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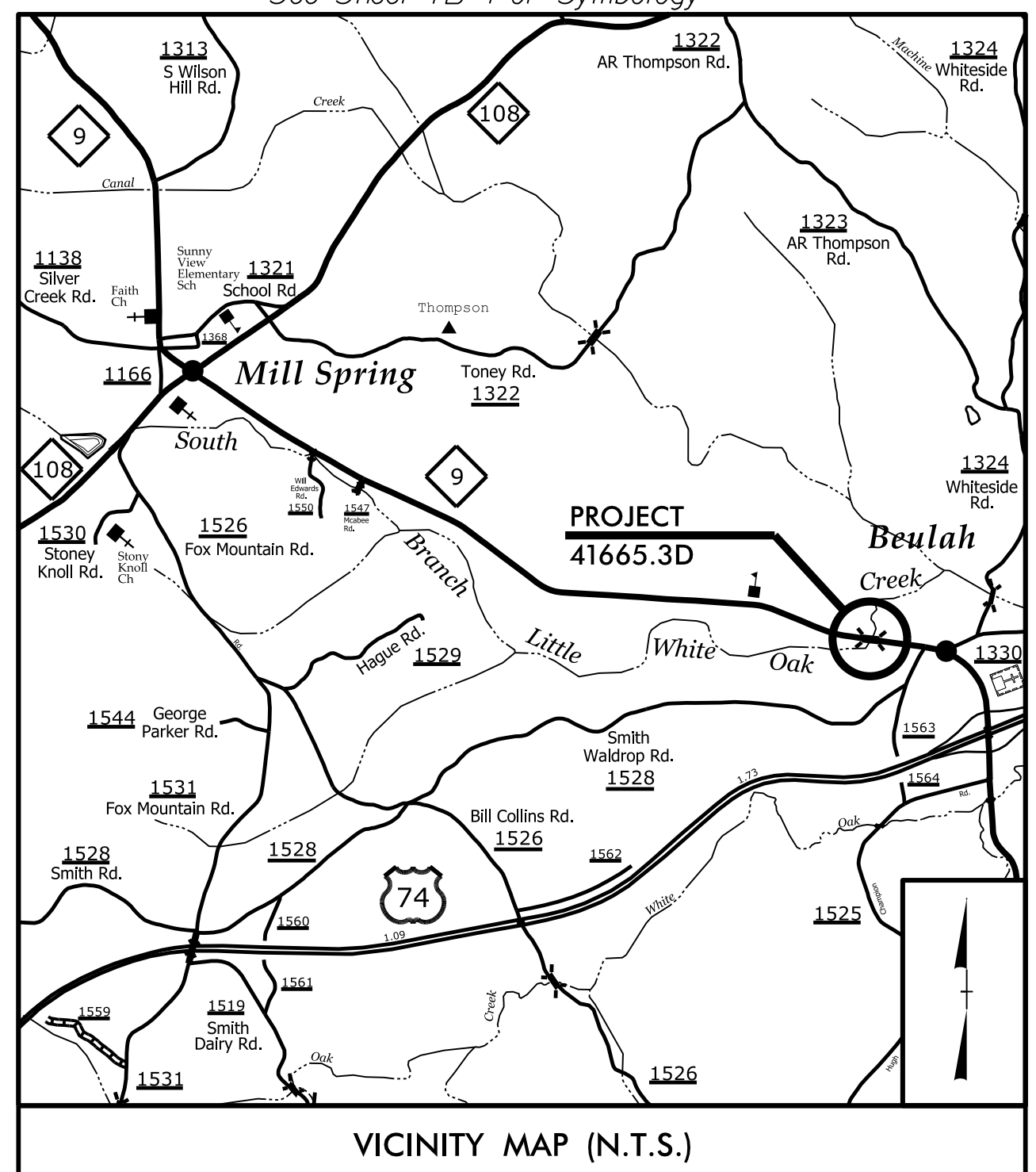
09_08/2011

PROJECT: BP14-R041

CONTRACT: DN01112

5/13/2025
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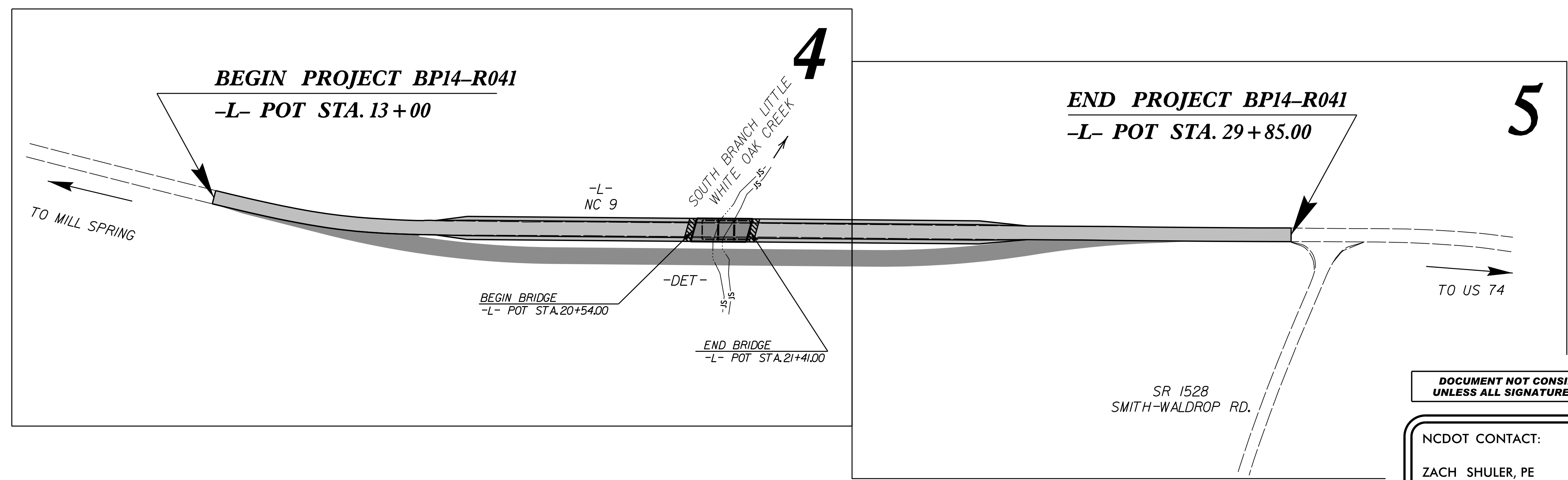
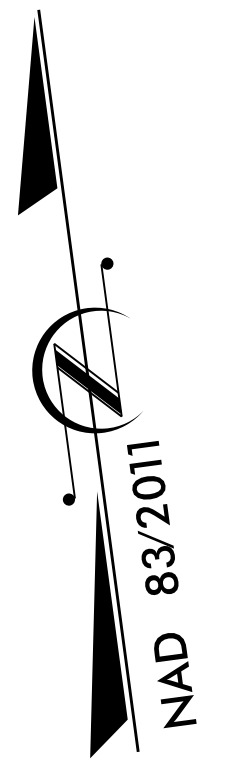
See Sheet 1A For Index of Sheets
 See Sheet 1B For Symbolology



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
POLK COUNTY

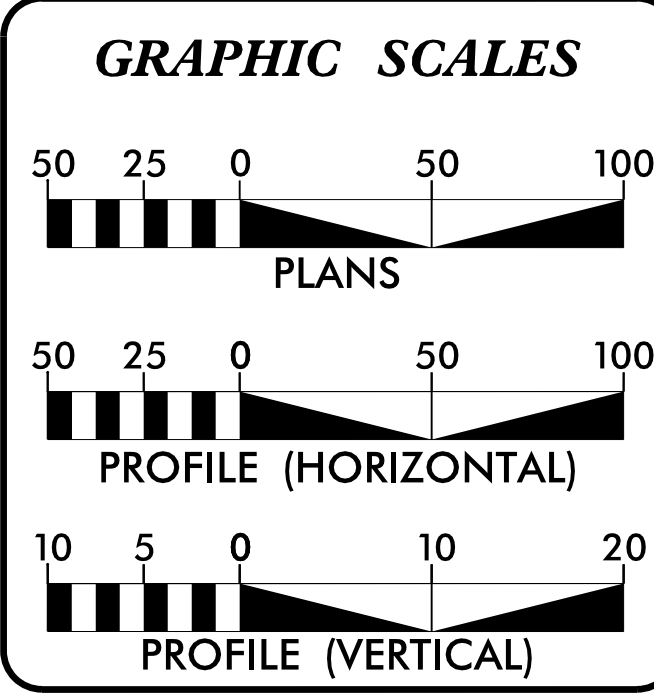
**LOCATION: BRIDGE #29 OVER SOUTH BRANCH
 LITTLE WHITE OAK CREEK ON NC 9**
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP14-R041	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
BP14.R041.1		P.E.	
BP14.R041.2		RW & UTILITIES	
BP14.R041.3		CONST.	



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

NCDOT CONTACT:
 ZACH SHULER, PE
 DIVISION BRIDGE PROGRAM MANAGER
 (828) 488-0902



DESIGN DATA
 ADT 2023 = 2,900
 T = 7 %
 V = 45 MPH

FUNCTIONAL CLASSIFICATION:
 COLLECTOR

REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT BP14-R041 = 0.303 mile

LENGTH STRUCTURES PROJECT BP14-R041 = 0.016 mile

TOTAL LENGTH PROJECT BP14-R041 = 0.319 mile

Prepared For:
DIVISION OF HIGHWAYS
 Division 14, 253 Webster Road, Sylva, NC 28779

By:
Weston & Sampson
 WSE of North Carolina, PC

2082 Energay Drive
 Apex, NC 27502
 Phone: 919.297.0220
 NC License: C-4847

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 DECEMBER 2, 2013

LETTING DATE:
 AUGUST 26, 2025

KEVIN S. HUTCHENS PE
 PROJECT ENGINEER

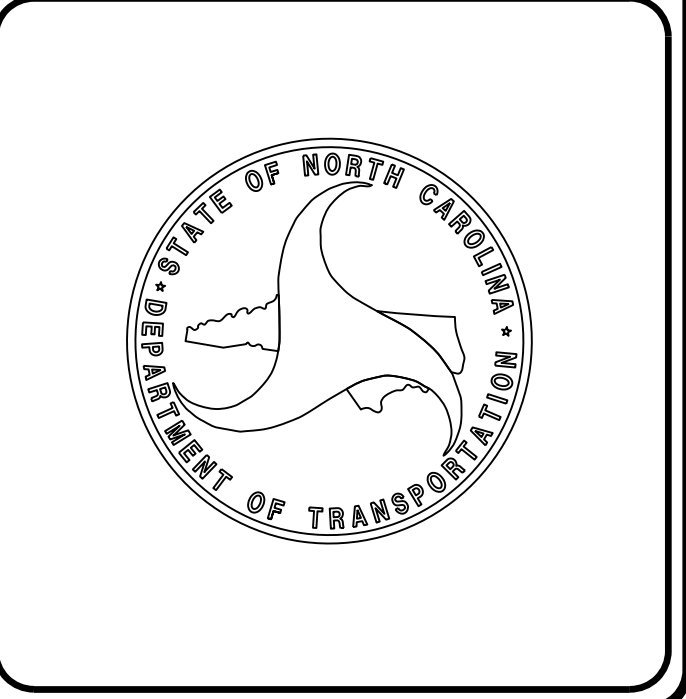
MADONNA SALEH
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Signed by:
 Kevin S. Hutchens
 20180827105492
 SIGNATURE: KEVIN S. HUTCHENS
 P.E.

ROADWAY DESIGN ENGINEER

Signed by:
 Kevin S. Hutchens
 20180827105492
 SIGNATURE: KEVIN S. HUTCHENS
 P.E.



8/17/99

PROJECT REFERENCE NO. <i>BPI4-R04I</i>	SHEET NO. <i>1A</i>
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston & Sampson <small>WSE of North Carolina, PC 2062 Energy Drive Phone: 919.297.0220</small>	<small>NC License: C-48417 Apex, NC 27502 westonandsampson.com</small>

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 11.

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

SUBSURFACE PLANS:
NO SUBSURFACE PLANS ARE AVAILABLE FOR THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

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:
POWER - RUTHERFORD EMC
TELEPHONE & CABLE - WINDSTREAM COMMUNICATIONS
WATER - POLK COUNTY
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.

2024 ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01-16-2024 REV.
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 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 11
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
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
423.02	Bridge Approach Fills - Type IA 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 1
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
866.02	Woven Wire Fence - with Wood Post
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C	SURVEY CONTROL SHEET
2A-1	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2B-1 THRU 2B-2	DETOUR PLANS SHEETS
2B-3	DETOUR PROFILE SHEET
2C-1	DETAIL OF REINFORCED SANDBAG HEADWALL
2C-2	DETAIL IN LIEU OF STD. 862.02: GUARDRAIL INSTALLATION (SHEET 6 OF 8)
2C-3	DETAIL IN LIEU OF STD. 862.03: STRUCTURE ANCHOR UNITS, TYPE III (SHEETS 1 & 2 OF 7)
2C-4	862D01 (SHEET 4 OF 15) 300D0102 - METHOD OF PIPE INSTALLATION RIGID PIPE
3B-1	SUMMARIES OF EARTHWORK, PAVEMENT REMOVAL, AND GUARDRAIL
3D-1	SUMMARIES OF DRAINAGE
3G-1	SUMMARY OF ROCK PLATING
4 THRU 5	PLAN SHEETS
6	PROFILE SHEET
TMP-1 THRU TMP-9	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLAN
EC-1 THRU EC-11	EROSION CONTROL PLANS
RF-1 THRU RF-3	DETAILS OF STREAMBANK REFORESTATION
SIGN-1 THRU SIGN-3	SIGNING PLANS
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-23	CROSS-SECTIONS
S-1 THRU S-29	STRUCTURE PLANS
SN	STRUCTURE STANDARD NOTES

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STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property 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 ☠
Potential Contamination Area: Soil	☠ S ☠
Known Contamination Area: Water	☠ W ☠
Potential Contamination Area: Water	☠ W ☠
Contaminated Site: Known or Potential	☠ ? ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
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	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite R/W Marker	-----
New Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	-----
New Temporary Construction Easement	-----
New Temporary Drainage Easement	-----
New Permanent Drainage Easement	-----
New Permanent Drainage / Utility Easement	-----
New Permanent Utility Easement	-----
New Temporary Utility Easement	-----
New 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	☼

Note: Not to Scale *S.U.E. = *Subsurface Utility Engineering*

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:

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 LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----
U/G TV Cable LOS C (S.U.E.*)	-----
U/G TV Cable LOS D (S.U.E.*)	-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
Above Ground Gas Line	-----

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
SS Forced Main Line LOS B (S.U.E.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

MISCELLANEOUS:

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

SURVEY CONTROL SHEET 74-0029

-FINAL-

BL POINT	DESC.	NORTH	EAST	ELEVATION	EL STATION	OFFSET
1	BL-1	573819.1600	1067722.2380	904.91	11+60.88	16.33 RT
2	BL-2	573695.9000	1068072.6070	900.16	15+30.26	15.39 RT
3	BL-3	573617.6000	1068591.0540	883.69	20+53.37	15.77 RT
4	BL-4	573508.4020	1069578.3860	913.81	30+46.27	15.50 LT

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	EY1 STATION	OFFSET
44	BL-4	573508.4020	1069578.3860	913.81	OUTSIDE PROJECT LIMITS	
5	BY1-5	573251.4380	1069432.2060	925.68	12+81.72	15.12 RT

 BM1 ELEVATION = 911.72
 N 573827.43 E 1067821.15
 BL STATION 5+90.57 40.62 LEFT
 8" SPIKE SET ON TOP OF A WHITE PINE STUMP

 BM2 ELEVATION = 884.01
 N 573648.76 E 1068609.11
 BL STATION 14+10.26 32.96 LEFT
 8" SPIKE SET ON TOP OF A WOOD POST AT NW END OF BRIDGE

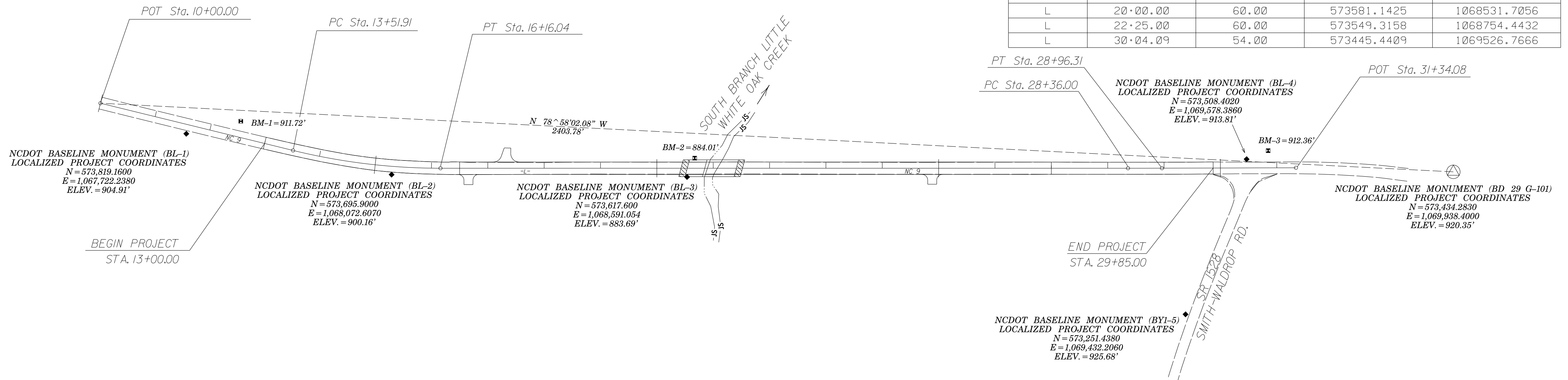
 BM3 ELEVATION = 912.36
 N 573517.93 E 1069618.40
 BL STATION 23+89.10
 N 76°35'58.67" E DIST 41.13
 8" SPIKE SET IN THE ROOT OF A 15' WILD CHERRY TREE



-L- FINAL			
TYPE	STATION	NORTH	EAST
POT	10+00.00	573894.2942	1067579.0495
PC	13+51.91	573763.0955	1067905.5906
PT	16+16.04	573694.8514	1068160.0918
PC	28+36.00	573522.2855	1069367.7860
PT	28+96.31	573513.8443	1069427.5043
POT	31+34.08	573480.9215	1069662.9817

-FINAL- ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	16+40.00	-20.05	573711.3126	1068186.6489
L	16+40.00	-40.00	573731.0598	1068189.4705
L	28+36.00	-40.00	573561.8833	1069373.4441
L	28+36.00	-20.00	573542.0844	1069370.6151
L	27+10.00	20.00	573520.3094	1069240.2247
L	27+10.00	40.00	573500.5105	1069237.3957
L	16+40.00	40.00	573651.8642	1068178.1544
L	16+40.00	19.95	573671.7148	1068180.9908

-FINAL- ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	14+50.00	18.78	573712.6544	1067992.6950
L	14+50.00	55.00	573677.9724	1067982.2369
L	20+00.00	60.00	573581.1425	1068531.7056
L	22+25.00	60.00	573549.3158	1068754.4432
L	30+04.09	54.00	573445.4409	1069526.7666



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BD 29 G-101" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF
 NORTHING: 573434.283(ft) EASTING: 1069938.400(ft)
 ELEVATION: 920.349(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998338194
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BD 29 G-101" TO -L- STATION IS
 N 78°58'02.08" W 2403.78'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

GEOID MODEL - G12NC
NOTE: DRAWING NOT TO SCALE

NOTES:

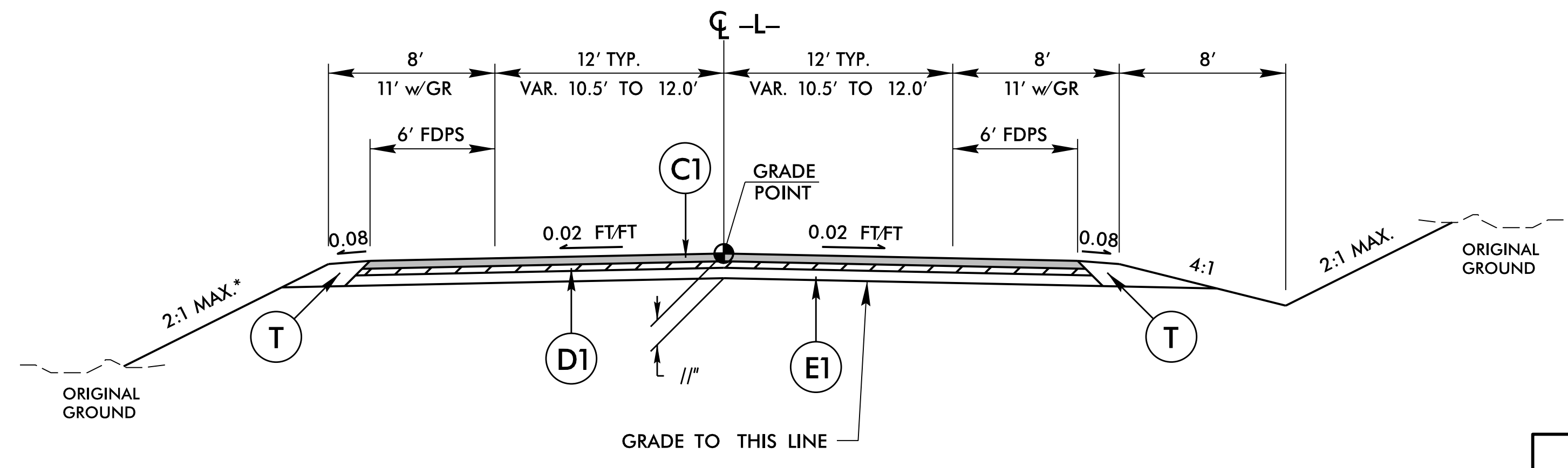
- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 740029_LS_CONTROL.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

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5/13/2025

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. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQUARE YARD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS PER SQUARE YARD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
J1	10" AGGREGATE BASE COURSE
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL THIS SHEET)

PAVEMENT EDGE SLOPES AND TRENCH SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

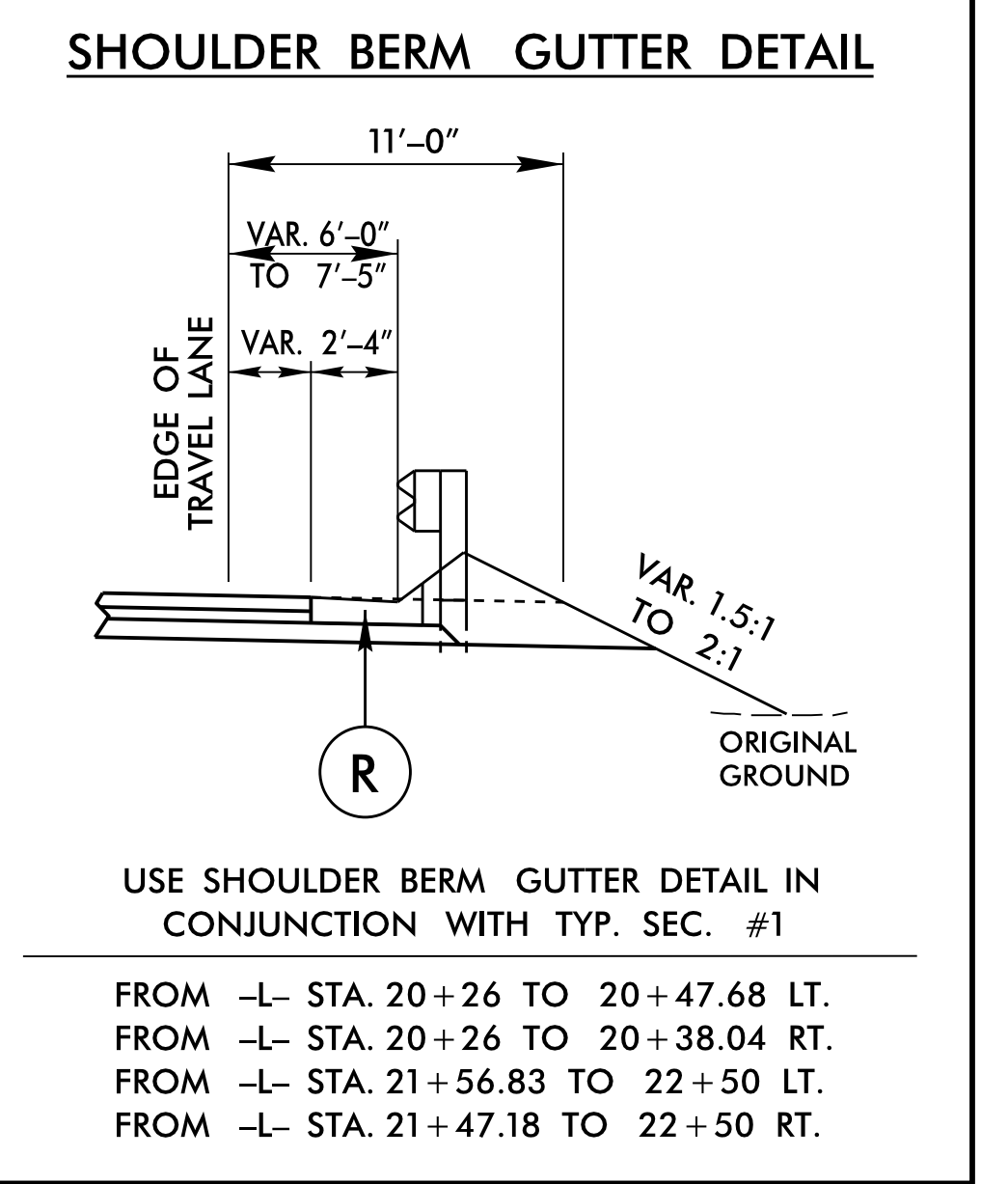


TYPICAL SECTION NO. 1

FROM -L- STA. 16+50.00 TO STA. 20+54.00 (BEGIN BRIDGE)
 FROM -L- STA. 21+41.00 (END BRIDGE) TO STA. 27+00.00

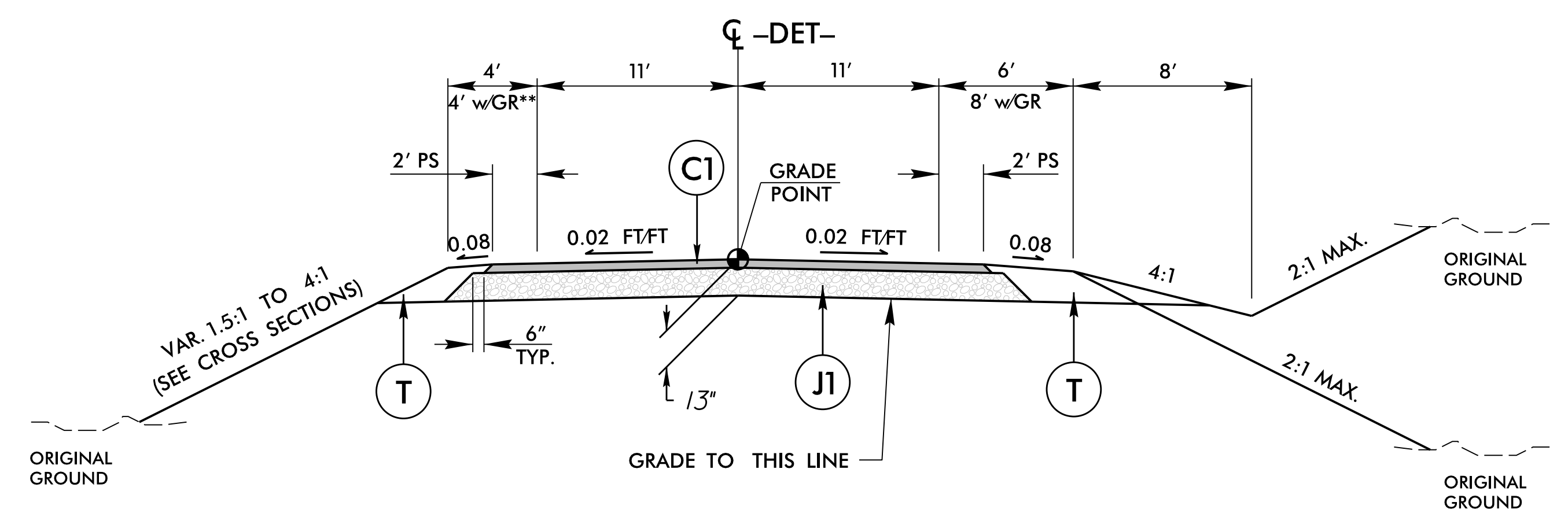
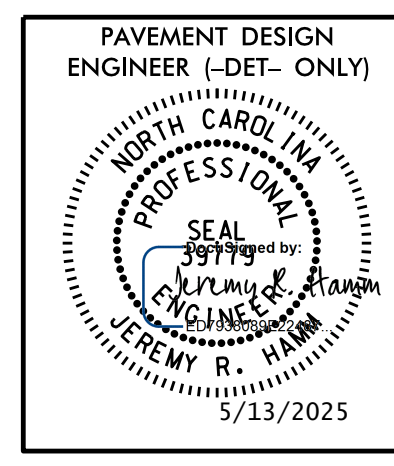
NOTE: RESURFACE (1.5" LAYER) EXISTING PAVEMENT USING (C2):
 FROM -L- STA. 13+00.00 TO 16+50.00
 FROM -L- STA. 27+00.00 TO 29+85.00

* NOTE: USE 1.5:1 FILL SLOPES:
 FROM -L- STA. 20+25.00 TO 20+56.00 LT
 FROM -L- STA. 20+00.00 TO 20+40.00 RT
 FROM -L- STA. 21+56.00 TO 22+50.00 LT
 FROM -L- STA. 21+40.00 TO 22+00.00 RT



USE SHOULDER BERM GUTTER DETAIL IN CONJUNCTION WITH TYP. SEC. #1

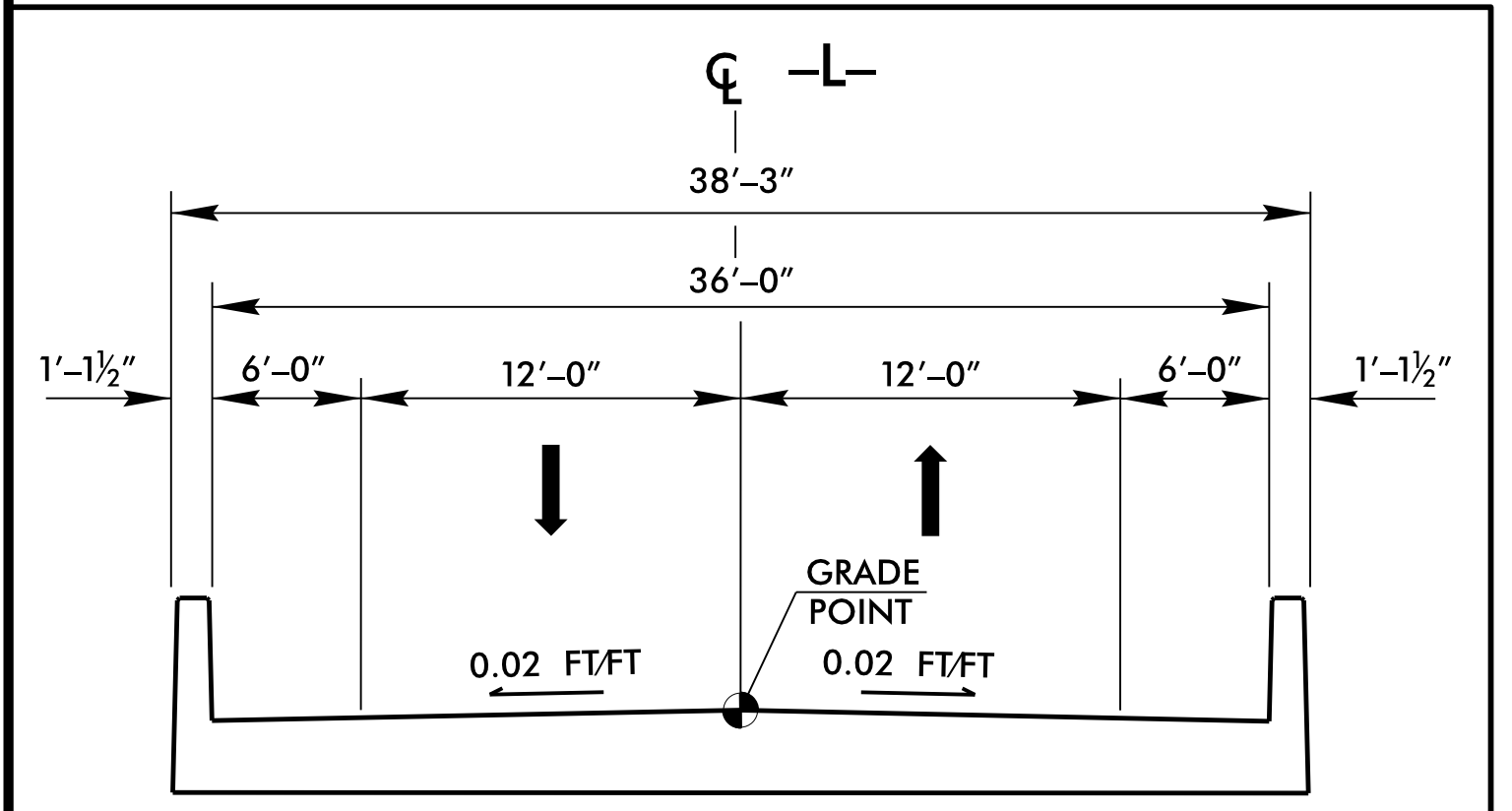
FROM -L- STA. 20+26 TO 20+47.68 LT.
 FROM -L- STA. 20+26 TO 20+38.04 RT.
 FROM -L- STA. 21+56.83 TO 22+50 LT.
 FROM -L- STA. 21+47.18 TO 22+50 RT.



TYPICAL SECTION NO. 2

FROM -DET- STA. 13+00.00 TO STA. 15+01.96 (WIDEN RT. USING EX. EOP AS GRADE CONTROL)
 FROM -DET- STA. 15+01.96 TO STA. 26+65.12
 FROM -DET- STA. 26+65.12 TO STA. 28+42.95 (WIDEN RT. USING EX. EOP AS GRADE CONTROL)

** NOTE: PLACE FACE OF GUARDRAIL AT EDGE OF PAVED SHOULDER ON LEFT SIDE OF DETOUR.



TYPICAL SECTION ON STRUCTURE

FROM -L- STA. 20+54.00 TO STA. 21+41.00

5/13/2025
 P:\065\0659\088\10100\Polk29\Roadway\Proj\polk29_Rdy_typ.dgn
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8/17/19

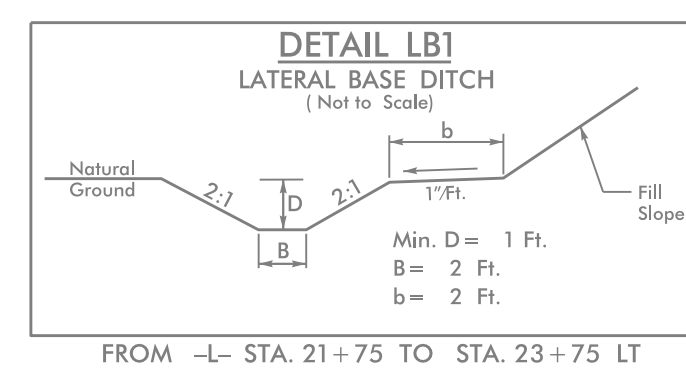
REVISIONS

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-L-
 PI Sta 14+84.61
 $\Delta = 13^{\circ} 45' 27.2" (LT)$
 $D = 5' 12" 31.3"$
 $L = 264.13'$
 $T = 132.70'$
 $R = 1,000.00'$
 RO = EXISTING
 SE = EXISTING

NAD 83/2011

NC GRID
NAD 83 NA 2011



BRIDGE DESCRIPTION #29
 CONCRETE DECK / BST SURFACE
 METAL GUARDRAILS
 2 CONCRETE BEAMS PERPENDICULAR W/ BRIDGE
 WOOD HEADWALLS
 WOOD WINGWALLS
 CONCRETE WHEELGUARD

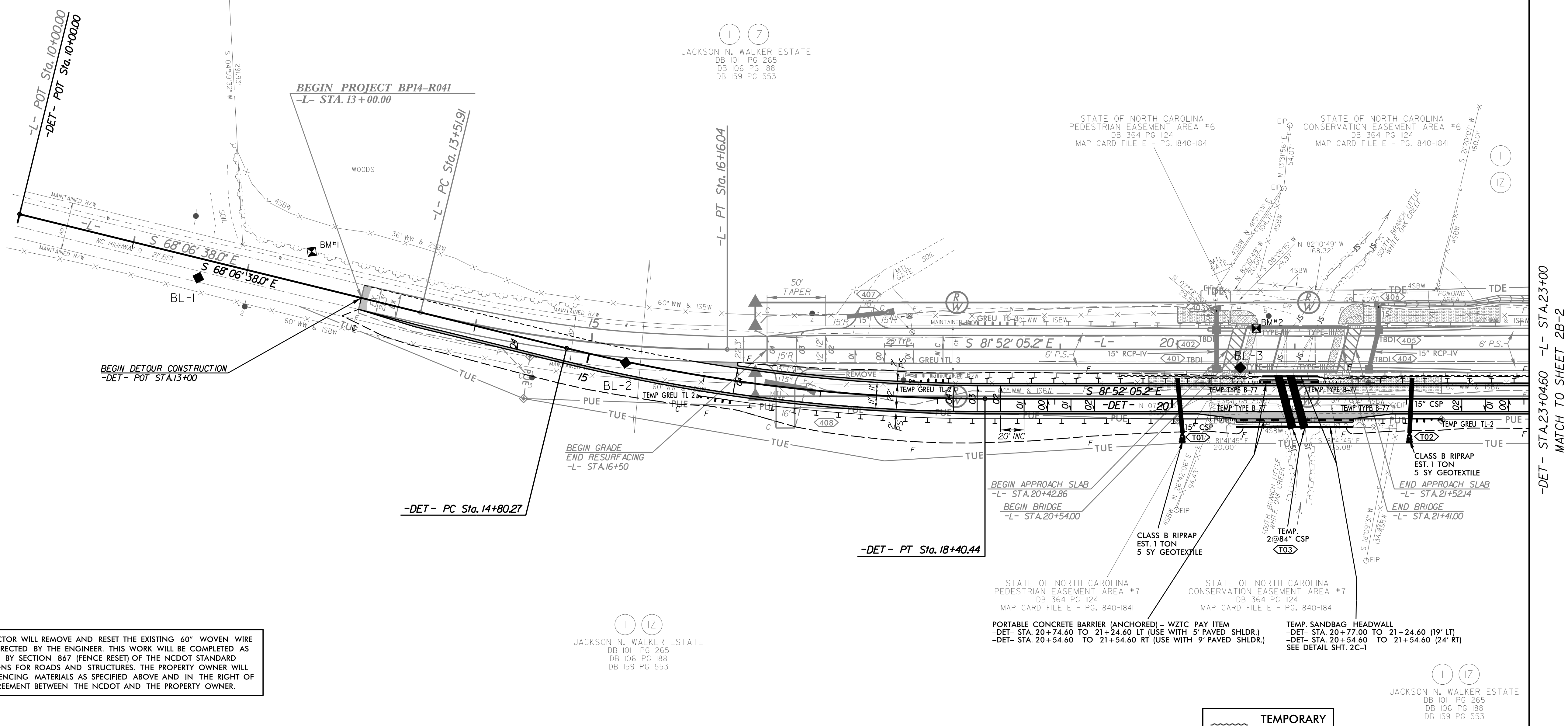
PROJECT REFERENCE NO. BPI4-R041	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston & Sampson WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	NC License: C-4847 Apex, NC 27502 westonandsampson.com

POLK COUNTY BOARD OF EDUCATION
 DB 114 PG 8
 DB 214 PG 1659
 PLAT BOOK 4 - PG. 63
 MAP CARD FILE B - PG. 771

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

STATE OF NORTH CAROLINA
 PEDESTRIAN EASEMENT AREA #6
 DB 364 PG 1124
 MAP CARD FILE E - PG. 1840-1841

STATE OF NORTH CAROLINA
 CONSERVATION EASEMENT AREA #6
 DB 364 PG 1124
 MAP CARD FILE E - PG. 1840-1841



THE CONTRACTOR WILL REMOVE AND RESET THE EXISTING 60" WOVEN WIRE FENCE AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE COMPLETED AS SPECIFIED BY SECTION 867 (FENCE RESET) OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. THE PROPERTY OWNER WILL SUPPLY THE FENCING MATERIALS AS SPECIFIED ABOVE AND IN THE RIGHT OF WAY AGREEMENT BETWEEN THE NCDOT AND THE PROPERTY OWNER.

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

-DET-
 PI Sta 16+61.22
 $\Delta = 13^{\circ} 45' 27.2" (LT)$
 $D = 3' 49' 11.0"$
 $L = 360.17'$
 $T = 180.96'$
 $R = 1,500.00'$
 SE = 0.04
 RO = 80'
 V = 40 mph

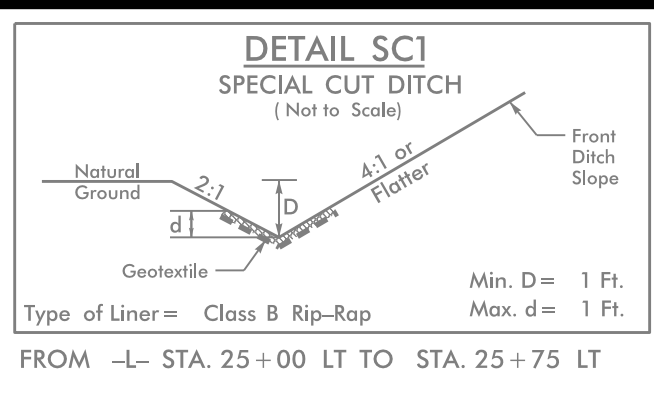
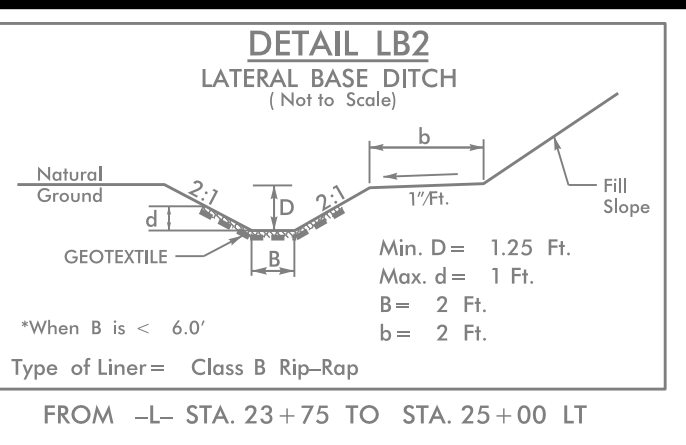
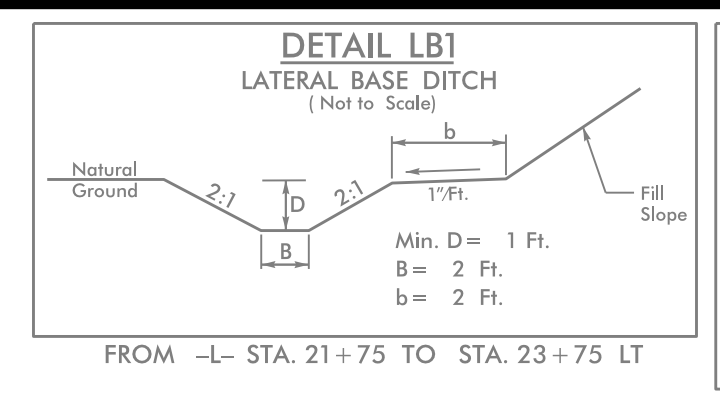
TEMPORARY SHORING

FOR -DET- PROFILE, SEE SHEET NO. 2B-3

DETOUR SHEET (1 OF 2)

-DET- STA. 23+04.60 -L- STA. 23+00
MATCH TO SHEET 2B-2

8/17/99



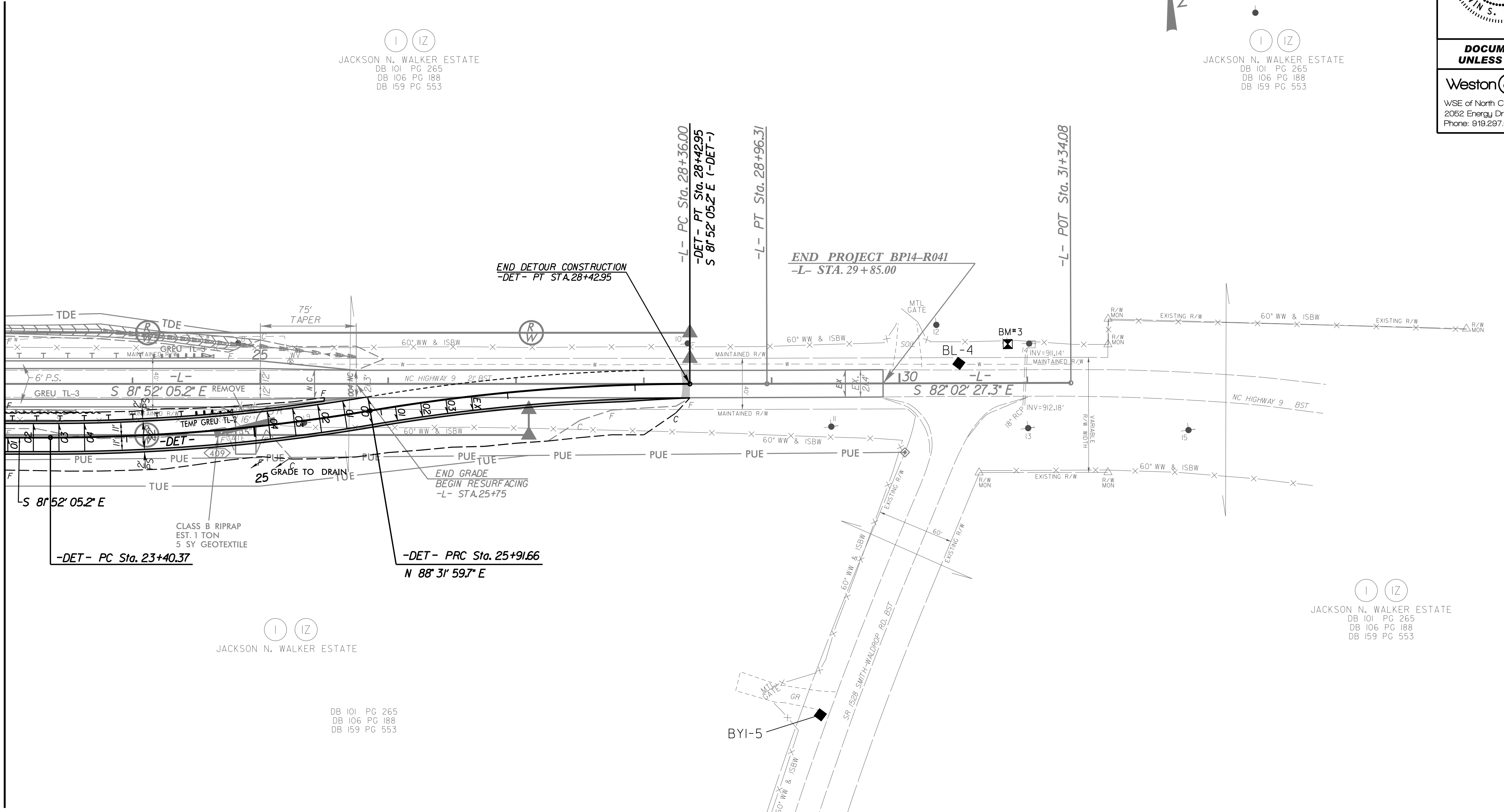
-L-
PI Sta 28+66.16
 $\Delta = 0^\circ 10' 22.0''$ (LT)
 $D = 0' 17' 11.3''$
 $L = 60.31'$
 $T = 30.16'$
 $R = 20,000.00'$
RO = EXISTING
SE = EXISTING



PROJECT REFERENCE NO. BP14-R04I		SHEET NO. 2B-2	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
Weston & Sampson		NC License: C-4847 Apex, NC 27502 westonandsampson.com	

REVISIONS

MATCH TO SHEET 2B-1
-DET- STA. 23+04.60 -L- STA. 23+00



THE CONTRACTOR WILL REMOVE AND RESET THE EXISTING 60" WOVEN WIRE FENCE AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE COMPLETED AS SPECIFIED BY SECTION 867 (FENCE RESET) OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. THE PROPERTY OWNER WILL SUPPLY THE FENCING MATERIALS AS SPECIFIED ABOVE AND IN THE RIGHT OF WAY AGREEMENT BETWEEN THE NCDOT AND THE PROPERTY OWNER.

-DET-

PI Sta 24+66.31	PI Sta 27+17.60
$\Delta = 9^\circ 35' 55.1''$ (LT)	$\Delta = 9^\circ 35' 55.1''$ (RT)
$D = 3' 49' 11.0''$	$D = 3' 49' 11.0''$
$L = 251.29'$	$L = 251.29'$
$T = 125.94'$	$T = 125.94'$
$R = 1,500.00'$	$R = 1,500.00'$
SE = 0.04	SE = 0.04
RO = 80'	RO = 80'
V = 40 mph	V = 40 mph

TEMPORARY SHORING

FOR -DET- PROFILE, SEE SHEET NO. 2B-3

DETOUR SHEET (2 OF 2)

5/6/2025 10:05:06 AM
P:\055\0659\088\10100\Polk29\Roadway\Proj\Polk29_rdy_psh\2B-2_det.dgn

5/28/24

PIPE HYDRAULIC DATA (15')			
DESIGN DISCHARGE	= 17	CFS	
DESIGN FREQUENCY	= 10	YRS	
DESIGN HW ELEVATION	= 883J	FT	

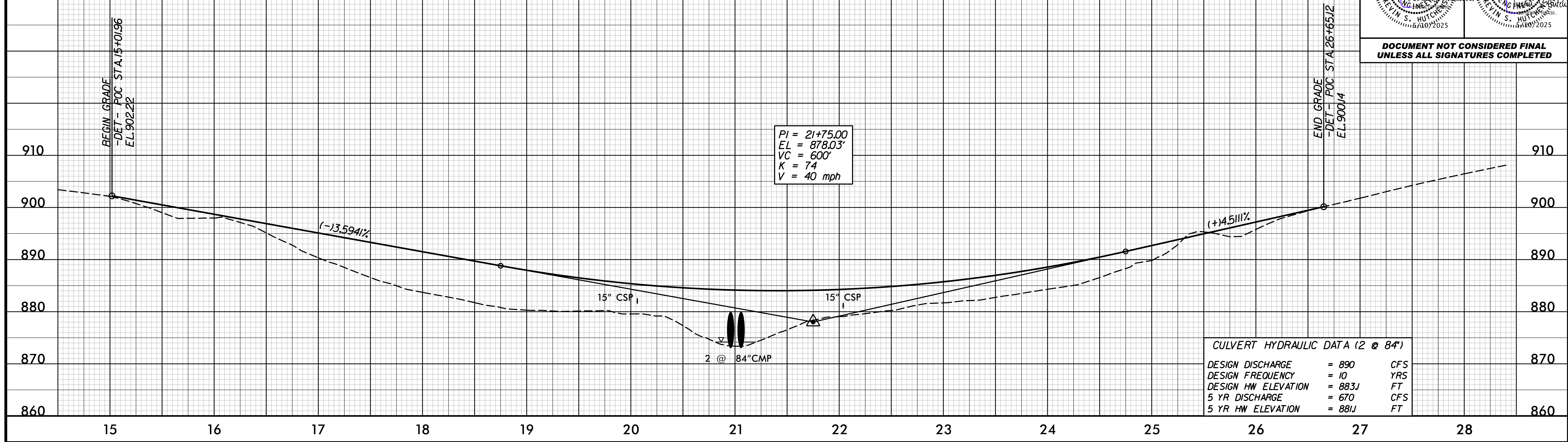
PIPE HYDRAULIC DATA (15')			
DESIGN DISCHARGE	= 2	CFS	
DESIGN FREQUENCY	= 10	YRS	
DESIGN HW ELEVATION	= 881.9	FT	

Weston Sampson
 WSE of North Carolina, PC
 2062 Energy Drive
 Phone: 919.297.0220

NC License: C-4847
 Apex, NC 27602
 westonandsampson.com

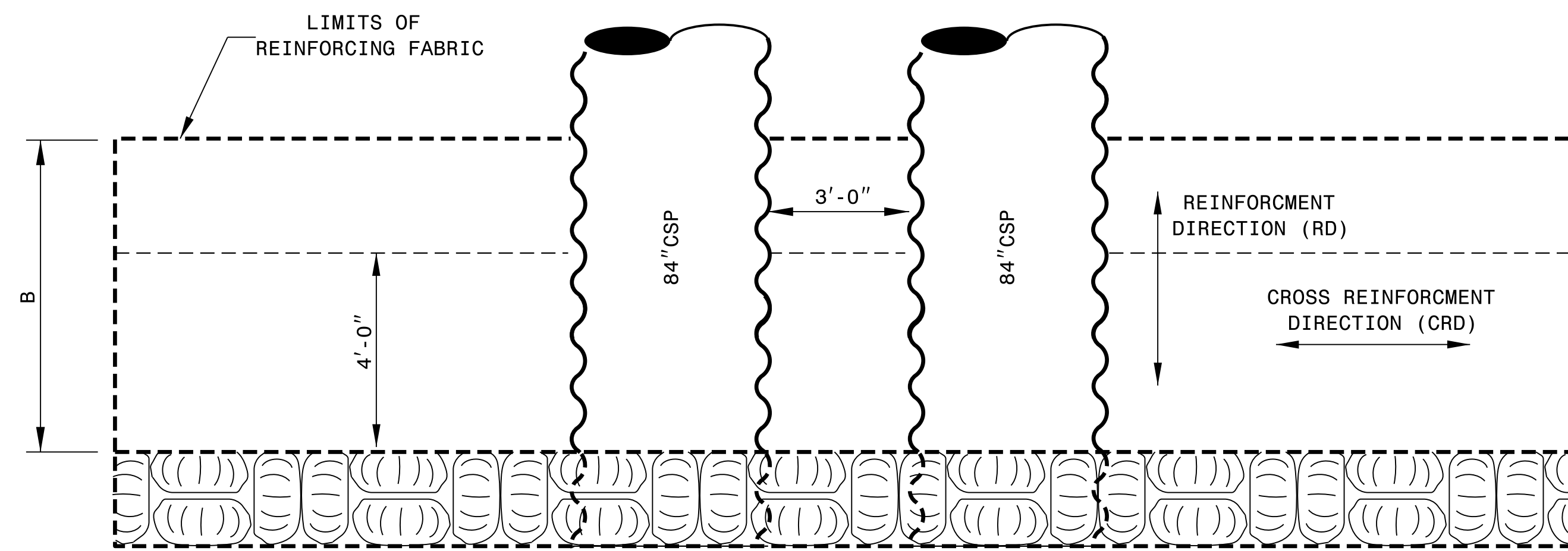
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-DET-

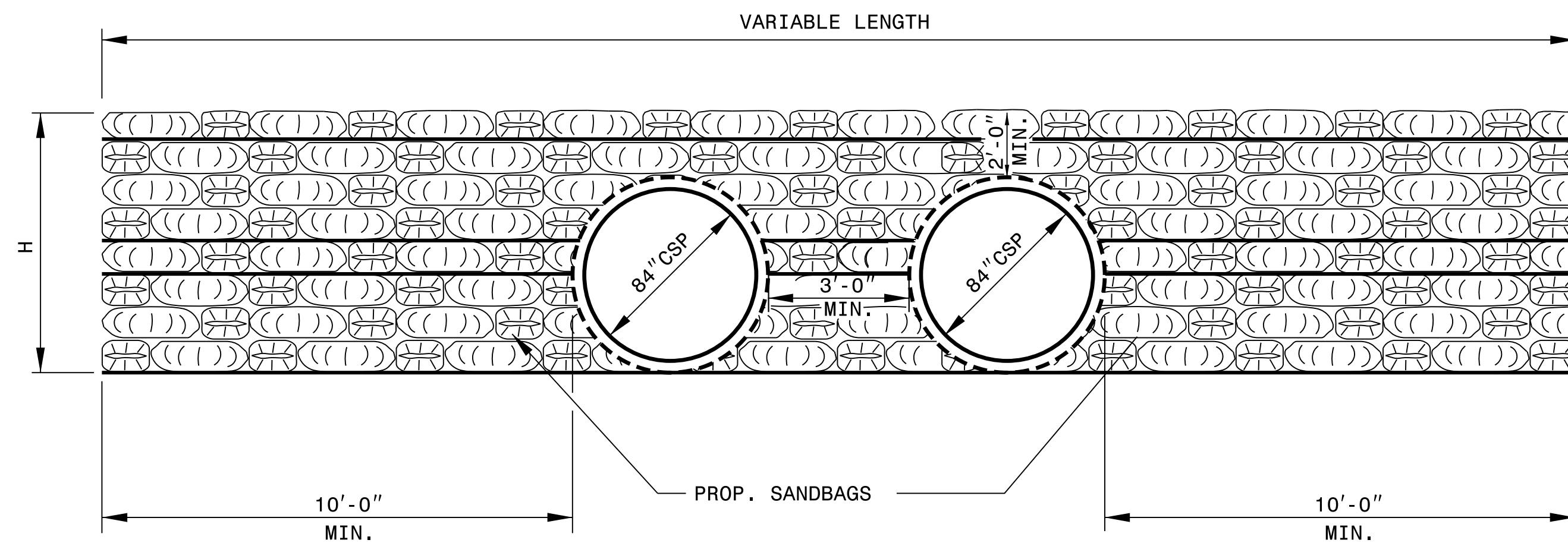


**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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PLAN



FRONT ELEVATION

REINFORCING FABRIC

WALL HEIGHT H (ft)	REINF. LENGTH B (ft)	ULTIMATE TENSILE STRENGTH (lb/ft)
< 4	6	2400
4 TO 6	6	3000
6 TO 8	= H	3600
8 TO 10	= H	4500

INLET END SANDBAG HEADWALL AREA = 583 S.F.

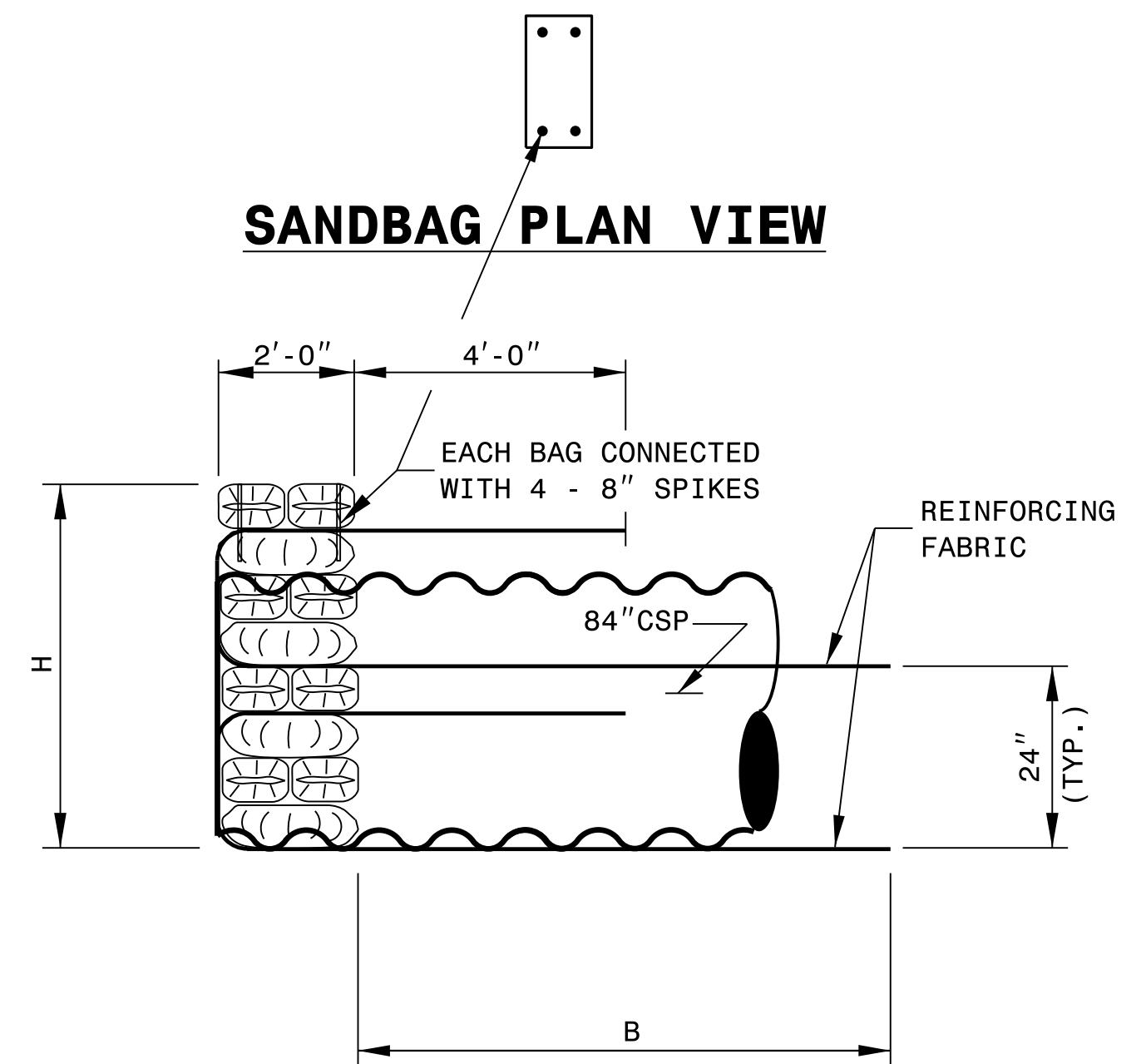
OUTLET END SANDBAG HEADWALL AREA = 371 S.F.

NOTES:

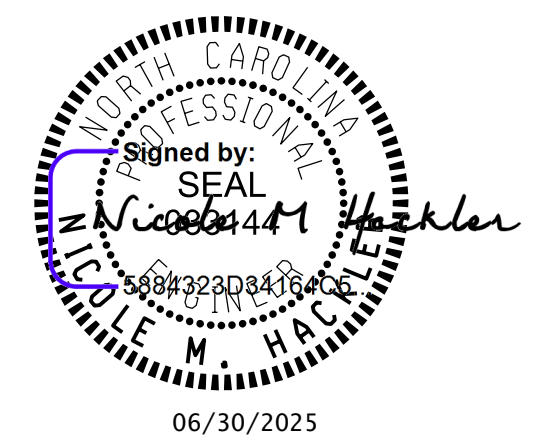
- REINFORCED SANDBAG HEADWALLS ARE BASED ON THE FOLLOWING ASSUMPTIONS:
 - TRAFFIC SURCHARGE IS 240 PSF OR LESS AND BACKSLOPE IS 2:1 OR FLATTER.
 - GRADE IN FRONT OF WALL IS 6:1 OR FLATTER
 - MAXIMUM APPLIED BEARING PRESSURE IS LESS THAN 1 TSF.
- REINFORCED SANDBAG HEADWALLS ARE BASED ON THE FOLLOWING IN-SITU SOIL PARAMETERS:
 - UNIT WEIGHT = 120 PCF
 - FRICTION ANGLE = 30 DEGREES

DO NOT USE REINFORCED SANDBAG HEADWALL DETAIL WHEN ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS PRESENT BELOW BOTTOM OF PIPE.
- PLACE REINFORCEMENT IN SLIGHT TENSION AND FREE OF KINKS, FOLDS, WRINKLES AND CREASES.
- DO NOT SPLICE REINFORCEMENT IN THE REINFORCEMENT DIRECTION (RD). SEAMS ARE ALLOWED IN THE CROSS-REINFORCEMENT DIRECTION (CRD).
- BACKFILL AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT BACKFILL WITH ROCK, BROKEN PAVEMENT OR SIMILAR MATERIAL. DO NOT DAMAGE REINFORCEMENT WHEN PLACING AND COMPACTING BACKFILL. DO NOT USE SHEEPSFOOT, GRID ROLLERS OR OTHER TYPES OF COMPACTION EQUIPMENT WITH FEET. DO NOT OPERATE HEAVY EQUIPMENT ON REINFORCEMENT UNTIL IT IS COVERED WITH AT LEAST 10" OF BACKFILL. USE ONLY HAND OPERATED EQUIPMENT TO COMPACT WITHIN 3 ft OF THE HEADWALL FACE.
- #4 REINFORCING BARS (GRADE 60) 24" LONG MAY BE SUBSTITUTED FOR 8" SPIKES. DRIVE #4 BARS THRU 4 BAGS MAXIMUM.
- HEADWALL DIMENSIONS MAY BE ADJUSTED FOR SINGLE, DOUBLE OR MORE PIPES AS SHOWN IN PLANS.



SIDE ELEVATION

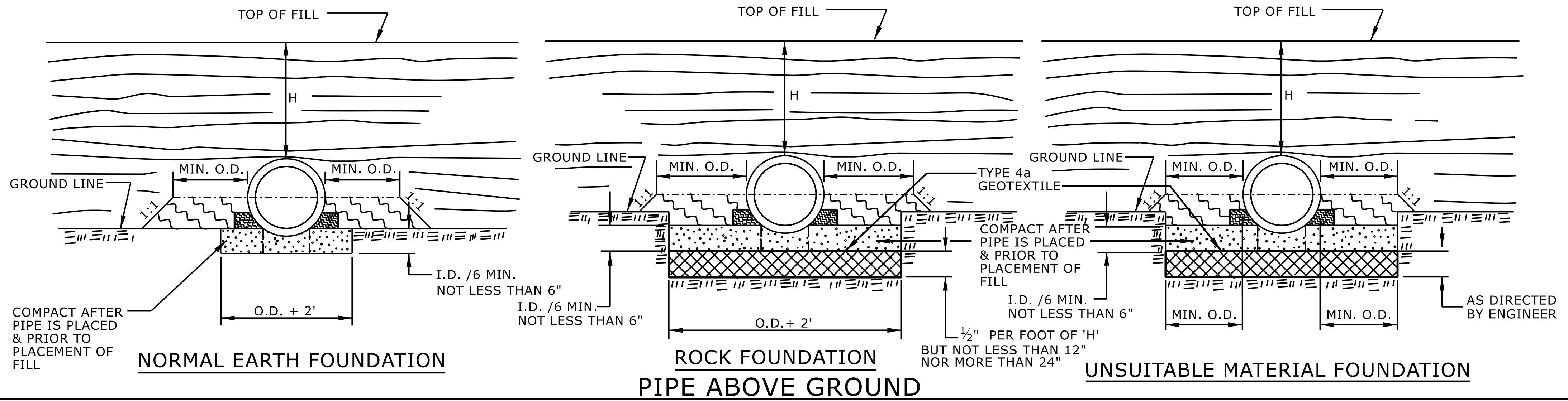
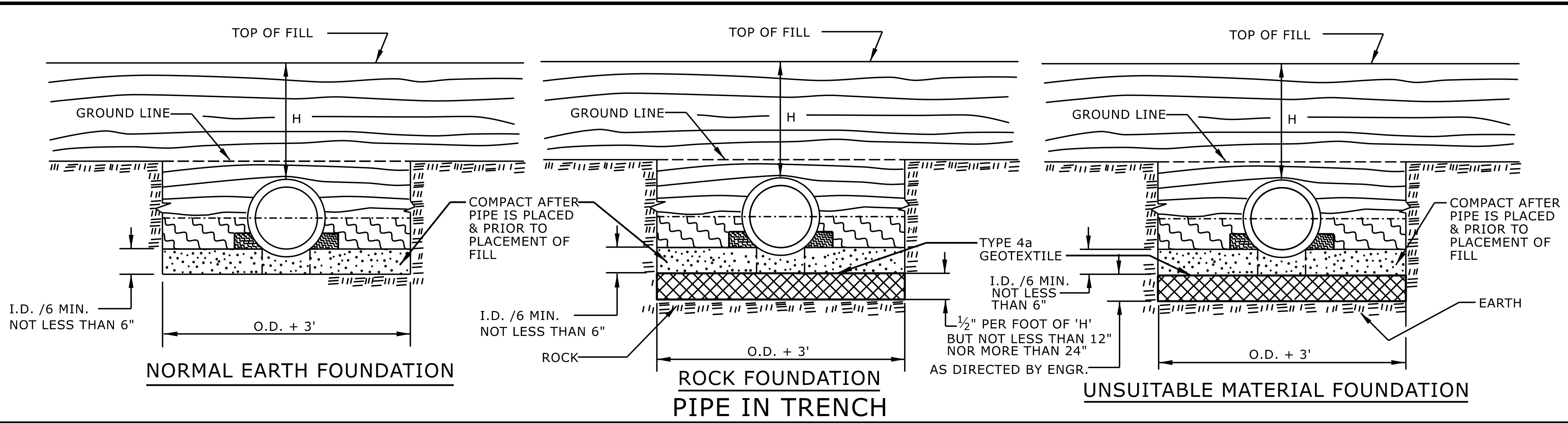


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

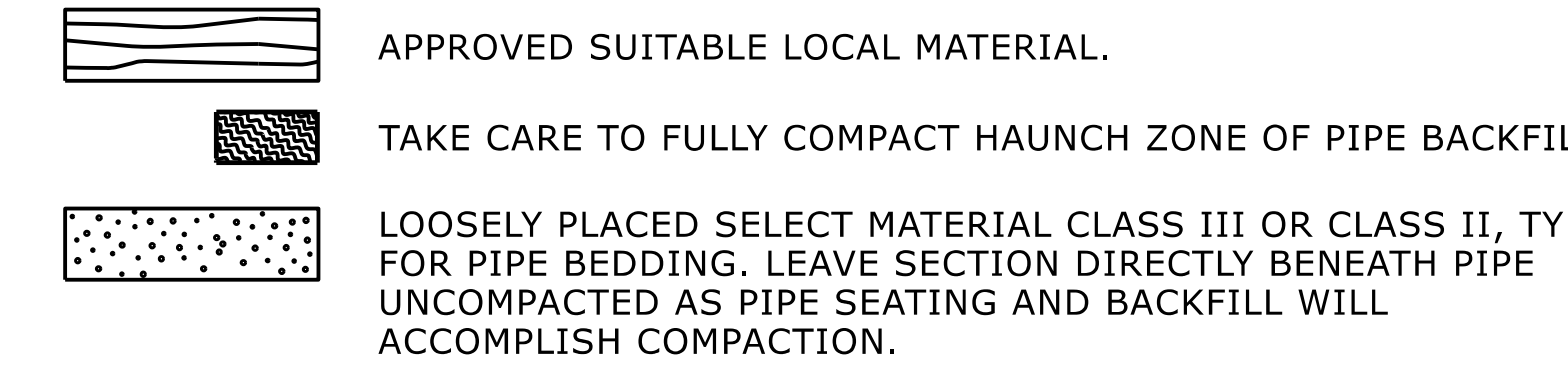
CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

DETAIL OF REINFORCED SANDBAG ENDWALL

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 12-5-2018
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/rbitt/english/misc/sandbag_endwalls.dgn

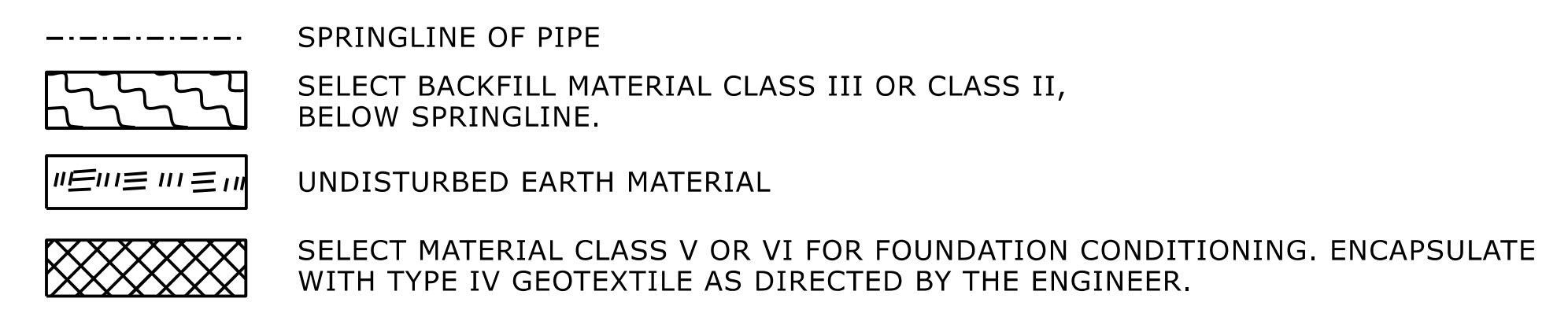


GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.



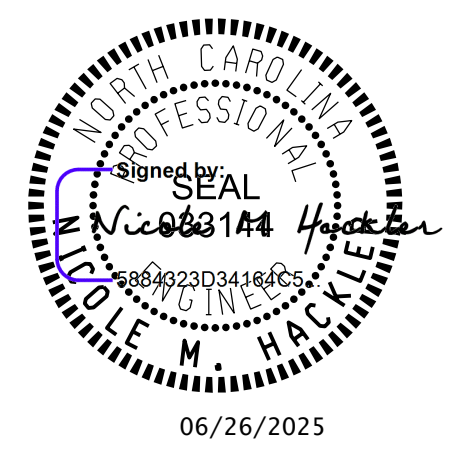
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

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



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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 RIGID PIPE



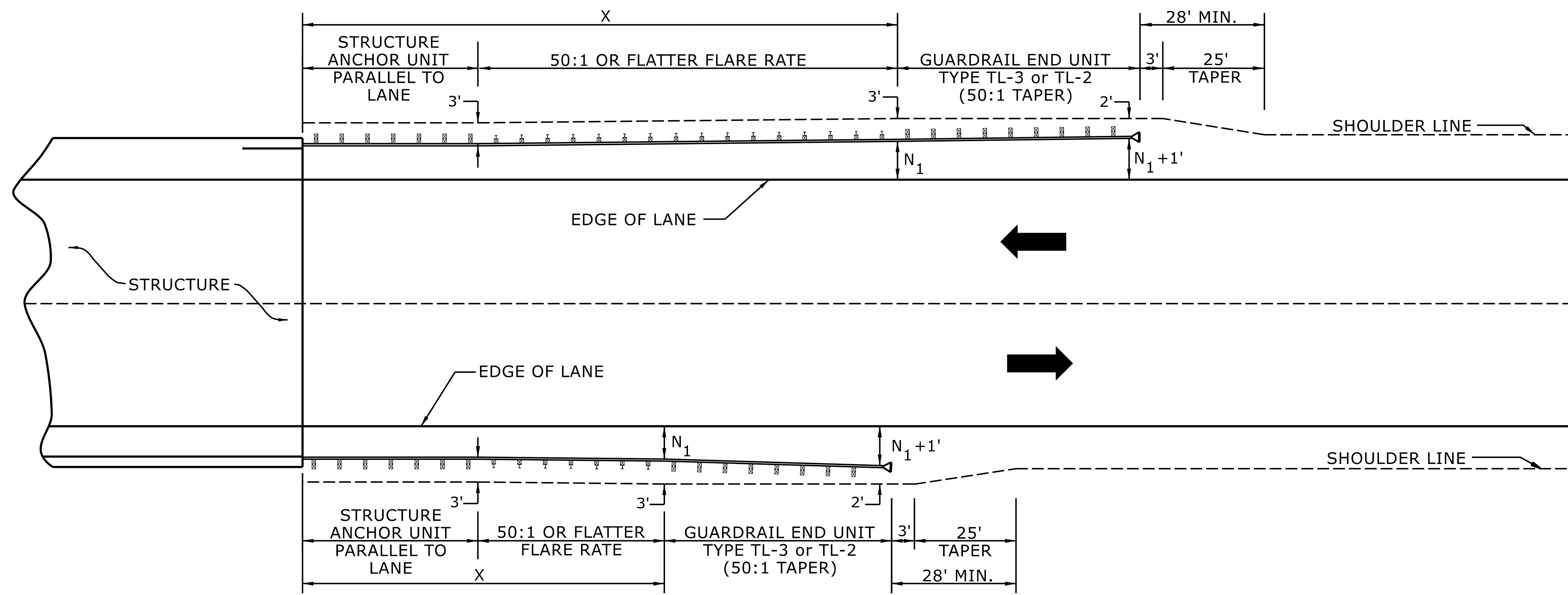
SHEET 2 OF 2
300.01

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

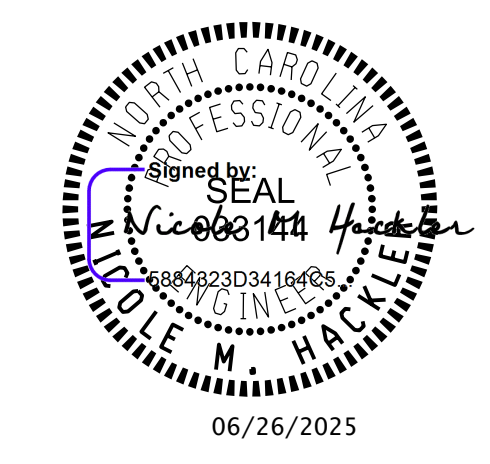
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.:



USE FLARE RATE AS THE CONTROL IF THE "N₁" DISTANCE IS NOT OBTAINED.
 ("N₁" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)
 SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS
 FOR POSTED SPEEDS ≥ 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

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



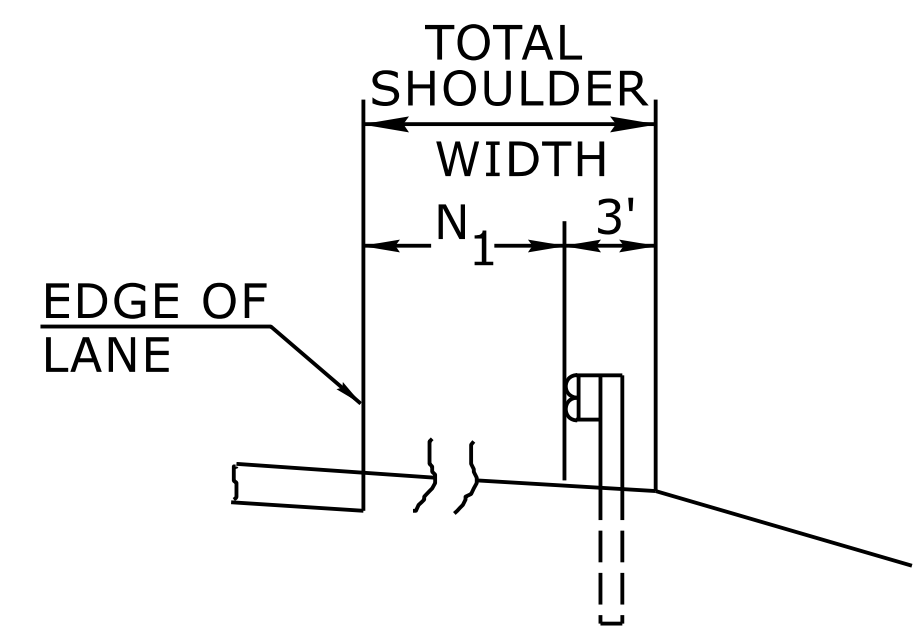
SHEET 4 OF 15
862D01

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

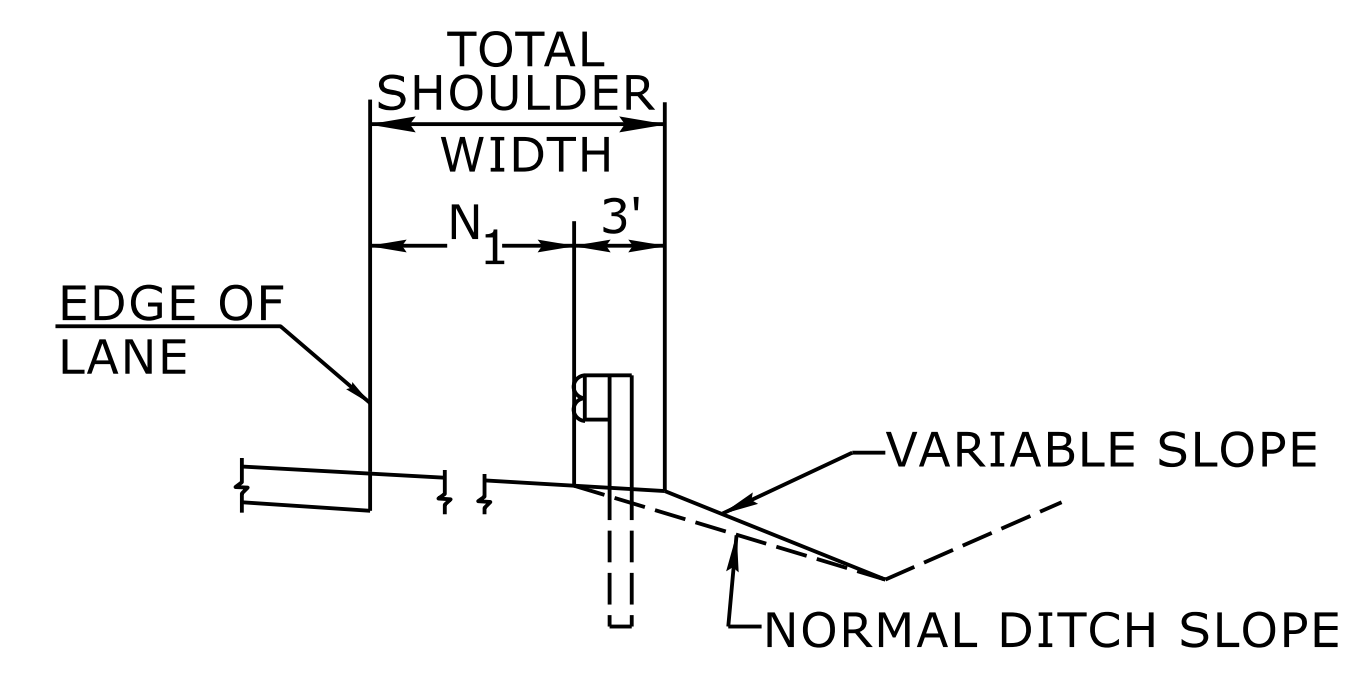
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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

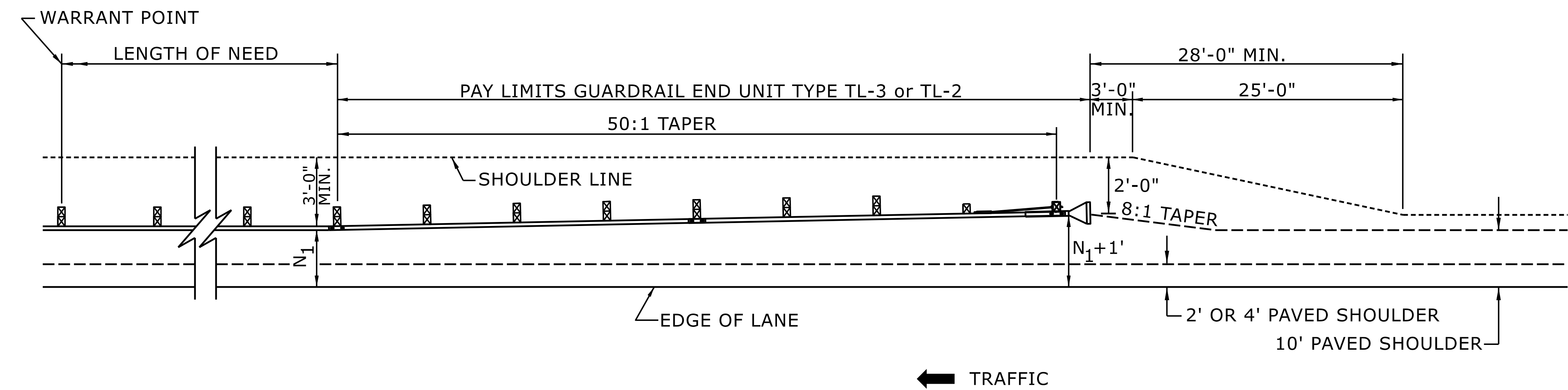


FILL SECTION



CUT SECTION

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

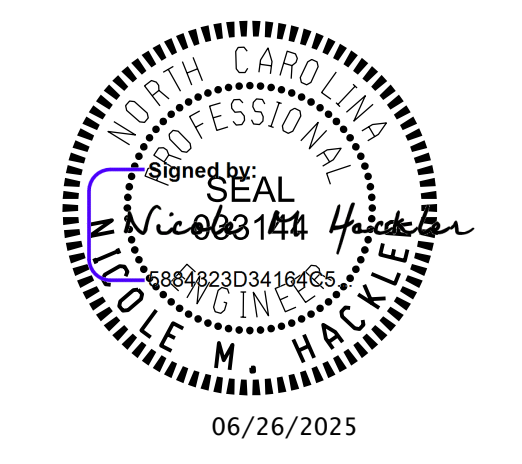


FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
 FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

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



SHEET 6 OF 15
862D01

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**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.: _____

COMPUTED BY: RWP DATE: 11-20-2018
 CHECKED BY: KSH DATE: 02-13-2019

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. BPI4-R041 SHEET NO. 3B-1
 Weston & Sampson
 NC License: C-4847
 WSE of North Carolina, PC
 2052 Energy Drive Apex, NC 27502
 Phone: 919.297.0220 westonandsampson.com

SUMMARY OF EARTHWORK
 IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT +%	BORROW	WASTE
PHASE 1 - DETOUR CONSTRUCTION					
-DET- 13+00.00 TO 28+42.95	973		7,508	6,535	0
PHASE 1 TOTAL	973		7,508	6,535	0
PHASE 2 - MAIN LINE CONSTRUCTION (EXCLUDES RIGHT SIDE SHOULDER AND/OR SLOPES)					
-L- 16+50.00 TO 20+54.00 (BEGIN BRIDGE)	75		1,573	1,498	0
-L- 21+41.00 (END BRIDGE) TO 25+75.00	55		2,349	2,294	0
PHASE 2 TOTAL	130		3,922	3,792	0
PHASE 3 - MAINLINE RIGHT SIDE COMPLETION & DETOUR REMOVAL					
-L- 13+00.00 TO 28+36.00 RT	7,103		488	0	6,615
PHASE 3 TOTAL	7,103		488	0	6,615
PROJECT SUBTOTAL (PHASE 1 + PHASE 2 + PHASE 3)	8,206		11,918	10,327	6,615
ESTIMATED LOSS DUE TO CLEARING AND GRUBBING	-220				-220
ESTIMATED SHOULDER MATERIAL			495	495	
PROJECT TOTAL	7,986		12,413	10,822	6,395
ESTIMATED 5% TO REPLACE TOPSOIL ON BORROW PIT				542	
GRAND TOTAL	7,986		12,413	11,364	6,395
SAY	8,000			11,400	

ESTIMATED DRAINAGE DITCH EXCAVATION = 90 CY
 THE FOLLOWING QUANTITIES ARE PER THE GEOTECHNICAL "ROADWAY RECOMMENDATIONS" LETTER DATED DECEMBER 11, 2018
 ESTIMATED UNDERCUT = 1,900 CY (CONTINGENCY, UNDERCUT FOR EMBT. STABILITY (1,400 CY) AND UNDERCUT FOR SUBGRADE STABILITY (500 CY), AS DIRECTED BY THE ENGINEER.)
 ESTIMATED GEOTEXTILE FOR SOIL STABILIZATION = 1,900 SY (CONTINGENCY, GEOTEXTILE FOR EMBT. STAB. (1,400 CY) AND GEOTEXTILE FOR SUBGRADE STAB. (500 CY), AS DIRECTED BY THE ENGINEER.)
 ESTIMATED SELECT GRANULAR MATERIAL = 1,900 CY (CONTINGENCY, USE FOR EMBT./BACKFILL FOR GEOTEXTILE FOR SOIL STABILIZATION OR BACKFILL IN WATER, AS DIRECTED BY THE ENGINEER.)

APPROXIMATE QUANTITIES ONLY. CLEARING AND GRUBBING, UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

SUMMARY OF PAVEMENT REMOVAL
 IN SQUARE YARDS

LOCATION	ASPHALT REMOVAL	ASPHALT BREAK-UP	CONCRETE REMOVAL	CONCRETE BREAK-UP
-L- STA. 16+50.00 TO 20+67.00 CL	990.00			
-L- STA. 21+42.00 TO 25+75.00 CL	1,017.33			
-DET- STA. 13+00.00 TO 28+42.95 CL	3,461.89			
TOTAL	5,469.22			
SAY	5,470			

"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.

GUARDRAIL SUMMARY

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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS				IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS		
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GREU TL-3	TYPE III	EA	G	NG								
-L-	18+14	20+59	LT	243.75				19+25	6' to 8'	11'	100'		2'			1	1									BEGIN GR FLARE -L- 19+15+/-	
-L-	17+67	20+49	RT	281.25			18+75		6' to 8'	11'	100'		2'			1	1									BEGIN GR FLARE -L- 19+18+/-	
-L-	21+45	24+64	LT	318.75			23+50		6' to 8'	11'	100'		2'			1	1									BEGIN GR FLARE -L- 21+90+/-	
-L-	21+36	23+56	RT	218.75				22+50	6' to 8'	11'	100'		2'			1	1									BEGIN GR FLARE -L- 21+80+/-	
SUBTOTAL (LF):				1,062.50												4	4										
TOTAL DEDUCTION FOR ANCHOR UNITS (LF):				275.00													50.00	18.75									
TOTAL (GUARDRAIL) (LF):				787.50													200.00	75.00									
SAY (GUARDRAIL) (LF):				812.50				ADDITIONAL GR POSTS (EA): SAY 10																			

TEMPORARY GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		TEMPORARY ANCHORS				IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS		
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TEMP. GREU TL-2	TEMP. TYPE B-77	EA	G	NG								
-DET-	17+80	20+74.60	LT	297.875				17+75	2'	4'						1	1									USE PORTABLE CONCRETE BARRIER (ANCHORED)	
-DET-	21+24.60	24+81	LT	360.375			23+75		2'	4'						1	1									-DET- STA. 20+74.60 TO 21+24.60 LT SEE TMP PLANS (WZTC PAY ITEM)	
-DET-	16+00	20+54.60	RT	460.375			16+75		6'	8'						1	1									USE PORTABLE CONCRETE BARRIER (ANCHORED)	
-DET-	21+54.60	22+28	RT	72.875				21+50	6'	8'						1	1									-DET- STA. 20+54.60 TO 21+54.60 RT SEE TMP PLANS (WZTC PAY ITEM)	
SUBTOTAL (LF):				1191.50												4	4										
TOTAL DEDUCTION FOR ANCHOR UNITS (LF):				191.50													25.00	22.875									
TOTAL (TEMPORARY GUARDRAIL) (LF):				1,000.00													100.00	91.50									
SAY (TEMPORARY GUARDRAIL) (LF):				1,025.00																							

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COMPUTED BY: Hamm, J.R. DATE: 6/9/2025
 CHECKED BY: Hunsberger, W.S. DATE: 6/10/2025

(9-17-24)

PROJECT NO.
BP14-R041

SHEET NO.
3G-1

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF ROCK PLATING

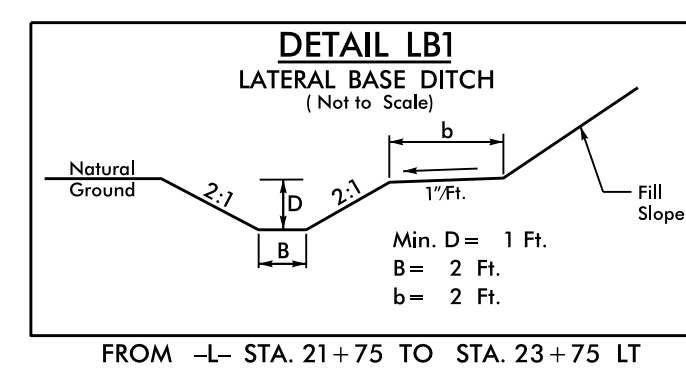
LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
-L-	1.5:1	20+00	1.5:1	20+49	RT	2		75
-L-	1.5:1	20+25	1.5:1	20+59	LT	2		35
-L-	1.5:1	21+36	1.5:1	22+25	RT	2		160
-L-	1.5:1	21+46	1.5:1	22+75	LT	2		240
							TOTAL SY:	510

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

8/17/99
REVISED 11/22/2023 - PARCEL IZ TUE ADDED FOR DETOUR AND UTILITY RELOCATION

PROJECT REFERENCE NO. BPI4-R041	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER WESTON SAMPSON SEAL 39283 KYLE S. HUTTON 10/10/2025	HYDRAULICS ENGINEER WESTON SAMPSON SEAL 39283 KYLE S. HUTTON 10/10/2025
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston Sampson WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	NC License: C-4847 Apex, NC 27502 westonandsampson.com

-L-
 PI Sta 14+84.61
 $\Delta = 13^{\circ} 45' 27.2" (LT)$
 $D = 5' 12" 31.3"$
 $L = 264.13'$
 $T = 132.70'$
 $R = 1,000.00'$
 RO = EXISTING
 SE = EXISTING

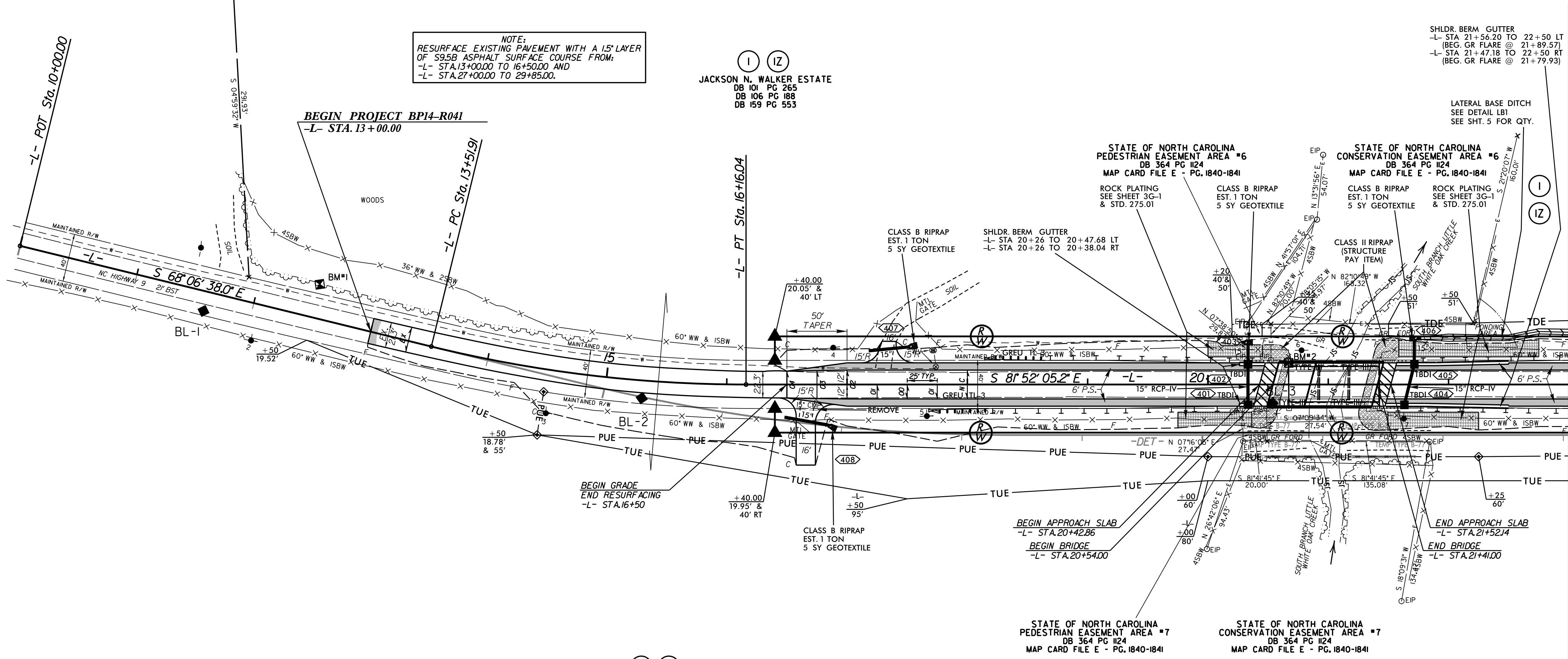


BRIDGE DESCRIPTION #29
 CONCRETE DECK / BST SURFACE
 METAL GUARDRAILS
 2 CONCRETE BEAMS PERPENDICULAR W/ BRIDGE
 WOOD HEADWALLS
 WOOD WINGWALLS
 CONCRETE WHEELGUARD

POLK COUNTY BOARD OF EDUCATION
 DB 114 PG 8
 DB 214 PG 1659
 PLAT BOOK 4 - PG. 63
 MAP CARD FILE B - PG. 771

NOTE:
 RESURFACE EXISTING PAVEMENT WITH A 1.5" LAYER
 OF S9.5B ASPHALT SURFACE COURSE FROM:
 -L- STA.13+00.00 TO 16+50.00 AND
 -L- STA.27+00.00 TO 29+85.00.

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

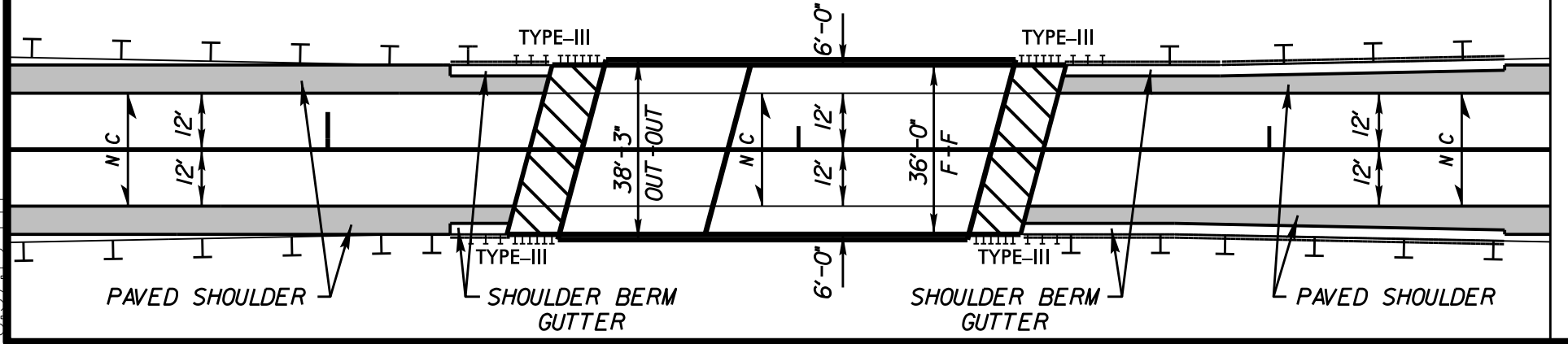


THE CONTRACTOR SHALL REMOVE AND RESET THE EXISTING 60" WOVEN WIRE FENCE AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE COMPLETED AS SPECIFIED BY SECTION 867 (FENCE RESET) OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. THE PROPERTY OWNER WILL SUPPLY THE FENCING MATERIALS AS SPECIFIED ABOVE AND IN THE RIGHT OF WAY AGREEMENT BETWEEN THE NCDOT AND THE PROPERTY OWNER.

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

SKETCH SHOWING BRIDGE /PAVEMENT RELATIONSHIP (N.T.S.)



THE CONTRACTOR SHALL REMOVE AND RESET ANY EXISTING 4-STRAND BARBED WIRE FENCING USED ALONG OR WITHIN THE CONSERVATION EASEMENT BOUNDARIES THAT ARE IMPACTED BY THE DETOUR CONSTRUCTION. THE FENCE AND STREAM GATE SHALL BE RESET IN THE ORIGINAL LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE COMPLETED AS SPECIFIED BY SECTION 867 (FENCE RESET) OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

FOR -L- PROFILE, SEE SHEET NO. 6

FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-29

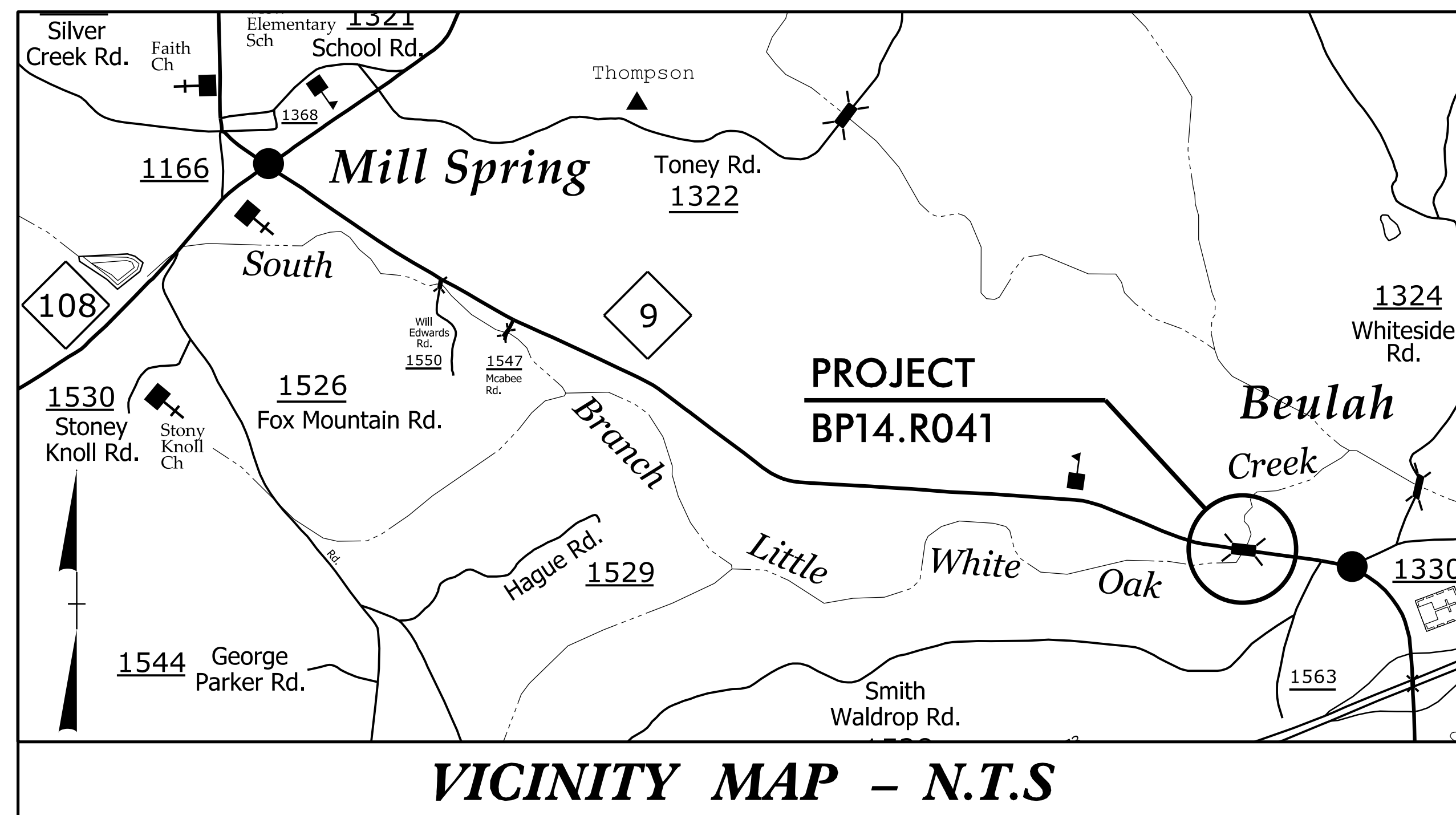
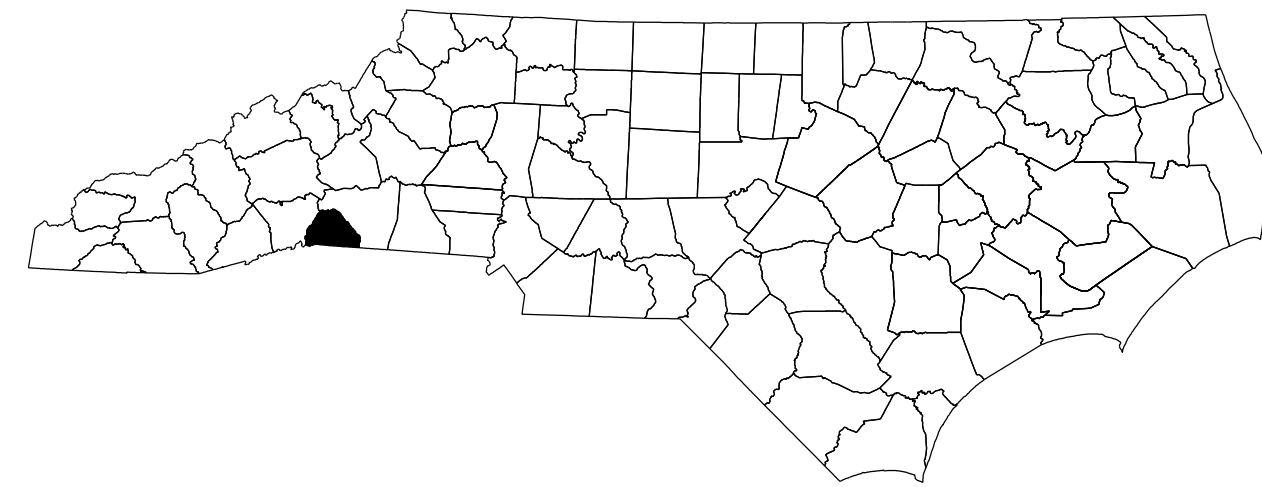
5/9/2025
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

POLK COUNTY

**BRIDGE NO: 29 ON NC 9
OVER SOUTH BRANCH LITTLE WHITE OAK CREEK**



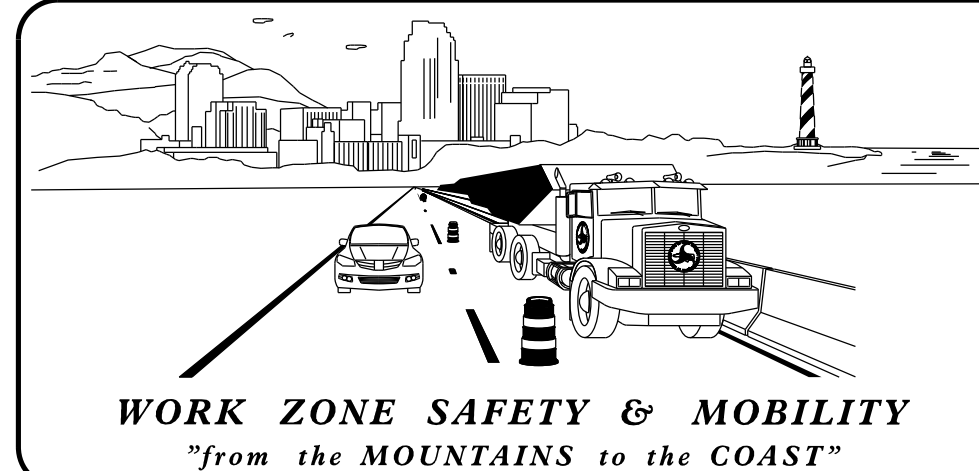
INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-3A	GENERAL NOTES
TMP-3B	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-3C	TEMPORARY SHORING NOTES
TMP-3D	PHASING NOTES
TMP-4-5	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-6-7	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-8-9	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

SHEET NO.
TMP-1

PROJECT: BP14.R041

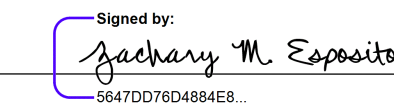
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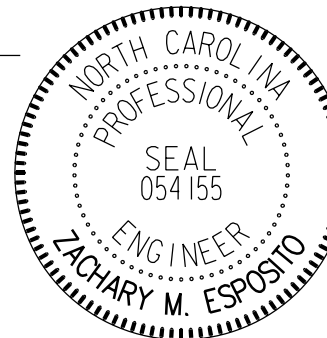


PLANS PREPARED BY:
ZACHARY M. ESPOSITO, P.E., T.C.D.S.
PROJECT ENGINEER
MIKAYLA M. LINDSEY, P.E.
PROJECT DESIGN ENGINEER

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DEPUTY DIVISION TRAFFIC ENGINEER



APPROVED: 
DATE: 7/7/2025
SEAL



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
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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	DRUM
1145.01	BARRICADES - TYPE III
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
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
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

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

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

TEMPORARY PAVEMENT MARKING

P1	WHITE EDGE LINE	PAINT (4")	LF
P13	YELLOW DOUBLE CENTER	PAINT (4")	LF
P61	WHITE STOPBAR	PAINT (24")	LF
P100	ALPHANUMERIC CHARACTER	PAINT	LF

APPROVED: DATE: 7/7/2025 SEAL			<h2>ROADWAY STANDARD DRAWINGS & LEGEND</h2>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

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
NC 9	MONDAY THRU FRIDAY 7AM-9AM / 2PM-4PM

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 WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, 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) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT OT AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENTE 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 INCES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT 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) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

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

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

TRAFFIC BARRIER

P) 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.

Q) PROTECT THE APPROACH END OF THE 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

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS


S) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC 9	PAINT	RAISED

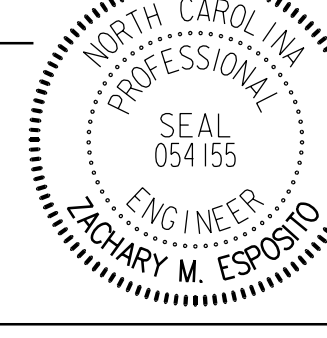
T) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

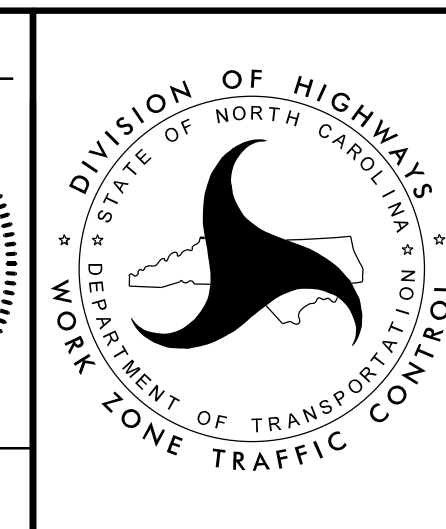
V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

APPROVED: 
 DATE: 7/7/2025

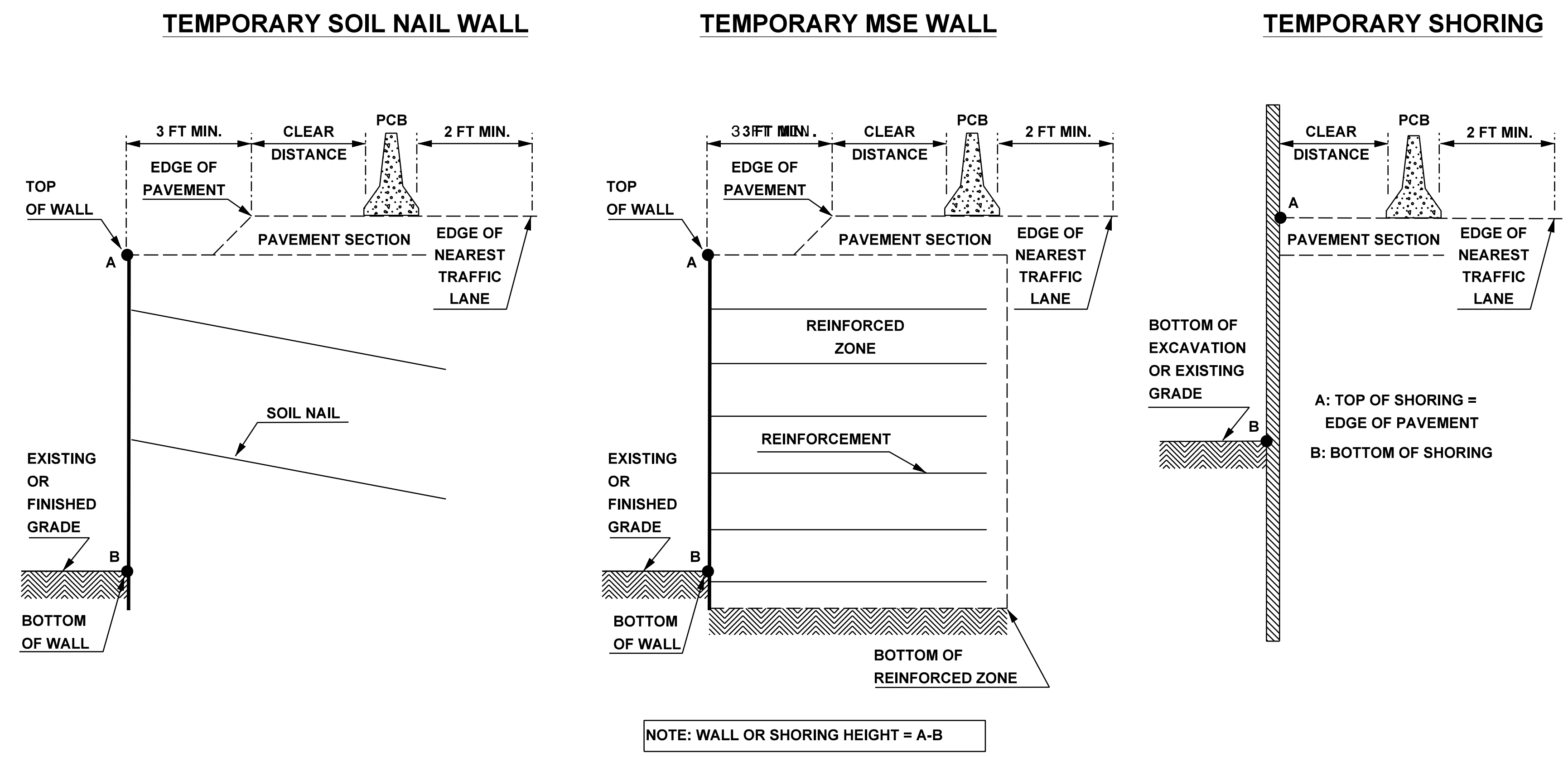
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GENERAL NOTES



NOTE: WALL OR SHORING HEIGHT = A-B

FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" STANDARD PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING/WALL 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 FOR APPLICABLE PAVEMENT DESIGN).
- 4- 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.
- 5- 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/WALLS EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- 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 OR APPROVED BY THE ENGINEER.
- 8- 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 THIS MINIMUM REQUIRED DISTANCE IS NOT AVAILABLE, CONTACT THE ENGINEER.
- 9- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	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	
38-44		25	26	28	30	34	37	
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

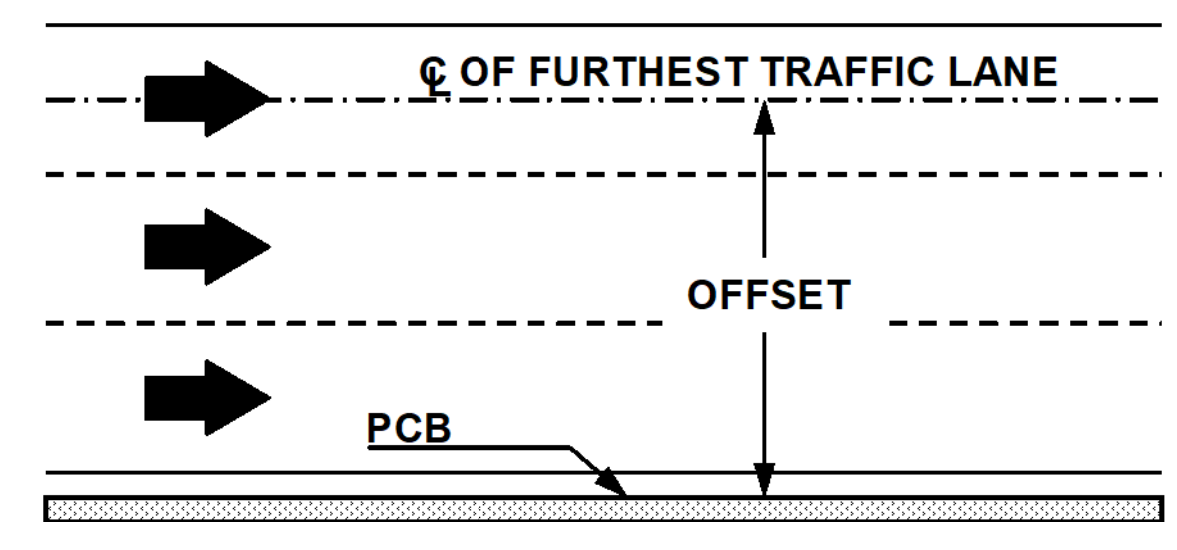
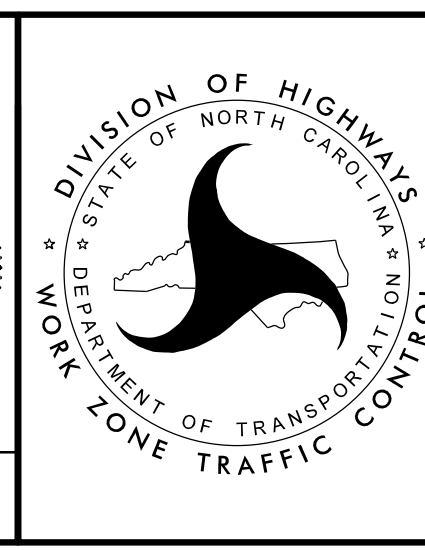


FIGURE B

APPROVED: *Zachary M. Esposito*
 DATE: 7/7/2025

SEAL

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PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

TEMPORARY SHORING 1

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

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 19+50± 22.5± FT RT OF -L- TO STATION 20+60± 23.5± FT RT OF -L-.

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 19+50± 22.5± FT RT OF -L- TO STATION 20+60± 23.5± FT RT OF -L-, FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATIONS:

ABOVE ELEVATION 860 FT
 UNIT WEIGHT = 110 LB/CF
 FRICTION ANGLE (F) = 28 DEGREES
 COHESION (C) = 0 LB/CF
 BELOW ELEVATION 860 FT
 UNIT WEIGHT = 120 LB/CF
 FRICTION ANGLE (F) = 30 DEGREES
 COHESION (C) = 0 LB/CF
 GROUNDWATER ELEVATION = 875 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 19+50± 22.5± FT RT OF -L- TO STATION 20+60± 24.5± FT OF -L-. THE INFORMATION PROVIDED FOR 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 19+50± 22.5± FT RT OF -L- TO STATION 20+60± 24.5± FT RT OF -L-. SEE STANDARD DRAWING 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 19+50± 22.5± FT RT OF -L- TO STATION 20+60± 24.5± 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.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 21+25± 24.5± FT RT OF -L- TO STATION 22+00± 22.5± FT RT OF -L-, AND STATION 22+00± 22.5± FT RT OF -L- TO STATION 23+75± 21± FT RT OF -L-.

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

DESIGN TEMPORARY SHORING FROM STATION 21+25± 24.5± FT RT OF -L- TO STATION 22+00± 22.5± FT RT OF -L-, AND STATION 22+00± 22.5± FT RT OF -L- TO STATION 22+50± 22.5± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATIONS:

ABOVE ELEVATION 865 FT
 UNIT WEIGHT = 110 LB/CF
 FRICTION ANGLE (F) = 28 DEGREES
 COHESION (C) = 0 LB/CF
 BELOW ELEVATION 865 FT
 UNIT WEIGHT = 120 LB/CF
 FRICTION ANGLE (F) = 30 DEGREES
 COHESION (C) = 0 LB/CF
 GROUNDWATER ELEVATION = 874 FT

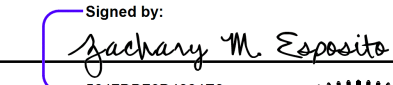
DESIGN TEMPORARY SHORING FROM STATION 22+50± 22.5± FT RT OF -L- TO STATION 23+75± 22.5± FT RT OF -L-. FOR THE FOLLOWINGS ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATIONS:

ABOVE ELEVATION 865 FT
 UNIT WEIGHT = 110 LB/CF
 FRICTION ANGLE (F) = 10 DEGREES
 COHESION (C) = 0 LB/CF
 BELOW ELEVATION 865 FT
 UNIT WEIGHT = 120 LB/CF
 FRICTION ANGLE (F) = 30 DEGREES
 COHESION (C) = 0 LB/CF
 GROUNDWATER ELEVATION = 874 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 21+25± 24.5 FT RT OF -L- TO STATION 23+75± 22.5± FT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

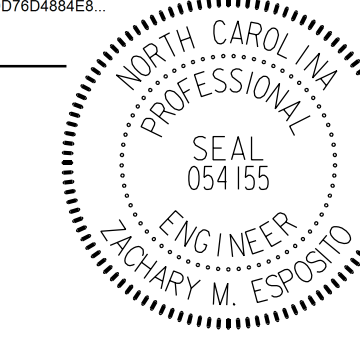
AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 21+25± 24.5± FT RT OF -L- TO STATION 23+75± 22.5± FT RT OF -L-. SEE STANDARD DRAWING 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 21+25± 24.5± FT RT OF -L- TO STATION 23+75± 22.5± FT RT OF -L-. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

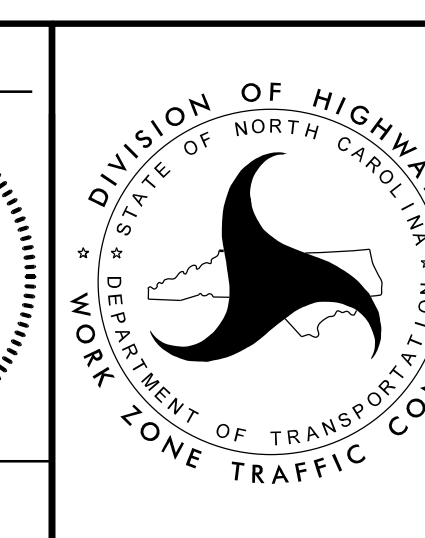
APPROVED: 
Signed by: Zachary M. Esposito
56470078D484E8

DATE: 7/7/2025

SEAL



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



TEMPORARY SHORING NOTES



DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR. SUITE 200 CHARLOTTE, NC 28262
PHONE: 704-548-4200 NC LICENSE NO. F-1524 www.drmp.com

PHASING NOTES

PHASE I

NOTE: WHEN REFERENCING THE USE OF FLAGGERS, SEE RSD 1101.02, SHEET 1 OF 19

- STEP 1 -- INSTALL ADVANCE WARNING SIGNS (SEE RSD 1101.01 AND 1101.03).
- STEP 2 -- ON NEW LOCATION CONSTRUCT DETOUR ALIGNMENT -DET- FROM 16+26 +/- TO 25+57 +/- (SEE TMP-4, 5).
- STEP 3 -- USING FLAGGERS, AS NECESSARY, CONSTRUCT THE FOLLOWING TIE-INS FLUSH TO EXISTING -L- ENSURING SMOOTH TRANSITIONS FROM THE EXISTING ALIGNMENT TO THE TEMPORARY ALIGNMENT (SEE TMP-4, 5):
- DET- 13+00 +/- TO 16+26 +/-
-DET- 25+57 +/- TO 28+42 +/-
- STEP 4 -- PRIOR TO TRANSITIONING TO PHASE II, CONTRACTOR TO INSTALL TEMPORARY SHORING AS DETAILED IN TMP-6 AND TMP-7.

NOTE: WHEN NEAR TIE-INS, CONTRACTOR TO ENSURE WORK IS COMPLETED AT THE END OF EACH WORK PERIOD TO PREVENT DROP OFFS.

PHASE II

- STEP 1 -- MAINTAIN NECESSARY ADVANCE WARNING SIGNS (SEE RSD 1101.01 AND 1101.03.)
- STEP 2 -- USING FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS ALONG -DET-, SEE TMP-6, 7.
- STEP 3 -- USING FLAGGERS, SHIFT TRAFFIC ONTO THE TEMPORARY ON-SITE DETOUR PATTERN DETAILED IN TMP-6 AND TMP-7. LAW ENFORCEMENT MAY BE USED AS NECESSARY, AFTER OBTAINING APPROVAL FROM DIVISION OFFICE.
- STEP 4 -- USING FLAGGERS, AS NECESSARY CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- 13+22± TO 28+00± AS DETAILED IN TMP-6 AND TMP-7.

NOTE 1: CONTRACTOR TO WEDGE, AS NEEDED, TO ENSURE SMOOTH TRANSITION FROM PROPOSED TO EXISTING ALIGNMENTS AT ALL TIMES.



NOTE 2: WHEN NEAR TIE-INS, CONTRACTOR TO ENSURE WORK IS COMPLETED AT THE END OF EACH WORK PERIOD TO PREVENT DROP OFFS.

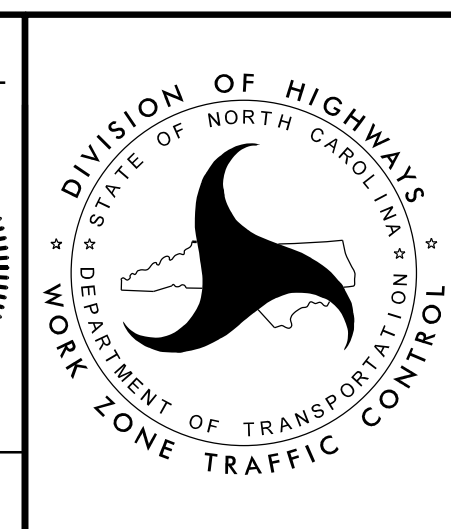
PHASE III

- STEP 1 -- MAINTAIN NECESSARY ADVANCE WARNING SIGNS (SEE RSD 1101.01 AND 1101.03).
- STEP 2 -- USING FLAGGERS, INSTALL PCB AND CRASH CUSHION AS SHOWN ON TMP-9, 10.
- STEP 3 -- USING FLAGGERS, PERFORM THE FOLLOWING:
-PLACE TEMPORARY PAVEMENT MARKINGS AND REMOVE CONFLICTING MARKINGS BEFORE SHIFTING TRAFFIC AS SHOWN ON TMP-8 AND TMP-9.
-SHIFT TRAFFIC ONTO -L- (NC 9) IN TEMPORARY PATTERN AS SHOWN IN TMP-8 AND TMP-9.
- STEP 4 -- BEHIND PCB, FINISH CONSTRUCTION OF SHOULDER OF -L- FROM 24+00± TO 25+75± AND BEGIN REMOVAL OF TEMPORARY -DET- ROUTE.
- STEP 5 -- AWAY FROM TRAFFIC AND USING FLAGGERS AS NEEDED, FINISH TEMPORARY -DET- REMOVAL AND ANY REMAINING CONSTRUCTION (SEE TMP-8,9). CONTRACTOR TO REMOVE ALL TEMPORARY SHORING AND PCB.

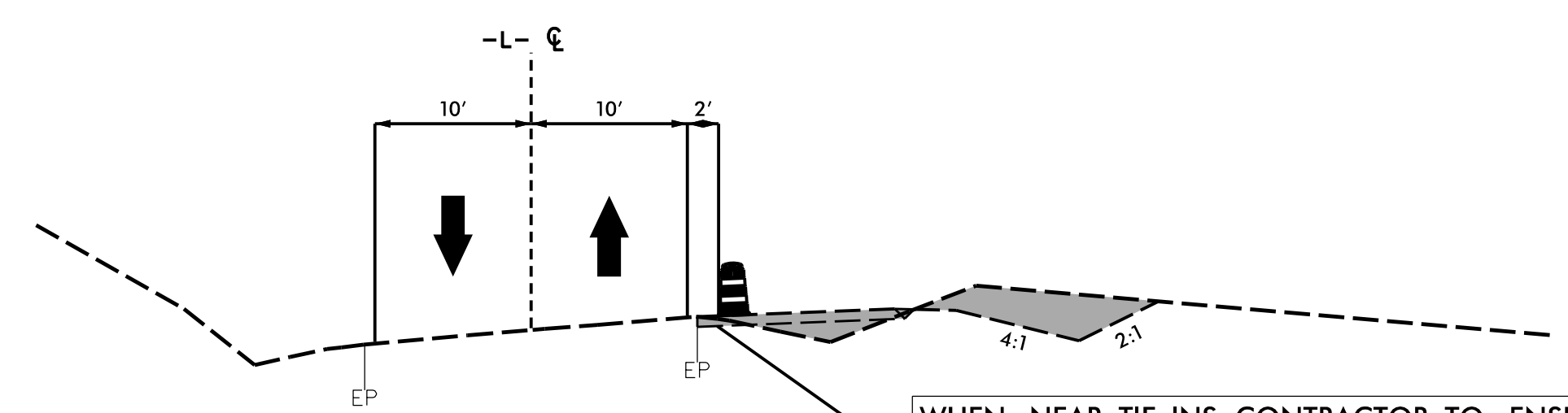
PHASE IV

- STEP 1 -- USING FLAGGERS, PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND MARKERS THROUGHOUT THE PROJECT LIMITS.
- STEP 2 -- REMOVE ALL TRAFFIC CONTROL DEVICES AND WORK ZONE SIGNS AND OPEN TO FINAL TRAFFIC PATTERN.

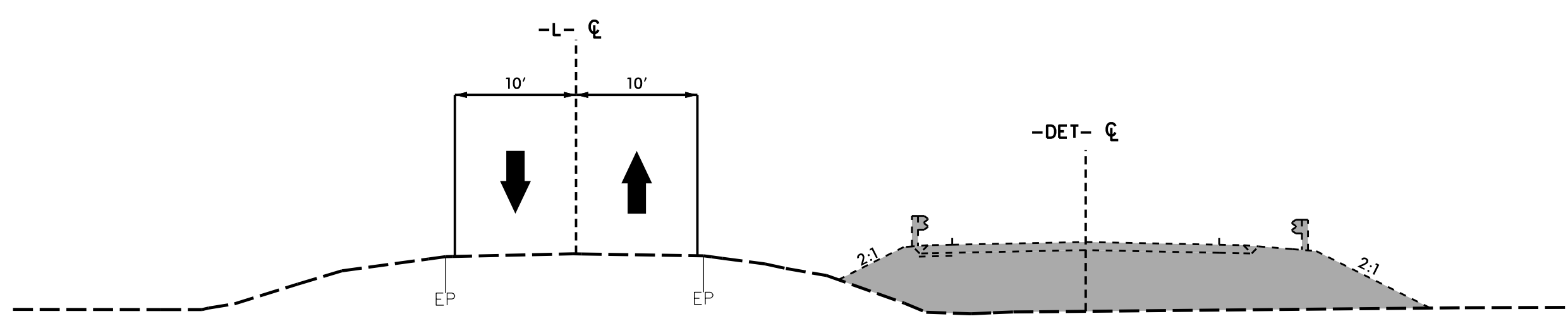
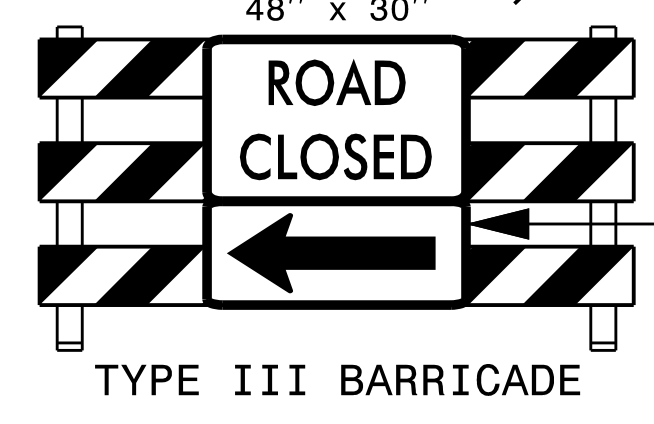
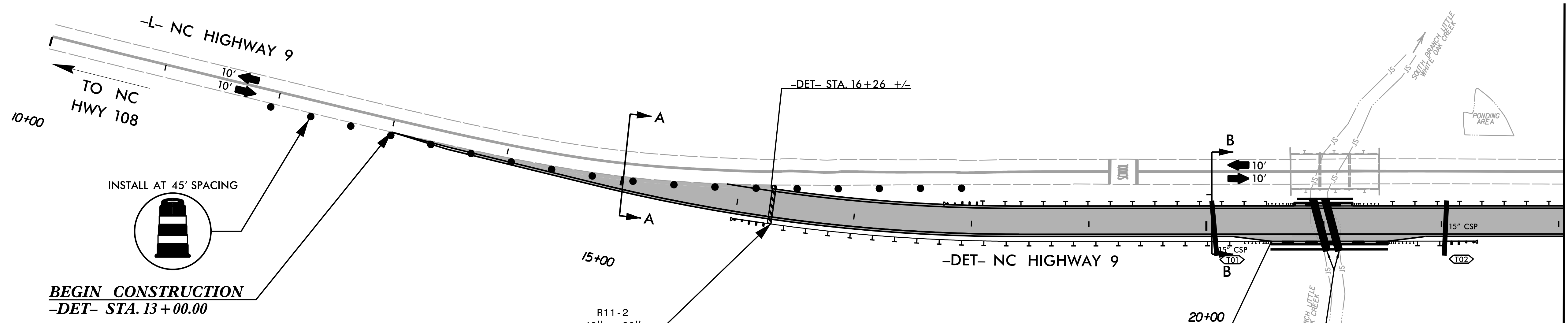
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DATE: 7/7/2025
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASING NOTES

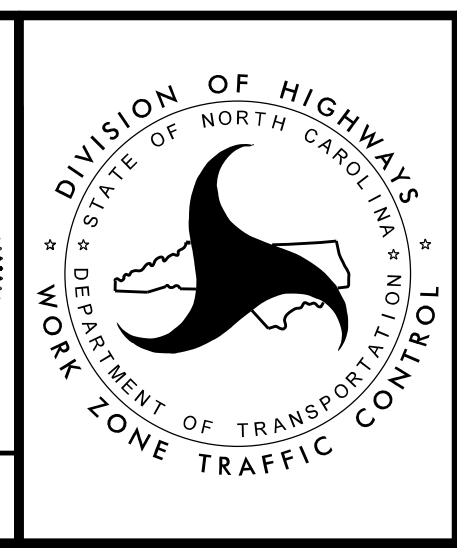


SECTION A-A
-L- 15+00
-DET- 15+00.88



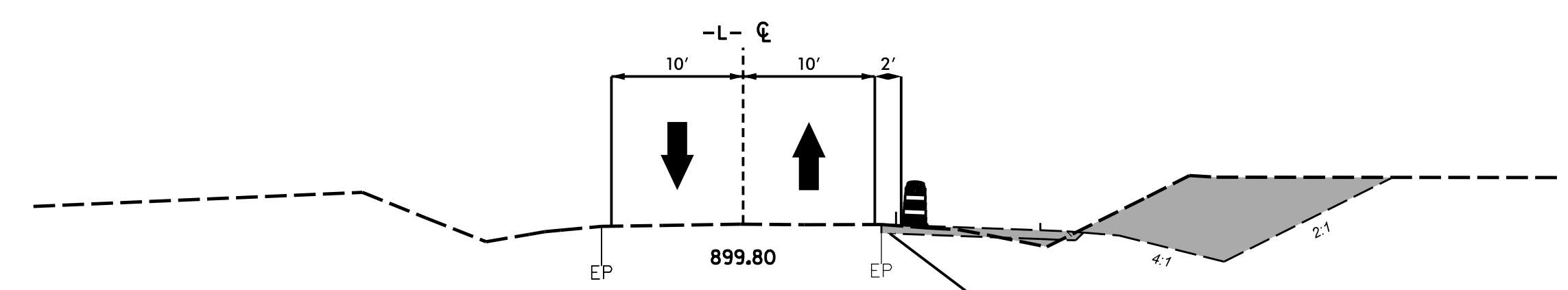
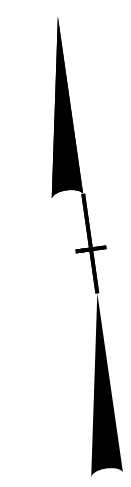
SECTION B-B
-L- 20+00
-DET- 20+04.60

APPROVED: *Zachary M. Esposito*
DATE: 7/7/2025
SEAL



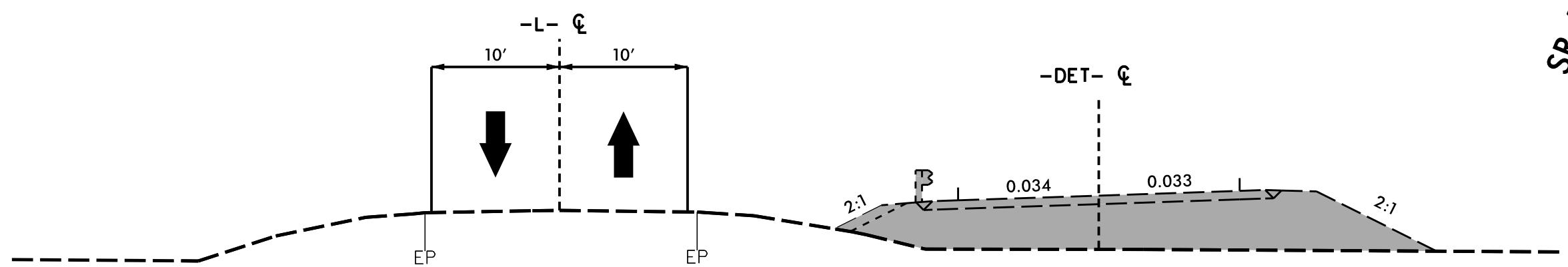
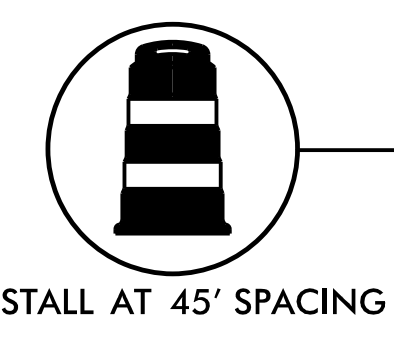
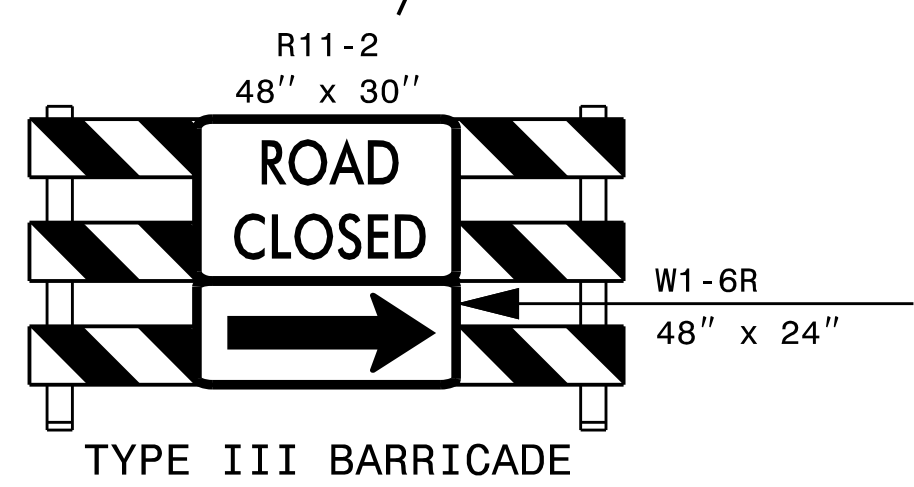
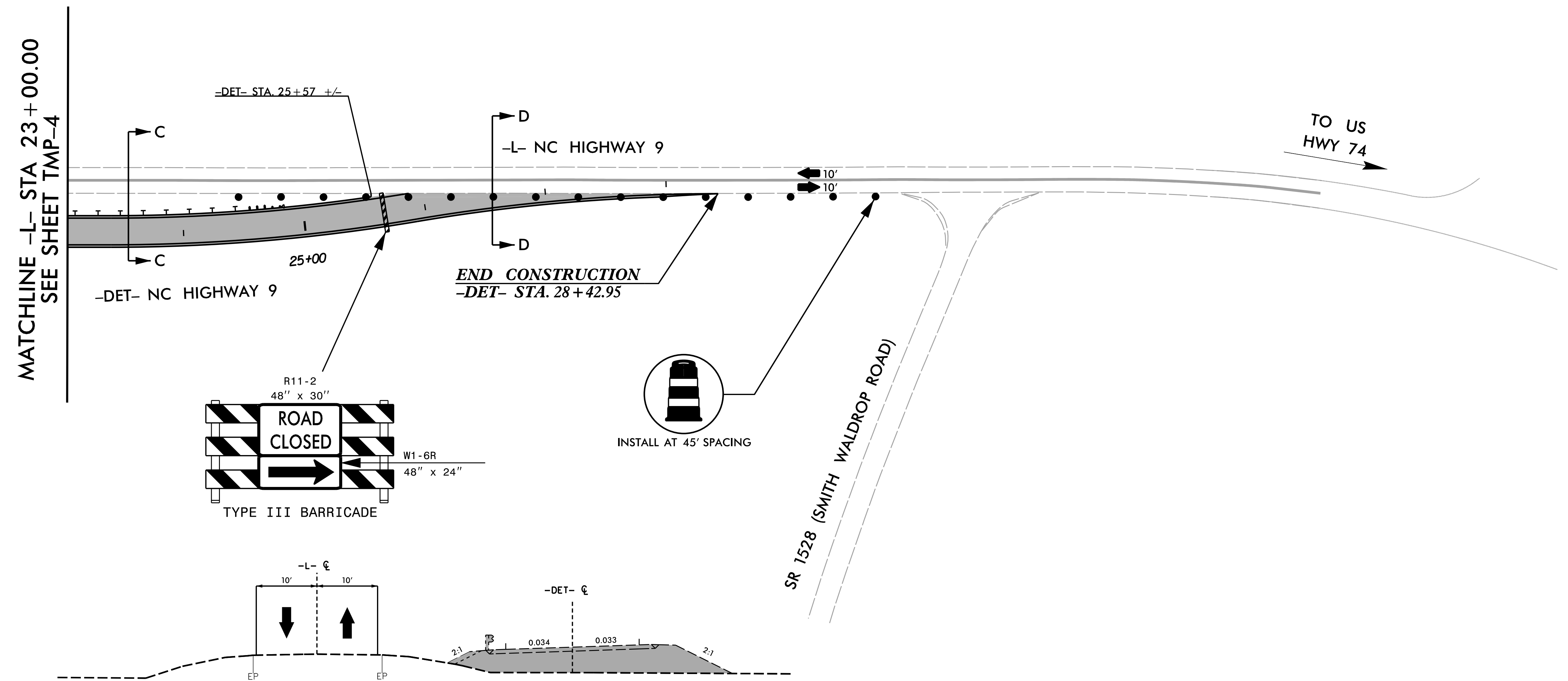
TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



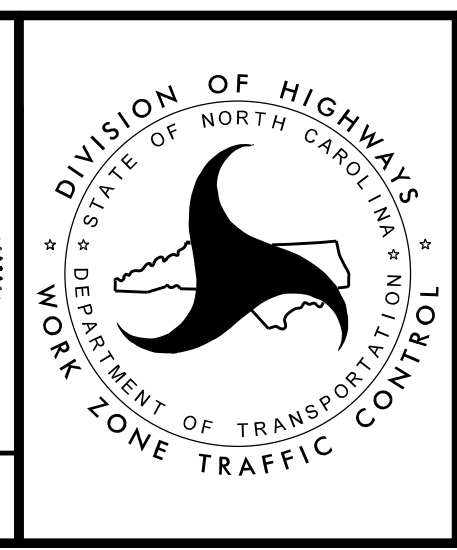
SECTION D-D
-L- 26+50
-DET- 26+56.47

WHEN NEAR TIE-INS, CONTRACTOR TO ENSURE WORK IS COMPLETED AT THE END OF EACH WORK PERIOD TO PREVENT DROP OFFS.



SECTION C-C
-L- 23+50
-DET- 23+54.60

APPROVED: *Zachary M. Esposito*
Signed by: Zachary M. Esposito
054700780484E8
 DATE: 7/7/2025
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 054155
 ZACHARY M. ESPOSITO

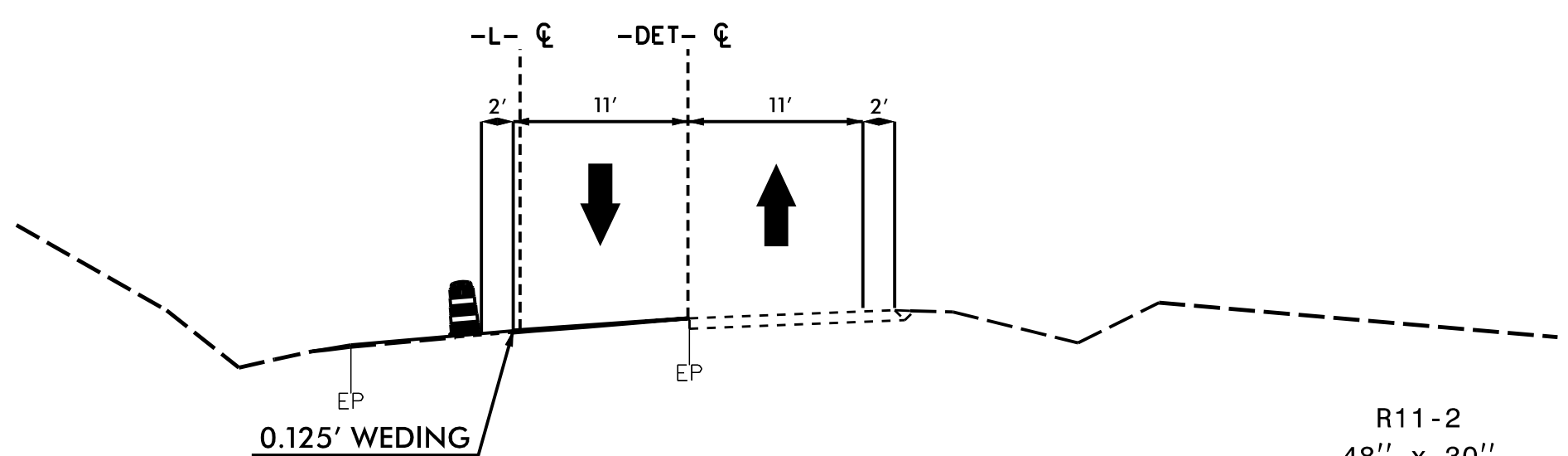


**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**

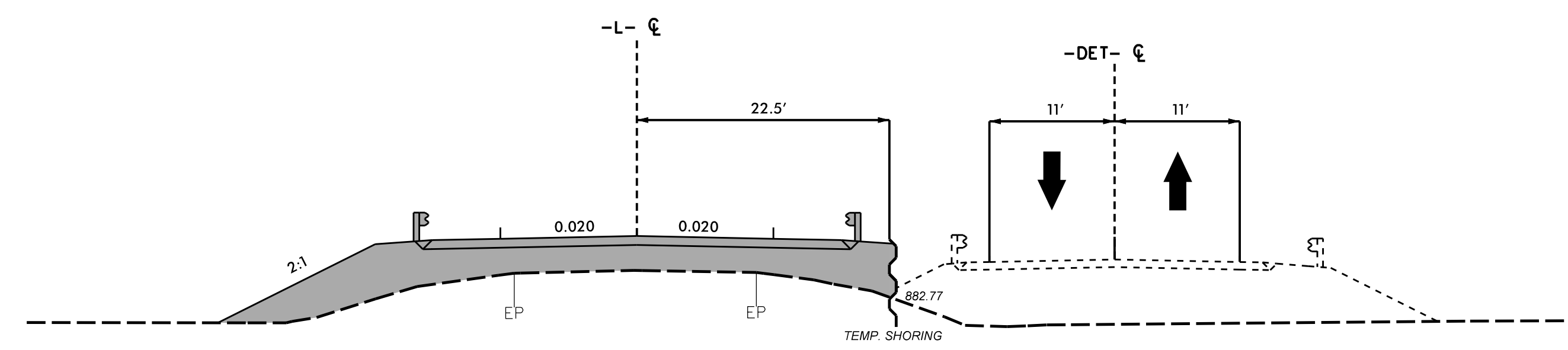
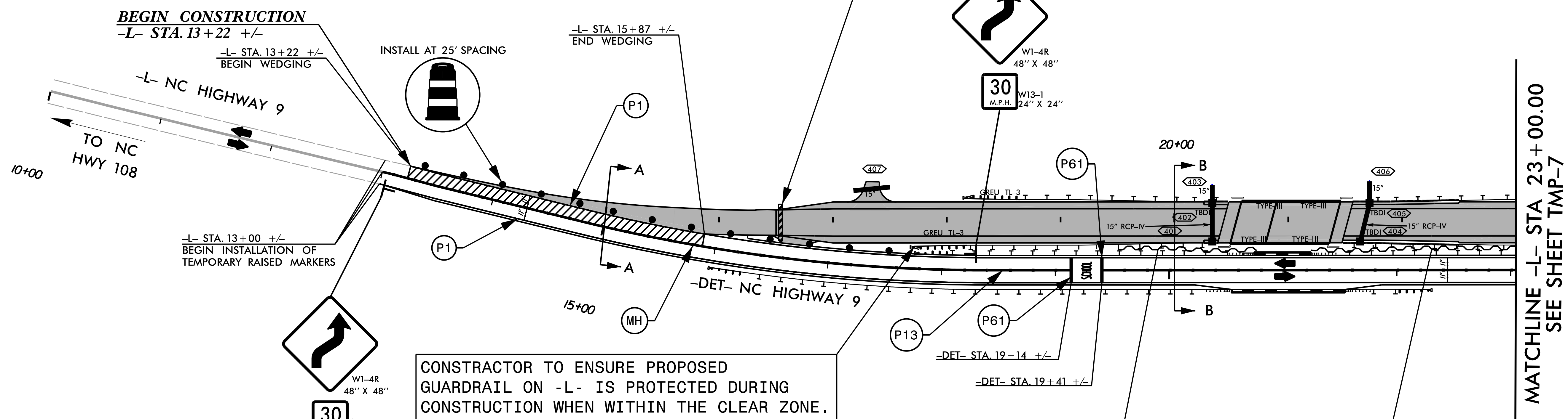
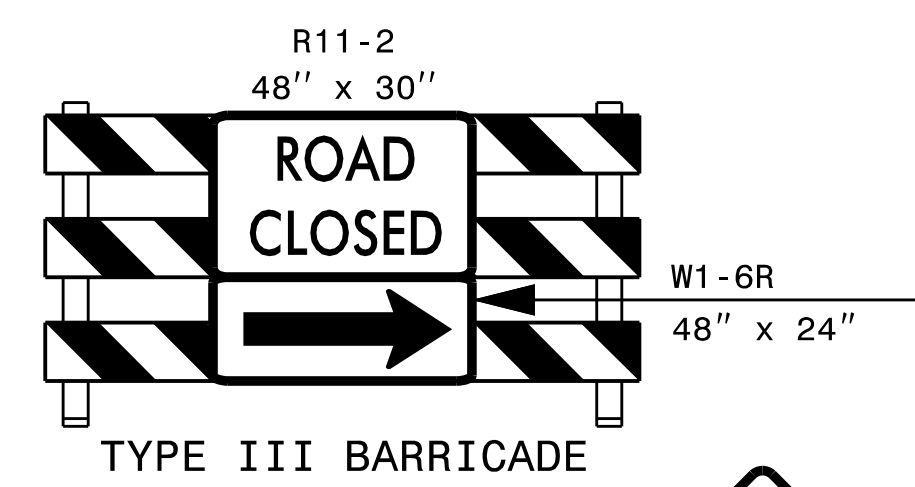
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UNLESS ALL SIGNATURES COMPLETED

NOTE: SEE TMP-3C FOR TEMPORARY SHORING 1 AND TEMPORARY SHORING 2 NOTES

SYMBOL LEGEND	
SCHOOL P100	ALPHANUMERIC CHARACTERS



SECTION A-A
-L- 15+00
-DET- 15+00.88



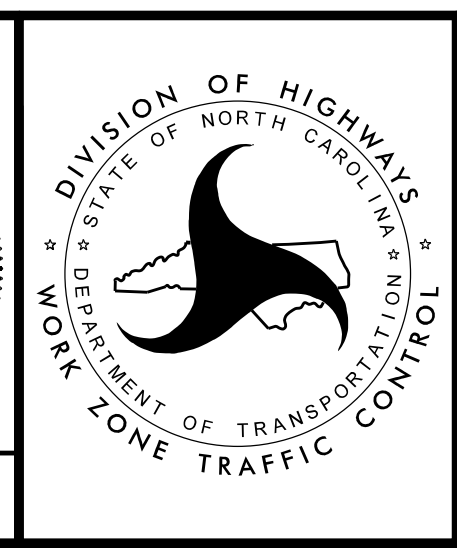
SECTION B-B
-L- 20+00
-DET- 20+04.60

- ① TEMPORARY SHORING - 990 SF
FROM -L- STA. 19+50 +/-, 24.0' RT TO -L- STA. 20+60 +/-, 24.5' RT
- ② TEMPORARY SHORING - 2816 SF
FROM -L- STA. 21+19 +/-, 24.4' RT TO -L- STA. 23+75 +/-, 21.0' RT

APPROVED: *Anthony M. Esposito*
DATE: 7/7/2025

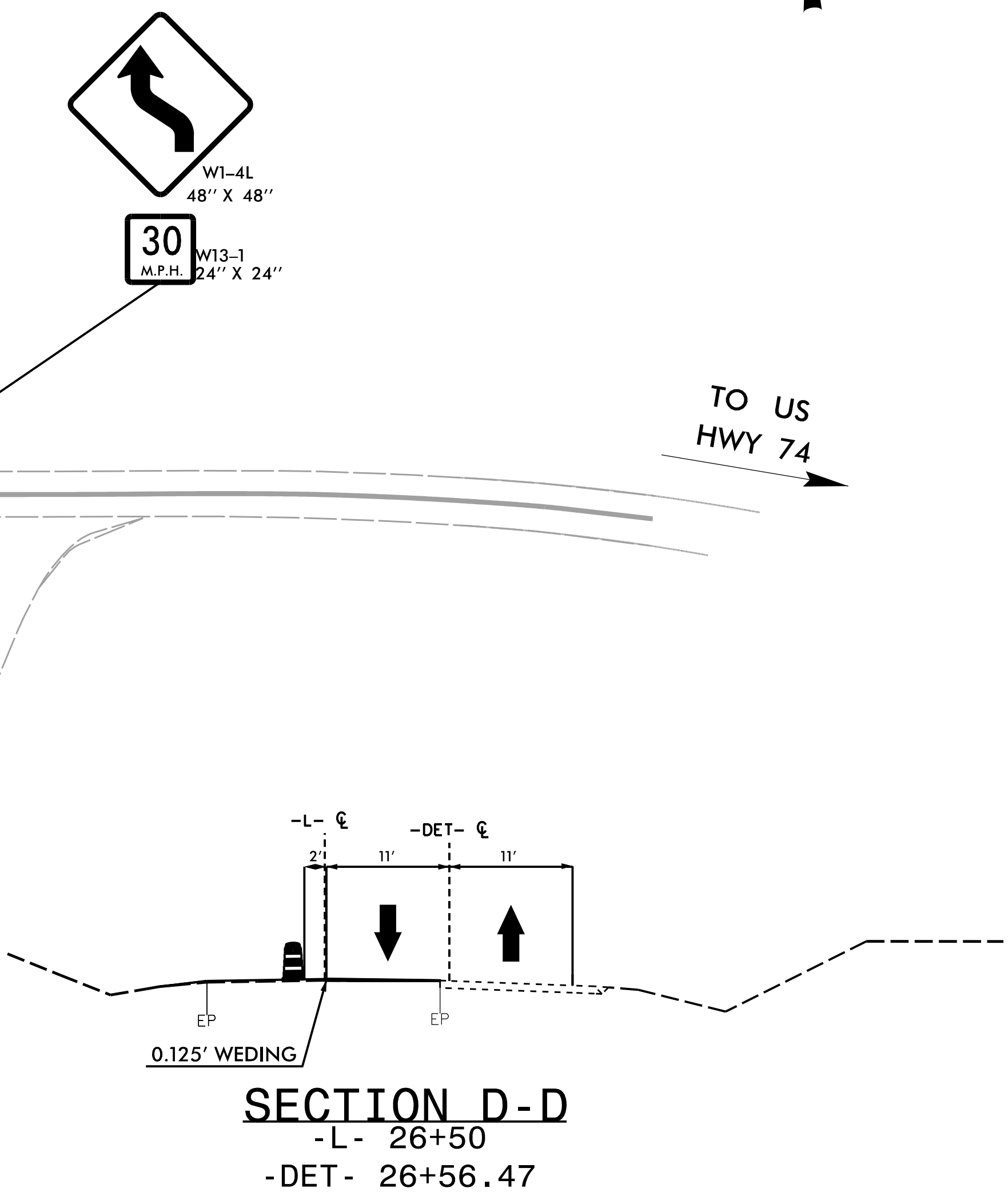
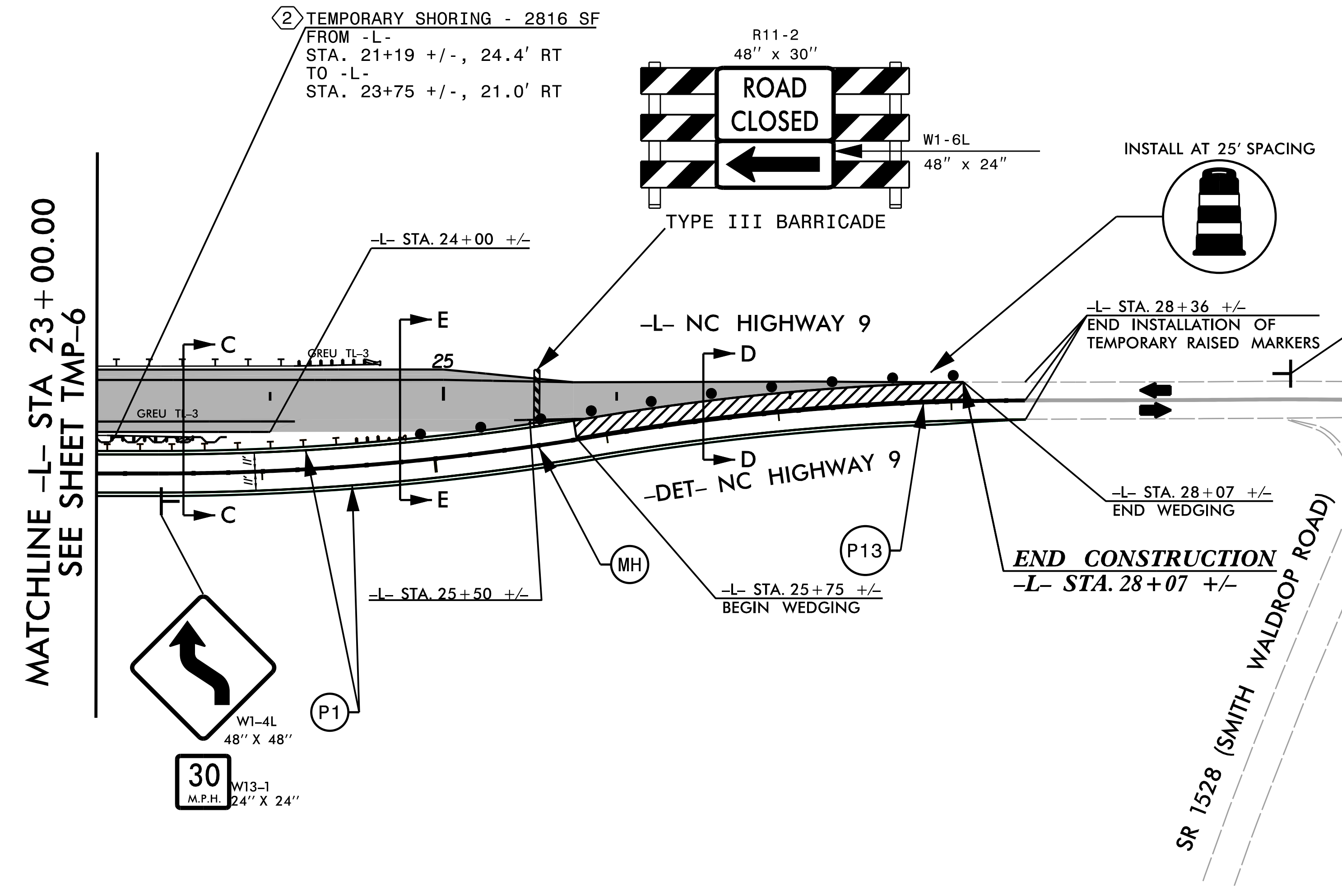
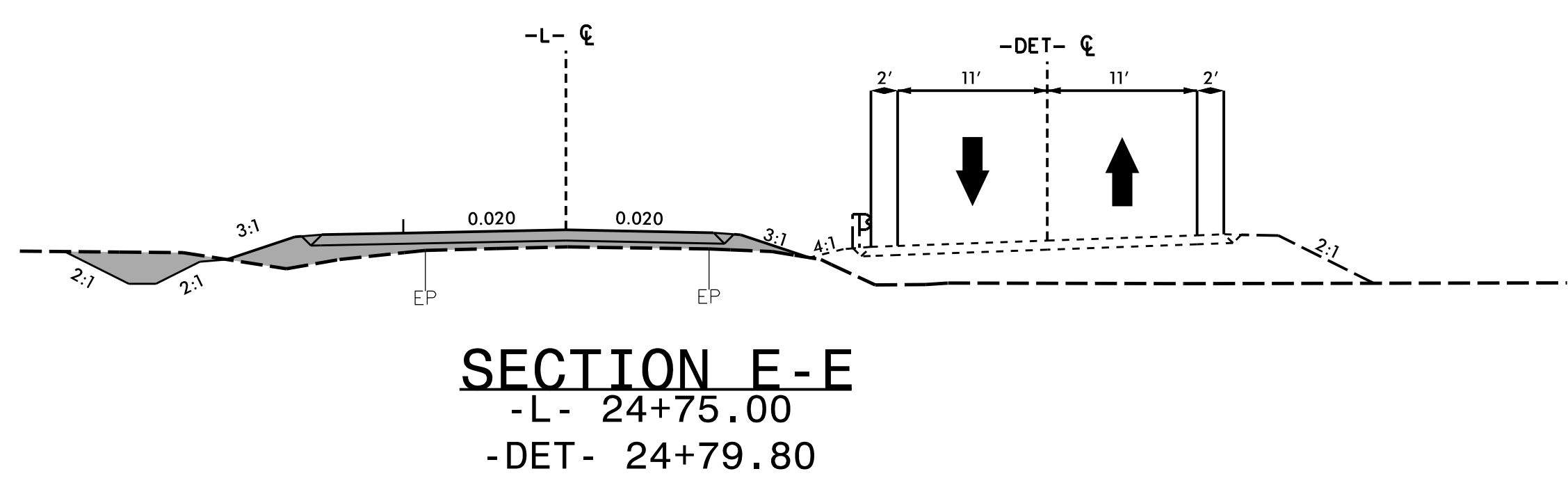
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



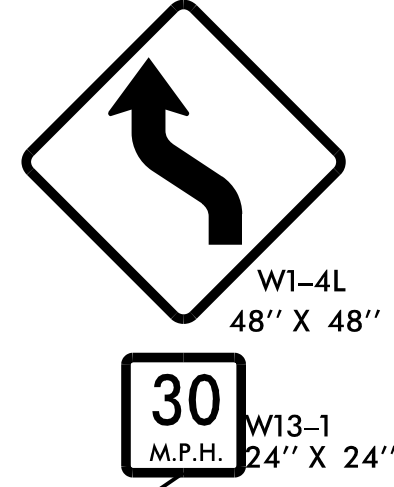
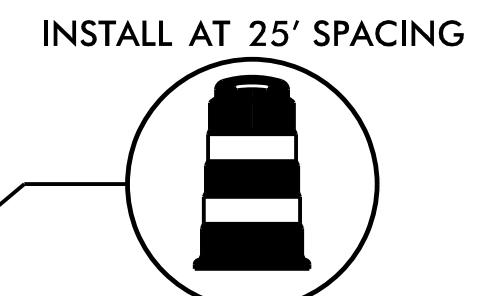
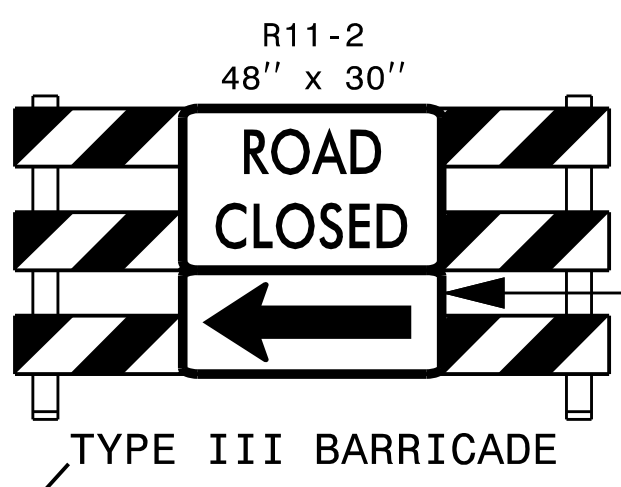
TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

NOTE: SEE TMP-3C FOR TEMPORARY SHORING 1 AND TEMPORARY SHORING 2 NOTES

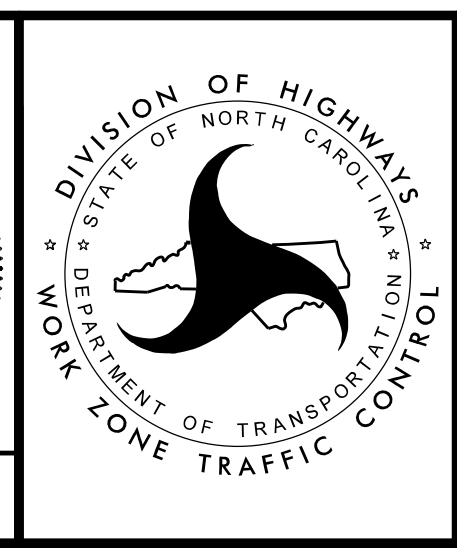


MATCHLINE -L- STA 23+00.00
SEE SHEET TMP-6

② TEMPORARY SHORING - 2816 SF
FROM -L- STA. 21+19 +/-, 24.4' RT
TO -L- STA. 23+75 +/-, 21.0' RT



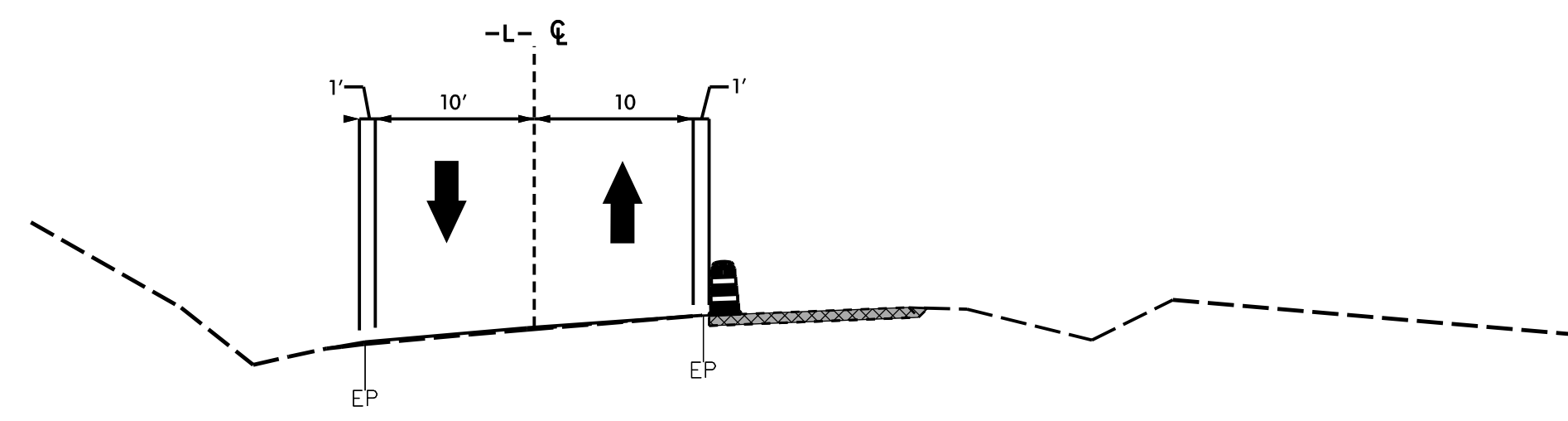
APPROVED: *Jacquary M. Esposito*
DATE: 7/7/2025
SEAL



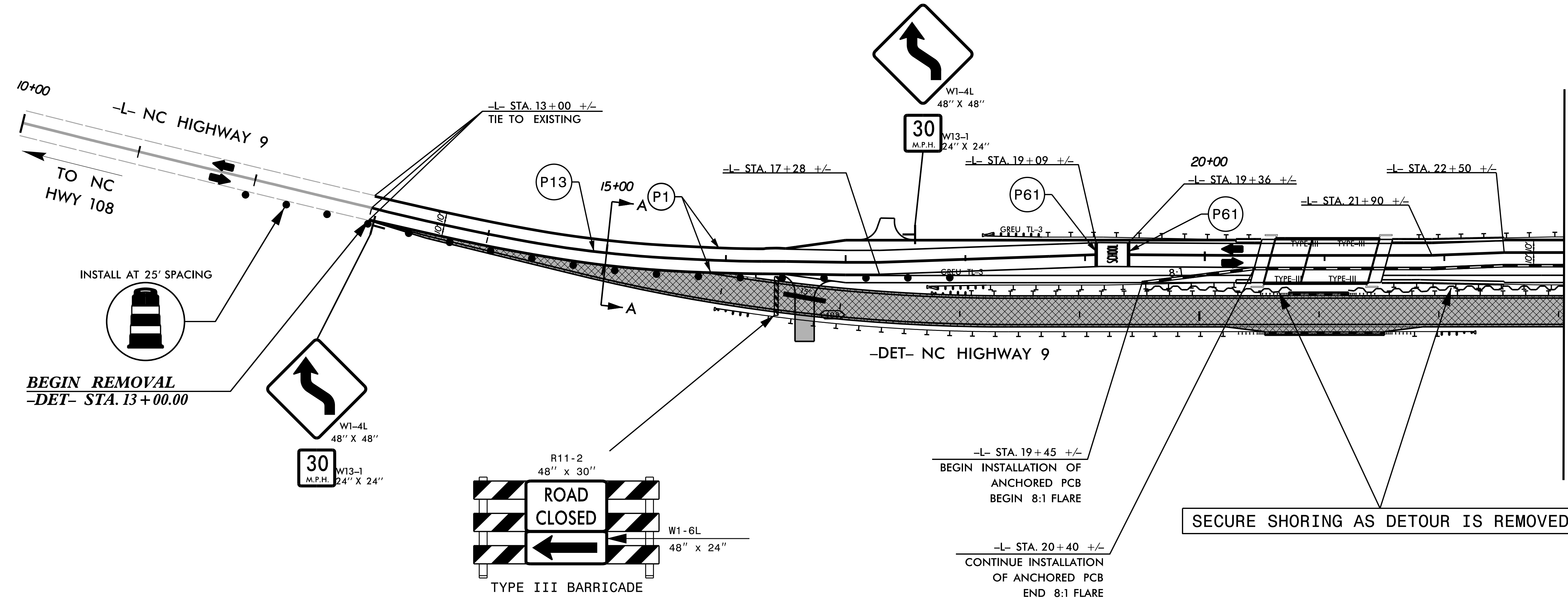
TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

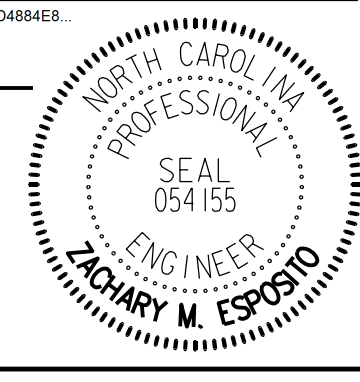
SYMBOL LEGEND	
SCHOOL	P100 ALPHANUMERIC CHARACTERS



SECTION A-A
-L- 15+00
-DET- 15+00.88

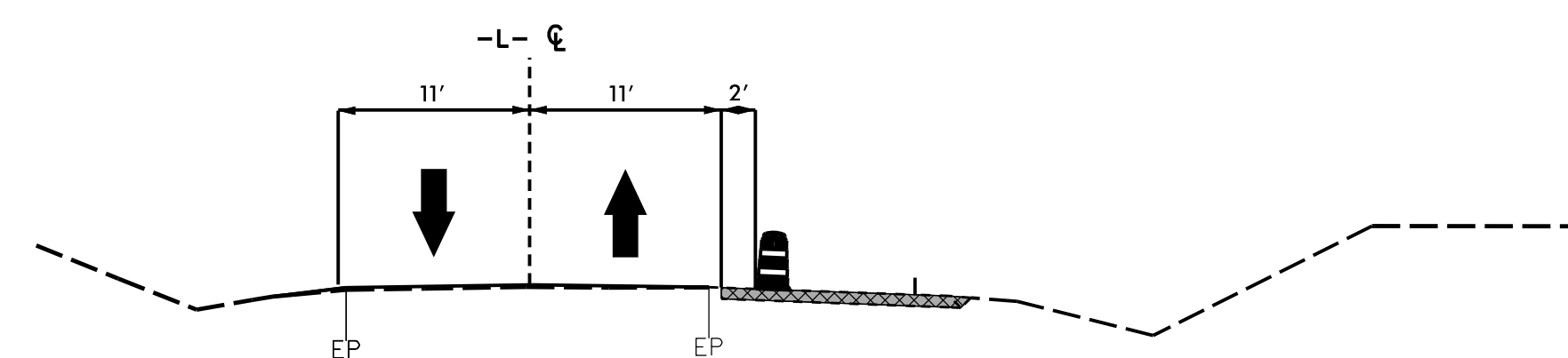


APPROVED: *Zachary M. Esposito*
DATE: 7/7/2025
SEAL

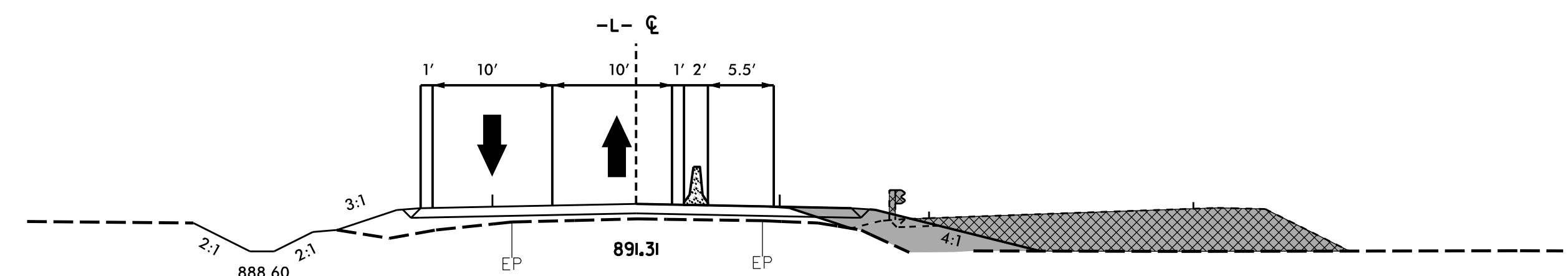
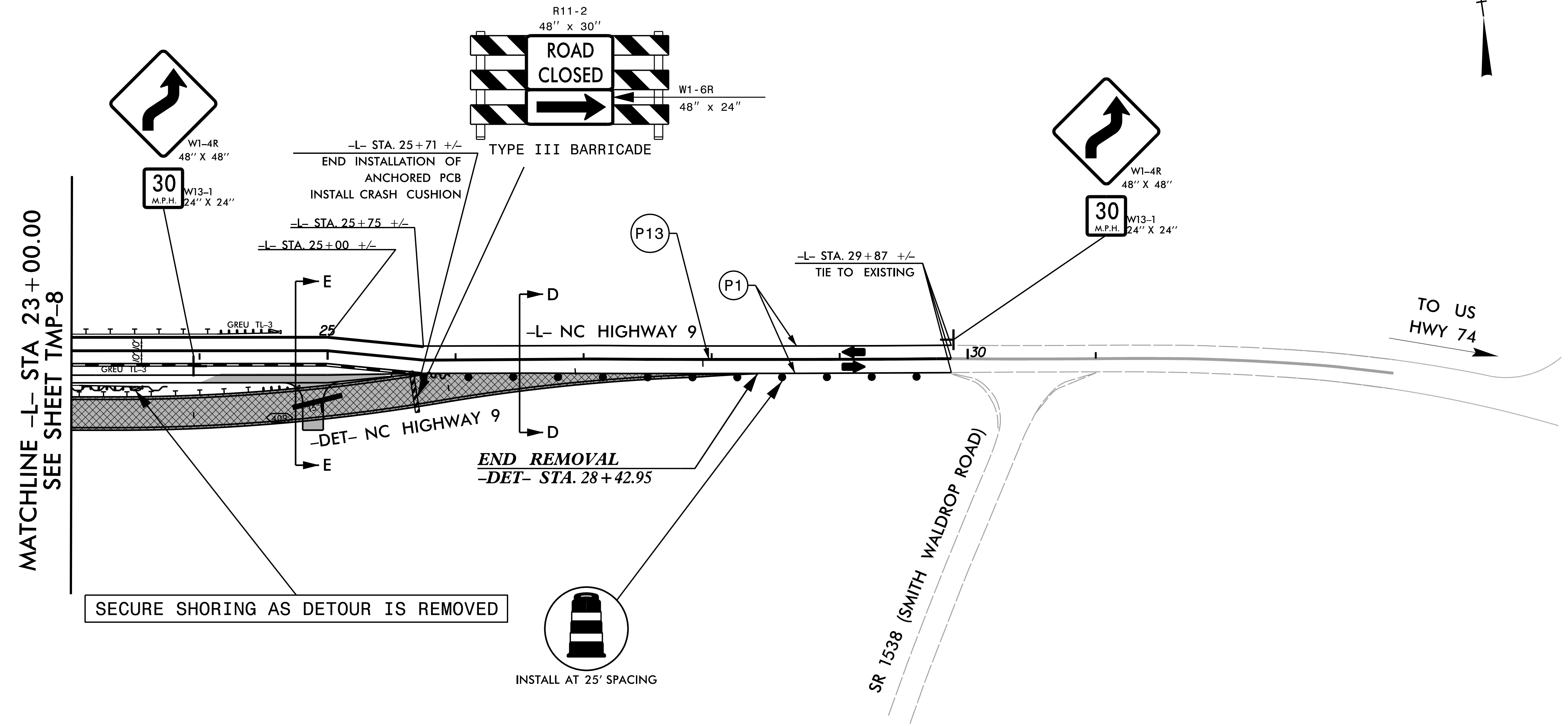
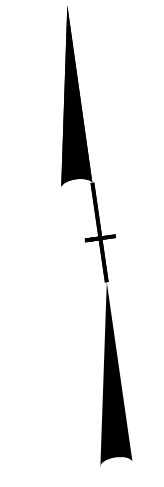


**TEMPORARY
TRAFFIC CONTROL
PHASE III DETAIL**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

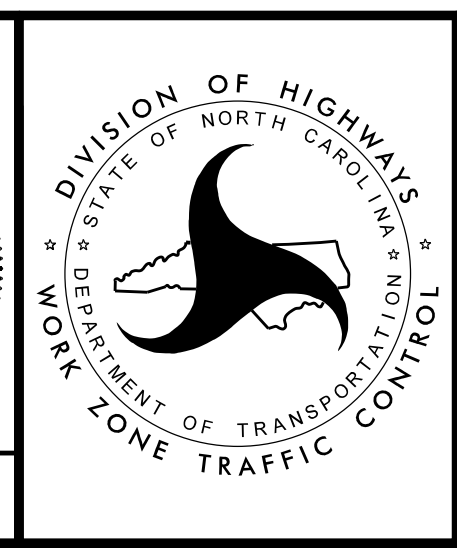


SECTION D-D
-L- 26+50
-DET- 26+56.47



SECTION E-E
-L- 24+75
-DET- 24+79.80

APPROVED: *Zachary M. Esposito*
 DATE: 7/7/2025
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 054155
 ZACHARY M. ESPOSITO

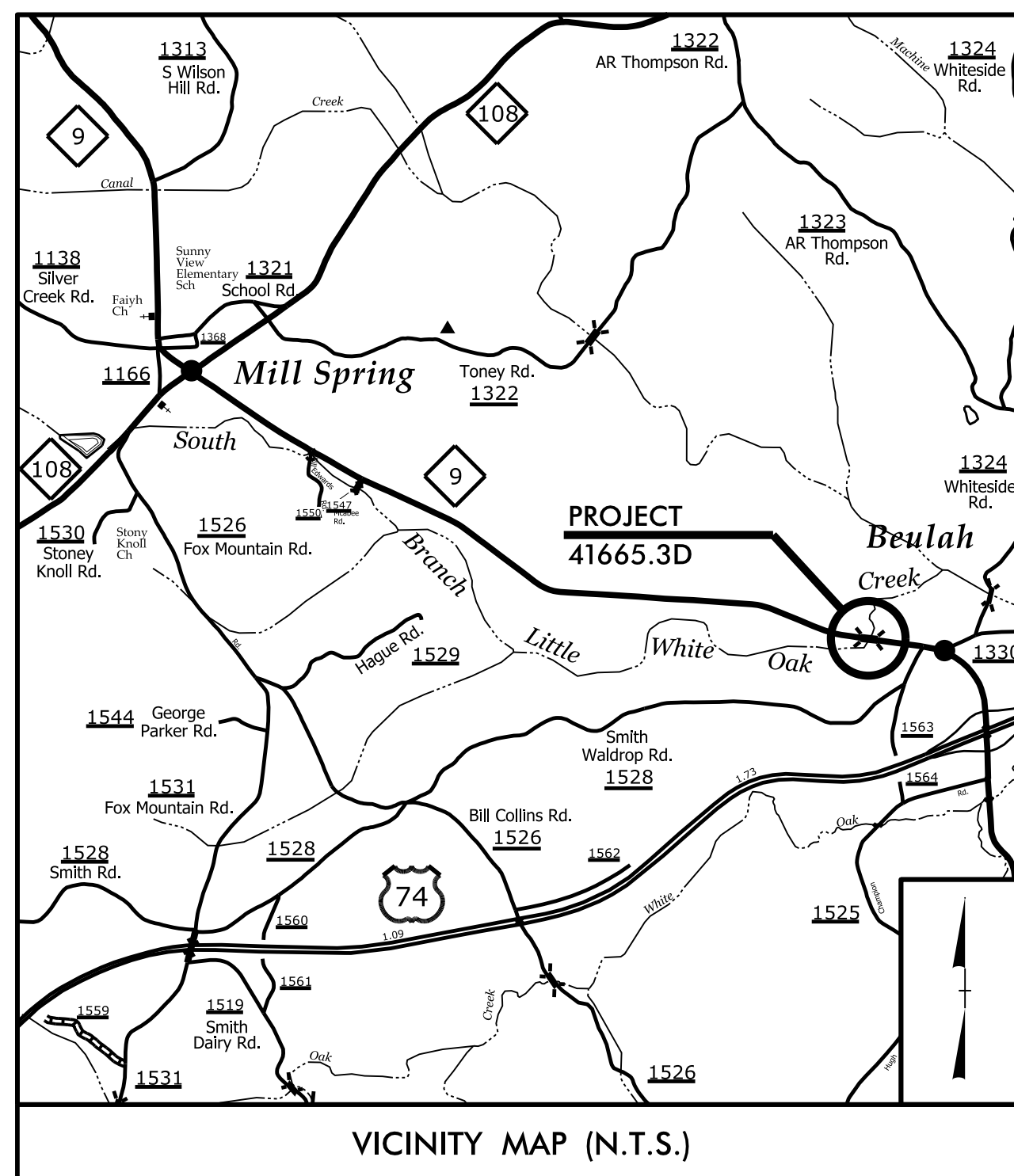


**TEMPORARY
TRAFFIC CONTROL
PHASE III DETAIL**

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP14-041	EC-1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Symbology

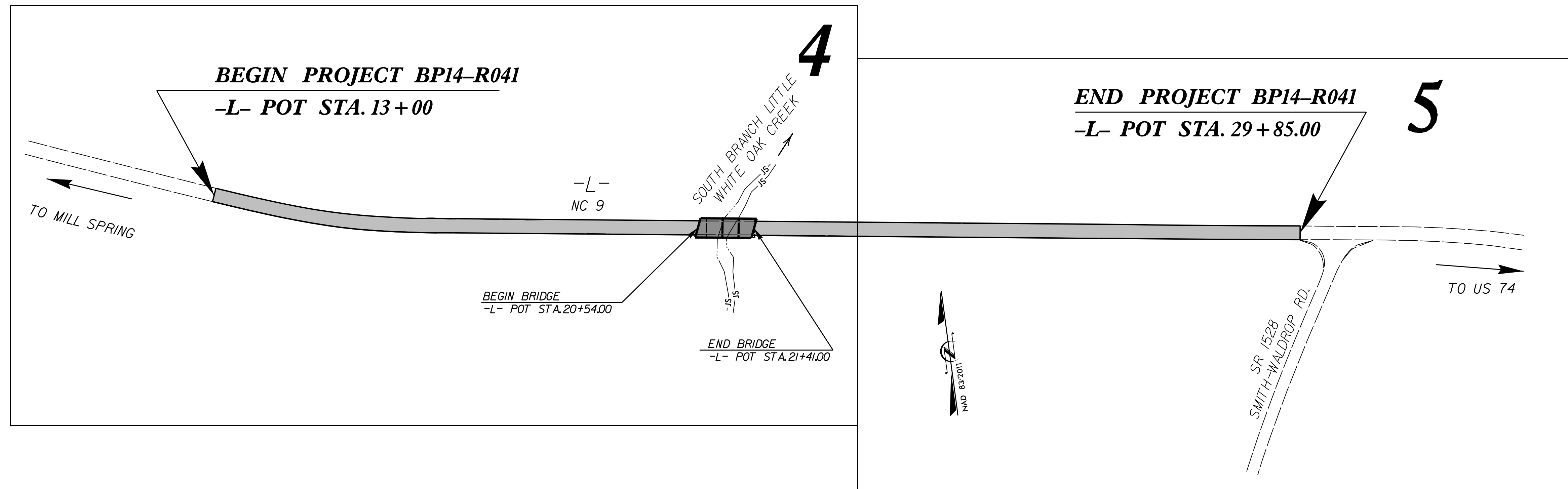


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
**PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL**
POLK COUNTY

**LOCATION: BRIDGE #29 OVER SOUTH BRANCH
LITTLE WHITE OAK CREEK ON NC 9**

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

PROJECT: 41665.3D

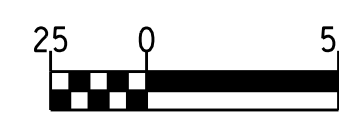


THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

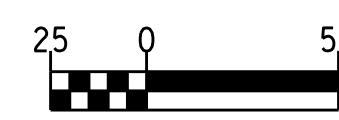
KEVIN S. HUTCHENS, PE
LEVEL III NAME

3635
LEVEL III CERTIFICATION NO.

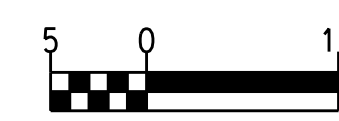
GRAPHIC SCALE



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE NCG 010000
GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH
CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION
OF ENERGY, MINERAL, AND LAND RESOURCES

Prepared in the Office of:

Weston & Sampson
2052 Energy Drive
Apex, NC 27502
Phone: 919.297.0220
NC License: C-4947

for

NCDOT DIVISION 14

NCDOT CONTACT: ZACHARY T. SHULER, PE
DIVISION 14 BRIDGE PROGRAM MANAGER
(828) 488-0902

2024 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "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.

- | | |
|--|--|
| 1604.01 Railroad Erosion Control Detail | 1632.01 Rock Inlet Sediment Trap Type A |
| 1605.01 Temporary Silt Fence | 1632.02 Rock Inlet Sediment Trap Type B |
| 1606.01 Special Sediment Control Fence | 1632.03 Rock Inlet Sediment Trap Type C |
| 1607.01 Gravel Construction Entrance | 1633.01 Temporary Rock Silt Check Type A |
| 1622.01 Temporary Berms and Slope Drains | 1633.02 Temporary Rock Silt Check Type B |
| 1630.01 Riser Basin | 1634.01 Temporary Rock Sediment Dam Type A |
| 1630.02 Silt Basin Type B | 1634.02 Temporary Rock Sediment Dam Type B |
| 1630.03 Temporary Silt Ditch | 1635.01 Rock Pipe Inlet Sediment Trap Type A |
| 1630.04 Stilling Basin | 1635.02 Rock Pipe Inlet Sediment Trap Type B |
| 1630.05 Temporary Diversion | 1640.01 Coir Fiber Baffle |
| 1630.06 Special Stilling Basin | 1645.01 Temporary Stream Crossing |
| 1631.01 Matting Installation | |

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

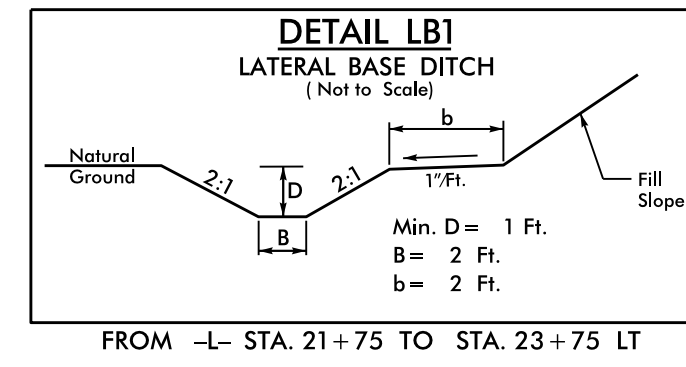
PROJECT REFERENCE NO. BP14-041	SHEET NO. EC-2
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EROSION & SEDIMENT CONTROL LEGEND

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				

PROJECT REFERENCE NO.	SHEET NO.
BPI4-R04I	EC-4/CONST.-4
NC License: C-4847 WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220 Apex, NC 27502 westonandsampson.com	

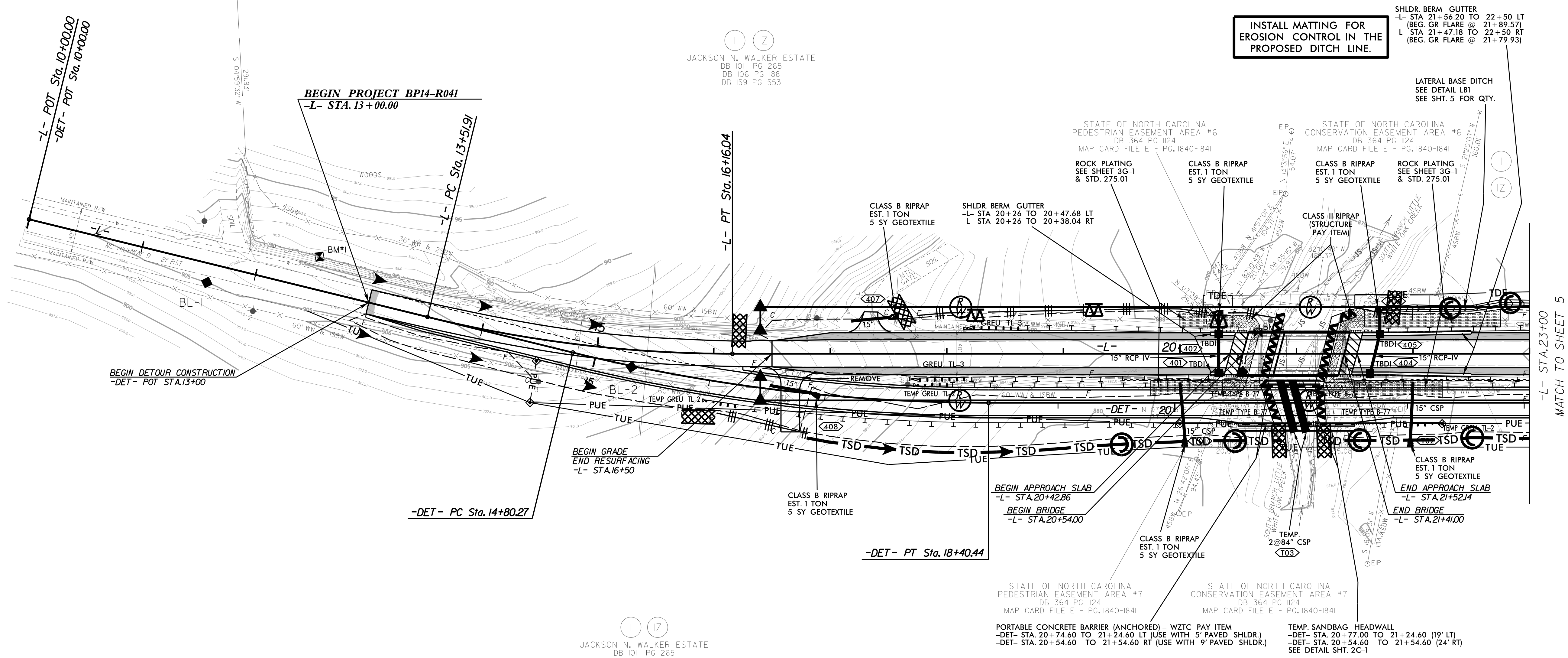
**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4**



BRIDGE DESCRIPTION #29
 CONCRETE DECK / BST SURFACE
 METAL GUARDRAILS
 2 CONCRETE BEAMS PERPENDICULAR W/ BRIDGE
 13 CONCRETE BEAMS PARALLEL W/ BRIDGE
 WOOD HEADWALLS
 WOOD WINGWALLS
 CONCRETE WHEELGUARD

POLK COUNTY BOARD OF EDUCATION
 DB 114 PG 8
 DB 214 PG 1659
 PLAT BOOK 4 - PG. 63
 MAP CARD FILE B - PG. 771

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553



**INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.**

SHLDR BERM GUTTER
 -L- STA 21+56.20 TO 22+50 LT
 (BEG. GR FLARE @ 21+89.57)
 -L- STA 21+47.18 TO 22+50 RT
 (BEG. GR FLARE @ 21+79.93)

LATERAL BASE DITCH
 SEE DETAIL LB1
 SEE SHT. 5 FOR QTY.

NOTE:
 PERIMETER EROSION CONTROL MEASURES SHALL BE
 INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

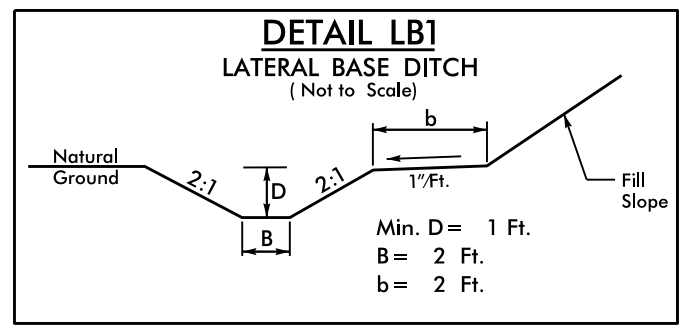
NOTE:
 UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN
 WHERE APPLICABLE

TEMPORARY SHORING

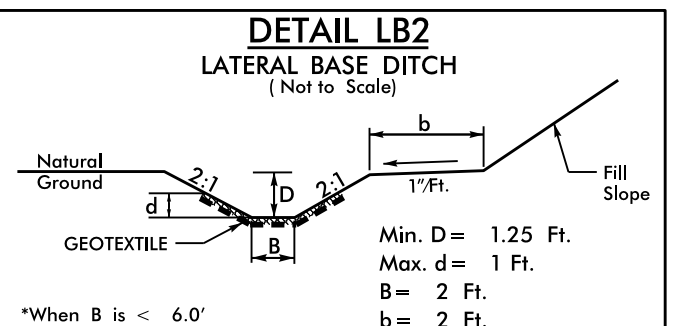
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
BP14-R041	EC-5/CONST.-5
Weston Sampson	
WSE of North Carolina, PC 2062 Energy Drive Phone: 919.297.0220	NC License: C-4847 Apex, NC 27502 westonandsampson.com

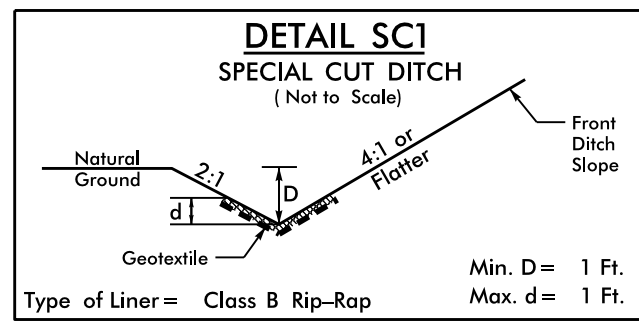
**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5**



FROM -L- STA. 21+75 TO STA. 23+75 LT



FROM -L- STA. 23+75 TO STA. 25+00 LT



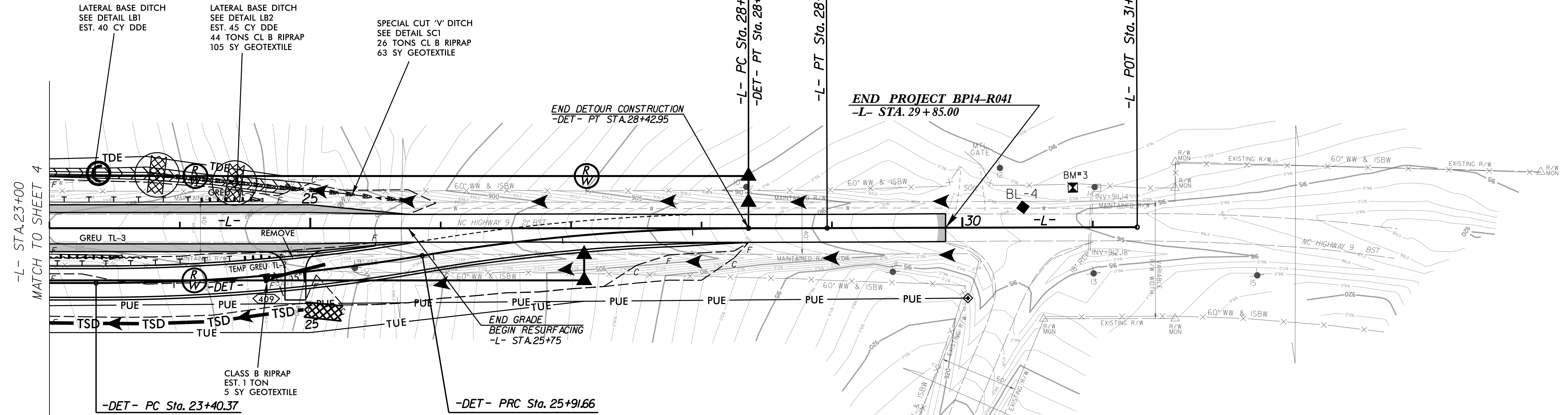
FROM -L- STA. 25+00 LT TO STA. 25+75 LT

NAD 83/2011

JACKSON N. WALKER ESTATE
DB 101 PG 265
DB 106 PG 188
DB 159 PG 553

JACKSON N. WALKER ESTATE
DB 101 PG 265
DB 106 PG 188
DB 159 PG 553

**INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.**



-L- STA.23+00
MATCH TO SHEET 4

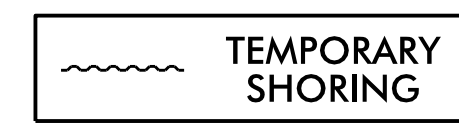
JACKSON N. WALKER ESTATE
DB 101 PG 265
DB 106 PG 188
DB 159 PG 553

JACKSON N. WALKER ESTATE
DB 101 PG 265
DB 106 PG 188
DB 159 PG 553

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

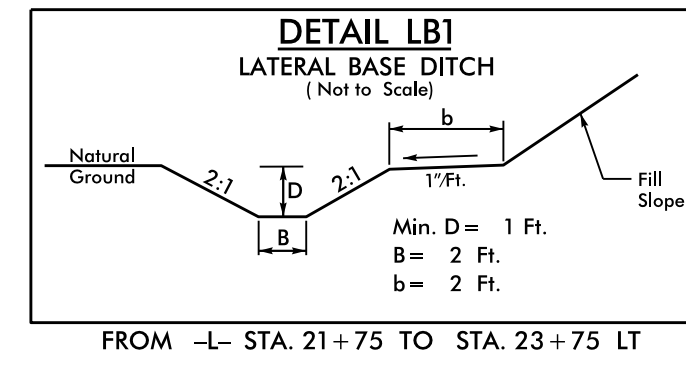
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

NOTE:
UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN
WHERE APPLICABLE



FOR -L- PROFILE, SEE SHEET NO. 6

5/9/2025
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11:43 AM



BRIDGE DESCRIPTION #29
 CONCRETE DECK / BST SURFACE
 METAL GUARDRAILS
 2 CONCRETE BEAMS PERPENDICULAR W/ BRIDGE
 13 CONCRETE BEAMS PARALLEL W/ BRIDGE
 WOOD HEADWALLS
 WOOD WINGWALLS
 CONCRETE WHEELGUARD

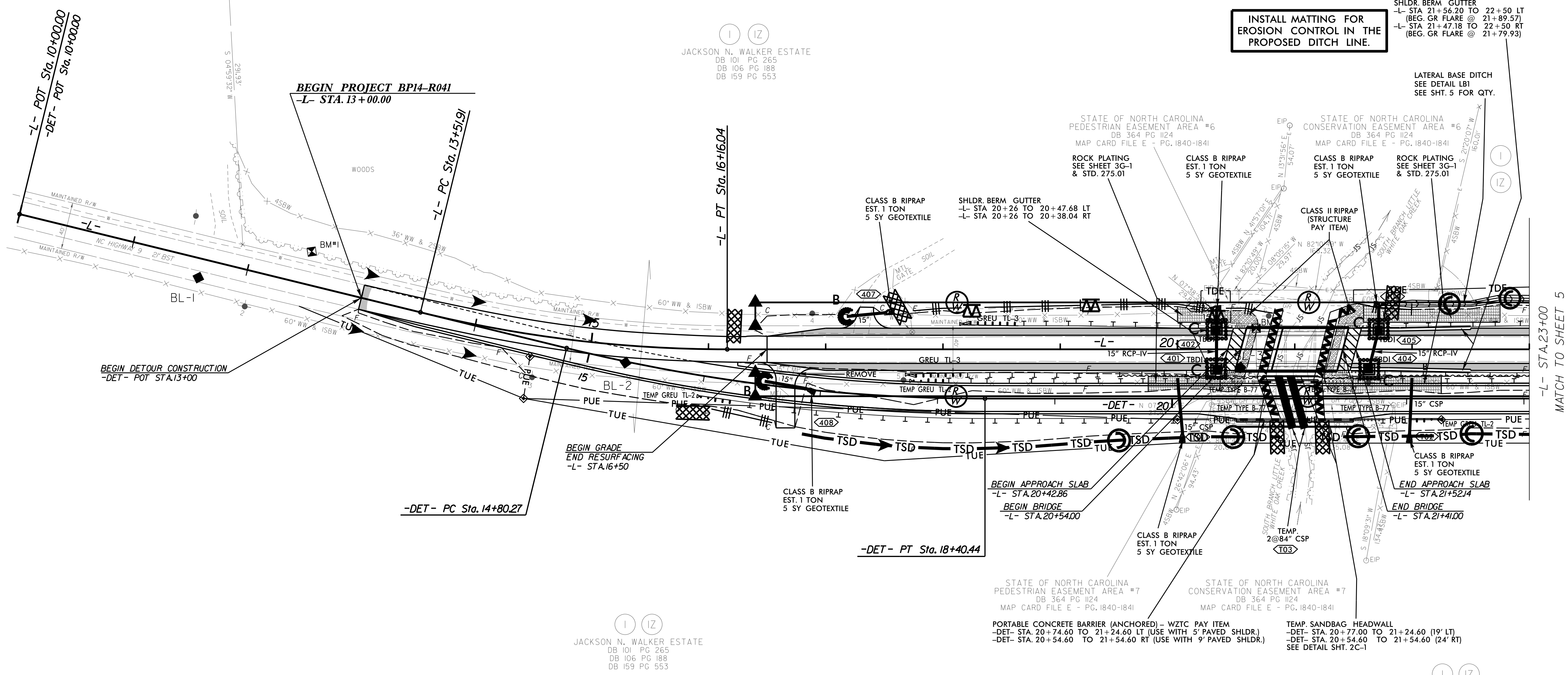
POLK COUNTY BOARD OF EDUCATION
 DB 114 PG 8
 DB 214 PG 1659
 PLAT BOOK 4 - PG. 63
 MAP CARD FILE B - PG. 771

JACKSON N. WALKER ESTATE
 DB 101 PG 265
 DB 106 PG 188
 DB 159 PG 553

INSTALL MATTING FOR
 EROSION CONTROL IN THE
 PROPOSED DITCH LINE.

SHLDR BERM GUTTER
 -L- STA 21+56.20 TO 22+50 LT
 (BEG. GR FLARE @ 21+89.57)
 -L- STA 21+47.18 TO 22+50 RT
 (BEG. GR FLARE @ 21+79.93)

LATERAL BASE DITCH
 SEE DETAIL LB1
 SEE SHT. 5 FOR QTY.



-L- STA.23+00
 MATCH TO SHEET 5

TEMPORARY SHORING

FOR -DET- PROFILE, SEE SHEET NO. 2B-3

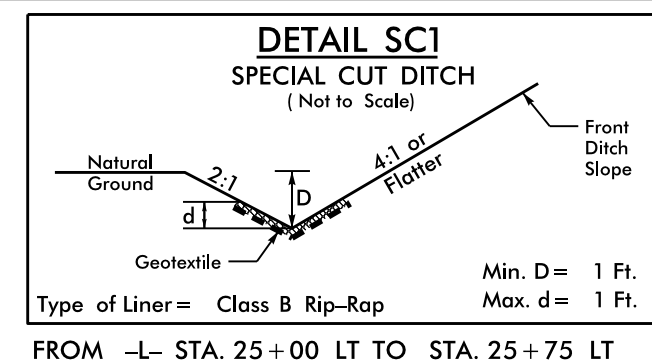
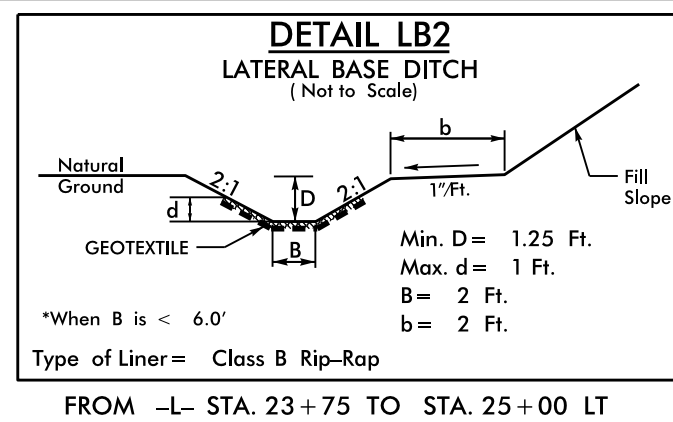
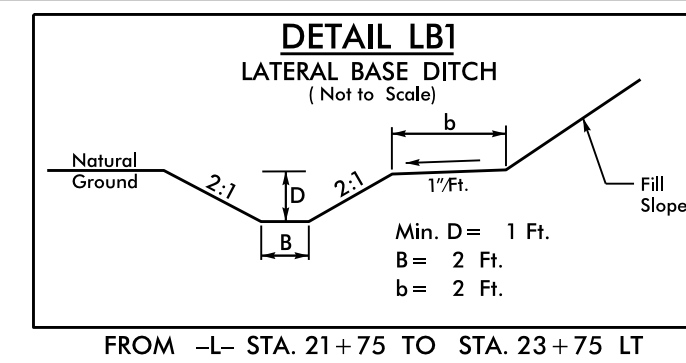
DETOUR SHEET (1 OF 2)

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

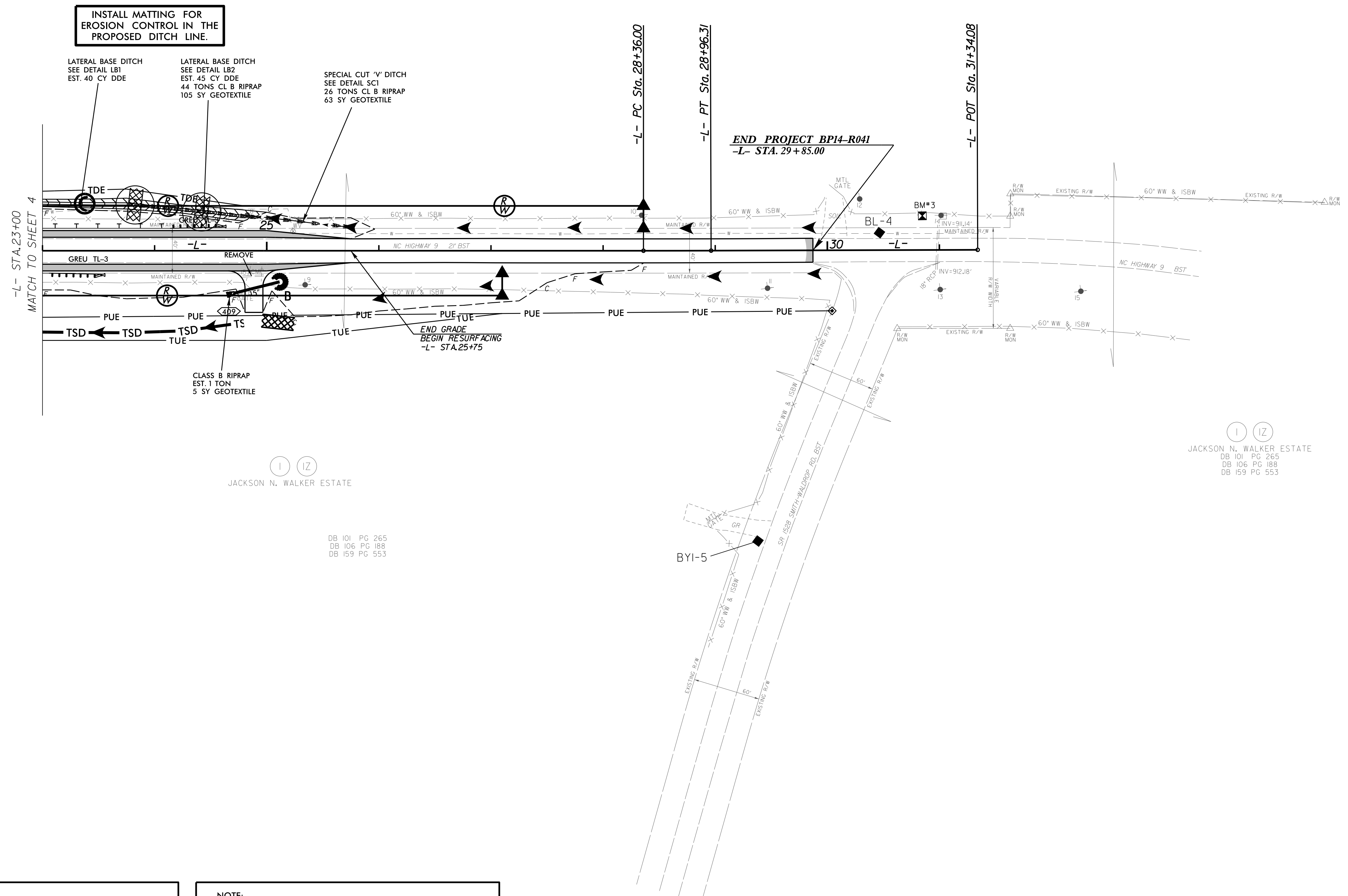
NOTE: UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE

P/S =
 Δ =
 D =
 L =
 T =
 SE =
 RO =
 V =

8/17/99
 5/9/2025
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 24240



NAD 83/2011



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

NOTE: UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE

FOR -L- PROFILE, SEE SHEET NO. 6

8/17/99
5/9/2025
R:\Hydro\Projects\EC\POLK29_EC_EC7.dgn

8/17/99

Weston & Sampson
WSE of North Carolina, PC
2052 Energy Drive
Phone: 919.297.0220
NC License: C-4847
Apex, NC 27502
westonandsampson.com

PROJECT REFERENCE NO. BPI4-R04I
SHEET NO. EC-9/CONST.2A
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER

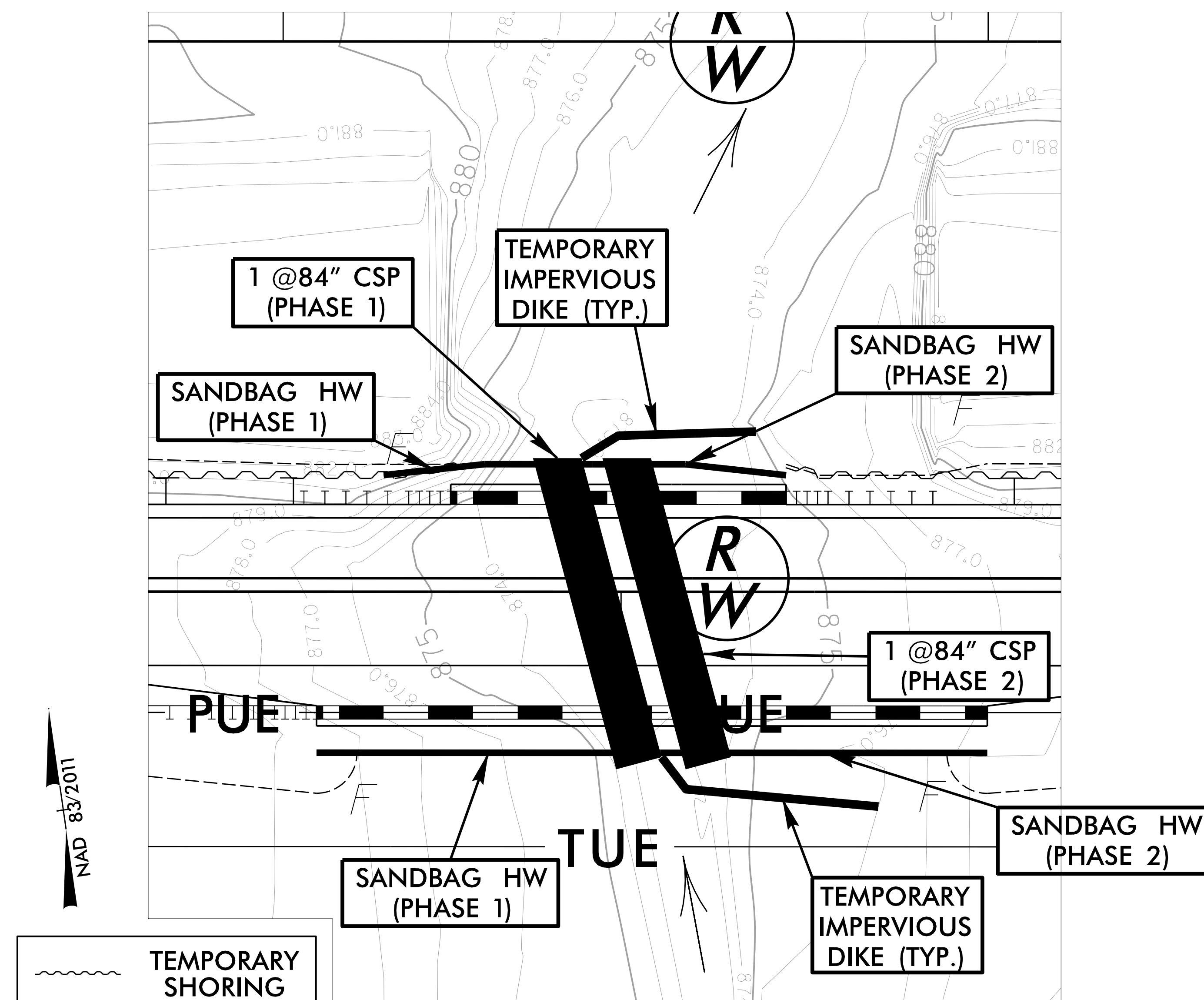
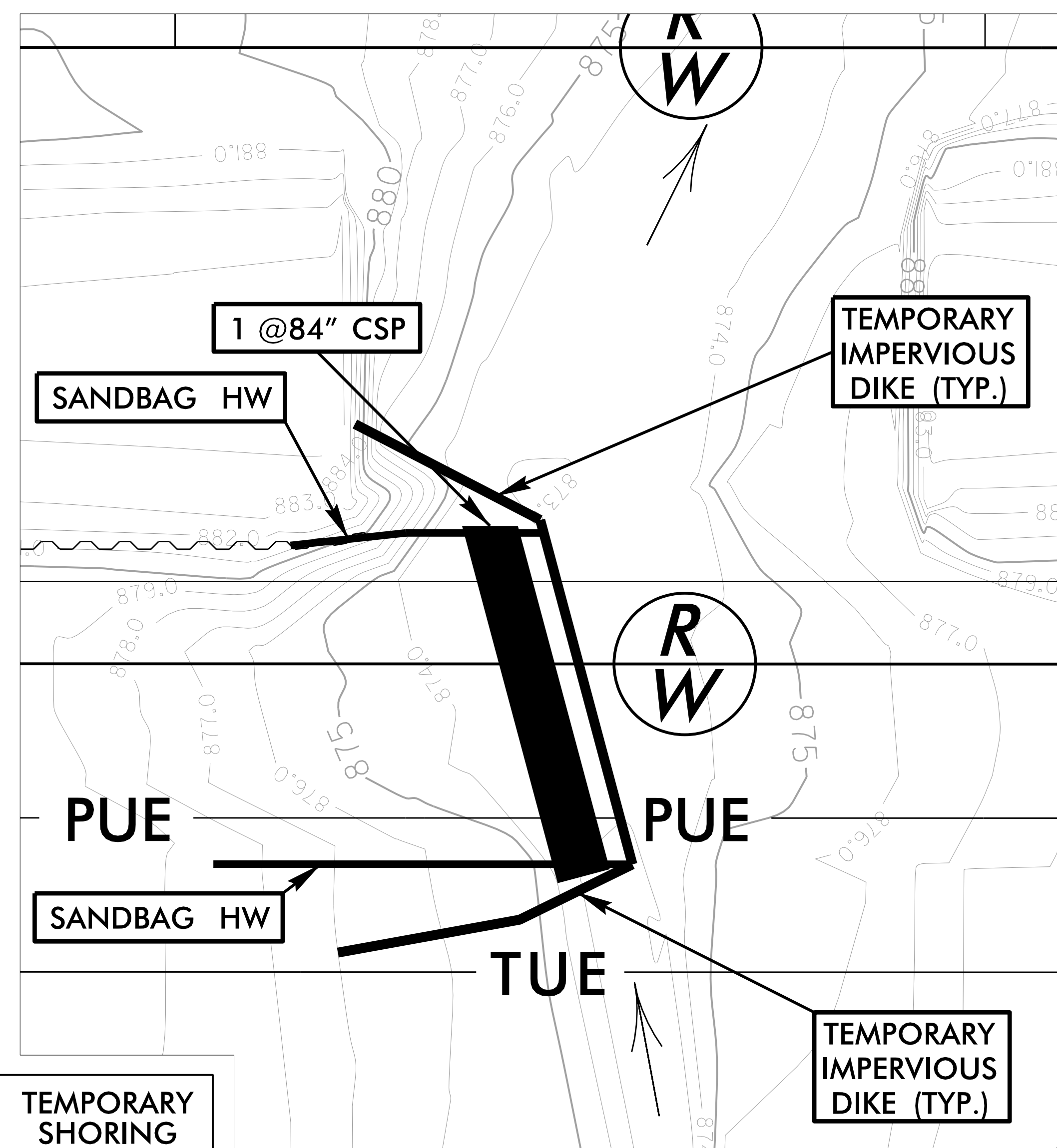
TEMP. CULVERT CONSTRUCTION SEQUENCE STA. 21+01 -DET-

PHASE I

1. PLACE SPECIAL STILING BASIN IN DESIRED LOCATION.
2. INSTALL TEMPORARY IMPERVIOUS DIKES AS SHOWN. PUMP IMPOUNDED FLOW TO SPECIAL STILING BASIN.
3. CONSTRUCT UPSTREAM AND DOWNSTREAM SANDBAG HW'S AS NECESSARY FOR PIPE INSTALLATION. INSTALL TEMPORARY 1 @84" CSP ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES AND MAINTENANCE ACTIVITES MANUAL. BACKFILL W/#67 STONE AROUND PIPE OR AS DIRECTED BY ENGINEER

PHASE II

1. CONSTRUCT IMPERVIOUS DIKE AS SHOWN. REMOVE IMPERVIOUS DIKE UTILIZED IN PHASE 1 AND DIVERT STREAM TO INSTALLED PIPE
2. PUMP IMPOUNDED FLOW TO SPECIAL STILING BASIN.
3. CONSTRUCT PHASE II PORTION OF BOTH UPSTREAM AND DOWNSTREAM SANDBAG HW'S AS NECESSARY FOR PIPE INSTALLATION. INSTALL TEMPORARY 1 @ 84" CSP ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES AND MAINTENANCE ACTIVITES MANUAL. BACKFILL W/#67 STONE AROUND PIPE OR AS DIRECTED BY ENGINEER
4. COMPLETE ENTIRTY OF UPSTREAM AND DOWNSTREAM SANDBAG HW WHILE CONSTRUCTING DETOUR ALIGNMENT.
5. REMOVE IMPERVIOUS DIKES AND SHIFT TRAFFIC TO DETOUR UPON COMPLETION



REVISIONS

5/9/2025
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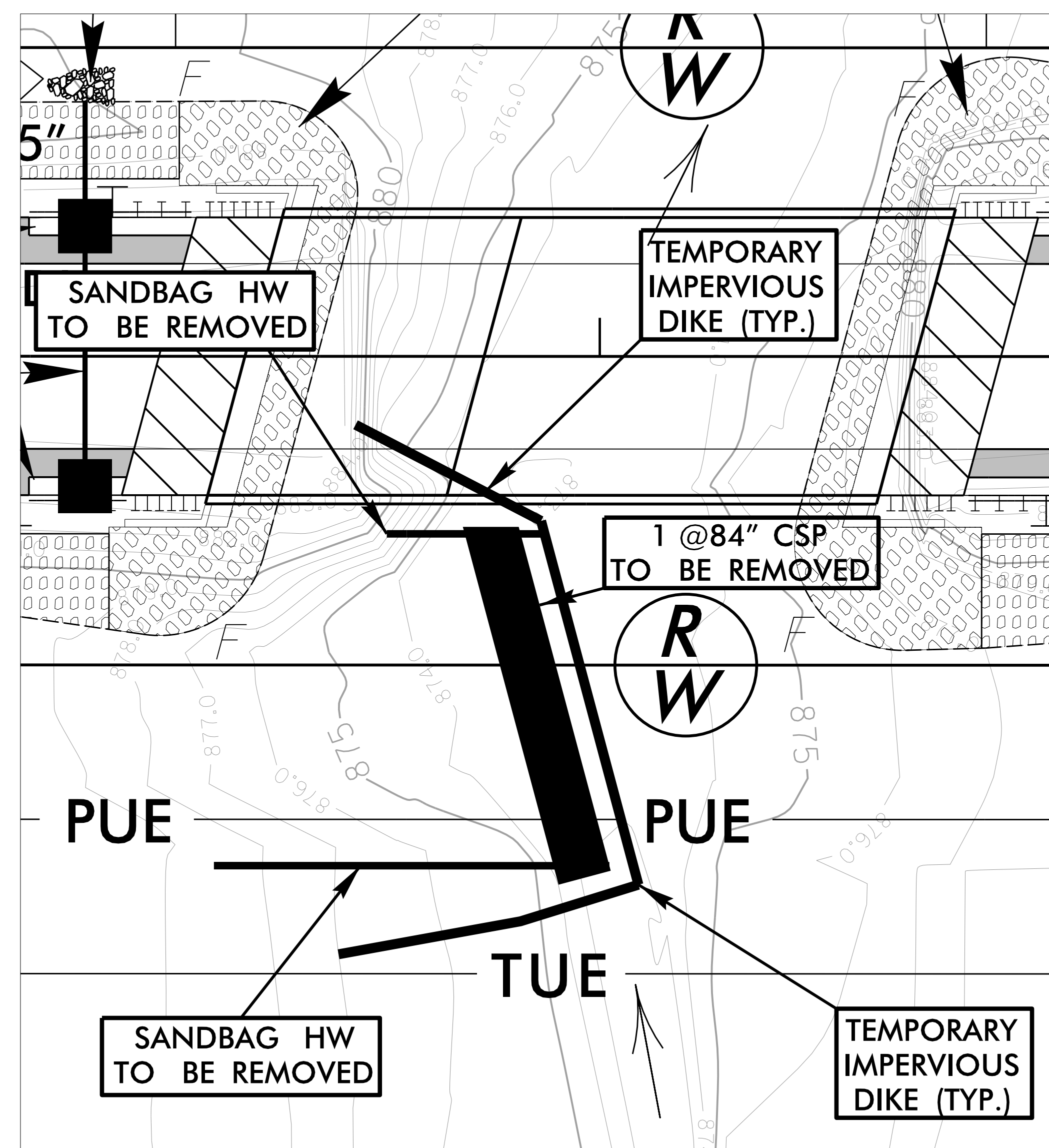
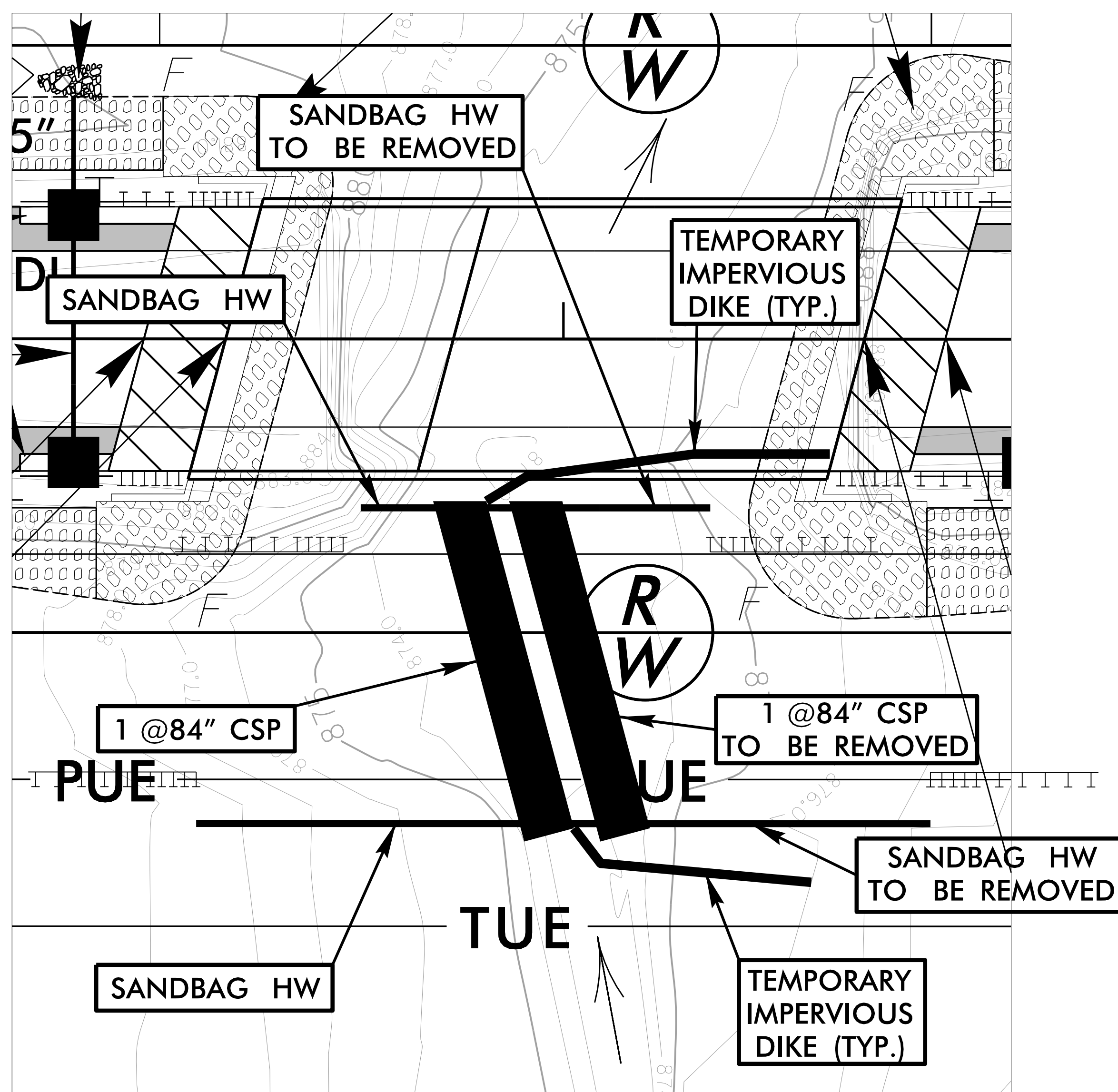
TEMP. CULVERT REMOVAL SEQUENCE STA. 21+01 -DET-

PHASE I

1. COMPLETE BRIDGE REPLACEMENT AND DIVERT TRAFFIC BACK TO PERMENANT ALIGNMENT. REMOVE DETOUR FILL AND TEMPORARY SHORING. ROCK PLATE -L- SIDE SLOPES AS SHOWN ON PSH4 AND ALLOWED BY DETOUR REMOVAL
2. INSTALL TEMPORARY IMPERVIOUS DIKES AS SHOWN WHILE MAINTAINING FLOW IN WESTERN TEMPORARY 1 @84" CSP. PUMP IMPOUNDED FLOW TO SPECIAL STILING BASIN IF NECESSARY.
3. REMOVE HW AND REMOVE EASTERN TEMPORARY 1 @84" CSP. CONTRACTOR SHOULD BE CAREFUL TO AVOID #67 STONE BACKFILL MATERIAL LOSS DOWNSTREAM AND TO MINIMIZE ANY OTHER SEDIMENT LOSSES.

PHASE II

1. REMOVE PHASE I IMPERVIOUS DIKE AND CONSTRUCT PHASE II IMPERVIOUS DIKE AS SHOWN WHILE DIVERTING STREAM TO HALF CROSS SECTIONAL FLOW CONDITIONS
2. PUMP ANY IMPOUNDED FLOW TO SPECIAL STILING BASIN.
3. REMOVE HW AND REMOVE WESTERN TEMPORARY 1 @84" CSP. CONTRACTOR SHOULD BE CAREFUL TO AVOID #67 STONE BACKFILL MATERIAL LOSS DOWNSTREAM AND TO MINIMIZE ANY OTHER SEDIMENT LOSSES.
4. REMOVE IMPERVIOUS DIKES
5. IN LOCATION OF AND AROUND REMOVED DETOUR 2@ 84" CSP PIPES GRADE STREAM BANKS AND RESTORE CONSERVATION EASEMENT AS INDICATED IN LITTLE WHITE OAK CREEK MITIGATION SPECIAL PROVISION.



REVISIONS

CONTRACT: DN01112 PROJECT: BP14.R041

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
POLK COUNTY**

LOCATION: REPLACE BRIDGE NO.29 OVER SOUTH BRANCH LITTLE WHITE OAK CREEK ON NC 9

<small>PROJ. REFERENCE NO.</small> BP14.R041	<small>SHEET NO.</small> SIGN-1
<small>APPROVED:</small> <small>DATE:</small> 6/27/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PROJECT NOTES

1. ALL EXISTING SIGNS TO BE REMOVED UNLESS OTHERWISE NOTED.

GENERAL NOTES

- . SIGNS FURNISHED BY STATE. CONTRACTOR TO NOTIFY STATE TO REQUEST SIGNS 60 DAYS BEFORE SIGNS ARE NEEDED.
- . 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.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

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
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNS ON 'U' CHANNEL POSTS
910.20	SIGNING SCHOOL ZONE WITH MARKED CROSSWALK WHERE SPEED REDUCTION IS REQUIRED

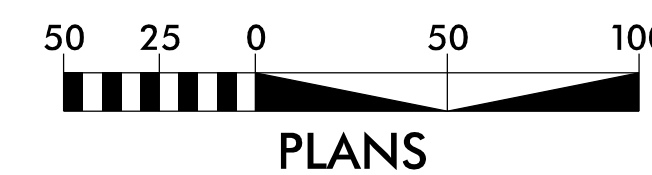
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	TYPE E SIGNS
SIGN-3	SIGNING DETAILS

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QTY.	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	65	L.F.
4096000000	904	SIGN ERECTION, TYPE E	8	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6	EA.

GRAPHIC SCALE





PLAN PREPARED BY: DRMP, INC.

ZACHARY M. ESPOSITO, PE, TCDS PROJECT MANAGER

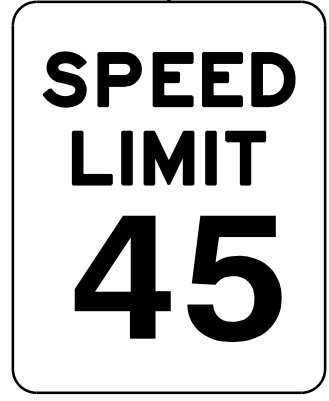
MIKAYLA M. LINDSEY, PE PROJECT ENGINEER



DRMP, INC.
5808 FARINGSDOWN PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJ. REFERENCE NO. BP14.R041	SHEET NO. SIGN-2
APPROVED: <i>Anthony M. Esposito</i>	
DATE: 6/27/2025	
	
	
<small>DRMP, INC. 5808 FARRINGTON PLACE RALEIGH, NC 27609 (919) 872-5115</small>	
<small>NC LICENSE NO. F-1524 www.drmp.com</small>	

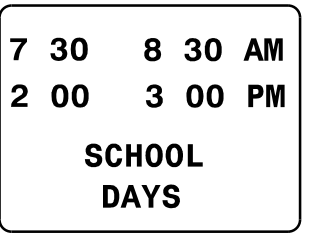
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R2-1

MOUNT UNDER SIGN 407

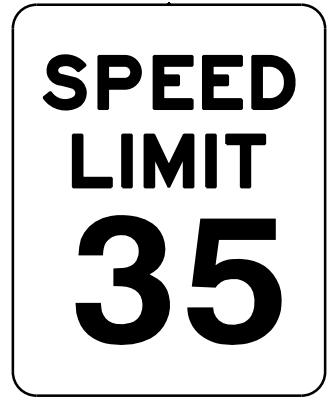
406 QUANTITY REQ'D 1



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MOUNT BELOW SIGN 402

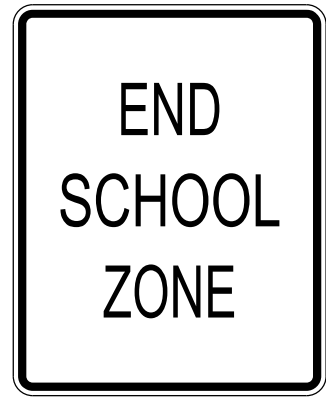
402 QUANTITY REQ'D 1



24" X 30"
R2-1

ONE "U" POST PER SIGN


407 QUANTITY REQ'D 1



24" X 30"
S5-2

ONE "U" POST PER SIGN


403 QUANTITY REQ'D 1



36" X 36"
S4-5

ONE "U" POST PER SIGN


404 QUANTITY REQ'D 2



24" X 8"
S4-3P

MOUNT ABOVE SIGN 402
MOUNT BELOW SIGN 405

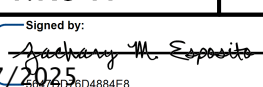


405 QUANTITY REQ'D 1



36" X 36"
S1-1

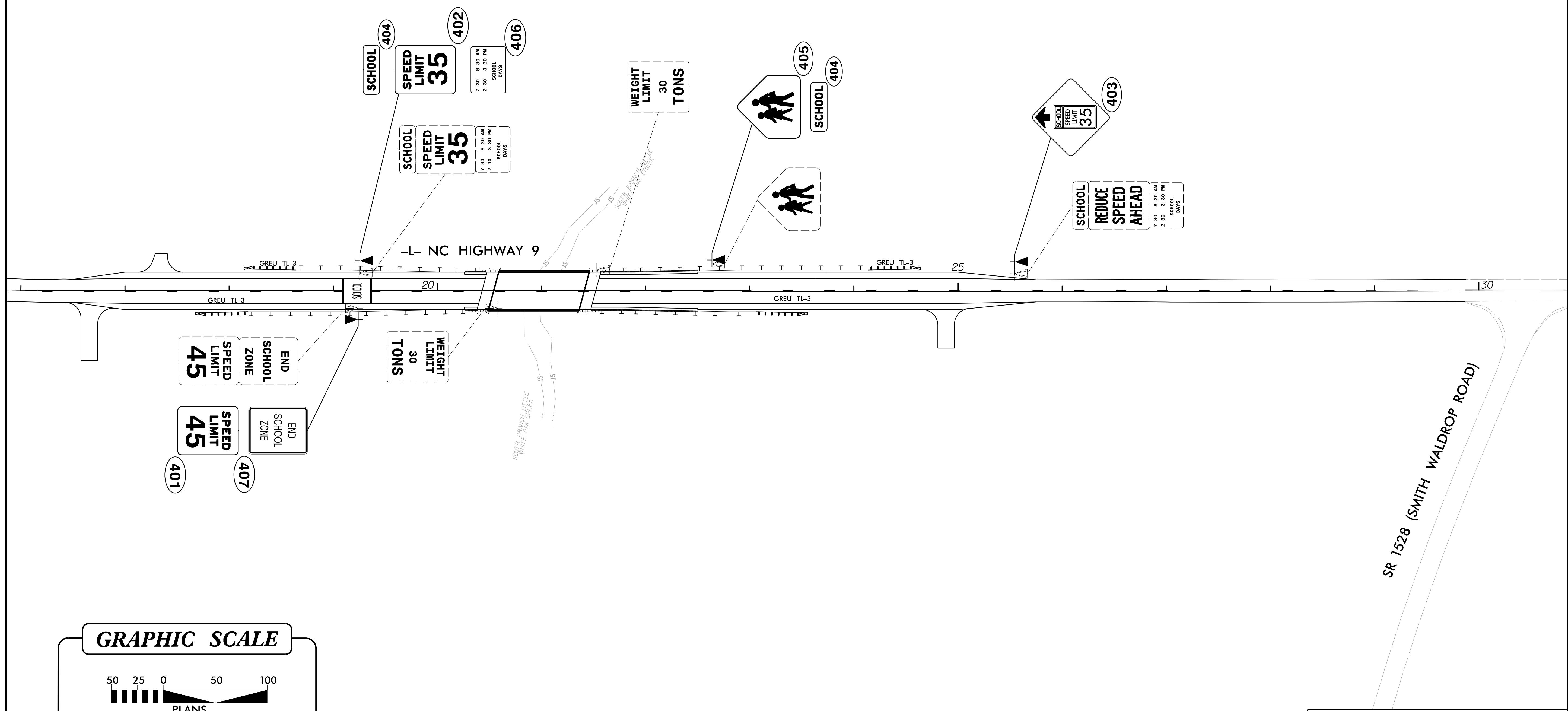
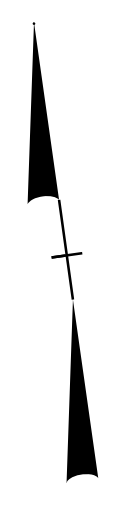
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TYPE E SIGNS

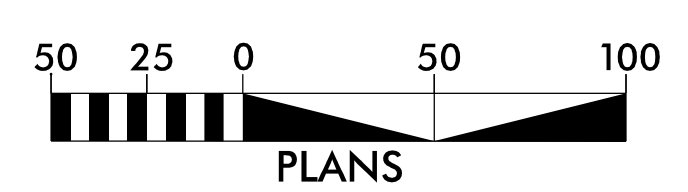
PROJ. REFERENCE NO.	SHEET NO.
BP14.R041	SIGN-3
APPROVED: 	
DATE: 6/27/2015	
	
	
<small>DRMP, INC. 5808 FARRINGTON PLACE RALEIGH, NC 27609 (919) 872-5115</small>	
<small>NC LICENSE NO. F-1524 www.drmp.com</small>	

PROJECT NOTES

- 1. ALL EXISTING SIGNS TO BE REMOVED UNLESS OTHERWISE NOTED.



GRAPHIC SCALE



SIGNING DETAILS

TIP PROJECT: BP14-R041

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

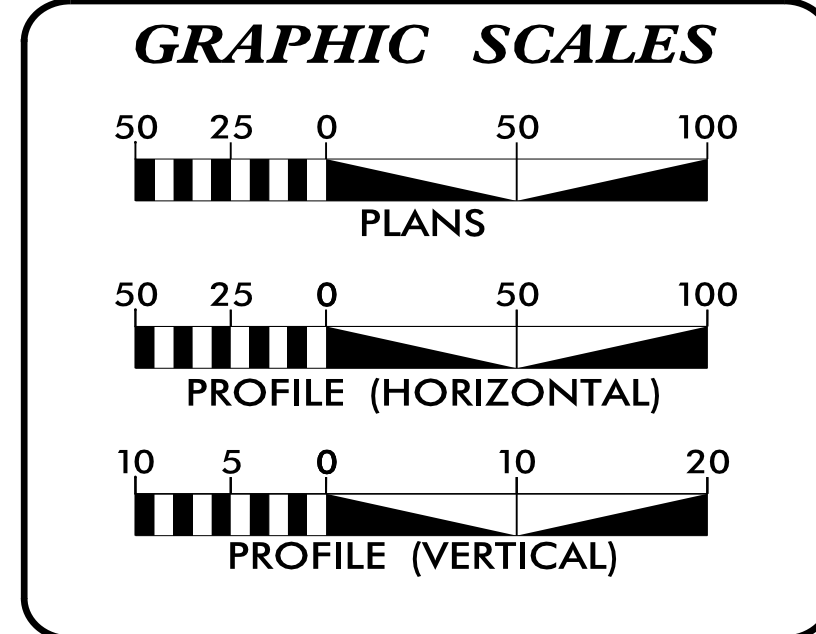
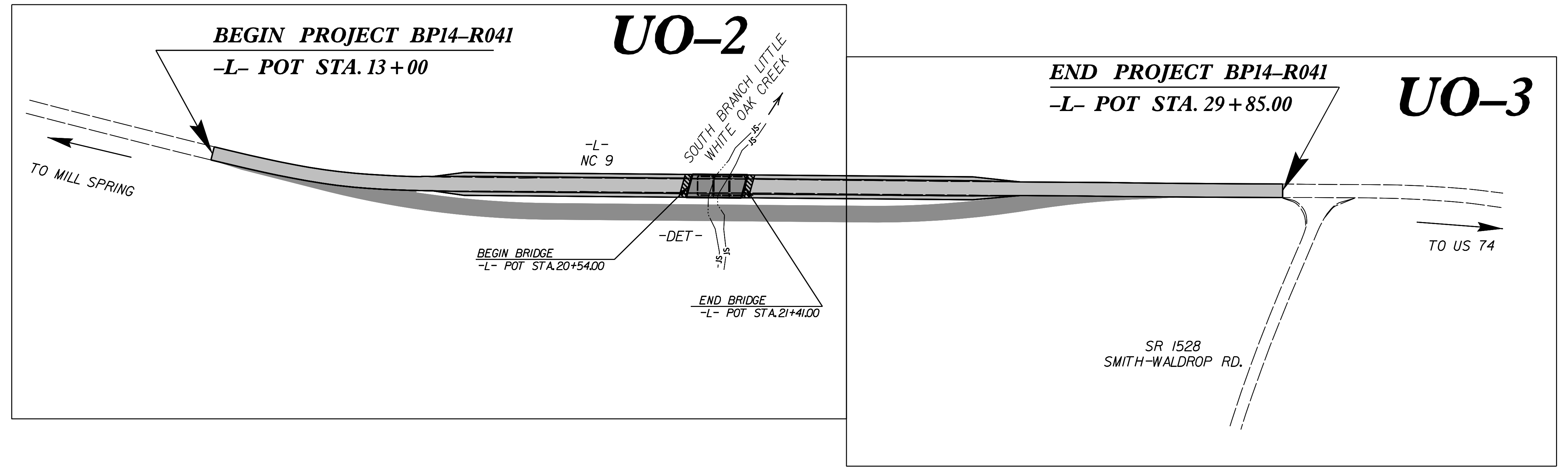
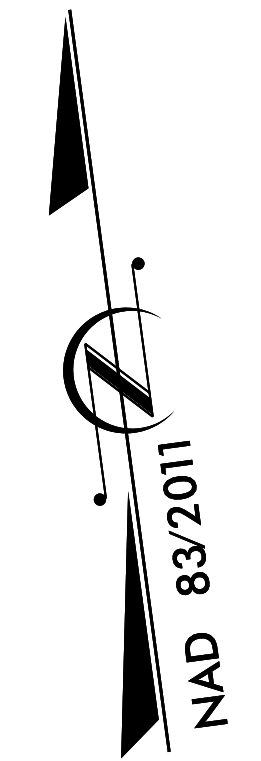
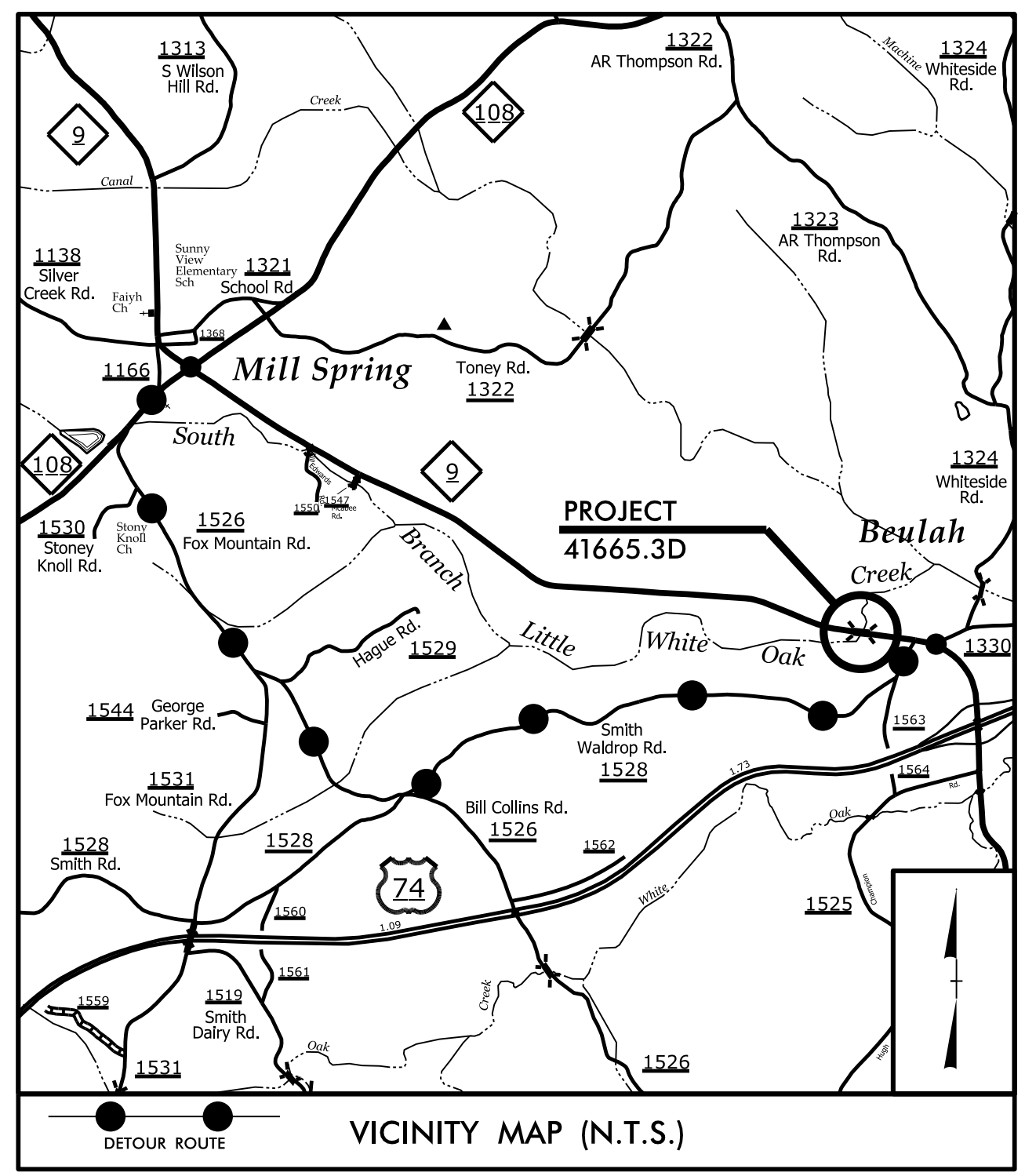
T.I.P. NO.	SHEET NO.
BP14-R041	UO-1

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.

**UTILITIES BY OTHERS PLANS
POLK COUNTY**

LOCATION: BRIDGE NO. 29 OVER SOUTH BRANCH
LITTLE WHITE OAK CREEK ON NC 9

TYPE OF WORK: UTILITY BY OTHERS RELOCATION



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-02 THRU UO-03	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

(A) POWER - RUTHERFORD EMC
(B) PHONE - WINDSTREAM
(C) WATER - INMAN-CAMPOBELLO WATER DISTRICT

PREPARED IN THE OFFICE OF:

Weston & Sampson
WSE of North Carolina, PC

698 East Chatham Street Suite 137
Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
NC License: C-4947

JIM FORBES UTILITY PROJECT MANAGER
D. VONDENHUEVEL PROJECT UTILITY COORDINATOR

**DIVISION OF HIGHWAYS
DIVISION 14**

345 TOOT HOLLOW ROAD
BRYSON CITY, NC 28713

ZACHARY SHULER BRIDGE PROGRAM MANAGER
BOB GOLDING DIVISION UTILITY ENGINEER
JUSTIN BROCK UTILITY COORDINATOR

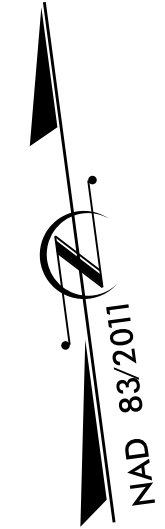
5/14/99
F:\19\2025\es\Coordination\U00\Polk29_ut_LU0-02_psh.dgn

Weston & Sampson
WSE of North Carolina, PC
598 East Chatham Street
Phone: 919.297.0220
Suite 137
Cary, NC 27511
Fax: 919.297.0221

PROJECT REFERENCE NO.	SHEET NO.
BP14-R041	UO-02
THIS SHEET CORRESPONDS TO RDY- 04	

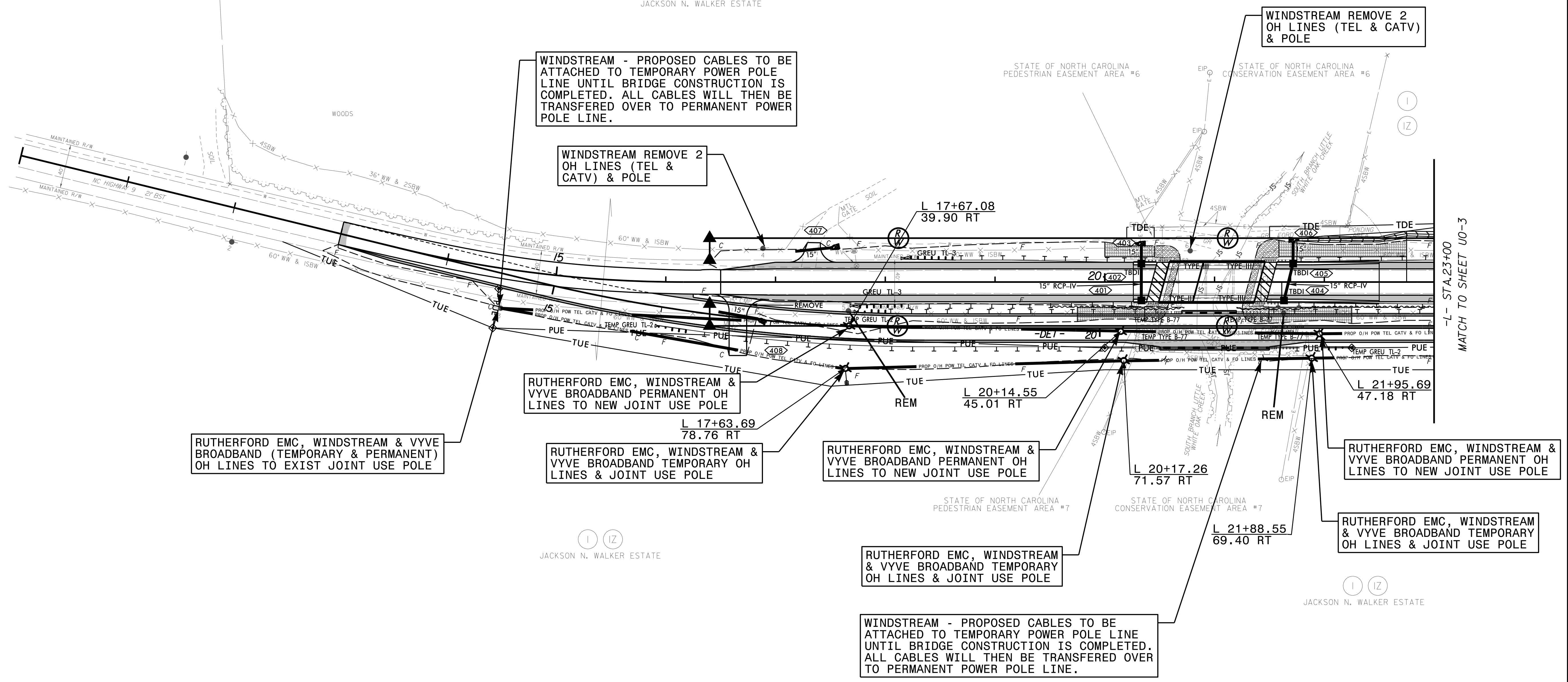
UTILITIES BY OTHERS

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



POLK COUNTY BOARD OF EDUCATION

I IZ
JACKSON N. WALKER ESTATE

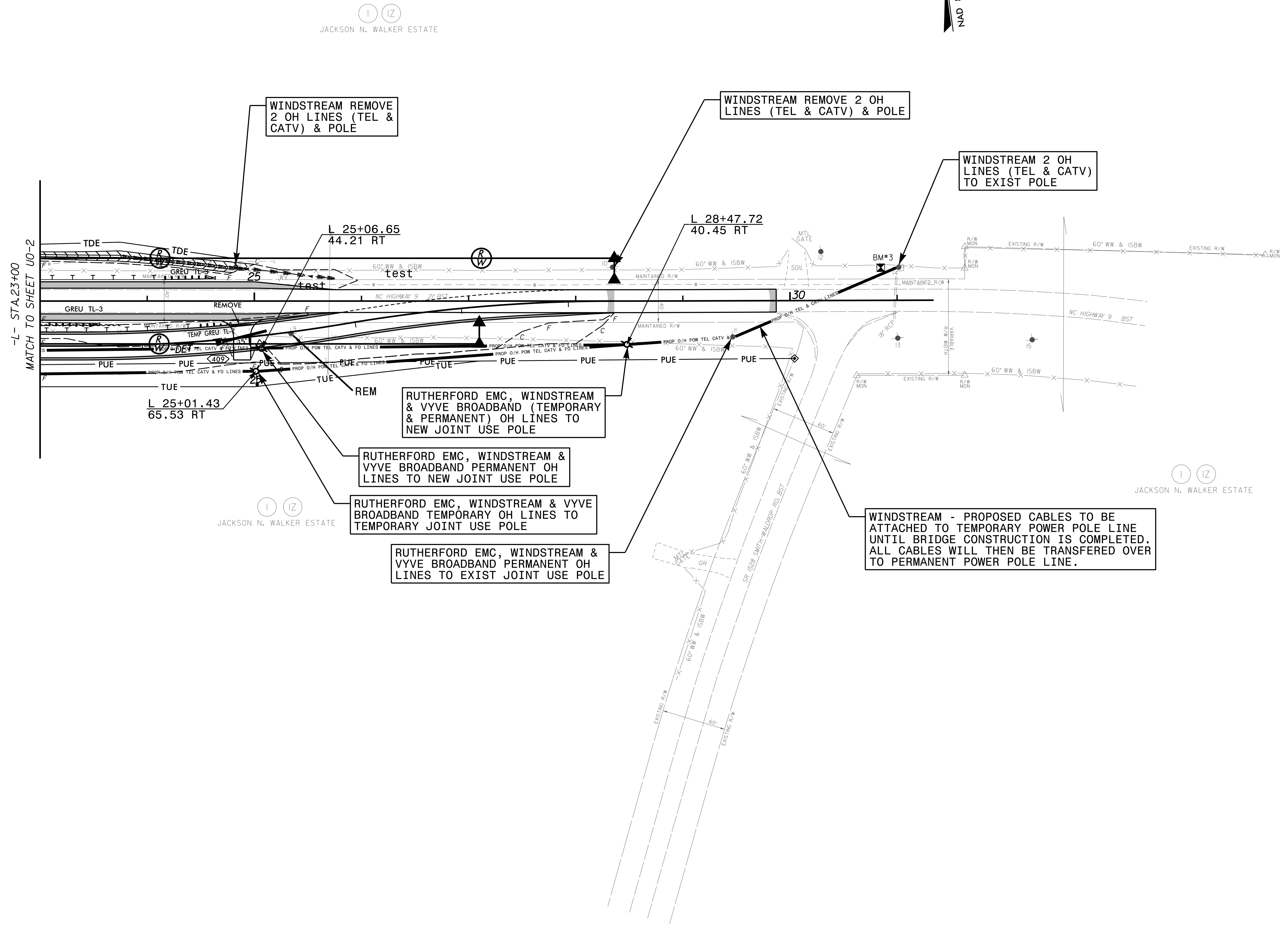


I IZ
JACKSON N. WALKER ESTATE

I IZ
JACKSON N. WALKER ESTATE

UTILITIES BY OTHERS

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



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