

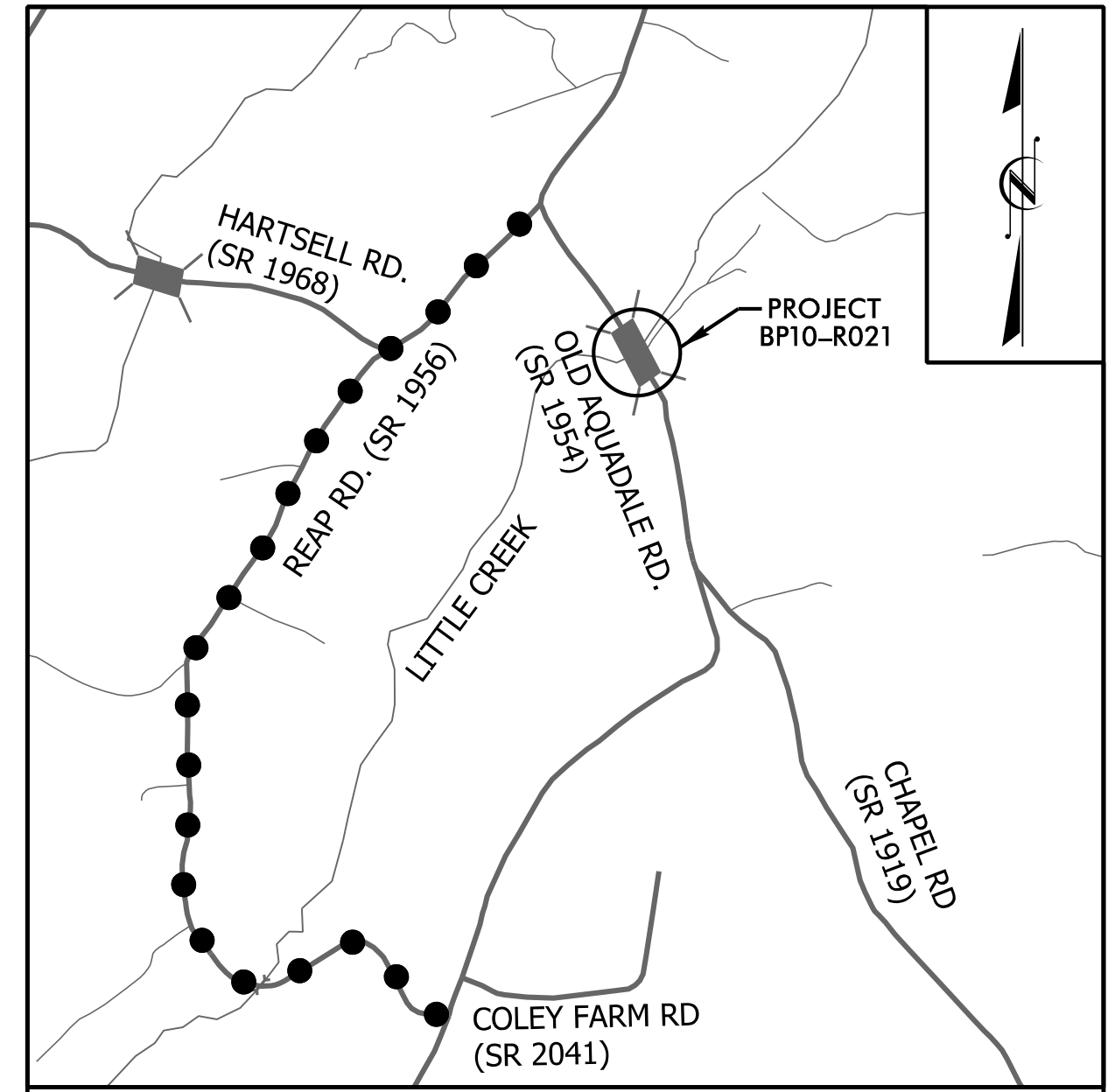
09_08/2019

I:\27\2026 X:\Raleigh\21-0064\005 - Stanly County R021\830095\05-CAD\BP10-R021\1-830095\Roadway\Proj\BP10-R021\RDy...t.sh.dgn

TIP PROJECT: BP10-R021

CONTRACT: DJ00591

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



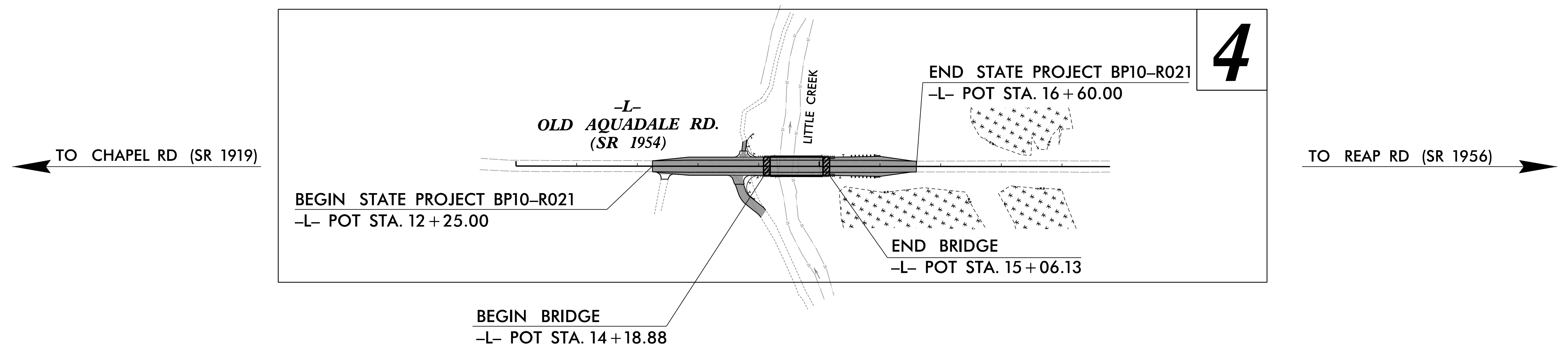
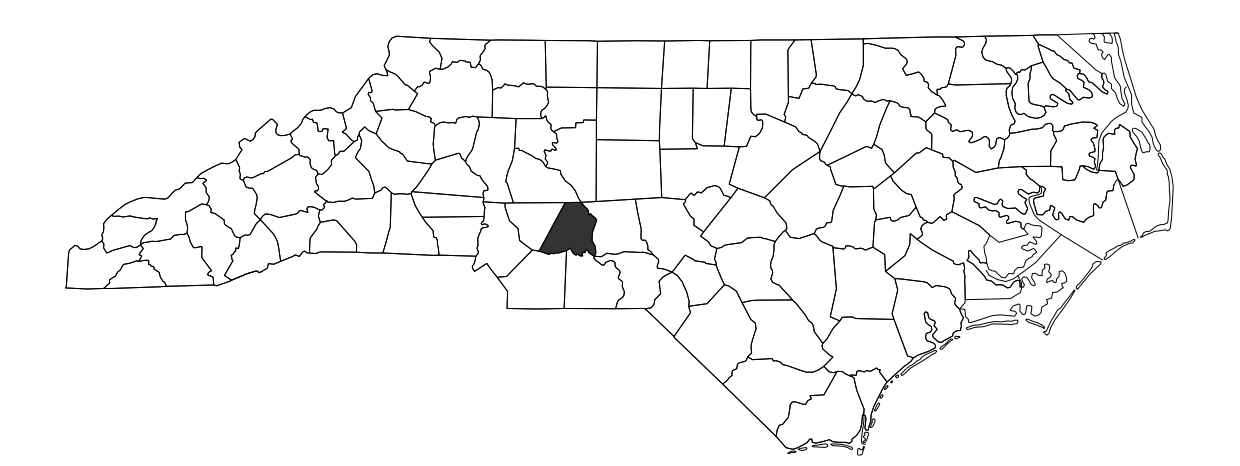
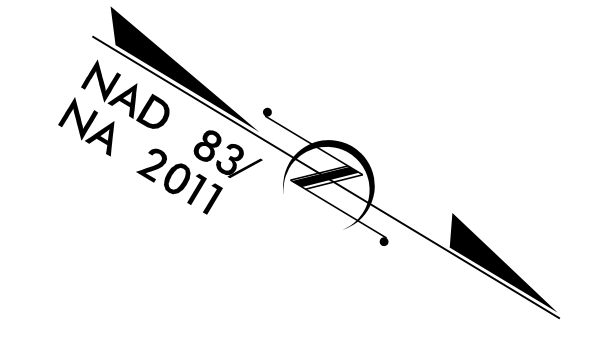
VICINITY MAP
..... OFFSITE DETOUR N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
STANLY COUNTY

**LOCATION: REPLACE BRIDGE NO. 95 OVER LITTLE CREEK
ON SR 1954 (OLD AQUADALE RD.)**

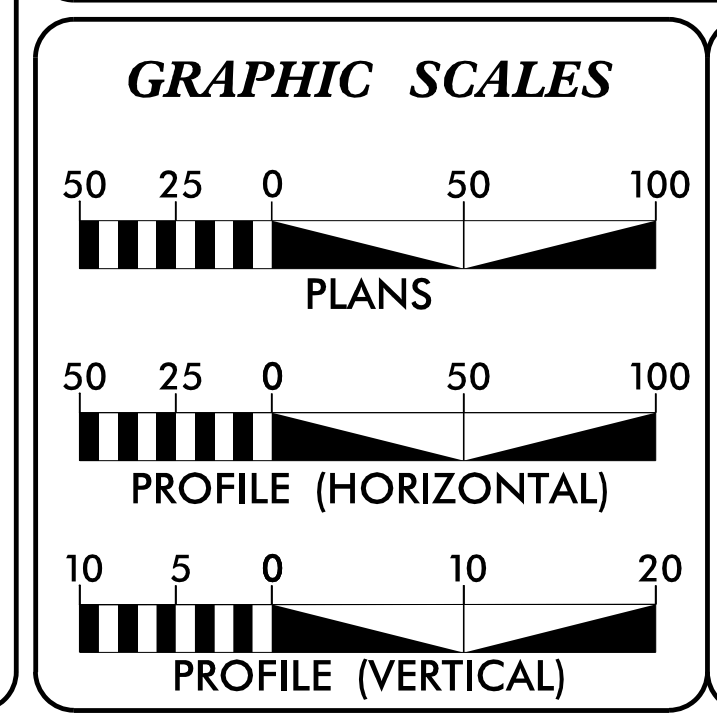
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP10-R021	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
BP10.R021.1	N/A	PE	
BP10.R021.2	N/A	ROW & UTL	
BP10.R021.3	N/A	CONST.	



HYDRAULIC DESIGN
Kimley»Horn
200 South Tryon, Suite 200
Charlotte, North Carolina 28202
NC License #F-0102

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2026 =	580
ADT 2046 =	708
K =	%
D =	%
T =	% *
V =	60 MPH
* TTST =	DUAL
FUNC CLASS =	
LOCAL	
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT BP10-R021	=	0.065 MILES
LENGTH OF STRUCTURE TIP PROJECT BP10-R021	=	0.017 MILES
TOTAL LENGTH TIP PROJECT BP10-R021	=	0.082 MILES

Prepared for the North Carolina Department of Transportation in the Office of:

AMT A. MORTON THOMAS AND ASSOCIATES, INC.
10735 DAVID TAYLOR DRIVE, SUITE 310 • CHARLOTTE, NC 28262
(704) 595-9975 • NC LICENSE NO. F-1049
WWW.AMTEngineering.COM

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 4, 2024

LETTING DATE:
MARCH 18, 2026

JASON GADDY, PE
PROJECT ENGINEER

DAN MORGAN, EI
PROJECT DESIGN ENGINEER

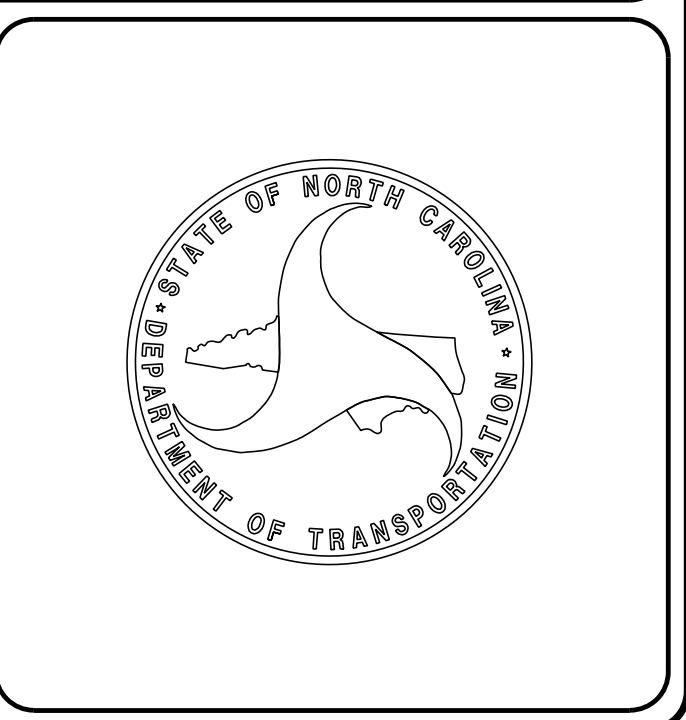
YANWEI MA, PE
DIVISION 10 BRIDGE PROGRAM MANAGER

HYDRAULICS ENGINEER

DocuSigned by:
Jason Gaddy
1/27/2026
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

DocuSigned by:
Jason T. Gaddy
1/27/2026
SIGNATURE: P.E.



8/17/2026 2:37:59 PM C:\Users\jguy\OneDrive\Documents\Projects\Roadway\Proj\BPI0.R021.Rdy_psh01A.dgn

INDEX OF SHEETS, LIST OF STANDARD DRAWINGS, & GENERAL NOTES

PROJECT REFERENCE NO. <i>BPI0-R021</i>	SHEET NO. <i>1A</i>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1 THRU 2C-3	SPECIAL DETAILS
3B-1 THRU 3B-2	ROADWAY QUANTITY SUMMARIES
3D-1	DRAINAGE SUMMARY
3G-1	GEOTECHNICAL SUMMARIES
4	PLAN AND PROFILE SHEET
4A	ROW & EASEMENT DETAILS
RW02C-1 THRU RW02C-3	SURVEY CONTROL SHEETS
RW03E-1 THRU RW04	RIGHT OF WAY CONTROL SHEETS
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
X-1	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-5	CROSS-SECTION SHEETS
S1,S1-1 THRU S1-22	STRUCTURE PLANS

STANDARD DRAWINGS

EFF. 01-16-2024
REV.

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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
423.01	Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment
423.02	Bridge Approach Fills - Type 1A Alternate Approach Fill for Integral 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
840.04	Concrete Open Throat Catch Basin (with Manhole) - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin (with Manhole) - 12" thru 48" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 12, and 14 of 15)
862.02	Guardrail Installation
862.03	Structure Anchor Units (Use Detail in Lieu of Standard for Sheet 8 of 9)
866.02	Woven Wire Fence - with Wood Post
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES

GENERAL NOTES:

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADE LINE: GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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.

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:

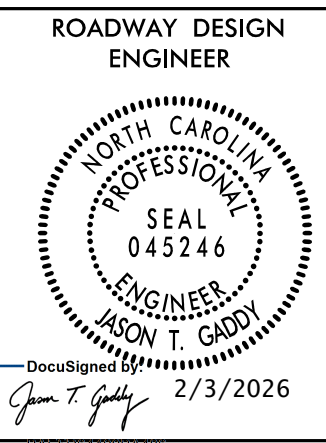
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

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.

RIGHT-OF-WAY MARKERS:

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



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	-----
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)*	-----

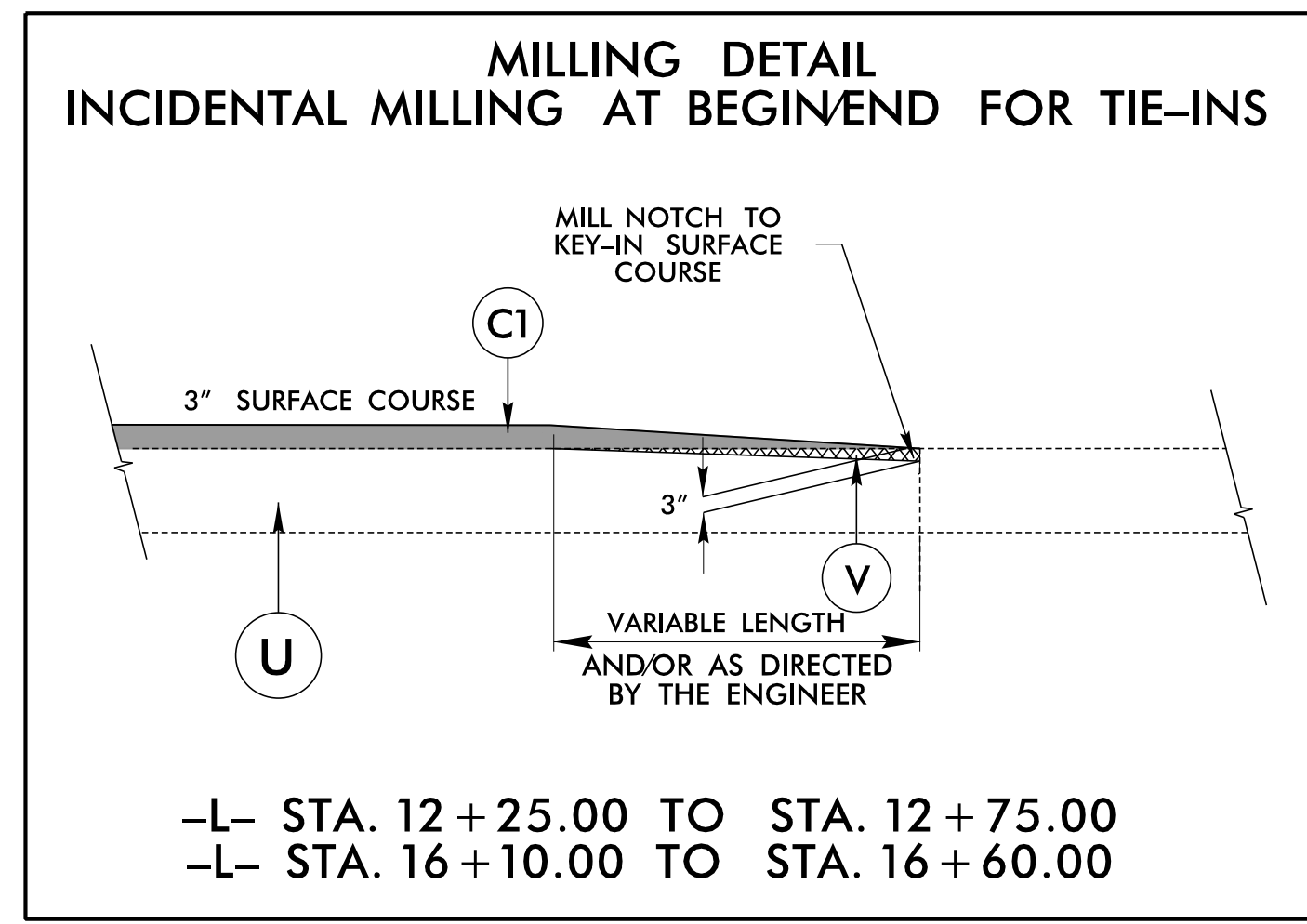
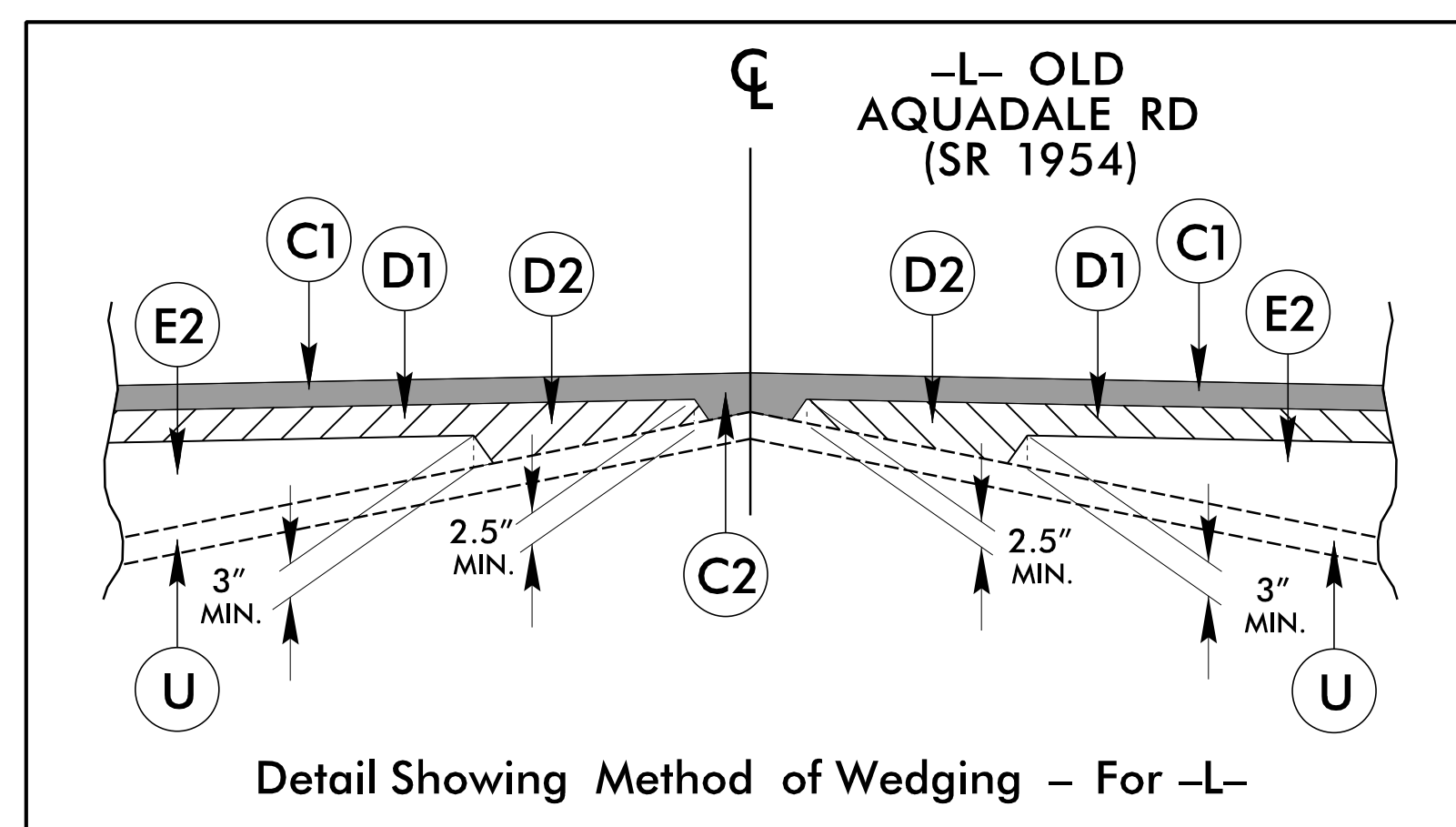
MISCELLANEOUS:

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.	-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	●
Abandoned According to Utility Records	-----
End of Information	-----

6/2/2026 12:06:42 PM Stanley County R021 (830095)\05-CAD\BPI0.R021.1.830095\Roadway\Proc\BPI0.R021.Rdy_tup.dgn

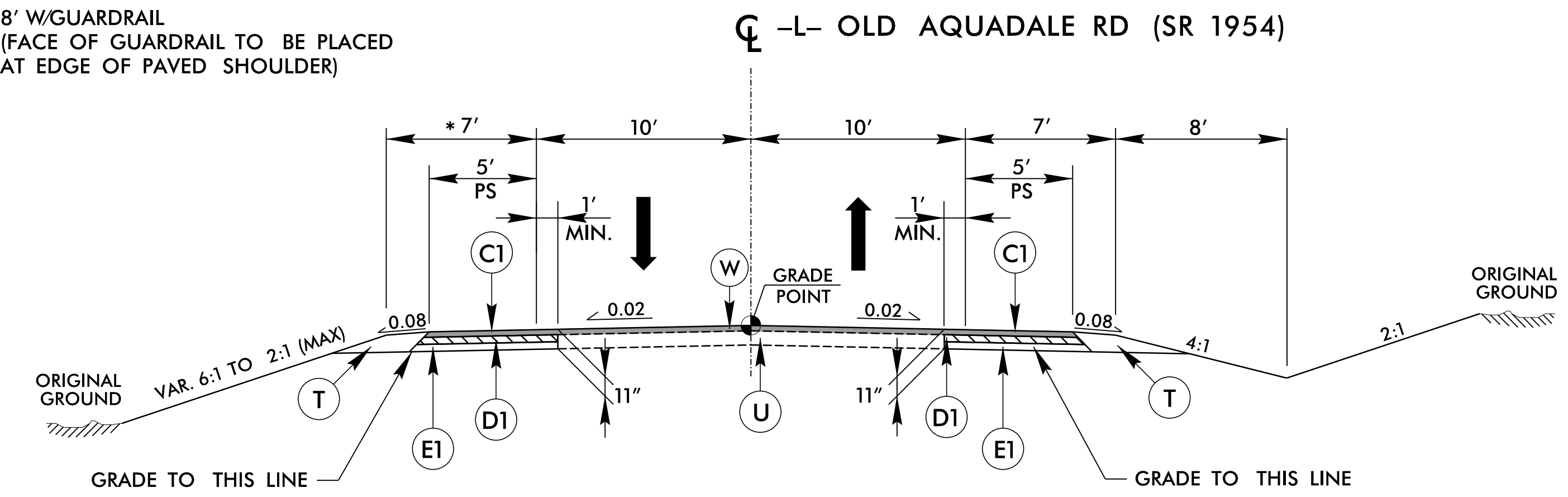
PAVEMENT SCHEDULE <i>(FINAL PAVEMENT DESIGN)</i>	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" 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 5.5" IN DEPTH.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE -L- WEDGING DETAIL)

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



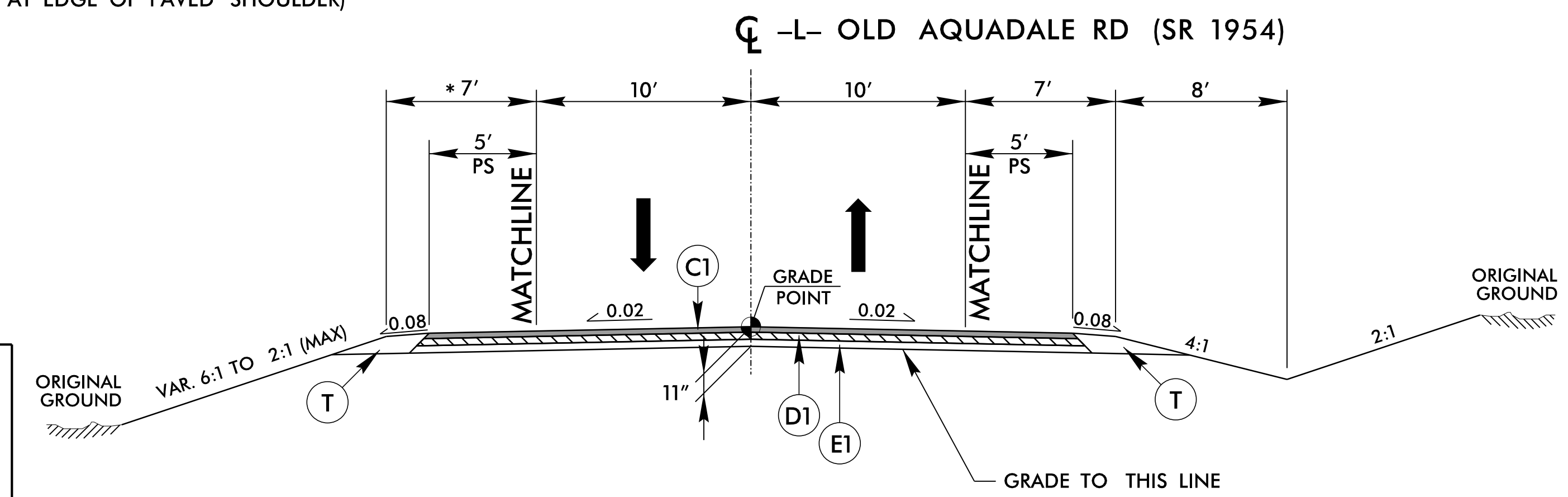
-L- STA. 12+25.00 TO STA. 12+75.00
-L- STA. 16+10.00 TO STA. 16+60.00

* 8' W/GUARDRAIL
(FACE OF GUARDRAIL TO BE PLACED AT EDGE OF PAVED SHOULDER)

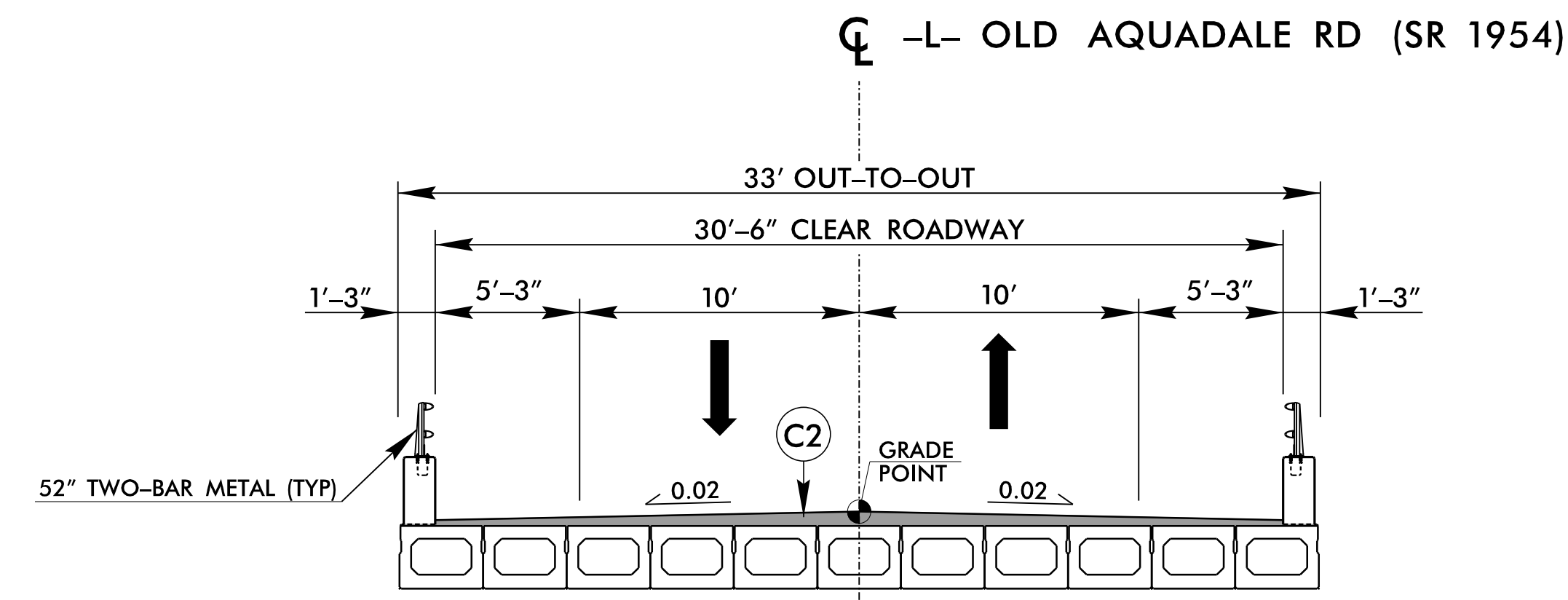


TYPICAL SECTION NO. 1
-L- STA. 12+25.00 TO STA. 13+20.00
-L- STA. 16+06.13 TO STA. 16+60.00

* 8' W/GUARDRAIL
(FACE OF GUARDRAIL TO BE PLACED AT EDGE OF PAVED SHOULDER)

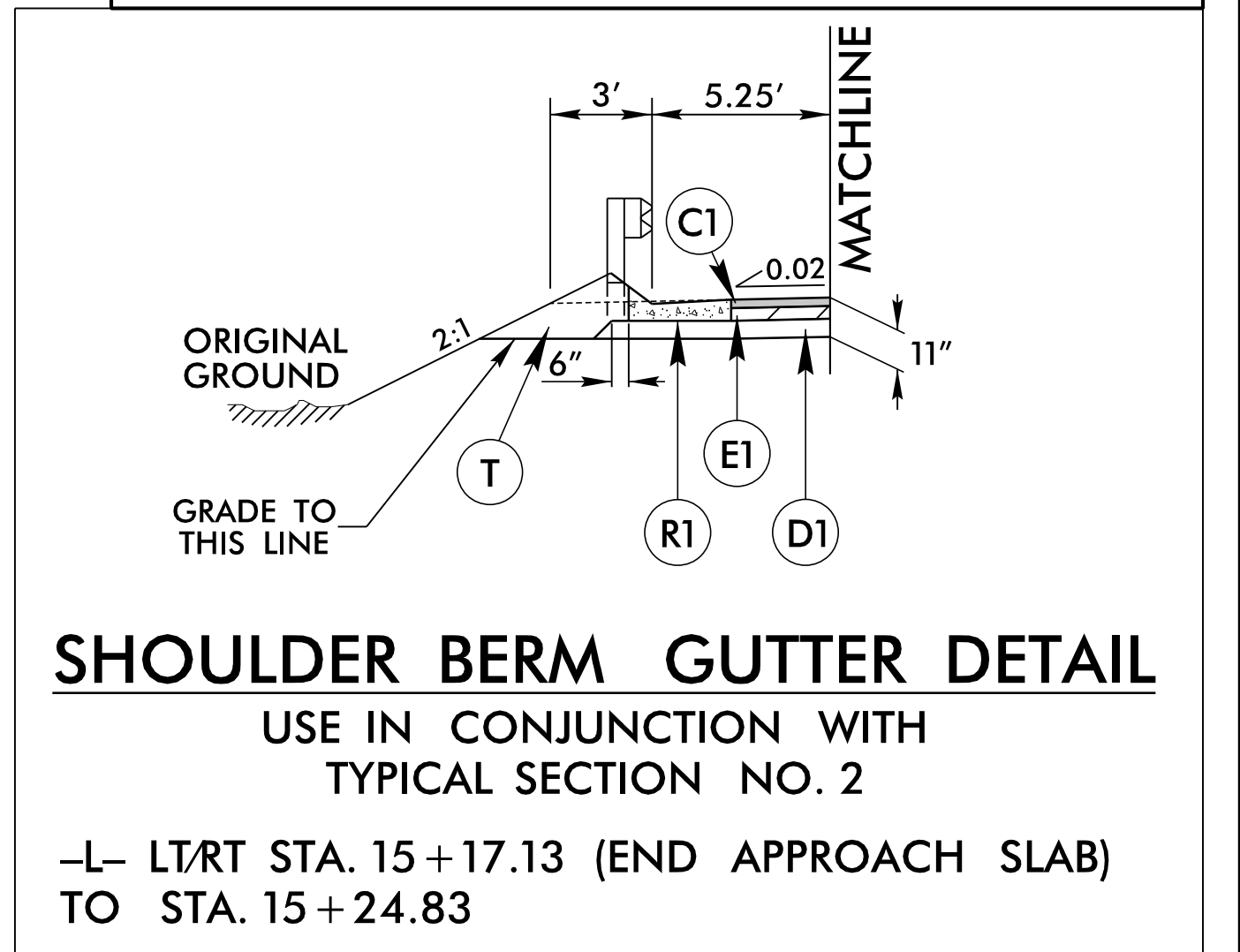
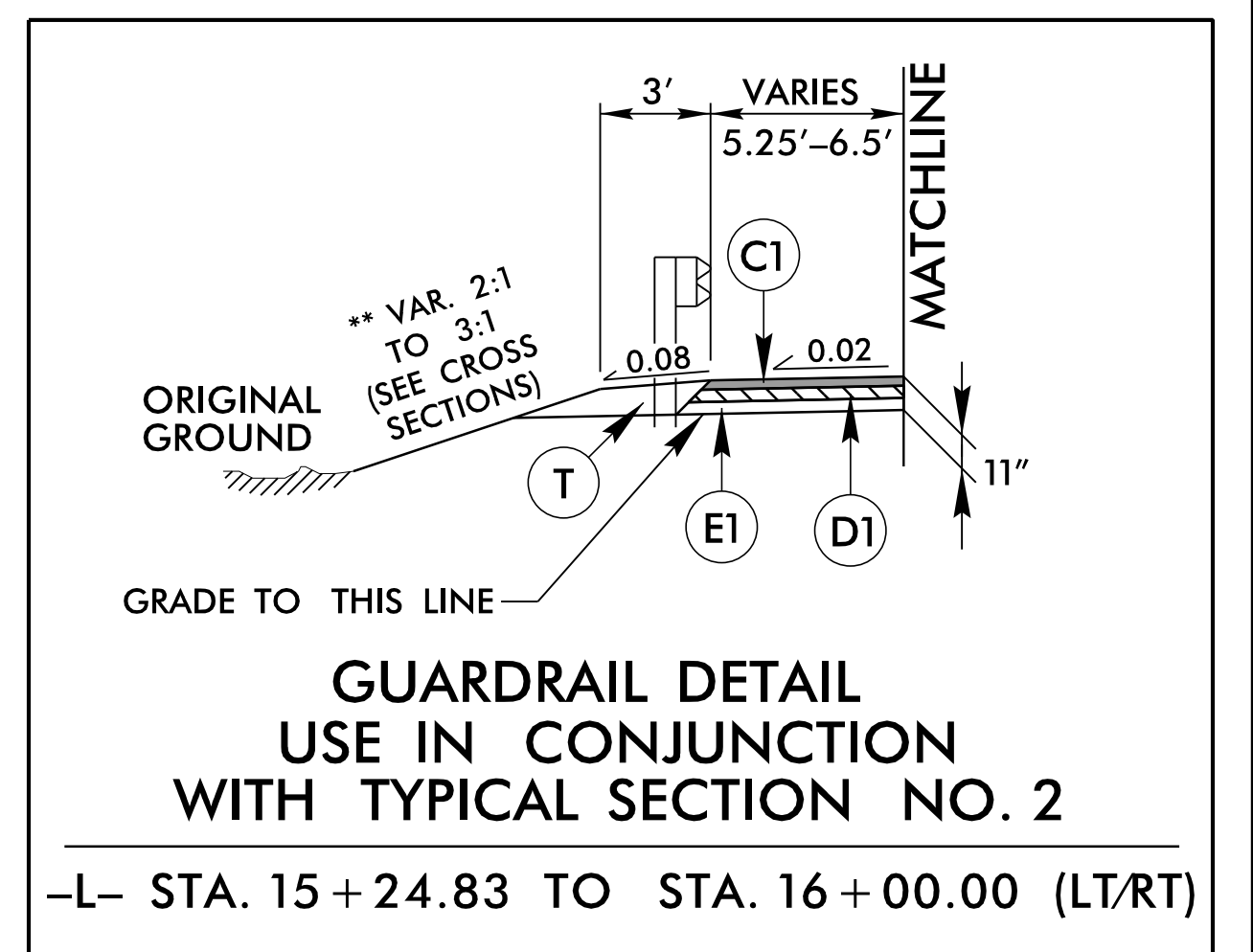


TYPICAL SECTION NO. 2
-L- STA. 13+20.00 TO STA. 14+18.88 (BEGIN BRIDGE)
-L- STA. 15+06.13 (END BRIDGE) TO STA. 16+06.13



TYPICAL SECTION NO. 3
-L- STA. 14+18.88 (BEGIN BRIDGE) TO STA. 15+06.13 (END BRIDGE)
SEE STRUCTURE PLANS FOR STRUCTURE CONSTRUCTION DETAILS

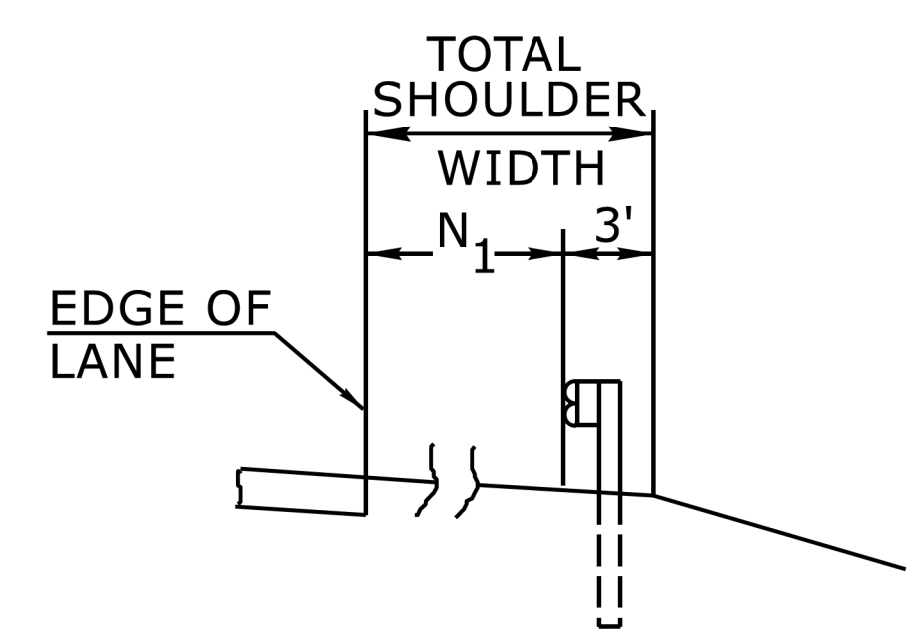
PROJECT REFERENCE NO. <i>BPI0-R021</i>	SHEET NO. <i>2A-1</i>
ROADWAY DESIGN ENGINEER <i>Jason T. Gaddy</i>	PAVEMENT DESIGN ENGINEER <i>Andrew D. Wingo</i>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



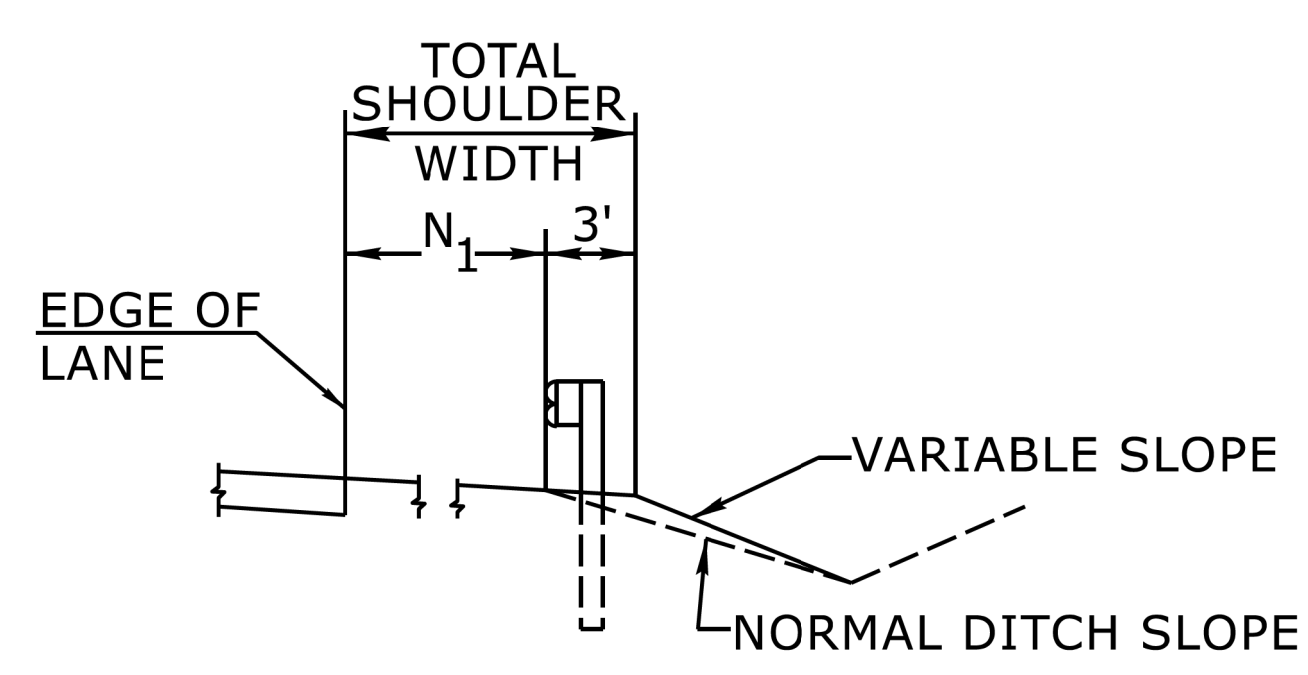
-L- LT/RT STA. 15+17.13 (END APPROACH SLAB) TO STA. 15+24.83

8/17/99

PROJECT REFERENCE NO. <i>BPI0-R021</i>	SHEET NO. <i>2C-2</i>
RW SHEET NO.	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

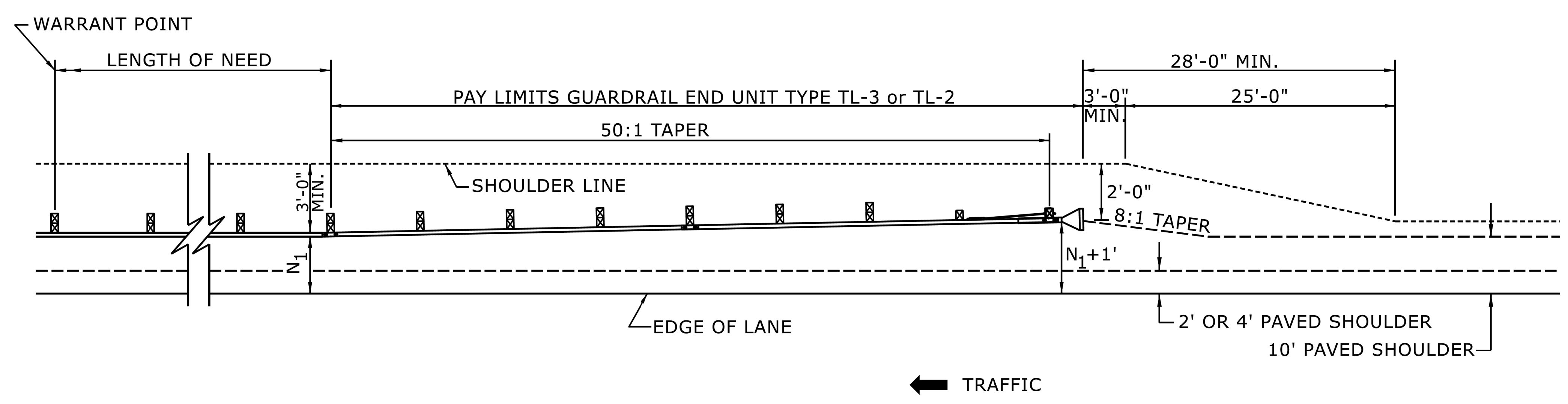


FILL SECTION



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

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



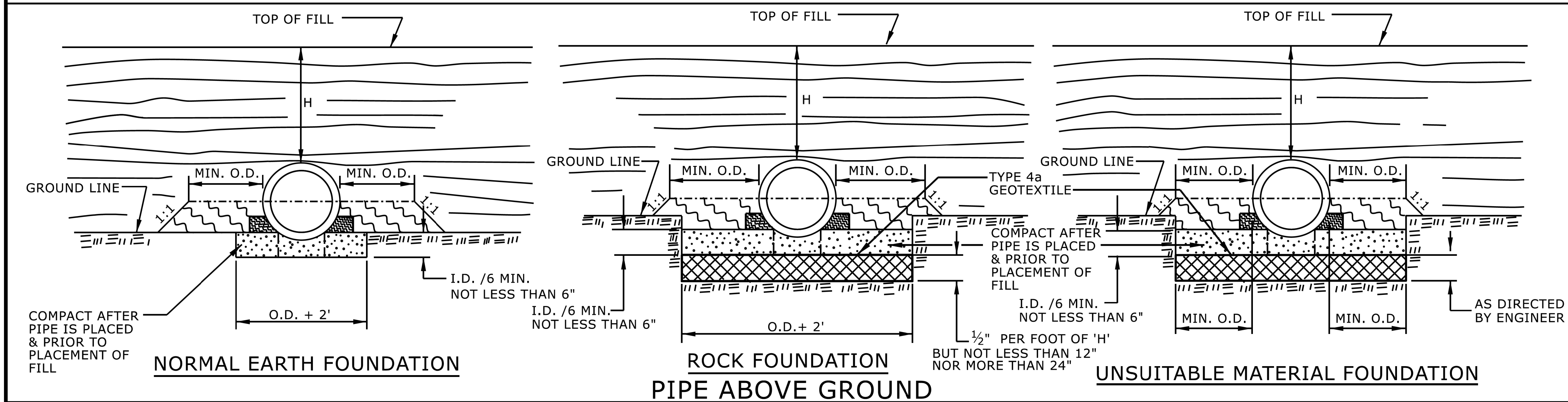
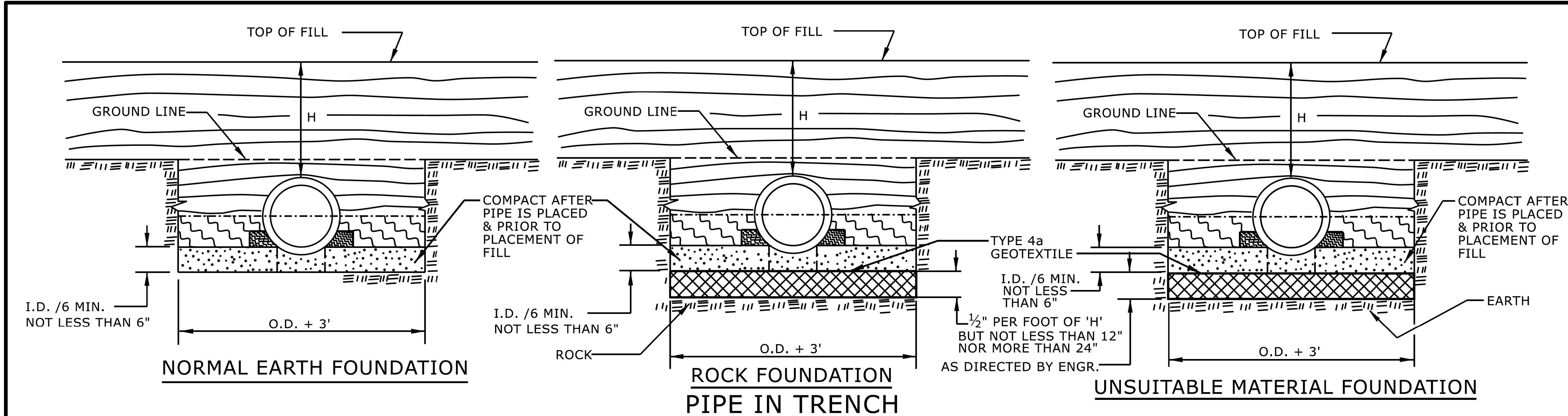
Signed by:
Nicole M. Hacker 8/23/2026
588432303416425

SHEET 6 OF 15
862D01

**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.:	



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.

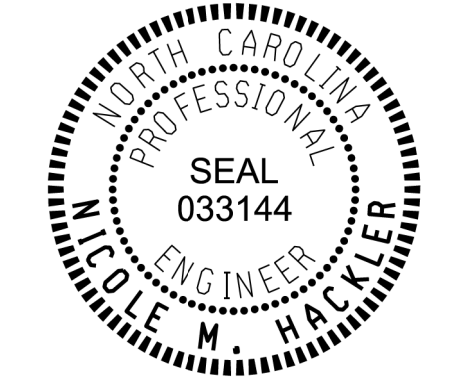
- APPROVED SUITABLE LOCAL MATERIAL.
- TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
- LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE



Signed by: *Nicole M. Hackler* 2026
588432034164CS

SHEET 2 OF 2
300.01

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.:	

8/17/99

EARTHWORK SUMMARY

STATION	STATION	EXCAVATION		EMBANKMENT	BORROW	TOTAL WASTE
		TOTAL UNCLASS.	UNDERCUT			
-L- 12+25.00	-L- 14+18.88	479		323		156
-L- 15+06.11	-L- 16+60.00	45		307	262	
SUBTOTAL		524		630	262	156
TOTAL		524		630	262	156
MATERIAL FOR SHOULDER CONSTRUCTION						
LOSS DUE TO CLEARING & GRUBBING						
ADDITIONAL UNDERCUT						
ROCK WASTE TO REPLACE BORROW						
ADJUST FOR ROCK WASTE						
WASTE IN LIEU OF BORROW						
PROJECT TOTAL		524		630	106	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT						
GRAND TOTAL						
SAY		600			200	

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Asphalt Pavement will be paid for at the contract lump sum price for "Grading."

Note: Earthwork quantities are calculated by the roadway designer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

REMOVAL OF EXISTING ASPHALT PAVEMENT

LINE	BEIGN STATION	END STATION	LOC.	LENGTH OR AREA	WIDTH	SQUARE YARDS
-L-	13+20	14+19	CL	1,711.02	---	190.11
-L-	15+06	16+06	CL	1,695.47	---	188.39
TOTAL						378.50
SAY						380

6/2/09
 I:\2006\06\06\21-0064\005 - Stanly County R021 (830095)\05-CAD\BP10.R021.1.830095\Roadway\Pro\BP10.R021.Rdy_psh03B-Series.dgn
 1/22/2006
 K:\106\106\21-0064\005 - Stanly County R021 (830095)\05-CAD\BP10.R021.1.830095\Roadway\Pro\BP10.R021.Rdy_psh03B-Series.dgn
 lescob.cha

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHOR / END UNITS				REMOVE EXISTING GUARDRAIL	REMOVE & RESET EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	AT-1	GREU TL- 3	TYPE III	TYPE III SC				
L	13+86.58	14+18.88	LT		48.00			14+18.88	VAR.	VAR.					1		1					
L	13+88.25	14+18.88	RT		50.00		14+18.88		VAR.	VAR.					1		1					
L	15+06.13	16+00.00	LT	93.87			15+06.13		5.25'	8.25'	50.0'		1.0'			1	1					
L	15+06.13	16+00.00	RT	93.87				15+06.13	5.25'	8.25'		50.0'		1.0'		1	1					
SUBTOTALS				187.74	98.00										2	2	4					
DEDUCTIONS																						
GREU TL-3 @ 50'					-100.00																	
TYPE III @ 18.75'					-75.00																	
TYPE III SC @ 18.75'																						
AT-1 @ 6.25'					-12.50																	
Total				0.24	98.00																	
SAY				12.5	112.5		5 ADDITIONAL POSTS								2	2	4	0				

WOVEN WIRE FENCE SUMMARY

STATION TO STATION	LT.	A	B	C	D	E	F
	OR RT.	FABRIC L.F.	END BRACE	CORNER BRACE	LINE BRACE	4" POSTS	5" POSTS
12+74.84 TO 13+87.22	RT	115.90		3		3	9
TOTAL		115.90				3	9
SAY		120				4	9

I:\2025\09\21-0064\005 - Stanly County R021 (830095)\05-CAD\BP10.R021.1.830095\Roadway\Proj\BP10.R021.Rdy_psh03B-Series.dgn
 6/2/2025 11:41:06 AM
 lescob.cha

COMPUTED BY: JKS 10/20/2025
CHECKED BY: CRL 10/20/2025

(9-17-24)

PROJECT NO.
BP10.R021

SHEET NO.
3G-1

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

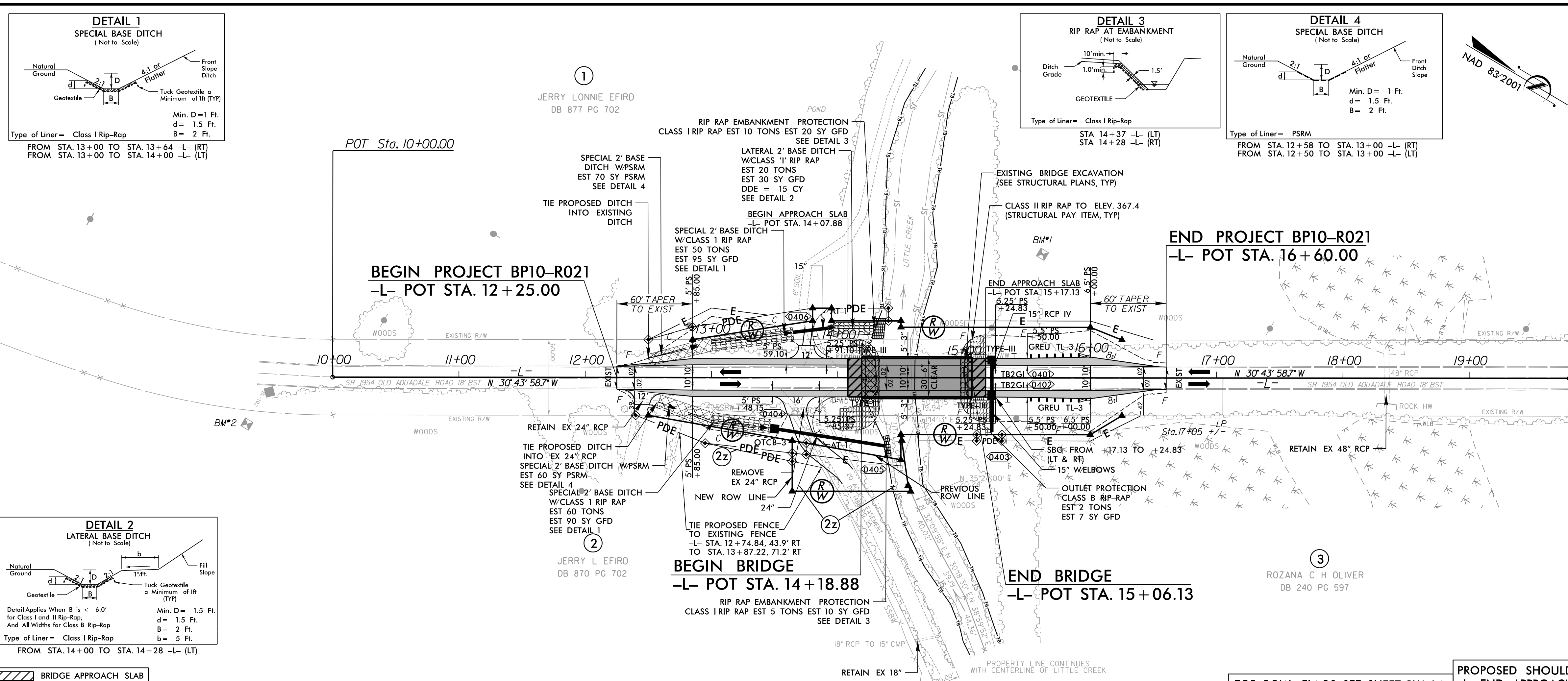
LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

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

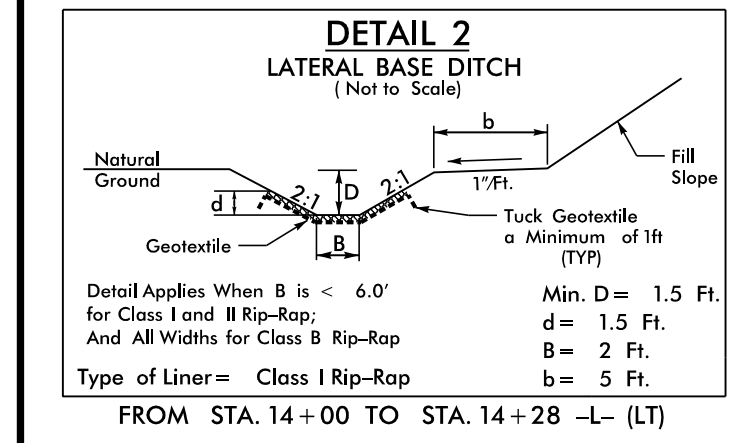
8/17/99

I:\2026\10\20\2025\21-0064\05 - Stanly County R021 (830095)\05-CAD\BP10.R021\1-830095\Roadway\Proj\BP10.R021_Rdy_psh030-1.dgn

8/17/2026
K:\Projects\21-0064\005 - Stanly County - Roadway\05-CAD\BP10-R021\1-830095\Roadway\Pro\BP10-R021_Rdwy_psh04.dgn



PROJECT REFERENCE NO. <i>BP10-R021</i>	SHEET NO. <i>04</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>Jason T. Goff</i>	HYDRAULICS ENGINEER <i>Jason D. Lawing</i>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BRIDGE APPROACH SLAB
NOTE: ALL DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED.


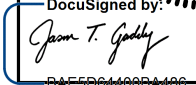
Station	Left Ditch	Right Ditch	Notes	Station
410				410
400			BEGIN PROJECT BP10-R021 -L- STA. 12+25.00 ELEV. = 383.18	400
390			PI = 13+30.00 EL = 376.65' VC = 210' K = 65 V = 40 mph	390
380			BEGIN BRIDGE -L- STA. 14+18.88 ELEV. = 373.99	380
370			END BRIDGE -L- STA. 15+06.11 ELEV. = 371.44	370
360	BRIDGE HYDRAULIC DATA DESIGN DISCHARGE = 2,400 CFS DESIGN FREQUENCY = 25 YRS DESIGN HW ELEVATION = 366.5 FT BASE DISCHARGE = 3,200 CFS BASE HW ELEVATION = 368.0 FT DRAINAGE AREA = 8.7 SQ. MI. OVERTOPPING DISCHARGE = 3,200 CFS OVERTOPPING FREQUENCY = 100 YRS OVERTOPPING ELEVATION = 368.0 FT			360
350			BEGIN SPECIAL DITCH GRADE LT -L- STA. 12+50 ELEV. = 379.85'	350
340			END SPECIAL DITCH GRADE RT -L- STA. 13+50 ELEV. = 370.50'	340
330			END SPECIAL DITCH GRADE LT -L- STA. 14+28 ELEV. = 366.14'	330
320			DATE OF SURVEY = 12-13-2022 W.S. ELEVATION AT DATE OF SURVEY = 358.2 FT	320

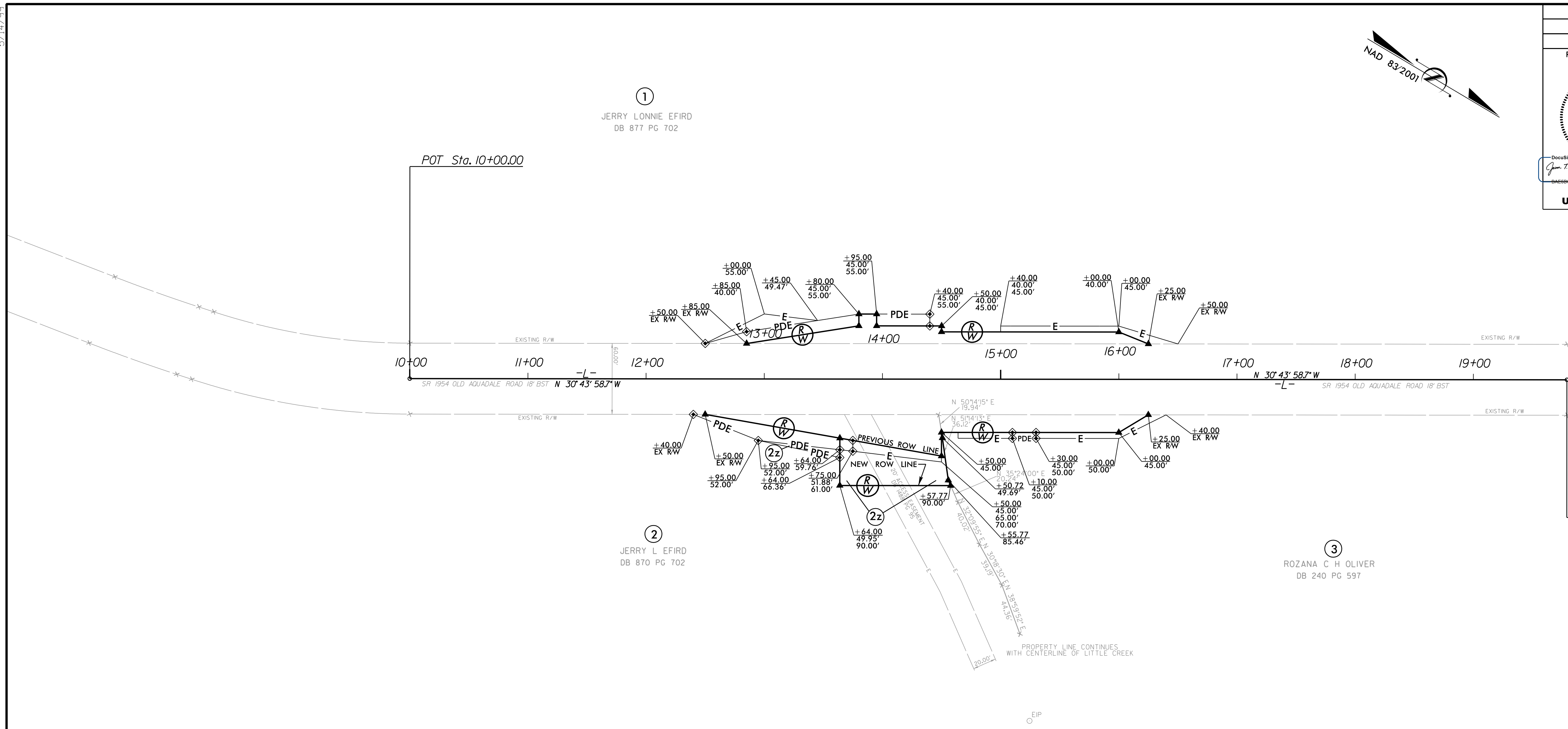
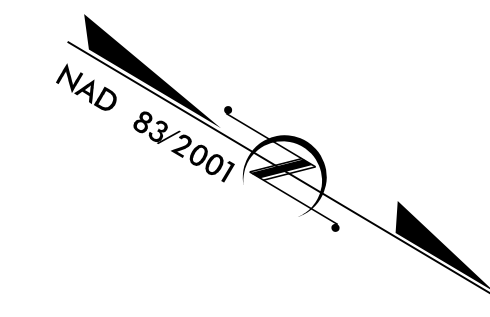
PROPOSED SHOULDER BERM GUTTER LIMITS:
FOR ROW FLAGS SEE SHEET RW-04. -L- END APPROACH SLAB STA. 15+17.13 TO STA. 15+24.83 - LT & RT

HYDRAULIC DESIGN
Kimley»Horn
200 South Tryon, Suite 200
Charlotte, North Carolina 28202
NC License #F-0102

ROADWAY DESIGN
AMT A. MORTON THOMAS AND ASSOCIATES, INC.
10735 DAVID TAYLOR DRIVE, SUITE 310 CHARLOTTE, NC 28262
(704) 595-9973 NC LICENSE NO. F-10489
WWW.AMTEngineering.COM

5/14/2026


PROJECT REFERENCE NO. <i>BP10-R021</i>	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
DocuSigned by:  1/28/2026	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PARCEL INDEX & ROW AREA DATA TABLE

PARCEL NO.	SHEET NO.	PROPERTY OWNER NAME	TOTAL AREA	ROW AREA	AREA REMAINING LEFT	AREA REMAINING RIGHT	TEMPORARY CONSTRUCTION EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPROARY DRAINAGE EASEMENT	PERMANENT UTILITY EASEMENT
1	4	JERRY LONNIE EFIRD	UNKNOWN	3,537.50	UNKNOWN	---	1,316.45	1,575.00	---	---
2	4	JERRY LONNIE EFIRD	UNKNOWN	3,481.73	---	UNKNOWN	539.06	1357.81	---	---
2z	4	JERRY LONNIE EFIRD	UNKNOWN	2,945.55	---	UNKNOWN	227.71	---	---	---
3	4	ROZANA C H OLIVER	UNKNOWN	2,455.57	---	UNKNOWN	792.01	100.00	---	---

ROW & EASEMENT LABELS





A. MORTON THOMAS AND ASSOCIATES, INC.
 10735 DAVID TAYLOR DRIVE, SUITE 310 • CHARLOTTE, NC 28262
 (704) 595-9975 • NC LICENSE NO. F-1049
 WWW.AMTEENGINEERING.COM

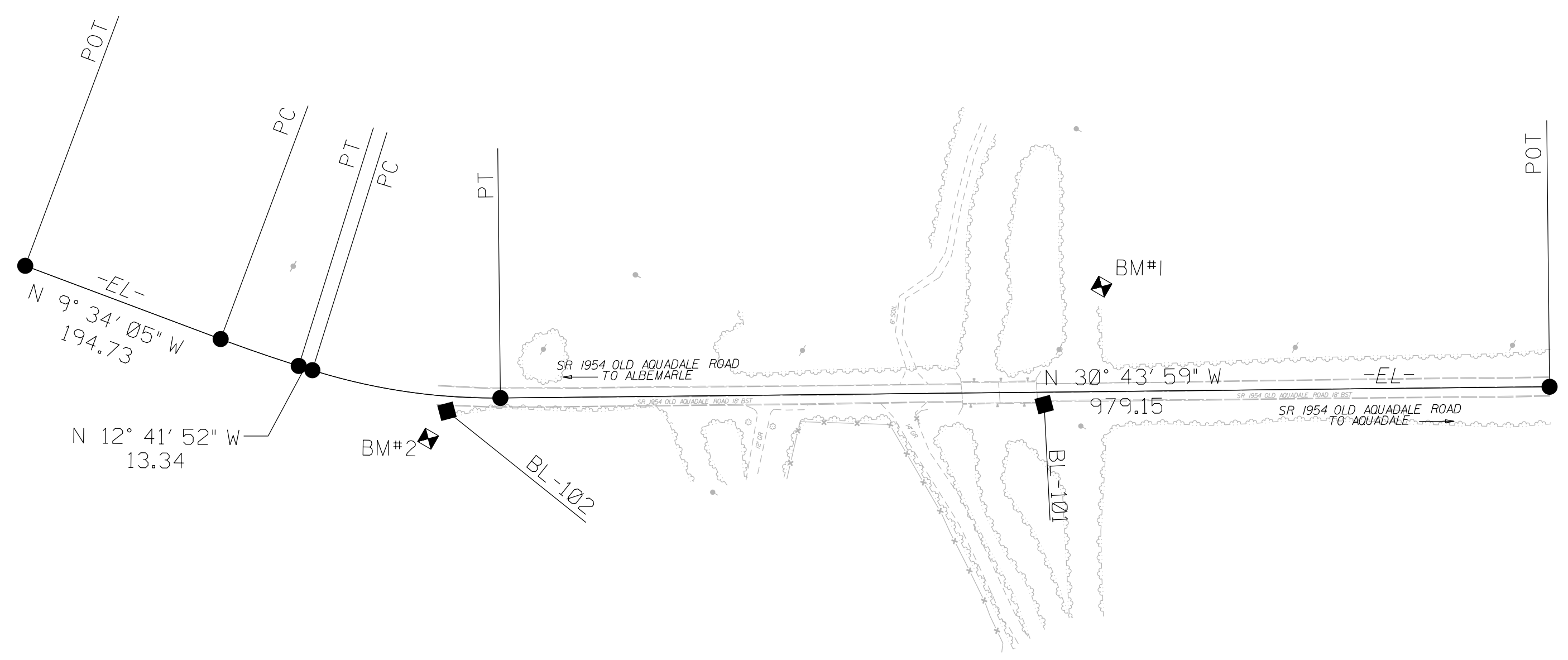
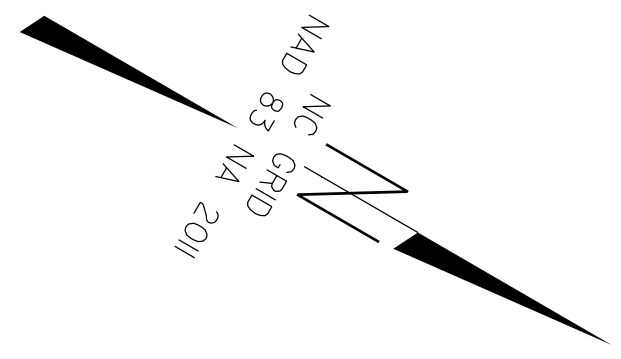
I:\2026\08\08\026-CAD\BP10-R021-1-830095-Roadway\Proc\BP10-R021-Rdy_psh04A_ROW.dgn
 1/28/2026 10:05:00 AM
 User: jgaddy

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 830095	SHEET NO. RW02C-1
Location and Surveys	
	
<small>WSP USA Inc. 128 TALBERT ROAD SUITE A MOORESVILLE, NC 28117 TEL: 704.662.0100 WWW.WSP.COM</small>	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS



830095-2

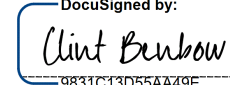
830095-1

I, Theodore C. Benbow, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 04/04/22 - 04/19/22
 Datum/Epoch: 2022.26
 Published/Fixed-control use: N/A
 Localized around: 830095-2
 Northing: 554212.9909
 Easting: 1629041.8881
 Combined grid factor: 0.9998591718
 Geoid model: 12B
 Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 04/04/22 to 04/19/22, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 21st day of April, 2022.

DocuSigned by:

 Theodore C. Benbow L-5368

SEE SHEET RW2C-3
 FOR FURTHER
 ALIGNMENT DETAILS

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

21-APR-2022 09:30
 I:\Survey\21-Survey\Projects\NCDOT\bp10r\Drawings\Base\Drawing\FW\Sheets\Working\830095_1s_r_w02c-1.dgn
 USWH702295 AT 101L233

REVISIONS

21-APR-2022 08:33
I:\Survey\1-Survey\Projects\NCDOT\bp10-\Drawings\Base Drawing\FW Sheets Working\830095_1s-rw02c-2.dgn
USWH702295 AT 101LZ33

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 830095	SHEET NO. RW02C-2
Location and Surveys	
wsp	WSP USA Inc. 128 TALBERT ROAD SUITE A MOORESVILLE, NC 28117 TEL: 704.662.0100 WWW.WSP.COM

BL	POINT	DESC.	NORTH	EAST	ELEVATION
4		BL-102	553196.8009	1629645.7166	401.17
3		BL-101	553675.7438	1629360.7072	370.00
2		830095-2	554212.9909	1629041.8881	380.90
1		830095-1	554973.4982	1628454.4381	443.13

 BM1 ELEVATION = 362.76
 N 553667 E 1629239
 BENCHTIE SET IN 12" SYCAMORE

 BM2 ELEVATION = 399.78
 N 553195 E 1629677
 BENCHTIE SET IN 36" OAK

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 830095	SHEET NO. RW02C-3
Location and Surveys	
wsp	WSP USA Inc. 128 TALBERT ROAD SUITE A MOORESVILLE, NC 28117 TEL: 704.662.0100 WWW.WSP.COM

REVISIONS

EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	552788.300	1629725.871							
LINE			N 09°34'04.6" W	194.73					
PC	552980.317	1629693.504							
CURVE			N 11°07'58.5" W	77.07	03°07'47.9*(LT)	04°03'38.8"	77.08	38.55	1410.96
PT	553055.936	1629678.623							
LINE			N 12°41'52.5" W	13.34					
PC	553068.945	1629675.692							
CURVE			N 21°42'55.6" W	177.39	18°02'06.2*(LT)	10°07'30.9"	178.12	89.80	565.87
PT	553233.742	1629610.060							
LINE			N 30°43'58.7" W	979.15					
POT	554075.375	1629109.679							

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
BP10.R021	RW03E-1
Location and Surveys	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	14+50.00	45.00	553643.5400	1629418.7729
L	13+64.00	49.95	553572.1476	1629466.9770
L	13+64.00	90.00	553592.6147	1629501.4023
L	14+57.77	90.00	553673.2189	1629453.4803
L	14+55.77	85.46	553669.1731	1629450.6051
L	14+50.72	49.69	553646.5553	1629422.4371

I, PHAREZ SCRUGGS, PLS, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 2/26/2025 to 2/26/2025, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 19TH day of MARCH, 2025.

Professional Land Surveyor L-5529

REVISIONS

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+40.00	30.00	553455.3672	1629513.1975
L	12+95.00	52.00	553513.8857	1629504.0007
L	13+64.00	59.76	553577.1622	1629475.4114

TEMPORARY CONSTRUCTION EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+64.00	66.36	553580.5352	1629481.0848

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 2/26/2025 TO 2/26/2025 .

PROJECT REFERENCE NO.	SHEET NO.
BP10.R021.1	RW04
Location and Surveys	

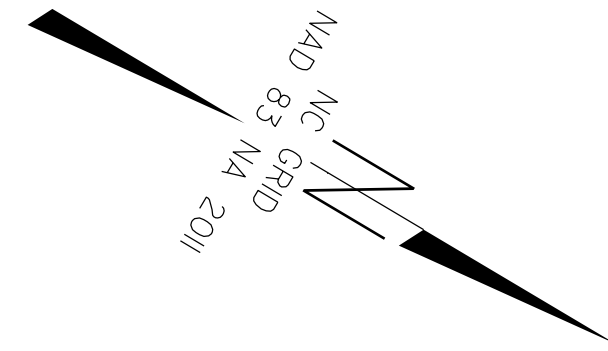
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

I, PHAREZ SCRUGGS, PLS, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 2/26/2025 to 2/26/2025, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

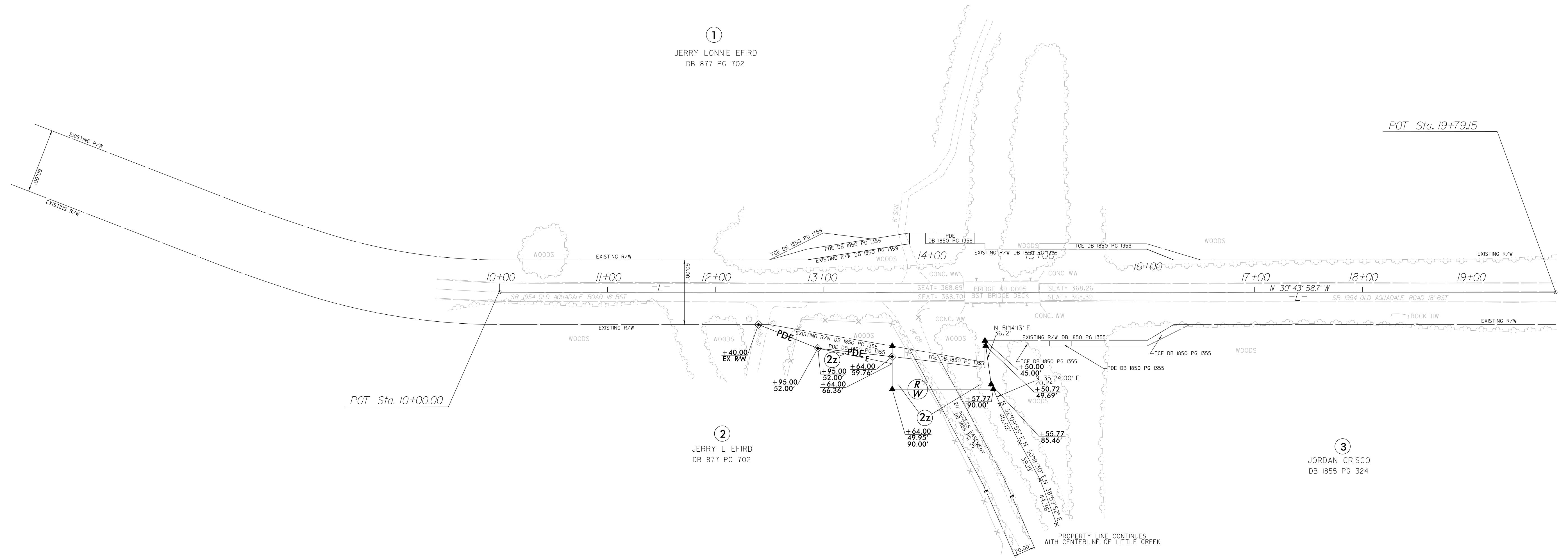
This 19th day of March, 2025.

Professional Land Surveyor L-5529

6/2/09



REVISIONS



NOTES:

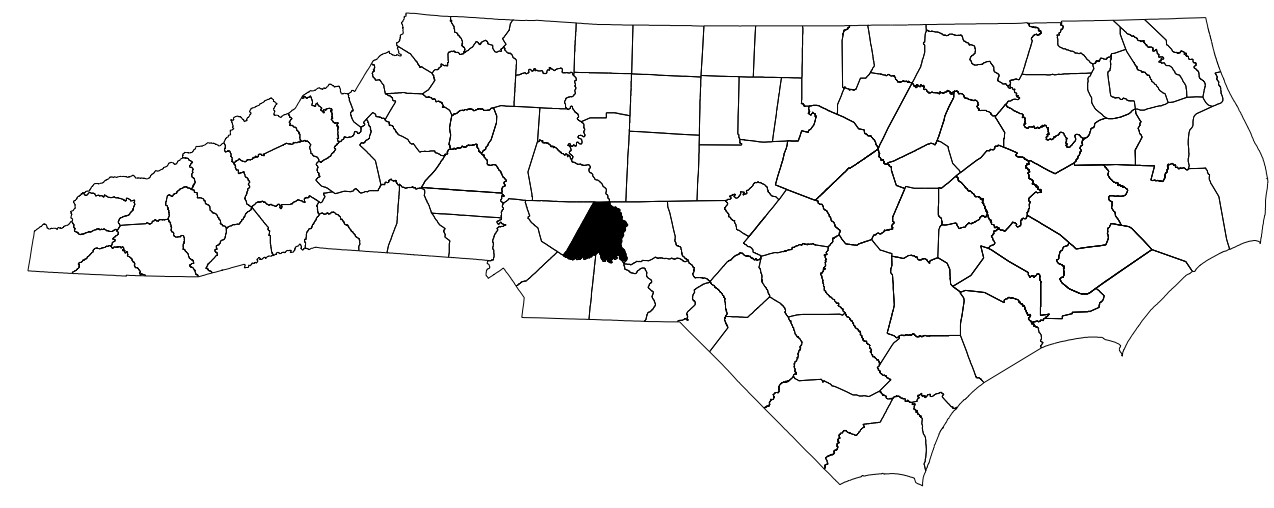
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 2/26/2024 TO 2/26/2024.

19-MAR-2025 15:49
 C:\Users\pssc\OneDrive\Documents\Projects\BP10.R021.1\BP10.R021.1.rw04_250314.dgn
 15-286451
 15-286451

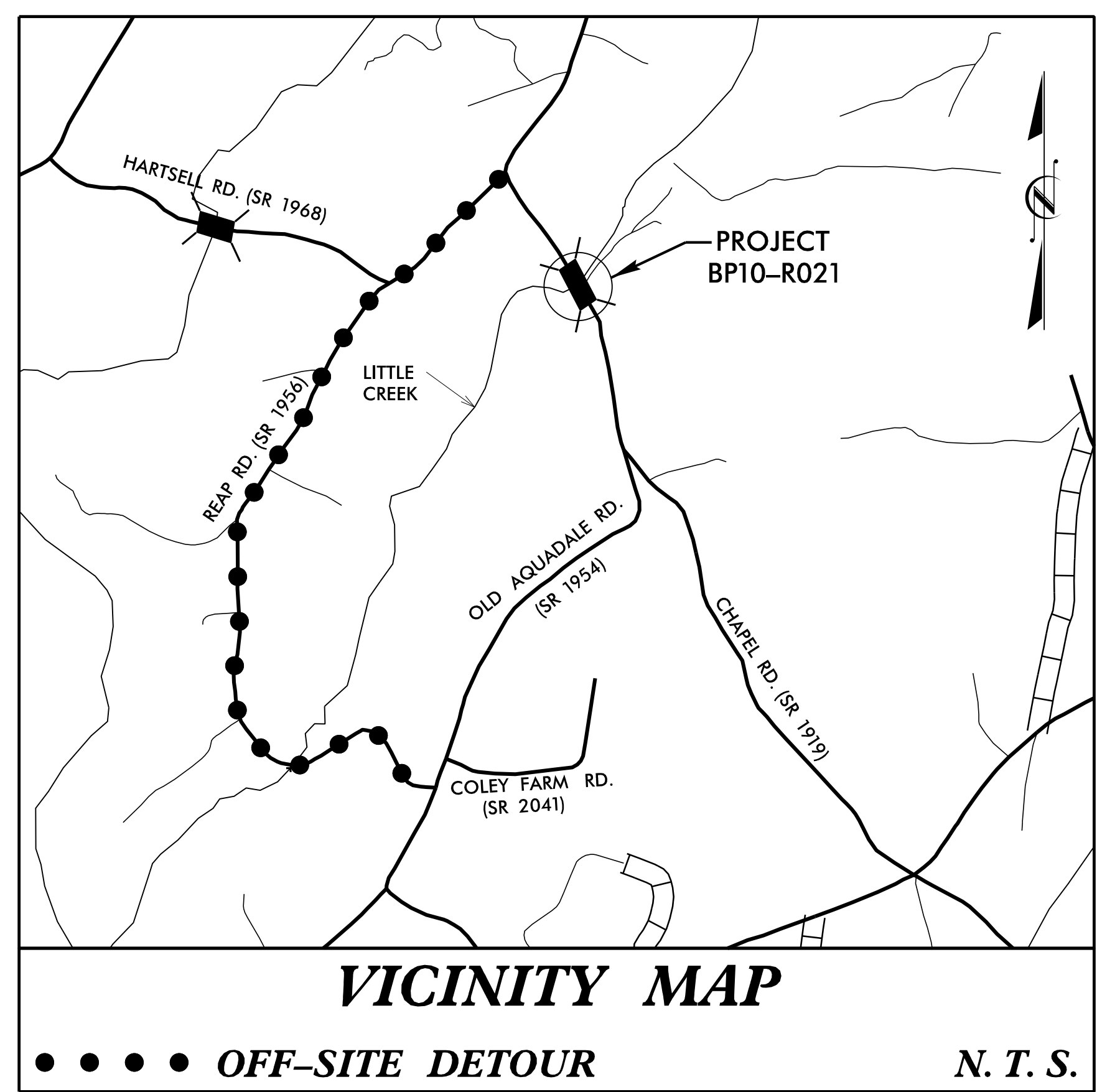
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

STANLY COUNTY



**LOCATION: REPLACE BRIDGE NO. 95 OVER LITTLE CREEK
ON SR 1954 (OLD AQUADALE RD.)**

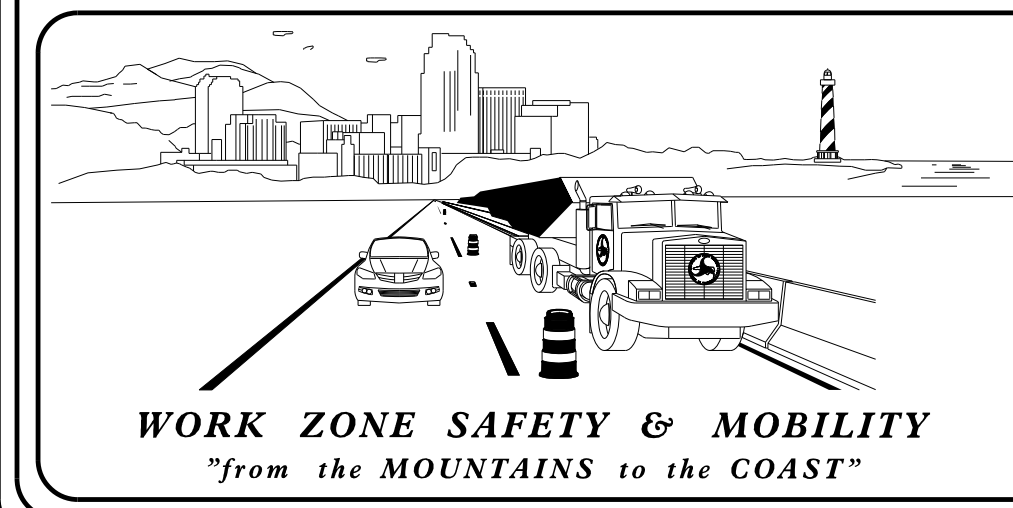


INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, PHASING NOTES, AND LOCAL NOTES)
TMP-2	SPECIAL SIGN DESIGN
TMP-3	OFF-SITE DETOUR

SHEET NO.
TMP-1

I:\23\2026 X:\Raleigh\21-0064-005 - Stanly County R021(830095)\05-CAD\BP10,R021\1-830095\Trffic\CP\BP10,R021.LC.TMP_01.dgn



PLANS PREPARED BY:

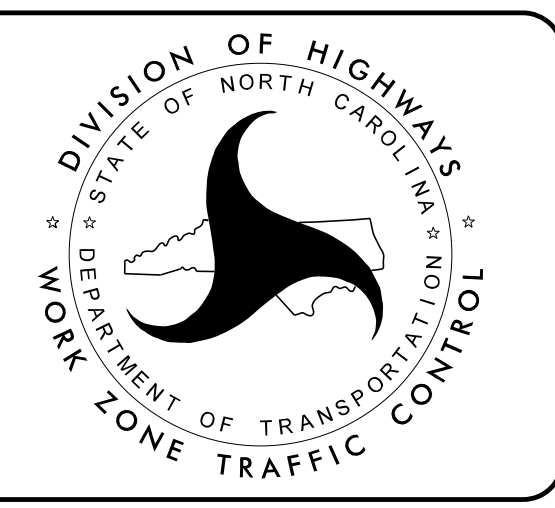
JASON GADDY, PE
PROJECT ENGINEER

DAN MORGAN, EI
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

YANWEI MA, PE
DIVISION 10 BRIDGE PROGRAM MANAGER

HOANG DIEU
DIVISION 10 BRIDGE PROJECT ENGINEER



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

APPROVED: *Jason T. Gaddy*
DATE: 1/28/2026

SEAL

TIP PROJECT: BP10-R021

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 ADVANCE WARNING SIGNS
1101.03	TEMPORARY ROAD 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
1145.01	BARRICADES

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
- LANE CLOSURE WORK AREA

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- 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

I:\22\2026
 X:\Raleigh\21-0064-005 - Stanly County R021(830095)\05-CAD\BP10.R021\CP\BP10.R021.LC.TMP_01A.dgn
 jescar.chd

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

- TRAFFIC MANAGEMENT STRATEGIES:
 FULL ROADWAY CLOSURES
 OFF-SITE DETOURS / USE OF ALTERNATIVE ROUTES

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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- B) 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.
- C) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF- SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- D) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF- SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

TRAFFIC CONTROL DEVICES

- F) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PHASING

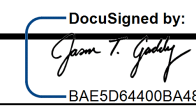
- STEP 1: USING SHEET TMP-2 AND RSD 1101.03 (SHEET 1 OF 9), INSTALL DETOUR ROUTE SIGNING TO CLOSE SR 1954 (OLD AQUADALE ROAD) ON PROPOSED -L- FROM STA. 12+25+/- TO STA. 16+60+/-.
- STEP 2: AWAY FROM TRAFFIC, COMPLETE REMOVAL OF EXISTING BRIDGE, CONSTRUCTION OF PROPOSED BRIDGE AND ROADWAY APPROACHES, INCLUDING DRAINAGE, GUARDRAIL, FINAL PAVEMENT MARKINGS AND MARKERS ON PROPOSED -L- FROM STA. 12+25+/- TO STA. 16+60+/-.
- STEP 3: REMOVE TEMPORARY TRAFFIC CONTROL DEVICES AND OPEN -L- TO PROPOSED 2-LANE, 2-WAY TRAFFIC PATTERN.

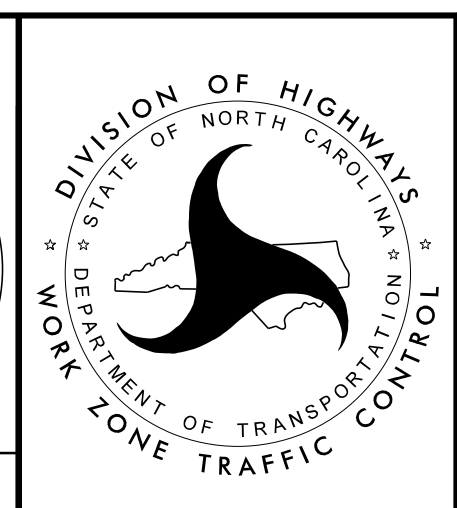
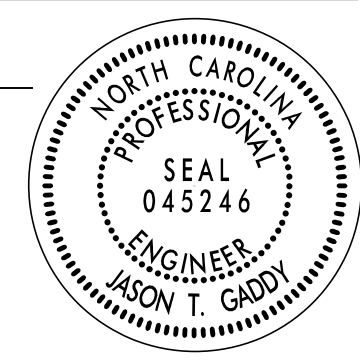
LOCAL NOTES

- 1. NOTIFY STANLY COUNTY EMERGENCY SERVICES AND PUBLIC SCHOOLS AT LEAST ONE MONTH PRIOR TO ROAD CLOSURE.

I:\22\2026 X:\Raleigh\21-0064-005 - Stanly County R021(830095)\05-CAD\BPO\021\830095\TrafficControl\CP\BPO\021\TC_TMP_01B.dgn jescar.chd

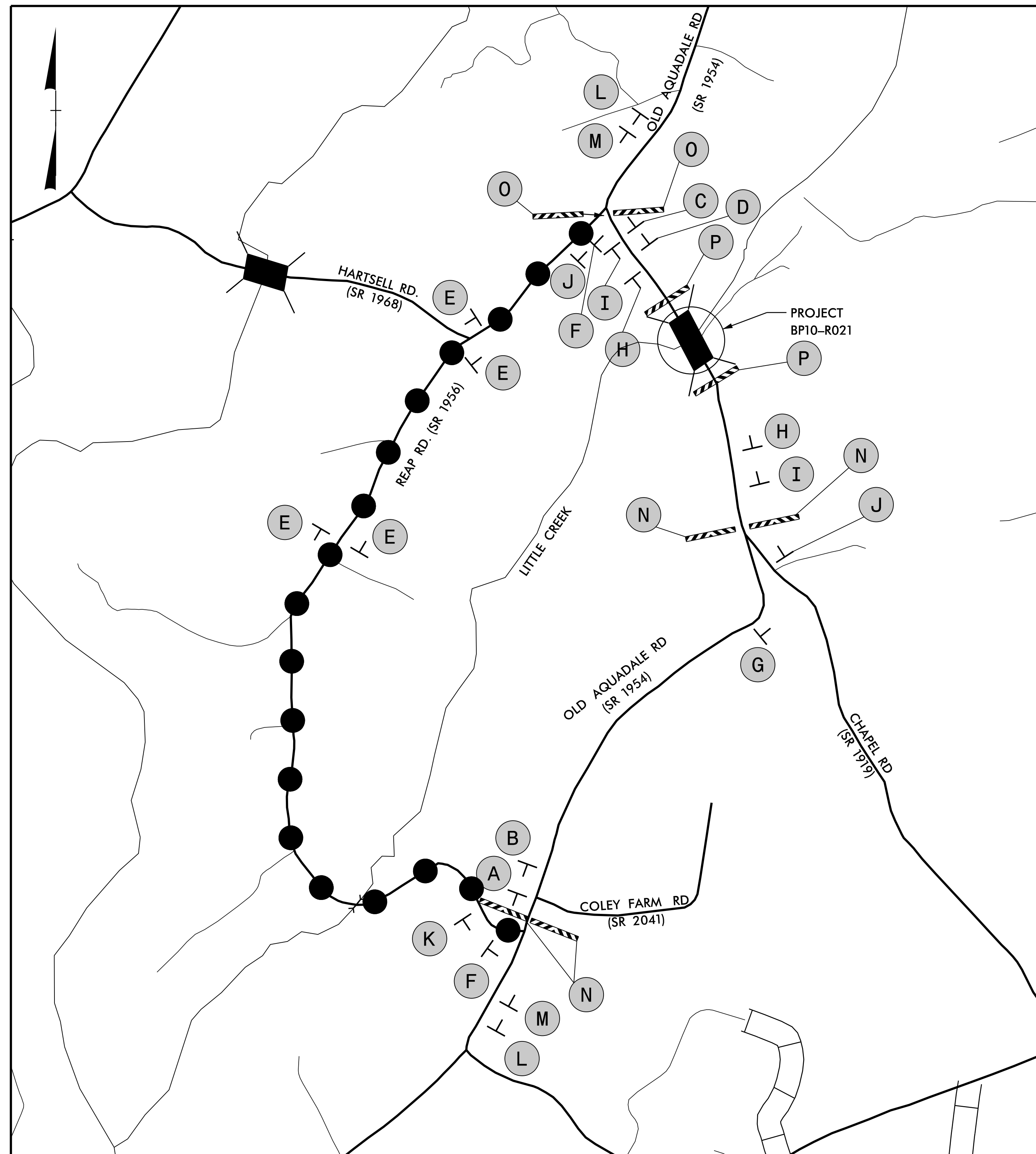


APPROVED: 
 DATE: 1/28/2026
 SEAL

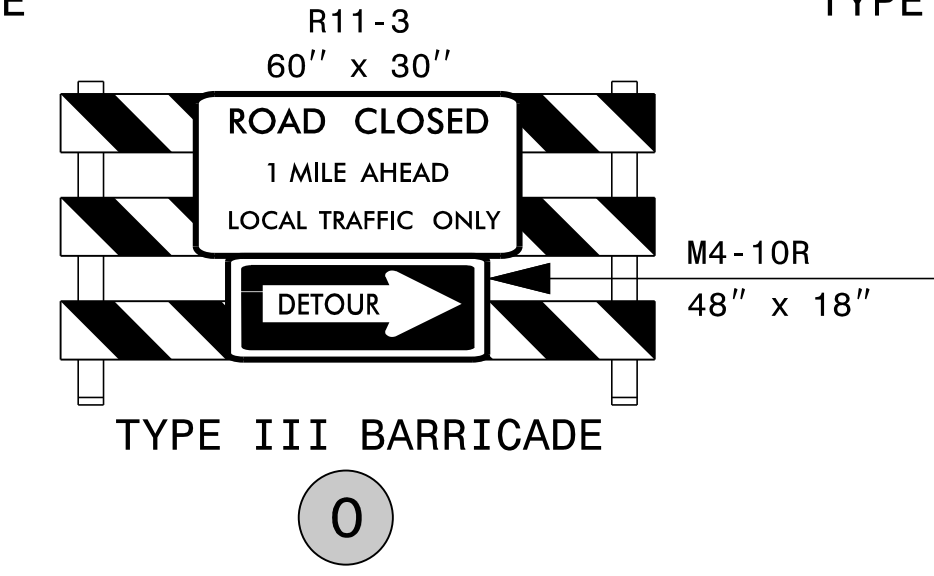
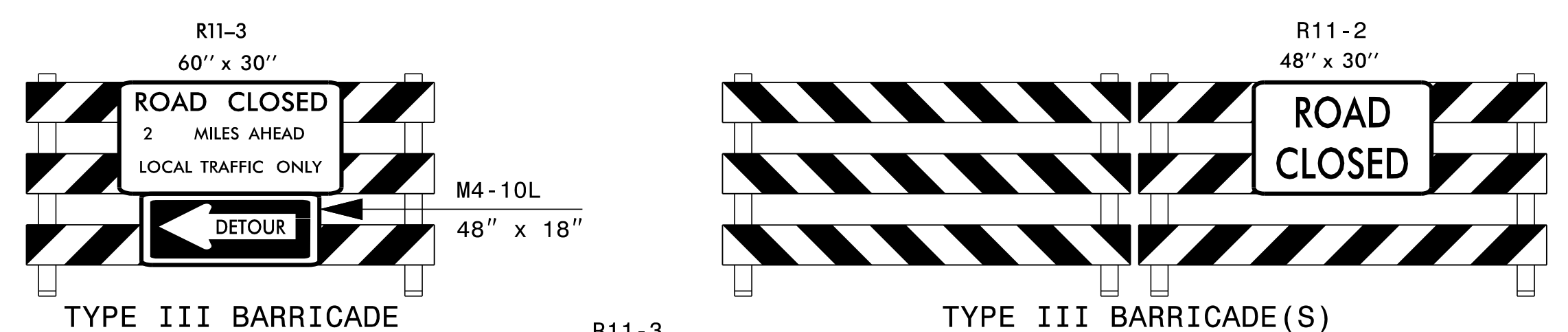
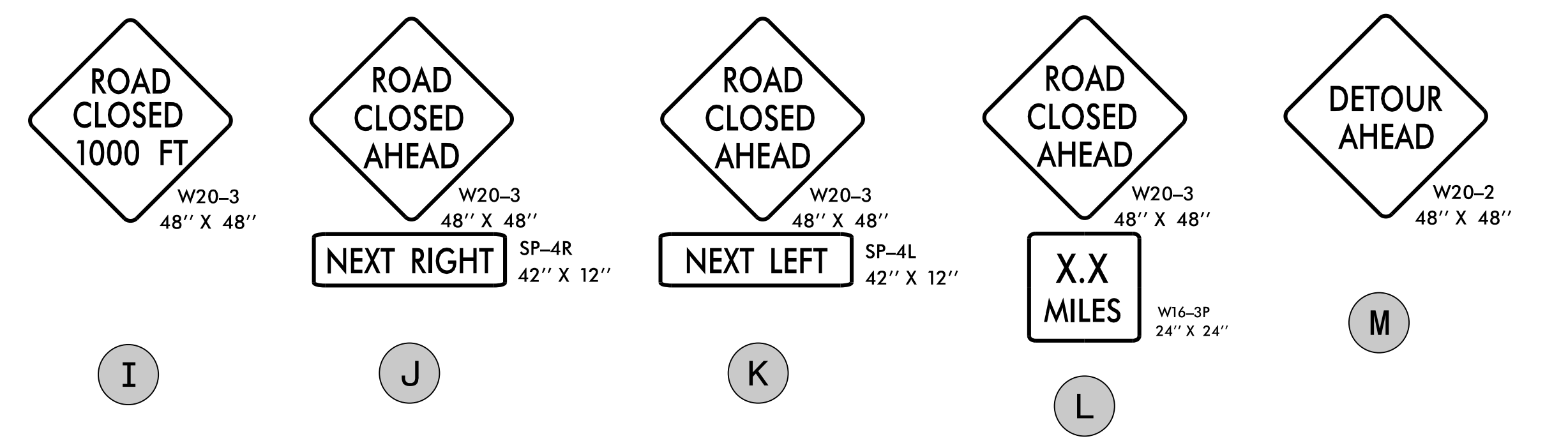
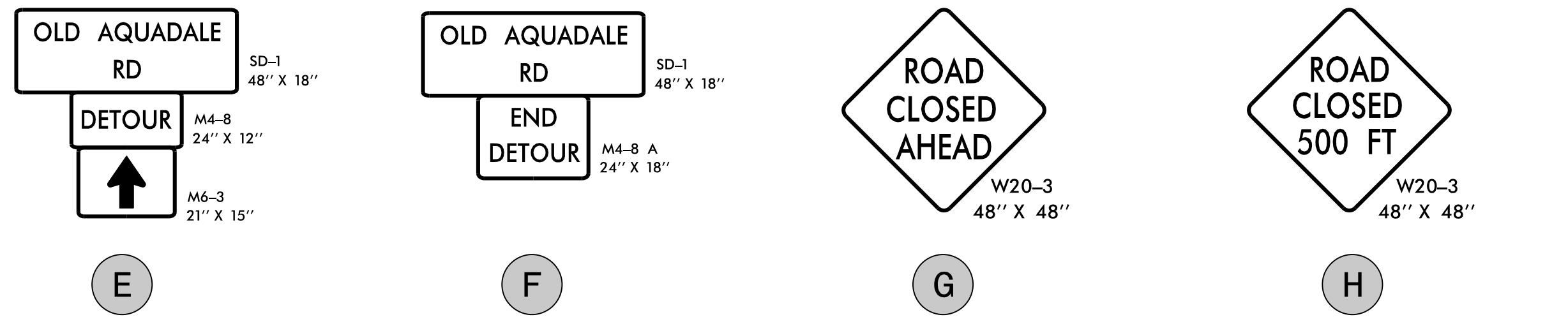
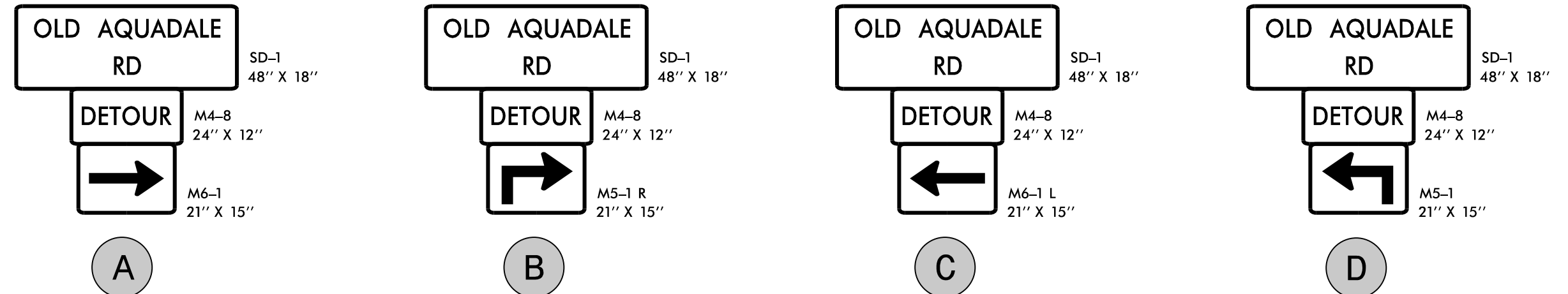


TRANSPORTATION OPERATIONS PLAN

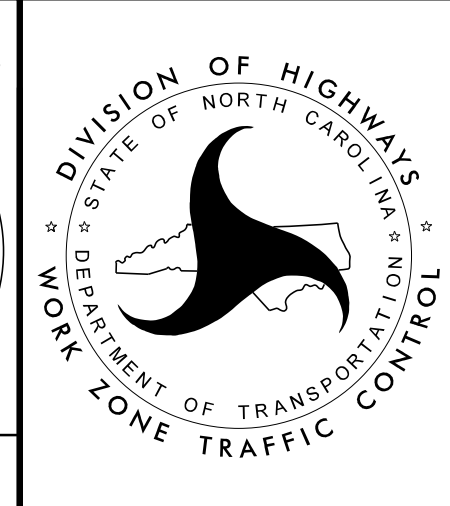
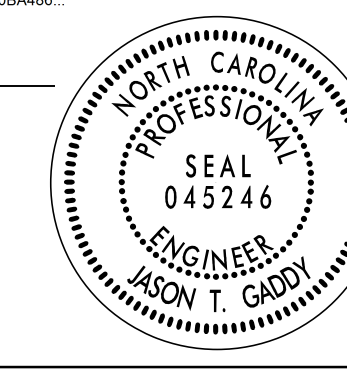
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



OFF-SITE DETOUR ROUTE

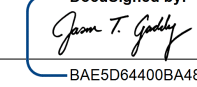



APPROVED:
 DATE: 1/28/2026
 SEAL



OFF-SITE DETOUR

I:\23\2026 X:\Raleigh\21-0064\005 - Stanley County R021(830095)\05-CAD\BP10-R021\TrafficControl\TCP\BP10-R021.TC_TMP_03.dgn

TIP NO.	SHEET NO.
BP10-R021	PMP - 1
APPROVED:  BAES064008488	
DATE: 1/28/2026	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
STANLY COUNTY**

**LOCATION: REPLACE BRIDGE NO. 95 OVER LITTLE CREEK
ON SR 1954 (OLD AQUADALE RD.)**

T.I.P.: BP10-R021

CONTRACT: XXXXXXX

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE
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:

ROAD NAME	MARKING	MARKER
SR 1954 -L-	THERMOPLASTIC	SNOWPLOWABLE
SR 1954 -L- (BRIDGE)	THERMOPLASTIC	RAISED


B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

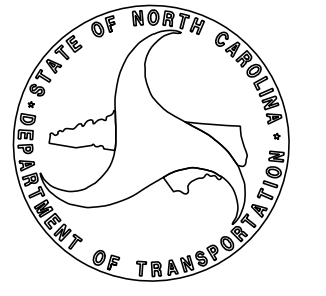
C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

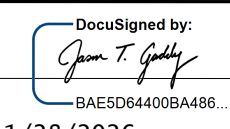
ROADWAY STANDARD DRAWING

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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE 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 & BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

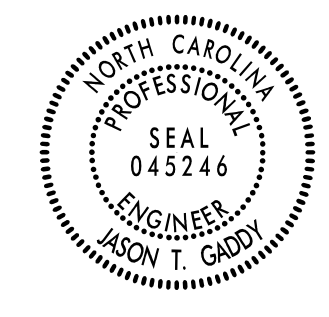
PLAN PREPARED BY: AMT	 A. MORTON THOMAS AND ASSOCIATES, INC. 10735 DAVID TAYLOR DRIVE, SUITE 310 • CHARLOTTE, NC 28262 77041 595-9975 • NC LICENSE NO. F-1049 WWW.AMTENGINEERING.COM
<u>JASON GADDY, PE</u> PROJECT MANAGER	
<u>DAN MORGAN, EI</u> PROJECT DESIGN ENGINEER	

PLAN SUBMITTED TO:	
<u>ZACHARY GARDNER, PE</u> DIVISION TRAFFIC ENGINEER	
<u>RICK BAUCOM, PE</u> DIVISION CONSTRUCTION ENGINEER	

APPROVED: 
DocuSigned by:
Jason T. Gaddy
BAE5D84400BA486

DATE: 1/28/2026

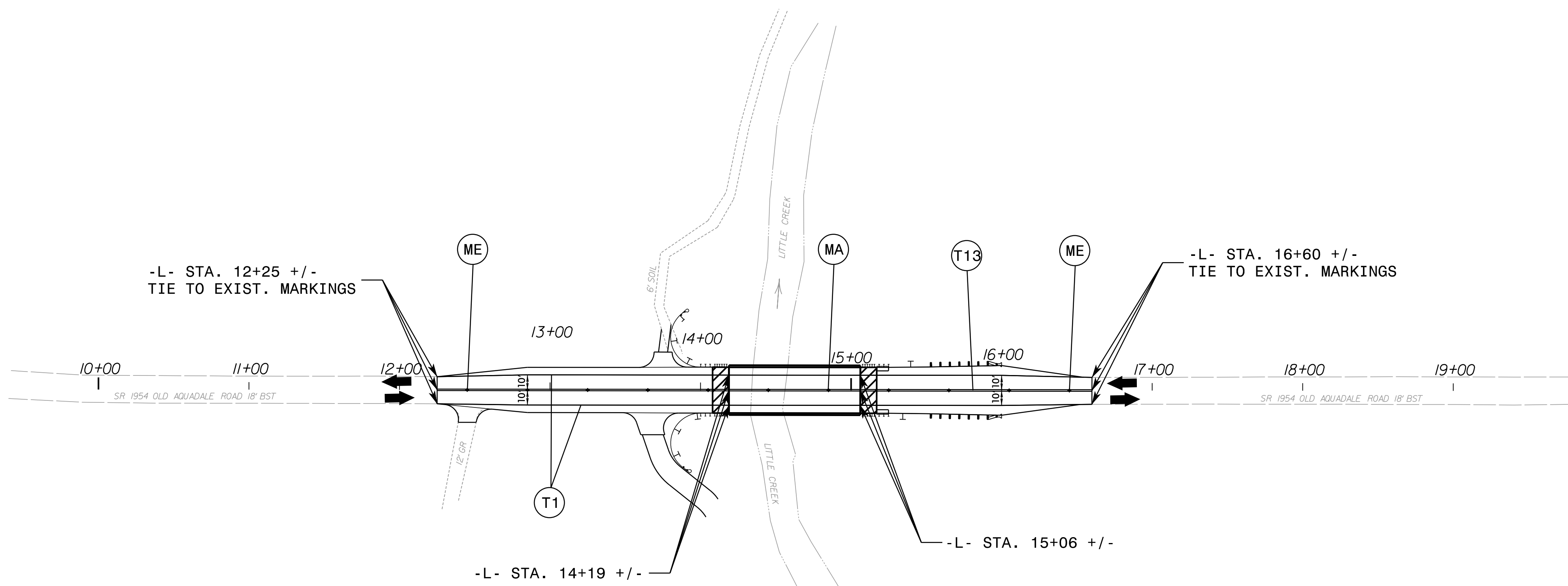
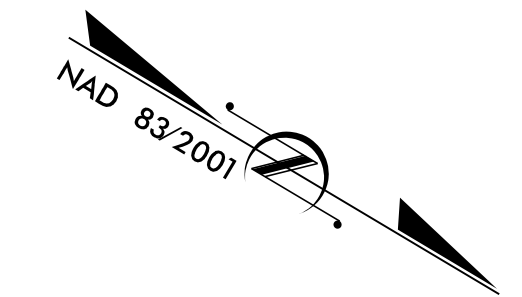
SEAL



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

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
THERMO (4", 90 MILS)	
T1	WHITE EDGELINE
T13	YELLOW DOUBLE CENTER
PERMANENT RAISED PAVEMENT MARKERS	
MA	YELLOW & YELLOW
SNOWPLOWABLE PAVEMENT MARKERS	
ME	YELLOW & YELLOW



I:\22\2026
 X:\Raleigh\21-0064.005 - Stearnly County R021 (830095)\05-CAD\BP10-R021\1.830095\Traffic\Signing\CADD\BP10-R021_TC_PMP02.dgn
 jescarcho

PAVEMENT MARKING DETAIL

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

Kimley»Horn
© 2023
 200 S. TRYON ST. • CHARLOTTE, NC 28202
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.
BPIQ.R021 *EC-2*

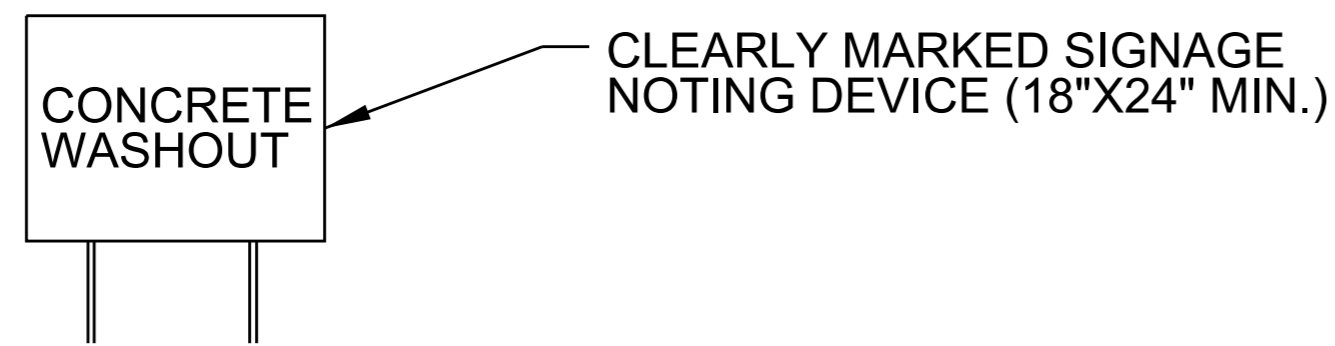
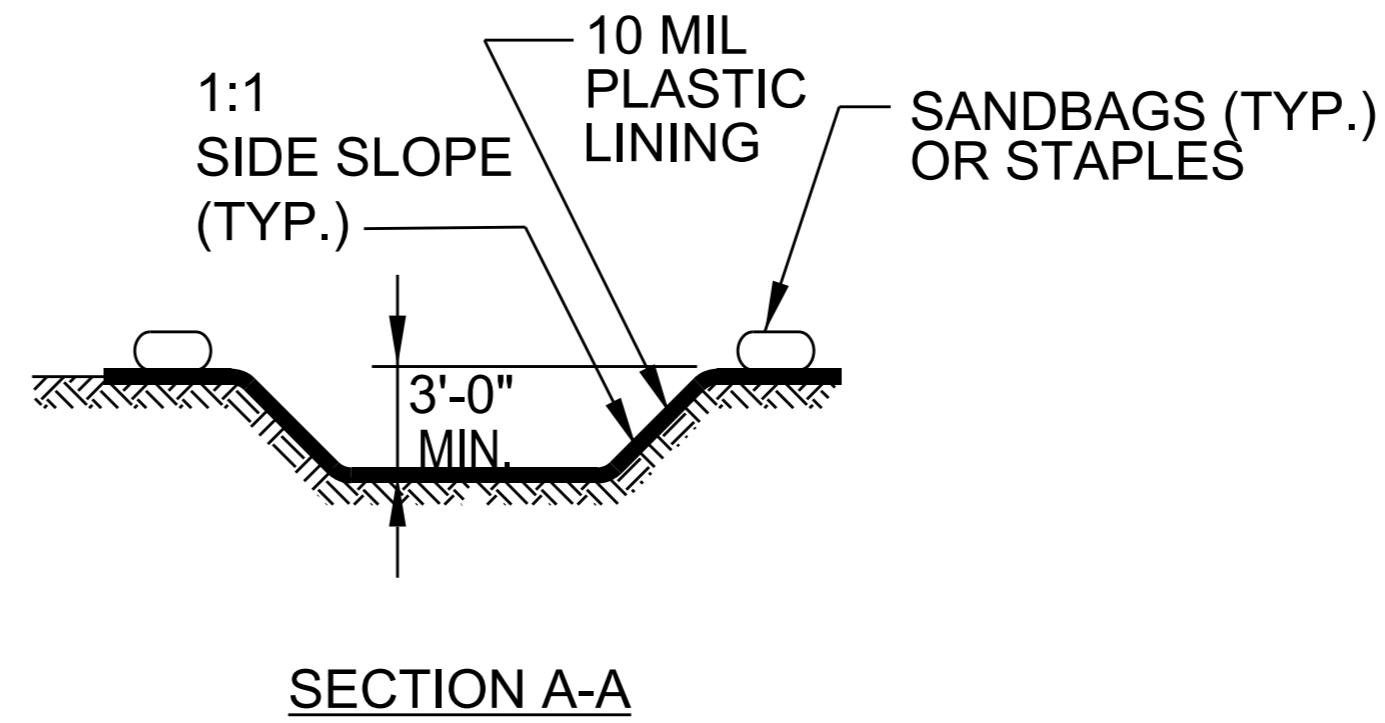
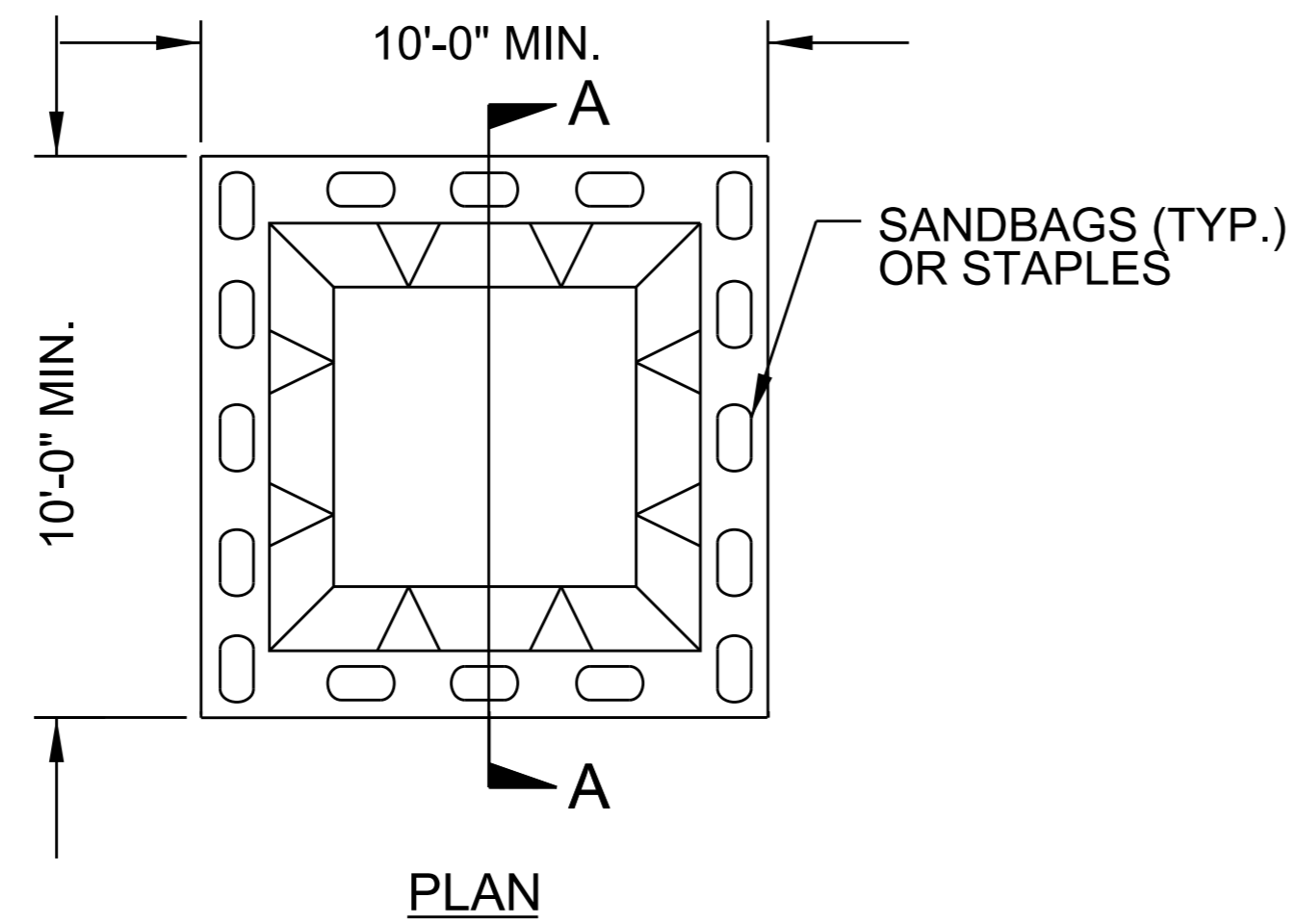
EROSION & SEDIMENT CONTROL LEGEND

<u>Std. #</u>	<u>Description</u>	<u>Symbol</u>	<u>Std. #</u>	<u>Description</u>	<u>Symbol</u>
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	—TSD—	1634.02	Temporary Rock Sediment Dam Type B	◐
1630.04	Stilling Basin	▭	1635.01	Rock Pipe Inlet Sediment Trap Type A	A ⊕
1630.05	Temporary Diversion	→ TD →	1635.02	Rock Pipe Inlet Sediment Trap Type B	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	EW
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	CFW
1632.01	Type A	A ⊕	1636.03	Excelsior Wattle Barrier	—EW—EW—EW—
1632.02	Type B	B ⊕	1636.03	Coir Fiber Wattle Barrier	—CFW—CFW—CFW—
1632.03	Type C	C ⊕			

REVISIONS

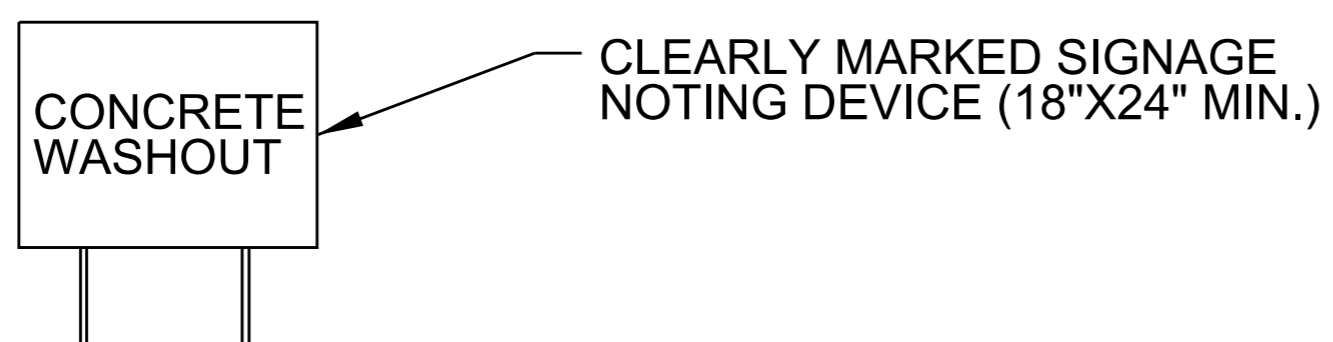
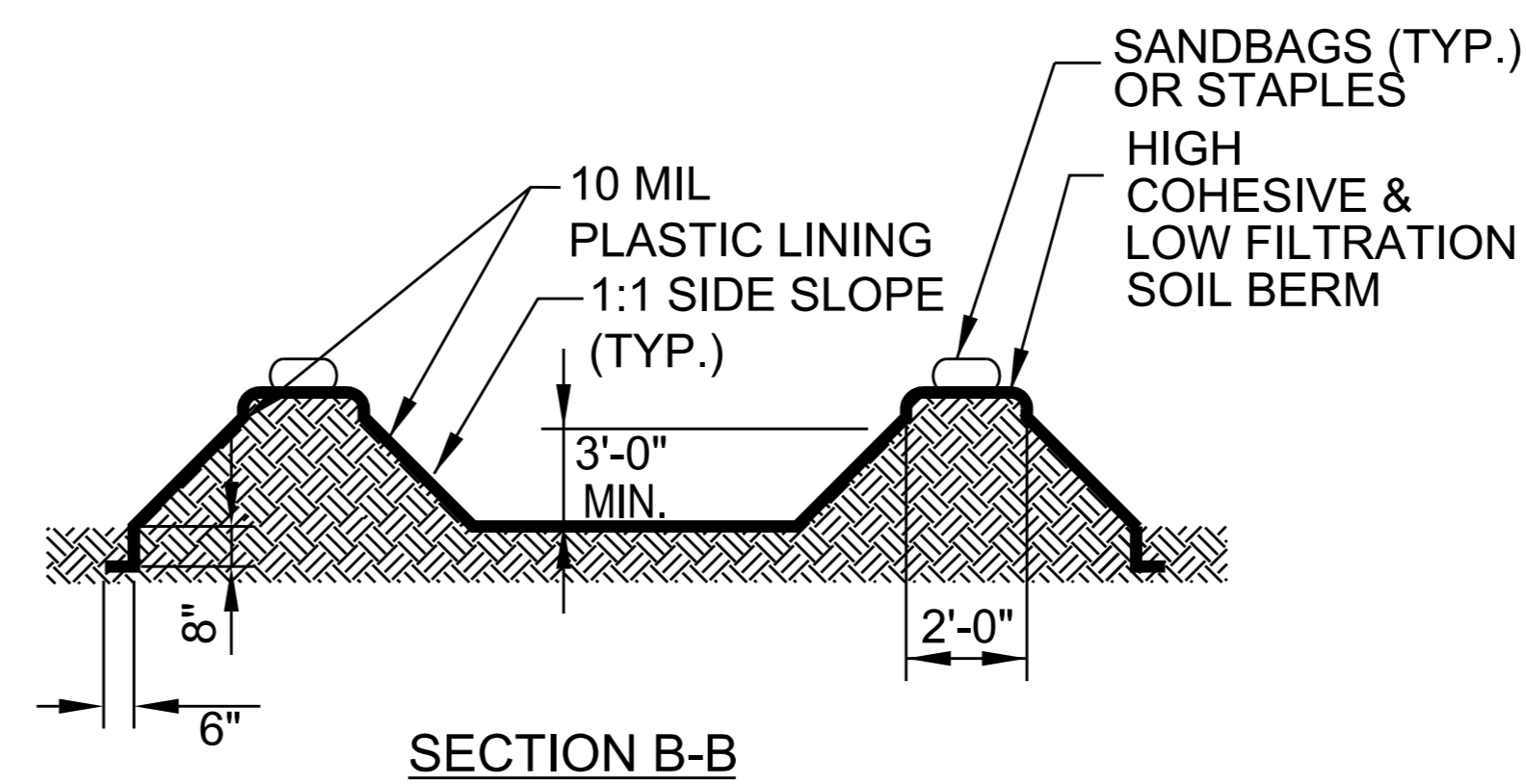
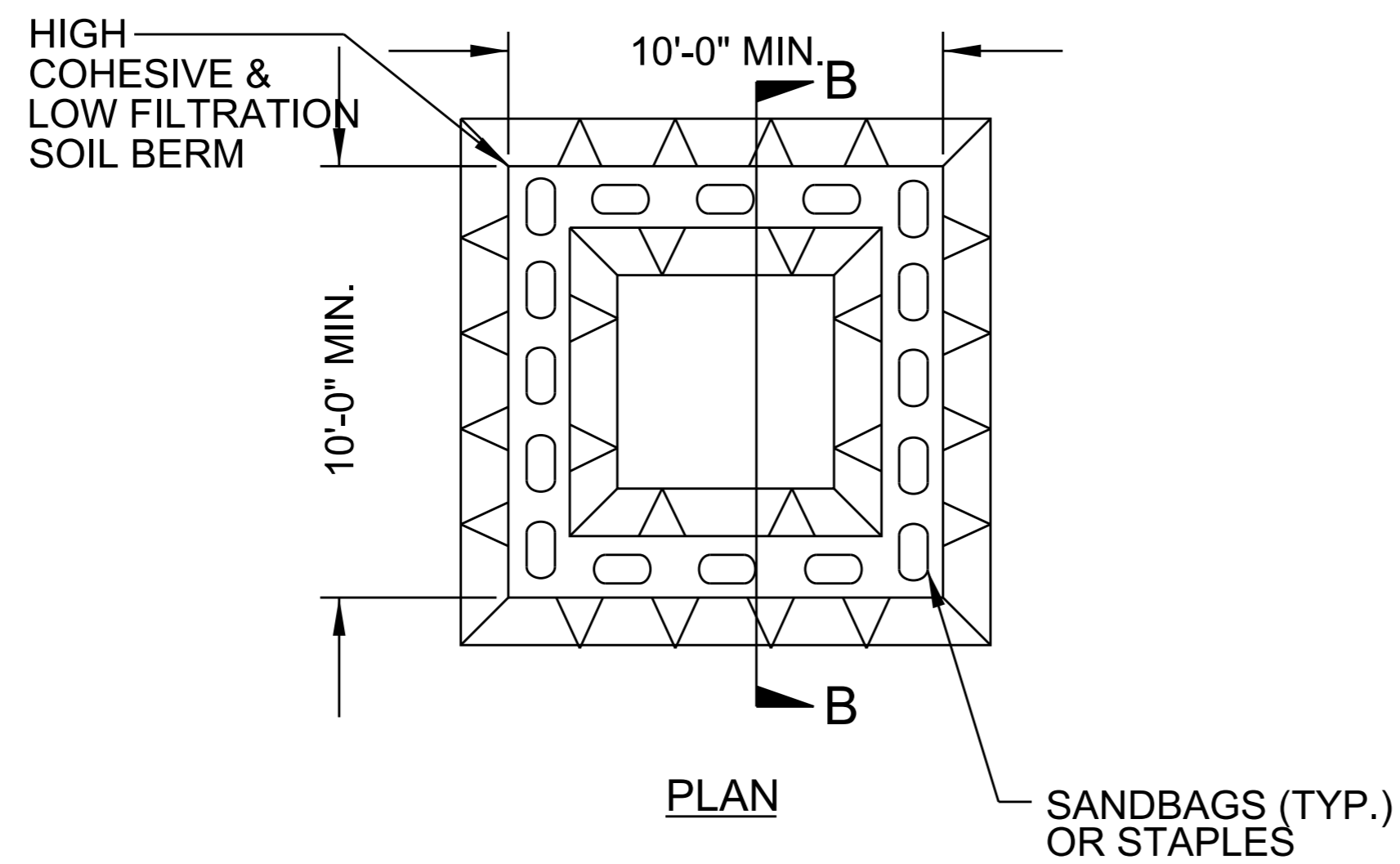
1/26/2026 K:\CHL_PRJ\04542005 - Bridge 830095\Erosion Control\Plan Sheets\BPIQ.R021.ec_pst_02&03.dgn

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.

REVISIONS

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Kimley»Horn <small>© 2025</small>
<small>200 S. TRYON ST. • CHARLOTTE, NC 28202</small>
<small>RIGHT-OF-WAY REV.</small>
<small>CONST. REV.</small>

<small>PROJECT REFERENCE NO.</small>	<small>SHEET NO.</small>
<i>BPI0.R02I</i>	<i>EC-3A</i>

SOIL STABILIZATION TIMEFRAMES

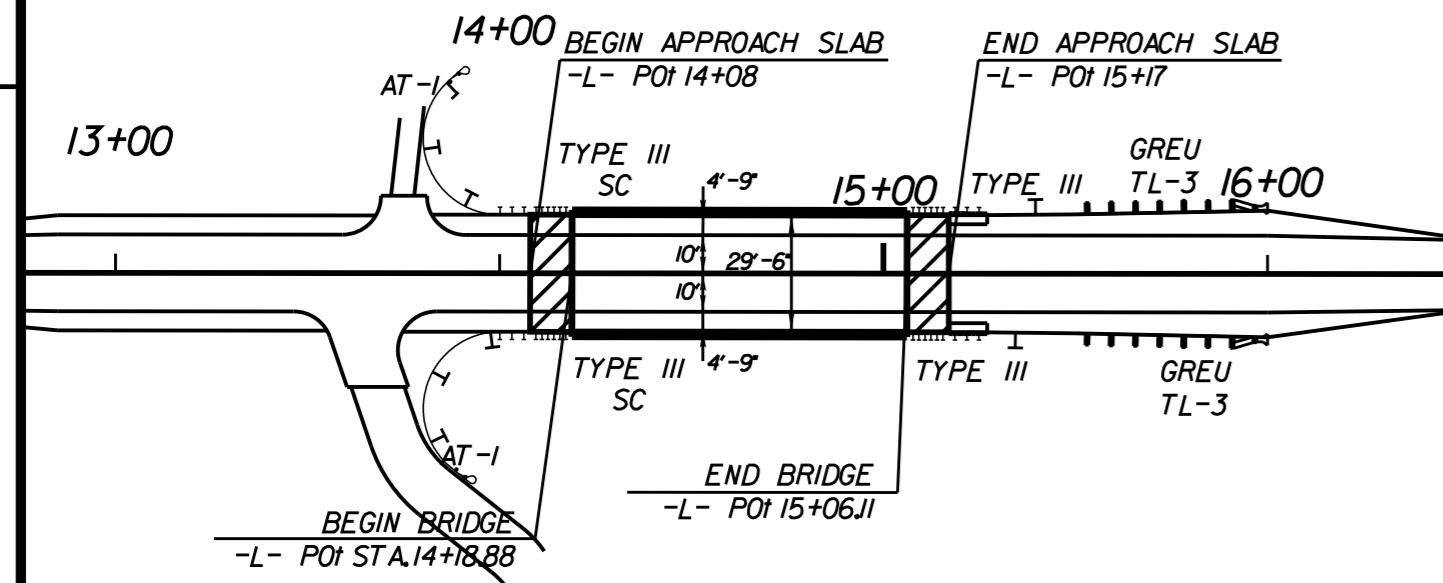
REVISIONS

<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

1/26/2026 K:\CHL_PRJ\04542005 - Bridge 830095\Erosion Control\Plan Sheets\BPI0.R02I.ec_ast_02&03.dgn

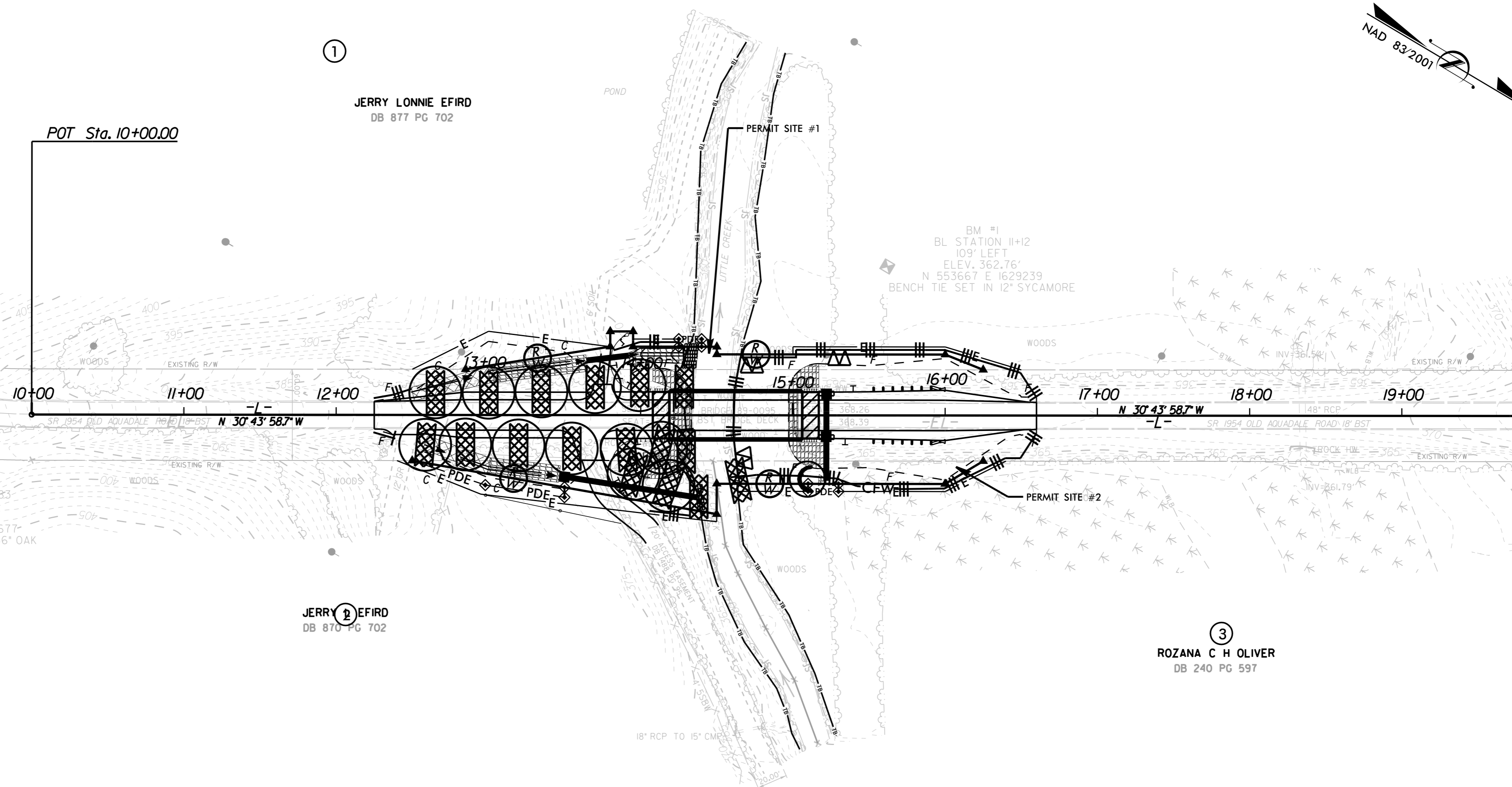
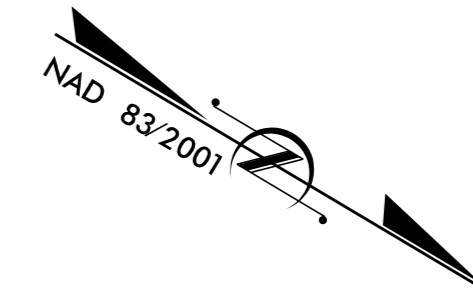
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



DETAIL SHOWING BRIDGE /PAVEMENT RELATIONSHIP

REVISIONS



POT Sta. 19+79J5

K:\CHL_PRJ\04542005 - Bridge 830095\Erosion Control\Plan Sheets\C&G\BPIO.R02I.Lero_psd04.dgn

1/26/2026

BRIDGE APPROACH SLAB

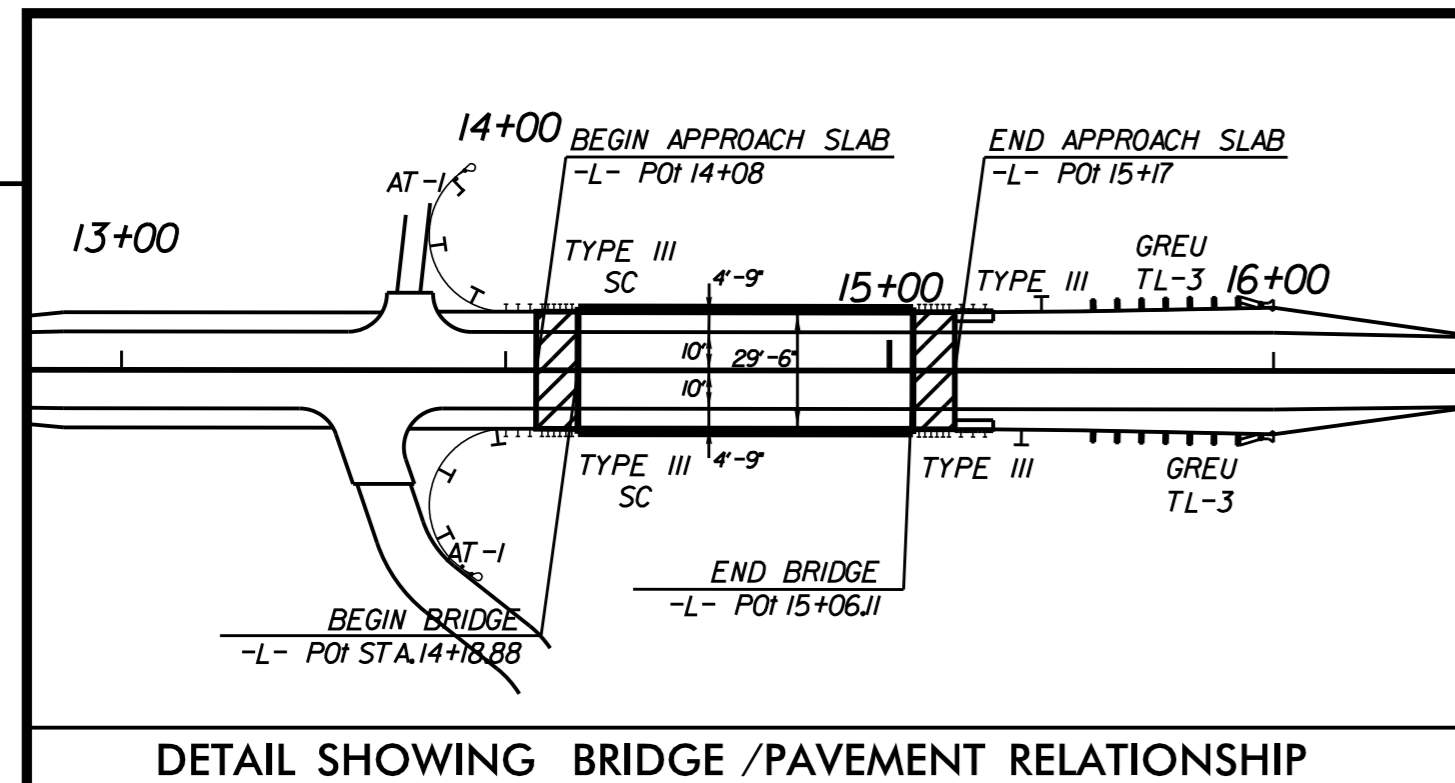
NOTE: ALL DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED.

INSTALL PSRM FOR EROSION CONTROL IN THE PROPOSED DITCH LINE. SEE SHEET EC-3 FOR STATION RANGES

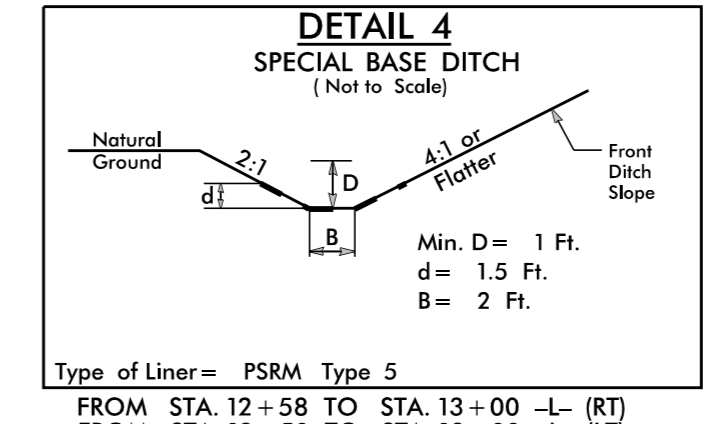
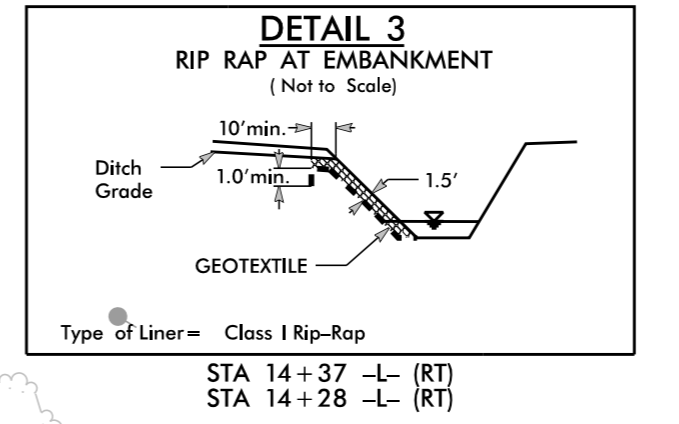
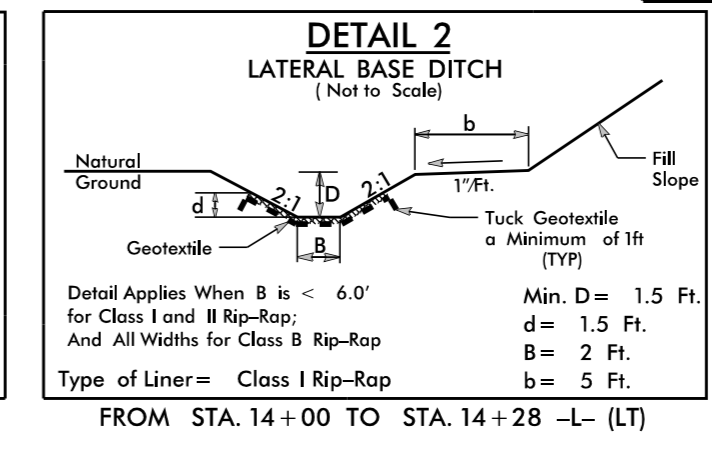
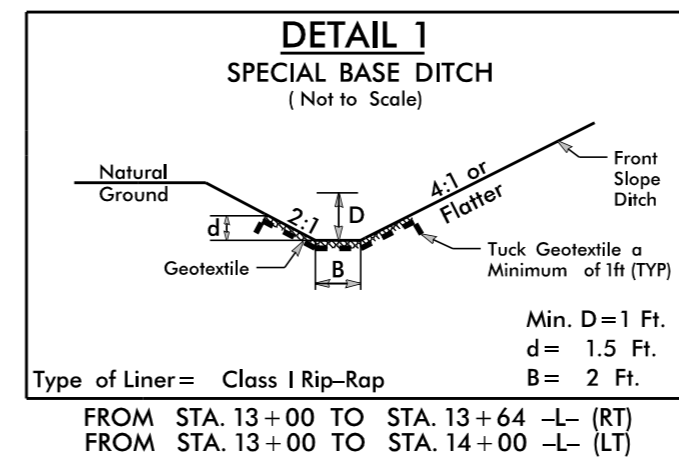
Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

Place Matting for Erosion Control on Slope as Work Allows. See Sheet EC-3 for Station Ranges

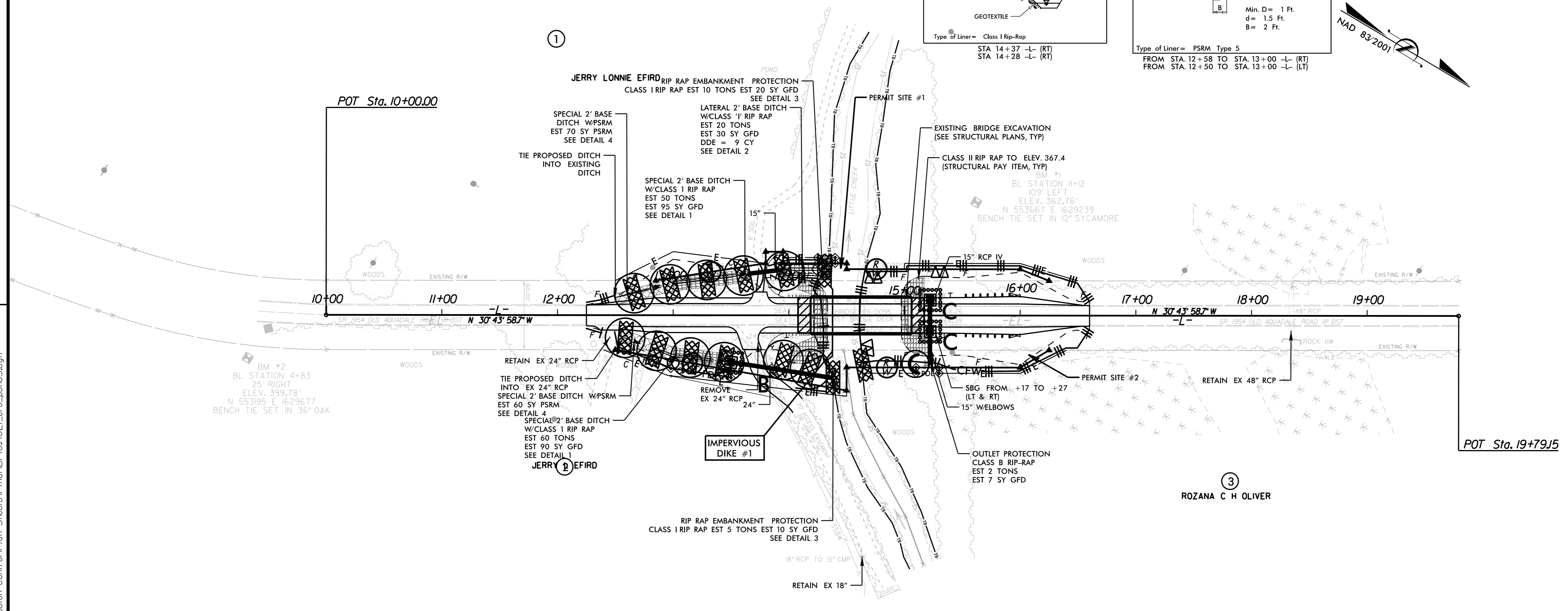
FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 4



DETAIL SHOWING BRIDGE /PAVEMENT RELATIONSHIP



REVISIONS



K:\CHL_PRJ\04542005 - Bridge 830095\Erosion Control\Plan Sheets\Final\BPI0.R021_ero_pst05.dgn

1/26/2026

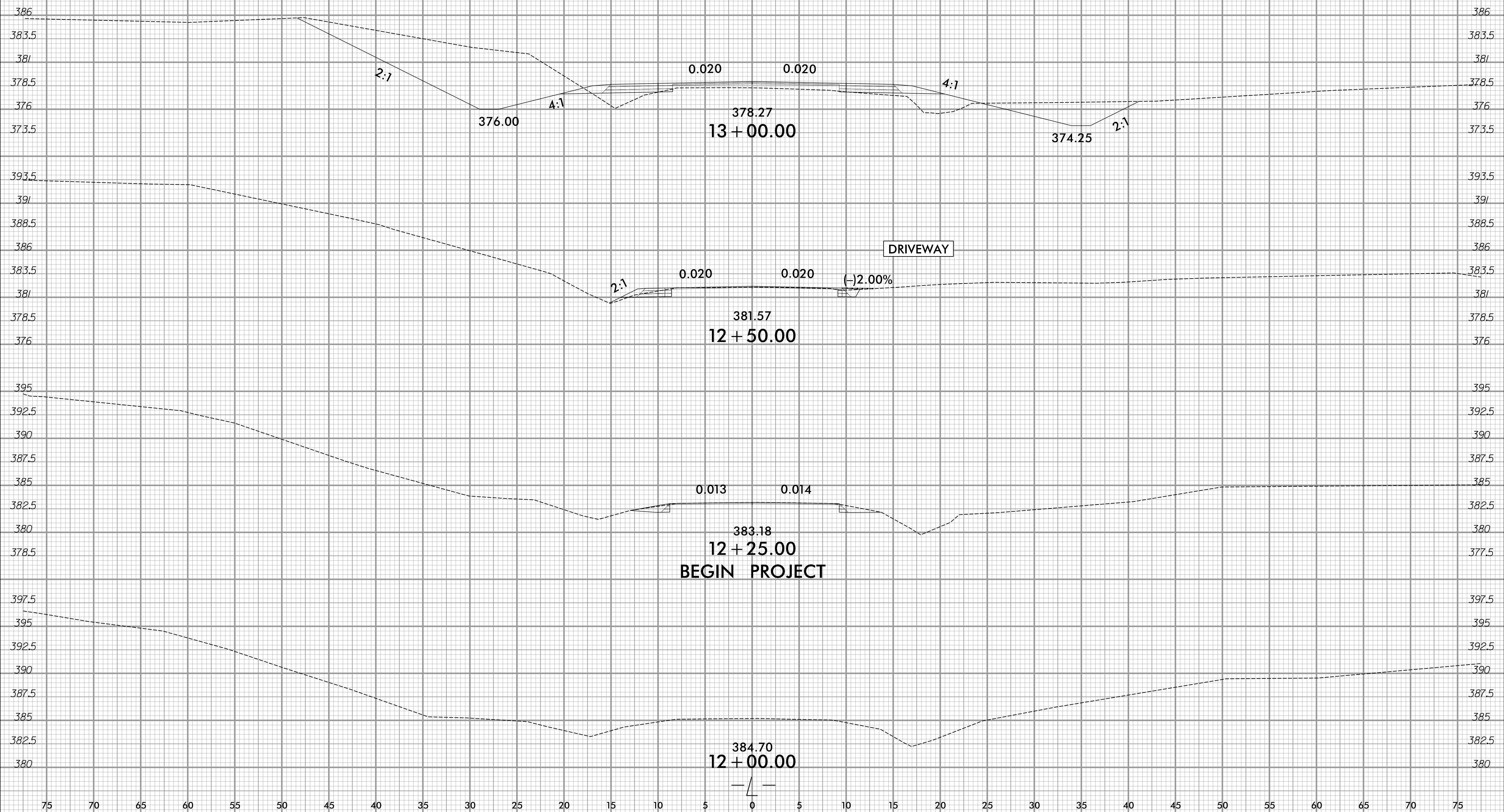
BRIDGE APPROACH SLAB
 NOTE: ALL DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED.

6/23/16



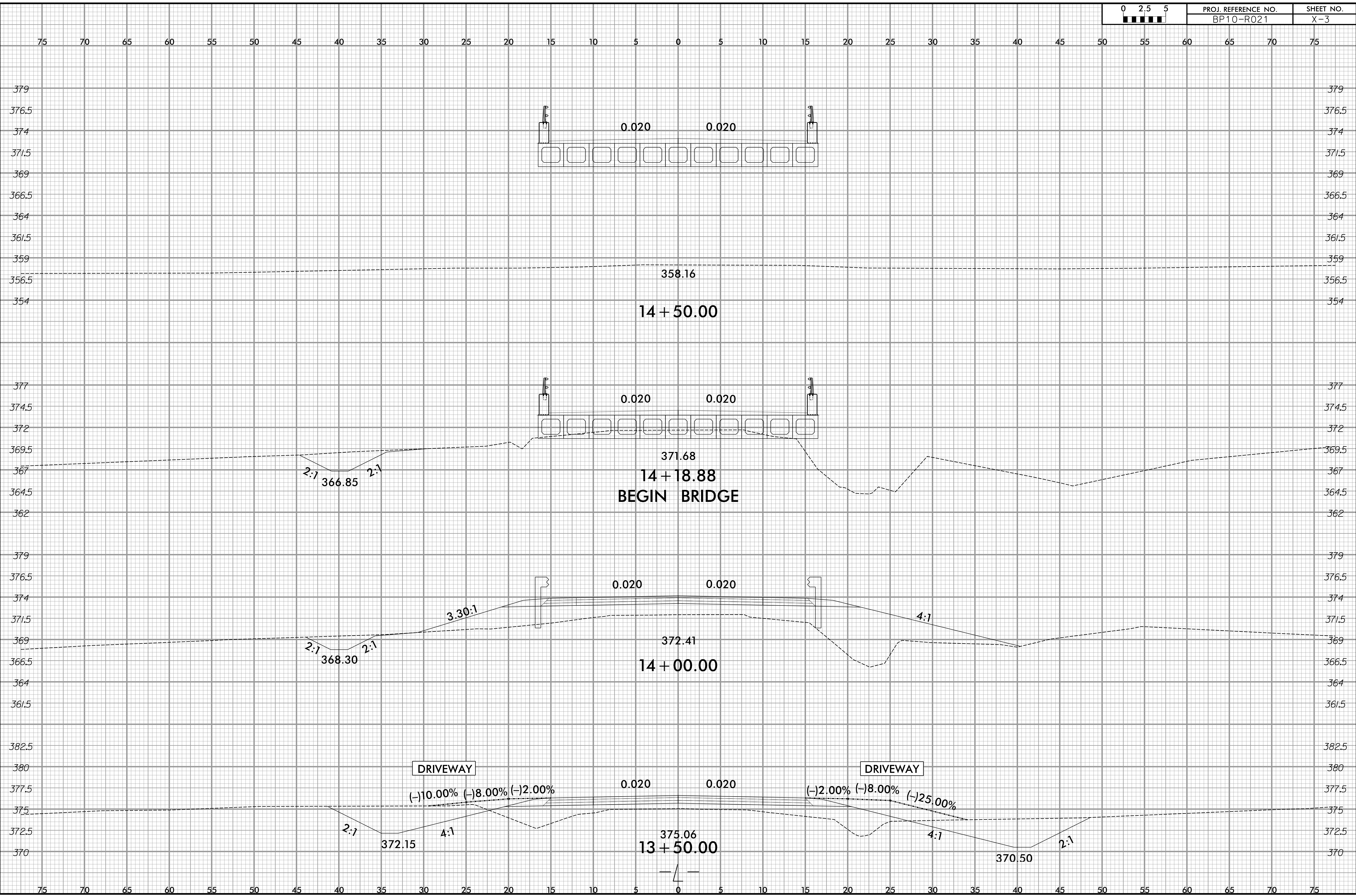
PROJ. REFERENCE NO.	SHEET NO.
BP10-R021	X-2

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



I:\22\2026
 X:\Relief\21-0064\005 - Stealy County R021 (830095)\05-CAD\BP10-R021.1-830095\Foodway\XSC\BP10-R021.Fdy_xp.dgn
 jescarola

6/23/16
I:\2026\X:\Raleigh\21-0004-005 - Stanly County R021 (830095)\05-CAD\BP10.R021.1.830095\Roadway\XSC\BP10.R021_Rdy_xpl.dgn

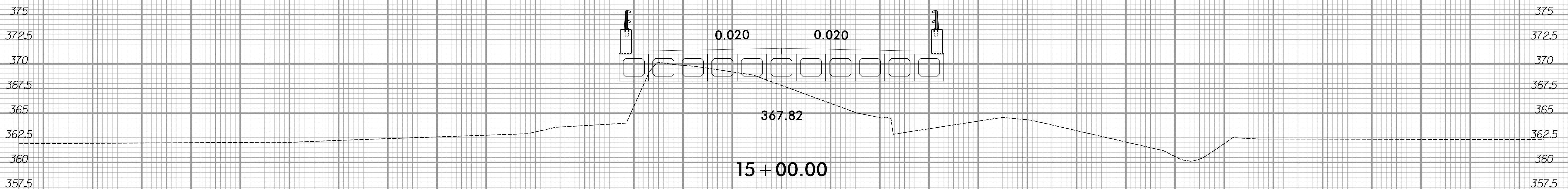
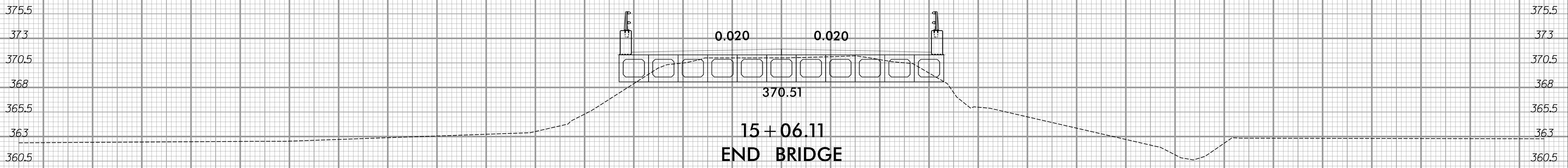
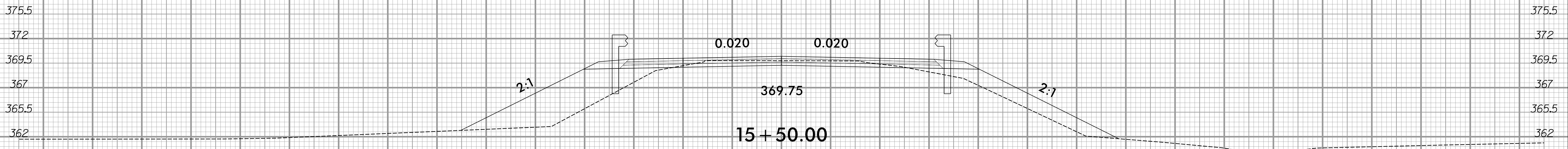
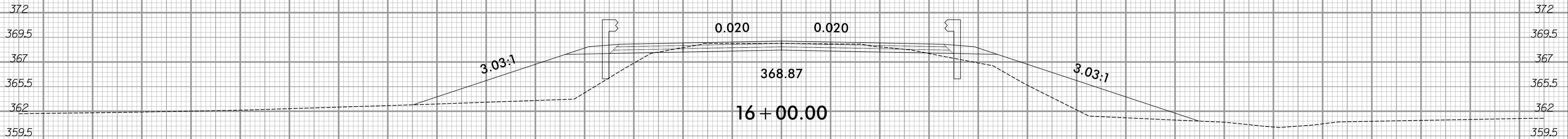


6/23/16



PROJ. REFERENCE NO.	SHEET NO.
BP10-R021	X-4

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

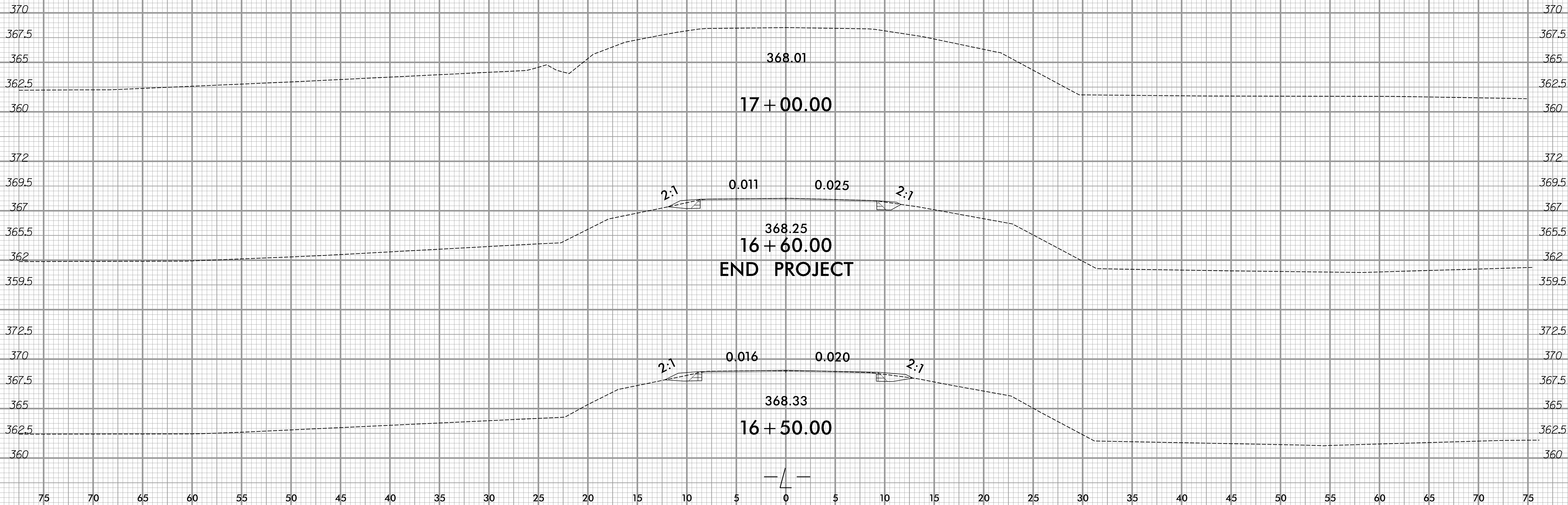
1/22/2026
X:\Projects\21-0064\005 - Stealy County R021 (830095)\05-CAD\BP10-R021.1.830095\Foodway\XSC\BP10-R021.Fdy_xp.dgn
jescar@cs

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
BP10-R021	X-5

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



I:\22\2026
 X:\Relight\21-0064\005 - Stonly County R021 (830095)\05-CAD\BP10-R021.1.830095\Foodway\XSC\BP10-R021.Fdy_xp.dgn
 pascarcis