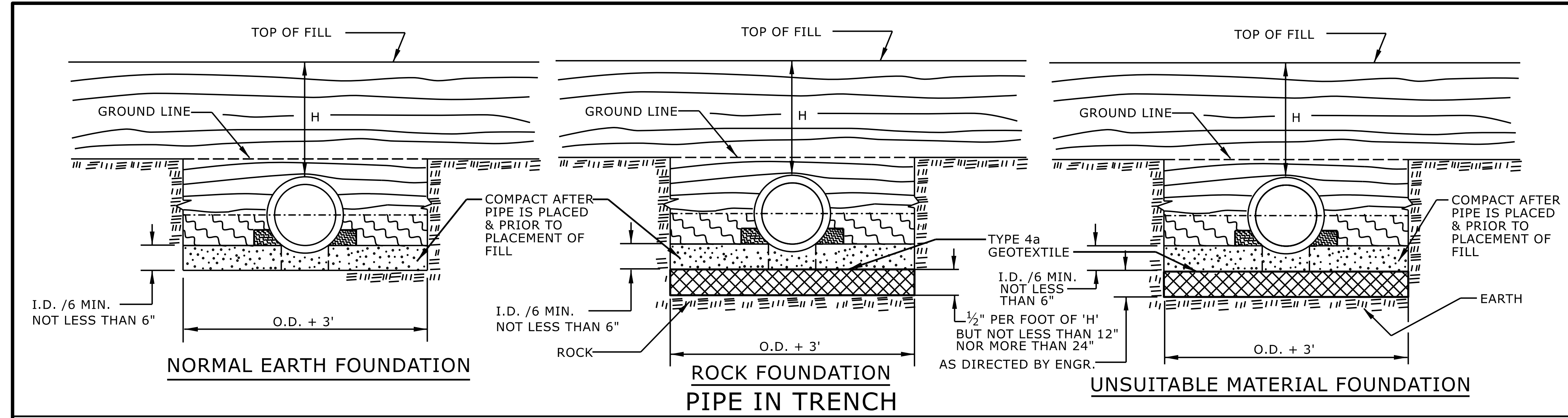
SHEET 6 OF 15
862D01

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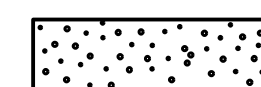
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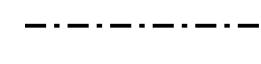

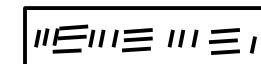

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GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

 APPROVED SUITABLE LOCAL MATERIAL.
 TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

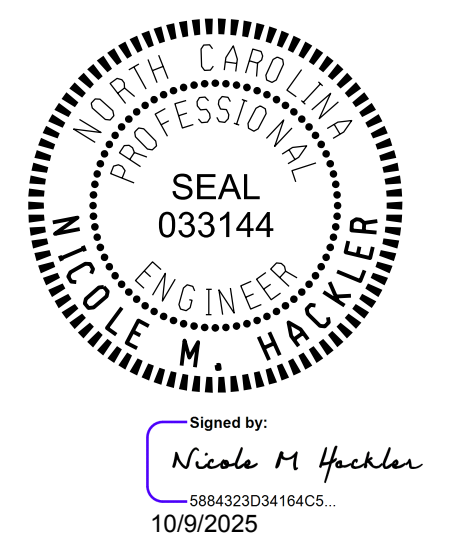
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
 REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

-  SPRINGLINE OF PIPE
-  SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.
-  UNDISTURBED EARTH MATERIAL
-  SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
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 DEPT. OF TRANSPORTATION
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 RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 RIGID PIPE

SHEET 2 OF 2
300.01

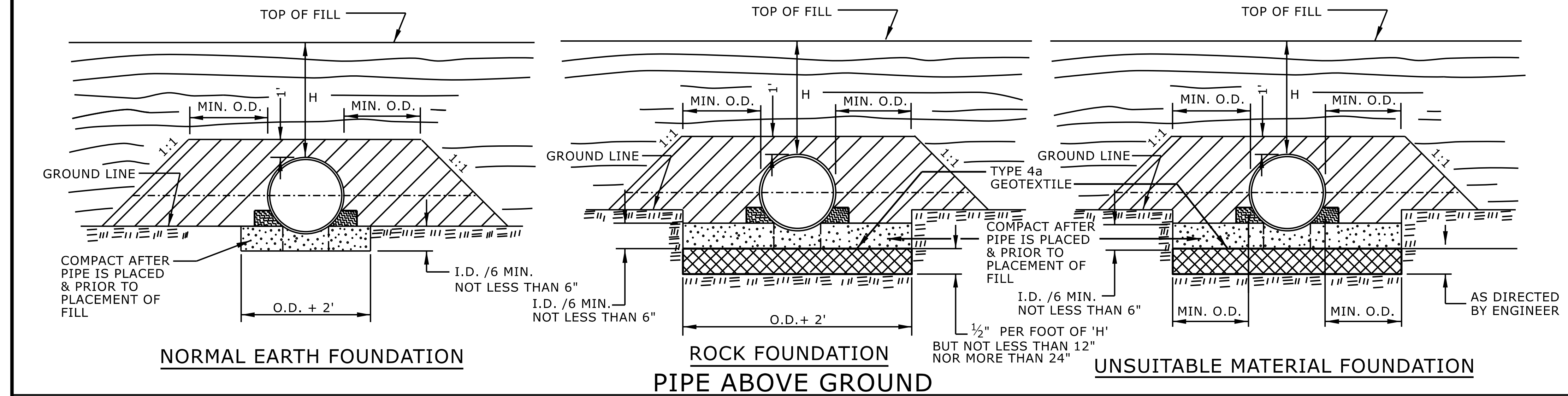
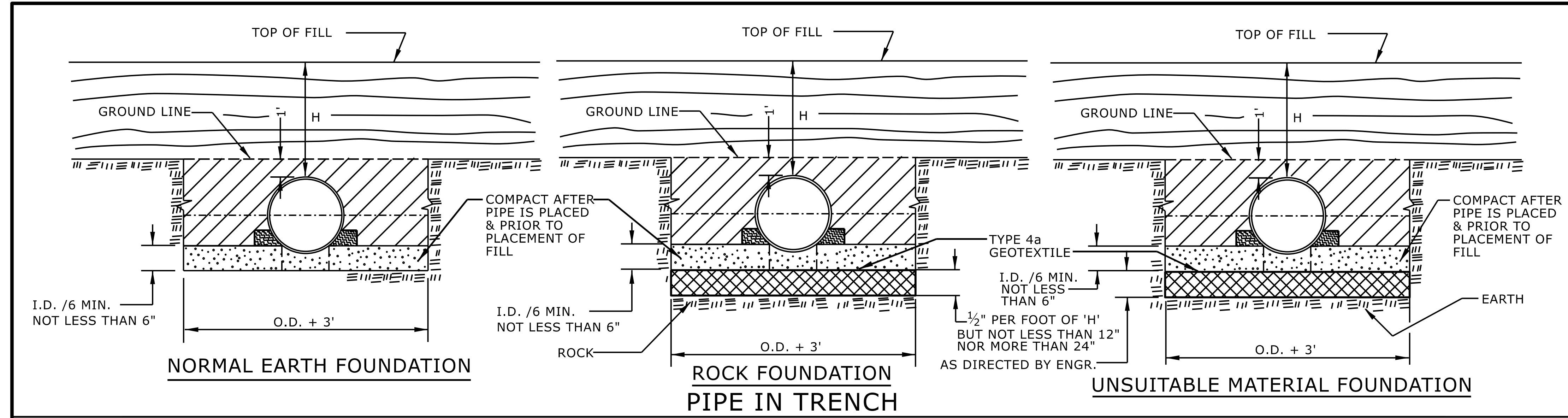


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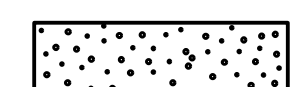
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 CHECKED BY: DATE:
 FILE SPEC.:

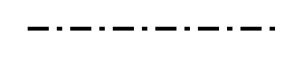
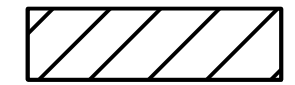
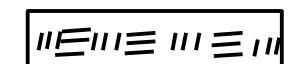



GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

 APPROVED SUITABLE LOCAL MATERIAL.
 TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

 SPRINGLINE OF PIPE
 SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
 UNDISTURBED EARTH MATERIAL
 SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FLEXIBLE PIPE



SHEET 1 OF 2
300.01

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

**CONTRACTS STANDARDS
 AND DEVELOPMENT UNIT**
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: DATE:

COMPUTED BY: J. Daily DATE: 1/4/2024
 CHECKED BY: L. Campos DATE: 1/4/2024

(2-3-23)

PROJECT NO. BP14.R006	SHEET NO. 3G-1
--------------------------	-------------------

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU	12	100	200	300		
					TOTAL CY/TONS/SY:	100	200**	300**	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
 *AST = Aggregate Stabilization
 **Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

SUMMARY OF ROCK PLATING

LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY	
-STREAM-	1.5:1	10+10.00	1.5:1	12+62.50	LT & RT	3	2	1050	
CONTINGENCY								200	
								TOTAL SY:	1250

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF REINFORCED SOIL SLOPES AND SLOPE EROSION CONTROL

LINE	Beginning Slope/ RSS (H:V)	Approx. Station	Ending Slope/ RSS (H:V)	Approx. Station	Location LT/RT	Reinforced Soil Slope (RSS) SY	Geocells SY	Coir Fiber Mat SY	Matting for Erosion Control SY
L	1.9:1	10+00	1.9:1	10+20	LT			50	
TOTAL SY:						0	0	50*	0**

*Total square yards of "Coir Fiber Mat" is only the estimated quantity for slopes steeper than 2:1 (H:V) and may only represent a portion of the coir fiber mat quantity shown in the Item Sheets of the Proposal.
 **Total square yards of "Matting for Erosion Control" is only the estimated quantity for RSS and may only represent a portion of the matting quantity shown in the Item Sheets of the Proposal.

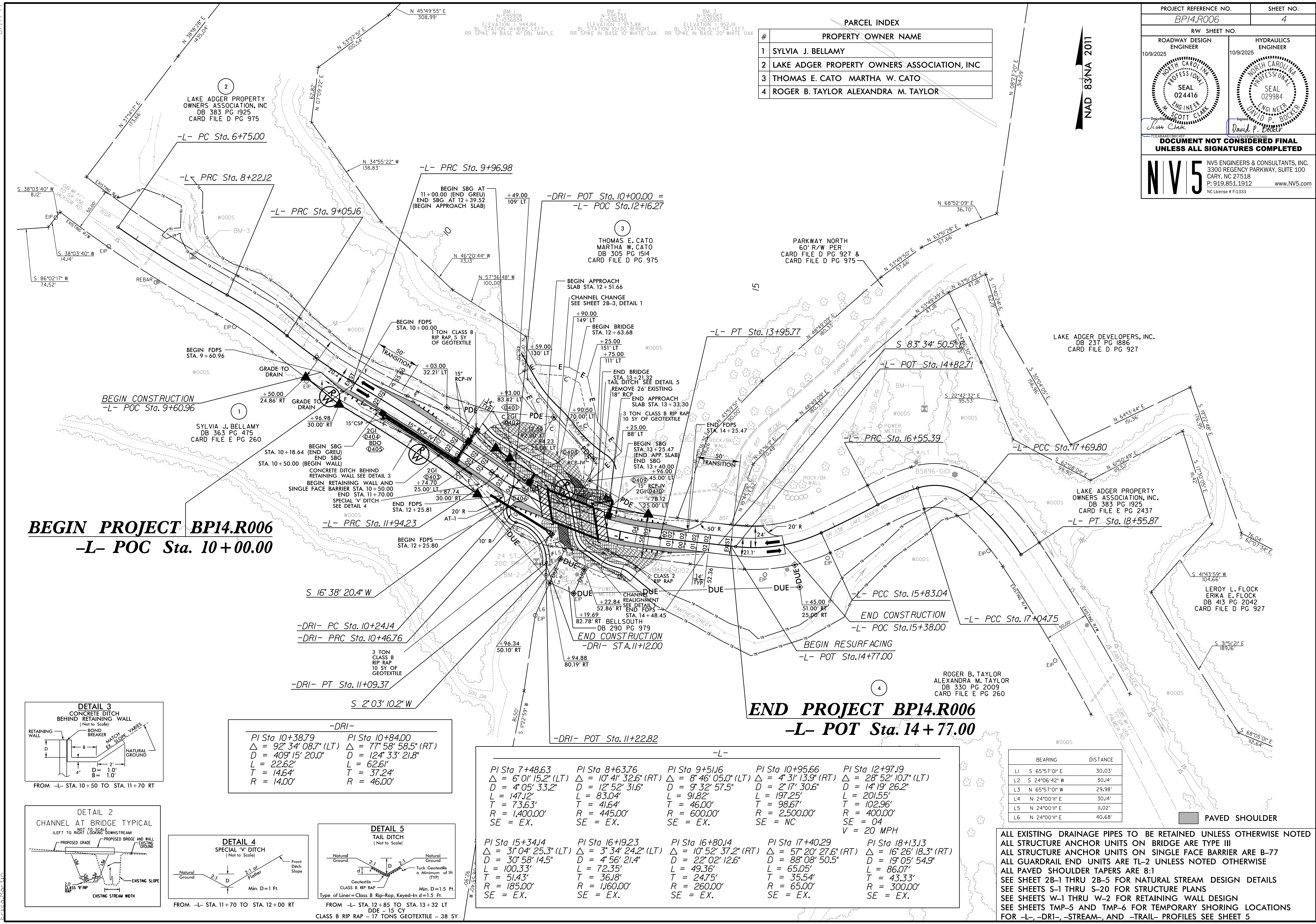
8/17/99

PROJECT REFERENCE NO. BP14.R006	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 10/9/2025	HYDRAULICS ENGINEER 10/9/2025
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	
<p>NV5 NV5 ENGINEERS & CONSULTANTS, INC. 3300 REGENCY PARKWAY, SUITE 100 CARY, NC 27518 P: 919.851.1912 www.NV5.com NC License # F-1333</p>	

PARCEL INDEX

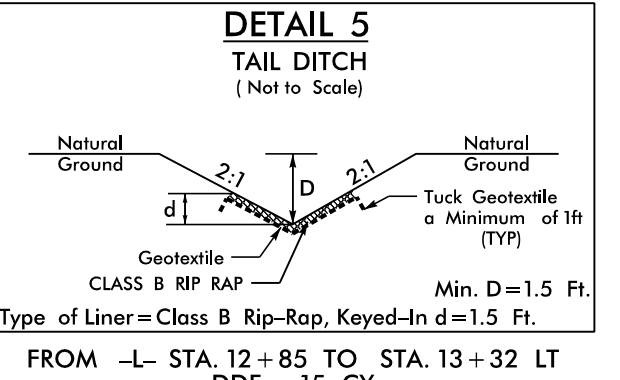
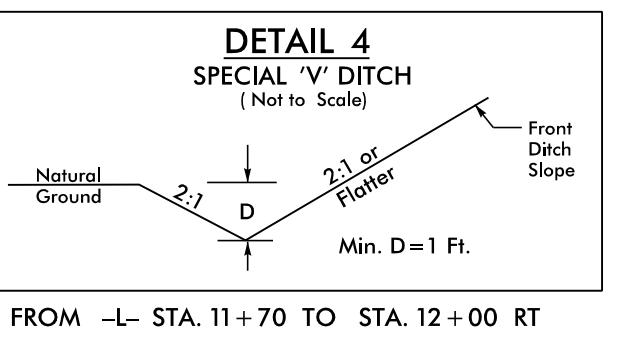
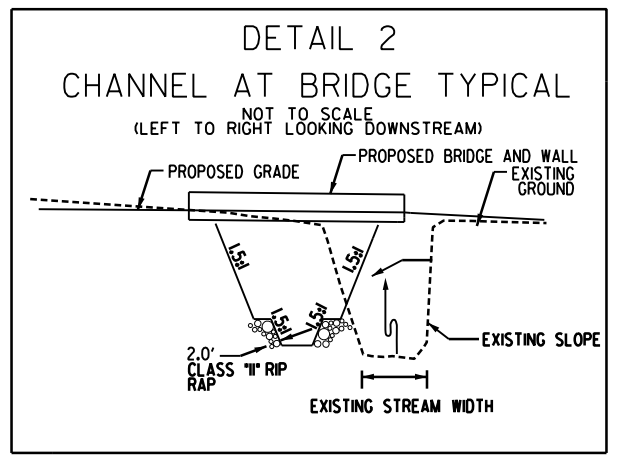
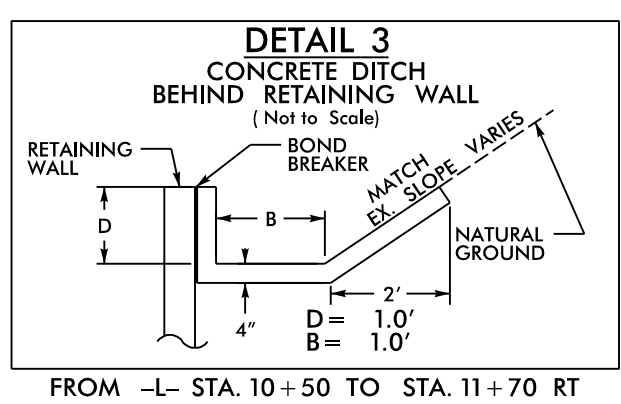
#	PROPERTY OWNER NAME
1	SYLVIA J. BELLAMY
2	LAKE ADGER PROPERTY OWNERS ASSOCIATION, INC
3	THOMAS E. CATO MARTHA W. CATO
4	ROGER B. TAYLOR ALEXANDRA M. TAYLOR

NAD 83NA 2011



BEGIN PROJECT BP14.R006
 -L- POC Sta. 10+00.00

END PROJECT BP14.R006
 -L- POT Sta. 14+77.00



-DRI-

PI Sta 10+38.79	PI Sta 10+84.00
$\Delta = 92^\circ 34' 08.7''$ (LT)	$\Delta = 77^\circ 58' 58.5''$ (RT)
D = 409' 15" 20.0"	D = 124' 33" 21.8"
L = 22.62'	L = 62.61'
T = 14.64'	T = 37.24'
R = 14.00'	R = 46.00'

-L-

PI Sta 7+48.63	PI Sta 8+63.76	PI Sta 9+51.16	PI Sta 10+95.66	PI Sta 12+97.19
$\Delta = 6^\circ 01' 15.2''$ (LT)	$\Delta = 10^\circ 41' 32.6''$ (RT)	$\Delta = 8^\circ 46' 05.0''$ (LT)	$\Delta = 4^\circ 31' 13.9''$ (RT)	$\Delta = 28^\circ 52' 10.7''$ (LT)
D = 4' 05" 33.2"	D = 12' 52" 31.6"	D = 9' 32" 57.5"	D = 2' 17" 30.6"	D = 14' 19" 26.2"
L = 147.12'	L = 83.04'	L = 91.82'	L = 197.25'	L = 201.55'
T = 73.63'	T = 41.64'	T = 46.00'	T = 98.96'	T = 102.96'
R = 1,400.00'	R = 445.00'	R = 600.00'	R = 2,500.00'	R = 400.00'
SE = EX.	SE = EX.	SE = EX.	SE = NC	SE = 04
				V = 20 MPH

BEARING	DISTANCE
L1 S 65°57'01" E	30.03'
L2 S 24°06'42" W	30.14'
L3 N 65°57'01" W	29.98'
L4 N 24°00'11" E	30.14'
L5 N 24°00'11" E	11.02'
L6 N 24°00'11" E	40.68'

ALL EXISTING DRAINAGE PIPES TO BE RETAINED UNLESS OTHERWISE NOTED
 ALL STRUCTURE ANCHOR UNITS ON BRIDGE ARE TYPE III
 ALL STRUCTURE ANCHOR UNITS ON SINGLE FACE BARRIER ARE B-77
 ALL GUARDRAIL END UNITS ARE TL-2 UNLESS NOTED OTHERWISE
 ALL PAVED SHOULDER TAPERS ARE 8:1
 SEE SHEET 2B-1 THRU 2B-5 FOR NATURAL STREAM DESIGN DETAILS
 SEE SHEETS S-1 THRU S-20 FOR STRUCTURE PLANS
 SEE SHEETS W-1 THRU W-2 FOR RETAINING WALL DESIGN
 SEE SHEETS TMP-5 AND TMP-6 FOR TEMPORARY SHORING LOCATIONS
 FOR -L-, -DRI-, -STREAM-, AND -TRAIL- PROFILES SEE SHEET 5

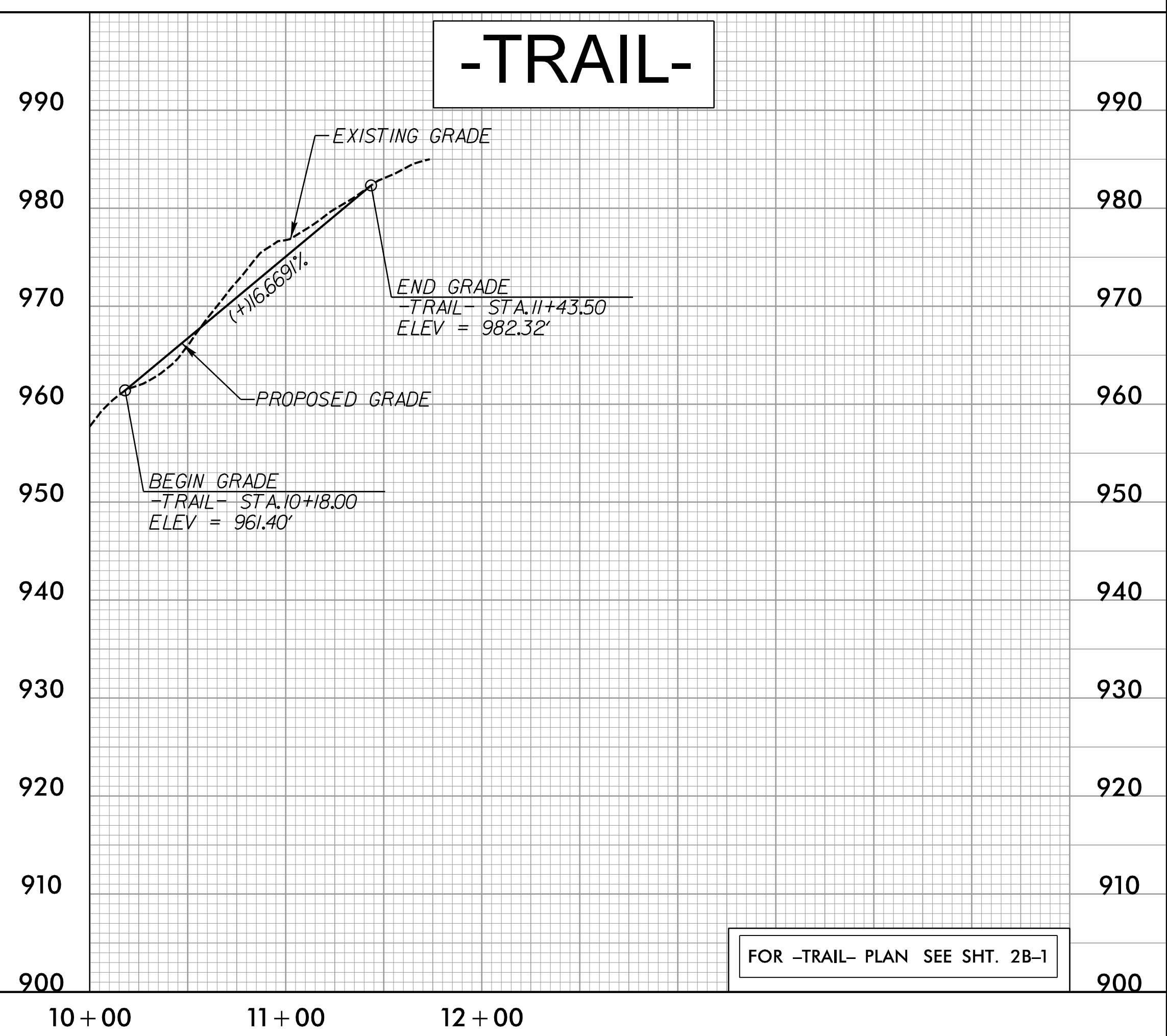
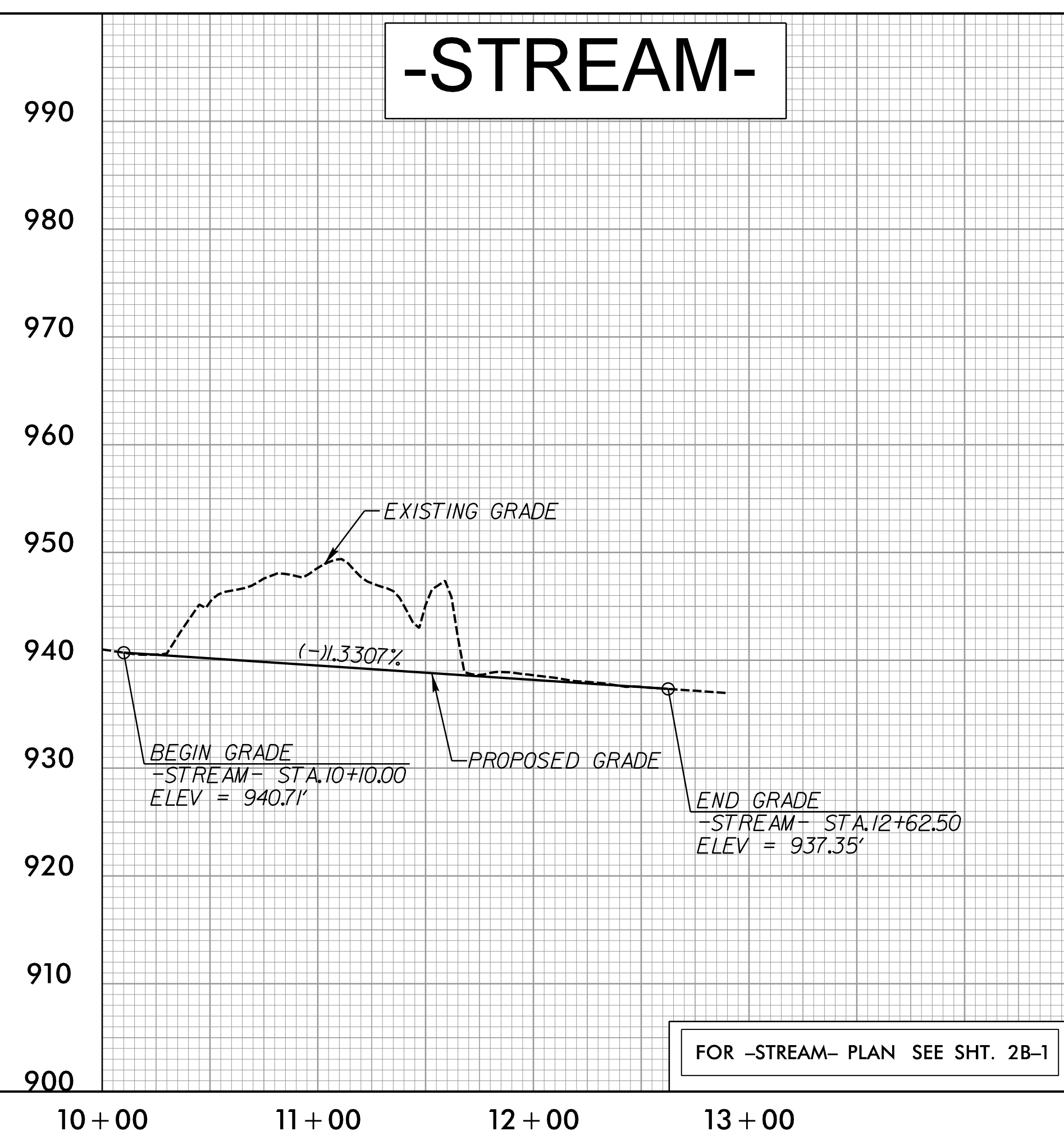
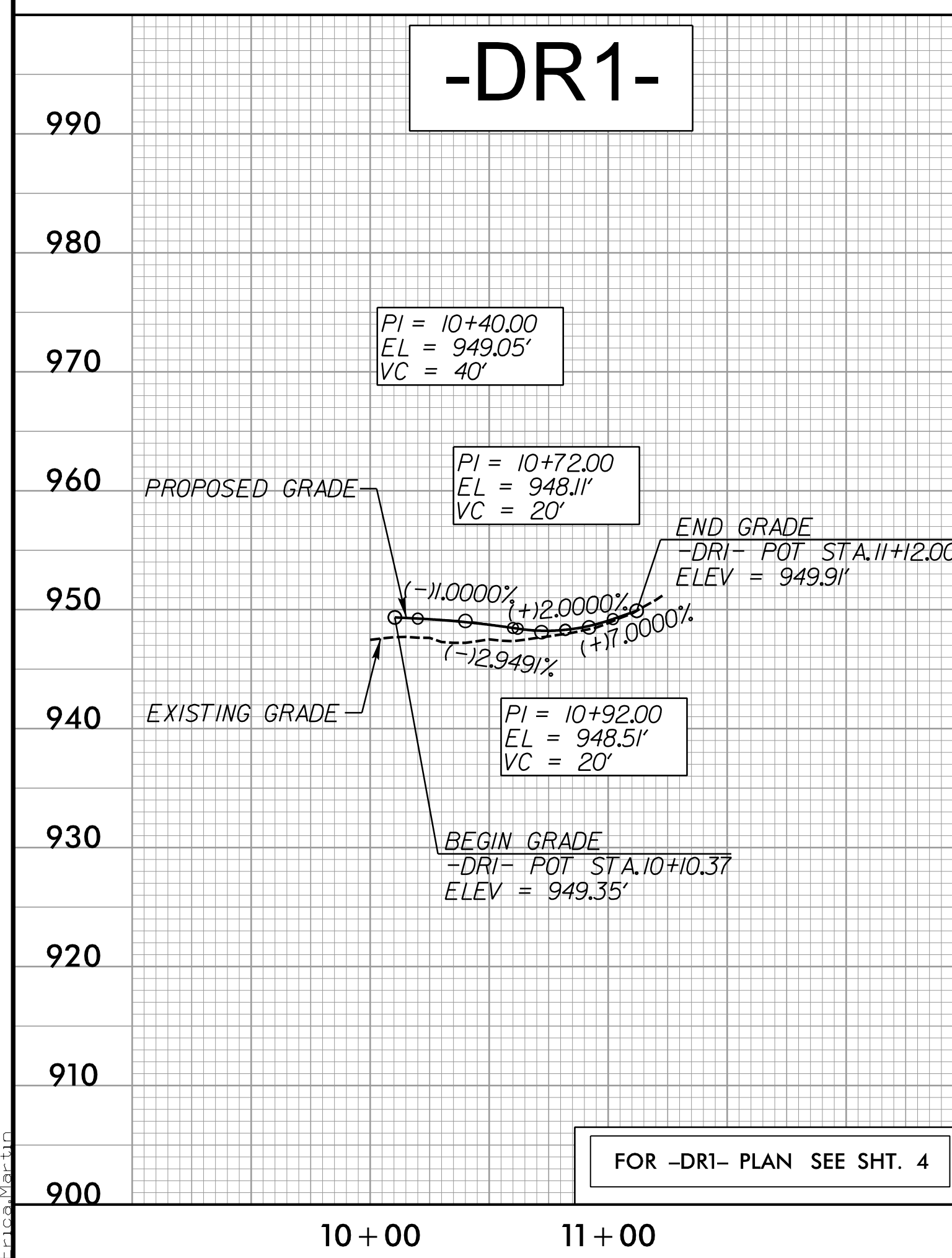
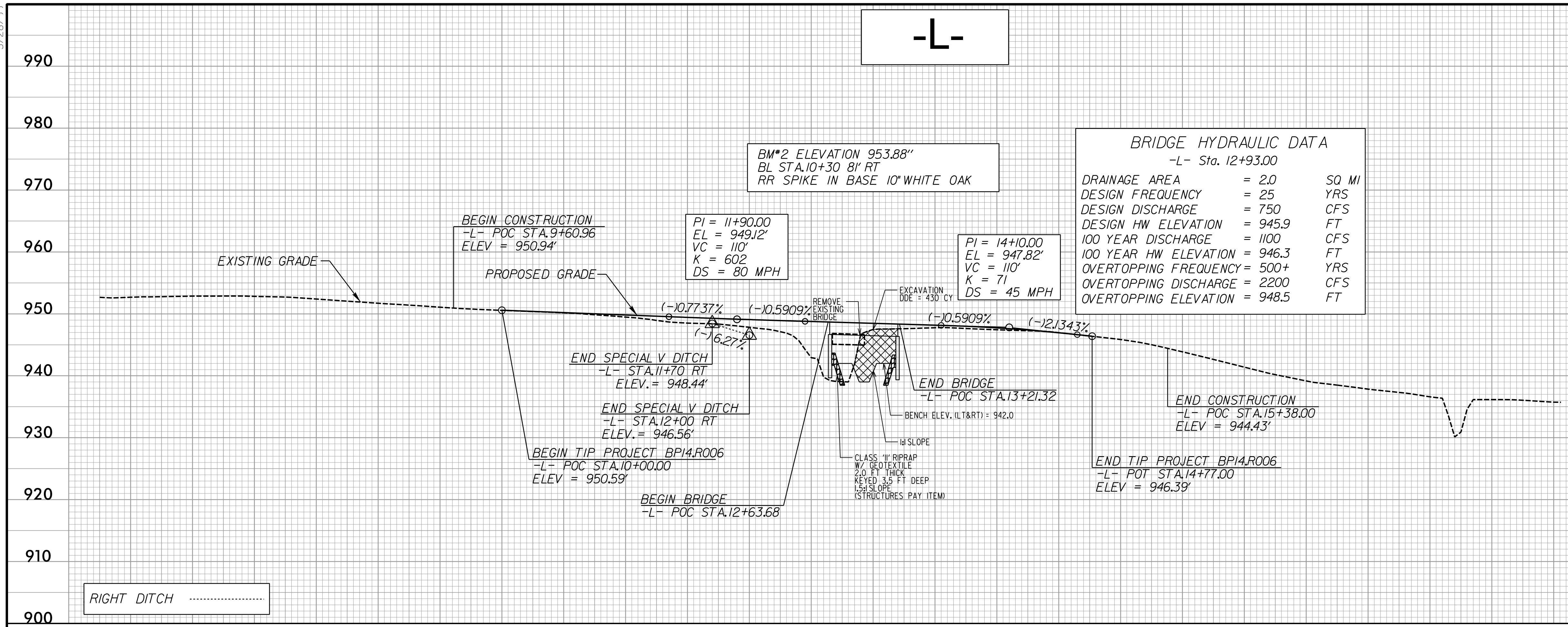
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5/28/2025

PROJECT REFERENCE NO. BPI4.R006	SHEET NO. 5
ROADWAY DESIGN ENGINEER 10/9/2025 	HYDRAULICS ENGINEER 10/9/2025

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NV5
 NV5 ENGINEERS & CONSULTANTS, INC.
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 CARY, NC 27518
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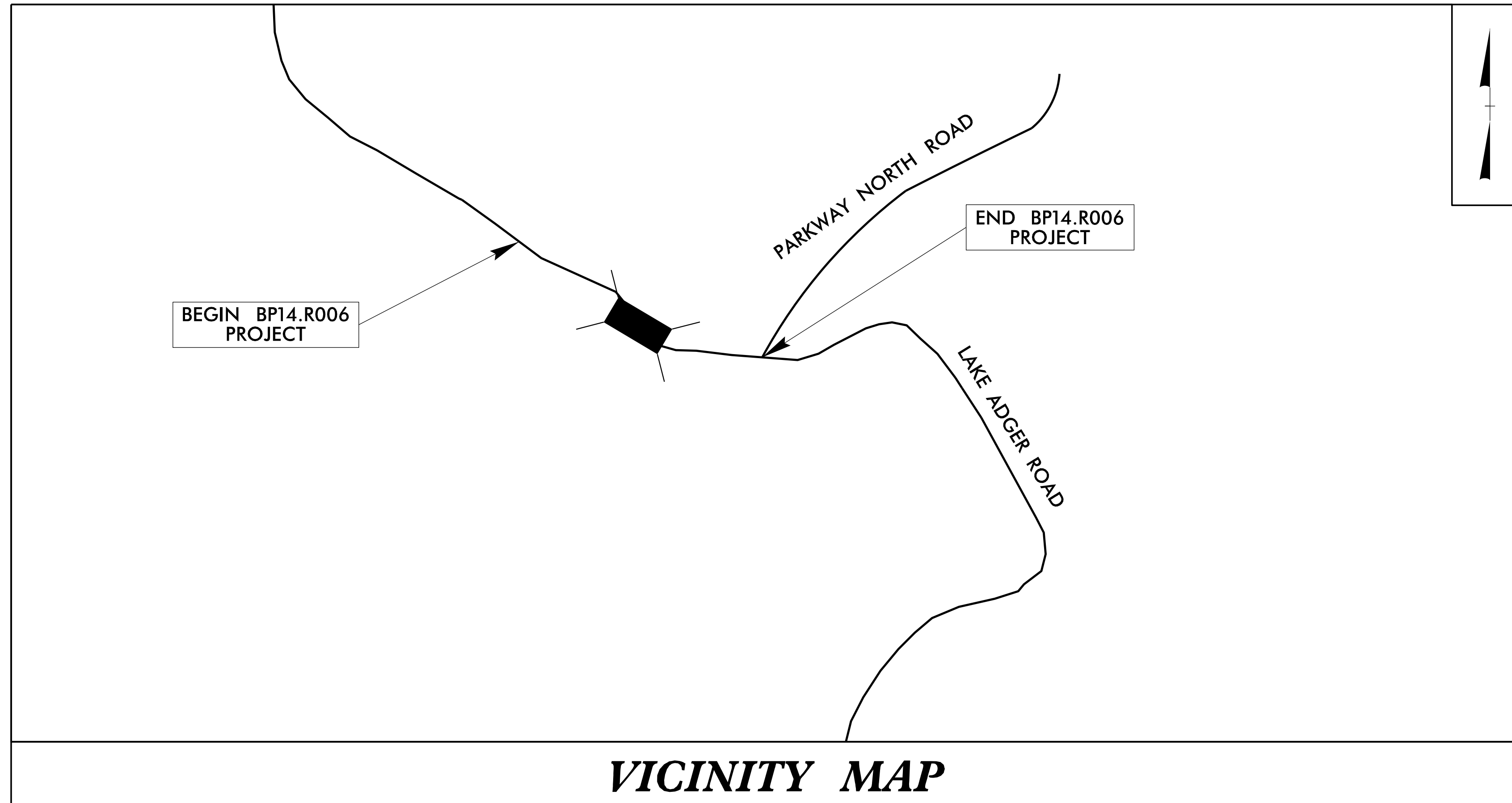
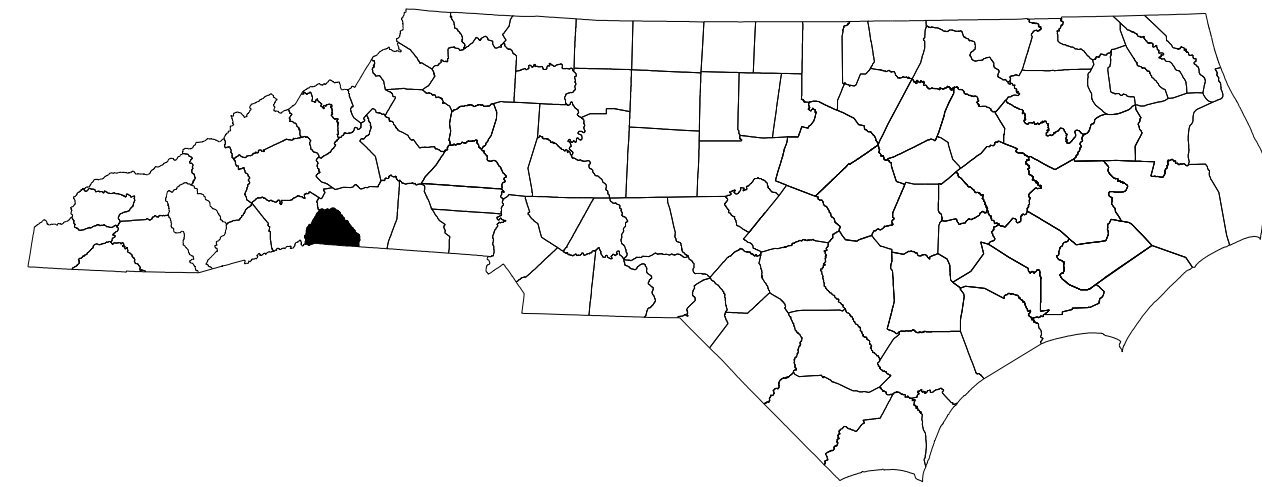
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 E:\Projects\BPI4.R006\Drawings\DRY_PSH_05.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

POLK COUNTY

**BRIDGE REPLACEMENT OF BRIDGE 143 ON SR 1138 (LAKE ADGER ROAD)
OVER PANTHER CREEK**



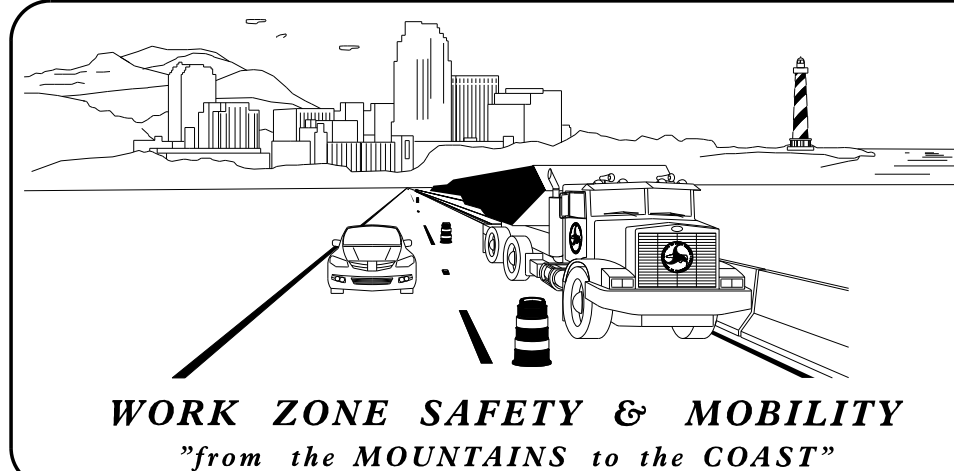
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-3A-3B	GENERAL NOTES
TMP-3C	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-3D	TEMPORARY SHORING NOTES
TMP-4A-4B	PHASING NOTES AND PLAN
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE I - STEP 1
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE I - STEP 2
TMP-7	TEMPORARY TRAFFIC CONTROL PHASE II

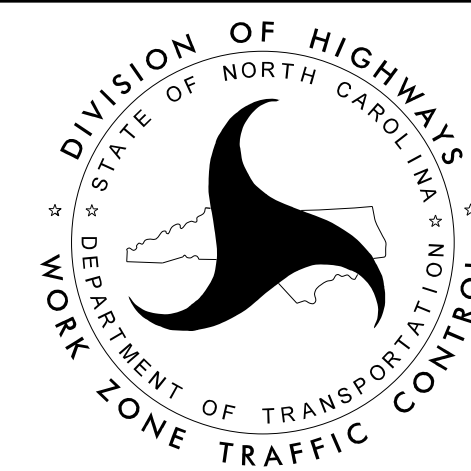
SHEET NO.
TMP-1

BP14.R006

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UNLESS ALL SIGNATURES COMPLETED**



PLANS PREPARED BY:
ZACHARY M. ESPOSITO, PE, TCDS
PROJECT ENGINEER
MIKAYLA M. LINDSEY, PE
PROJECT DESIGN ENGINEER



DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR.,
SUITE 220 CHARLOTTE, NC 28262
PHONE: 704-549-4260

NC LICENSE NO. F-1524
www.drmp.com

APPROVED:
DATE: 10/8/2025

SEAL



CONTRACT:



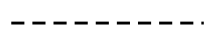
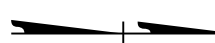


ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

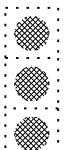
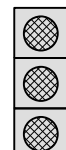
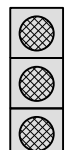

-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  TEMP. SHORING (LOCATION PURPOSES ONLY)

 WORK AREA

 REMOVAL

 WEDGING








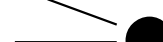




SIGNALS

-  EXISTING
-  PROPOSED
-  TEMPORARY
-  PORTABLE




PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES




TRAFFIC CONTROL DEVICES

-  BARRICADE (TYPE III)
-  PEDESTRIAN BARRICADE
-  CONE
-  DRUM
-  SKINNY DRUM
-  TUBULAR MARKER
-  TEMPORARY CRASH CUSHION
-  FLASHING ARROW BOARD
-  FLAGGER
-  LAW ENFORCEMENT
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

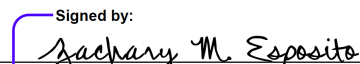
-  CRYSTAL / CRYSTAL
-  CRYSTAL / RED
-  YELLOW / YELLOW

PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

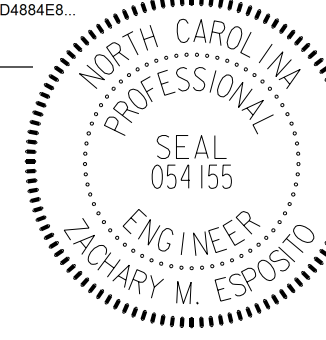
TEMPORARY PAVEMENT MARKING

-  P61
- WHITE STOPBAR
- PAINT (24")
- LF

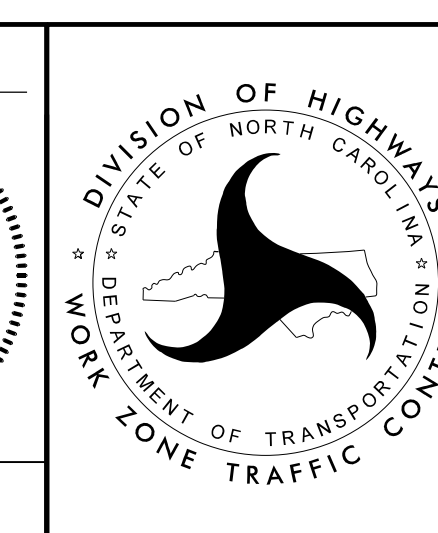
APPROVED: 
Signed by: Anthony M. Esposito
 05410707824884ER

DATE: 10/8/2025

SEAL



**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



**ROADWAY STANDARD
 DRAWINGS & LEGEND**

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
LAKE ADGER ROAD	NONE

B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON LAKE ADGER ROAD.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

O) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.


INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

P) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

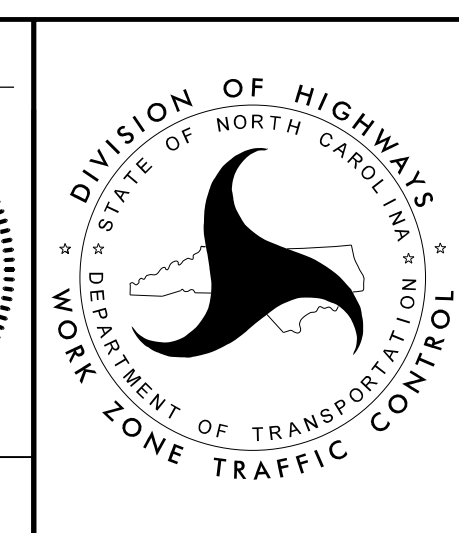
POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH OR HIGHER	30 FT

APPROVED: 
Signed by: Zachary M. Esposito
 054707804848E8

DATE: 10/8/2025


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GENERAL NOTES

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GENERAL NOTES

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TRAFFIC CONTROL DEVICES

Q) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- T) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKINGS	MARKER
LAKE ADGER ROAD	PAINT 4"	TEMPORARY RAISED
PARKWAY NORTH ROAD	PAINT 4"	NONE

MISCELLANEOUS

U) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 200FT AND 200FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

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<h2 style="margin: 0;">GENERAL NOTES</h2>		

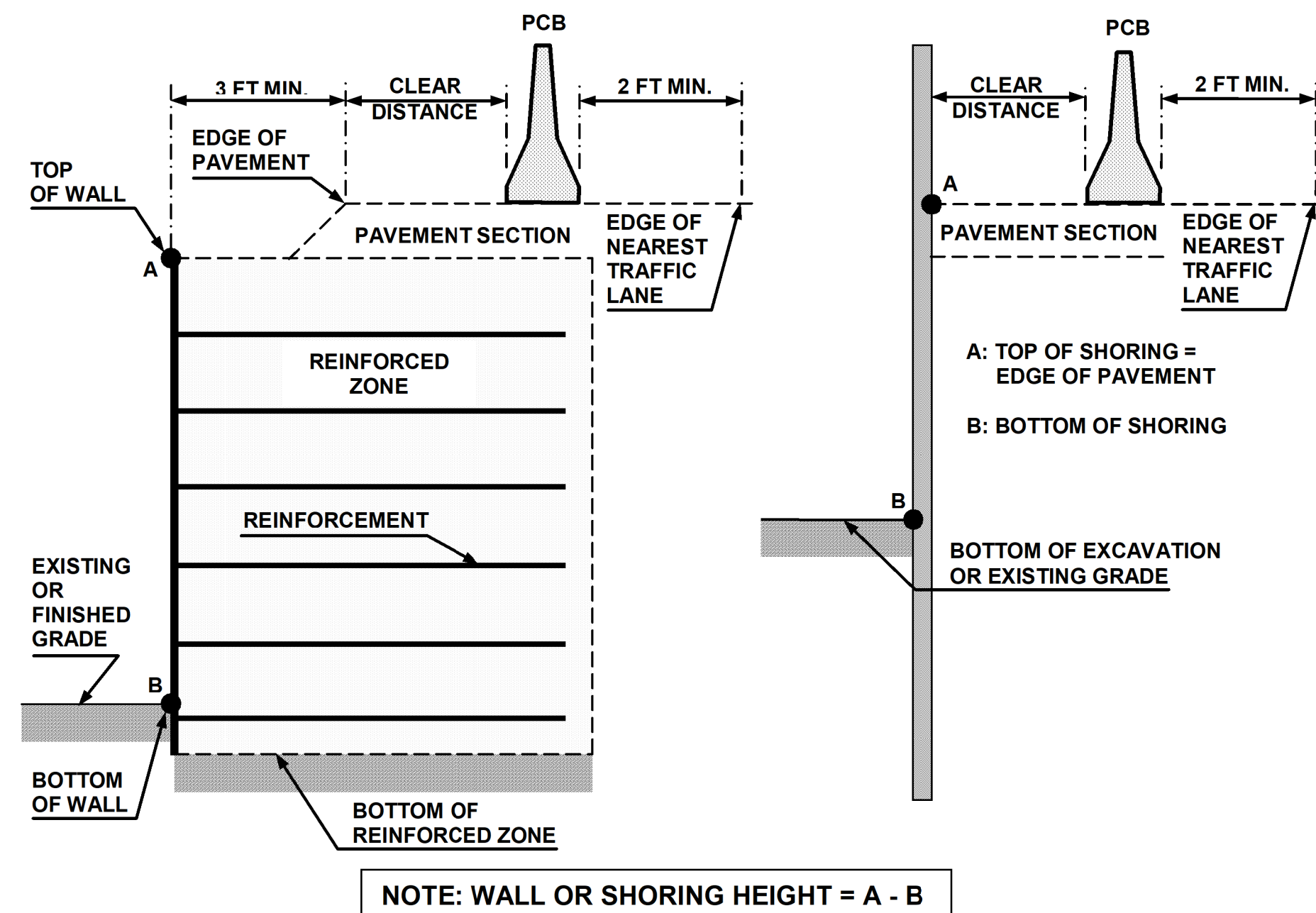


FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
	50-56	32	36	42	44	47	50	
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
26-32		24	25	27	28	32	35	
32-38		24	26	27	30	33	36	
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
		Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds				

* See Figure Below

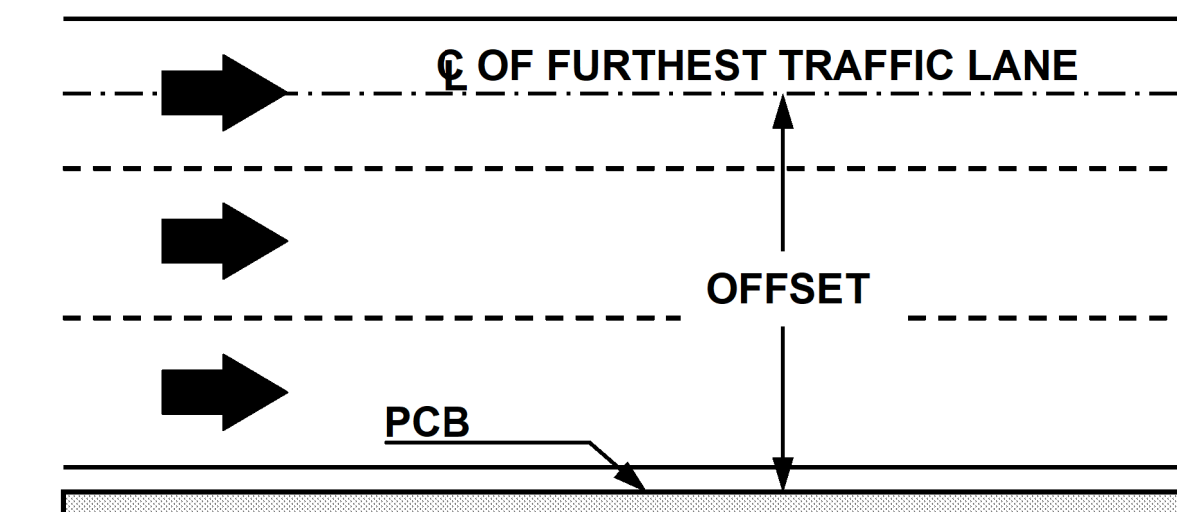
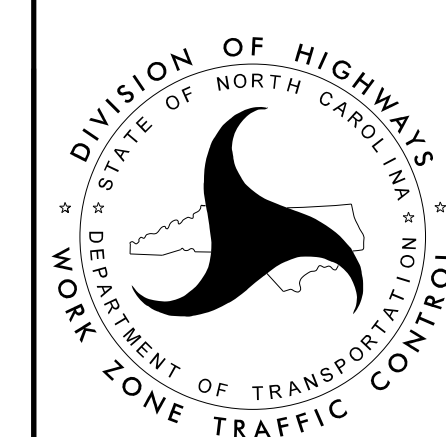


FIGURE B

DETAIL PROVIDED
BY NCDOT



PORTABLE CONCRETE
BARRIER AT TEMPORARY
SHORING LOCATIONS



TEMPORARY SHORING NOTES

TEMPORARY SHORING 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 12+51± 14.3± FT RT OF -L- TO STATION 12+79± 9.0± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

TOTAL UNIT WEIGHT = 140 LB/CF
FRICTION ANGLE (F) = 45 DEGREES
COHESION (C) = 0 LB/SF
GROUNDWATER ELEVATION = N/A FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 12+51± 14.3± FT RT OF -L- TO STATION 12+79± 9.0± FT RT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 12+51± 14.3± FT RT OF -L- TO STATION 12+79± 9.0± FT RT OF -L-. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 12+51± 14.3± FT RT OF -L- TO STATION 12+79± 9.0± FT RT OF -L-. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 12+92± 7.5± FT RT OF -L- TO STATION 13+29± 0.1± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

TOTAL UNIT WEIGHT = 115 LB/CF
FRICTION ANGLE (F) = 28 DEGREES
COHESION (C) = 0 LB/SF
GROUNDWATER ELEVATION = N/A FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 12+92± 7.5± FT RT OF -L- TO STATION 13+29± 0.1± FT RT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 12+92± 7.5± FT RT OF -L- TO STATION 13+29± 0.1± FT RT OF -L-. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 12+92± 7.5± FT RT OF -L- TO STATION 13+29± 0.1± FT RT OF -L-. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING 3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 12+46± 0.8± FT RT OF -L- TO STATION 12+70± 1.6± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

TOTAL UNIT WEIGHT = 140 LB/CF
FRICTION ANGLE (F) = 45 DEGREES
COHESION (C) = 0 LB/SF
GROUNDWATER ELEVATION = N/A FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 12+46± 0.8± FT RT OF -L- TO STATION 12+70± 1.6± FT RT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 12+46± 0.8± FT RT OF -L- TO STATION 12+70± 1.6± FT RT OF -L-. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 12+46± 0.8± FT RT OF -L- TO STATION 12+70± 1.6± FT RT OF -L-. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING 4

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 12+78± 1.2± FT RT OF -L- TO STATION 13+28± 0.4± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

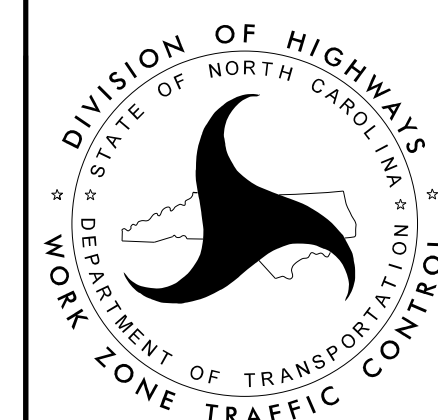
TOTAL UNIT WEIGHT = 115 LB/CF
FRICTION ANGLE (F) = 28 DEGREES
COHESION (C) = 0 LB/SF
GROUNDWATER ELEVATION = N/A FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 12+78± 1.2± FT RT OF -L- TO STATION 13+28± 0.4± FT RT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 12+78± 1.2± FT RT OF -L- TO STATION 13+28± 0.4± FT RT OF -L-. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 12+78± 1.2± FT RT OF -L- TO STATION 13+28± 0.4± FT RT OF -L-. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEER. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION BY THOMAS J. DAILY ON 12/08/2023 AND SEALED BY A PROFESSIONAL ENGINEER, THOMAS J. DAILY, PE, LICENSE NUMBER 045672



TEMPORARY SHORING NOTES

PHASING NOTES

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES (RSD 1101.01). FIELD VERIFY LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES, SCHOOLS, BUS STOPS, EMERGENCY SERVICES, AND BUSINESSES DURING THE LIFE OF THE CONTRACT, PRIOR TO INCORPORATION, OBTAIN WRITTEN APPROVAL FROM THE ENGINEER ON METHOD TO MAINTAIN ACCESS.

COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT NO PONDING OF WATER WILL OCCUR WITHIN THE TRAVEL LANE.

WHEN USING LANE CLOSURES (RSD 1101.02), RETURN TRAFFIC TO EXISTING AND/OR TEMPORARY TRAFFIC PATTERN UPON ACTIVITIES COMPLETION, UNLESS OTHERWISE NOTED IN THE PHASING PLANS.

WHEN PHASING STATES TO USE LANE CLOSURES, REFER TO THE FOLLOWING FOR ALL EXISTING AND PROPOSED ROADS:

-ALL TWO-LANE/TWO-WAY FACILITIES SEE RSD 1101.02 SHEET 1 OF 19

COMPLETE PAVING UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE UNTIL STATED TO PLACE FINAL LAYER IN THE PHASING PLANS.

WHEN WEDGING OVER EXISTING PAVEMENT, WEDGE TO PROPOSED ELEVATION (LESS THE FINAL LAYER OF SURFACE COURSE), OR WEDGE AS NEEDED TO MAINTAIN TRAFFIC. MAINTAIN POSITIVE DRAINAGE AND MAINTAIN A MAXIMUM 0.04 ROLLOVER IN BOTH EXISTING AND/OR TEMPORARY TRAVEL LANES.

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

FOR ALL SHOULDER CLOSURES, SEE RSD 1101.04. WHEN PORTABLE CONCRETE BARRIER (PCB) IS PRESENT ON SHOULDERS, PLACE SHOULDER CLOSURE SIGNS & DEVICES IN ADVANCE OF PCB.

TRAFFIC CONTROL NOTE 1:
FOR THE DURATION OF CONSTRUCTION, ENSURE ALL DRIVEWAY ACCESS IS MAINTAINED.

TRAFFIC CONTROL NOTE 2:
CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER OPERATION OF PORTABLE SIGNALS THROUGHOUT ENTIRE CONSTRUCTION TIMELINE.

TRAFFIC CONTROL NOTE 3:
CONTRACTOR MUST ENSURE PROPER CLEAR ZONES ARE MAINTAINED WHEN USING PORTABLE CONCRETE BARRIER (PCB).

TRAFFIC CONTROL NOTE 4:
STREAM AND TRAIL CONTRACTORS TO COORDINATE CONSTRUCTION OF THEIR RESPECTIVE PROJECTS WITH THE ROADWAY CONTRACTOR THROUGHOUT PHASE I AND PHASE II. THE STREAM AND TRAIL CONSTRUCTION MUST BE COMPLETED PRIOR TO MOVING ONTO PHASE III.

TRAFFIC CONTROL NOTE 5:
FOR THE DURATION OF THE PROJECT, THE TRAIL IS TO BE BARRICADED AND CLOSED.

PHASING PLAN

PHASE I

STEP 1: (SEE TMP-5)

INSTALL WORK ZONE ADVANCE WARNING SIGNS. (RSD 1101.01)

BEFORE SHIFTING INTO PHASE I - STEP 1 LONG TERM TRAFFIC PATTERN, INSTALL PORTABLE SIGNALS AND SIGNAGE FOR EACH DIRECTION. AFTER INSTALLATION, ACTIVATE PORTABLE SIGNALS.

AFTER INSTALLING SIGNALS, USING LANE CLOSURES AS NEEDED, SHIFT TRAFFIC TO THE PHASE I - STEP 1 LONG TERM TRAFFIC PATTERN.

ONCE SHIFTED AND WITH SIGNALS ACTIVE, BEGIN -L- CONSTRUCTION (INCLUDING THE NEW TRAIL) BEHIND DRUMS AND AWAY FROM TRAFFIC, TO THE FOLLOWING STATIONS:

-L- STA. 9+60 +/- TO -L- STA. 11+82 +/- (SEE TMP-5)

STEP 2: (SEE TMP-6)

MAINTAIN WORK ZONE ADVANCE WARNING SIGNS. (RSD 1101.01)

MAINTAIN PHASE I PORTABLE SIGNALS.

AWAY FROM TRAFFIC, USING LANE CLOSURES AS NEEDED, SHIFT TRAFFIC TO THE PHASE I - STEP 2 LONG TERM TRAFFIC PATTERN.


ONCE SHIFTED AND WITH SIGNALS ACTIVE, INSTALL PCB AS SHOWN ON TMP-6. AFTER PCB INSTALLATION, CONTINUE -L- CONSTRUCTION, BEHIND BARRIERS AND AWAY FROM TRAFFIC, TO THE FOLLOWING STATIONS (INCLUDING DRAINAGE):

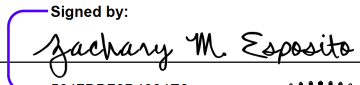
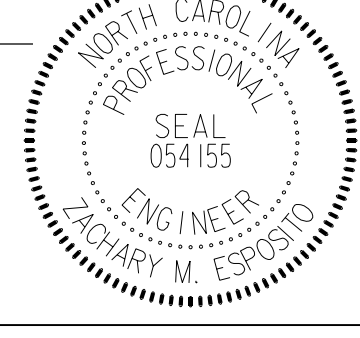

-L- STA. 10+00 +/- TO -L- STA. 15+38 +/- (SEE TMP-6)

SPECIAL WEDGING NOTE:
COMPLETE -L- WEDGING OPERATIONS ENSURING POSITIVE DRAINAGE IS MAINTAINED AND PCB IS MOVED AND RESET AFTER EACH LIFT, USING FLAGGERS AND PORTABLE SIGNALS AS NEEDED.

SHORING NOTE 1:
ENSURE TEMPORARY SHORING FOR PHASE I IS INSTALLED PER TRAFFIC CONTROL PLANS BEFORE BEGINNING PHASE I - STEP 2 CONSTRUCTION. (SEE TMP-6 FOR PHASE I TEMPORARY SHORING)

SHORING NOTE 2:
AT THE END OF PHASE I - STEP 2, ENSURE TEMPORARY SHORING FOR PHASE II IS INSTALLED PER TRAFFIC CONTROL PLANS BEFORE TRANSITIONING TO PHASE II CONSTRUCTION. (SEE TMP-7 FOR PHASE II TEMPORARY SHORING)

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PHASING PLAN

PHASE II

STEP 1: (SEE TMP-7)

MAINTAIN WORK ZONE ADVANCE WARNING SIGNS. (RSD 1101.01)

MAINTAIN PHASE I PORTABLE SIGNALS.

AWAY FROM TRAFFIC, USING LANE CLOSURES AS NEEDED, SHIFT TRAFFIC TO THE PHASE II (LONG TERM) TRAFFIC PATTERN.

ONCE SHIFTED AND WITH SIGNALS ACTIVE, RESET PCB AS SHOWN ON TMP-5. AFTER PCB RESET, COMPLETE -L- CONSTRUCTION, BEHIND BARRIERS AND AWAY FROM TRAFFIC, TO THE FOLLOWING STATIONS (INCLUDING DRAINAGE):

-L- STA. 9+60 +/- TO -L- STA. 15+38 +/- (SEE TMP-6)

SPECIAL WEDGING NOTE:

COMPLETE -L- WEDGING OPERATIONS ENSURING POSITIVE DRAINAGE IS MAINTAINED AND PCB IS MOVED AND RESET AFTER EACH LIFT, USING FLAGGERS AND PORTABLE SIGNALS AS NEEDED.

SHORING REMOVAL NOTE:

CONTRACTOR TO SAFELY REMOVE PHASE II SHORING WHEN READY TO COMPLETE BRIDGE CONSTRUCTION.

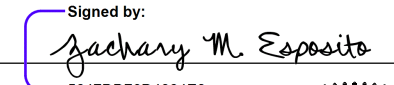
PHASE III

STEP 1:

MAINTAIN WORK ZONE ADVANCE WARNING SIGNS. (RSD 1101.01)

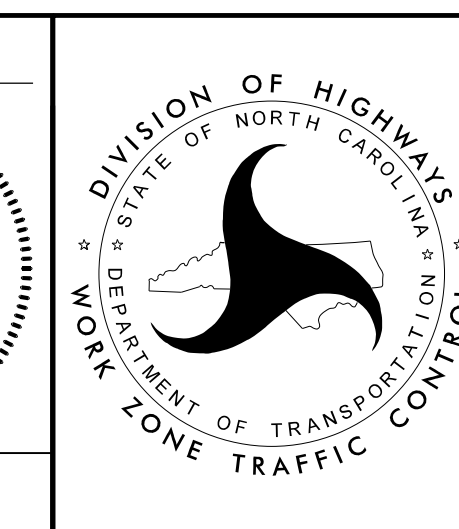
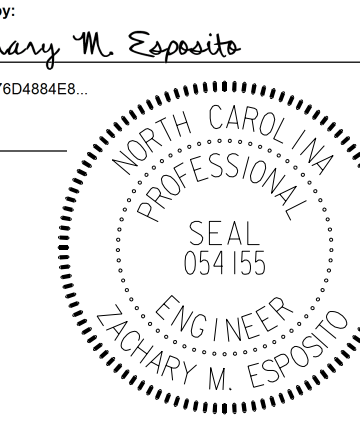
USING FLAGGERS AS NEEDED, REMOVE ALL PORTABLE SIGNALS, PCB AND SHORING FROM PREVIOUS PHASES AND ASSOCIATED WORK ZONE SIGNS.

AWAY FROM TRAFFIC, USING LANE CLOSURES AND FLAGGERS AS NEEDED, FINISH ANY REMAINING CONSTRUCTION AND/OR PAVING, INCLUDING FINAL SURFACE COURSE, AND INSTALL ANY REMAINING PAVEMENT MARKINGS AND MARKERS. SEE PAVEMENT MARKING PLAN FOR MORE DETAILS.

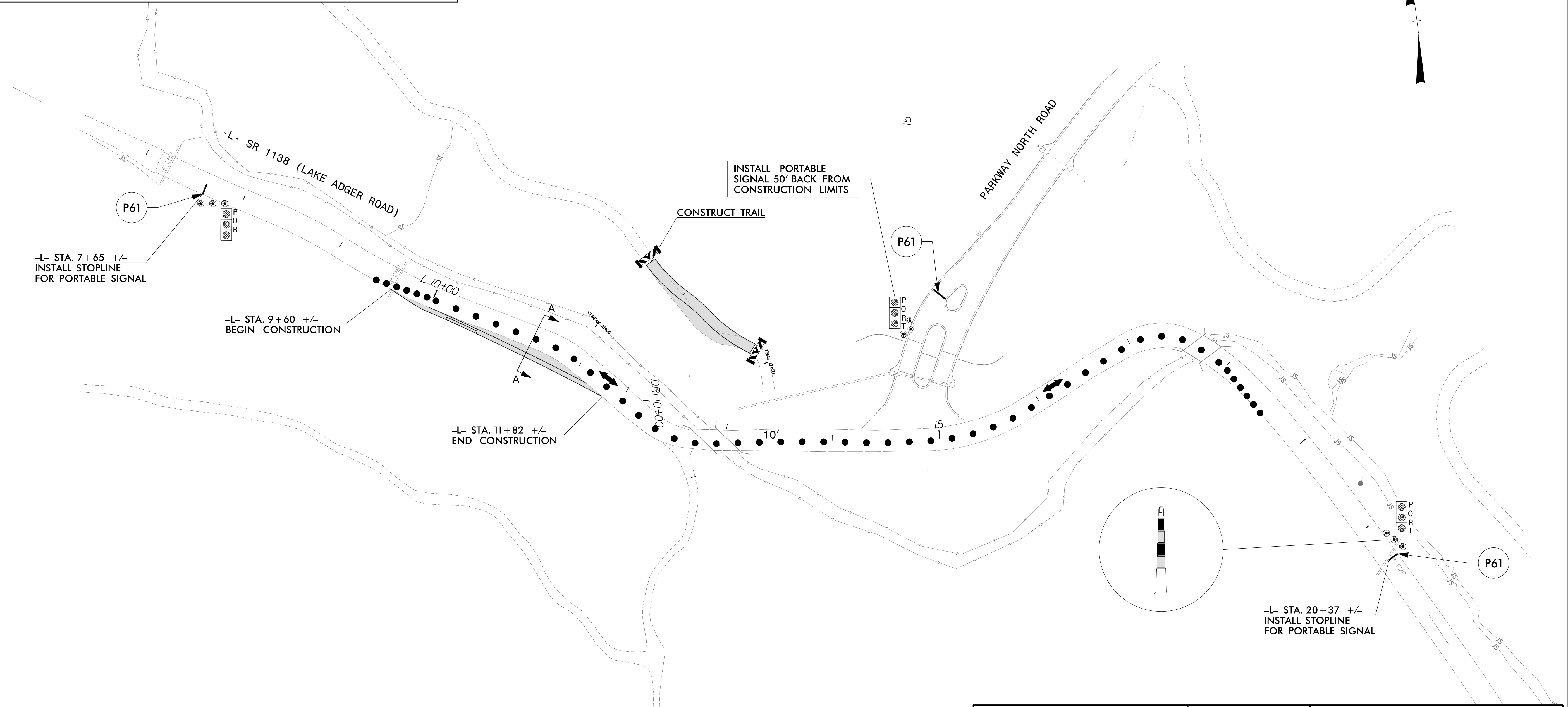
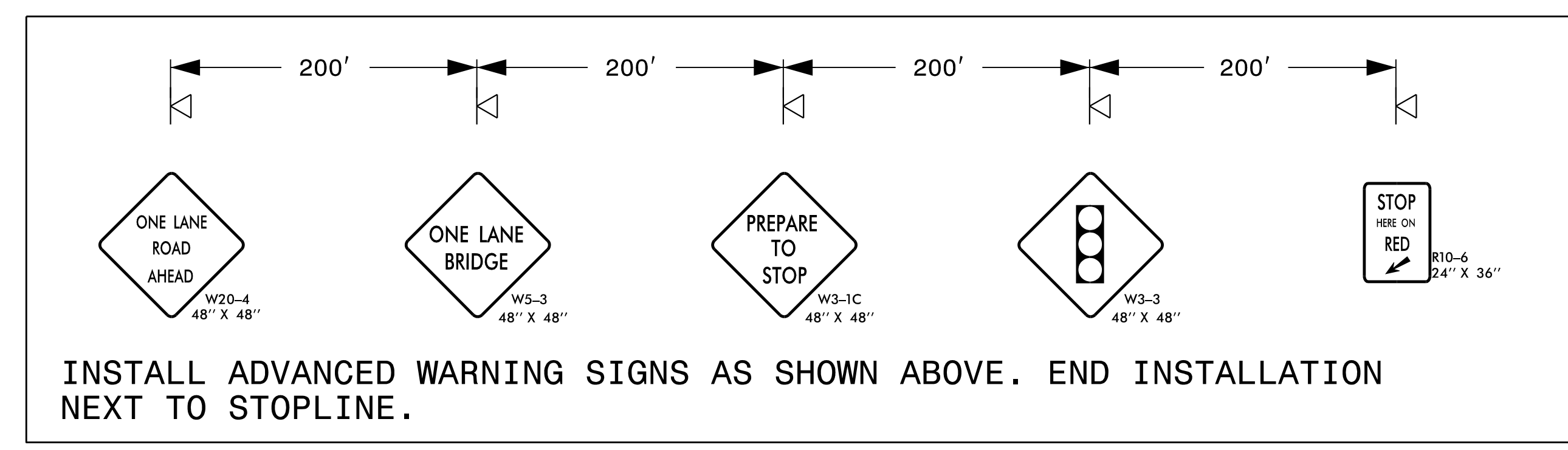
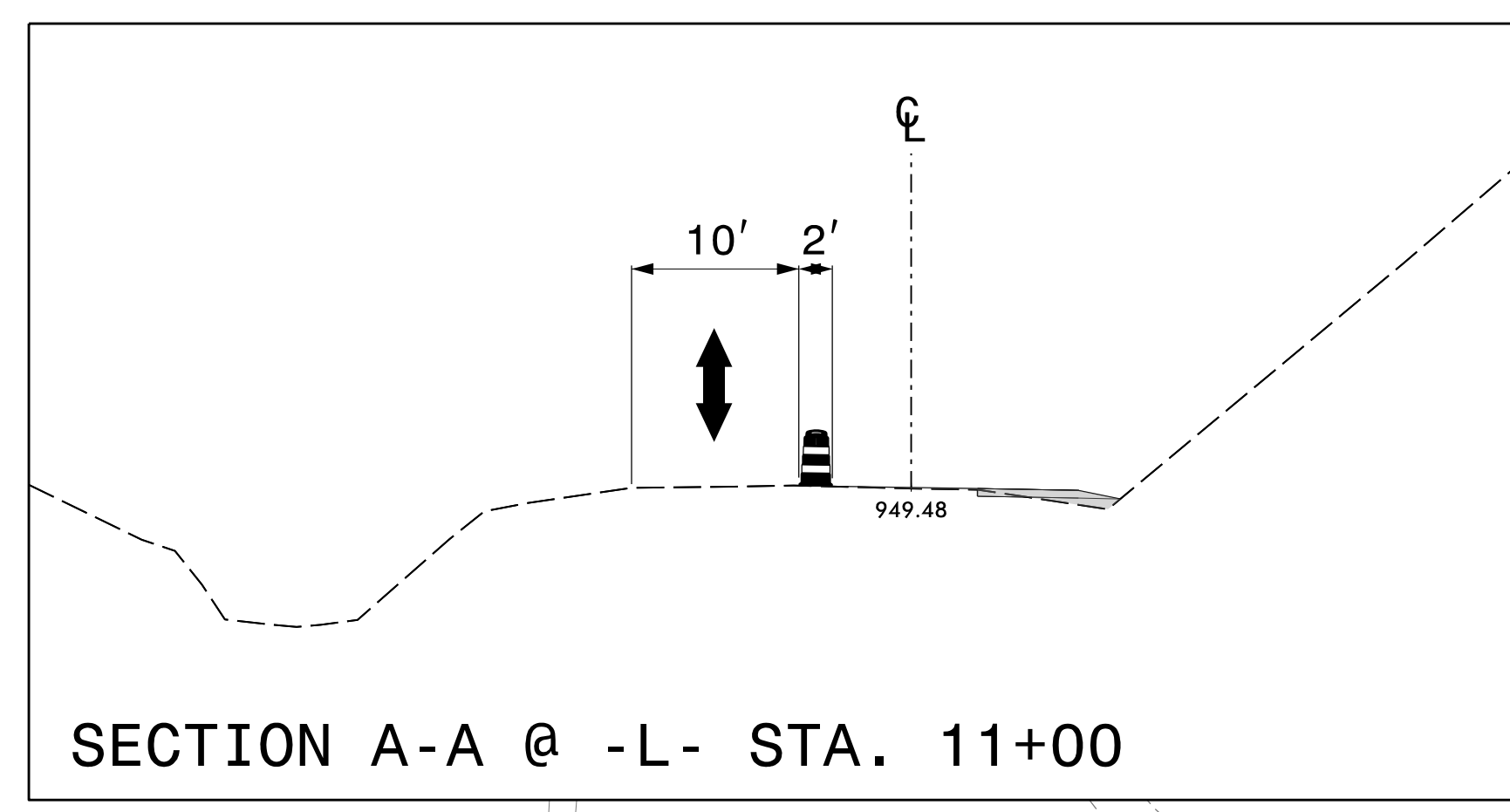
APPROVED: 
DATE: 10/8/2025

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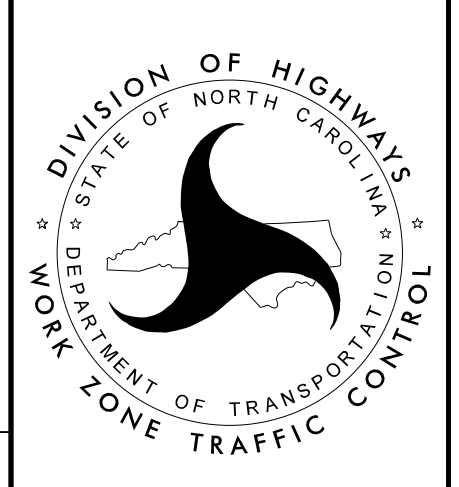
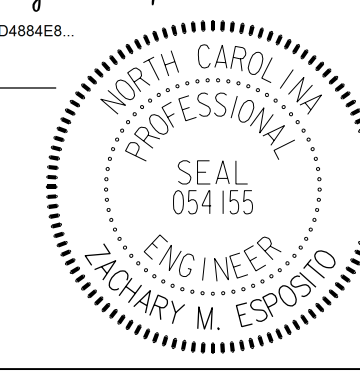
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PHASING NOTES
AND PLAN

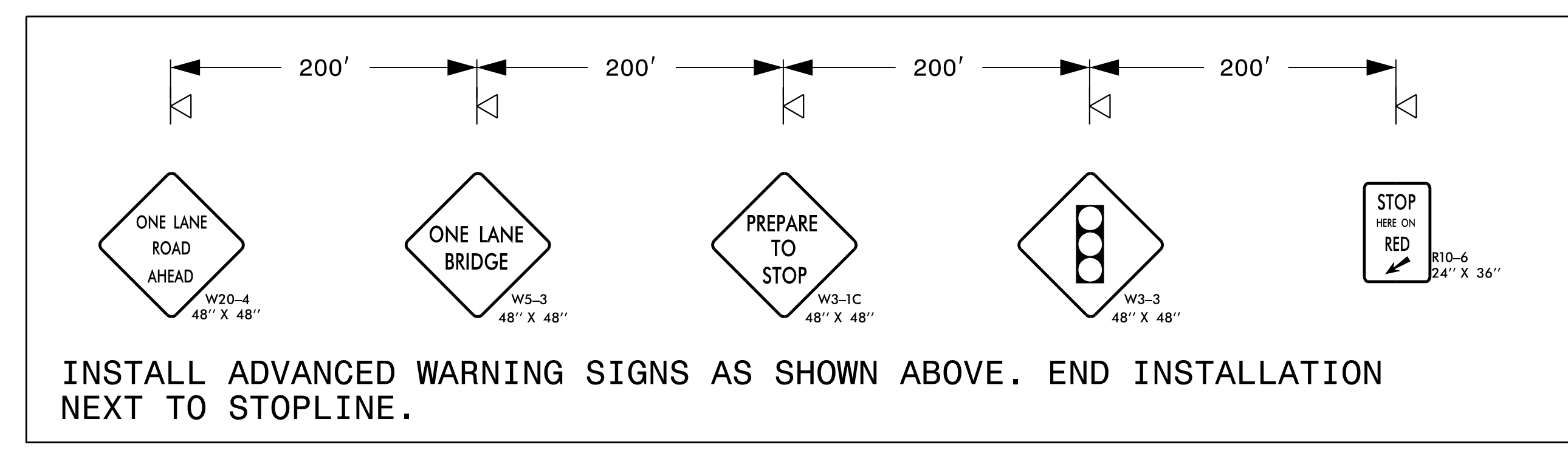
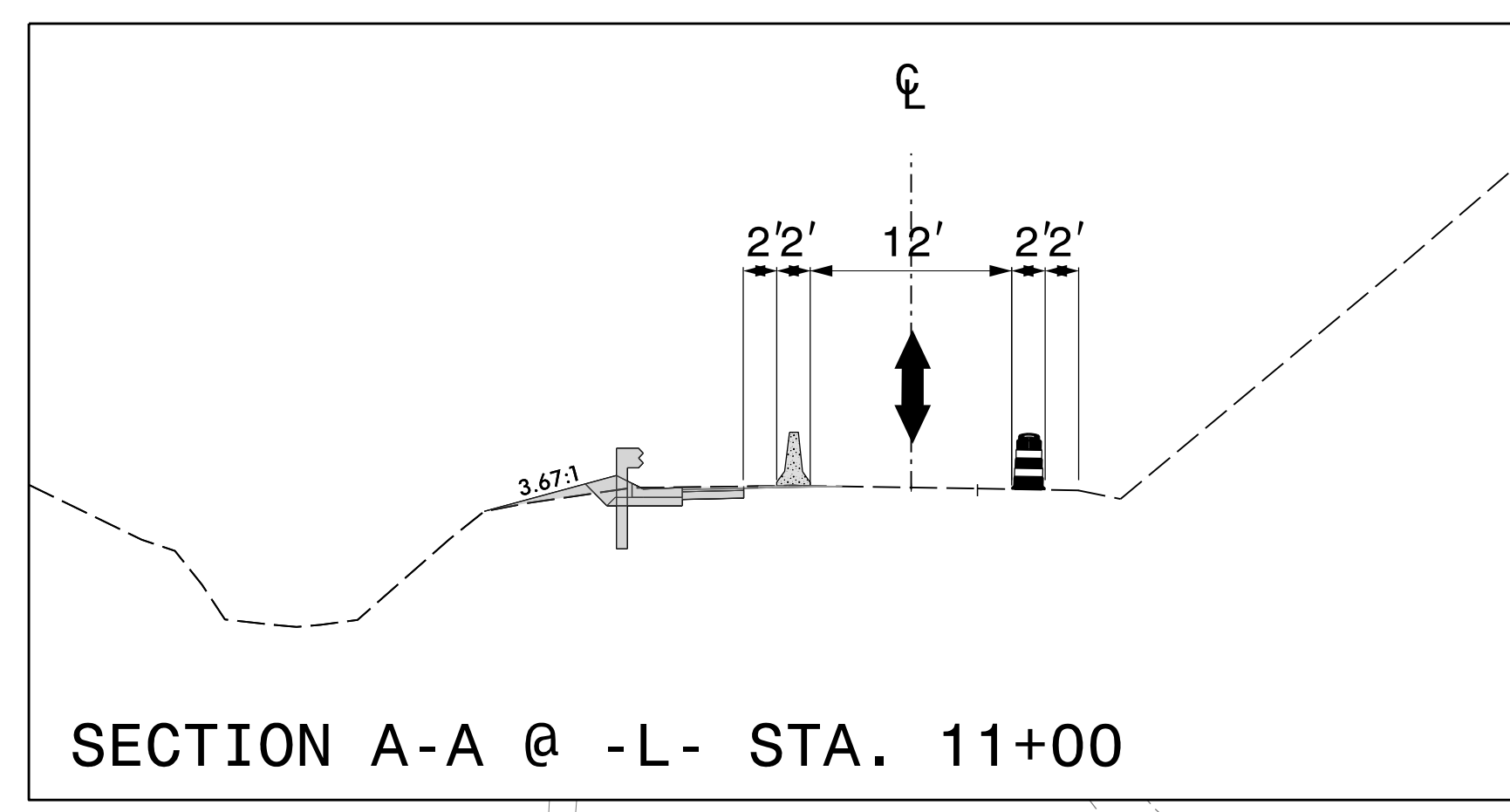


APPROVED: *Zachary M. Esposito*
 DATE: 10/8/2025
 SEAL

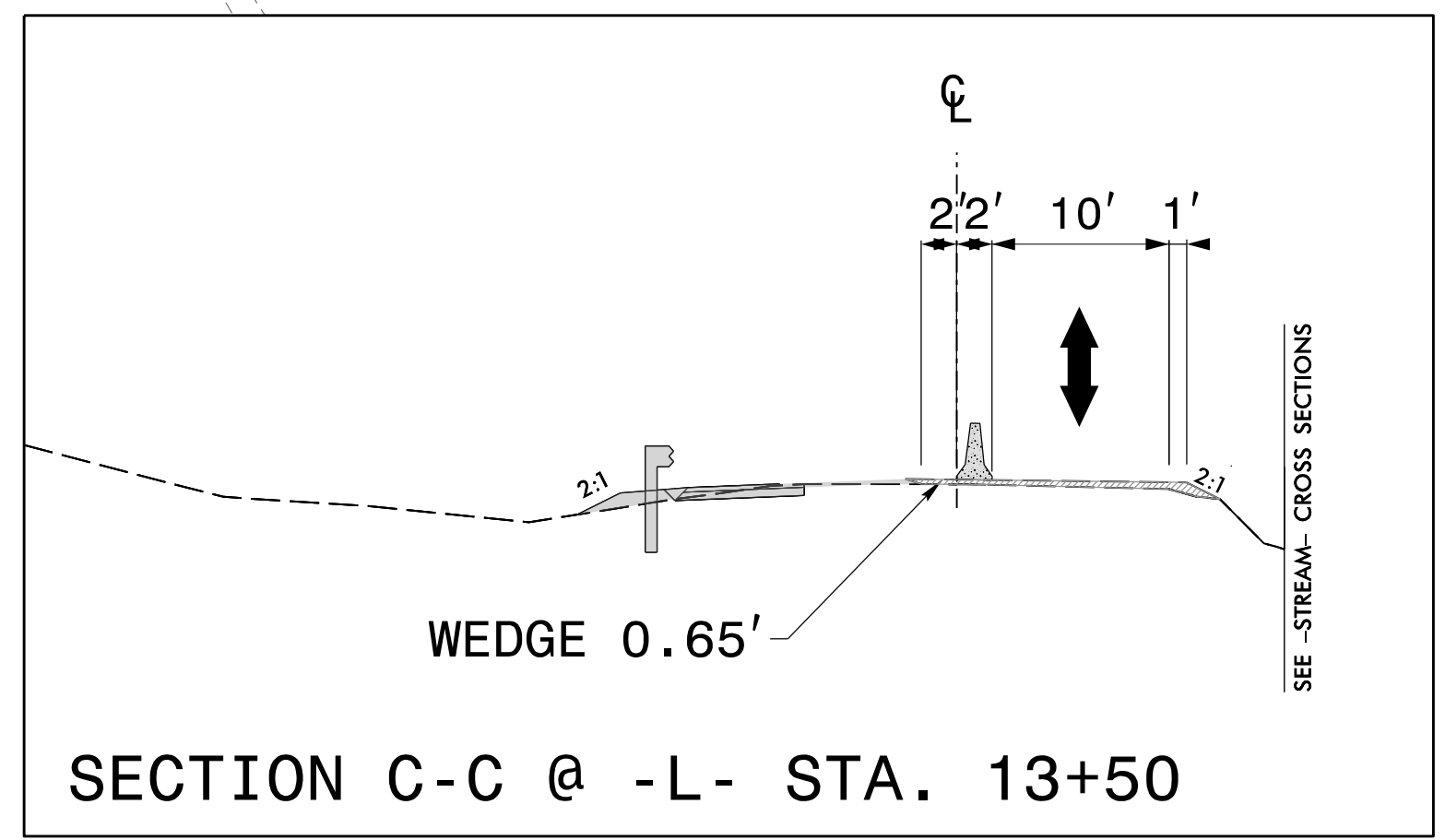
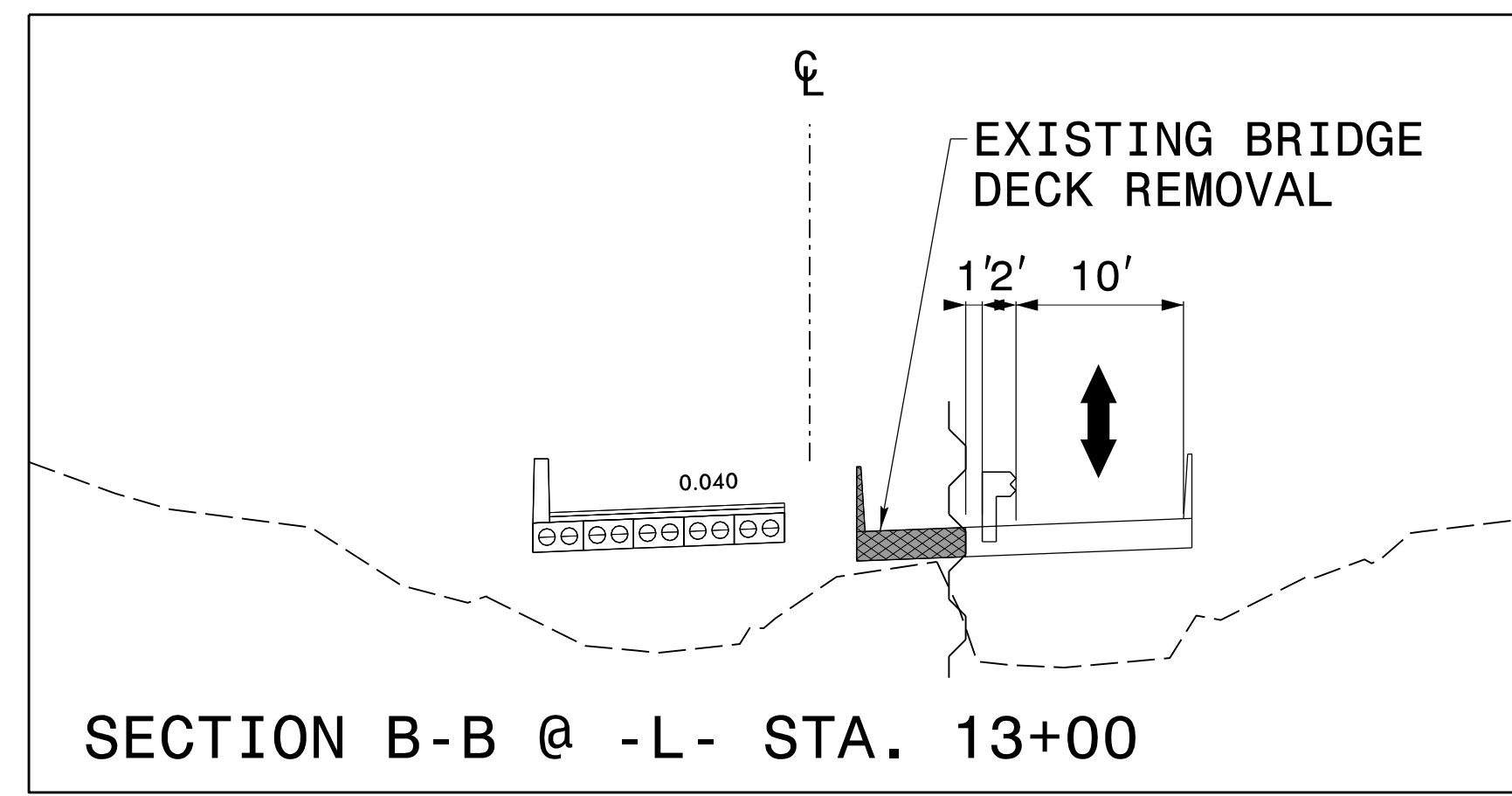
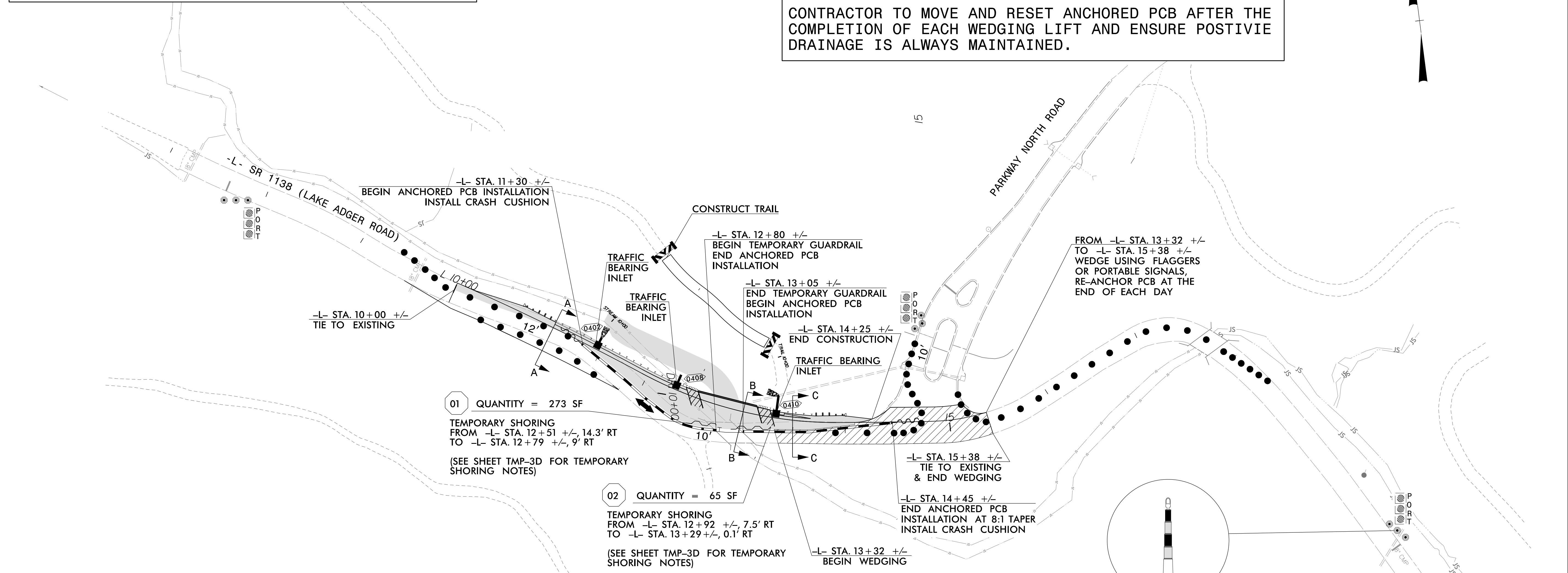


**TEMPORARY
TRAFFIC CONTROL
PHASE I - STEP 1**

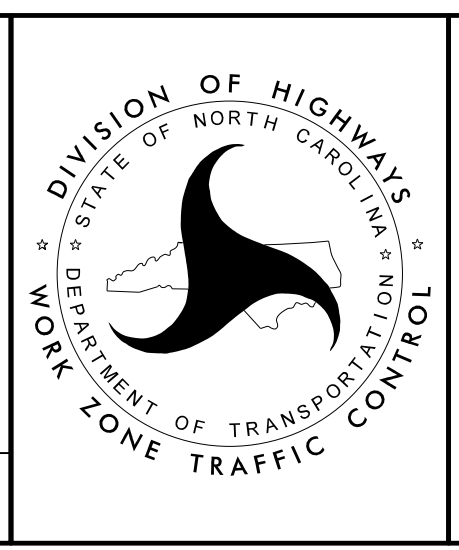
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SPECIAL WEDGING NOTE:
CONTRACTOR TO MOVE AND RESET ANCHORED PCB AFTER THE COMPLETION OF EACH WEDGING LIFT AND ENSURE POSITIVE DRAINAGE IS ALWAYS MAINTAINED.

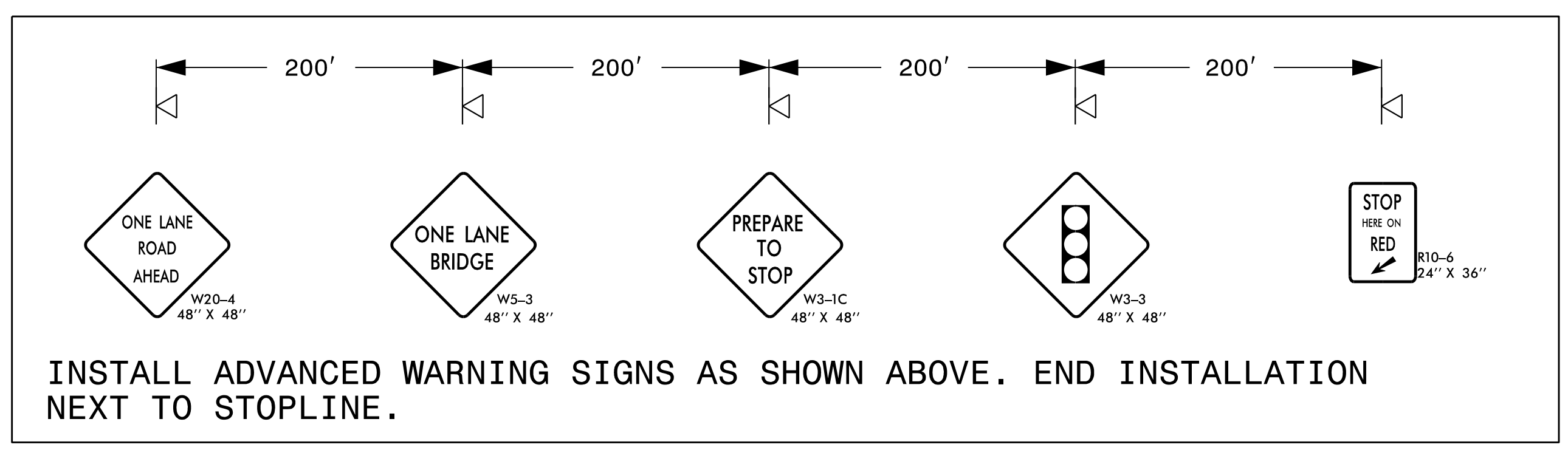
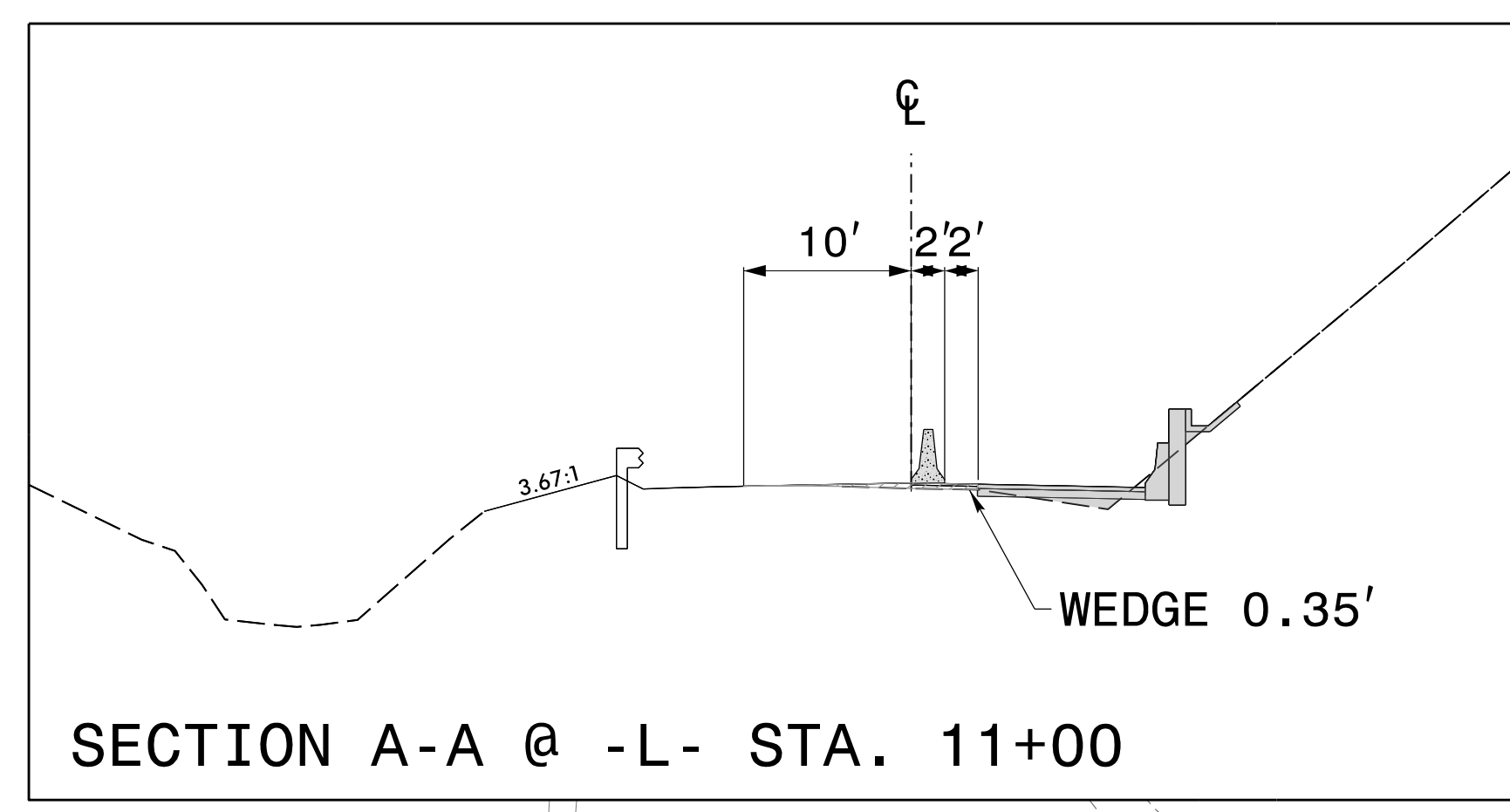


APPROVED: *Zachary M. Esposito*
DATE: 10/8/2025
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
ZACHARY M. ESPOSITO
054155

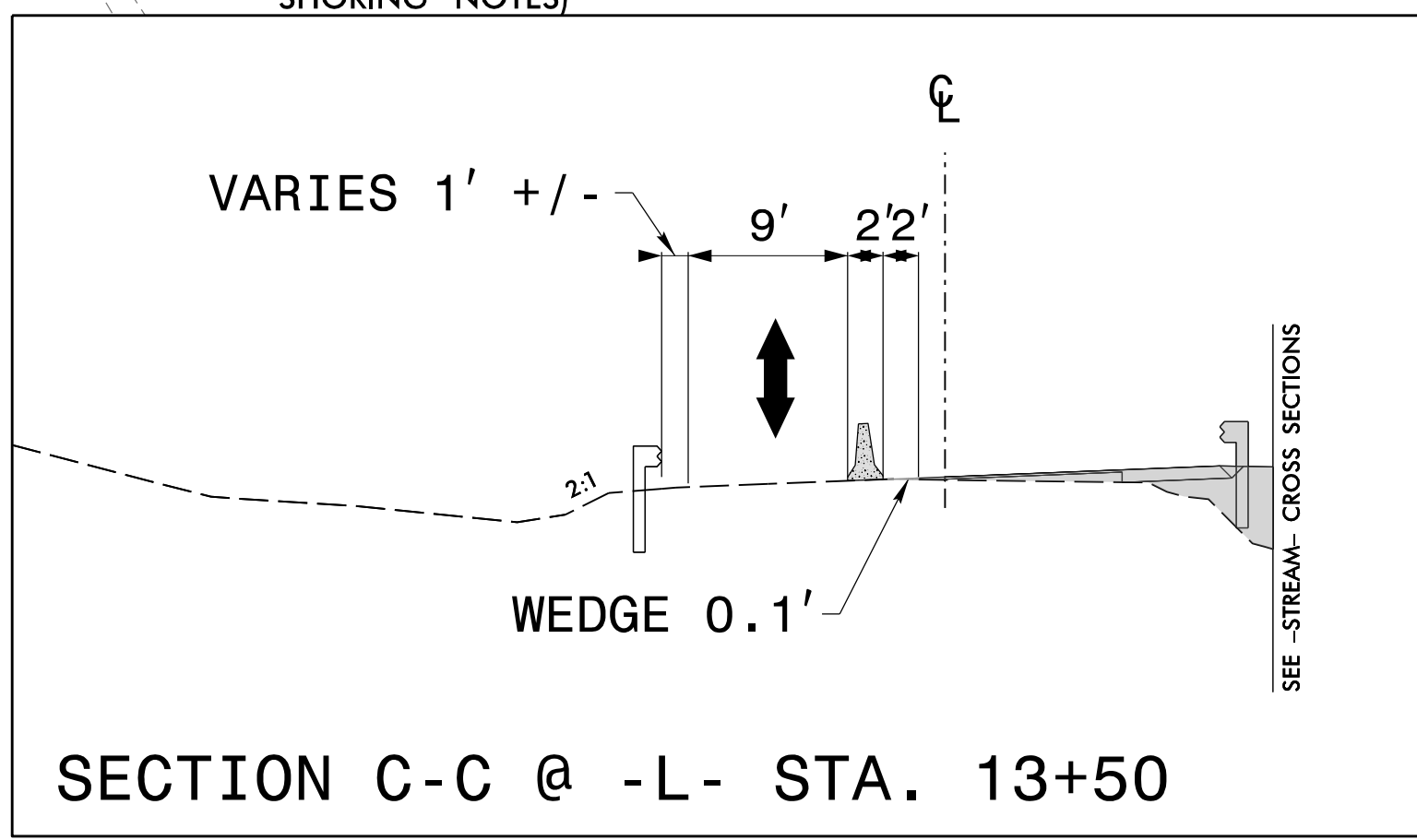
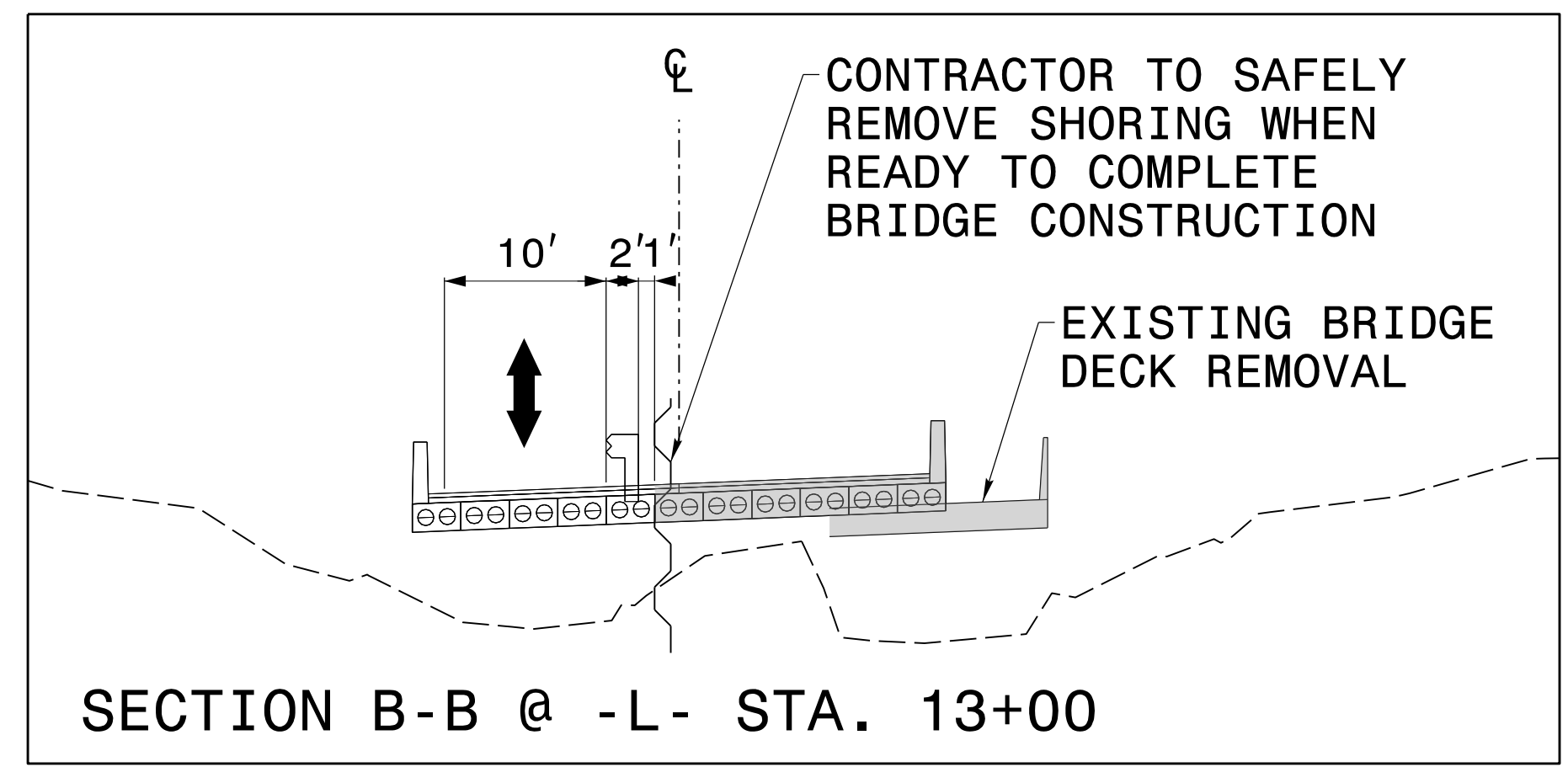
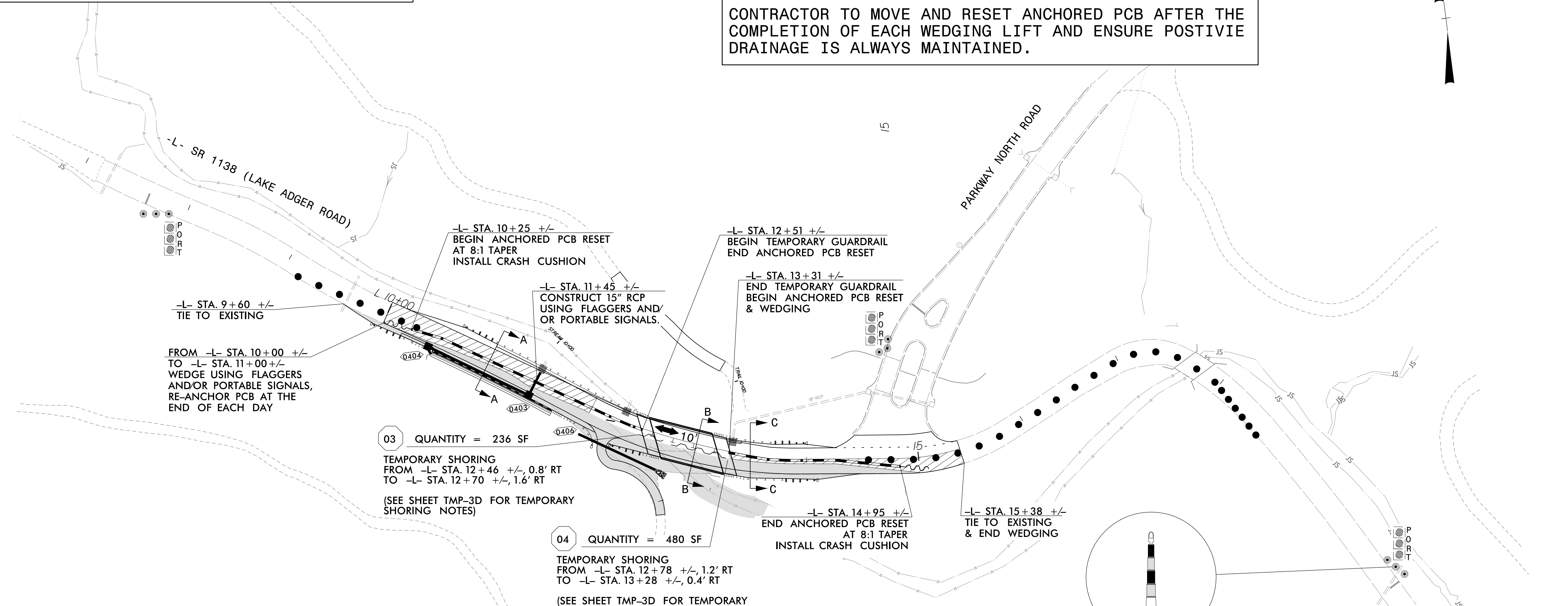


TEMPORARY TRAFFIC CONTROL PHASE I - STEP 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SPECIAL WEDGING NOTE:
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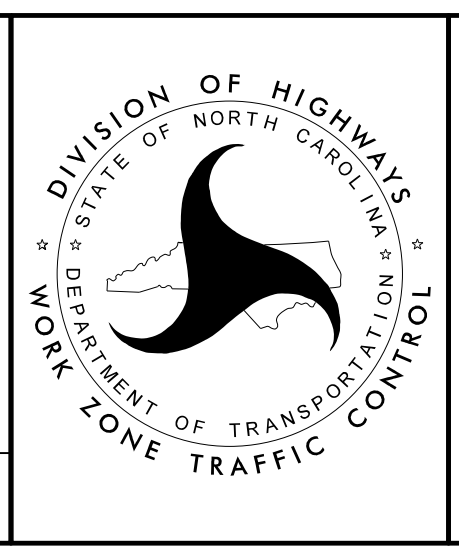


APPROVED: *Zachary M. Esposito*
DATE: 10/8/2025

SEAL

DRMP, INC. PROFESSIONAL ENGINEER
ZACHARY M. ESPOSITO
SEAL 054155

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TEMPORARY TRAFFIC CONTROL PHASE II

PROJECT: BP14.R006

CONTRACT:

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
POLK COUNTY**

**LOCATION: BRIDGE REPLACEMENT OF BRIDGE 143 ON SR 1138 (LAKE ADGER ROAD)
OVER PANTHER CREEK**

<small>RKA PROJECT NO.</small> BP14.R006	<small>SHEET NO.</small> PMP - 1
<small>APPROVED:</small> Zachary M. Esposito <small>5647007604884E8</small>	
<small>DATE:</small> 10/8/2025	
<small>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</small>	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<small>STD. NO.</small>	<small>TITLE</small>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

PAVEMENT MARKING SCHEDULE

<small>SYMBOL</small>	<small>DESCRIPTION</small>
<small>THERMOPLASTIC (4", 90 MILS)</small>	
T1	WHITE EDGELINE
T5	2 FT. - 6 FT. /SP WHITE MINISKIP
T13	YELLOW DOUBLE CENTER
<small>THERMOPLASTIC (24", 90 MILS)</small>	
T61	WHITE STOPBAR

SUMMARY OF QUANTITIES

<small>ITEM NO.</small>	<small>ITEM DESCRIPTION</small>	<small>QUANTITY</small>	<small>UNIT</small>
<small>DESC. NO.</small>	<small>SECT. NO.</small>		
4685000000	1205	2300	L.F.
4709000000	1205	50	L.F.
4895000000	SP	20	E.A.

INDEX

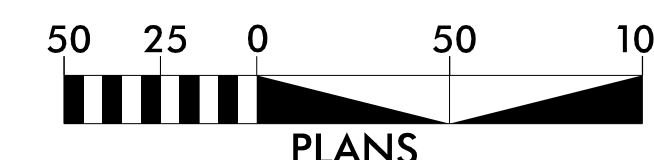
<small>SHEET NO.</small>	<small>DESCRIPTION</small>
PMP-1	TITLE SHEET
PMP-2	PAVEMENT MARKING DETAIL

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | <small>ROAD NAME</small> | <small>MARKING</small> | <small>MARKER</small> |
|--------------------------|------------------------|-----------------------|
| LAKE ADGER ROAD | THERMOPLASTIC | INLAID RAISED |
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
 C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
 D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
 E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

GRAPHIC SCALE



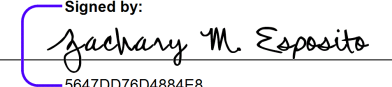
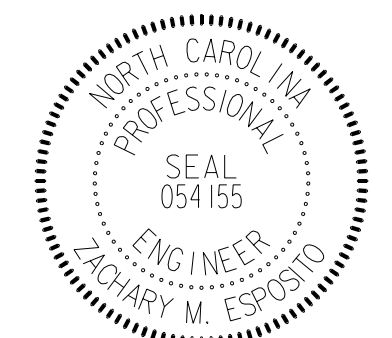

PLAN PREPARED BY: DRMP, INC.

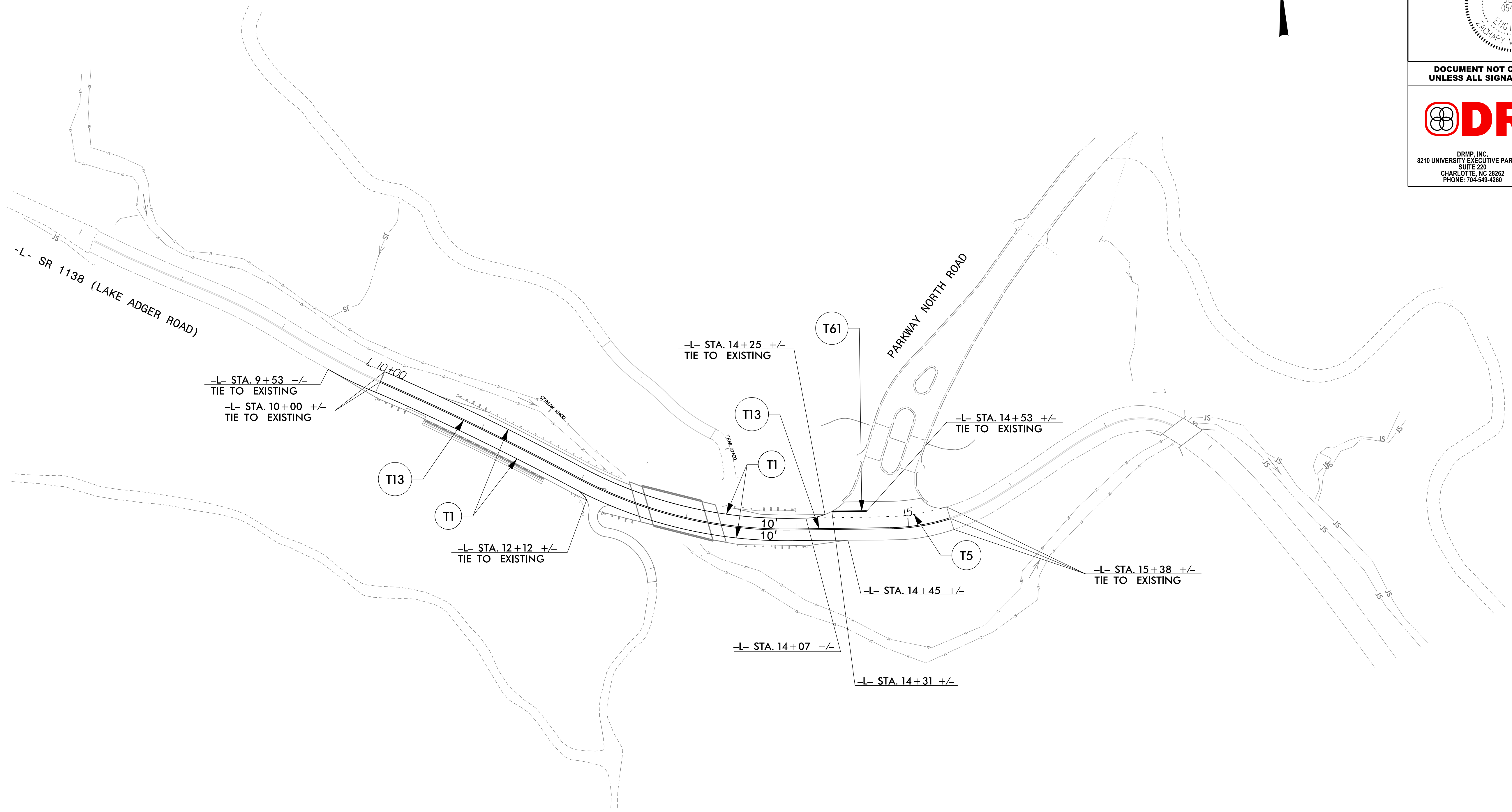
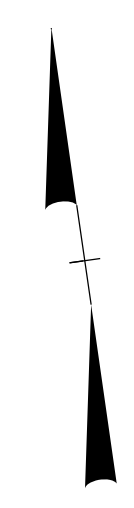
ZACHARY M. ESPOSITO, PE, TCDS PROJECT MANAGER

MIKAYLA M. LINDSEY, EI PROJECT ENGINEER



DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 200
CHARLOTTE, NC 28222
PHONE: 704-548-4220
NC LICENSE NO. F-1524
www.drmp.com

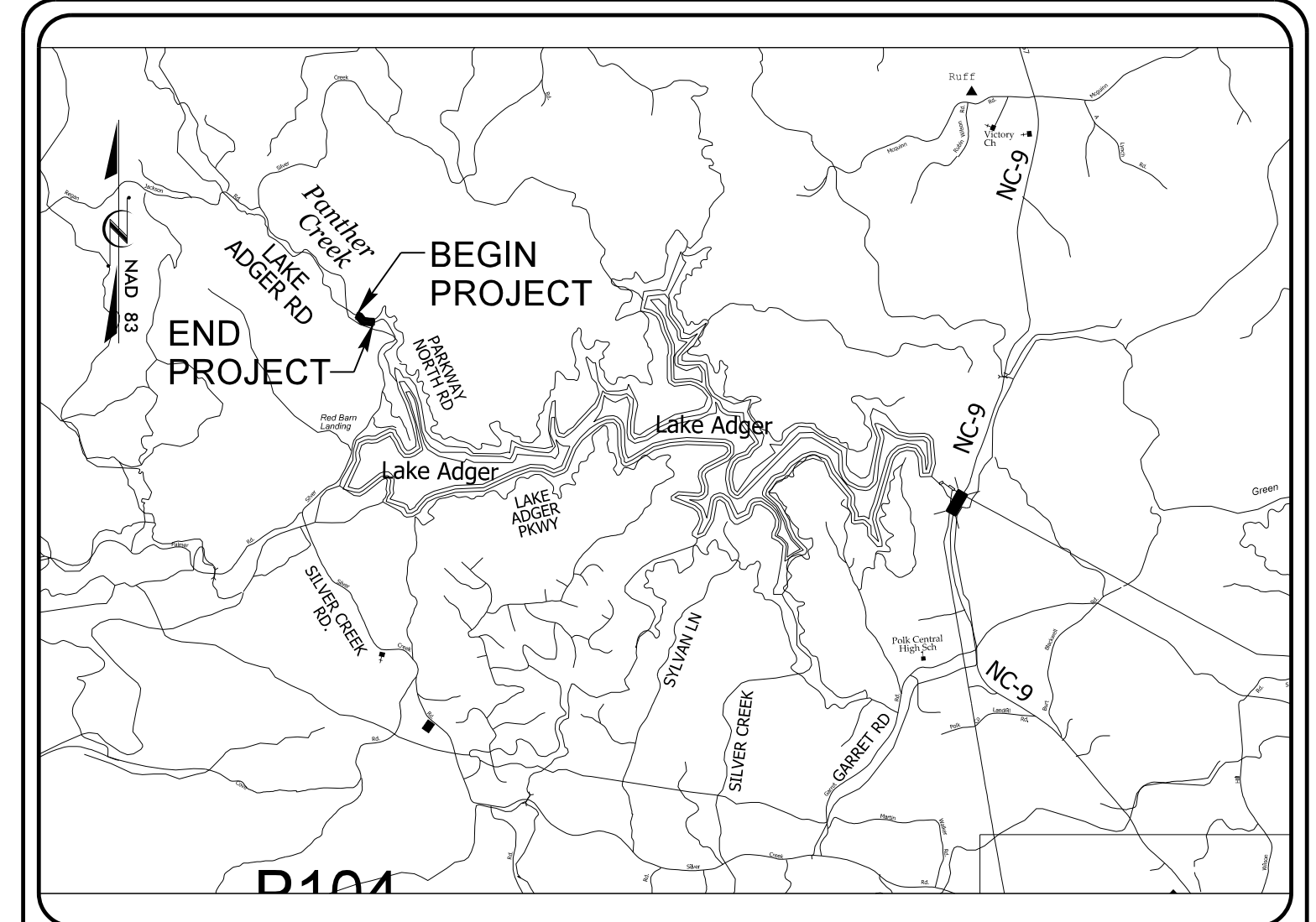
RKA PROJECT NO.	SHEET NO.
BP14.R006	PMP-2
APPROVED: 	
DATE: 10/8/2025	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
<small>DRMP, INC. 8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 220 CHARLOTTE, NC 28262 PHONE: 704-549-4280</small>	



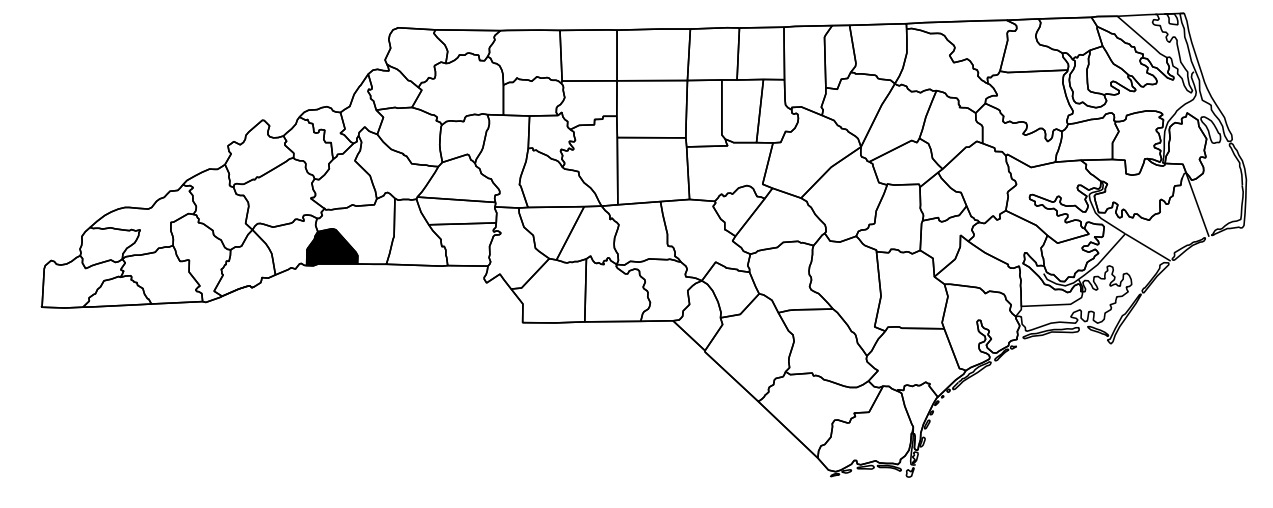
PAVEMENT MARKING DETAIL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP14.R006	EC-1	7
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

PROJECT: BP14.R006



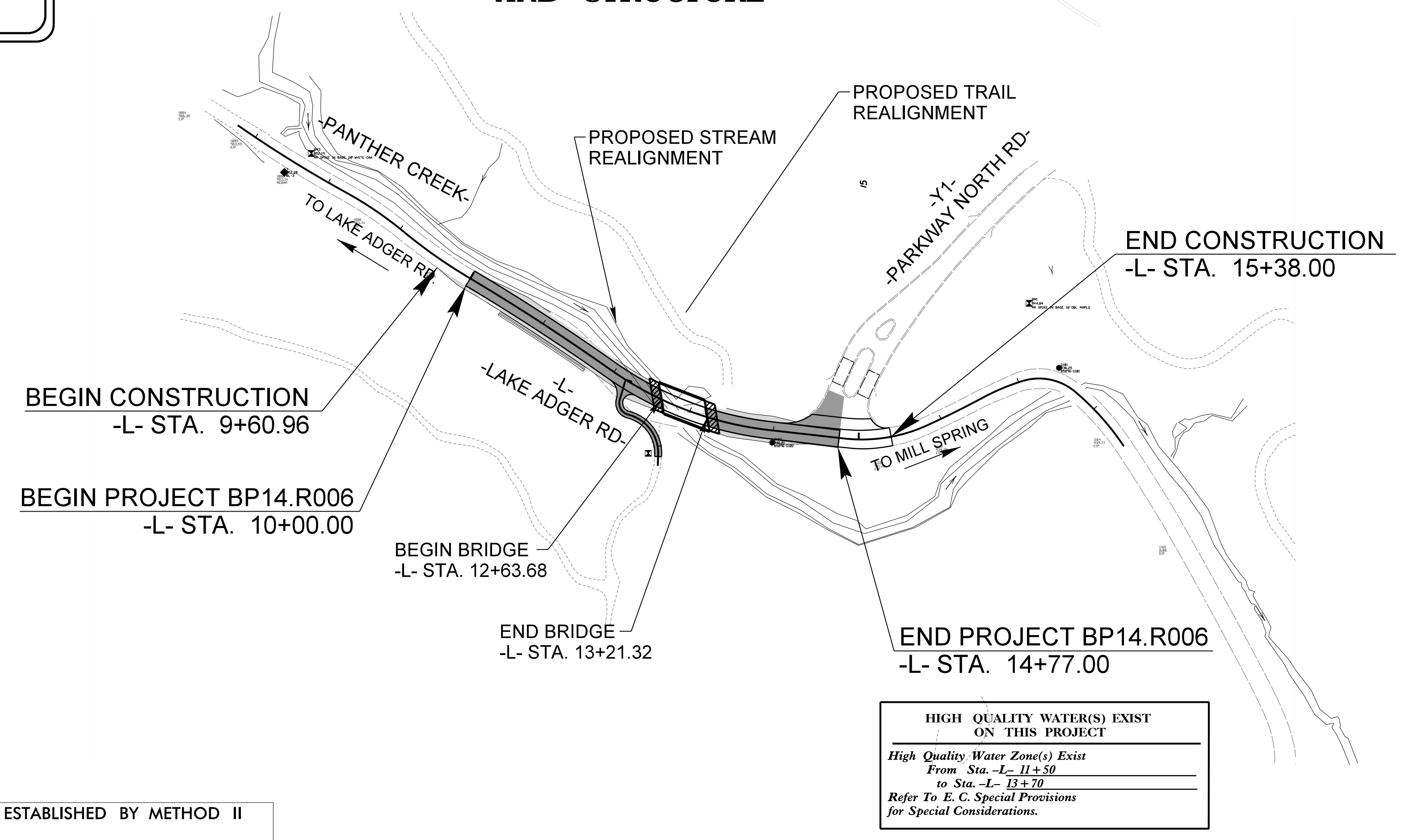
VICINITY MAP
NOT TO SCALE



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
POLK COUNTY

LOCATION: REPLACE POLK BRIDGE 143 ON SR 1138 OVER PANTHER CREEK

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, RETAINING WALL,
AND STRUCTURE**



NAD 83/NA 2011

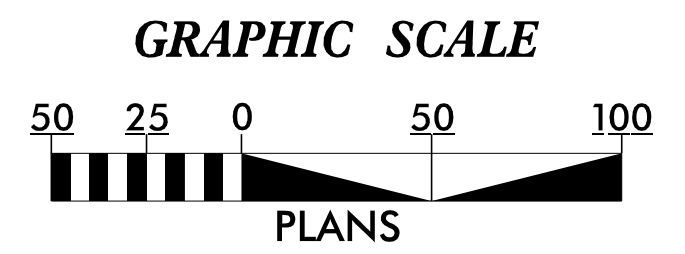
THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
Refer To E. C. Special Provisions for Special Considerations.

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT
High Quality Water Zone(s) Exist From Sta. -L- 11+50 to Sta. -L- 13+70 Refer To E. C. Special Provisions for Special Considerations.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
NV5
8514 McAlpine Park Drive, Suite 135
Charlotte, NC 28211
NC License #F-1333

Designed by:
WILL J. WEATHERSBEE 3161
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings
The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

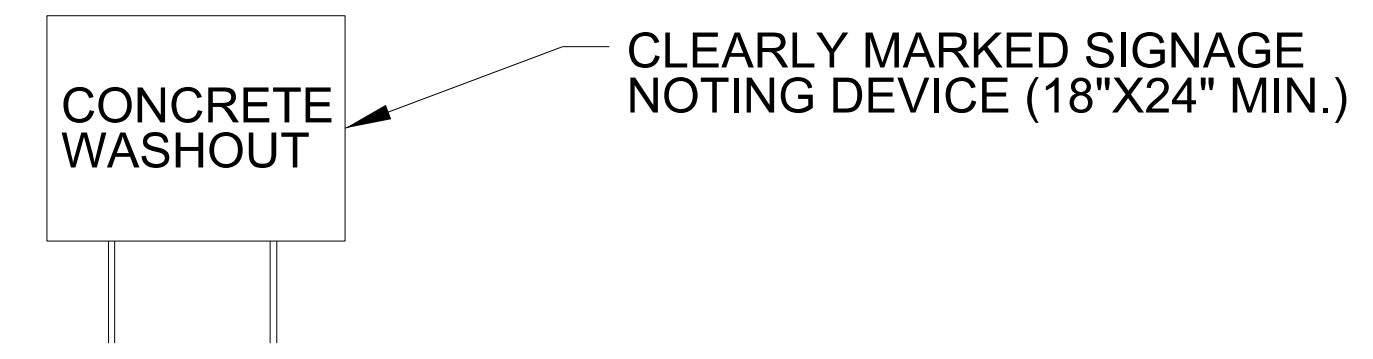
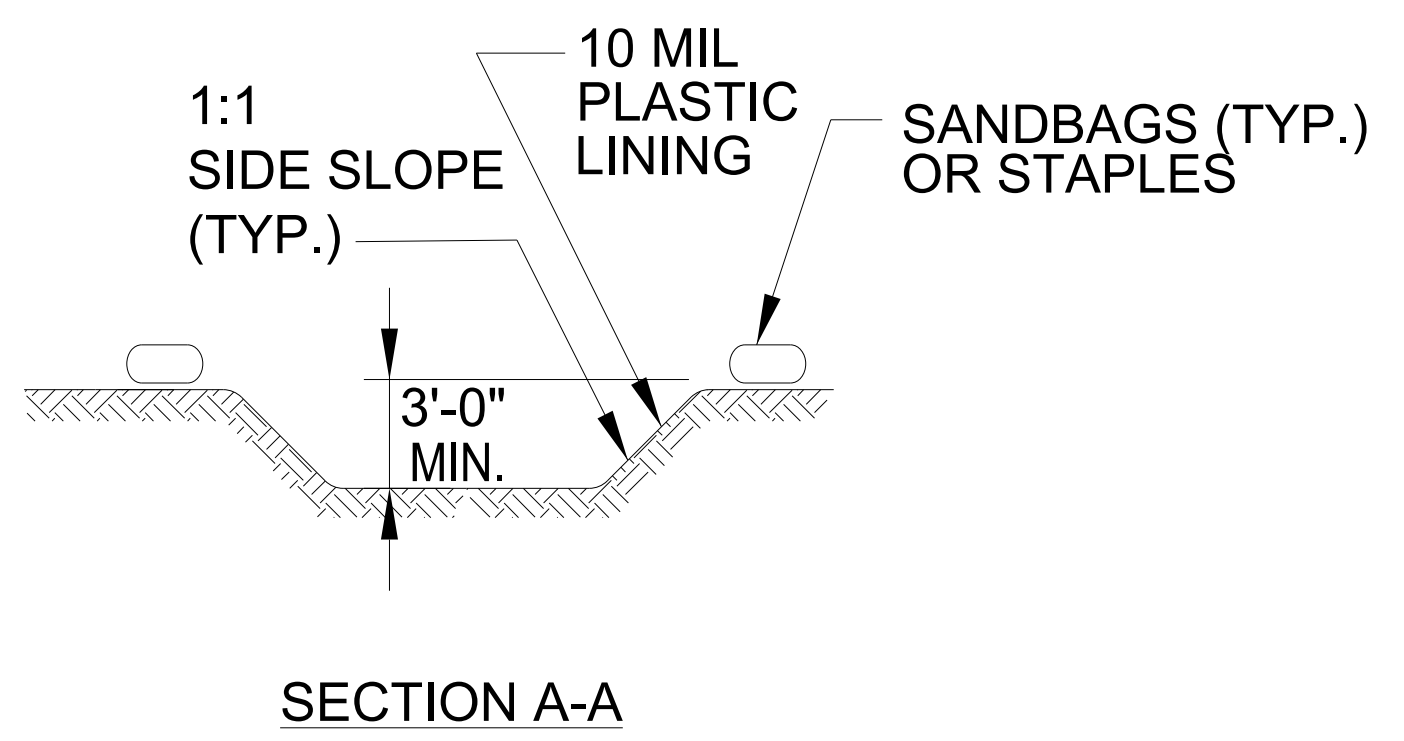
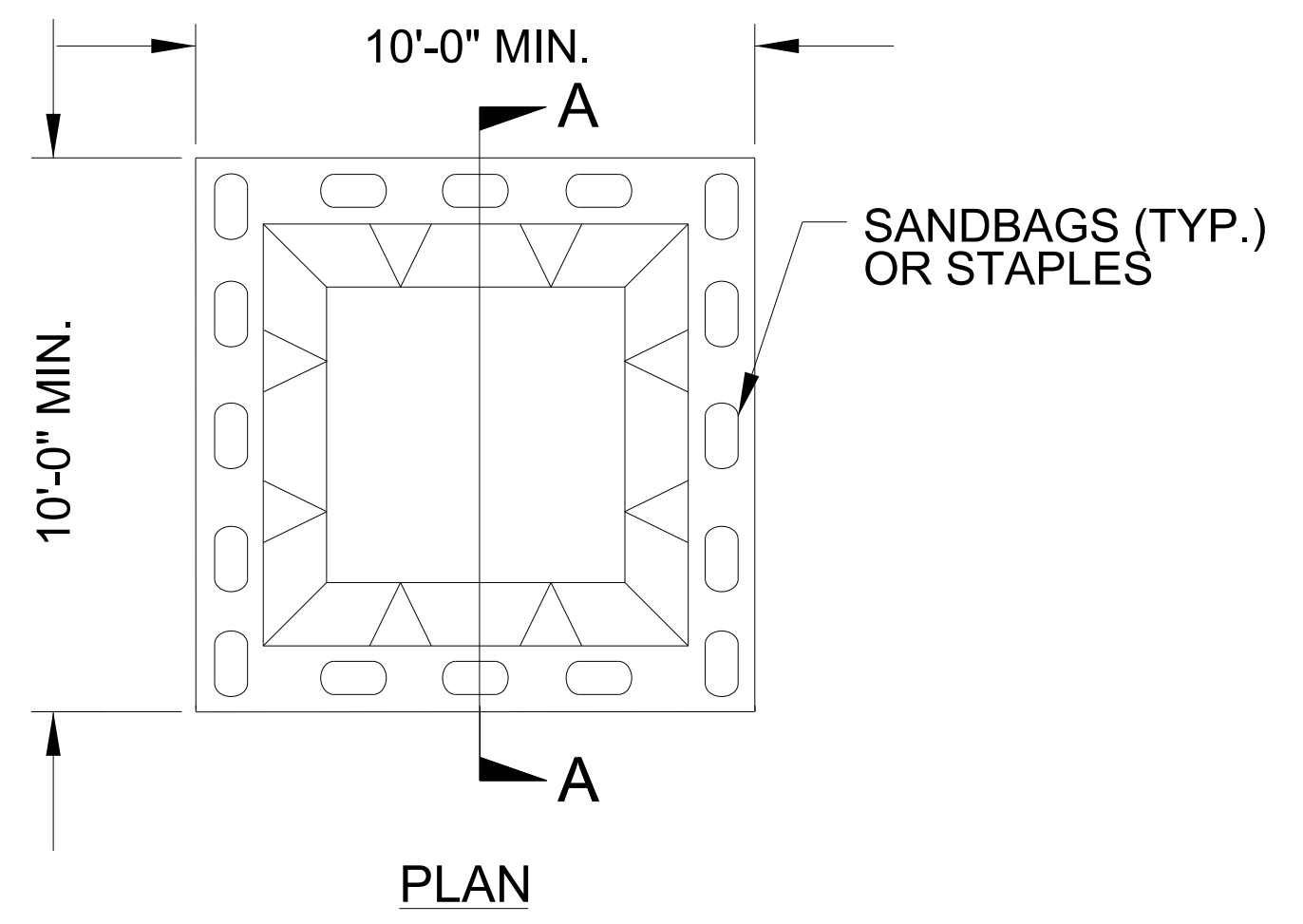
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

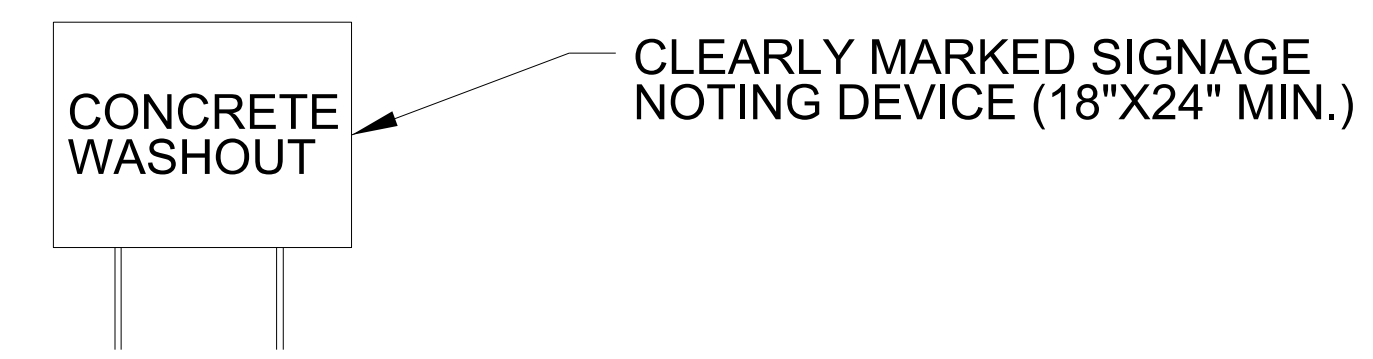
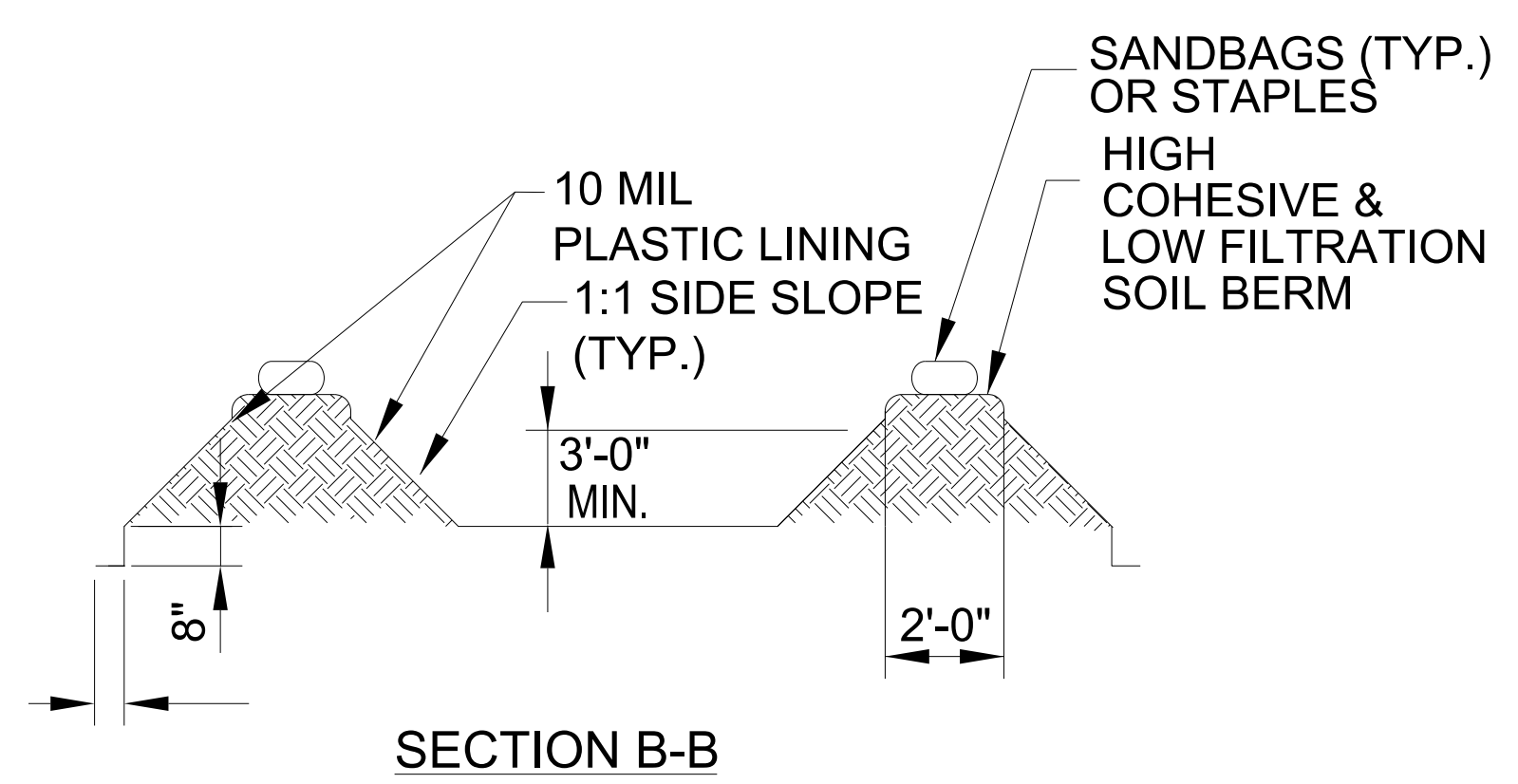
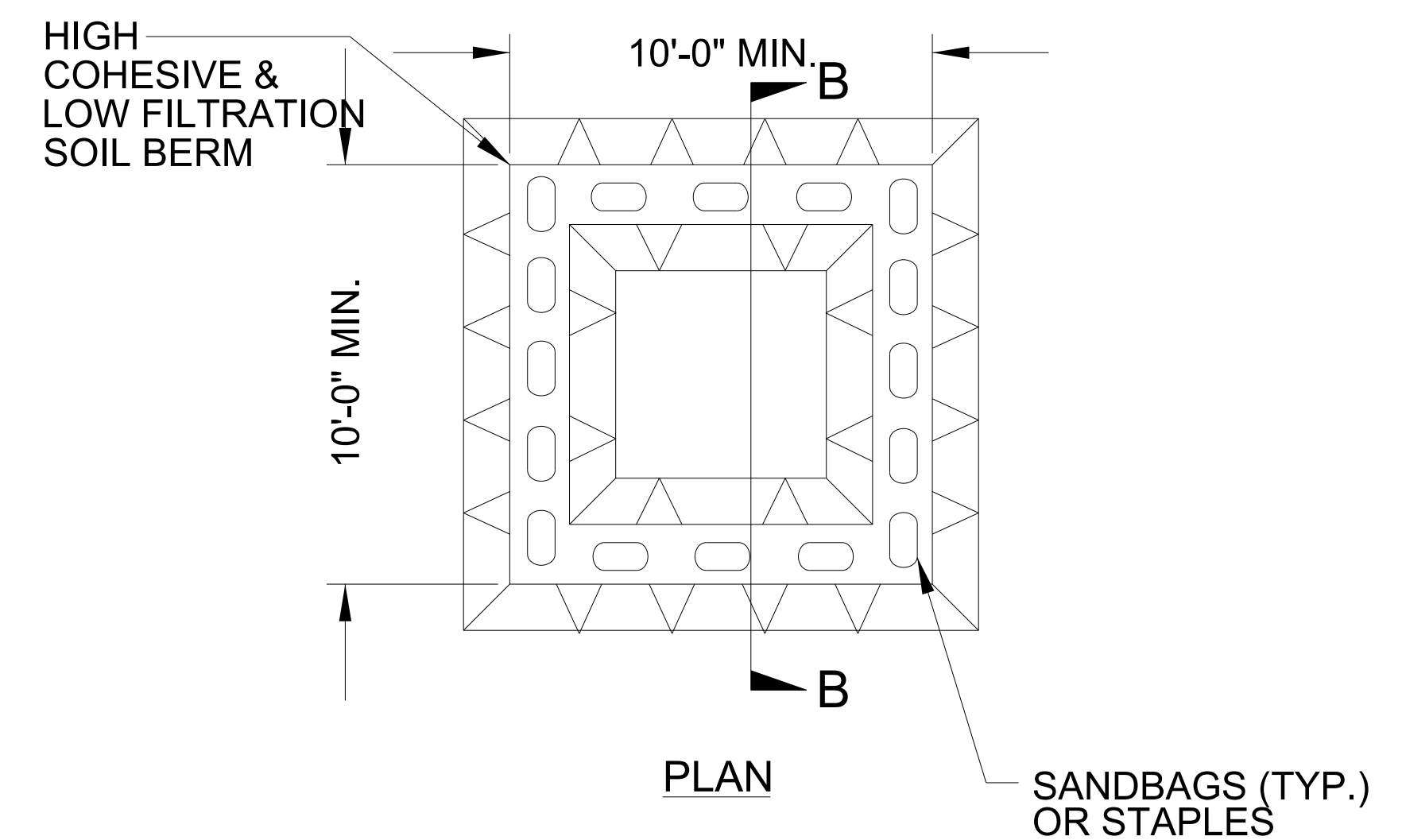
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ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



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.



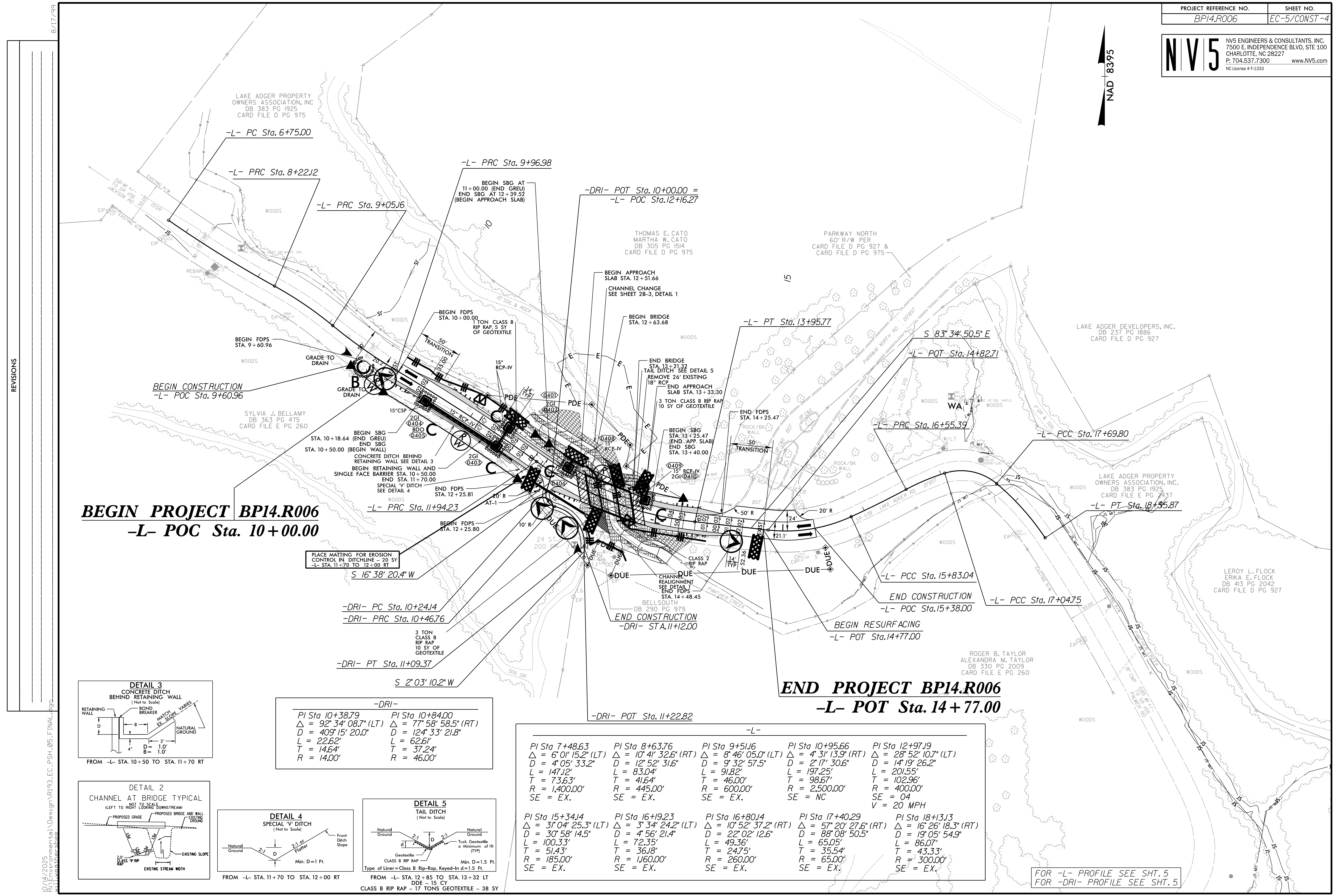
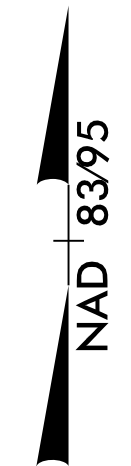
ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

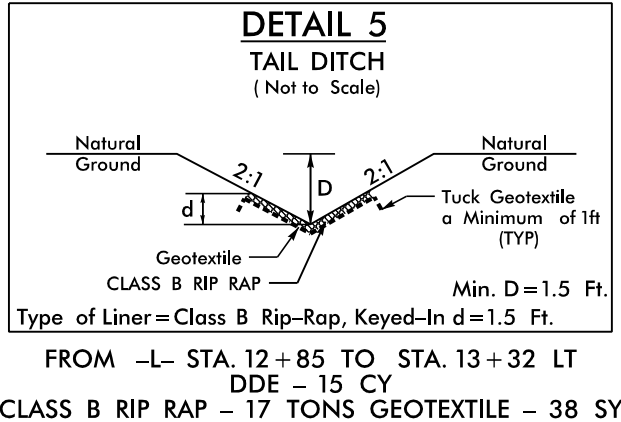
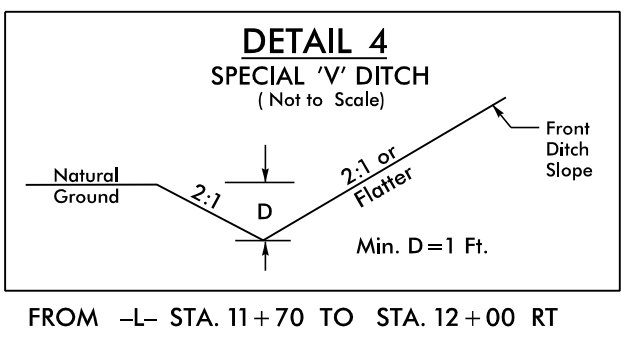
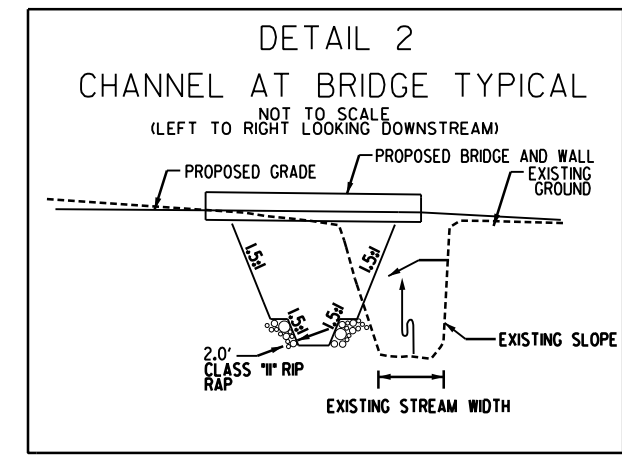
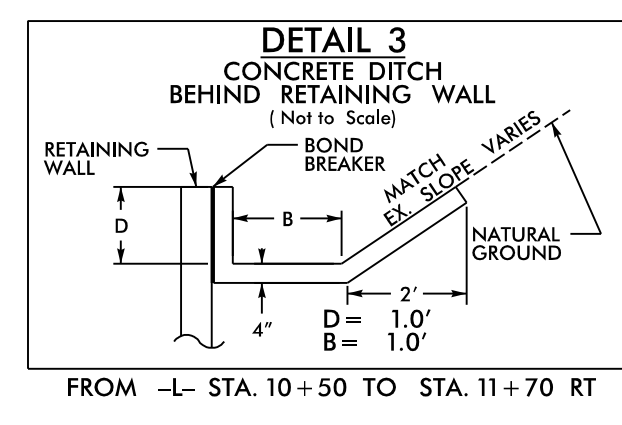
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES



REVISIONS

BEGIN PROJECT BPI4.R006
 -L- POC Sta. 10+00.00

END PROJECT BPI4.R006
 -L- POT Sta. 14+77.00



-DRI-

PI Sta 10+38.79	PI Sta 10+84.00
$\Delta = 92^\circ 34' 08.7''$ (LT)	$\Delta = 77^\circ 58' 58.5''$ (RT)
D = 409' 15" 20.0"	D = 124' 33" 21.8"
L = 22.62'	L = 62.61'
T = 14.64'	T = 37.24'
R = 14.00'	R = 46.00'

-L-

PI Sta 7+48.63	PI Sta 8+63.76	PI Sta 9+51.16	PI Sta 10+95.66	PI Sta 12+97.19
$\Delta = 6^\circ 01' 15.2''$ (LT)	$\Delta = 10^\circ 41' 32.6''$ (RT)	$\Delta = 8^\circ 46' 05.0''$ (LT)	$\Delta = 4^\circ 31' 13.9''$ (RT)	$\Delta = 28^\circ 52' 10.7''$ (LT)
D = 4' 05" 33.2"	D = 12' 52" 31.6"	D = 9' 32" 57.5"	D = 2' 17" 30.6"	D = 14' 19" 26.2"
L = 147.12'	L = 83.04'	L = 91.82'	L = 197.25'	L = 201.55'
T = 73.63'	T = 41.64'	T = 46.00'	T = 98.67'	T = 102.96'
R = 1,400.00'	R = 445.00'	R = 600.00'	R = 2,500.00'	R = 400.00'
SE = EX.	SE = EX.	SE = EX.	SE = NC	SE = 04
				V = 20 MPH

PI Sta 15+34.14	PI Sta 16+19.23	PI Sta 16+80.14	PI Sta 17+40.29	PI Sta 18+13.13
$\Delta = 31^\circ 04' 25.3''$ (LT)	$\Delta = 3^\circ 34' 24.2''$ (LT)	$\Delta = 10^\circ 52' 37.2''$ (RT)	$\Delta = 57^\circ 20' 27.6''$ (RT)	$\Delta = 16^\circ 26' 18.3''$ (RT)
D = 30' 58" 14.5"	D = 4' 56" 21.4"	D = 22' 02" 12.6"	D = 88' 08" 50.5"	D = 19' 05" 54.9"
L = 100.33'	L = 72.35'	L = 49.36'	L = 65.05'	L = 86.07'
T = 51.43'	T = 36.18'	T = 24.75'	T = 35.54'	T = 43.33'
R = 185.00'	R = 1,160.00'	R = 260.00'	R = 65.00'	R = 300.00'
SE = EX.	SE = EX.	SE = EX.	SE = EX.	SE = EX.

FOR -L- PROFILE SEE SHT. 5
 FOR -DRI- PROFILE SEE SHT. 5

10/14/2025
 R:\Environmental\Design\1913_EC_PSH_05_FINAL.dwg
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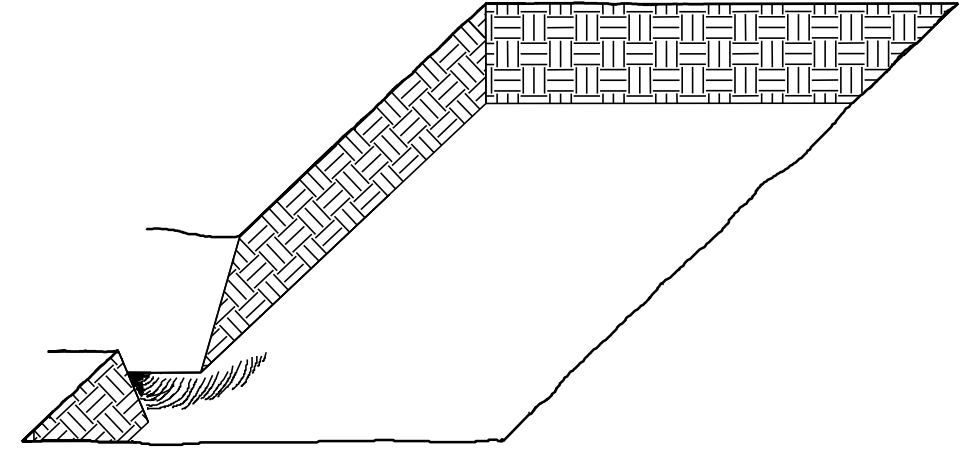
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP14.R006	RF-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

PLANTING DETAILS

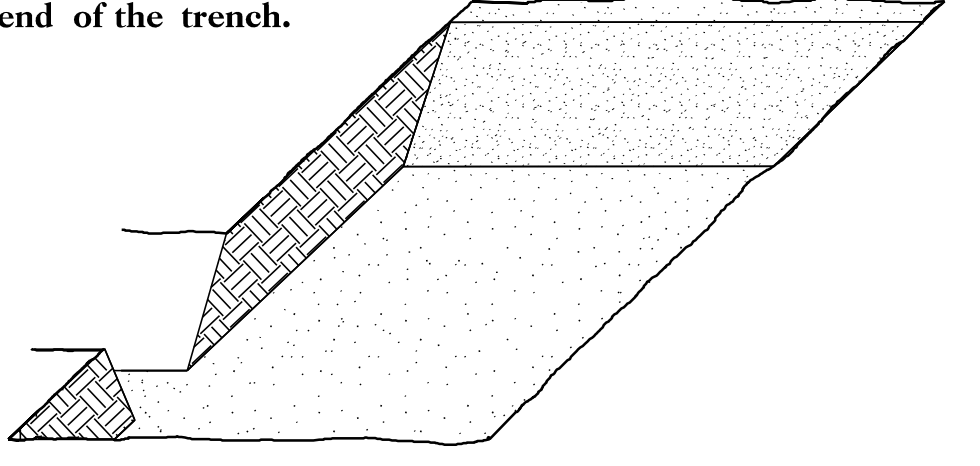
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

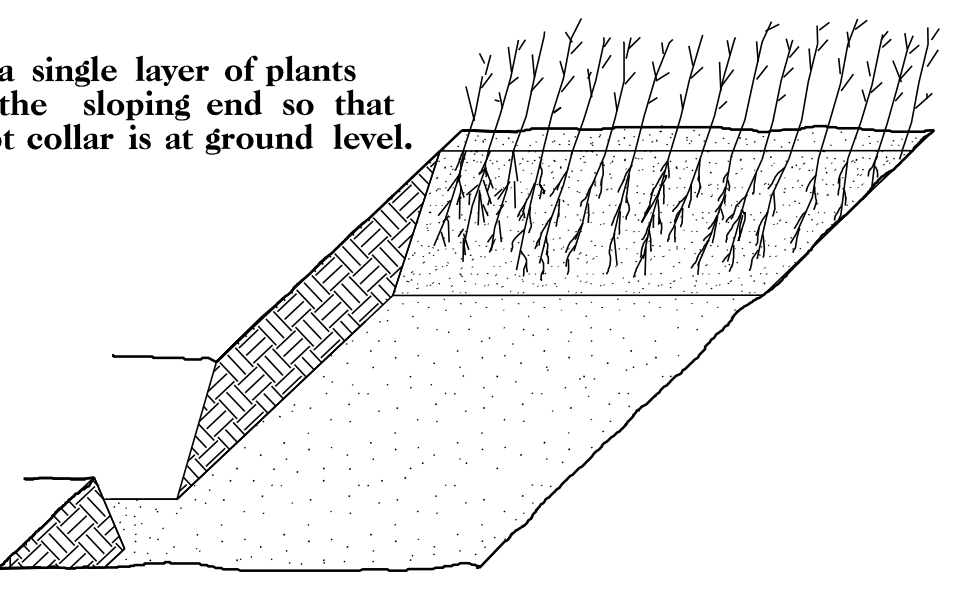
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



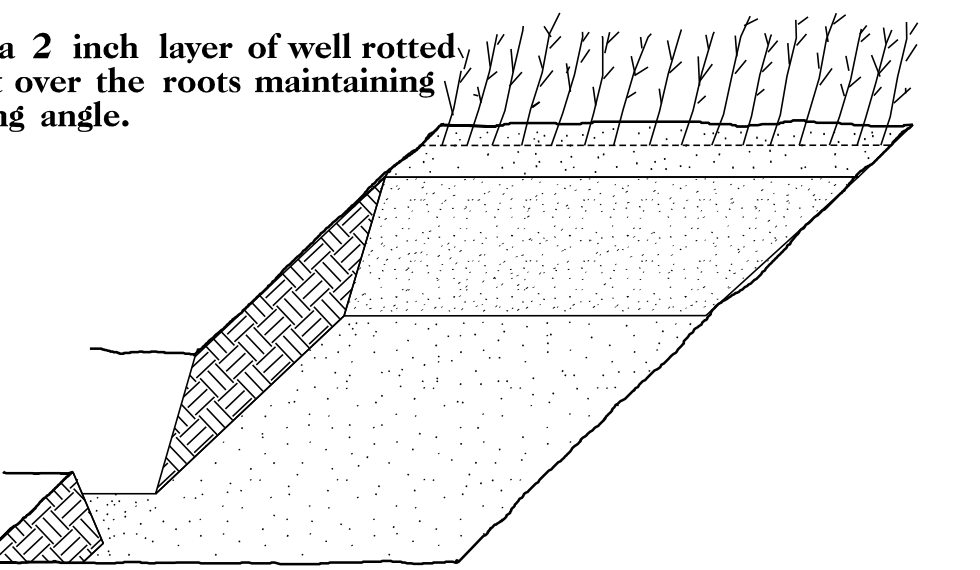
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

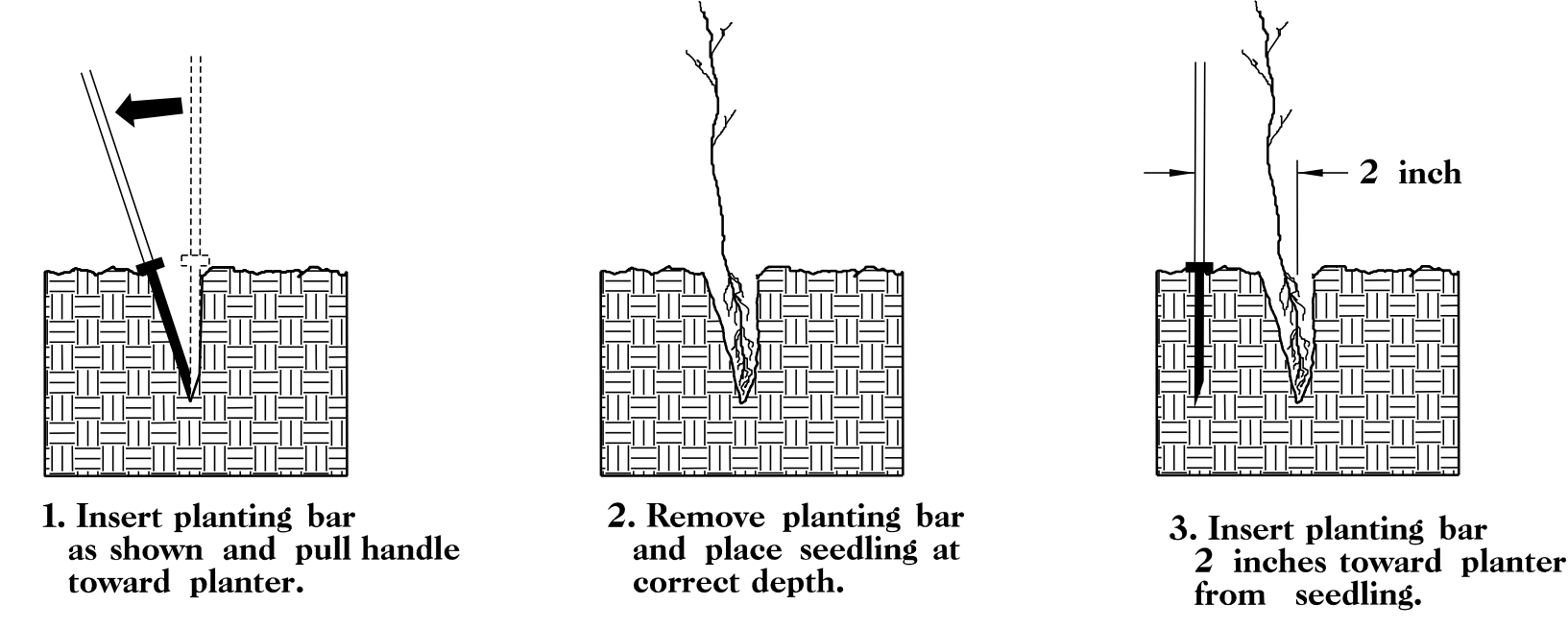


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

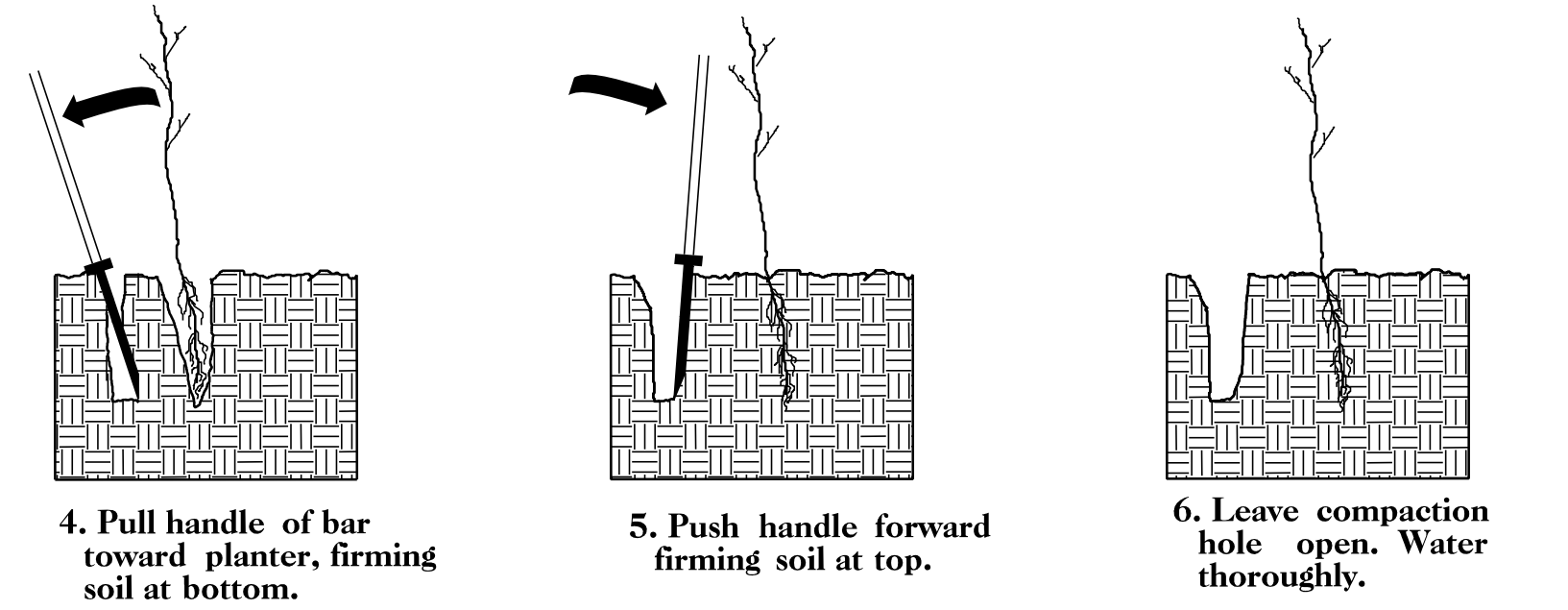


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

DIBBLE PLANTING METHOD USING THE KBC PLANTING BAR



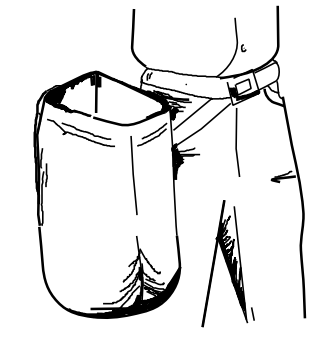
1. Insert planting bar as shown and pull handle toward planter.
2. Remove planting bar and place seedling at correct depth.
3. Insert planting bar and place seedling 2 inches toward planter from seedling.



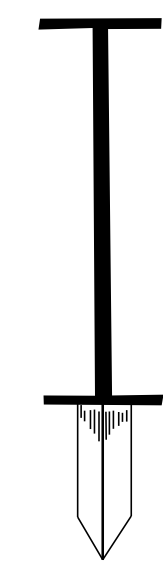
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

- TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25%	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25%	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	12 in - 18 in BR
25%	FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25%	BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

PROJECT: BPI4.R006

CONTRACT:

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
POLK COUNTY**

**LOCATION: BRIDGE REPLACEMENT OF BRIDGE 143 ON SR 1138 (LAKE ADGER ROAD)
OVER PANTHER CREEK**

<small>RKA PROJECT NO.</small> BP14.R006	<small>SHEET NO.</small> SIGN-1
<small>APPROVED:</small> <small>Signed by: Zachary M. Esposito 5647D076D488AE8</small>	
<small>DATE:</small> 10/8/2025	
<small>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</small>	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

GENERAL NOTES

- . SIGNS TO BE FURNISHED BY STATE
- . CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C RETRO REFLECTIVE SHEETING.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	15	L.F.
4102000000	904	SIGN ERECTION, TYPE E	1	EA.
4152000000	904	DISPOSAL OF SIGN SYSTEM, D, E OR F	4	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	4	EA.
4158000000	907	DISPOSAL OF SIGN SYSTEM, WOOD	2	EA.
4915000000	1264	7' U-CHANNEL POSTS	4	EA.
4957000000	1264	OBJECT MARKERS (TYPE 3)	4	EA.

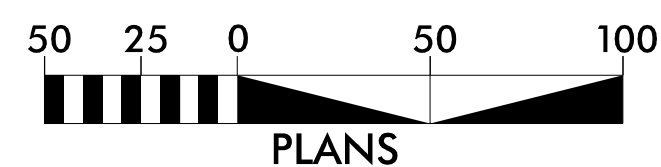
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	TYPE E SIGNS
SIGN-3	EXISTING SIGNS AND PROPOSED SIGNS

PROJECT NOTES

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL

GRAPHIC SCALE



PLAN PREPARED BY: DRMP, INC.

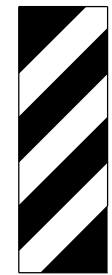
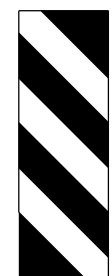
ZACHARY M. ESPOSITO, PE, TCDS PROJECT MANAGER

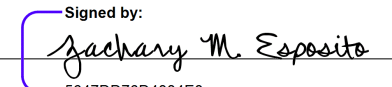
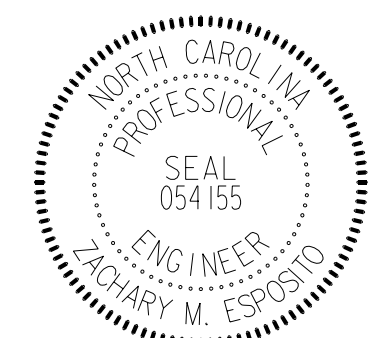
MIKAYLA M. LINDSEY, EI PROJECT ENGINEER



DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 200
CHARLOTTE, NC 28262
PHONE: 704-549-4250
NC LICENSE NO. F-1524
www.drmp.com

10/7/2025
0:\Char\lotte\Char-lotte-RKA_Projects\2018_Projects\18338_B-5896 (R-193)\Signs-PMPs\BP14.R006_Sgn_Sign02.dgn
User:White

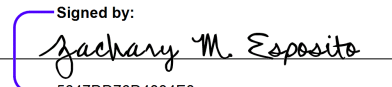
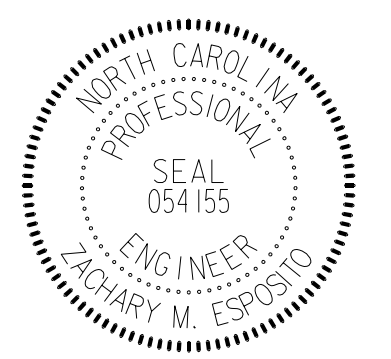

<p>401 QUANTITY REQ'D <u>2</u></p>  <p>12" X 36" OM3-L</p> <p>ONE "U" POST PER SIGN</p>					
<p>402 QUANTITY REQ'D <u>2</u></p>  <p>12" X 36" OM3-R</p> <p>ONE "U" POST PER SIGN</p>					
<p>403 QUANTITY REQ'D <u>1</u></p>  <p>36" X 36" R1-1</p> <p>ONE "U" POST PER SIGN</p>					

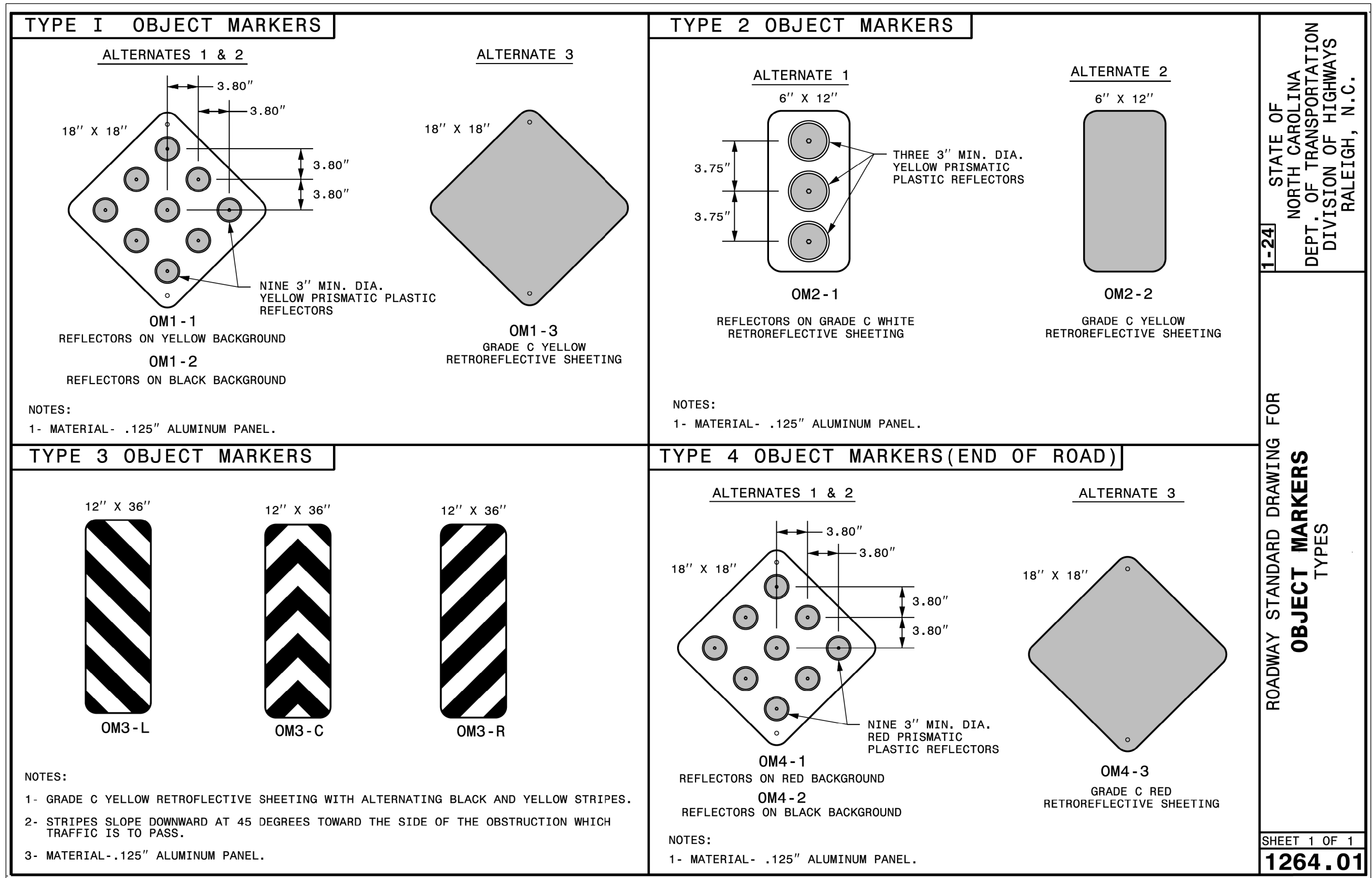
TIP NO. BP14.R006	SHEET NO. SIGN-2
APPROVED:  Signed by: Anthony M. Esposito 05470076D484E8	
DATE: 10/8/2025	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**DRMP**

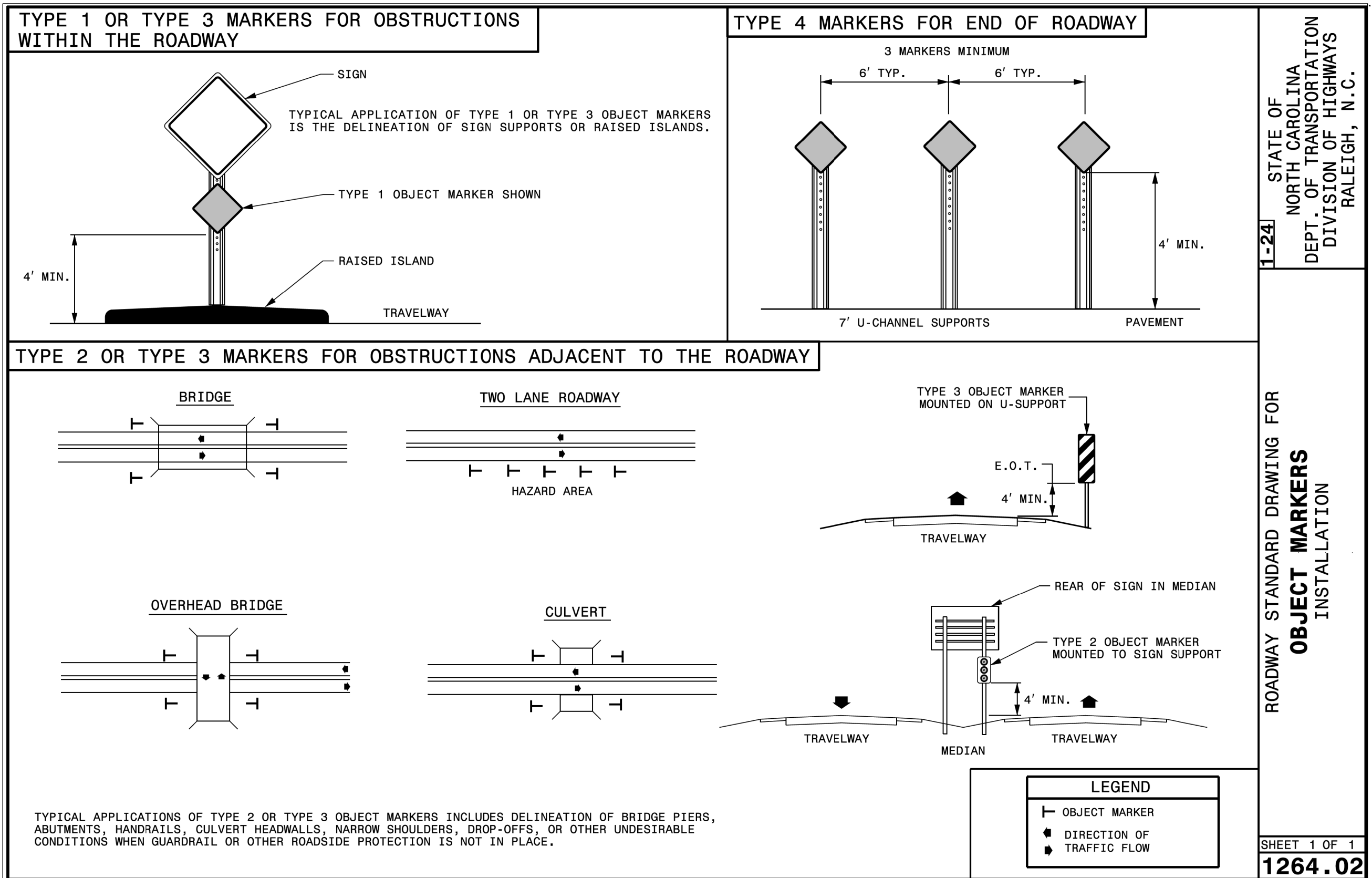
DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR. NC LICENSE NO. F-1524
SUITE 220 CHARLOTTE, NC 28262 www.drmp.com
PHONE: 704-549-4280

TYPE E SIGNS




PROJECT REFERENCE NO.	SHEET NO.
BP14.R006	SIGN-3
APPROVED: 	
DATE: 10/8/2025	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
<small>DRMP, INC. 8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 220 CHARLOTTE, NC 28262 PHONE: 704-549-4280</small>	

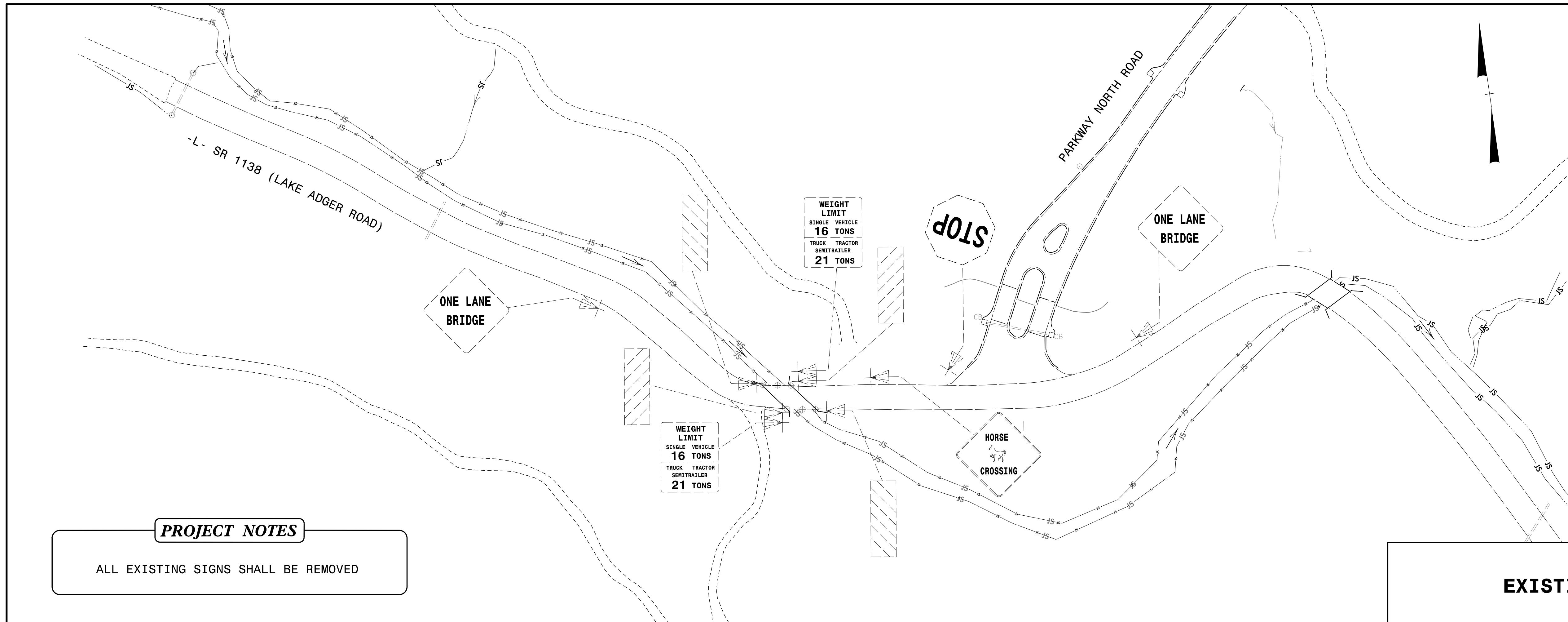


NCDOT STANDARD DRAWING - 1264.01 (SHEET 1 OF 1)



NCDOT STANDARD DRAWING - 1264.02 (SHEET 1 OF 1)

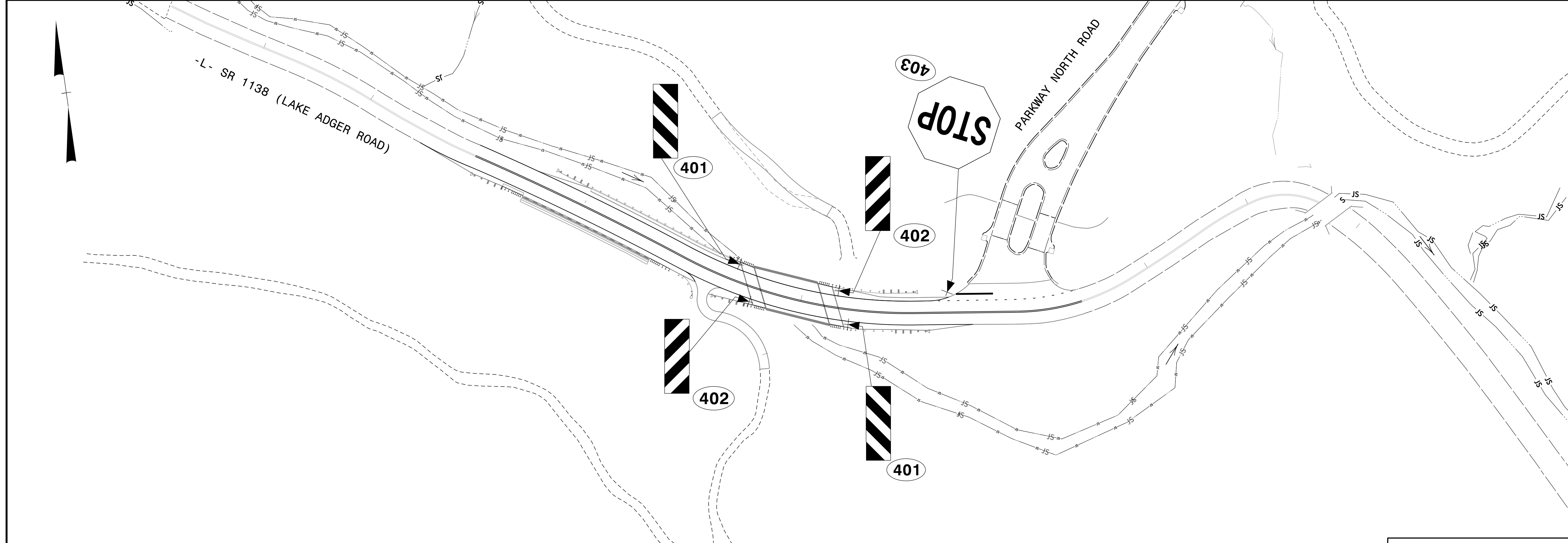
RKA PROJECT NO.	SHEET NO.
BP14.R006	SIGN-4
APPROVED:  0547007804884E8	
DATE: 10/8/2025	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
<small>DRMP, INC. 8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 220 CHARLOTTE, NC 28262 PHONE: 704-549-4280</small>	
<small>NC LICENSE NO. F-1524 www.drmp.com</small>	



PROJECT NOTES

ALL EXISTING SIGNS SHALL BE REMOVED

EXISTING SIGNS



PROPOSED SIGNS

09-OCT-2025 12:30 S:\Server_Files\PROJECTS\2018\A2018308.00_NV5_Div 14 Bridges (13)\A2018308.25_CALYX_Div 14 B-5896\Design\Utilities\Engineering\UBO\Proj\B-5896_ut_tsh_U01_psh.dgn

TIP PROJECT: BP14.R006

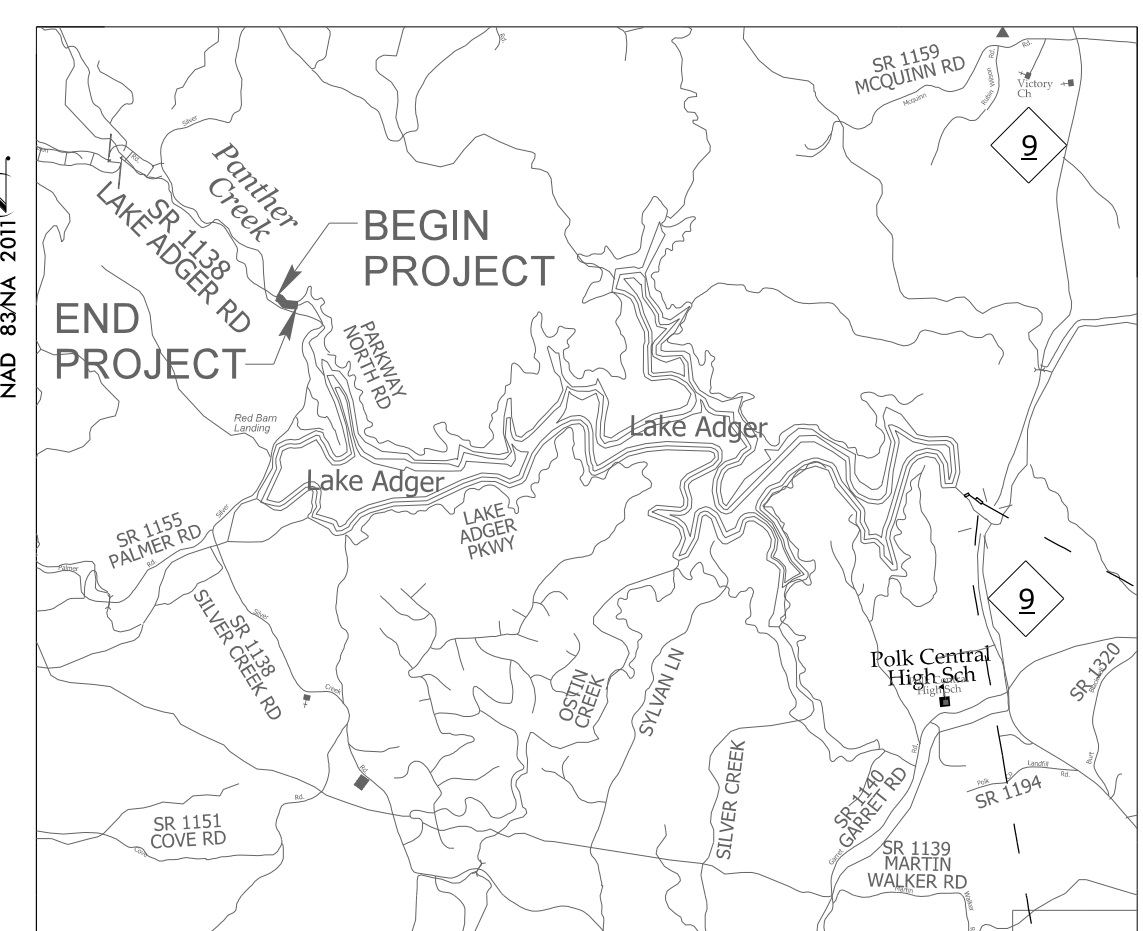
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
BP14.R006	UO-1

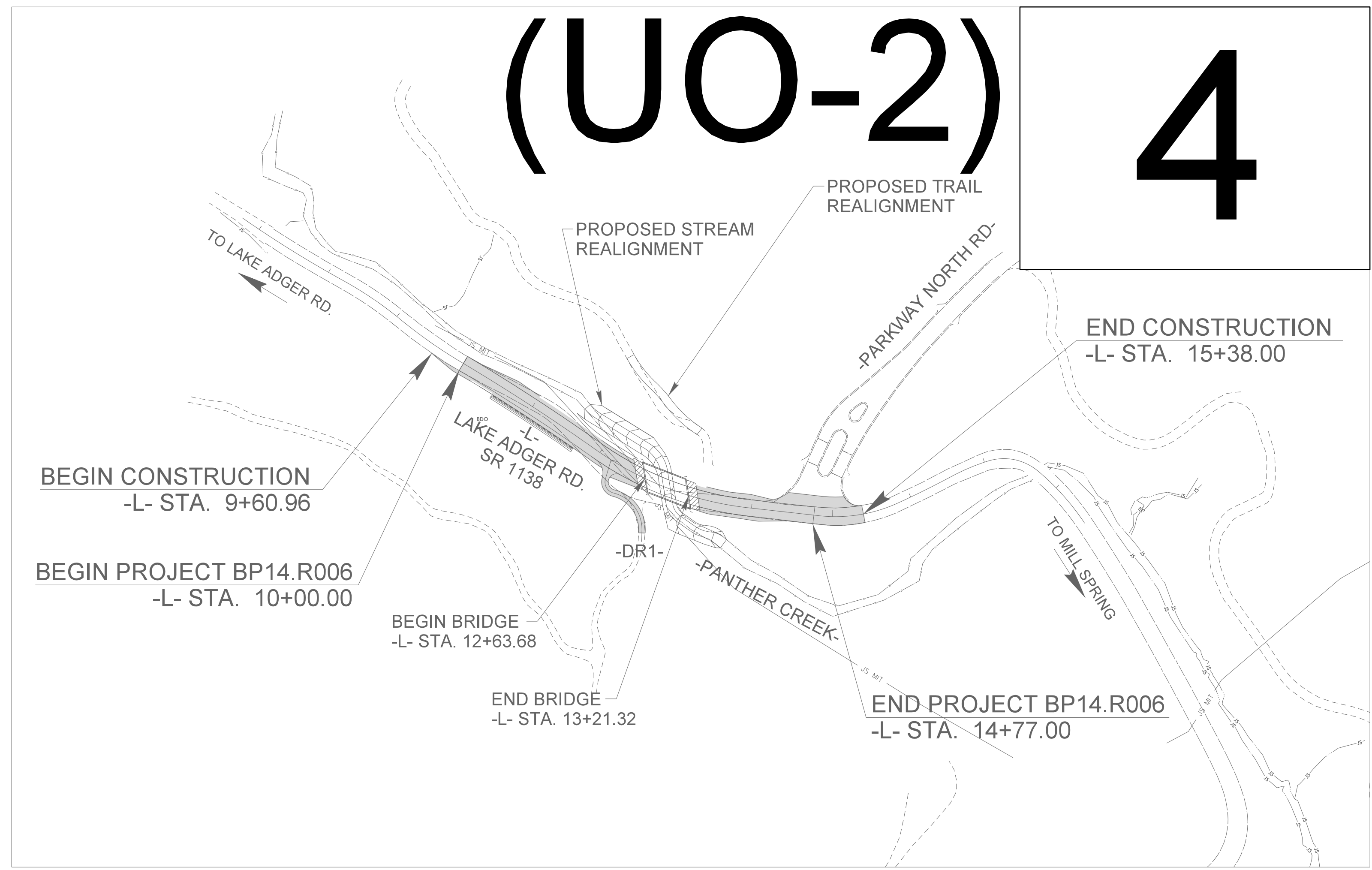
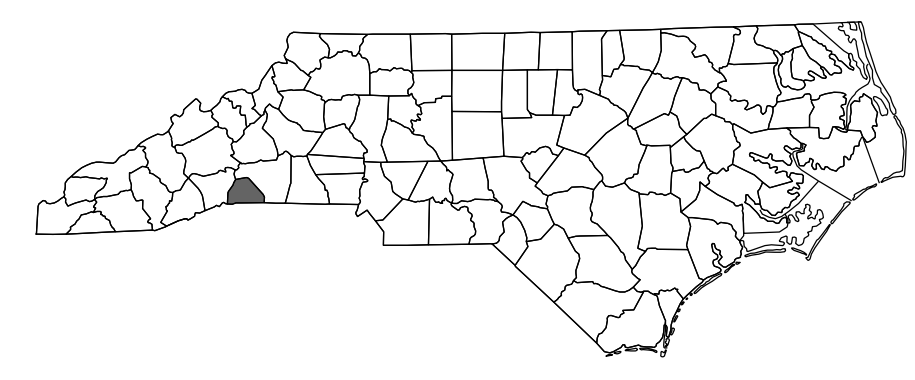
NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET IS DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

**UTILITIES BY OTHERS PLANS
POLK COUNTY**

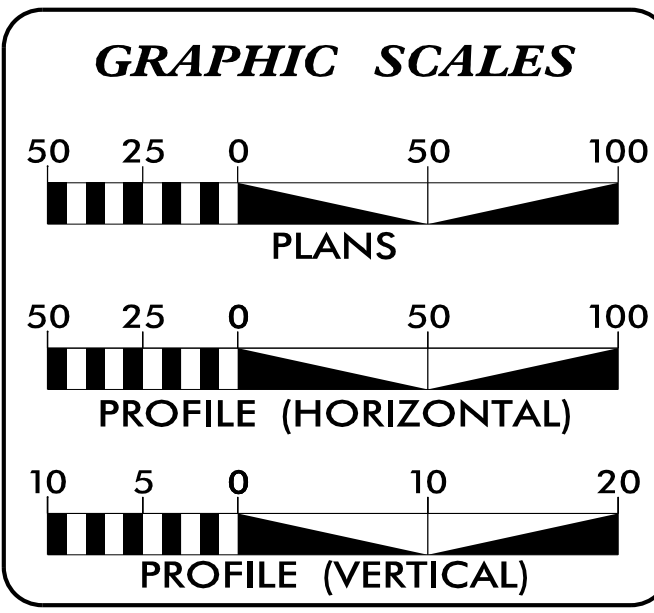
LOCATION: BRIDGE #740043, SR 1138 (LAKE ADGER RD) OVER PANTHER CREEK
TYPE OF WORK: POWER DISTRIBUTION & TELECOM RELOCATIONS



VICINITY MAP



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEET

UTILITY OWNERS WITH CONFLICTS

(A) POWER DISTRIBUTION - REMC
(B) TELECOM - AT&T

PREPARED IN THE OFFICE OF:

HINDE ENGINEERING
License No. C-2639
10020 Monroe Road, Suite 280 Matthews, NC 28105
(704) 814-4407

<u>Clint L. Stevens, PE</u>	UTILITY COORDINATION PROJECT MANAGER
<u>Kevin S. Hinde, PE</u>	PROJECT UTILITY COORDINATOR
<u>James N. Arnold</u>	PROJECT UTILITY DESIGNER

**DIVISION OF HIGHWAYS
DIVISION 14**
253 WEBSTER RD.
SYLVA, NC 28779
PHONE (828) 586-2141
FAX (828) 586-4043

<u>Robert Golding</u>	DIVISION UTILITY ENGINEER
<u>Lynn Kieselhorst</u>	DIVISION UTILITY COORDINATOR
<u>Zack Schuler</u>	DIVISION BRIDGE PROGRAM MANAGER

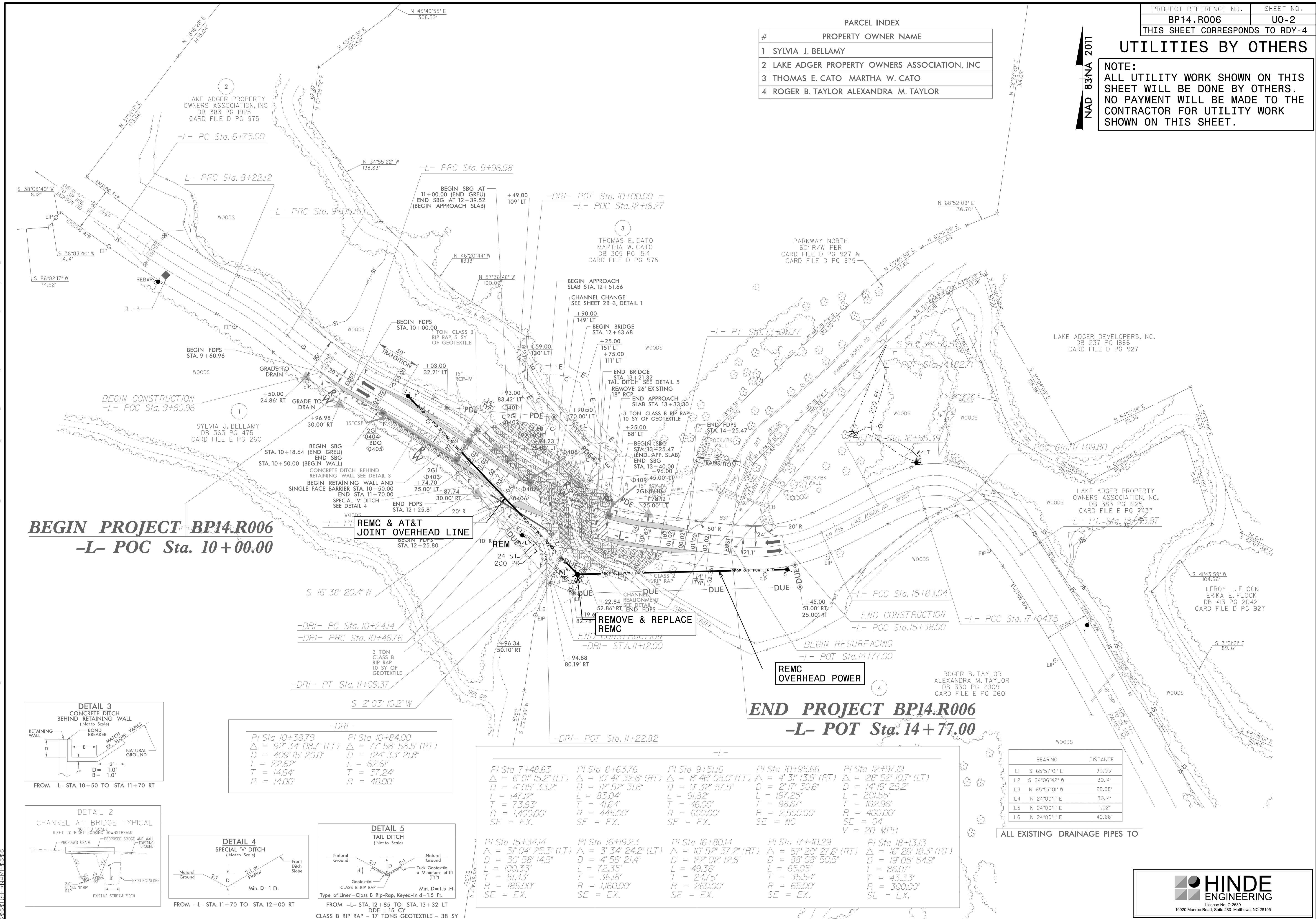
PARCEL INDEX

#	PROPERTY OWNER NAME
1	SYLVIA J. BELLAMY
2	LAKE ADGER PROPERTY OWNERS ASSOCIATION, INC
3	THOMAS E. CATO MARTHA W. CATO
4	ROGER B. TAYLOR ALEXANDRA M. TAYLOR

UTILITIES BY OTHERS

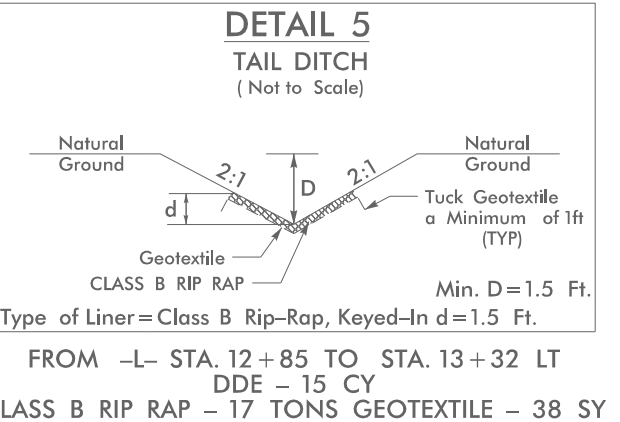
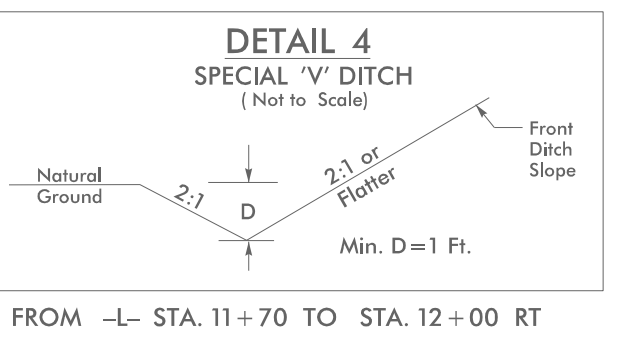
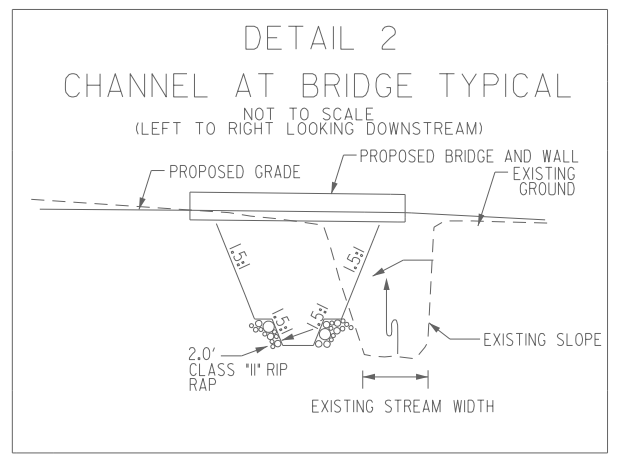
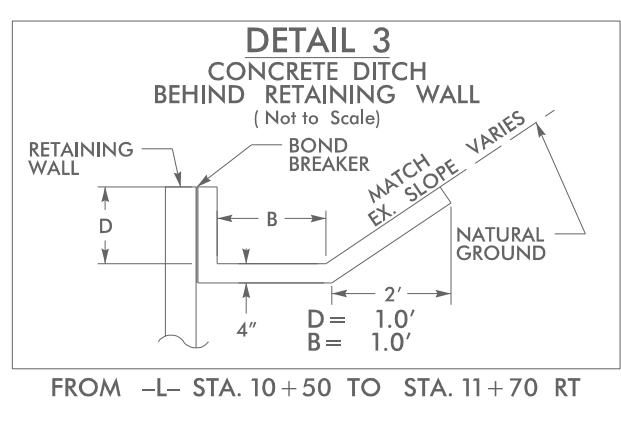
NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

NAD 83 NA 2011



BEGIN PROJECT BP14.R006
-L- POC Sta. 10+00.00

END PROJECT BP14.R006
-L- POT Sta. 14+77.00



-DRI-

PI Sta 10+38.79	PI Sta 10+84.00
$\Delta = 92^\circ 34' 08.7\" (LT)$	$\Delta = 77^\circ 58' 58.5\" (RT)$
$D = 409' 15\" 20.0'$	$D = 124' 33\" 21.8'$
$L = 22.62'$	$L = 62.61'$
$T = 14.64'$	$T = 37.24'$
$R = 14.00'$	$R = 46.00'$

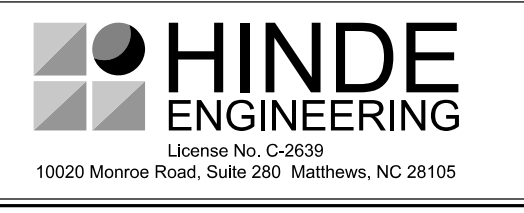
-L-

PI Sta 7+48.63	PI Sta 8+63.76	PI Sta 9+51.16	PI Sta 10+95.66	PI Sta 12+97.19
$\Delta = 6^\circ 01' 15.2\" (LT)$	$\Delta = 10^\circ 41' 32.6\" (RT)$	$\Delta = 8^\circ 46' 05.0\" (LT)$	$\Delta = 4^\circ 31' 13.9\" (RT)$	$\Delta = 28^\circ 52' 10.7\" (LT)$
$D = 4^\circ 05' 33.2'$	$D = 12^\circ 52' 31.6'$	$D = 9^\circ 32' 57.5'$	$D = 2^\circ 17' 30.6'$	$D = 14^\circ 19' 26.2'$
$L = 147.12'$	$L = 83.04'$	$L = 91.82'$	$L = 197.25'$	$L = 201.55'$
$T = 73.63'$	$T = 41.64'$	$T = 46.00'$	$T = 98.67'$	$T = 102.96'$
$R = 1,400.00'$	$R = 445.00'$	$R = 600.00'$	$R = 2,500.00'$	$R = 400.00'$
SE = EX.	SE = EX.	SE = EX.	SE = NC	SE = 04
				V = 20 MPH

BEARING DISTANCE

L1	S 65°57'01\" E	30.03'
L2	S 24°06'42\" W	30.14'
L3	N 65°57'01\" W	29.98'
L4	N 24°00'11\" E	30.14'
L5	N 24°00'11\" E	11.02'
L6	N 24°00'11\" E	40.68'

ALL EXISTING DRAINAGE PIPES TO

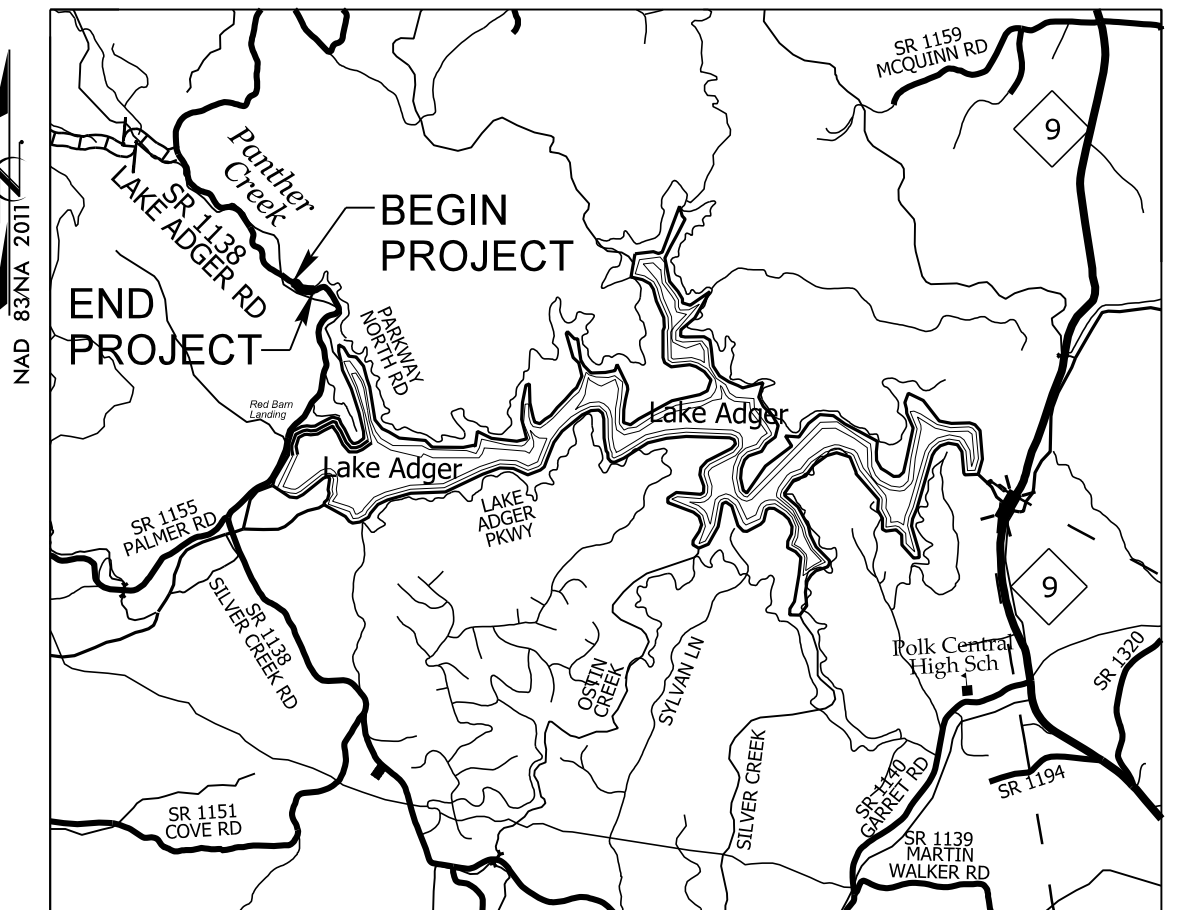


09/08/2025

BP14.R006

CONTRACT: DN00586

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols

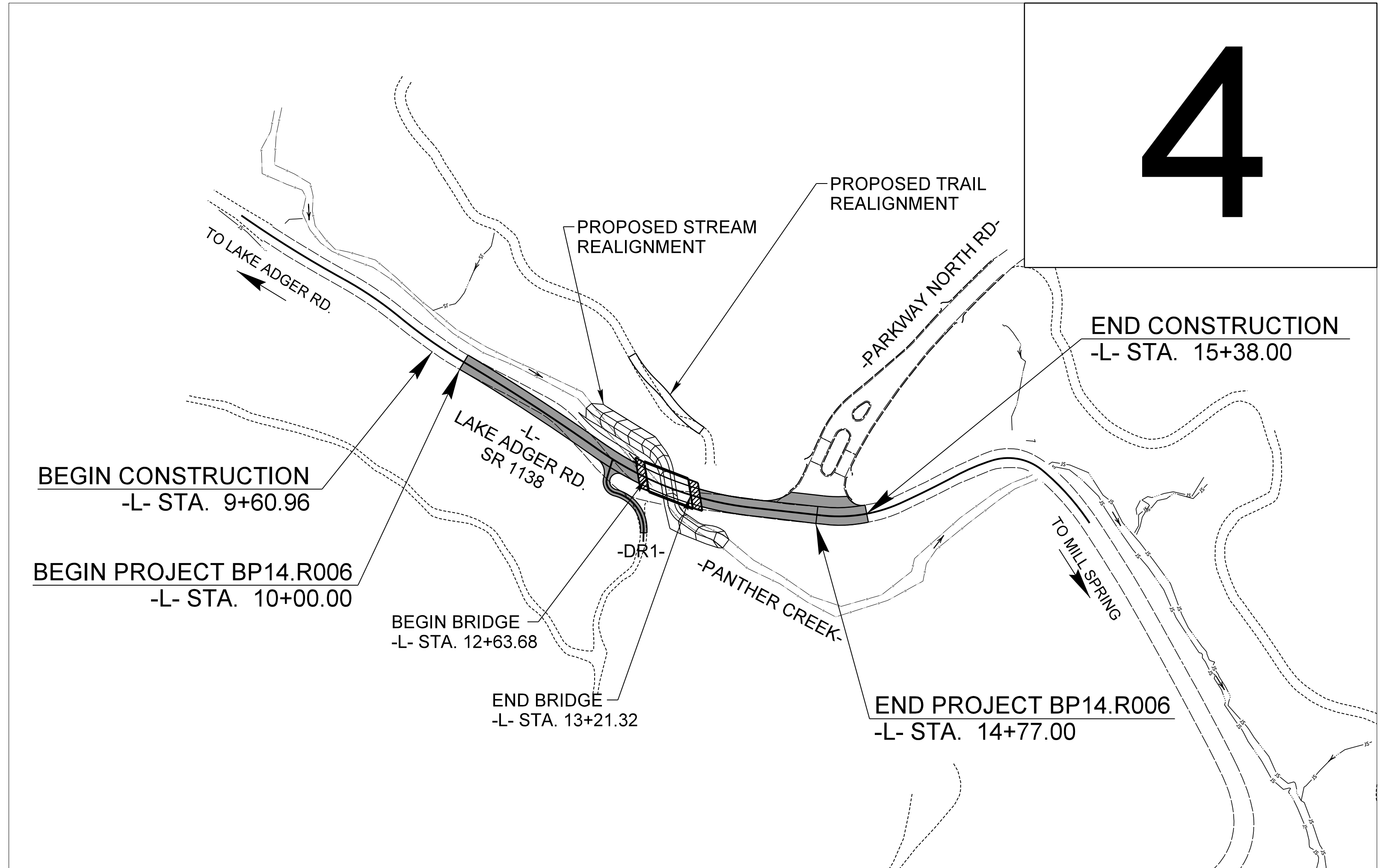
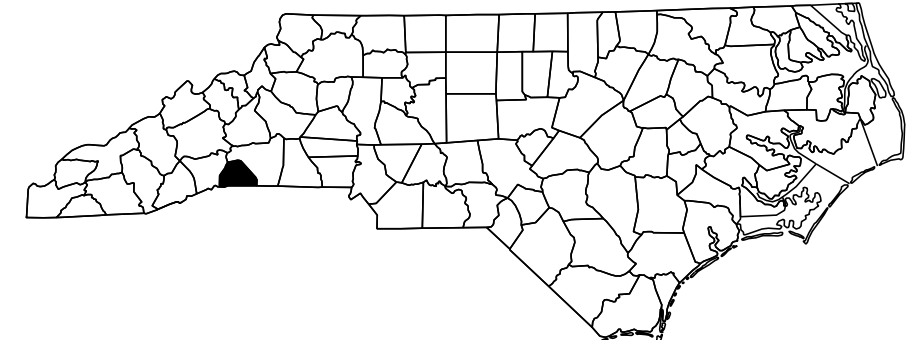


VICINITY MAP

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS **POLK COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP14.R006	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
BP14.R006.1		P.E.	
BP14.R006.2		ROW	
BP14.R006.3		CONST	

LOCATION: REPLACE POLK BRIDGE 143 ON SR 1138 OVER PANTHER CREEK
TYPE OF WORK: GRADING, DRAINAGE, PAVING, RETAINING WALL, AND STRUCTURE

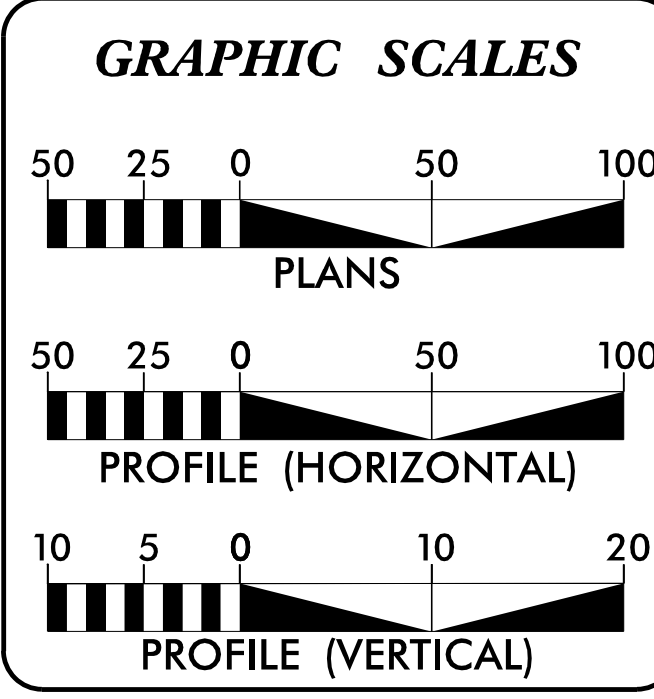


4

NAD 83NA 2011

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2025 = N/A
ADT 2045 = < 400

K = 12 %
D = 55 %
T = 13 % *
V = 20 MPH

* TTST = 1% DUAL 12%
FUNC CLASS = LOCAL SUB-REGIONAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BP14.R006	0.080 Miles
LENGTH STRUCTURE TIP PROJECT BP14.R006	0.010 Miles
TOTAL LENGTH TIP PROJECT BP14.R006	0.090 Miles

Prepared in the Office of:
NIV5
NVS ENGINEERS & CONSULTANTS, INC.
3300 REGENCY PARKWAY, SUITE 100
CARY, NC 27518
P: 919.851.1912 www.NVS.com
NC License # F-1333

FOR NORTH CAROLINA DEPT. OF TRANSPORTATION, DIVISION 14
2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: M. SCOTT CLARK
OCTOBER 19, 2023 PROJECT ENGINEER

LETTING DATE: ERICA MARTIN
DECEMBER 09, 2025 PROJECT DESIGN ENGINEER

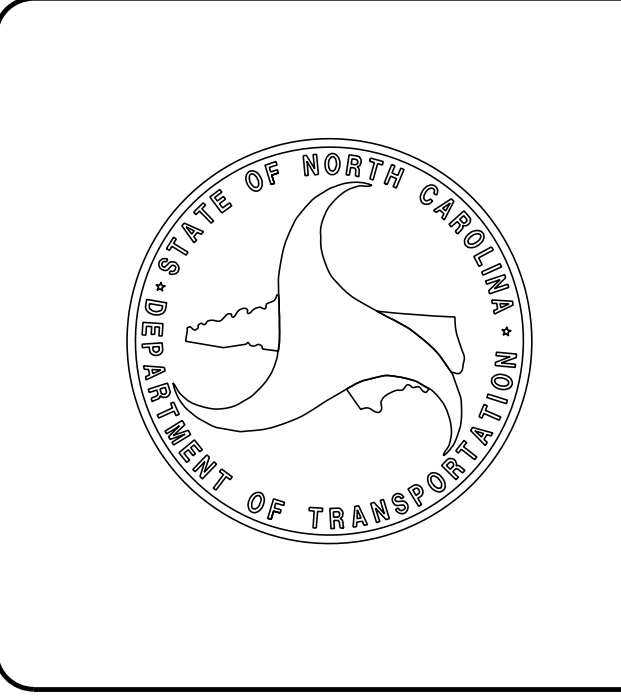
NCDOT CONTACT: ANDREW BUCHANAN
DIVISION 14 PROJECT MANAGER

HYDRAULICS ENGINEER

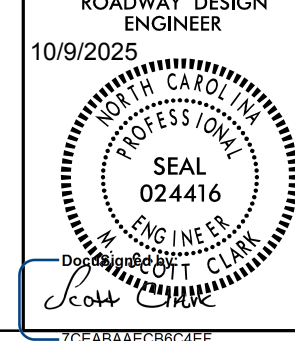

Signed by: David P. Becker
SIGNATURE: 10/9/2025
P.E.

ROADWAY DESIGN ENGINEER

Signed by: Scott Clark
SIGNATURE: 10/9/2025
P.E.



INDEX OF SHEETS, GENERAL NOTES, and LIST OF STANDARDS

PROJECT REFERENCE NO. <i>BPI4.R006</i>	SHEET NO. <i>1A</i>
ROADWAY DESIGN ENGINEER	
10/9/2025	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
<small>NVS ENGINEERS & CONSULTANTS, INC. 3300 REGENCY PARKWAY, SUITE 100 CARY, NC 27518 P. 919.851.1912 www.NV5.com NC License # F-1333</small>	

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1B	CONVENTIONAL SYMBOLS
2A-1 TO 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 TO 2B-5	NATURAL STREAM DESIGN DETAILS
2C-1 THRU 2C-5	DETAILS IN LIEU OF STANDARDS
3B-1	ROADWAY SUMMARIES
3D-1	DRAINAGE SUMMARY
3G-1	GEOTECHNICAL SUMMARY
4	PLAN SHEETS
5	PROFILE SHEETS
TMP-1 THRU TMP-6	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-5/CONST-4	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-3	SIGNING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1	CROSS SECTION INDEX
X-1A	CROSS SECTION SUMMARY
X-2 TO X-38	CROSS SECTION PLANS
S-1 THRU S-20	STRUCTURE PLANS
WALL-1 THRU WALL-2	WALL PLANS

GENERAL NOTES

GENERAL NOTES:

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

RANDOLPH ELECTRIC MEMBERSHIP CORPORATION & AT&T

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

LIST OF STANDARDS

2024 ROADWAY ENGLISH 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 hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
275.01	Rock Plating
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.02	Parallel Pipe End Section - Precast Concrete Section for 15" to 24" Pipe
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
423.01	Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.02	Driveway Turnout - Radius Type
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
854.07	Single Slope Concrete Barrier
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - for B-77 and B-83 Anchor Units
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

EFF. 01-16-2024
REV.

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin (EIP)	○
Computed Property Corner	×
Existing Concrete Monument (ECM)	□
Parcel/Sequence Number	(123)
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	-S-S-
Potential Contamination Area: Soil	-S-S-
Known Contamination Area: Water	-W-W-
Potential Contamination Area: Water	-W-W-
Contaminated Site: Known or Potential	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	×
Foundation	□
Area Outline	□
Cemetery	+
Building	□
School	□
Church	+
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	▬
Proposed Lateral, Tail, Head Ditch	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Secondary Horiz and Vert Control Point	◆
Vertical Benchmark	⊕
Existing Right of Way Monument	△
Proposed Right of Way Monument (Rebar and Cap)	▲
Proposed Right of Way Monument (Concrete)	⊙
Existing Permanent Easement Monument	◇
Proposed Permanent Easement Monument (Rebar and Cap)	◆
Existing C/A Monument	△
Proposed C/A Monument (Rebar and Cap)	▲
Proposed C/A Monument (Concrete)	⊙
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Existing Control of Access Line	-----
Proposed Control of Access Line	-----
Proposed ROW and CA Line	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage/Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▨
VEGETATION:	
Single Tree	○
Single Shrub	○
Hedge	-----

Woods Line	-----
Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A, B, C or D (Accuracy)

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊕
Power Transformer	⊕
U/G Power Cable Hand Hole	⊕
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊕
U/G Power Line (SUE - LOS B)*	-----
U/G Power Line (SUE - LOS C)*	-----
U/G Power Line (SUE - LOS D)*	-----
TELEPHONE:	
Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	⊕
U/G Telephone Test Hole (SUE - LOS A)*	⊕
U/G Telephone Cable (SUE - LOS B)*	-----
U/G Telephone Cable (SUE - LOS C)*	-----
U/G Telephone Cable (SUE - LOS D)*	-----
U/G Telephone Conduit (SUE - LOS B)*	-----
U/G Telephone Conduit (SUE - LOS C)*	-----
U/G Telephone Conduit (SUE - LOS D)*	-----
U/G Fiber Optics Cable (SUE - LOS B)*	-----
U/G Fiber Optics Cable (SUE - LOS C)*	-----
U/G Fiber Optics Cable (SUE - LOS D)*	-----

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line Test Hole (SUE - LOS A)*	⊕
U/G Water Line (SUE - LOS B)*	-----
U/G Water Line (SUE - LOS C)*	-----
U/G Water Line (SUE - LOS D)*	-----
Above Ground Water Line	-----

TV:

TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	⊕
U/G TV Test Hole (SUE - LOS A)*	⊕
U/G TV Cable (SUE - LOS B)*	-----
U/G TV Cable (SUE - LOS C)*	-----
U/G TV Cable (SUE - LOS D)*	-----
U/G Fiber Optic Cable (SUE - LOS B)*	-----
U/G Fiber Optic Cable (SUE - LOS C)*	-----
U/G Fiber Optic Cable (SUE - LOS D)*	-----

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line Test Hole (SUE - LOS A)*	⊕
U/G Gas Line (SUE - LOS B)*	-----
U/G Gas Line (SUE - LOS C)*	-----
U/G Gas Line (SUE - LOS D)*	-----
Above Ground Gas Line	-----

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
SS Force Main Line Test Hole (SUE - LOS A)*	⊕
SS Force Main Line (SUE - LOS B)*	-----
SS Force Main Line (SUE - LOS C)*	-----
SS Force Main Line (SUE - LOS D)*	-----

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line (SUE - LOS B)*	-----
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.