

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1 THRU 2C-3	SPECIAL DETAILS
3B-1 THRU 3B-2	ROADWAY AND DRAINAGE SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 5	PLAN AND PROFILE SHEET
RW02C-1 THRU RW02C-3	SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY LINES
TMP-1 THRU TMP-4	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX
X-1A	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-11	CROSS-SECTIONS
S-1 THRU S-X	STRUCTURE PLANS

GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

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

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

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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

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

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

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE
POWER - BLUE RIDGE ENERGY: STEVE TAYLOR - STAYLOR@BLUERIDGEENERGY.COM
GREG LIPFORD - GLIPFORD@BLUERIDGEENERGY.COM
COMMUNICATIONS - SKYLINE/SKYBEST: ERIC HOLT (336)-876-6591
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.

ROCK
ROCK IS ANTICIPATED BETWEEN 10+83.00 TO 11+41.83. BLASTING MAY BE REQUIRED FOR EXCAVATION ON THE PROJECT. SEE SECTION 220 OF THE STANDARD SPECIFICATIONS AND IF APPLICABLE, ROCK BLASTING PROVISION.

2024 ROADWAY ENGLISH STANDARD DRAWINGS
EFF. 01-16-2024
REV.

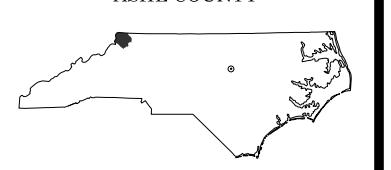
The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)
DIVISION 4 - MAJOR STRUCTURES	
423.02	Bridge Approach Fills - Type 1A Approach Fill for Bridge Abutment
423.03	Bridge Approach Fills - Type 2 Approach Fill for Bridge Abutment with MSE Wall
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
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 (Use Details in Lieu of Standards for Sheets 4, 6, 12, and 14 of 15)
862.02	Guardrail Installation
862.03	Structure Anchor Units (Use Detail in Lieu of Standard for Sheet 8 of 9)
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets

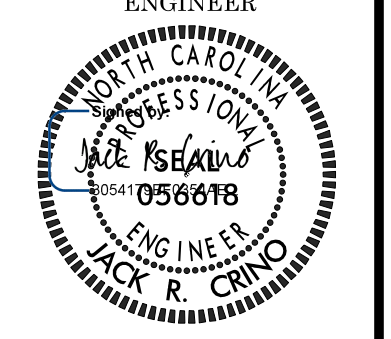
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IA

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ASHE COUNTY



ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER



11/3/2025



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UNLESS ALL SIGNATURES COMPLETED

REVISIONS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

Table listing boundary and property symbols: State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin (EIP), Computed Property Corner, Existing Concrete Monument (ECM), Parcel / Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Existing Historic Property Boundary, Known Contamination Area: Soil, Potential Contamination Area: Soil, Known Contamination Area: Water, Potential Contamination Area: Water, Contaminated Site: Known or Potential.

BUILDINGS AND OTHER CULTURE:

Table listing building and culture symbols: Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing hydrology symbols: Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

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

RAILROADS:

Table listing railroad symbols: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY & PROJECT CONTROL:

Table listing right of way and project control symbols: Primary Horiz Control Point, Primary Horiz and Vert Control Point, Secondary Horiz and Vert Control Point, Vertical Benchmark, Existing Right of Way Monument, Proposed Right of Way Monument (Rebar and Cap), Proposed Right of Way Monument (Concrete), Existing Permanent Easement Monument, Proposed Permanent Easement Monument (Rebar and Cap), Existing C/A Monument, Proposed C/A Monument (Rebar and Cap), Proposed C/A Monument (Concrete), Existing Right of Way Line, Proposed Right of Way Line, Existing Control of Access Line, Proposed Control of Access Line, Proposed ROW and CA Line, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage/Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement.

ROADS AND RELATED FEATURES:

Table listing road and related features symbols: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing vegetation symbols: Single Tree, Single Shrub, Hedge.

Table listing other symbols: Woods Line, Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing existing structures symbols: Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall, MINOR: Head and End Wall, Pipe Culvert, Footbridge, Drainage Box: Catch Basin, DI or JB, Paved Ditch Gutter, Storm Sewer Manhole, Storm Sewer.

UTILITIES:

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

POWER:

Table listing power symbols: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, U/G Power Line Test Hole (SUE - LOS A)*, U/G Power Line (SUE - LOS B)*, U/G Power Line (SUE - LOS C)*, U/G Power Line (SUE - LOS D)*.

TELEPHONE:

Table listing telephone symbols: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, U/G Telephone Test Hole (SUE - LOS A)*, U/G Telephone Cable (SUE - LOS B)*, U/G Telephone Cable (SUE - LOS C)*, U/G Telephone Cable (SUE - LOS D)*, U/G Telephone Conduit (SUE - LOS B)*, U/G Telephone Conduit (SUE - LOS C)*, U/G Telephone Conduit (SUE - LOS D)*, U/G Fiber Optics Cable (SUE - LOS B)*, U/G Fiber Optics Cable (SUE - LOS C)*, U/G Fiber Optics Cable (SUE - LOS D)*.

WATER:

Table listing water symbols: Water Manhole, Water Meter, Water Valve, Water Hydrant, U/G Water Line Test Hole (SUE - LOS A)*, U/G Water Line (SUE - LOS B)*, U/G Water Line (SUE - LOS C)*, U/G Water Line (SUE - LOS D)*, Above Ground Water Line.

TV:

Table listing TV symbols: TV Pedestal, TV Tower, U/G TV Cable Hand Hole, U/G TV Test Hole (SUE - LOS A)*, U/G TV Cable (SUE - LOS B)*, U/G TV Cable (SUE - LOS C)*, U/G TV Cable (SUE - LOS D)*, U/G Fiber Optic Cable (SUE - LOS B)*, U/G Fiber Optic Cable (SUE - LOS C)*, U/G Fiber Optic Cable (SUE - LOS D)*.

GAS:

Table listing gas symbols: Gas Valve, Gas Meter, U/G Gas Line Test Hole (SUE - LOS A)*, U/G Gas Line (SUE - LOS B)*, U/G Gas Line (SUE - LOS C)*, U/G Gas Line (SUE - LOS D)*, Above Ground Gas Line.

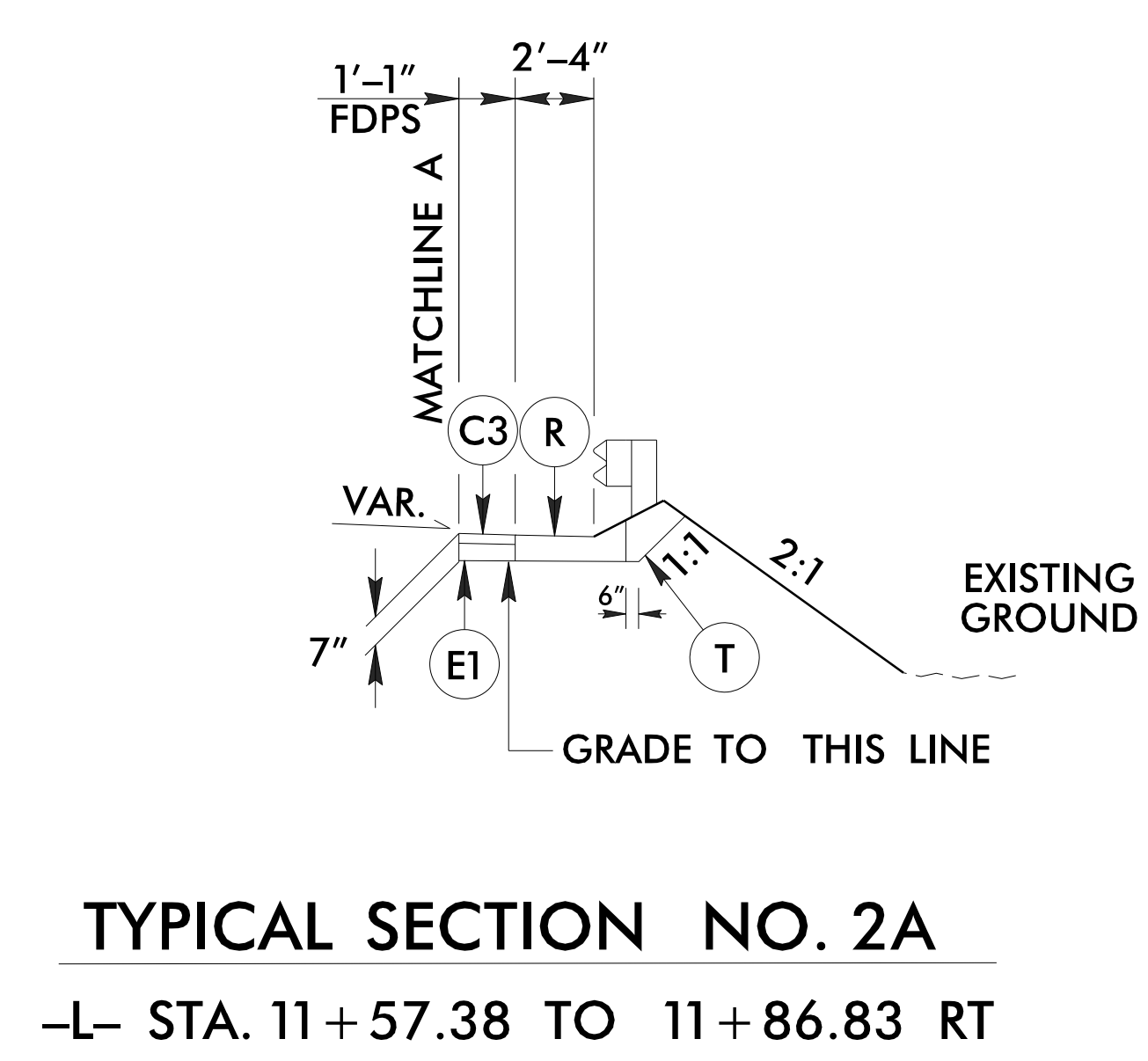
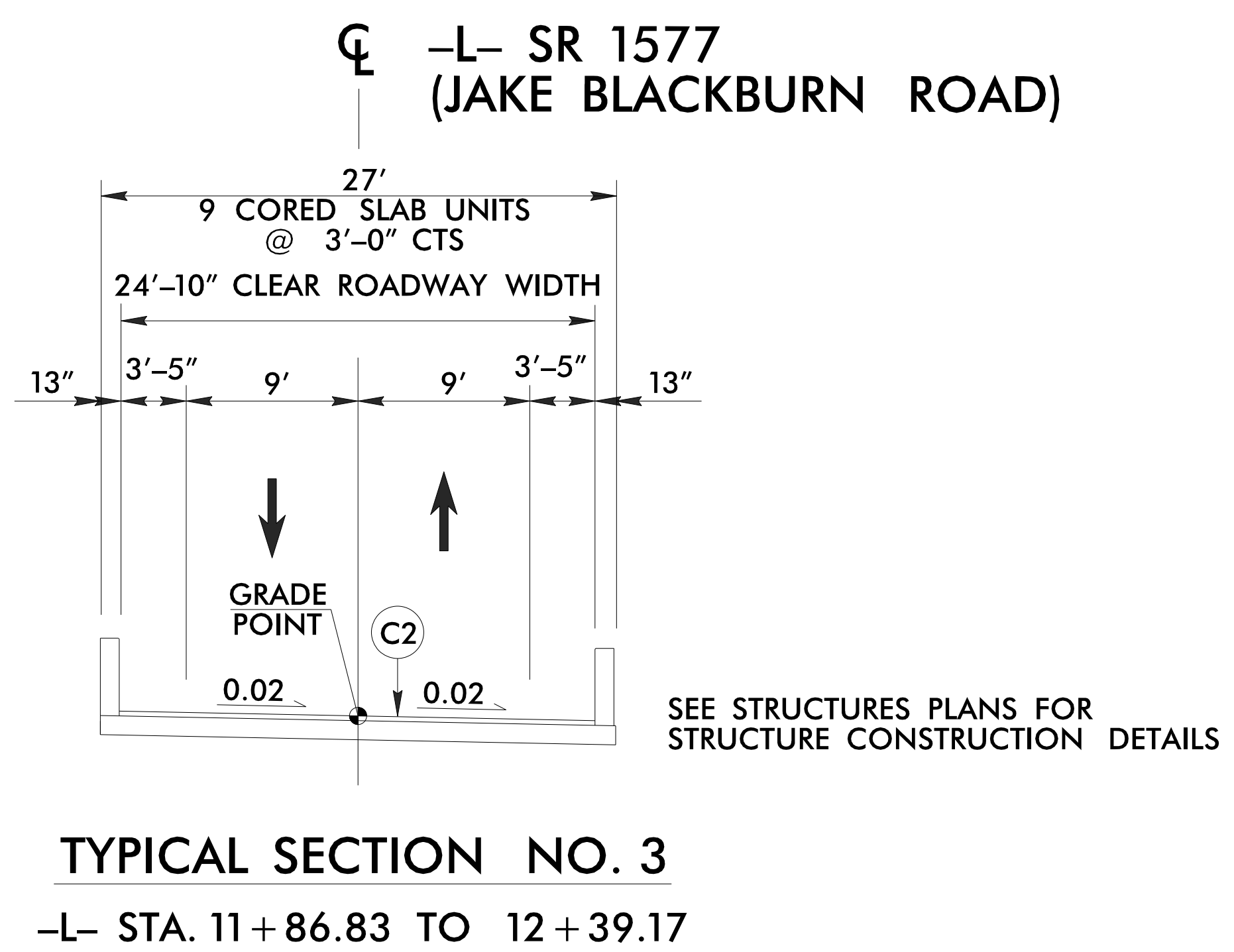
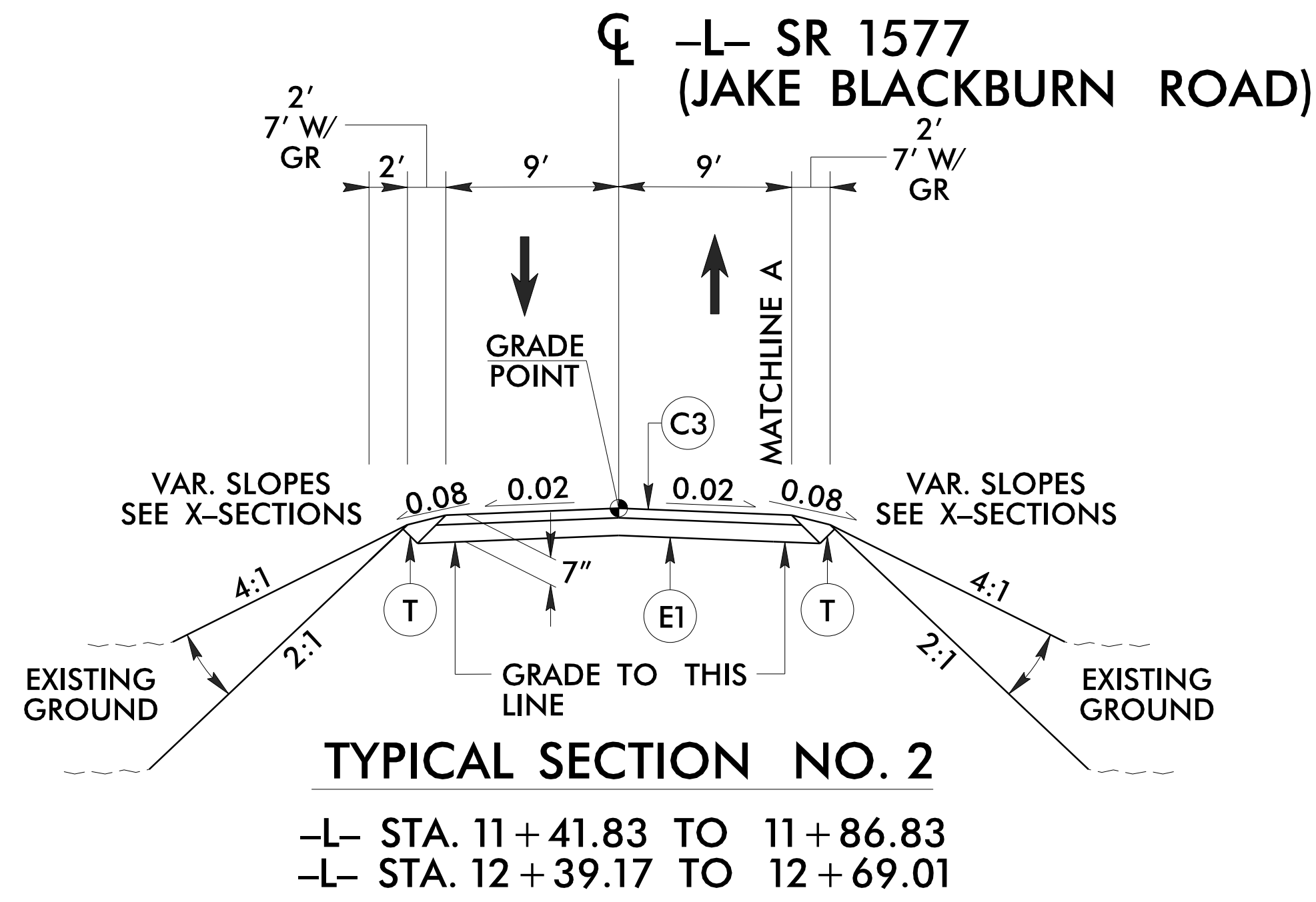
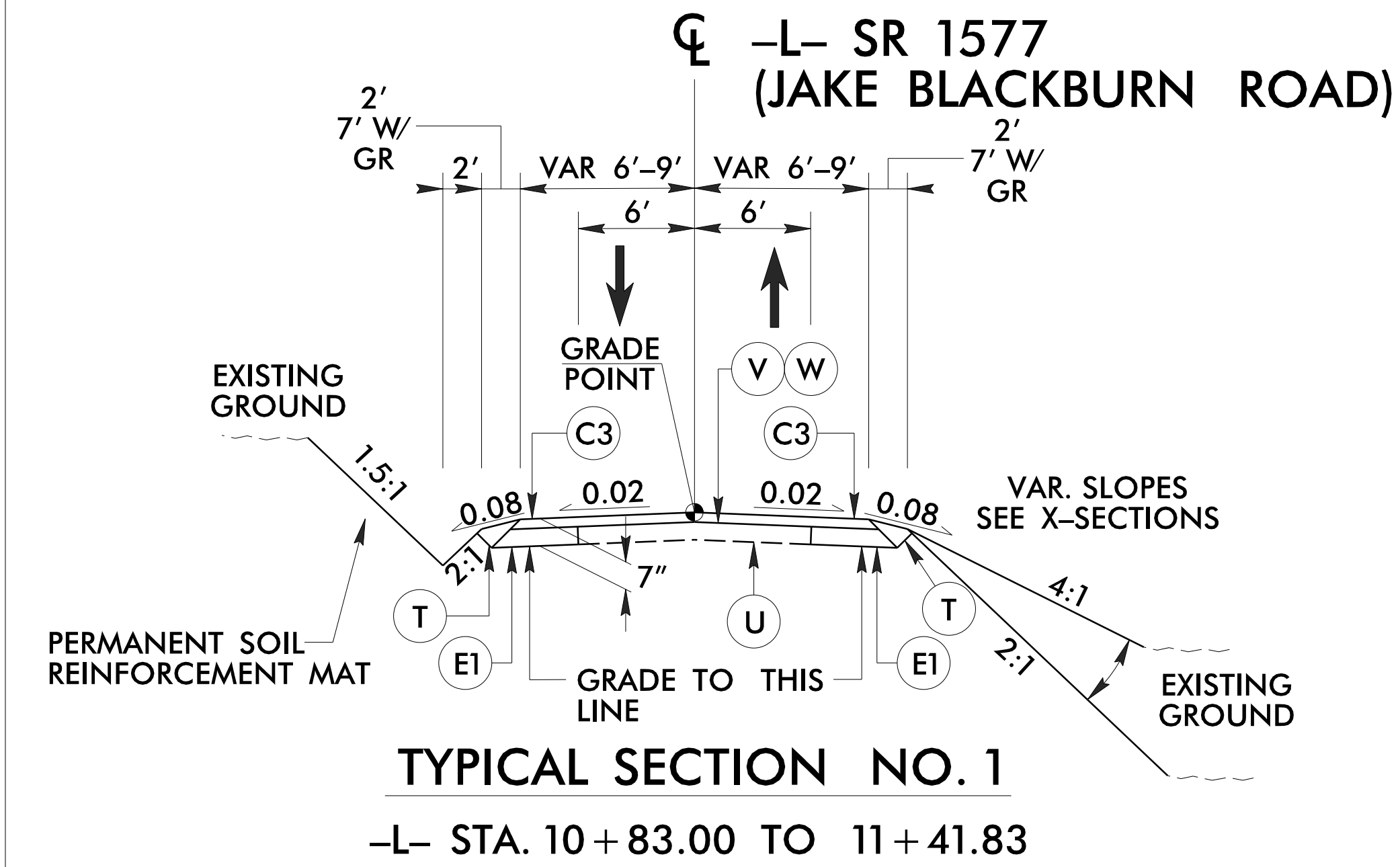
SANITARY SEWER:

Table listing sanitary sewer symbols: Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, SS Force Main Line Test Hole (SUE - LOS A)*, SS Force Main Line (SUE - LOS B)*, SS Force Main Line (SUE - LOS C)*, SS Force Main Line (SUE - LOS D)*.

MISCELLANEOUS:

Table listing miscellaneous symbols: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line (SUE - LOS B)*, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, Abandoned According to Utility Records, End of Information.

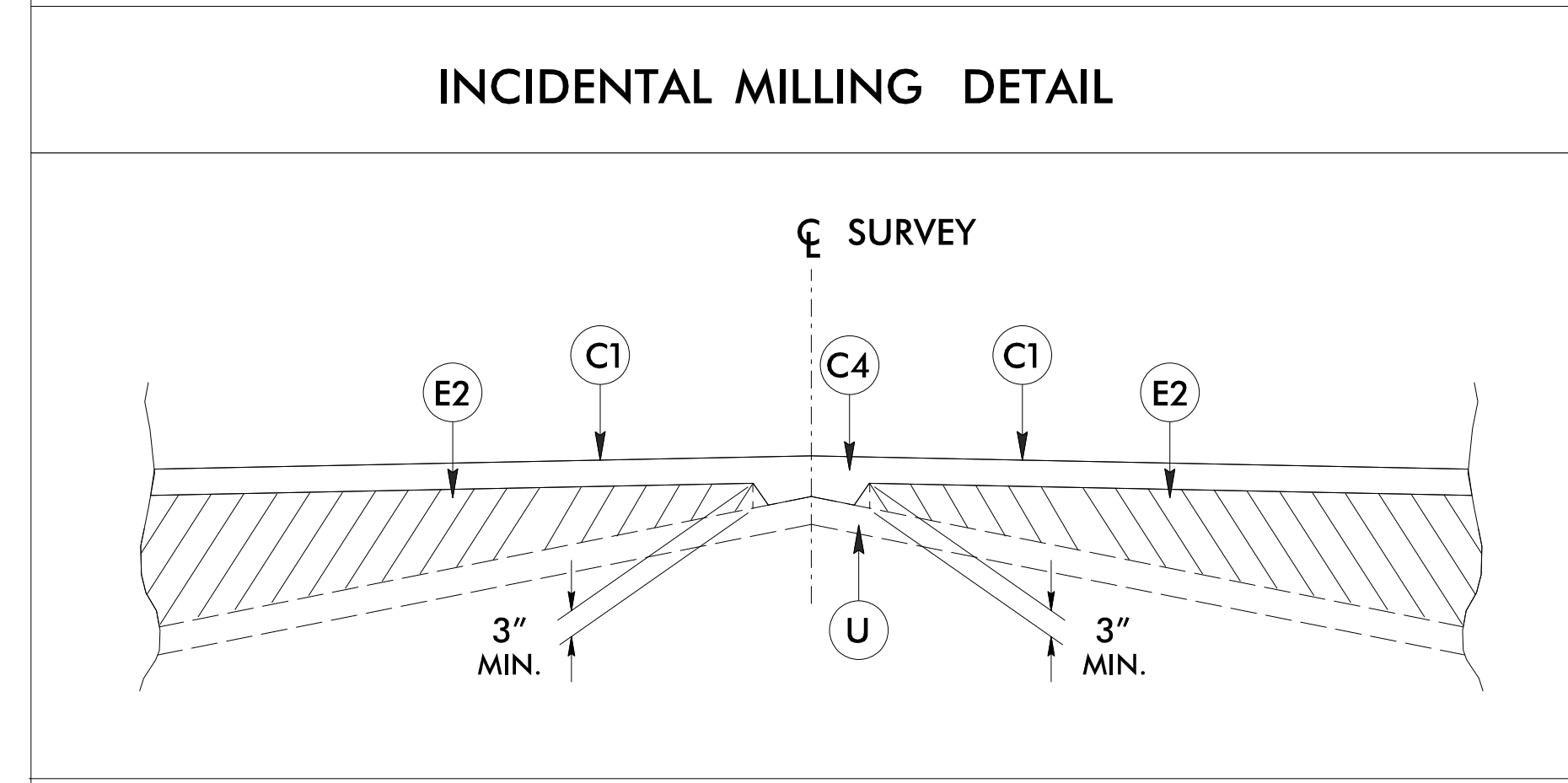
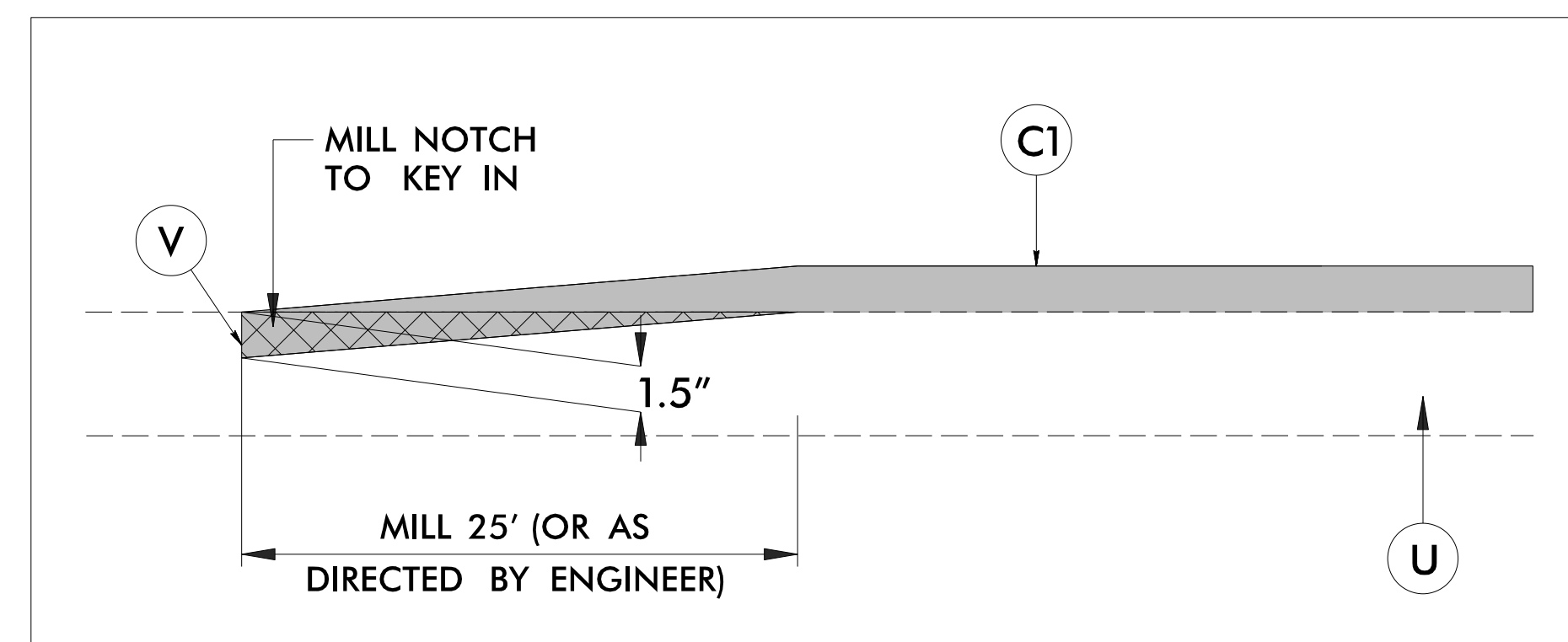
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PAVEMENT SCHEDULE

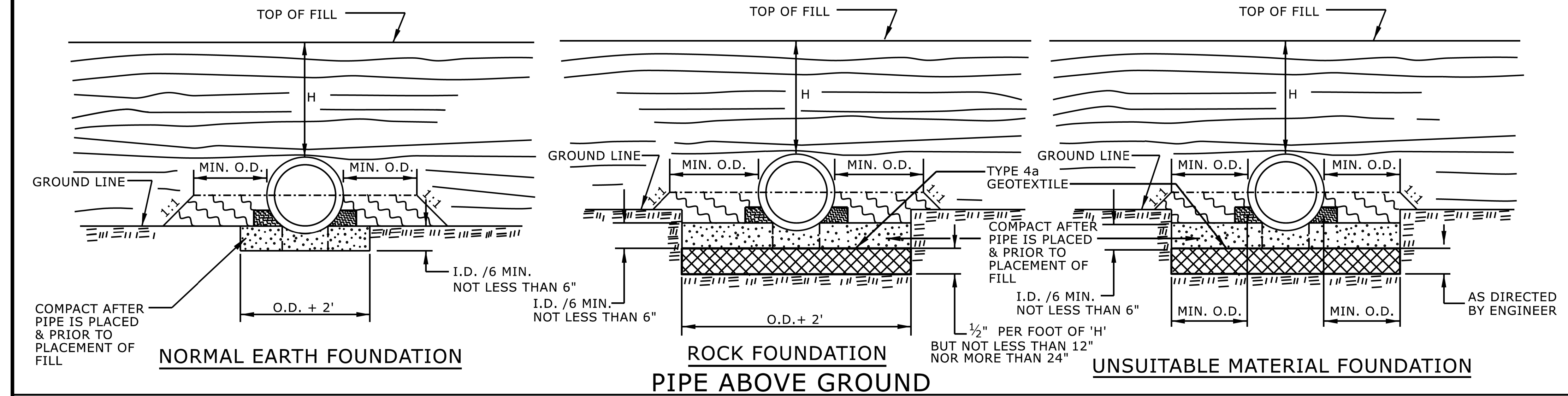
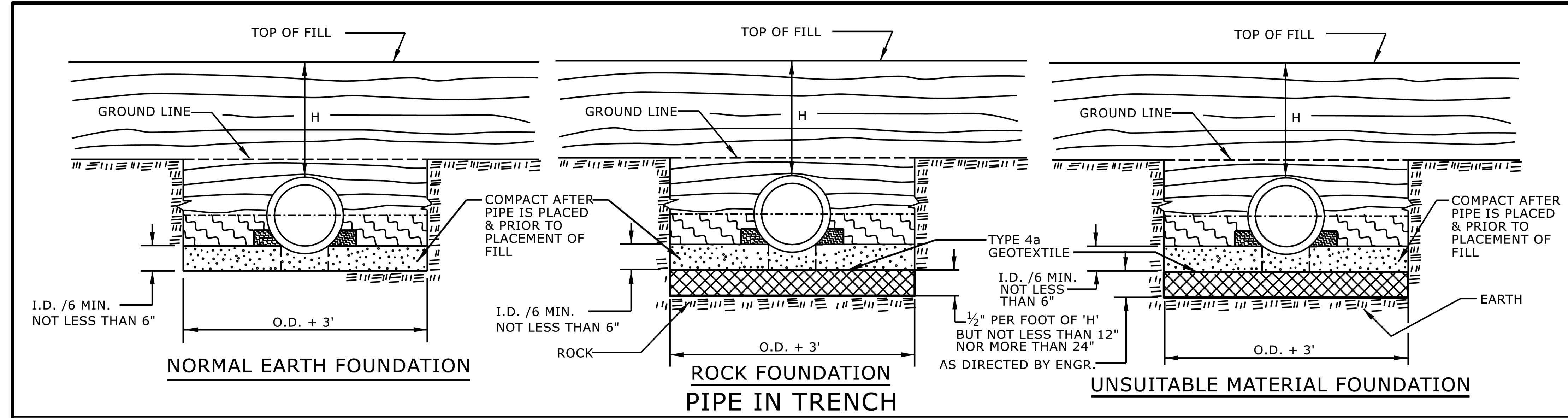
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH LAYER.
C2	PROP. APPROX. 2.75" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 151 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" OR GREATER THAN 1.5" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R	PROP. SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

NOTE:
 1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
 2. TRANSITION FULL DEPTH SHOULDER IN AREAS OF 8:1 TAPERS, UNLESS OTHERWISE SHOWN IN THE PLANS.



DF18311.2005593.PR
 2A-1
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ASHE COUNTY
 ROADWAY DESIGN UNIT
 ROADWAY DESIGN ENGINEER
 JACK R. CRIVELLO
 056618
 10/31/2025
 PAVEMENT DESIGN ENGINEER
 KIMLEY-HORN
 PREPARED BY
 Kimley-Horn
 10/31/2025
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS



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

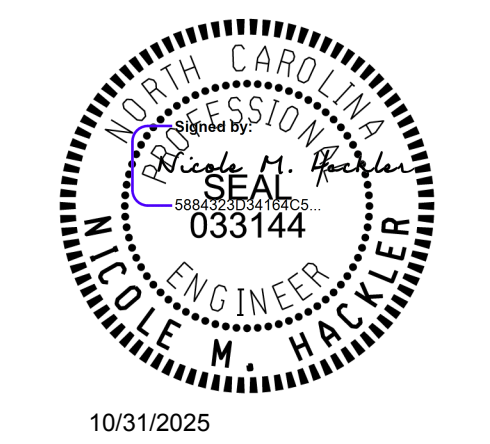
- APPROVED SUITABLE LOCAL MATERIAL.
- TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
- LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

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

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

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

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 RIGID PIPE



SHEET 2 OF 2
300.01

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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.: _____

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

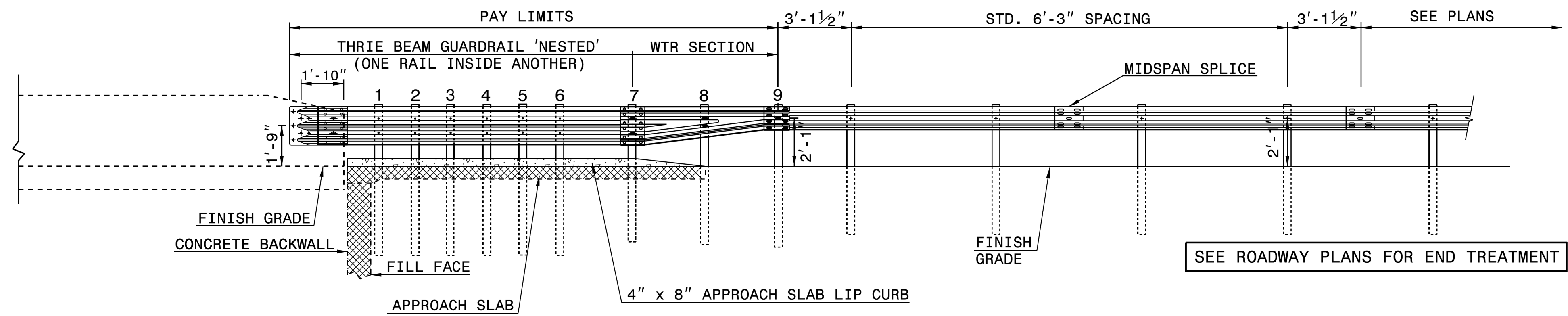
ENGLISH DETAIL DRAWING FOR TYPE III - SHOP CURVED STRUCTURE ANCHOR UNIT

SHEET 1 OF 1 TYPE III SC

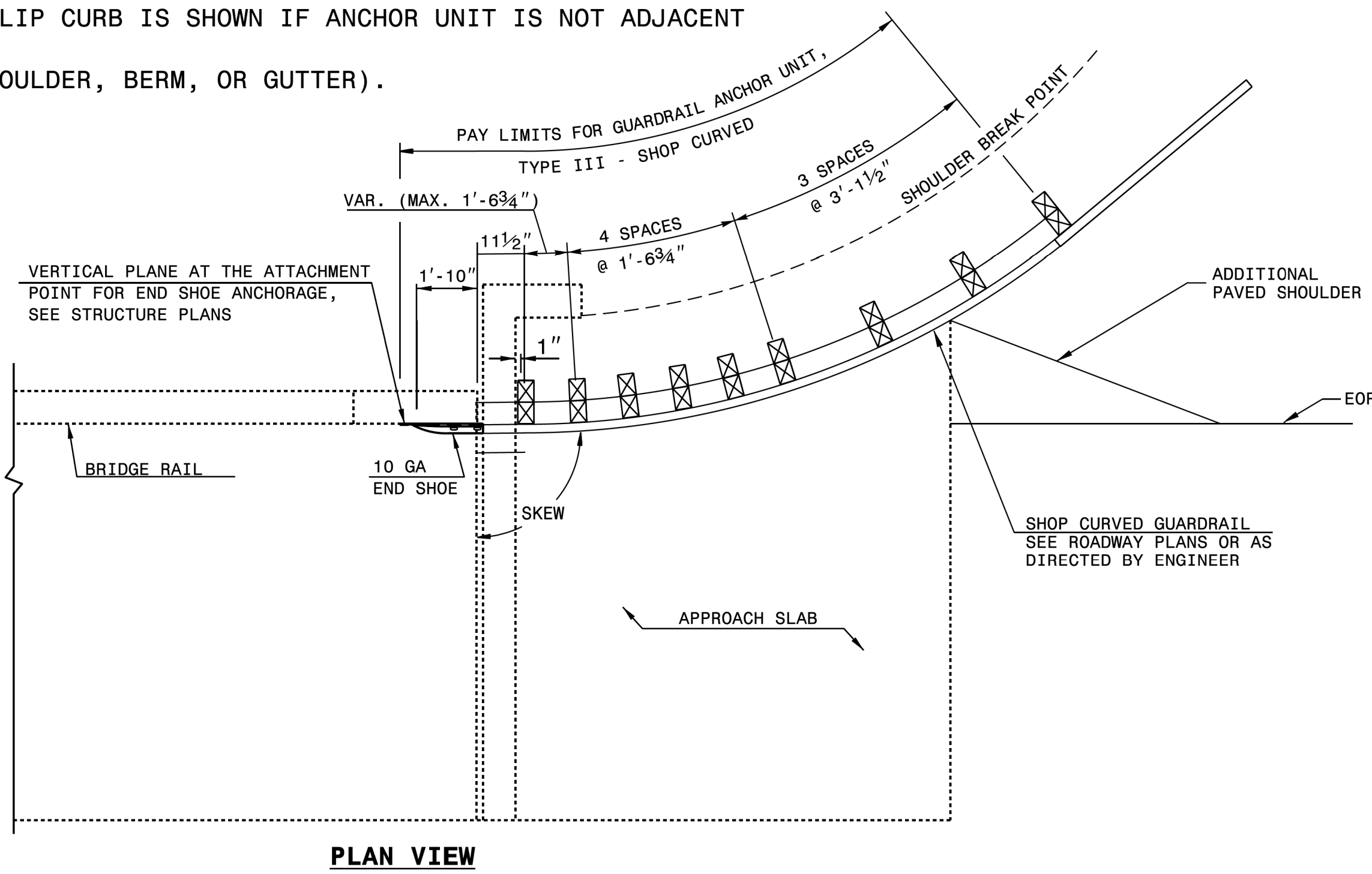
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR TYPE III - SHOP CURVED STRUCTURE ANCHOR UNIT

SHEET 1 OF 1 TYPE III SC

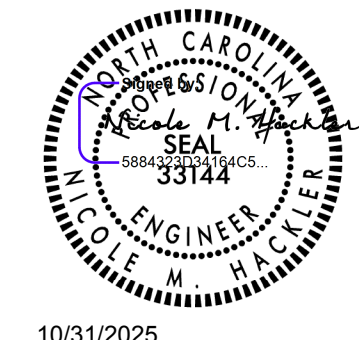


- NOTE:
- **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 - *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11 1/2" IF CONCRETE BACKWALL IS NOT PRESENT.
 - SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
 - MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
 - USE NO STEEL POSTS WITHIN THE GUARDRAIL ANCHOR UNIT LIMITS.
 - LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 - SEE STANDARD 862.03 SHEET 4 FOR POST SECTIONS 1 THRU 9.



GUARDRAIL ANCHOR UNIT, TYPE III - SHOP CURVED FOR ATTACHMENT TO RAIL ON BRIDGE

01-FEB-2018 09:49 S:\Contracts\Special Details\Howerton\Guardrail\31 inch Guardrail\type_iii_sc.dgn Jhowerton AT CSD-292595



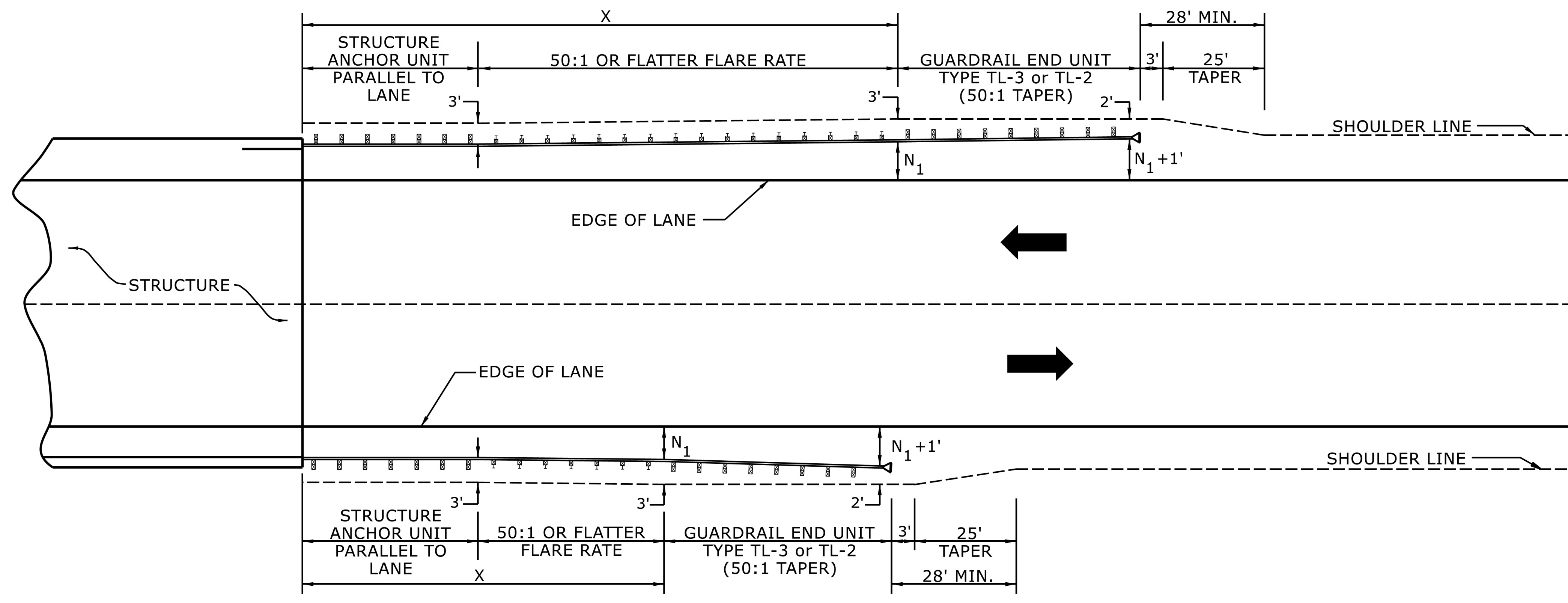
10/31/2025

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

SEE PLATE FOR TITLE

ORIGINAL BY: E.E.Ward DATE: 4-4-02
MODIFIED BY: T.S.Spell DATE: 2-01-18
CHECKED BY: DATE:
FILE SPEC.: Jhowerton\guardrail\31inguardrail\typeiiiisc.dgn



USE FLARE RATE AS THE CONTROL IF THE " N_1 " DISTANCE IS NOT OBTAINED.
 (" N_1 " IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

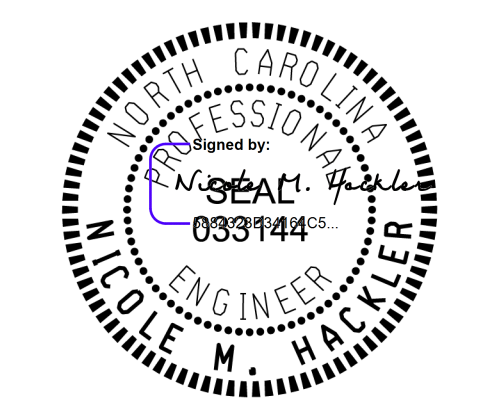
FOR POSTED SPEEDS \geq 45MPH USE GREU TYPE TL-3
 FOR POSTED SPEEDS $<$ 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

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

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



10/31/2025

SHEET 4 OF 15
862D01

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

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

SUMMARY OF EARTHWORK IN CUBIC YARDS

LINE	STATION	STATION	EXCAVATION		EMBANKMENT	BORROW	WASTE
			TOTAL UNCLASSIFIED	UNDERCUT	EMBANKMENT + 15%		TOTAL
-L-	10 + 83.00	11 + 86.83	149		51		98
-L-	12 + 39.17	12 + 69.01	24		6		18
				10			
PROJECT TOTAL			173	10	57		116
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT							
GRAND TOTAL			173	10			116
SAY			200	10			200

SHOULDER BORROW = 5 C.Y.

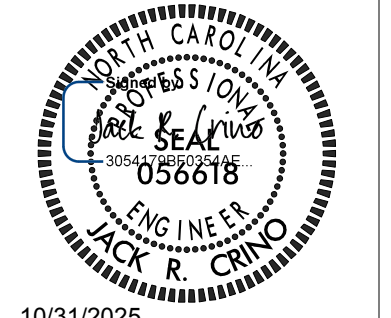
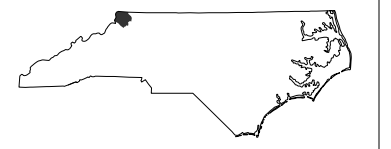
SUMMARY OF SHOULDER BERM GUTTER			
LINE	STATION TO STATION	LOCATION	LENGTH (LF)
-L-	11 + 49.13 TO 11 + 84.13	RT	35
TOTAL			35
SAY			35

SUMMARY OF PAVEMENT REMOVAL			
LINE	STATION TO STATION		AREA (SY)
-L-	11 + 10.00 TO 12 + 69.01		283
TOTAL			283
SAY			290

LUMP SUM GRADING QUANTITIES

THE PAY ITEMS WILL BE PAID FOR AT THE THE CONTRACT LUMP SUM PRICE FOR "GRADING". QUANTITIES ARE APPROXIMATE AND SHALL BE CONFIRMED BY CONTRACTOR PRIOR TO BIDDING.

SPEC NO.	ITEM	QUANTITY	UNIT
200	CLEARING AND GRUBBING	0.3	ACR
225	UNCLASSIFIED EXCAVATION	200	CY
225	BORROW EXCAVATION	0	CY
250	REMOVAL OF EXISTING ASPHALT PAVEMENT	290	SY
500	FINE GRADING	290	SY



10/31/2025



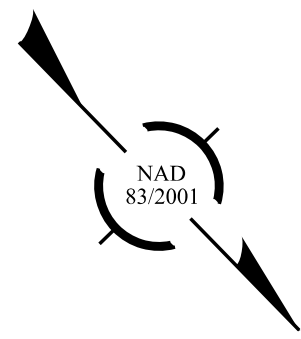
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UNLESS ALL SIGNATURES COMPLETED

REVISIONS

* REFER TO SHEET 2B-1 FOR TYPE III SHOP CURVE DETAILS

CUR DATA -L-
Pc 11+01.49
 $\Delta c = 10^{\circ}44'25.9''$ (LT)
D = 45'06'53.2"
Lc = 23.81
Tc = 11.94
R = 127
DS = 15 MPH
SE = 0.03

LORENA DIONISIA SANCHEZ
DB 568 PG 1239
-Y1- POB 10+00.00



NOTE: EXISTING DRIVEWAY DITCH ACTS AS DRAINAGE BREAK

BEGIN PROJECT DF18311.2005593.PR
-L- STA 10+83.00

BEGIN BRIDGE
-L- STA 11+86.83

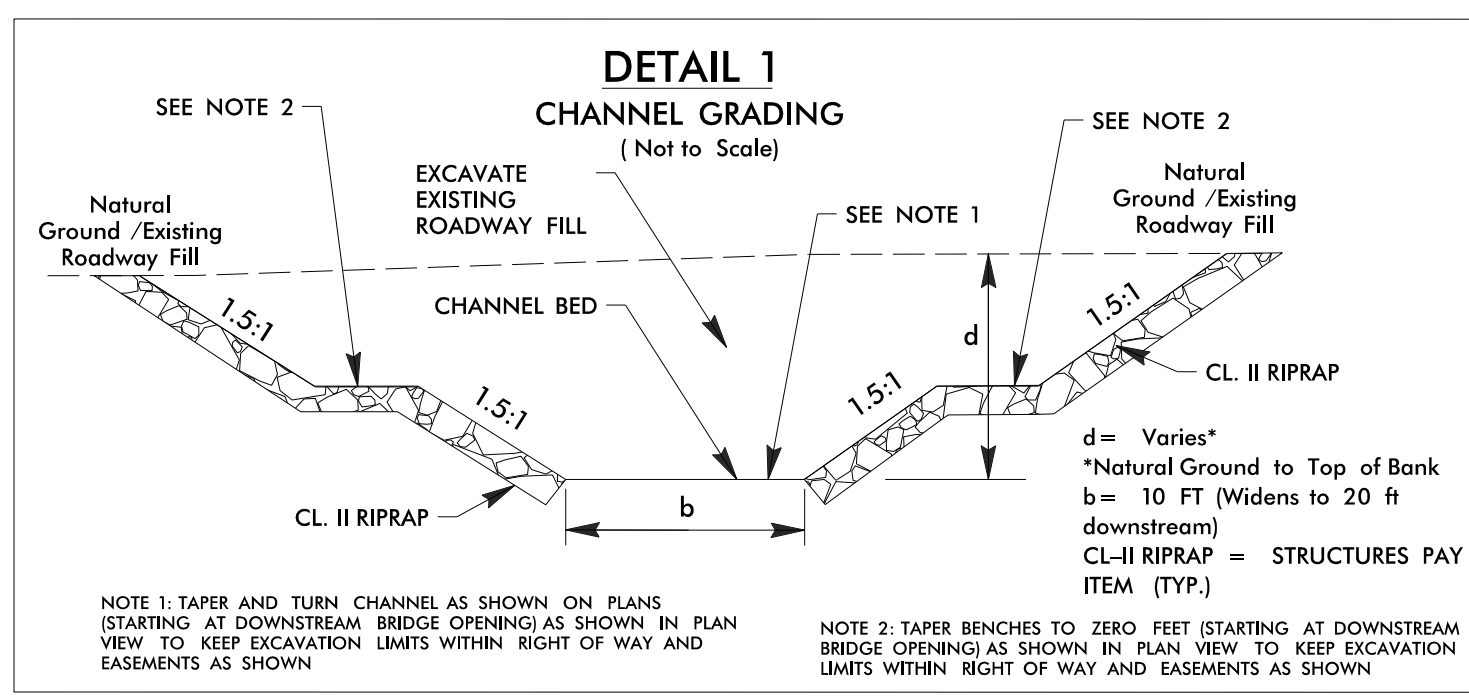
END BRIDGE
-L- STA 12+39.17

END PROJECT DF18311.2005593.PR
-L- STA 12+69.01

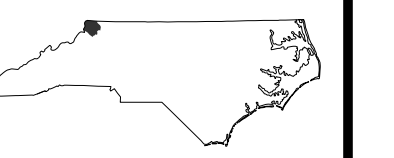
-L- POE 12+78.03
-Y1- 11+23.78
 $\Delta = 91^{\circ}51'14.1''$

END CONSTRUCTION
-Y1- STA 11+81.76 (9' RT)

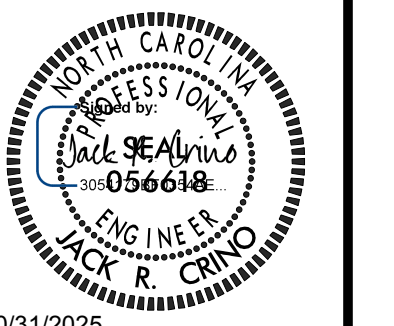
-Y1- POE 12+52.92



FROM PROPOSED DOWNSTREAM BRIDGE FACE TO 42 FEET DOWNSTREAM OF PROPOSED BRIDGE

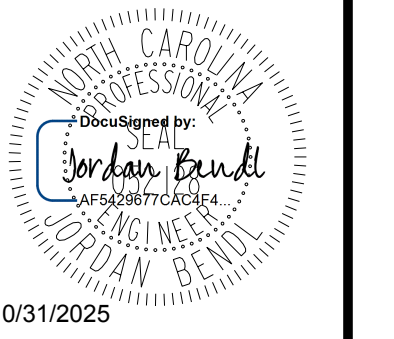


ROADWAY DESIGN UNIT
ROADWAY DESIGN ENGINEER



10/31/2025

HYDRAULICS ENGINEER



10/31/2025

PREPARED BY

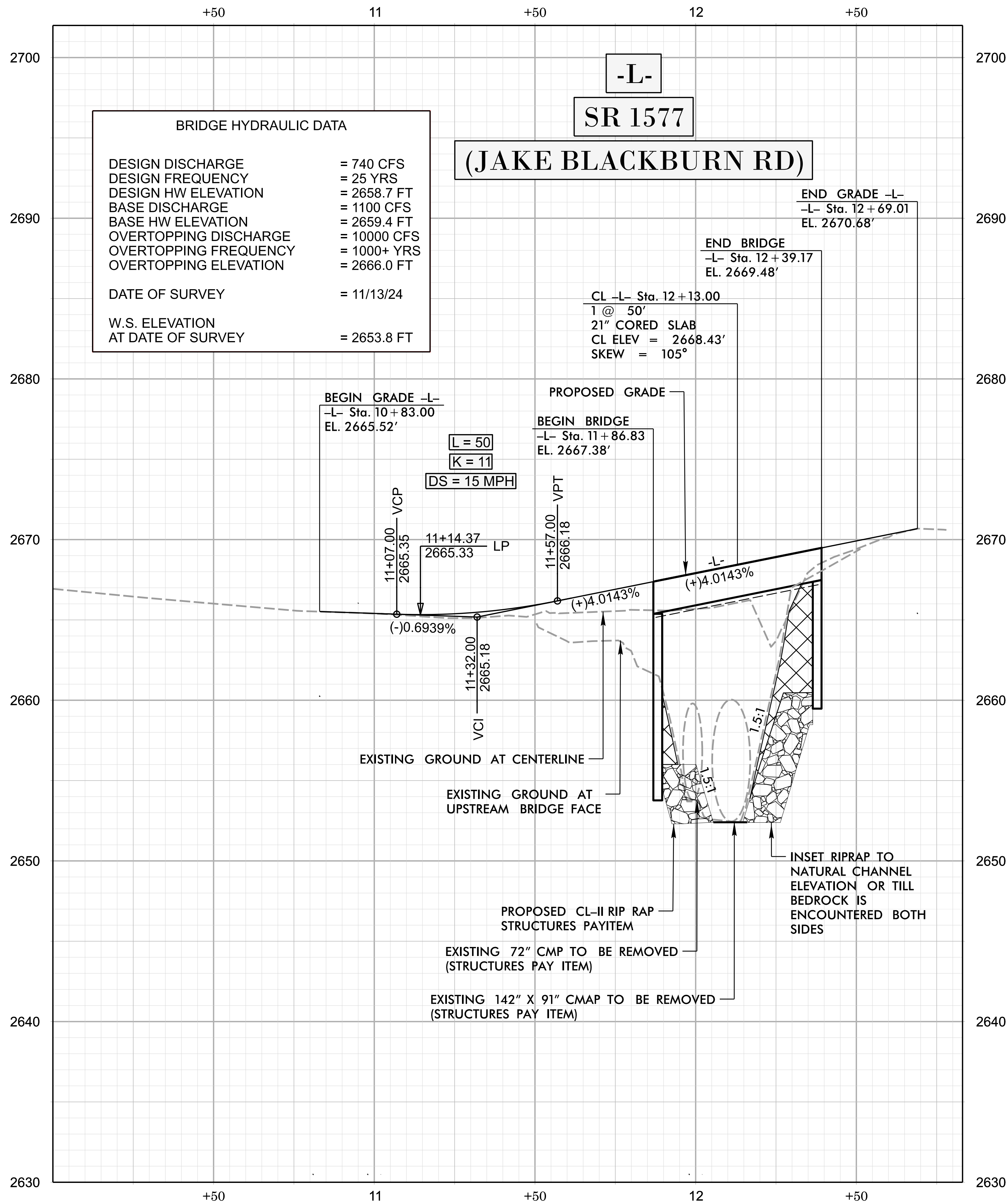
Kimley Horn

NO SCALE OF STATE PROJECTS SHALL BE USED UNLESS ALL SIGNATURES COMPLETED

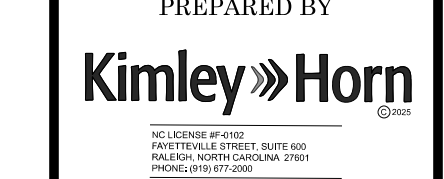
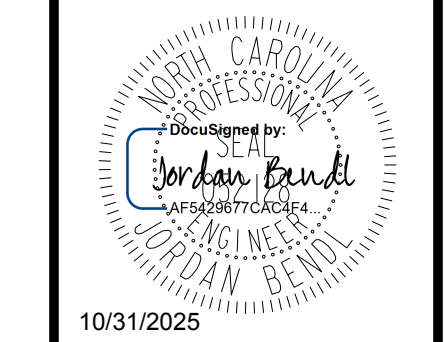
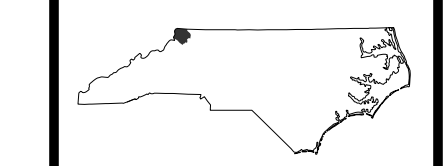
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS

FOR -L- PROFILE, SEE SHEET 5





FOR -L- PLAN, SEE SHEET 4

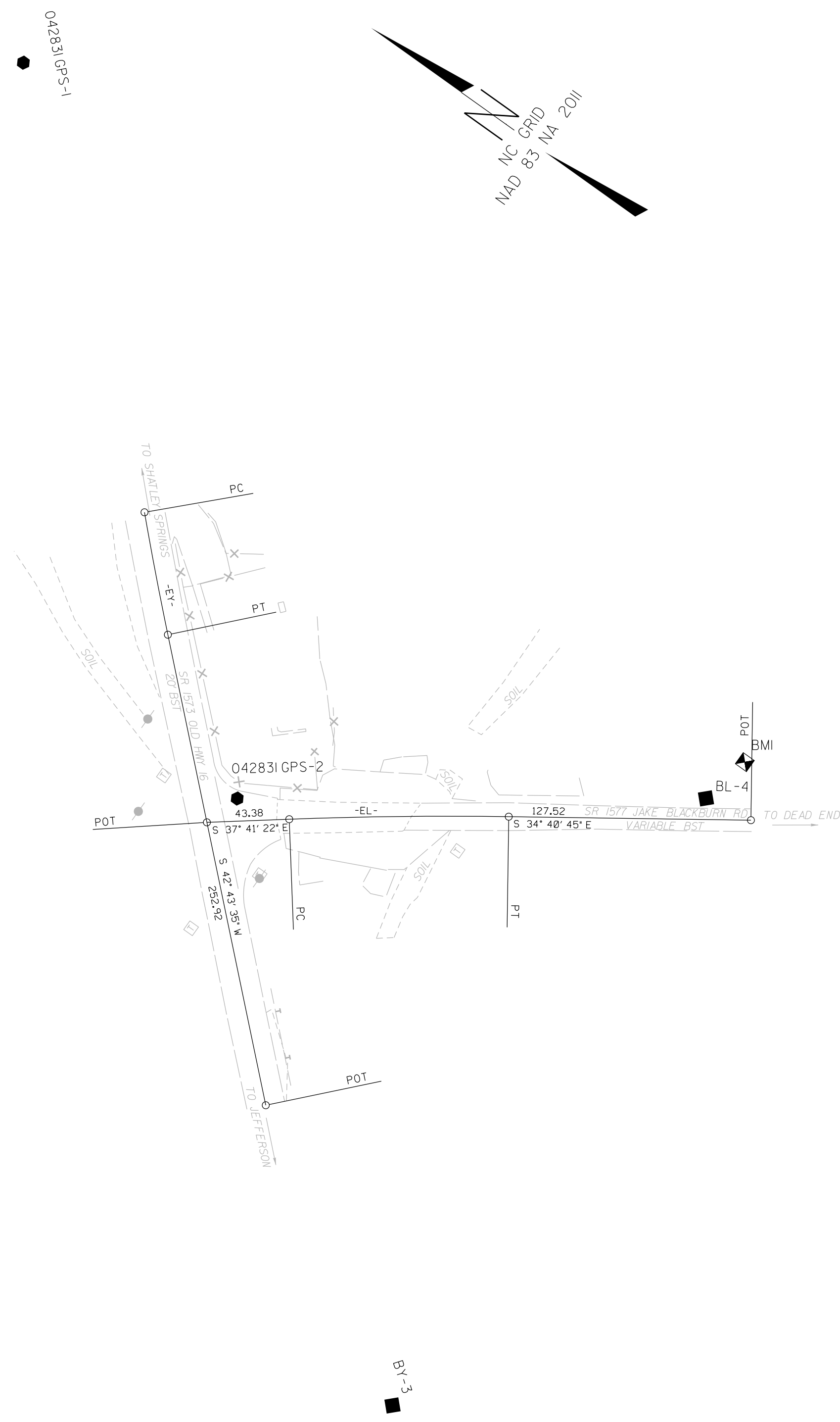


REVISIONS

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 04-2831	SHEET NO. RW-02C-1
Location and Surveys	
 ONE WEST FOURTH ST., SUITE 820 WINSTON SALEM, N.C. 27101 LICENSE NO.: F-0672 www.stantec.com	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



I, Clinton B. Osborne, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 12/10/24
 Datum/Epoch: NAD83-2011
 Published/Fixed-control use: RTN
 Localized around: 042831 GPS-2
 Northing: 998575.3554
 Easting: 1282543.9642
 Combined grid factor: 0.999975778
 Geoid model: GEI0D18
 Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 12/10/24 to 12/13/24, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 17th day of December, 2004.

DocuSigned by:

 CLB6F6B08F6449B



Professional Land Surveyor L-3834

NOTES:

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

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 04-2831	SHEET NO. RW-02C-2
Location and Surveys	
 ONE WEST FOURTH ST., SUITE 820 WINSTON SALEM, N.C. 27101 LICENSE NO.: F-0672 www.stantec.com	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
2		042831 GPS-2	998575.3554	1282543.9642	2668.88
4		BL-4	998374.4918	1282687.3745	2666.17

.....
 BM1 ELEVATION = 2664.42
 N 998369 E 1282715
 BL STATION 7+47.00
 S 78°36'15.6" E DIST 27.99
 RR SPIKE IN 18" ASH TREE

BY	POINT	DESC.	NORTH	EAST	ELEVATION
1		042831 GPS-1	998891.9429	1282793.7411	2657.70
2		042831 GPS-2	998575.3554	1282543.9642	2668.88
3		BY-3	998323.2572	1282331.4639	2677.44

I, Clinton B. Osborne, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: 12/10/24
 Datum/Epoch: NAD83-2011
 Published/Fixed-control use: RTN
 Localized around: 042831 GPS-2
 Northing: 998575.3554
 Easting: 1282543.9642
 Combined grid factor: 0.999975778
 Geoid model: GEIOD18
 Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 12/10/24 to 12/13/24, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 17th day of December, 2004.

DocuSigned by:

 0A9F8B08F8449B...


Professional Land Surveyor L-3834

NOTES:

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

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 04-2831	SHEET NO. RW-02C-3
Location and Surveys	
 <p>Stantec ONE WEST FOURTH ST., SUITE 820 WINSTON SALEM, N.C. 27101 LICENSE NO.: F-0672 www.stantec.com</p>	
<p>PROJECT SURVEYOR</p> 	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	

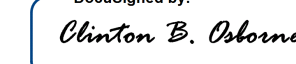
EL		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	998581.064	1282524.490		S 37°41'21.7" E	43.38					
LINE										
PC	998546.734	1282551.012		S 36°11'03.2" E	115.57	03°00'37.0"(RT)	02°36'15.7"	115.59	57.81	2200.00
CURVE										
PT	998453.453	1282619.245		S 34°40'44.7" E	127.52					
LINE										
POT	998348.583	1282691.803								

I, Clinton B. Osborne, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Date of survey: 12/10/24
 Datum/Epoch: NAD83-2011
 Published/Fixed-control use: RTN
 Localized around: 042831 GPS-2
 Northing: 998575.3554
 Easting: 1282543.9642
 Combined grid factor: 0.999975778
 Geoid model: GEIOD18
 Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 12/10/24 to 12/13/24, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 17th day of December, 2004.

DocuSigned by:

0A6F6B08F6449B

Professional Land Surveyor L-3834

EY		N	E	BEARING	DIST	DELTA	D	L	T	R
PC	998702.594	1282638.202		S 43°39'57.3" W	65.58	01°52'43.9"(LT)	02°51'53.2"	65.58	32.80	2000.00
CURVE										
PT	998655.153	1282592.921		S 42°43'35.3" W	252.92					
LINE										
POT	998469.360	1282421.317								

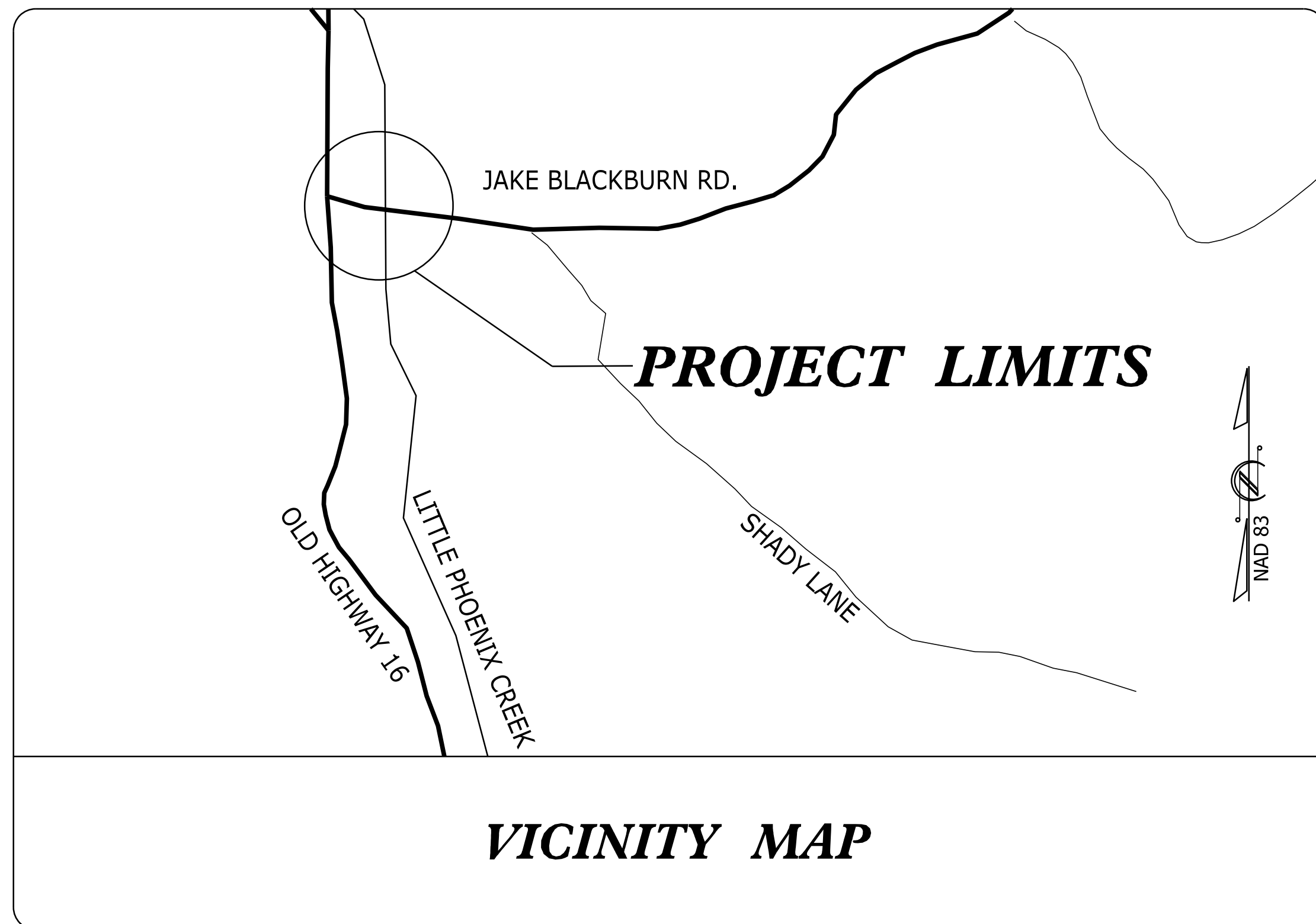
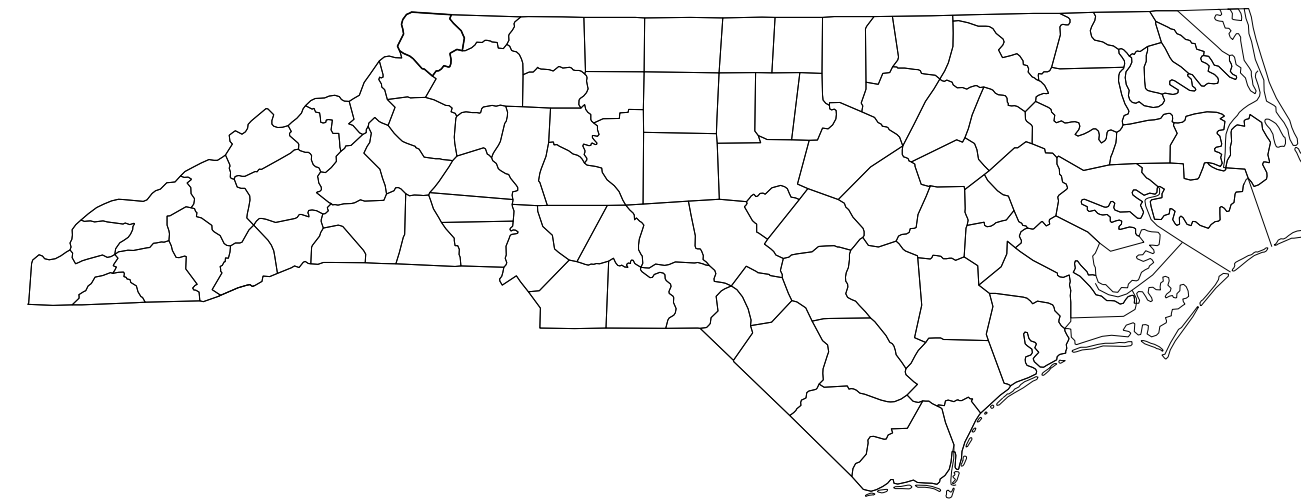
NOTES:

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ASHE COUNTY



TYPE OF WORK: *GRADING, DRAINAGE
PAVING, STRUCTURE.*

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, PROJECT VICINITY AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	GENERAL NOTES
TMP-1C	GENERAL NOTES AND PHASING NOTES
TMP-2A	TEMPORARY SHORING NOTES
TMP-3	PHASE I DETAIL
TMP-4	PHASE II DETAIL

09/26/25 DATE SUBMITTED

SUBMITTAL:

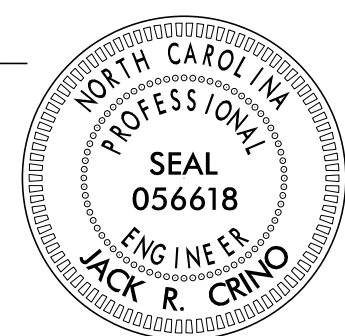
- STAGING CONCEPT
- MIDPOINT
- PRE-FINAL
- FINAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED: _____

DATE: _____

SEAL

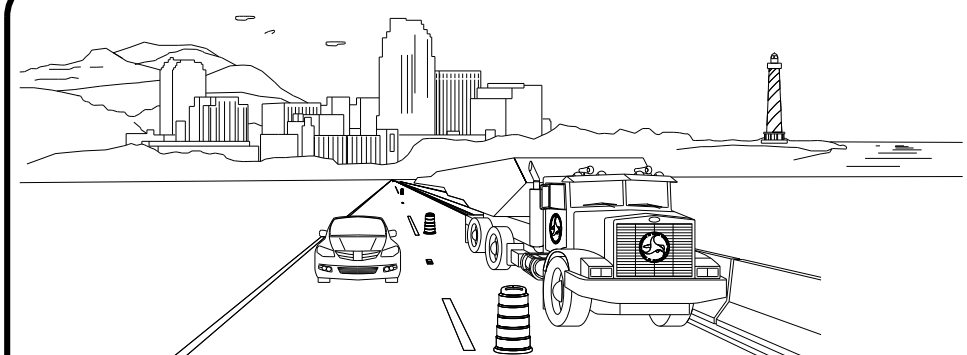


SHEET NO.

TMP-1

TIP PROJECT: DF18311.2005593.PR

TIP PROJECT:



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

BEN CRAWFORD, P.E.
WZTC ENGINEER

JACK CRINO, P.E.
WZTC DESIGN ENGINEER

NCDOT CONTACTS:

ROBBIE WEISZ, P.E.
PROJECT MANAGER
NCDOT PROJECT MANAGEMENT UNIT



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANAUARY 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	DRUMS
1135.01	CONES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL & BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL & BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

- WORK AREA
- MILLING, RESURFACING AND WEDGING
- REMOVAL
- TEMPORARY PAVEMENT

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

- PAVEMENT MARKING LINES
- P1 - PAINT (4" WHITE) EDGELINE
 - P5 - PAINT (4" WHITE) 2FT. - 6FT./SP MINISKIP
 - P61 - PAINT (24" WHITE) WHITE STOPBAR

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn

APPROVED: DATE: 03/31/2025 		ROADWAY STANDARD DRAWINGS & LEGEND
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MANAGEMENT STRATEGIES

PROPOSED IMPROVEMENTS ALONG SR 1577 (JAKE BLACKBURN RD) WILL BE CONSTRUCTED IN PHASES WHILE MAINTAINING TRAFFIC AND USING TEMPORARY TRAFFIC PATTERNS AND TEMPORARY LANE CLOSURES. LOCAL ACCESS TO RESIDENTS AND BUSINESSES WILL BE MAINTAINED AT ALL POSSIBLE TIMES DURING CONSTRUCTION.

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 UNDESIRE 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 PLANS, OR DIRECTED BY THE ENGINEER.

NC DOT HAS THE AUTHORITY TO MODIFY DAY AND TIME RESTRICTIONS AS TRAFFIC DICTATES DUE TO HEAVY TRAFFIC ALONG SR 1577 (JAKE BLACKBURN RD), FOR THE DURATION OF THE PROJECT.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 1577 (JAKE BLACKBURN RD) SR 1573 (OLD HIGHWAY 16)	SEE CONTRACT

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME	HOLIDAY
SR 1577 (JAKE BLACKBURN RD) SR 1573 (OLD HIGHWAY 16)	<ol style="list-style-type: none"> FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

- I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING *UNEVEN LANE* SIGNS (W8-11) 100FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- K) 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.
- L) PROVIDE SIGNING REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- M) CONTRACTOR SHALL COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 100 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- P) INSTALL PORTABLE CONCRETE 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.

ONCE PORTABLE 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.

- Q) PROTECT THE APPROACH END OF 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.

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.

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

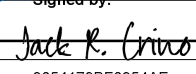
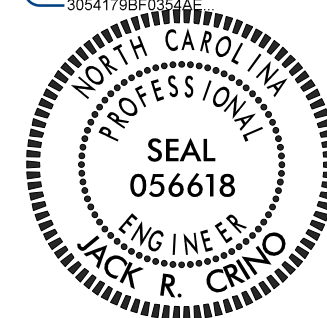
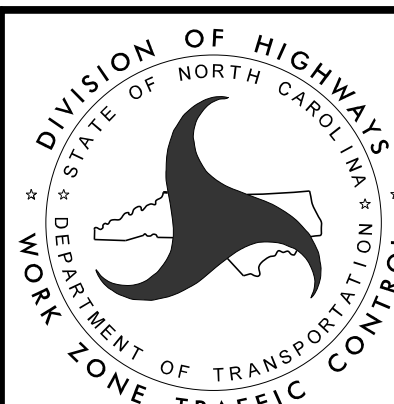
POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

- R) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (25 MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS) AND 1135 (CONES) FOR ADDITIONAL REQUIREMENTS.
- S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 100 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn

APPROVED:  DATE: 11/19/2025 		<h2 style="margin: 0;">GENERAL NOTES</h2>
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GENERAL NOTES (CONT.)

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
JAKE BLACKBURN RD	PAINT	N/A
OLD HIGHWAY 16	PAINT	N/A

V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVMENT MARKING LINES.

W) REPLACE ANY PAVEMENT MARKING LINES THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

X) 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.

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

MISCELLANEOUS

Z) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.

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

PHASING

WHILE MAINTAINING TRAFFIC USING RSD 1101.02 FOR LANE CLOSURES AS NECESSARY, PERFORM THE FOLLOWING AS SHOWN ON SHEETS TMP-3 AND TMP-4. LANE CLOSURES ARE REQUIRED ANYTIME PERSONNEL OR EQUIPMENT ARE WORKING WITHIN FIVE FEET OF A TRAVEL LANE.

PHASE 1

- STEP 1: PRIOR TO BEGINING CONSTRUCTION, INSTALL ADVANCE WARNING SIGNS ALONG SR 1577 (JAKE BLACKBURN RD) AND SR 1573 (OLD HWY 16) AS SHOWN ON RSD. 1101.01 SHEET 3 OF 3.
- STEP 2: UTILIZING FLAGGING FOR A TEMPORARY LANE CLOSURE AS SHOWN ON RSD. 1101.02 SHEET 1 OF 19, INSTALL DRAINAGE STRUCTURES 403 TO 404 AND 1' OF TEMPORARY PAVEMENT AND 3' OF GRADED SHOULDER ALONG -EL- STA. 10+83.00 TO STA. 12+25.00, AS SHOWN IN PLANS.
- STEP 3: INSTALL ADVANCE WORK SIGNS FOR A PORTABLE TEMPORARY SIGNAL IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19 AND COVER.
- STEP 4: INSTALL TEMPORARY GUARDRAIL, TEMPORARY END UNITS, TEMPORARY PAVEMENT MARKINGS, AND REMOVE CONFLICTING PAVEMENT MARKINGS. ACTIVATE PORTABLE TEMPORARY SIGNALS AND PLACE TRAFFIC ONTO TEMPORARY PATTERN AS SHOWN IN TMP-3.

INTERMEDIATE CONTRACT TIME #2:
THE COMPLETION DATE FOR THE WORK ASSOCIATED WITH PHASE 1, STEPS 5 & 6 IS 90 CONSECUTIVE CALENDER DAYS AFTER AND INCLUDING THE DATE THAT THE CONTRACTOR COMPLETES PHASE 1, STEP 4. REFER TO THE PROJECT SPECIFICATIONS FOR LIQUIDATED DAMAGES.

- STEP 5: AWAY FROM TRAFFIC, INSTALL THE TEMPORARY SHORING AS SHOWN ON TMP-3.
- STEP 6: AWAY FROM TRAFFIC, BEGIN CONSTRUCTION ON THE ROADWAY AND BRIDGE AS SHOWN ON TMP-3, INCLUDING BUT NOT LIMITED TO PIPE AND HEADWALL REMOVAL, BRIDGE CONSTRUCTION, DRAINAGE, GRADING, MILLING, WEDGING, PAVEMENT REMOVAL AND GUARDRAIL UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT SURFACE COURSE.

PHASE 2

- STEP 1: WHILE MAINTAINING TRAFFIC IN THE PHASE 1 TEMPORARY PATTERN, INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY GUARDRAIL ON THE NEWLY CONSTRUCTED BRIDGE AS SHOWN ON SHEET TMP-4 THAT DOES NOT CONFLICT WITH THE PHASE 1 PORTABLE CONCRETE BARRIER.
- STEP 2: ADJUST TEMPORARY PAVEMENT MARKINGS AND SHIFT TRAFFIC ONTO PATTERN SHOWN IN TMP-4.

INTERMEDIATE CONTRACT TIME #3:
THE COMPLETION DATE FOR THE WORK ASSOCIATED WITH PHASE 2, STEP 3 IS 60 CONSECUTIVE CALENDER DAYS AFTER AND INCLUDING THE DATE THAT THE CONTRACTOR COMPLETES PHASE 2, STEP 2. REFER TO THE PROJECT SPECIFICATIONS FOR LIQUIDATED DAMAGES.

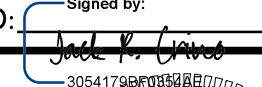

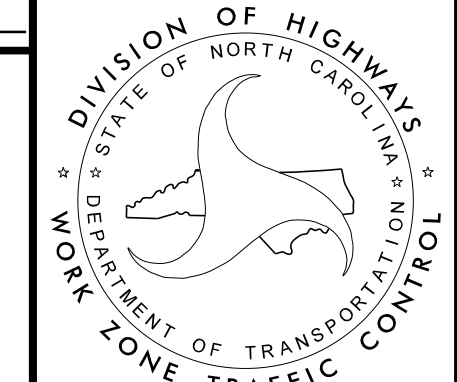
- STEP 3: AWAY FROM TRAFFIC, CONSTRUCT THE ROADWAY AND BRIDGE AS SHOWN ON TMP-4, INCLUDING BUT NOT LIMITED TO TEMPORARY SHORING REMOVAL, PIPE REMOVAL, BRIDGE CONSTRUCTION, DRAINAGE, GRADING, MILLING, WEDGING, PAVEMENT REMOVAL, AND GUARDRAIL UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT SURFACE COURSE.

PHASE 3

- STEP 1: REMOVE TRAFFIC CONTROL DEVICES INSTALLED IN PHASE 2, INSTALL TEMPORARY PAVEMENT MARKINGS IN THE FINAL PATTERN AS SHOWN ON PAVEMENT MARKINGS PLANS, AND SHIFT TRAFFIC INTO THE FINAL PATTERN.
- STEP 2: UTILIZING RSD. 1101.02 SHEET 1 OF 19 FOR TEMPORARY LANE CLOSURES, PLACE THE FINAL ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND MARKERS.
- STEP 3: REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL LANES TO TRAFFIC.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn

APPROVED:  DATE: 11/14/2025 		<p>GENERAL AND PHASING NOTES</p>
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TEMPORARY SHORING NOTES

**TEMPORARY SHORING RECOMMENDATIONS
DATED SEPTEMBER 10, 2025
FROM FALCON ENGINEERING**

1. **FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.**
2. **BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.**
3. **DESIGN TEMPORARY SHORING FROM -L- STATION 11+79, 7.5' LT TO STATION 12+32, 7.5' LT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:**

ABOVE ELEVATION 2,649 (ROADWAY EMBANKMENT OR ALLUVIAL SOIL)

UNIT WEIGHT (GAMMA) = 120 LB/CF

FRICTION ANGLE (f) = 30 DEGREES

COHESION (c) = 0 LB/SF

BELOW ELEVATION 2,649 (WEATHERED ROCK OR ROCK)

UNIT WEIGHT (GAMMA) = 140 LB/CF

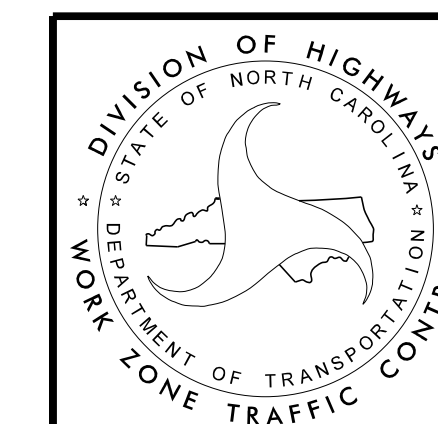
FRICTION ANGLE (F) = 45 DEGREES

COHESION (c) = 0 LB/SF

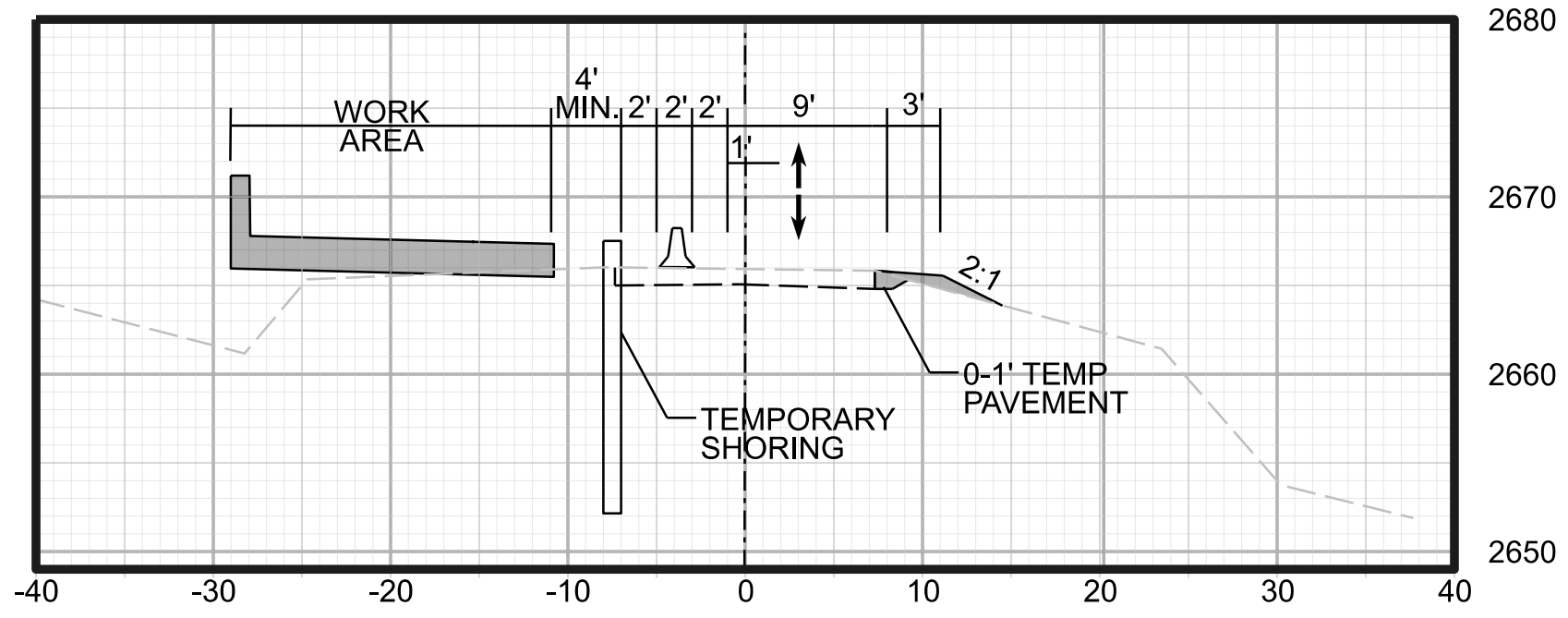
GROUNDWATER ELEVATION = 2,654 FT

4. **DRIVEN PILING FOR TEMPORARY SHORING FROM 11+79, 7.5' LT TO STATION 12+32, 7.5' LT WILL NOT PENETRATE BELOW ELEVATION 2,649 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.**
5. **IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM 11+79, 7.5' LT TO STATION 12+32, 7.5' LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.**

Kimley»Horn



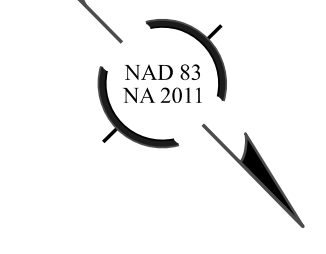
**TEMPORARY
SHORING NOTES**



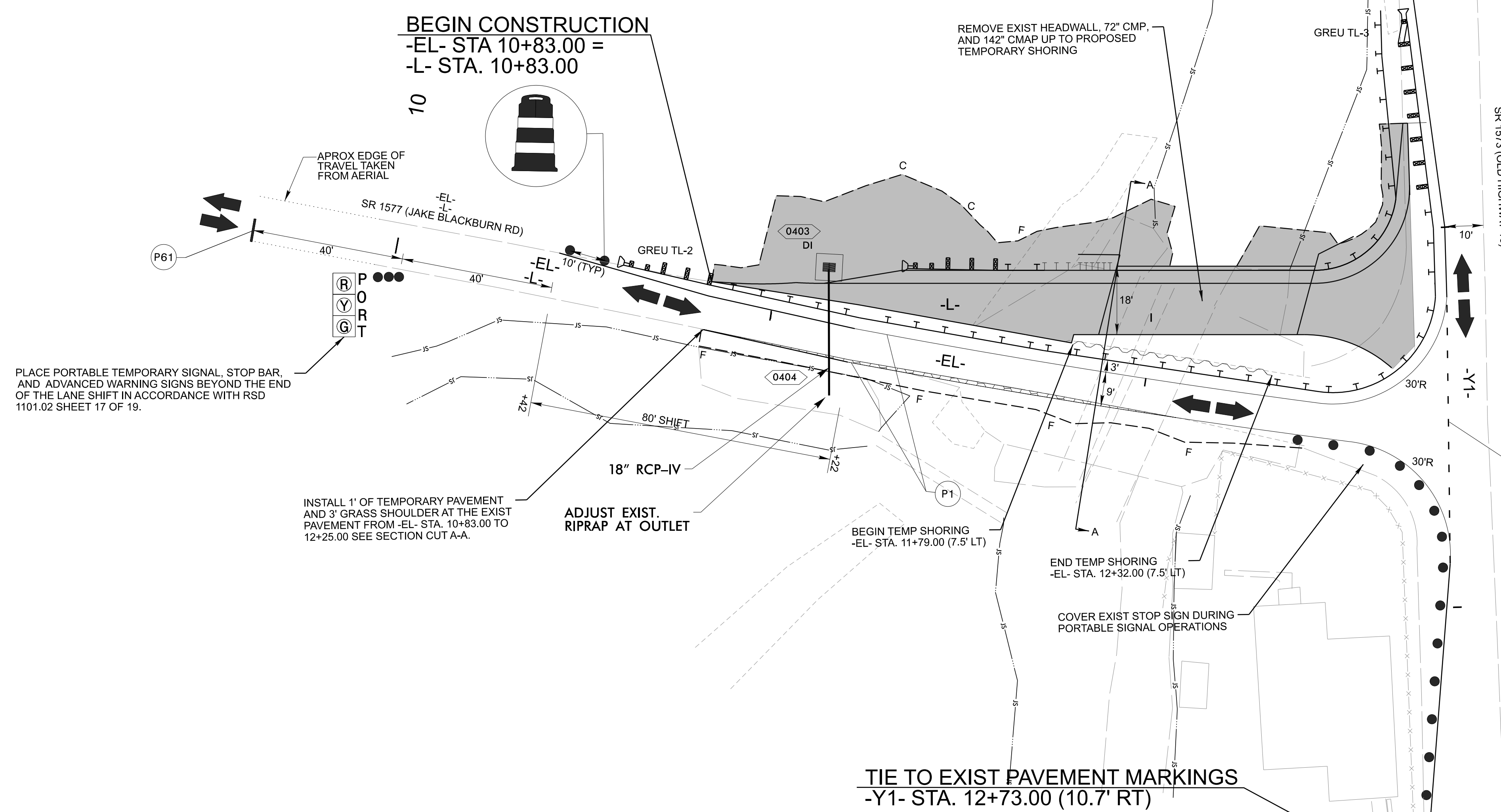
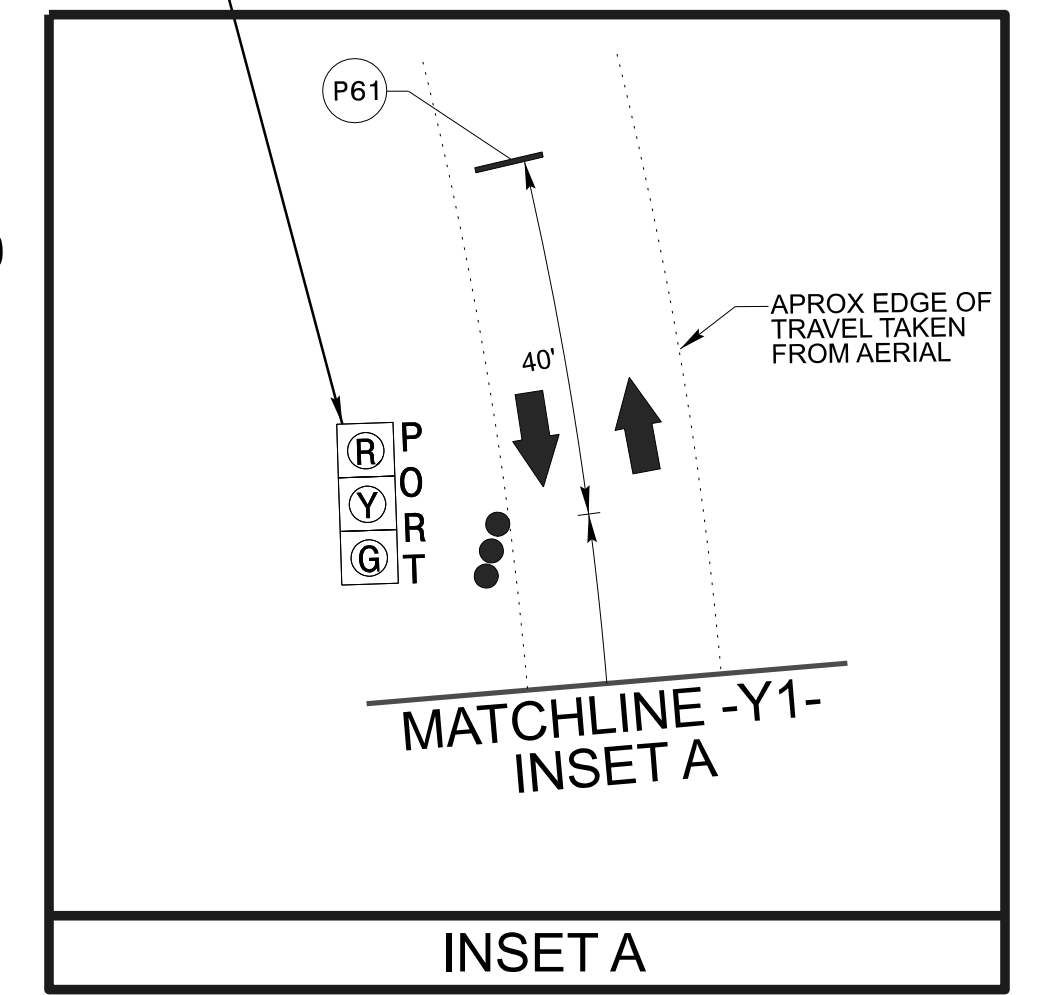
-EL-
11+88.00
SECTION A-A

TIE TO EXIST PAVEMENT MARKINGS
-Y1- STA. 10+05.00 (10' RT)

PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.



POSSIBLE SHORING LOCATIONS						
SHORING ID NO.	BEGIN STA. & OFFSET REF	END STA. & OFFSET REF	SHORING TYPE	EST. AVG. SHORING HT.	MAX SHORING HT.	REFERENCE DATA SOURCE
1	-EL- 11+79 +/- (7.5 +/- LEFT)	-EL- 12+32 +/- (7.5 +/- LEFT)	ROADWAY	20 FT.	20 FT.	TMP-2 SHEET



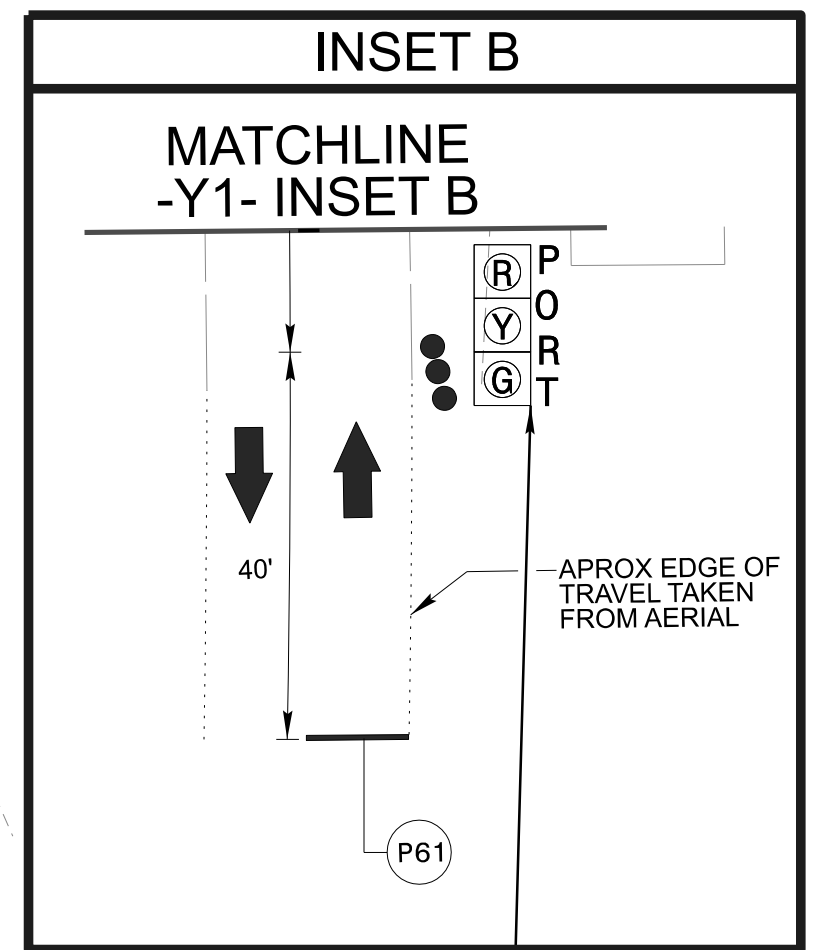
PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.

INSTALL 1' OF TEMPORARY PAVEMENT AND 3' GRASS SHOULDER AT THE EXIST PAVEMENT FROM -EL- STA. 10+83.00 TO 12+25.00 SEE SECTION CUT A-A.

ADJUST EXIST. RIPRAP AT OUTLET

TIE TO EXIST PAVEMENT MARKINGS
-Y1- STA. 12+73.00 (10.7' RT)

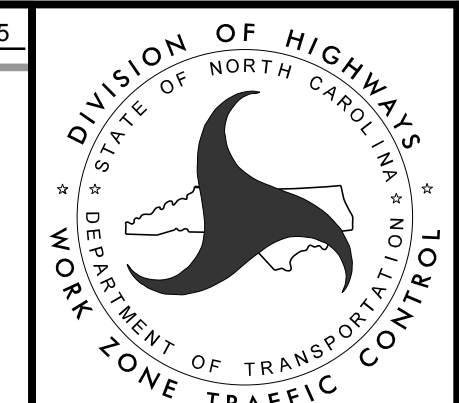
PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

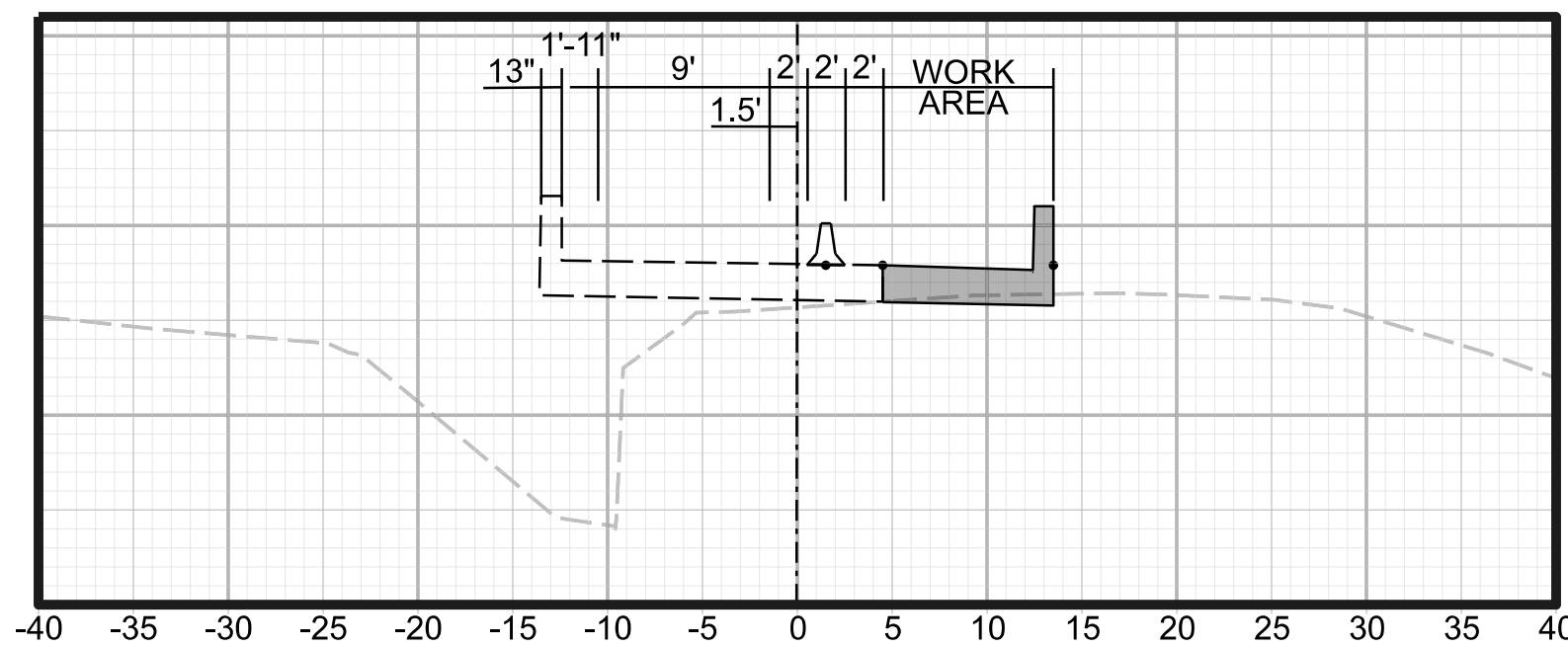


APPROVED: *Jack R. Crino* DATE: 12/10/2025



PHASE I DETAIL

PROJ. REFERENCE NO.	SHEET NO.
DF18311.2005593.PR	TMP-4



-L-
12+00.00
SECTION B-B

TIE TO EXIST PAVEMENT MARKINGS
-Y1- STA. 10+05.00 (10' RT)

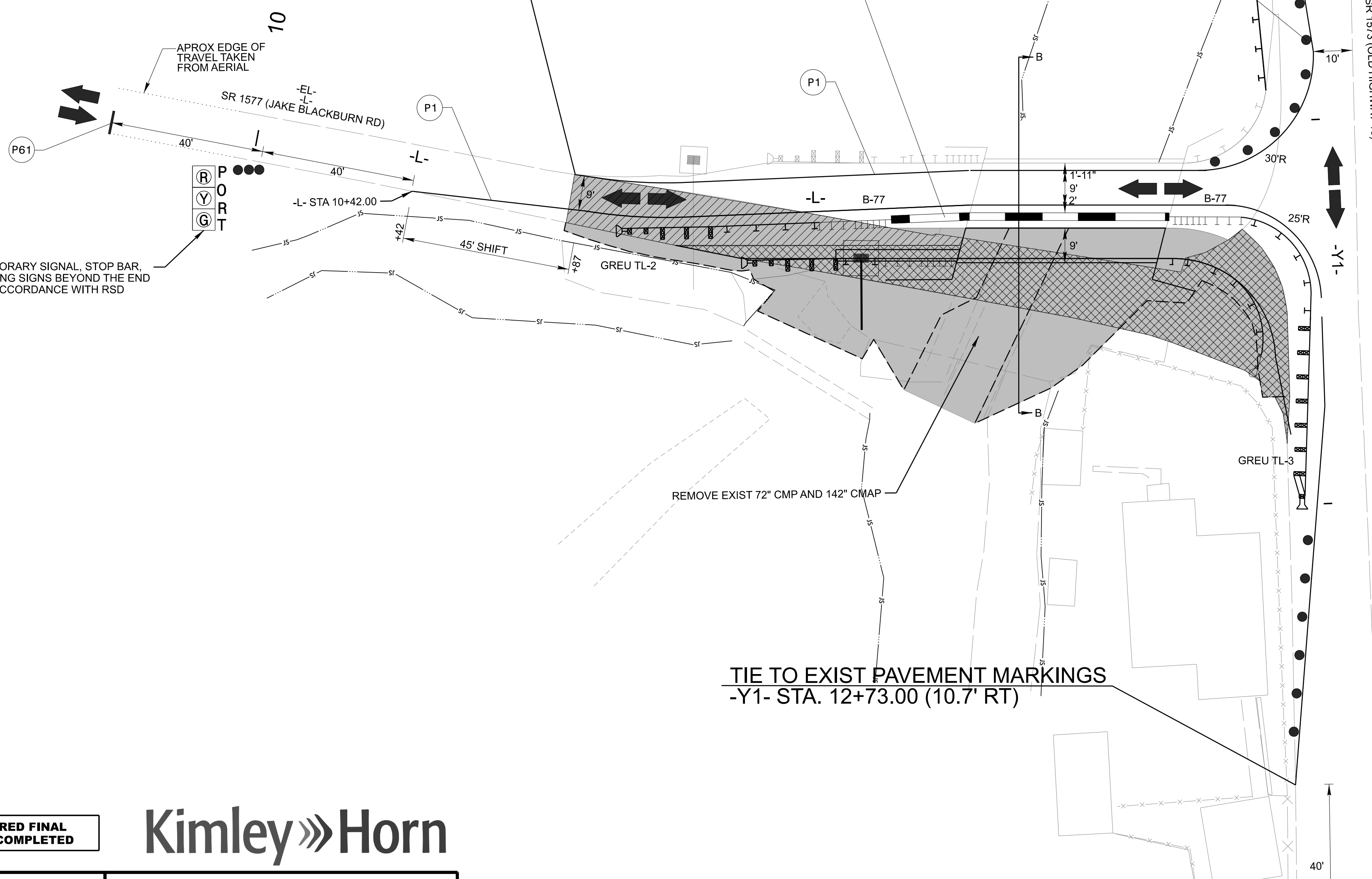
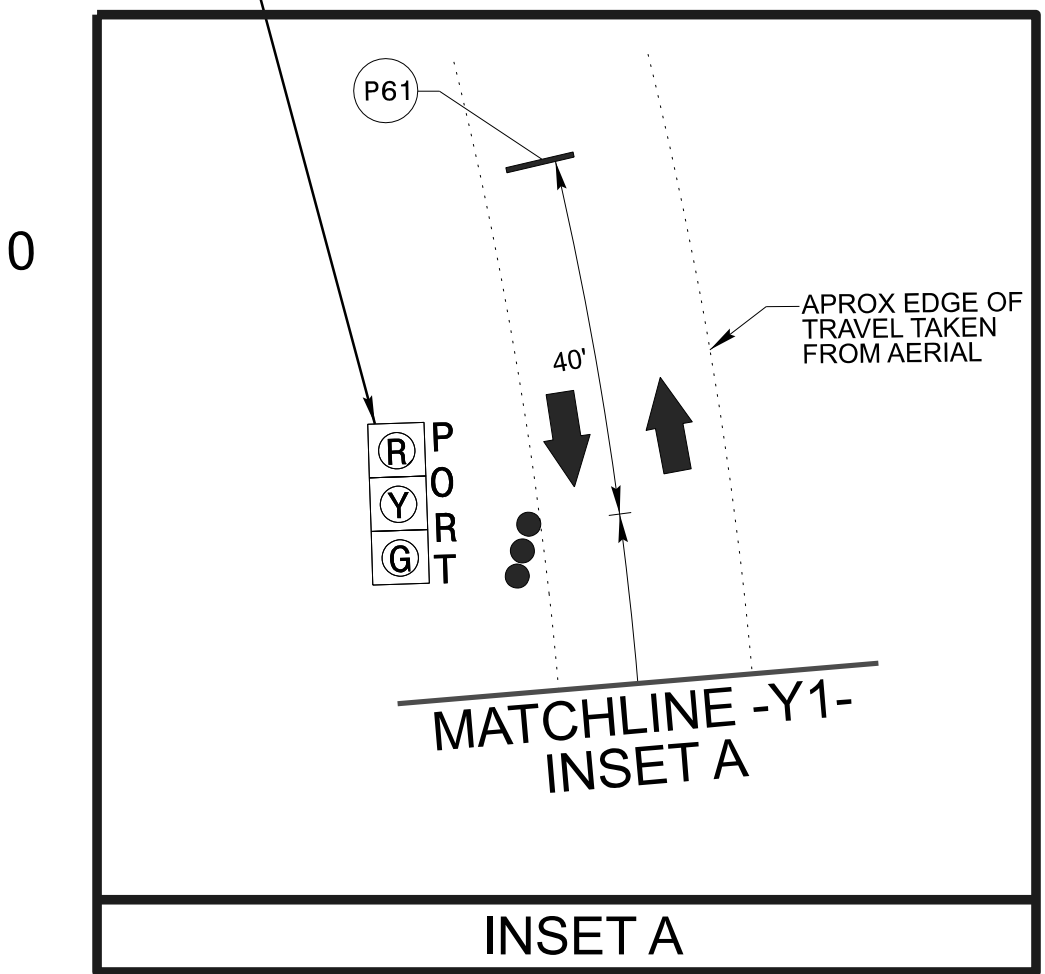
END CONSTRUCTION
-Y1- STA. 10+42.00

BEGIN CONSTRUCTION
TIE TO EXISTING
-L- STA. 10+83.00

PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.

PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.

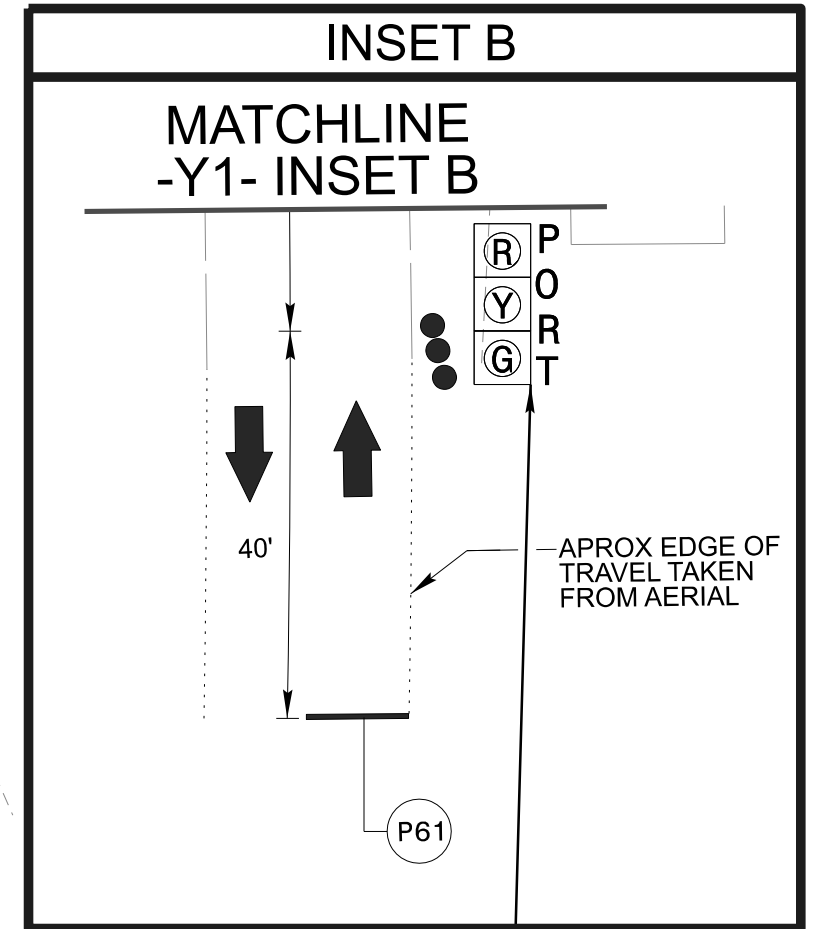
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TIE TO EXIST PAVEMENT MARKINGS
-Y1- STA. 12+73.00 (10.7' RT)

+78

+73

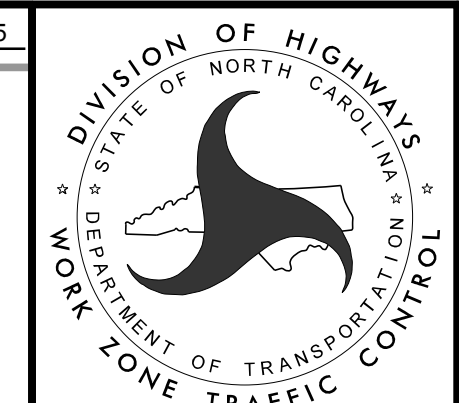


PLACE PORTABLE TEMPORARY SIGNAL, STOP BAR, AND ADVANCED WARNING SIGNS BEYOND THE END OF THE LANE SHIFT IN ACCORDANCE WITH RSD 1101.02 SHEET 17 OF 19.

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn

APPROVED: *Jack R. Crino* DATE: 12/10/2025



PHASE II DETAIL


CONTRACT: DK00439 TIP PROJECT: DF18311.2005593.PR

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKING PLAN
ASHE COUNTY**

LOCATION: CULVERT #BP-005-2831 ON SR 1577
(JAKE BLACKBURN RD) OVER

TYPE OF WORK: LITTLE PHOENIX CREEK
GRADING, DRAINAGE, PAVING,
AND STRUCTURE

<small>TIP NO.</small> DF18311.2005593.PR	<small>SHEET NO.</small> PMP-1
<small>Signed by:</small> <i>Jack R. Crino</i> <small>30541786F0354AE...</small>	
<small>APPROVED:</small>	
<small>DATE:</small> 10/31/2025	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP -1	PAVEMENT MARKING PLAN TITLE, SCHEDULE SHEET, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES, AND FINAL PAVEMENT MARKING SCHEDULE
PMP -2	PAVEMENT MARKING PLAN SHEETS

GENERAL NOTES

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

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
-L- SR 1577 (JAKE BLACKBURN RD)	INTEGRATED MULTIPOLYMER	NONE
-Y1- SR 1573 (OLD HWY 16)	INTEGRATED MULTIPOLYMER	NONE

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

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

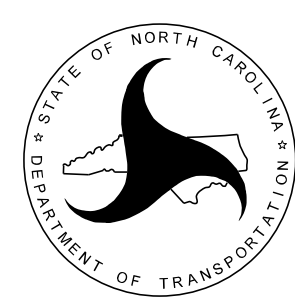
PAVEMENT MARKING SCHEDULE


SYMBOL	DESCRIPTION
PAVEMENT MARKINGS	
INTEGRATED MULTIPOLYMER (4", 90 MILS)	
IM1	WHITE EDGELINE
IM5	2 FT.-6 FT./SP WHITE MINISKIP
IM13	YELLOW DOUBLE CENTER

ROADWAY STANDARD DRAWING

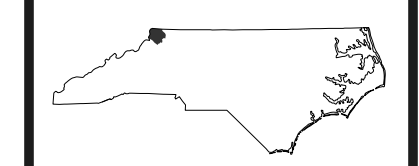
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

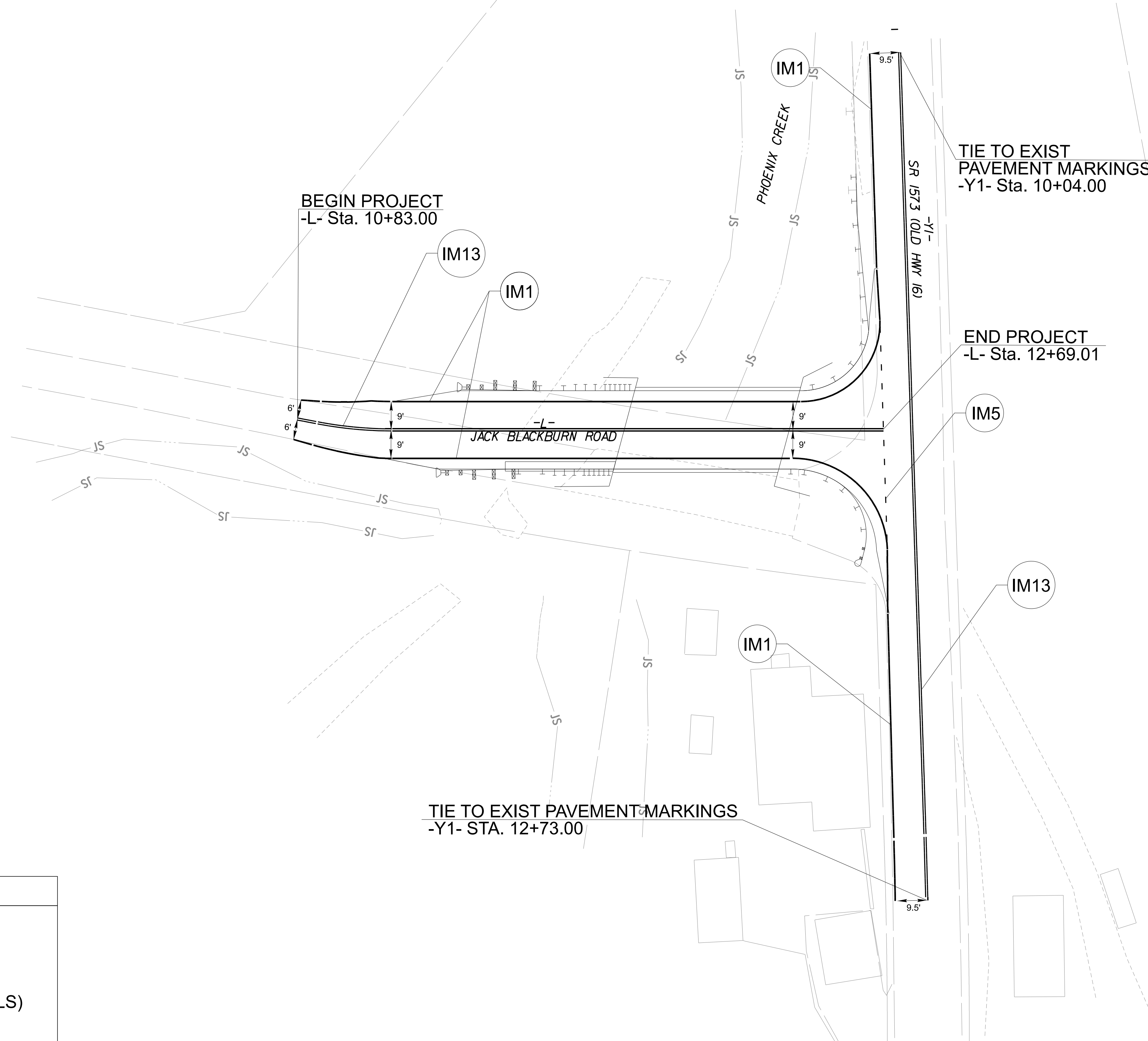
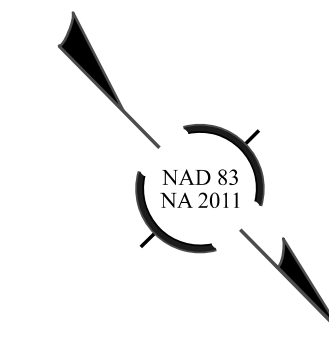
PLANS SUBMITTED TO: NCDOT	
ROB WEISZ, P.E. DIVISION 11 BRIDGE PROGRAM MANAGER	

PLAN PREPARED BY: KIMLEY-HORN	
JACK R. CRINO, P.E. PROJECT DESIGN ENGINEER	

NC LICENSE #F-0102
FAYETTEVILLE STREET, SUITE 600
RALEIGH, NORTH CAROLINA 27601
PHONE: (919) 877-2000

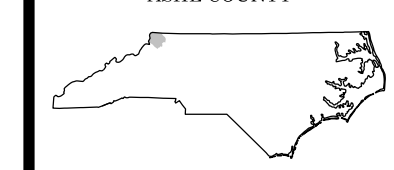


10/31/2025



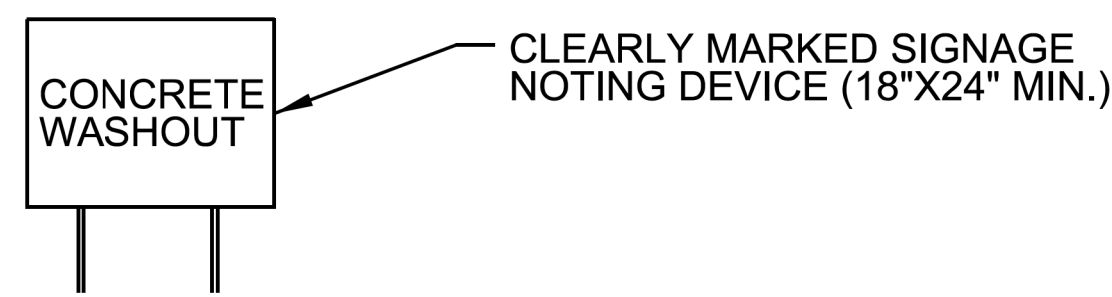
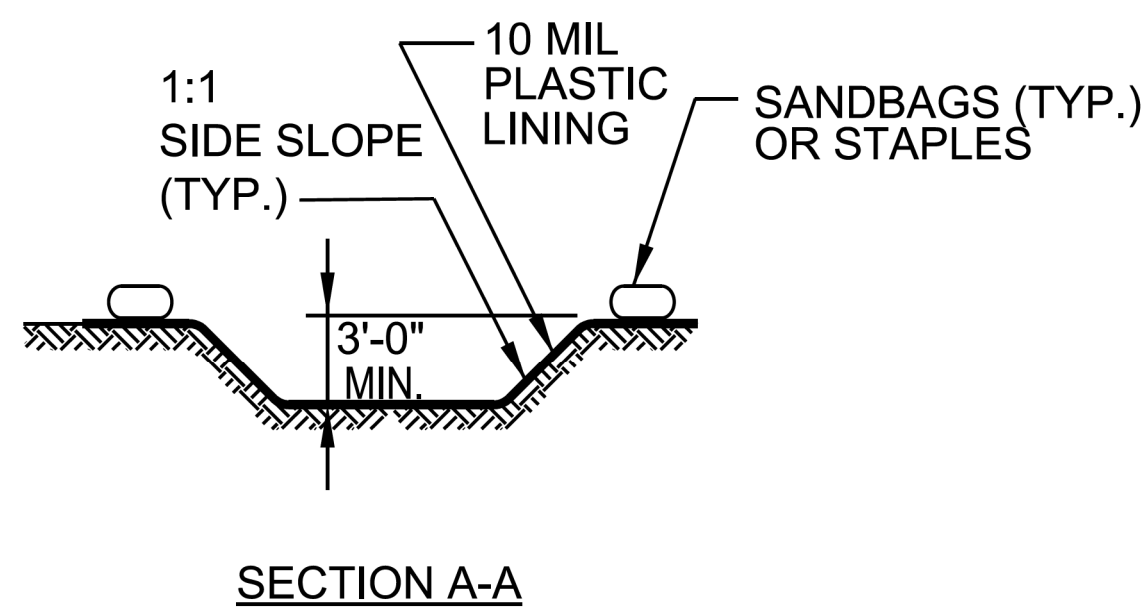
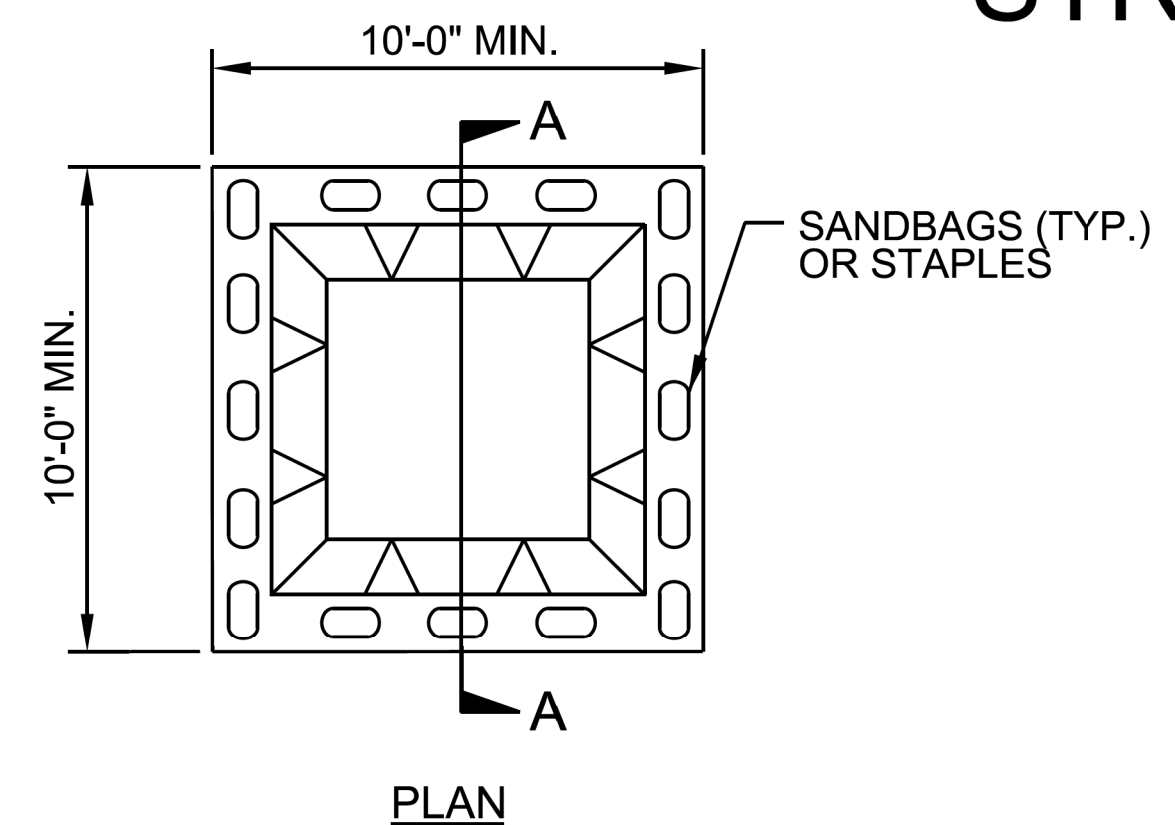
PAVEMENT MARKING LEGEND	
IM1	WHITE EDGELINE (4", 90 MILS)
IM5	2 FT. - 6 FT./SP WHITE MINISLIP (4", 90 MILS)
IM13	YELLOW DOUBLE CENTERLINE (4", 90 MILS)

REVISIONS



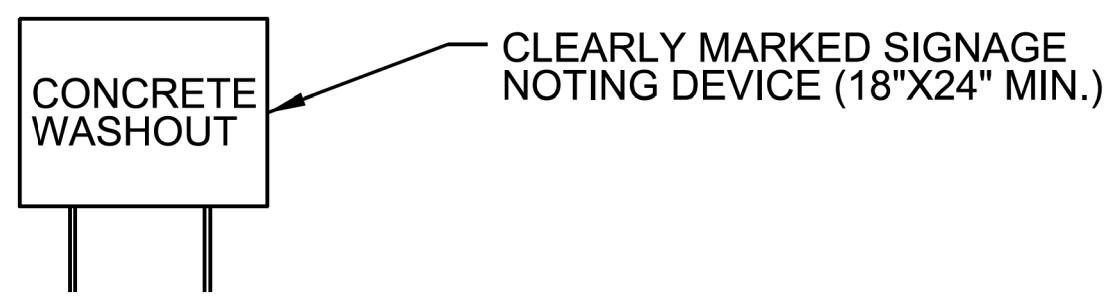
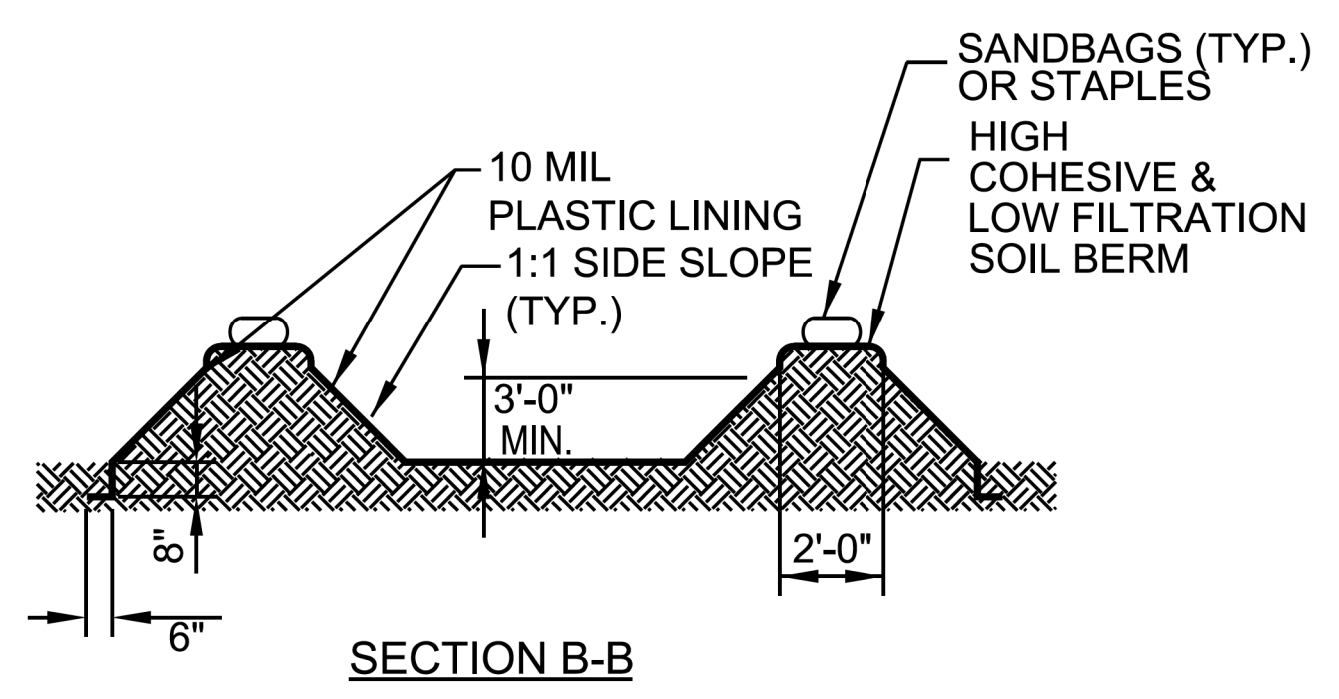
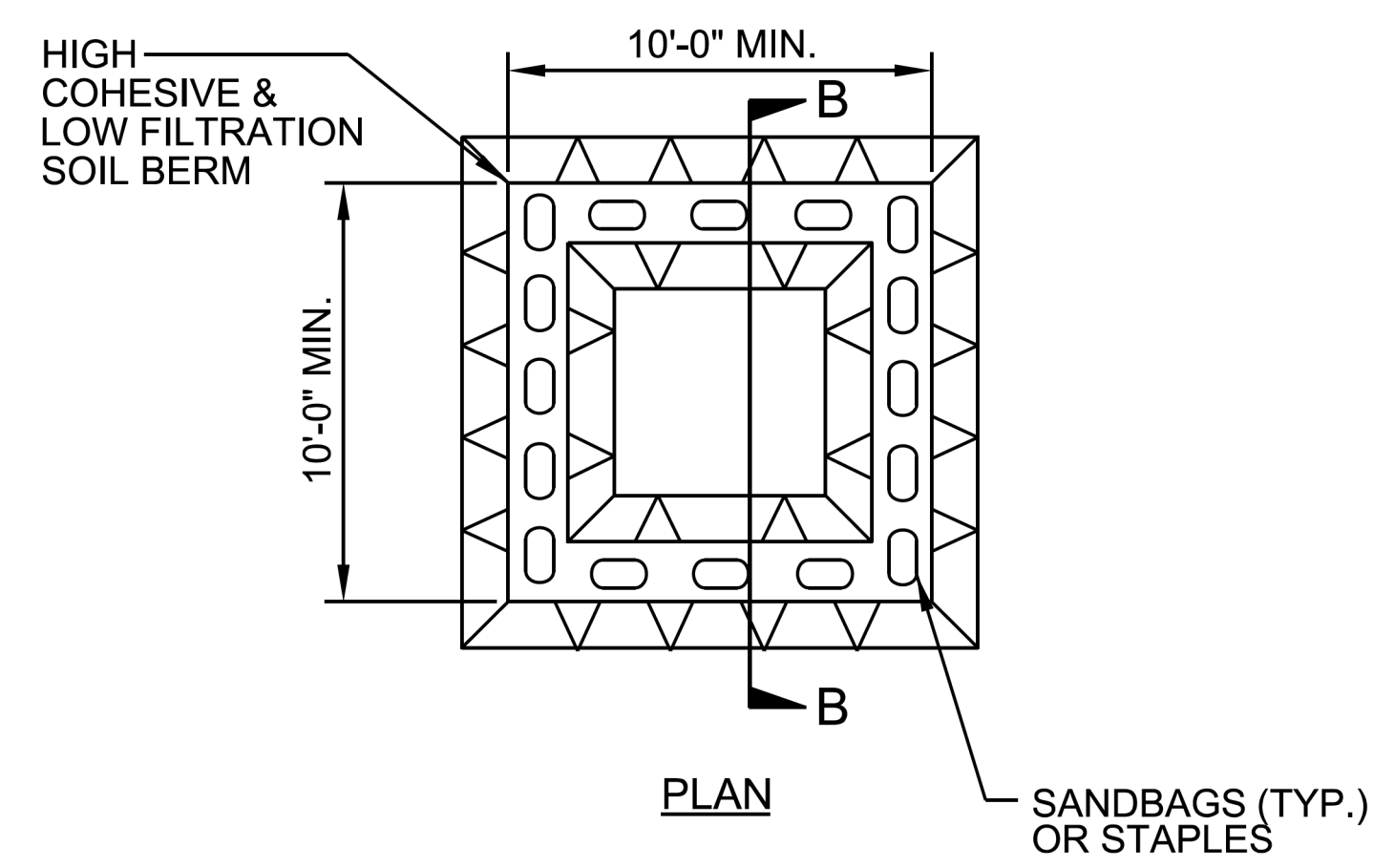
PROJECT REFERENCE NO. X-XXX	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

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



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

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

REVISIONS

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
STRAW MATTING FOR DITCHES					
4	-L-	10+83	11+60	LT	45
STRAW MATTING FOR SLOPES					
					SEE MISC MATTING BELOW
SUBTOTAL					45
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					500
TOTAL					545

PSRM TYPE-1 FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
SLOPES					
4	-L-	10+95	11+60	LT	150

DF18311.2005593.PR
EC-03
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ASHE COUNTY

ROADWAY DESIGN UNIT

PREPARED BY
Kimley Horn
INCORPORATED
1000 W. HARRIS STREET, SUITE 400
WARRINGTON, NORTH CAROLINA 27581
WWW.KIMLEYHORN.COM

REVISIONS

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

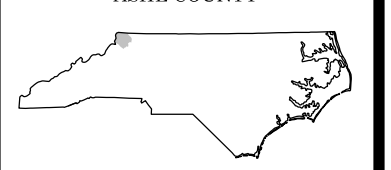
SOIL STABILIZATION TIMEFRAMES

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

DF18311.2005593.PR

EC-03A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ASHE COUNTY



ROADWAY DESIGN UNIT

PREPARED BY



NO GUARANTEE OF ACCURACY
OR FITNESS FOR ANY PARTICULAR PURPOSE
UNLESS SPECIFICALLY STATED OTHERWISE
ON A SEPARATE BASIS

REVISIONS

FOR -L- PLAN, SEE SHEET 4

REFER TO SHEET 2B-1 FOR
TYPE III SHOP CURVE DETAILS

UTILIZE SPECIAL STILLING
BASINS AS NEEDED
FOR BRIDGE CONSTRUCTION

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

SPECIAL WATER MANAGEMENT NOTE:
CULVERT AND ROADWAY EMBANKMENT
REMOVAL SHALL BE PERFORMED IN PHASES.
CONTRACTOR SHALL INSTALL IMPERVIOUS
DIKES TO DIVERT CLEAN, ACTIVE FLOW INTO
THE BARREL AND HALF OF ROADWAY THAT IS
NOT UNDER REMOVAL UPON COMPLETION OF
EACH PHASE. FLOW SHALL BE SHIFTED TO THE
OPPOSITE BARREL. ALTERNATE BYPASS
METHODS REQUIRE RESIDENT ENGINEER
APPROVAL.

EIP
CALLED FOR
WITNESS
S 61°49'16" W, 3.76'
FROM TREE

PREPARED BY
Kimley Horn

NOTE: EXISTING
DRIVEWAY DITCH
ACTS AS DRAINAGE
BREAK

BEGIN BRIDGE
-L- STA 11+87.38

BEGIN CONSTRUCTION
-Y1- STA 10+30.00 (15' RT)

-Y1- STA 10+42.00 (15' RT)
TIE TO EXISTING
GUARDRAIL

-Y1- STA 10+72.35 (9' RT)

END BRIDGE
-L- STA 12+39.58

END PROJECT DF18311.2005593.PR
-L- STA 12+69.01

-L- POE 12+78.03
-Y1- 11+23.78
 $\Delta = 91^{\circ}51'14.1''$

BEGIN PROJECT DF18311.2005593.PR
-L- STA 10+83.00

-L- PC 10+89.55

REMOVE EXIST.
18" CMP
INV=2659.36

DO NOT
DISTURB
EXIST
36" CMP

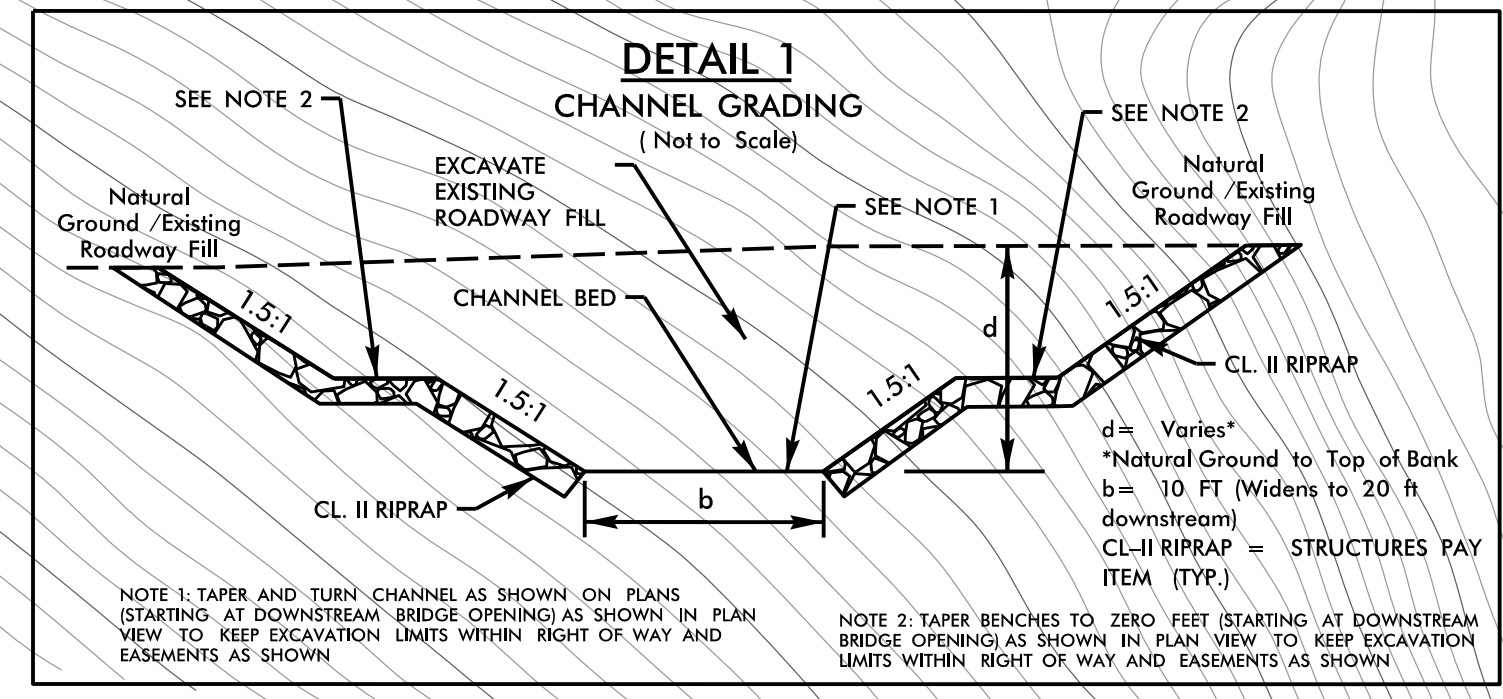
-L- Sta. 11+10.58

18" RCP-IV
ADJUST EXIST.
RIPRAP AT OUTLET
INV: 2660.8'

DO NOT
DISTURB
GAZEBO
REMOVE EXISTING
72" CMP AND
142"X91" CMAP
(STRUCTURES PAY
ITEM)

END CONSTRUCTION
-Y1- STA 11+81.76 (9' RT)

-Y1- POE 12+52.92



1.5:1 LAYBACK W/
CL I RIPRAP
CL I EST. 65 TONS
EST. 70 SY GFD

15" RCP-IV

FROM PROPOSED DOWNSTREAM BRIDGE FACE TO
42 FEET DOWNSTREAM OF PROPOSED BRIDGE

FOR -L- PLAN, SEE SHEET 4

REVISIONS

* REFER TO SHEET 2B-1 FOR TYPE III SHOP CURVE DETAILS

UTILIZE SPECIAL STILLING BASINS AS NEEDED FOR BRIDGE CONSTRUCTION

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4

DF18311.2005593.PR

EC-5

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ASHE COUNTY

ROADWAY DESIGN UNIT

LORENA DIONISIA SANCHEZ DB 568 PG 1239

-Y1- POB 10+00.00

SPECIAL WATERSHED MANAGEMENT NOTE: RESET IMPERVIOUS DIKES AT EACH STAGE OF BRIDGE CONSTRUCTION TO KEEP ACTIVE FLOW AWAY FROM THE TOE OF BANKS. CONTAIN ALL UPLAND RUNOFF WITHIN THE DIKES AND PUMP/DEWATER TO SPECIAL STILLING BASINS.

EIP CALLED FOR WITNESS S 61°49'16" W, 3.76' FROM TREE

PREPARED BY

Kimley Horn

NO. 10000 STATE ST. SUITE 200
RANDOLPH COUNTY, NC 28684
PH: 704.785.1100 FAX: 704.785.1101
WWW.KIMLEYHORN.COM

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

NOTE: EXISTING DRIVEWAY DITCH ACTS AS DRAINAGE BREAK

BEGIN BRIDGE -L- STA 11+87.38

BEGIN CONSTRUCTION -Y1- STA 10+30.00 (15' RT)

-Y1- STA 10+42.00 (15' RT) TIE TO EXISTING GUARDRAIL

-Y1- STA 10+72.35 (9' RT)

END PROJECT DF18311.2005593.PR -L- STA 12+69.01

-L- POE 12+78.03
-Y1- 11+23.78
 $\Delta = 91^{\circ}51'14.1"$

END CONSTRUCTION -Y1- STA 11+81.76 (9' RT)

-Y1- POE 12+52.92

FOR -L- PLAN, SEE SHEET 4

BEGIN PROJECT DF18311.2005593.PR -L- STA 10+83.00

-L- PC 10+89.55

REMOVE EXIST. 18" CMP INV=2659.36'

-L- Sta. 11+10.58

ADJUST EXIST. RIPRAP AT OUTLET
0404 INV: 2660.8'

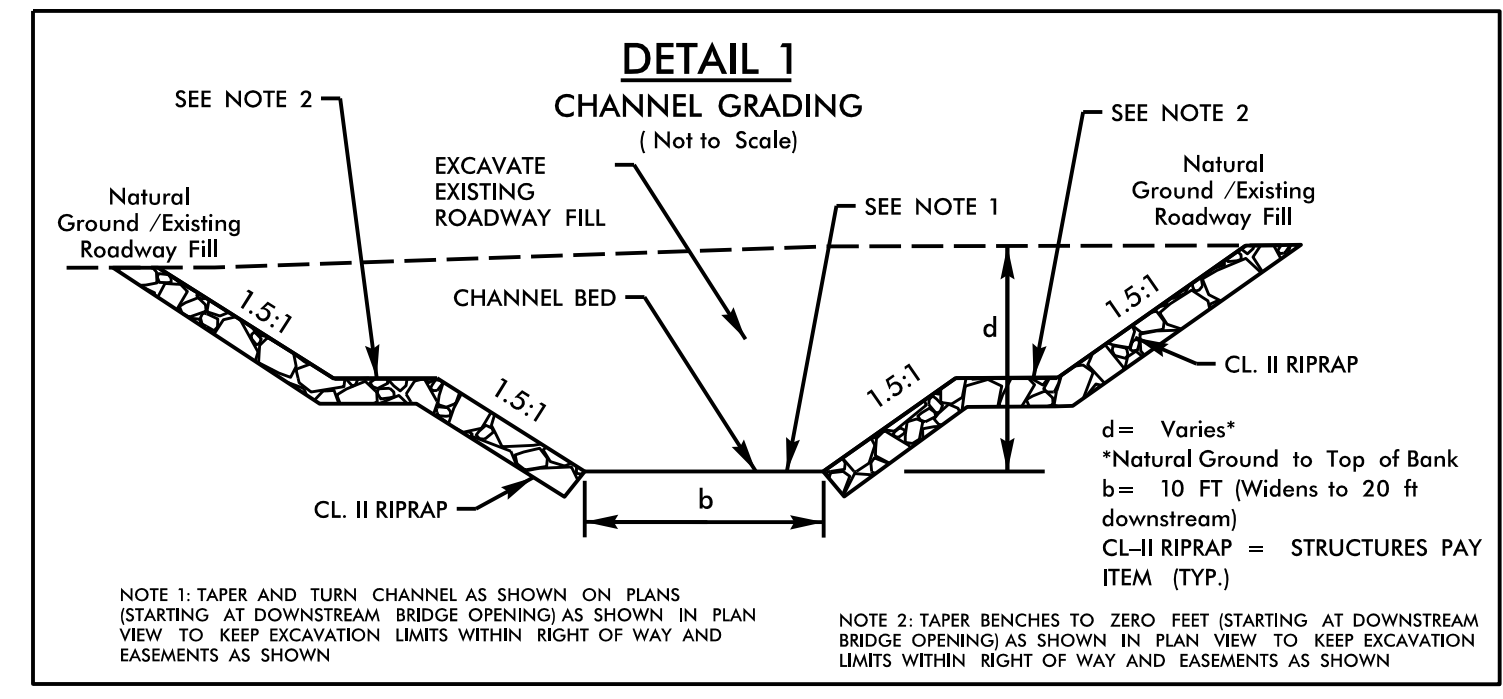
1.5:1 LAYBACK W/ CL.I RIPRAP EST. 65 TONS EST. 70 SY GFD

15" RCP-IV

DO NOT DISTURB EXIST 36" CMP

DO NOT DISTURB GAZEBO REMOVE EXISTING 72" CMP AND 142"X91" CMAP (STRUCTURES PAY ITEM) ISBKD

PROPOSED CHANNEL GRADING AND ROADWAY EXCAVATION SEE DETAIL 1 (STRUCTURES PAY ITEM)



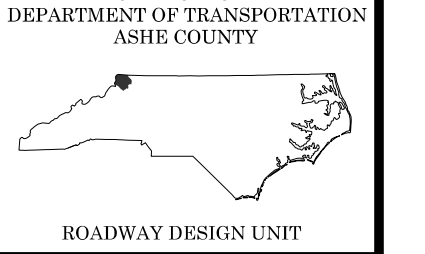
FROM PROPOSED DOWNSTREAM BRIDGE FACE TO 42 FEET DOWNSTREAM OF PROPOSED BRIDGE

* REFER TO SHEET 2B-1 FOR TYPE III SHOP CURVE DETAILS

CUR DATA -L-
Pc 11+01.49
 $\Delta c = 10^{\circ}44'25.9''$ (LT)
D = 45'06'53.2"
Lc = 23.81
Tc = 11.94
R = 127
DS = 15 MPH
SE = 0.03

DF18311.2005593.PR

UD-2

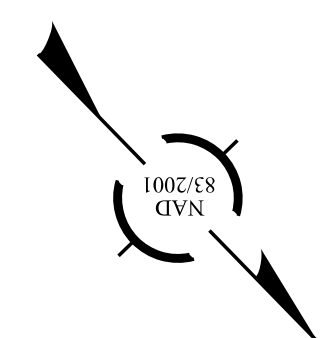


ROADWAY DESIGN UNIT

PREPARED BY

Kimley Horn

NO. 1000 OF STATE
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/31/2024



LORENA DIONISIA SANCHEZ
DB 568 PG 1239

-Y1- POB 10+00.00

BEGIN BRIDGE
-L- STA 11+86.83

BEGIN CONSTRUCTION
-Y1- STA 10+30.00 (15' RT)

-Y1- STA 10+42.00 (15' RT)
TIE TO EXISTING
GUARDRAIL

-Y1- STA 10+72.35 (9' RT)

END PROJECT DF18311.2005593.PR
-L- STA 12+69.01

-L- POE 12+78.03
-Y1- 11+23.78
 $\Delta = 91^{\circ}51'14.1''$

END CONSTRUCTION
-Y1- STA 11+81.76 (9' RT)

-Y1- POE 12+52.92

BEGIN PROJECT DF18311.2005593.PR
-L- STA 10+83.00

-L- PC 10+89.55

-L- Sta. 11+10.58

-L- Sta. 11+13.41

-L- PT 11+13.36

END BRIDGE
-L- STA 12+39.17

SKYLINE/SKYBEST
PROPOSED
OVERHEAD POLE

SKYLINE/SKYBEST
PEDESTAL AND
U/G LINE(S) TO
BE REMOVED

SKYLINE/SKYBEST
PROPOSED
PEDESTAL

SKYLINE/SKYBEST TO
REMOVE UNDERGROUND
FIBER OPTIC CABLE

NOTE: ALL STREAM LINES ARE
APPROXIMATE AND NOT DELINEATED
OR SURVEYED. ASSUMED
JURISDICTIONAL

NOTE: ALL STREAM LINES ARE
APPROXIMATE AND NOT DELINEATED
OR SURVEYED. ASSUMED
JURISDICTIONAL

DO NOT
DISTURB
EXIST
36" CMP

DO NOT
DISTURB
GAZEBO

DENNIS GEORGE &
SUSAN BATES
DB 469 PG 1248

HYTE J BLEVINS (HEIRS)
DB 16 PG 244

JUDSON EZEKIAL
BLEVINS
DB 359 PG 972

JUDSON EZEKIAL
BLEVINS
DB 359 PG 972

EIP
CALLED FOR
WITNESS
S 61'49'16" W, 3.76'
FROM TREE

42' WHITE OAK
S 36'25'40" E
135.69'

TO DEAD END
-L-
SR 1577
(JAKE BLACKBURN RD)

TO JEFFERSON

TO SHATLEY SPRINGS

VARIABLE STONE
WALL

REVISIONS

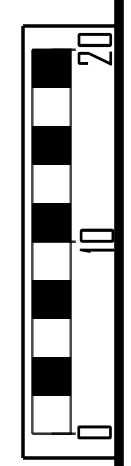
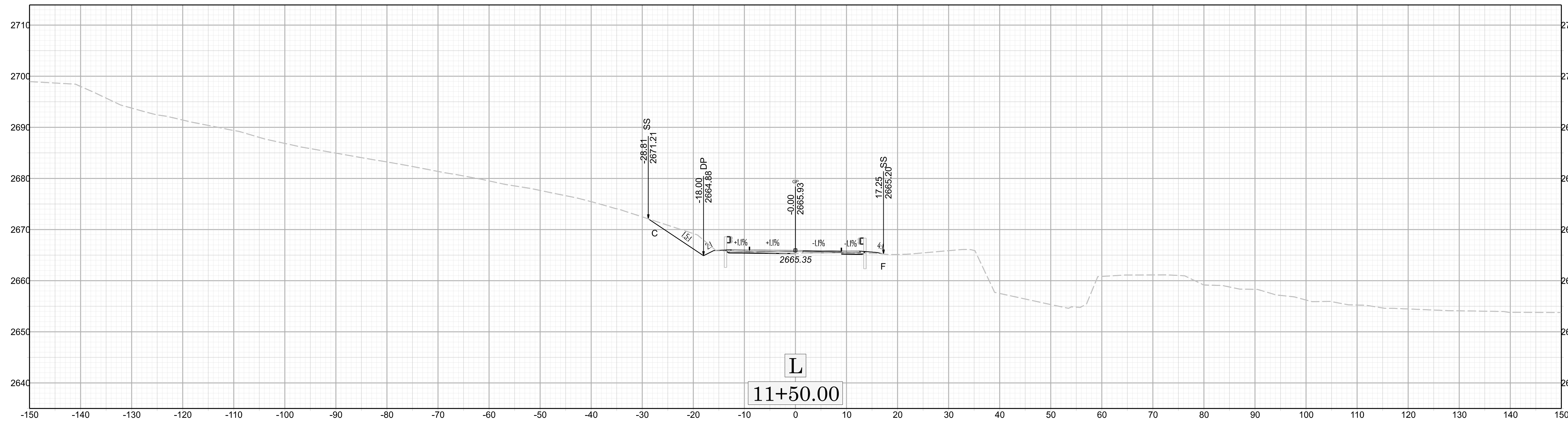
DF18311.2005593.PR
CROSS SECTION INDEX

-L- SR 1577 (JAKE BLACKBURN ROAD)

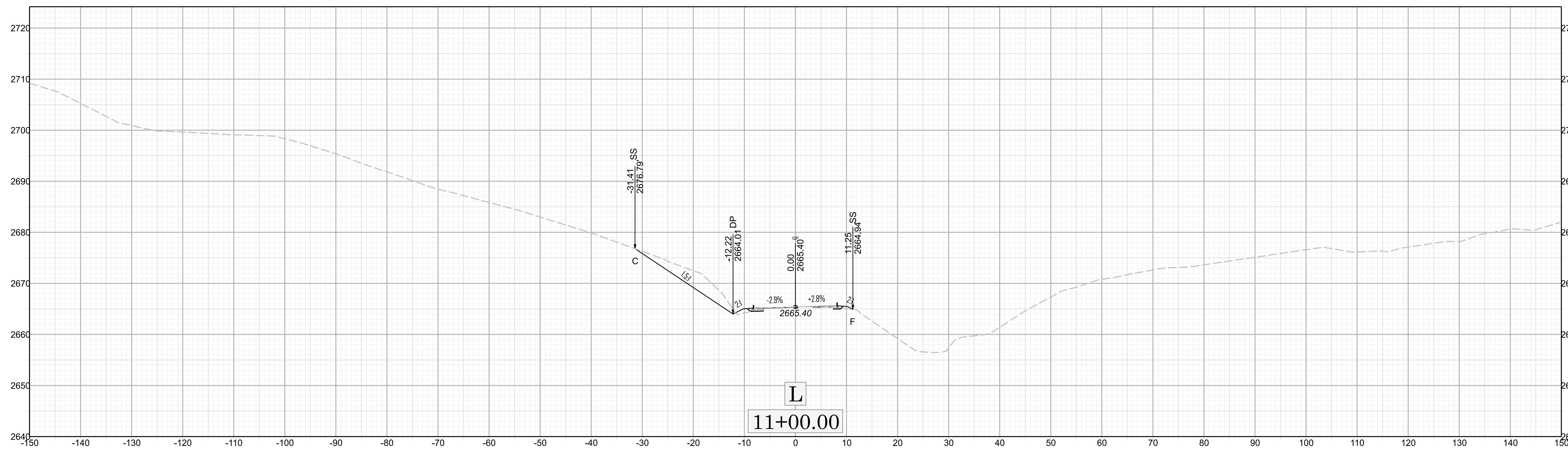
X-2 THRU X-5

-L- PH 1 SR 1577 (JAKE BLACKBURN ROAD)

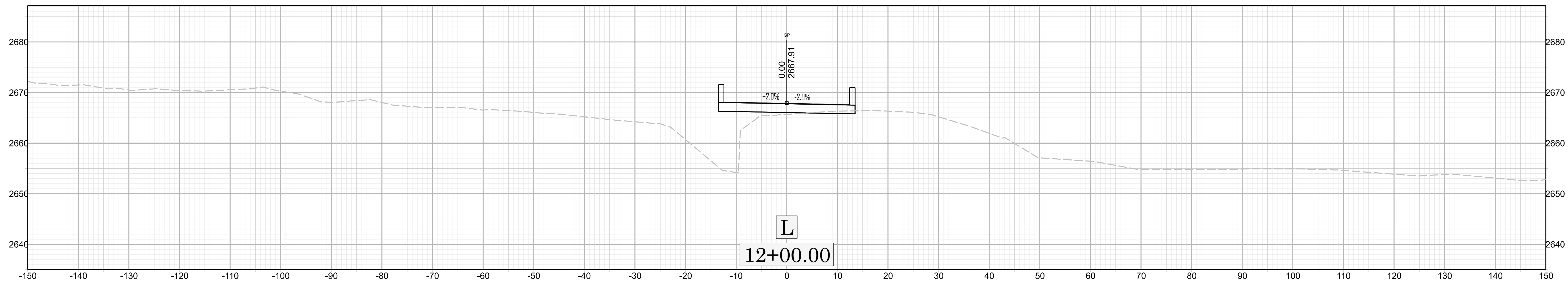
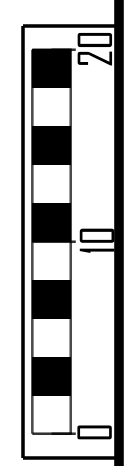
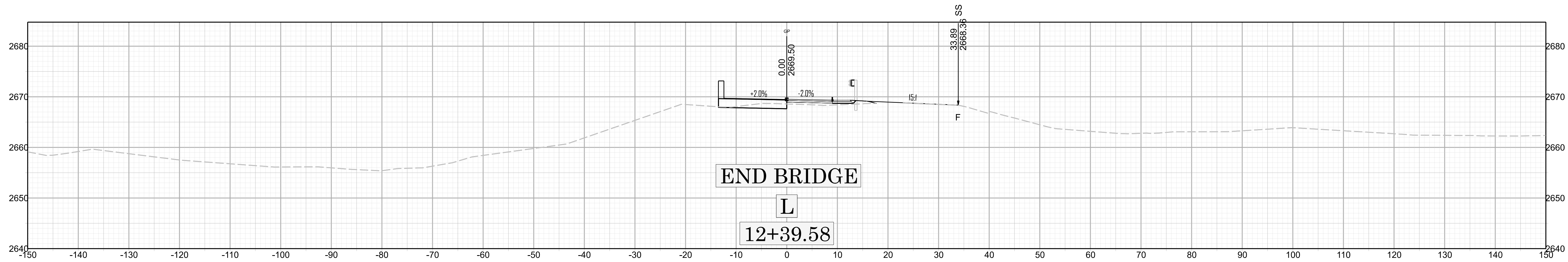
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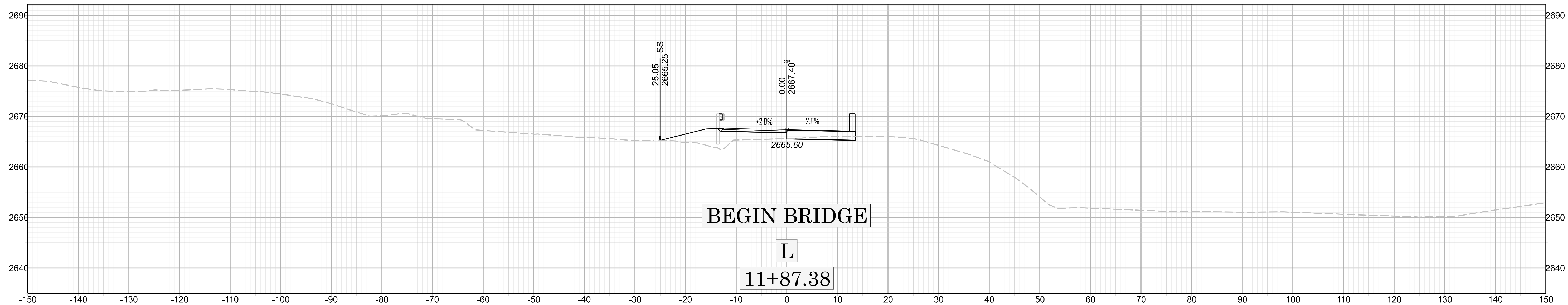
X 3



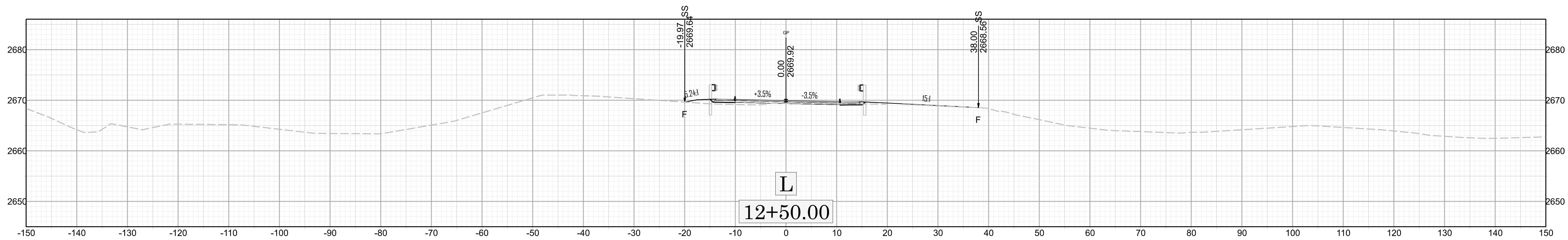
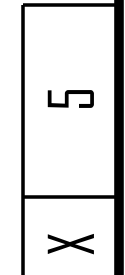
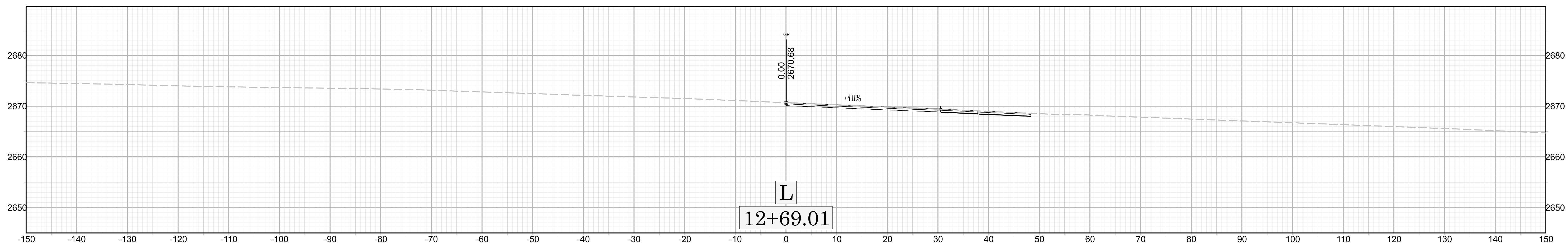
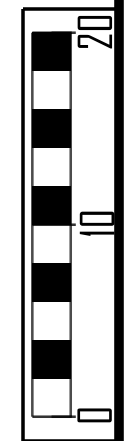
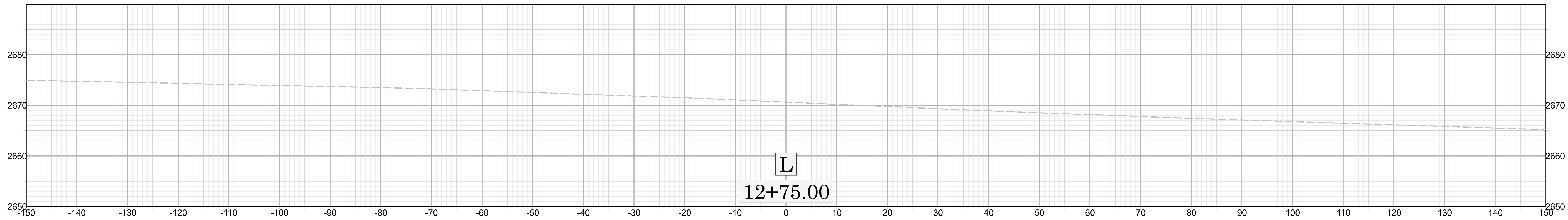
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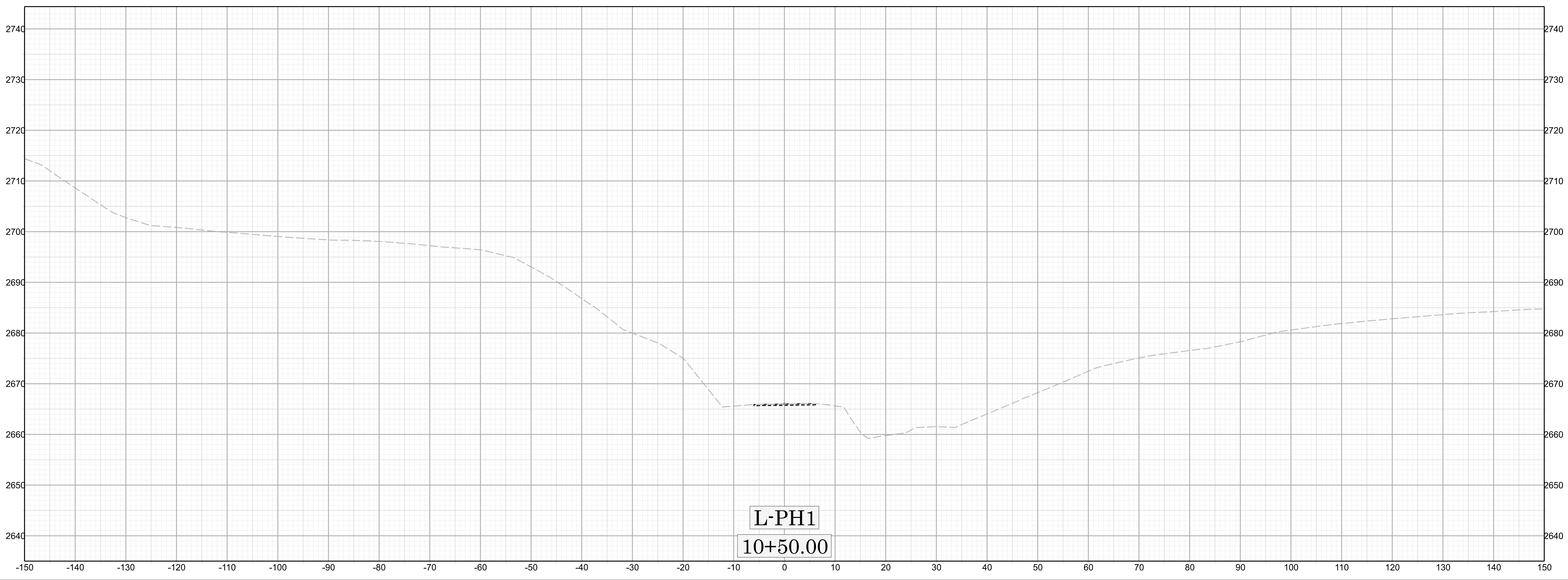
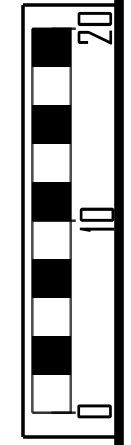
X 4



DF8311.2005593.PR



DFB311.2005593.PR

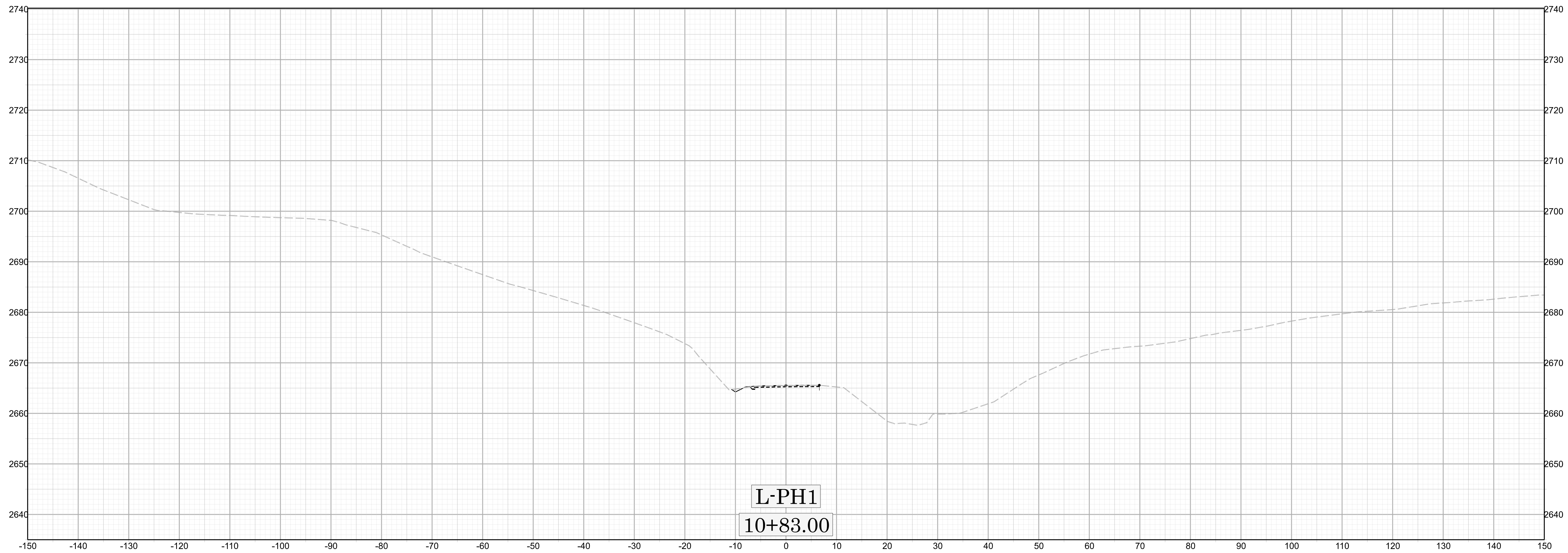
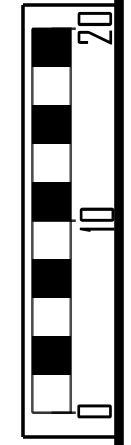


X 6

DF8311.2005593.PR

L-PH1

10+50.00

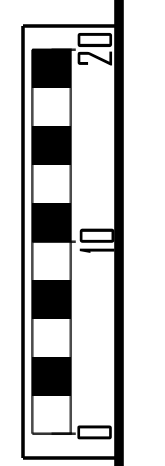


X 7

DF8311.2005593.PR

L-PH1

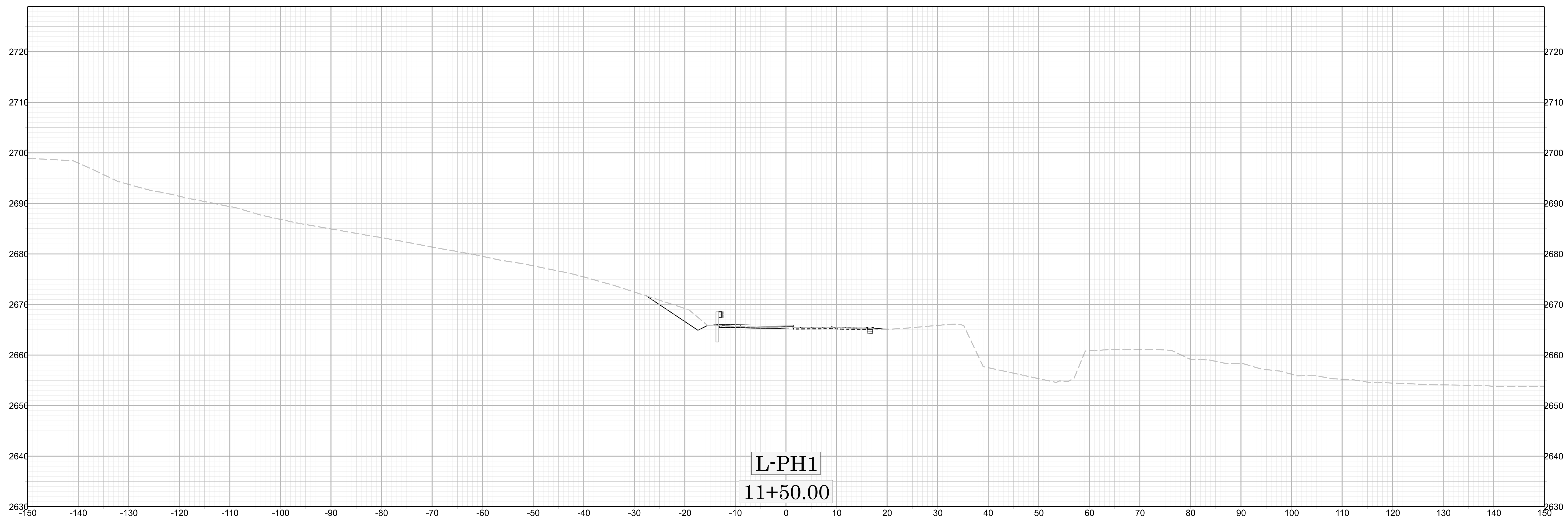
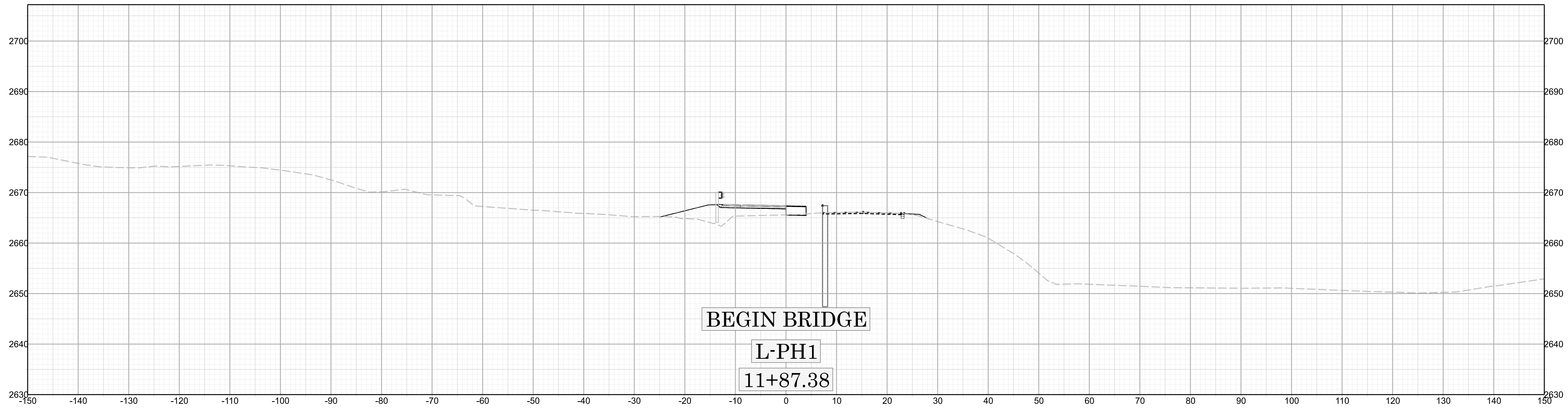
10+83.00

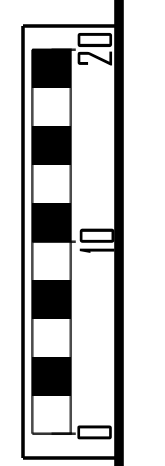
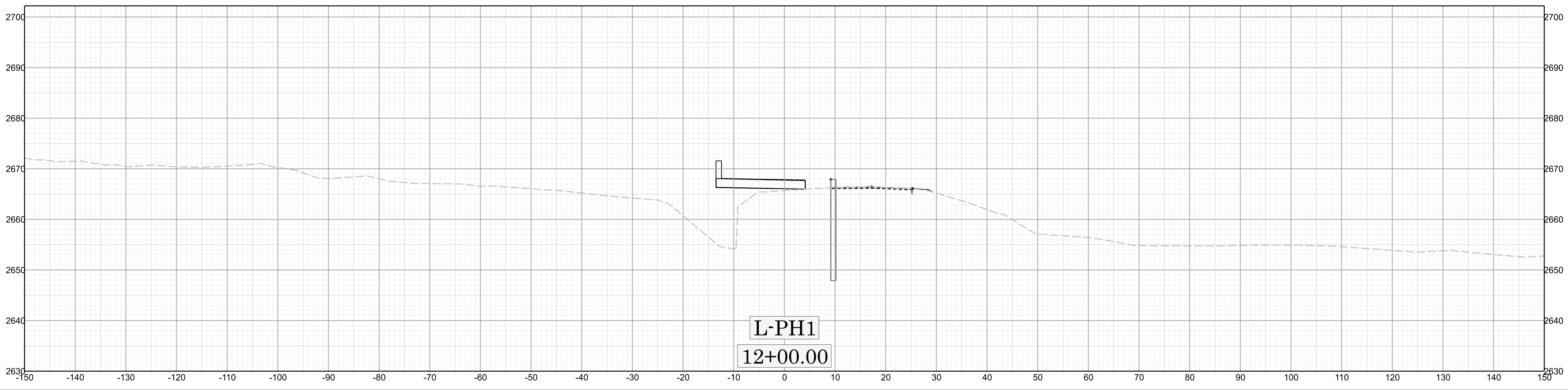
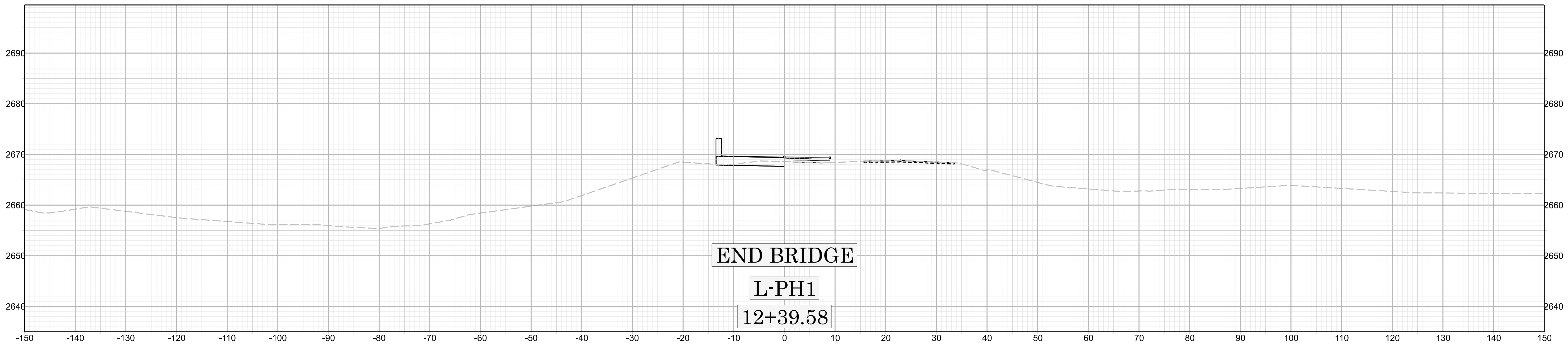


X 8

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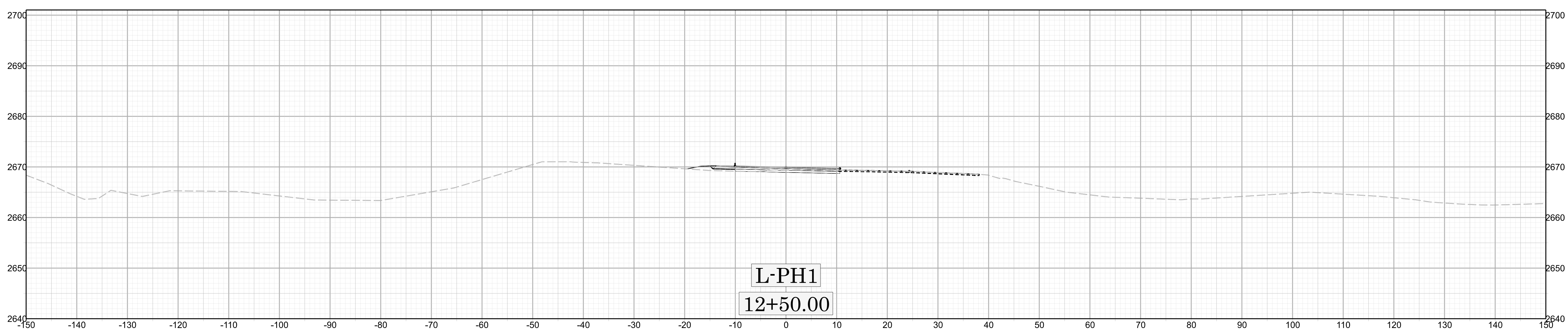
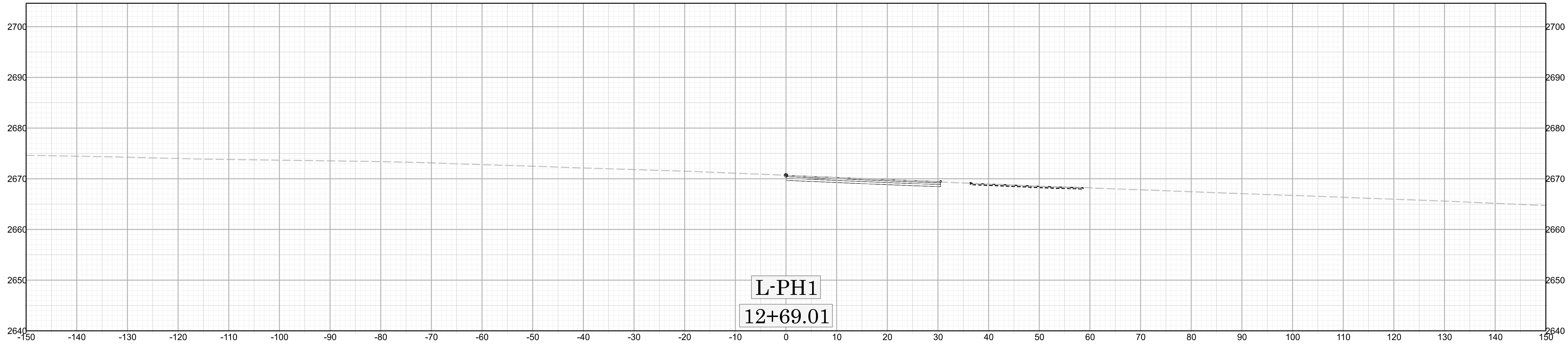
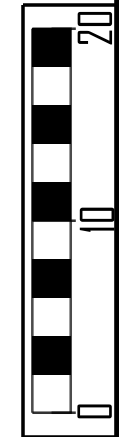
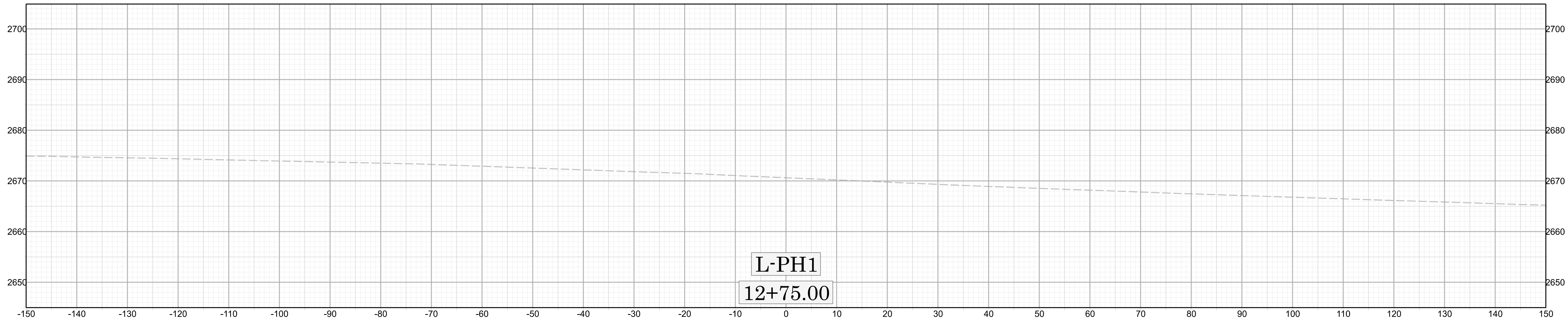






X 10

DF8311.2005593.PR



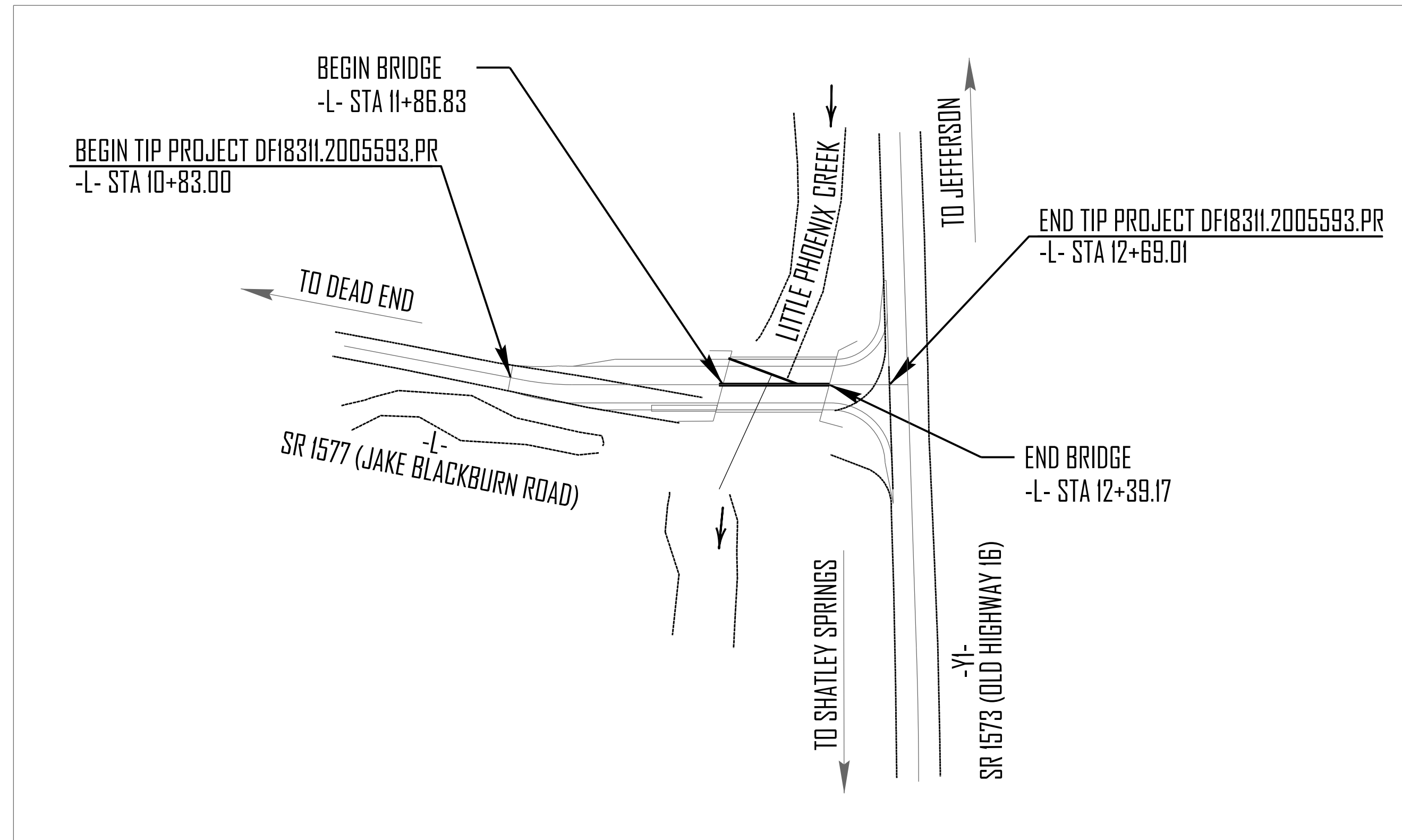
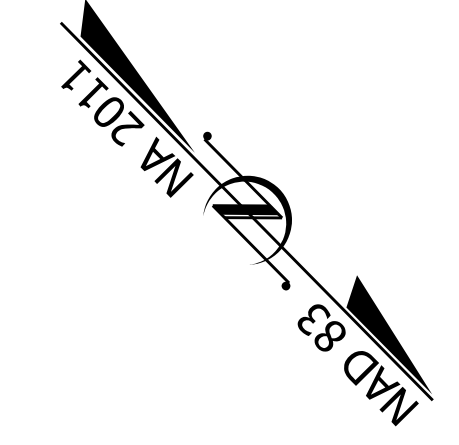
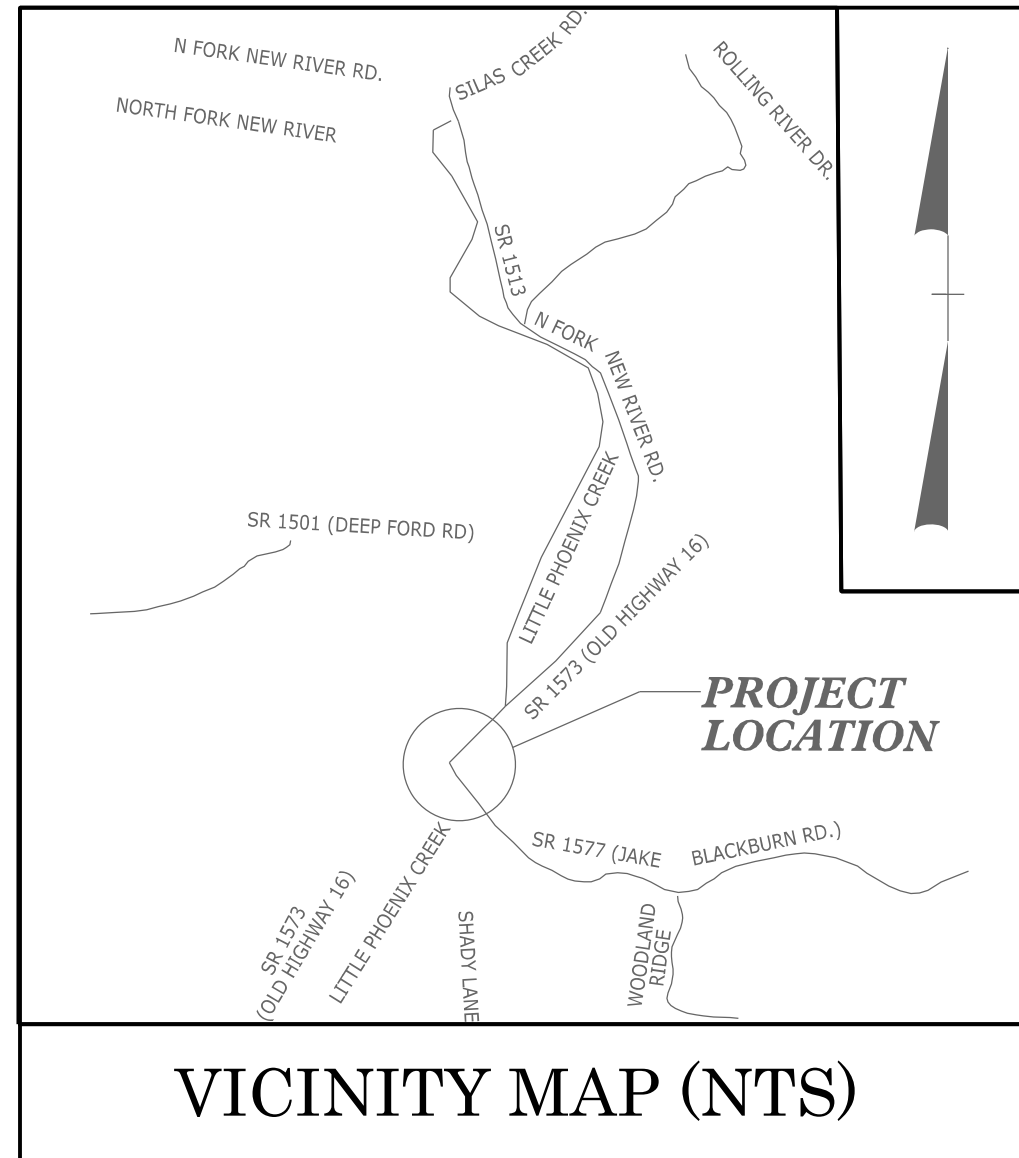
CONTRACT: DK00439 TIP PROJECT: DF18311.2005593.PR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ASHE COUNTY

LOCATION: *CULVERT #BP-005-2831 ON SR 1577
(JAKE BLACKBURN RD) OVER
LITTLE PHOENIX CREEK*
TYPE OF WORK: *GRADING, DRAINAGE, PAVING,
AND STRUCTURE*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18311.2005593.PR		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
DF18311.2005593.PR		P.E.	
DF18311.2005593.PR		R/W + UTL	
DF18311.2005593.PR		CONST.	



STRUCTURES

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DESIGN DATA

ADT 2026 = 409
ADT 2046 = 500
K = %
D = %
T = % *
V = 25 MPH
* TTST = 2% DUAL 1%
FUNC CLASS =
SUB
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT DF18311.2005593.PR
= 0.025 MILES
LENGTH OF STRUCTURE TIP PROJECT DF18311.2005593.PR
= 0.010 MILE
TOTAL LENGTH OF TIP PROJECT DF18311.2005593.PR
= 0.035 MILES

Prepared in the Office of:
KIMLEY-HORN

421 FAYETTEVILLE ST., SUITE 600, RALEIGH NC, 27601
NC LICENSE #F-0102

2024 STANDARD SPECIFICATIONS

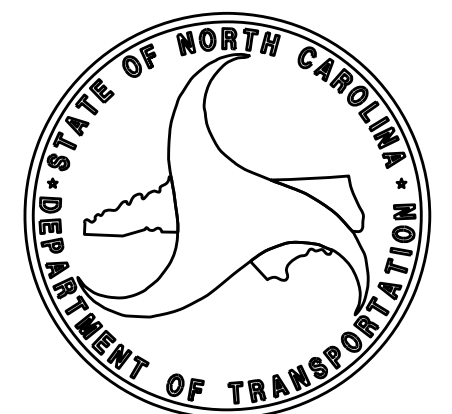
RIGHT OF WAY DATE:
APRIL 25, 2025

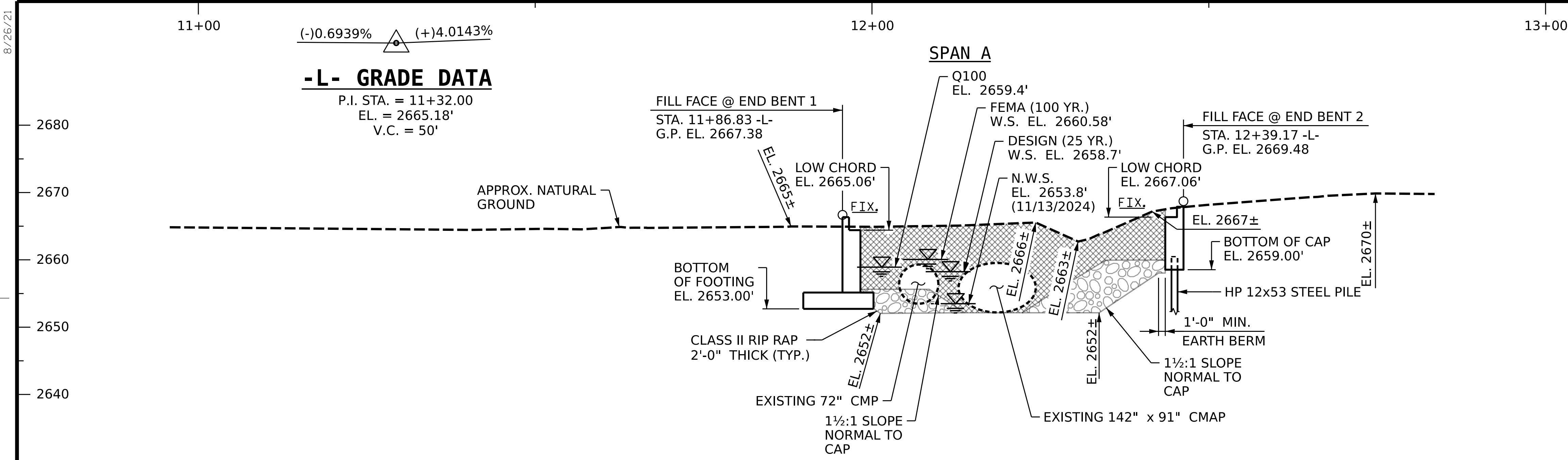
LETTING DATE:

ANDREW L. PHILLIPS, P.E.
PROJECT ENGINEER

JACK LOGAN, E.I.
PROJECT DESIGN ENGINEER

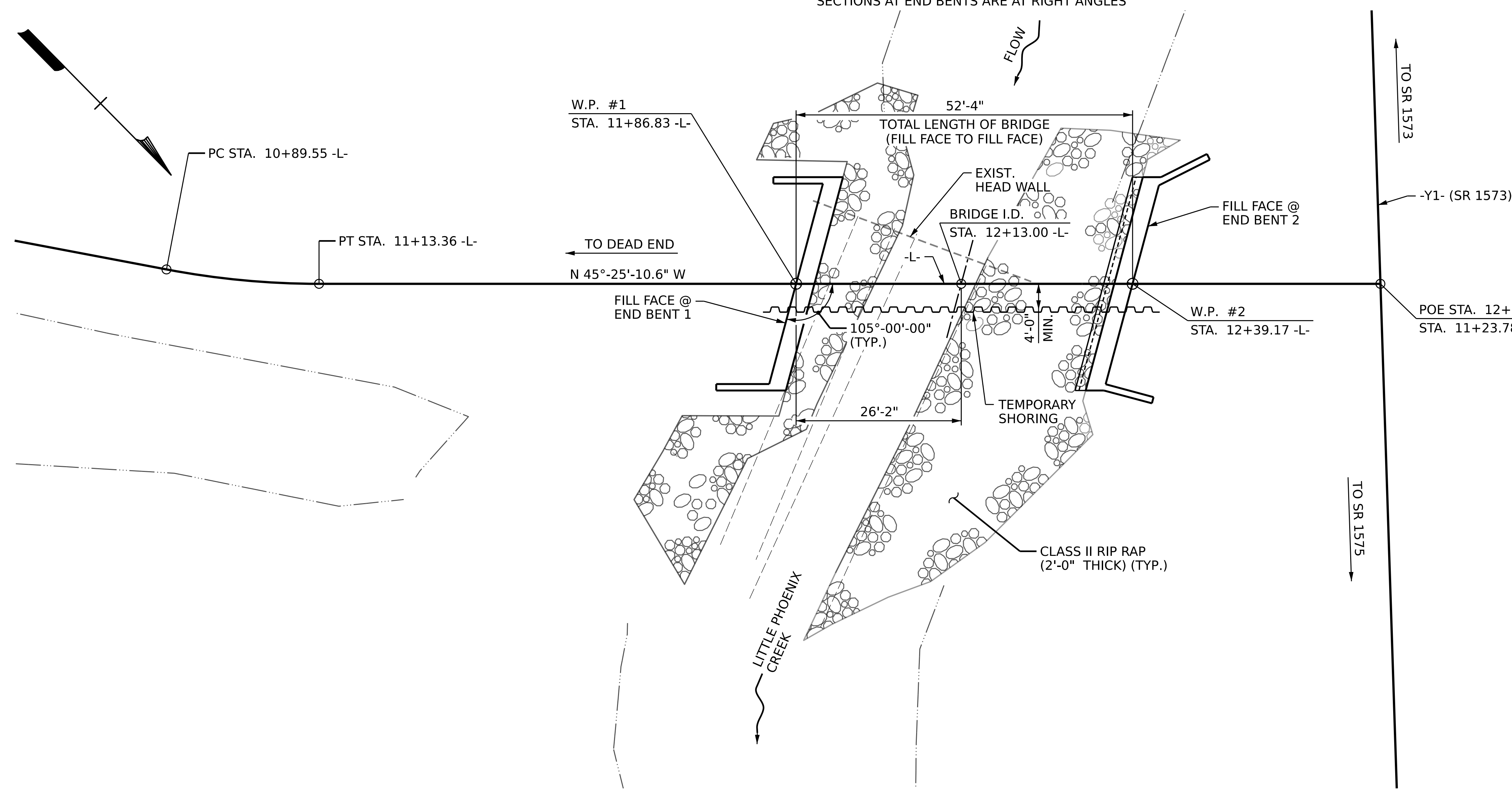
ROBBIE WEISZ, P.E.
NCDOT PROJECT MANAGER





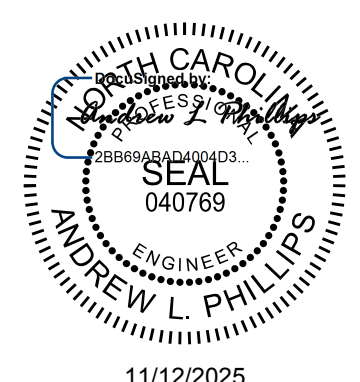
UNCLASSIFIED STRUCTURE EXCAVATION

SECTION ALONG -L-
SECTIONS AT END BENTS ARE AT RIGHT ANGLES



I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

PROJECT NO. **DF18311.2005593.PR**
ASHE COUNTY
 STATION: **12+13.00 -L-**
 SHEET 1 OF 5 BRIDGE NO. 040543



Kimley»Horn
 421 Fayetteville Street, Suite 600
 Raleigh, NC 27601-1772
 Phone (919) 677-2000
 NC LICENSE # F-0102

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
FOR BRIDGE OVER LITTLE PHOENIX CREEK ON SR 1577 BETWEEN DEAD END AND SR 1573

DRAWN BY: T. K. BOYD DATE: 08/2025
 CHECKED BY: J. R. LOGAN DATE: 08/2025
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE: 08/2025

PLAN
 PILES AND FOOTING NOT SHOWN IN PLAN VIEW FOR CLARITY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

S-1
 TOTAL SHEETS 19

SUMMARY OF SPREAD FOOTING INFORMATION
 (Blank entries indicate item is not applicable to structure)

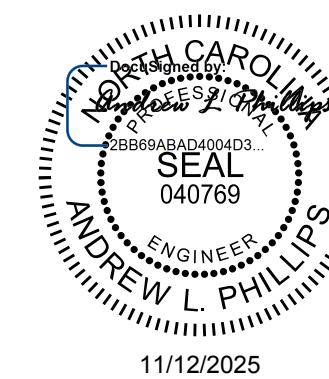
End Bent / Bent No. Footing(s) #(-#) (e.g., "Bent 1, Footing 1-2")	Factored Bearing Resistance KSF	Footing Dimensions (Length x Width) FT x FT	Required Bearing Resistance KSF	Scour Critical Elevation FT	Minimum Bottom of Footing (Footing No Higher Than) Elevation FT
End Bent No. 1	20	See Structure Plans	45	2653.50	2653.00

NOTES:

- The Micropile and Spread Footing Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (W. Scott Hunsberger, #036283) on 08-08-2025.

PROJECT NO. DF18311.2005593.PR
ASHE COUNTY
 STATION: 12+13.00 -L-

SHEET 2 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 MICROPILE AND
 SPREAD FOOTING
 FOUNDATION TABLES

Kimley»Horn
 421 Fayetteville Street, Suite 600
 Raleigh, NC 27601-1772
 Phone (919) 677-2000
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REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-2
					TOTAL SHEETS
					19

DRAWN BY : T. K. BOYD DATE : 08/2025
 CHECKED BY : J. R. LOGAN DATE : 08/2025
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE : 08/2025

8/26/21

SUMMARY OF PILE INFORMATION/INSTALLATION

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pile(s) #(-#) (e.g., "Bent 1, Piles 1-5")	Number of Piles per Line	Factored Resistance per Pile KIPS	Pile Cut-Off (Top of Pile) Elevation FT	Estimated Pile Length per Pile FT	Scour Critical Elevation FT	Driven Piles			Predrilling for Piles **			Drilled-In Piles		
						Minimum Pile Tip (Tip No Higher Than) Elevation FT	Required Driving Resistance (RDR)* per pile KIPS	Pile Redrives Quantity EACH	Predrilling Length per Pile LIN FT	Predrilling Elevation (Elevation Not To Predrill Below) FT	Maximum Predrilling Diameter INCHES	Pile Excavation (Bottom of Hole) Elevation FT	Pile Excavation Not In Soil per Pile LIN FT	Pile Excavation In Soil per Pile LIN FT
End Bent No. 2, Piles 1-5	5	165	See Structure Plans	20			275					2644.00	10	5
TOTAL QUANTITY:													50	25

* $RDR = \frac{\text{Factored Resistance} + \text{Factored Drag Load} + \text{Factored Dead Load}}{\text{Dynamic Resistance Factor}} + \text{Nominal Drag Load Resistance} + \text{Nominal Resistance from Scourable Material}$

** Predrilling for Piles is required for end bents/bents with a predrilling length and at the Contractor's option for end bents/bents with predrilling information but no predrilling length.

PILE DESIGN INFORMATION

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pile(s) #(-#) (e.g., "Bent 1, Piles 1-5")	Factored Axial Load per Pile KIPS	Factored Drag Load per Pile KIPS	Factored Dead Load * per Pile KIPS	Dynamic Resistance Factor	Nominal Drag Resistance per Pile KIPS	Nominal Scour Resistance per Pile KIPS
End Bent No. 2, Piles 1-5	162			0.60		

* Factored Dead Load is factored weight of pile above the ground line.

NOTES:

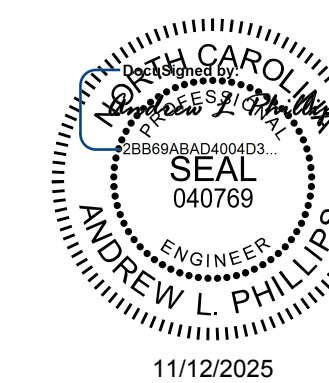
1. The Pile Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (Jeremy R. Hamm, #039779) on 11-07-2025.
2. Total Pile Driving Equipment Setup quantity (not shown in Pile Foundation Tables) equals the number of driven piles, i.e., the number of piles with a Required Driving Resistance.
3. The Engineer may adjust the quantity for DPT Testing and Pipe Pile Plates when necessary.

PROJECT NO. DF18311.2005593.PR

ASHE COUNTY

STATION: 12+13.00 -L-

SHEET 2 OF 5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

MICROPILE AND
SPREAD FOOTING
FOUNDATION TABLES

Kimley»Horn

421 Fayetteville Street, Suite 600
Raleigh, NC 27601-1772
Phone (919) 677-2000
NC LICENSE # F-0102

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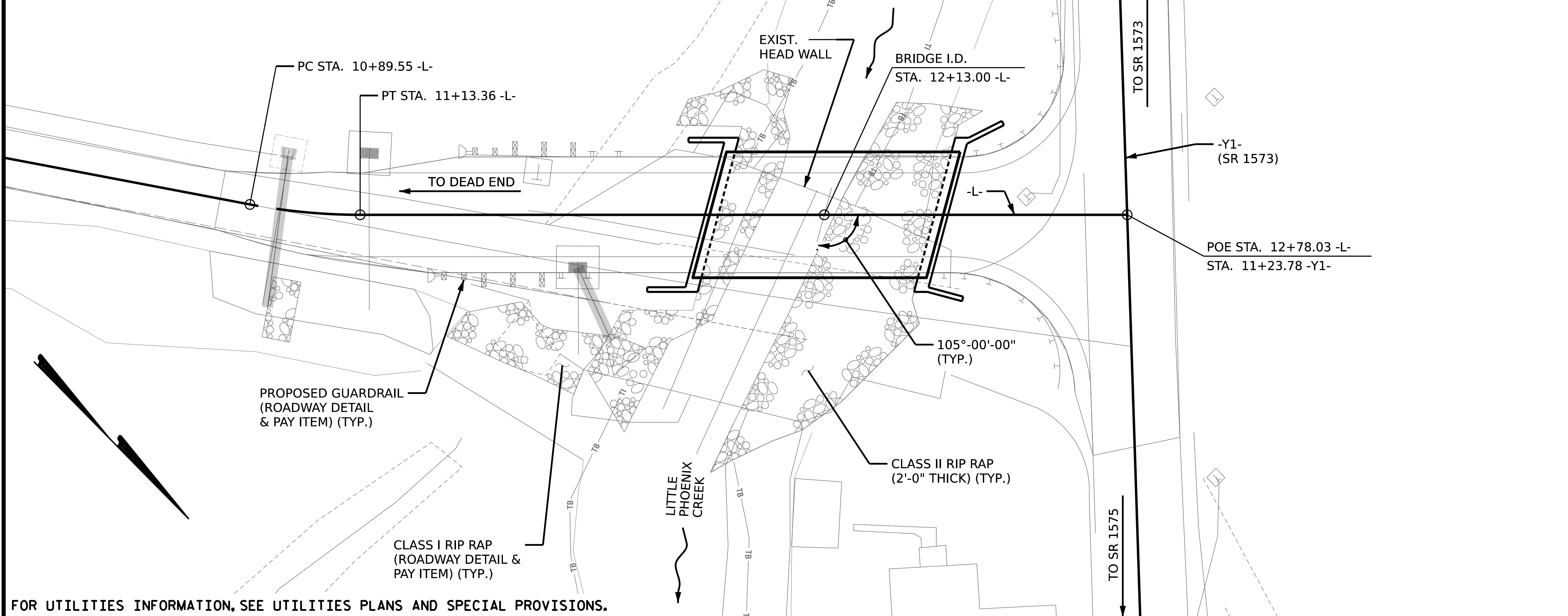
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1			3			TOTAL SHEETS
2			4			19

DRAWN BY : <u>T. K. BOYD</u>	DATE : <u>08/2025</u>
CHECKED BY : <u>J. R. LOGAN</u>	DATE : <u>08/2025</u>
DESIGN ENGINEER OF RECORD: <u>A. L. PHILLIPS</u>	DATE : <u>08/2025</u>

8/26/21

BM #1: R/R SPIKE IN 18" ASHE TREE, 30.55' RT. OF STA. 10+00.00 -L-, EL. 2664.42'



LOCATION SKETCH

NOTES

- ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
- THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 20 FT EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.
- THE EXISTING STRUCTURE CONSISTING OF 1 72" CMP AND 1 142" x 91" CMAP WITH CONCRETE HEADWALL AND LOCATED AT THE SITE OF PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE CULVERT DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.
- THE SUBSTRUCTURE OF THE EXISTING PIPES INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
- REMOVAL OF THE EXISTING PIPES SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES".
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.
- FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.
- THE SCOUR CRITICAL ELEVATION FOR END BENT NO. 1 IS 2653.50'. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

HYDRAULIC DATA

DESIGN DISCHARGE ----- 740 C.F.S.
 FREQUENCY OF DESIGN FLOOD ----- 25 YRS.
 DESIGN HIGH WATER ELEVATION----- 2658.7 FT.
 DRAINAGE AREA ----- 3.47 SQ. MI.
 BASIC DISCHARGE (0100)----- 1100 C.F.S.
 BASIC HIGH WATER ELEVATION----- 2659.4 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE -----10000 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD --->1000+ YRS.
 OVERTOPPING FLOOD ELEVATION -----2666.0 FT.

TOTAL BILL OF MATERIAL

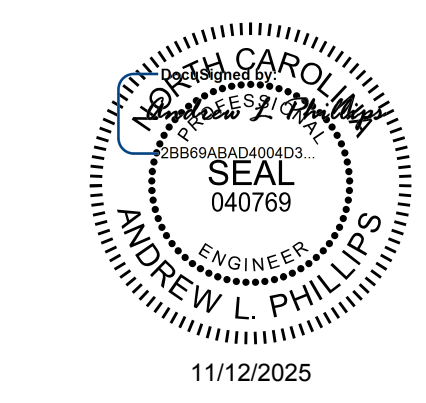
	REMOVAL OF EXISTING STRUCTURE	ASBESTOS ASSESSMENT	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	REINFORCING STEEL	PILE DRIVING EQUIPMENT SETUP FOR HP 12x53 STEEL PILES	HP 12x53 STEEL PILES	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONC. CORED SLABS		
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LUMP SUM	CU. YDS.	LBS.	EA.	NO.	LIN. FT.	LIN. FT.	TONS	SO. YDS.	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE										100.25			LUMP SUM	9	450	
END BENT 1					LUMP SUM	81.6	10,150					160.0	178.0			
END BENT 2			25	50	LUMP SUM	47.9	8,530	5	5	100		200.0	223.0			
TOTAL	LUMP SUM	LUMP SUM	25	50	LUMP SUM	129.5	18,680	5	5	100	100.25	360.0	401.0	LUMP SUM	9	450

FOUNDATION NOTES

1. FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
2. KEY IN SPREAD FOOTINGS AT END BENT NO. 1 AT LEAST 12" INTO ROCK WITH MINIMUM THICKNESS AS SHOWN ON THE PLANS.
3. FOOTING EXCAVATIONS AT END BENT NO. 1 WILL EXTEND INTO MATERIAL THAT DETERIORATES WHEN EXPOSED TO THE ELEMENTS. CHECK FIELD CONDITIONS FOR THE REQUIRED RESISTANCE AND PLACE CONCRETE IMMEDIATELY AFTER THE EXCAVATION IS COMPLETED.
4. PILE EXCAVATION IS REQUIRED FOR END BENT NO. 2. PILE EXCAVATION SHOULD EXTEND AN ELEVATION OF 10.0 FEET BELOW THE TOP OF WEATHERED ROCK.
5. FILL HOLES FOR PILE EXCAVATION WITH CONCRETE.

DRAWN BY : T. K. BOYD DATE : 08/2025
 CHECKED BY : J. R. LOGAN DATE : 08/2025
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE : 08/2025

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 Raleigh, NC 27601-1772
 Phone (919) 677-2000
 NC LICENSE # F-0102

PROJECT NO. **DF18311.2005593.PR**
ASHE COUNTY
 STATION: **12+13.00 -L-**

SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
NOTES, LOCATION SKETCH AND TOTAL BILL OF MATERIAL

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1			3			TOTAL SHEETS
2			4			19

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LOAD TYPE	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING (#)	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE					COMMENT NUMBER			
						MOMENT					SHEAR					MOMENT								
						LIVE-LOAD FACTORS (γLL)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	LIVE-LOAD FACTORS (γLL)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD	HL-93 (INVENTORY)	N/A	①	1.205	--	1.75	0.271	1.59	50'	EL	24.482	0.616	1.20	50'	EL	4.896	0.80	0.271	1.46	50'	EL	24.482		
	HL-93 (OPERATING)	N/A		1.562	--	1.35	0.271	2.06	50'	EL	24.482	0.616	1.56	50'	EL	4.896	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.434	51.614	1.75	0.271	1.97	50'	EL	24.482	0.616	1.43	50'	EL	4.896	0.80	0.271	1.81	50'	EL	24.482		
	HS-20 (OPERATING)	36.000		1.859	66.906	1.35	0.271	2.56	50'	EL	24.482	0.616	1.86	50'	EL	4.896	N/A	--	--	--	--	--		
LEGAL LOAD	SINGLE VEHICLE (SV)	SNSH	13.500		3.678	49.655	1.4	0.271	5.02	50'	EL	24.482	0.616	4.00	50'	EL	4.896	0.80	0.271	3.68	50'	EL	24.482	
		SNGARBS2	20.000		2.905	58.101	1.4	0.271	3.97	50'	EL	24.482	0.616	2.93	50'	EL	4.896	0.80	0.271	2.91	50'	EL	24.482	
		SNAGRIS2	22.000		2.748	60.456	1.4	0.271	3.83	50'	EL	19.586	0.616	2.75	50'	EL	4.896	0.80	0.271	2.81	50'	EL	24.482	
		SNCOTTS3	27.250		1.835	49.998	1.4	0.271	2.50	50'	EL	24.482	0.616	2.01	50'	EL	4.896	0.80	0.271	1.83	50'	EL	24.482	
		SNAGGRS4	34.925		1.595	55.714	1.4	0.271	2.18	50'	EL	24.482	0.616	1.72	50'	EL	4.896	0.80	0.271	1.60	50'	EL	24.482	
		SNS5A	35.550		1.556	55.303	1.4	0.271	2.12	50'	EL	24.482	0.616	1.77	50'	EL	4.896	0.80	0.271	1.56	50'	EL	24.482	
		SNS6A	39.950		1.455	58.112	1.4	0.271	1.99	50'	EL	24.482	0.616	1.64	50'	EL	4.896	0.80	0.271	1.45	50'	EL	24.482	
	SNS7B	42.000		1.386	58.224	1.4	0.271	1.89	50'	EL	24.482	0.616	1.65	50'	EL	4.896	0.80	0.271	1.39	50'	EL	24.482		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.782	58.809	1.4	0.271	2.43	50'	EL	24.482	0.616	1.94	50'	EL	4.896	0.80	0.271	1.78	50'	EL	24.482	
		TNT4A	33.075		1.798	59.458	1.4	0.271	2.45	50'	EL	24.482	0.616	1.86	50'	EL	4.896	0.80	0.271	1.80	50'	EL	24.482	
		TNT6A	41.600		1.497	62.293	1.4	0.271	2.04	50'	EL	24.482	0.616	1.80	50'	EL	4.896	0.80	0.271	1.50	50'	EL	24.482	
		TNT7A	42.000		1.520	63.842	1.4	0.271	2.08	50'	EL	24.482	0.616	1.67	50'	EL	4.896	0.80	0.271	1.52	50'	EL	24.482	
		TNT7B	42.000		1.585	66.559	1.4	0.271	2.16	50'	EL	24.482	0.616	1.59	50'	EL	4.896	0.80	0.271	1.58	50'	EL	24.482	
		TNAGRIT4	43.000		1.504	64.667	1.4	0.271	2.05	50'	EL	24.482	0.616	1.53	50'	EL	4.896	0.80	0.271	1.50	50'	EL	24.482	
TNAGT5A		45.000		1.405	63.217	1.4	0.271	1.92	50'	EL	24.482	0.616	1.56	50'	EL	4.896	0.80	0.271	1.40	50'	EL	24.482		
TNAGT5B	45.000	③	1.376	61.936	1.4	0.271	1.88	50'	EL	24.482	0.616	1.45	50'	EL	4.896	0.80	0.271	1.38	50'	EL	24.482			
EMERGENCY VEHICLE (EV)	EV2	28.750		2.180	62.675	1.3	0.271	3.02	50'	EL	24.482	0.616	2.21	50'	EL	4.896	0.80	0.271	2.18	50'	EL	24.482		
	EV3	43.000	④	1.409	60.571	1.3	0.271	1.95	50'	EL	24.482	0.616	1.49	50'	EL	4.896	0.80	0.271	1.41	50'	EL	24.482		

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γDC	γDW
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

-
-
-
-

CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

② DESIGN LOAD RATING (HS-20)

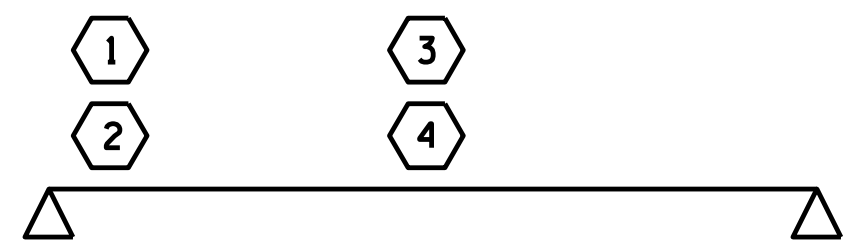
③ LEGAL LOAD RATING **

④ EMERGENCY VEHICLE LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

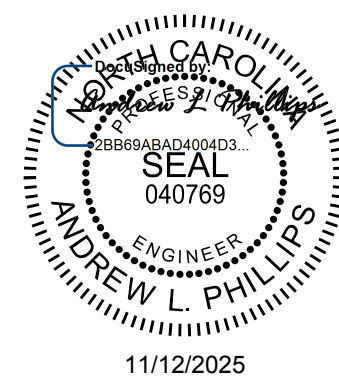
I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER



LRFR SUMMARY
FOR SPAN "A"

PROJECT NO. DF18311.2005593.PR
ASHE COUNTY
STATION: 12+13.00 -L-

SHEET 5 OF 5



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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
**LRFR SUMMARY FOR
50' CORED SLAB UNIT
105° SKEW**

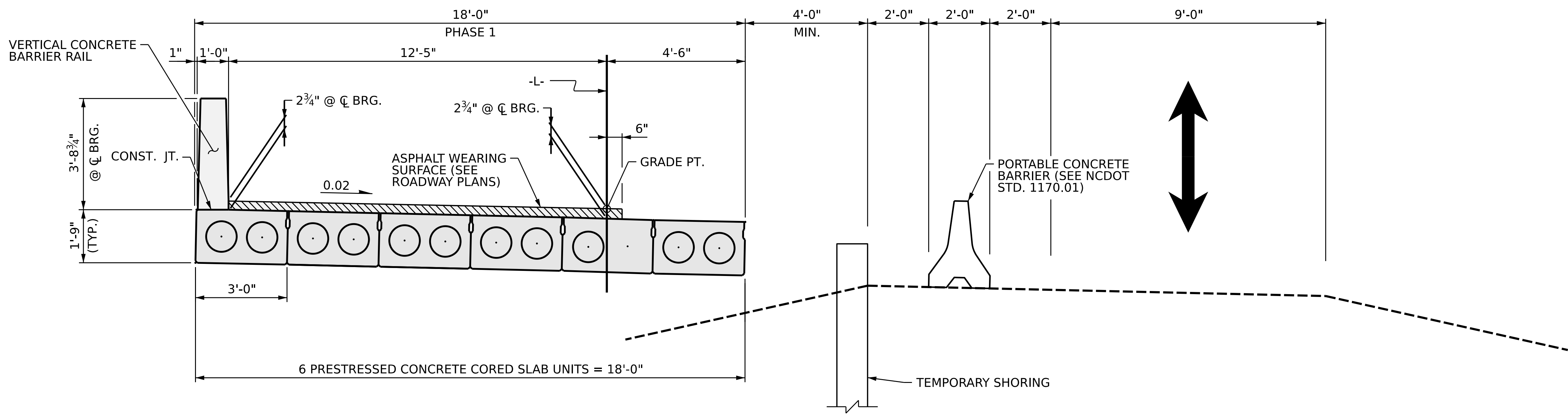
(NON-INTERSTATE TRAFFIC)

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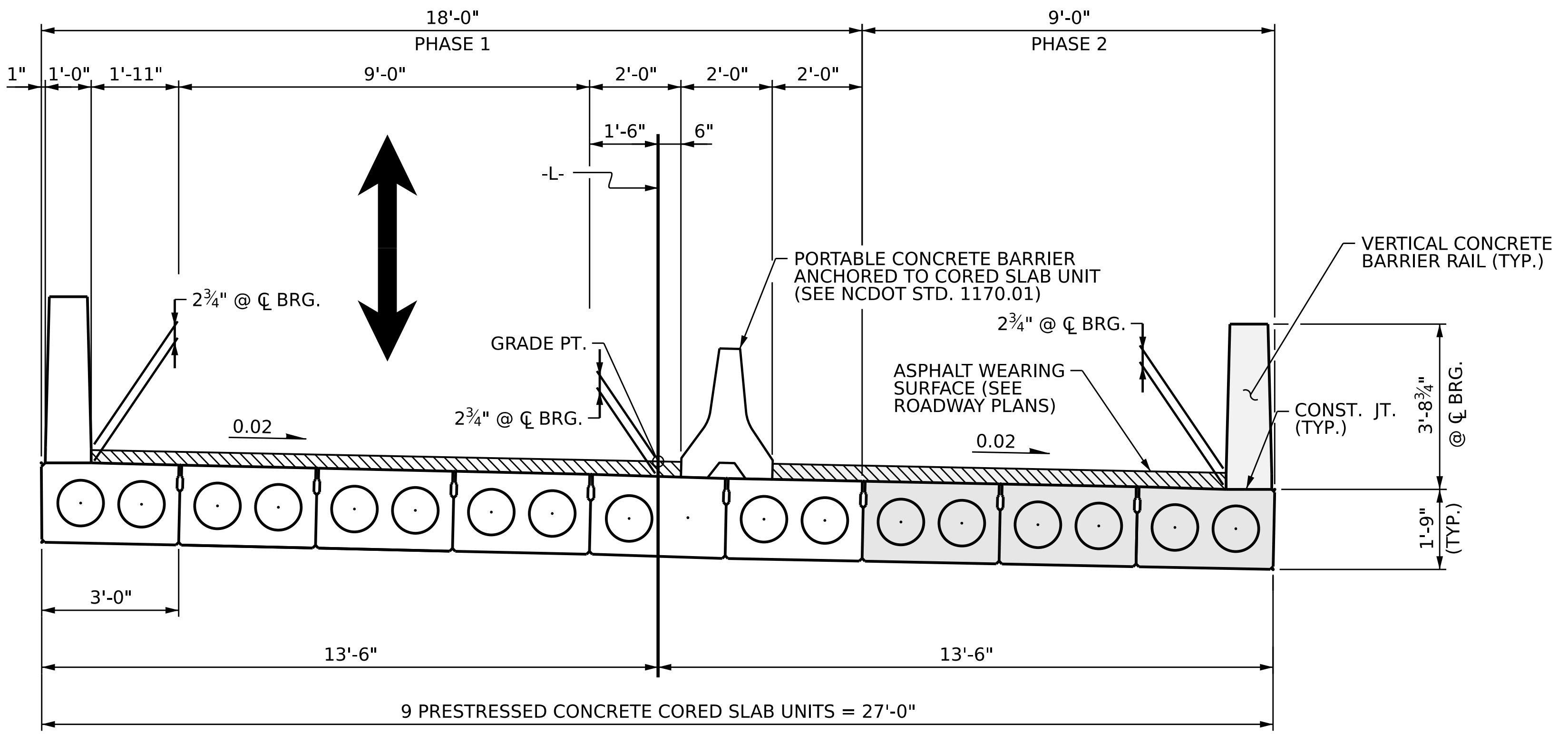
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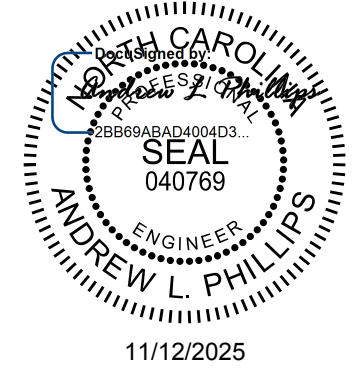


TYPICAL SECTION - PHASE I



TYPICAL SECTION - PHASE II

PROJECT NO. DF18311.2005593.PR
ASHE COUNTY
 STATION: 12+13.00 -L-



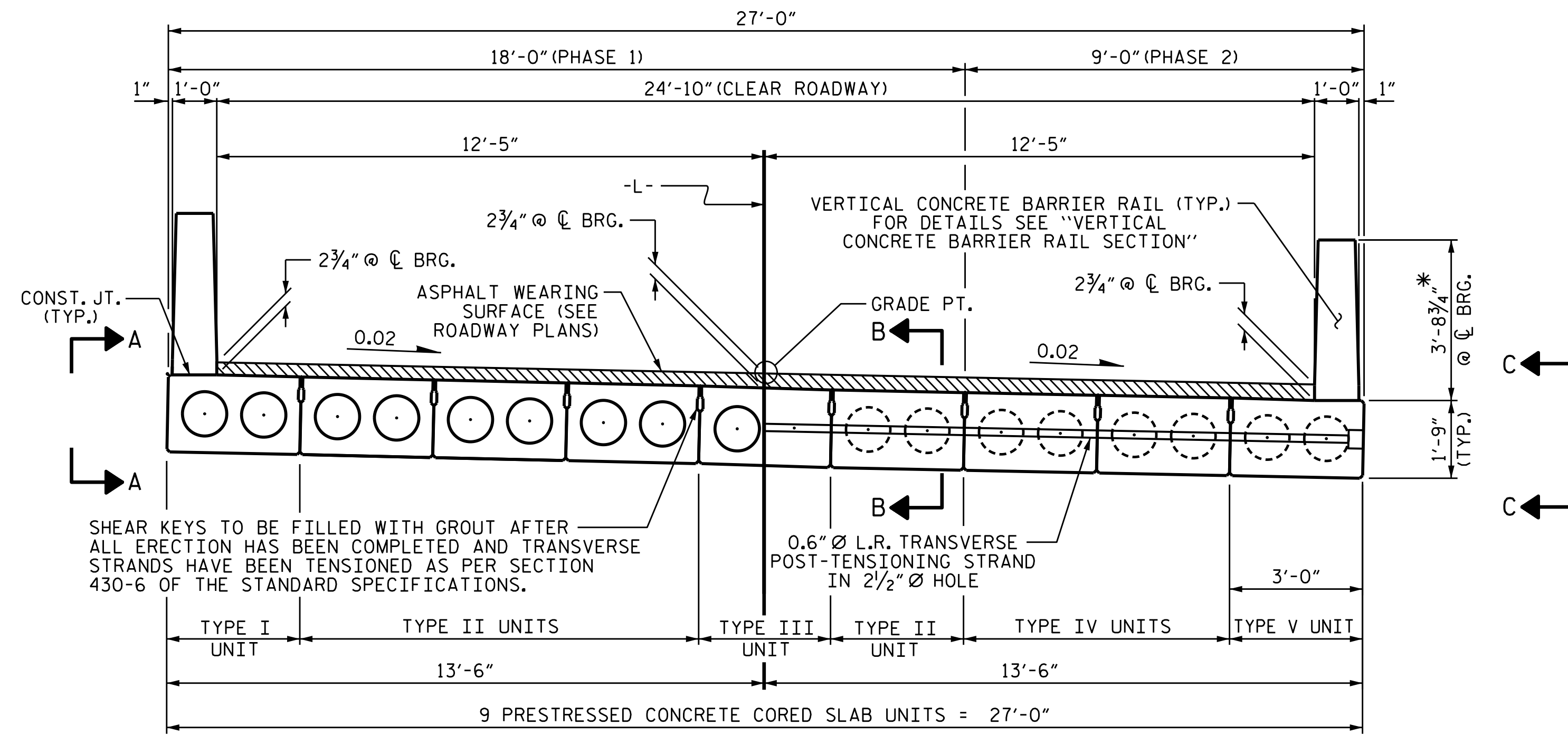
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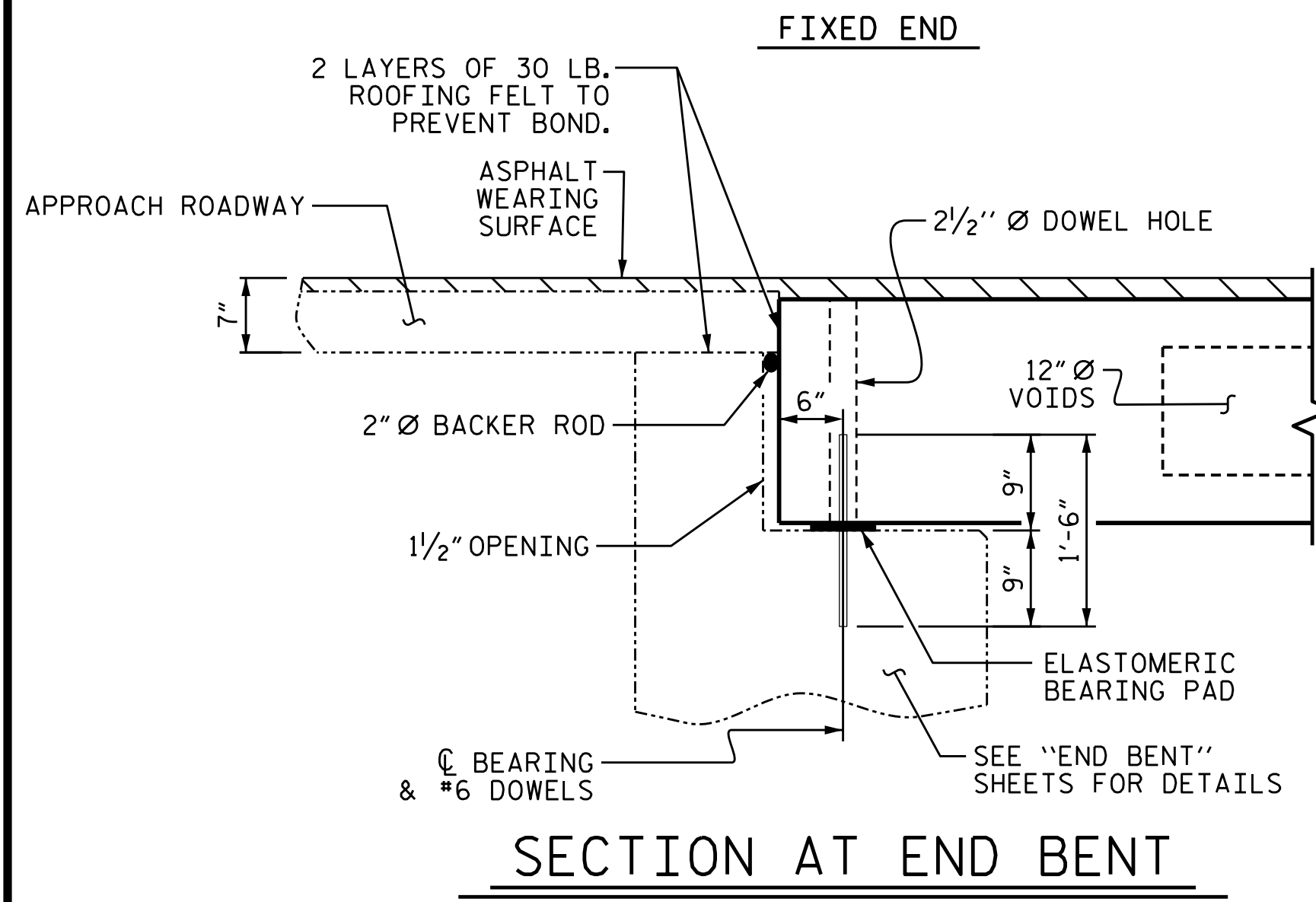
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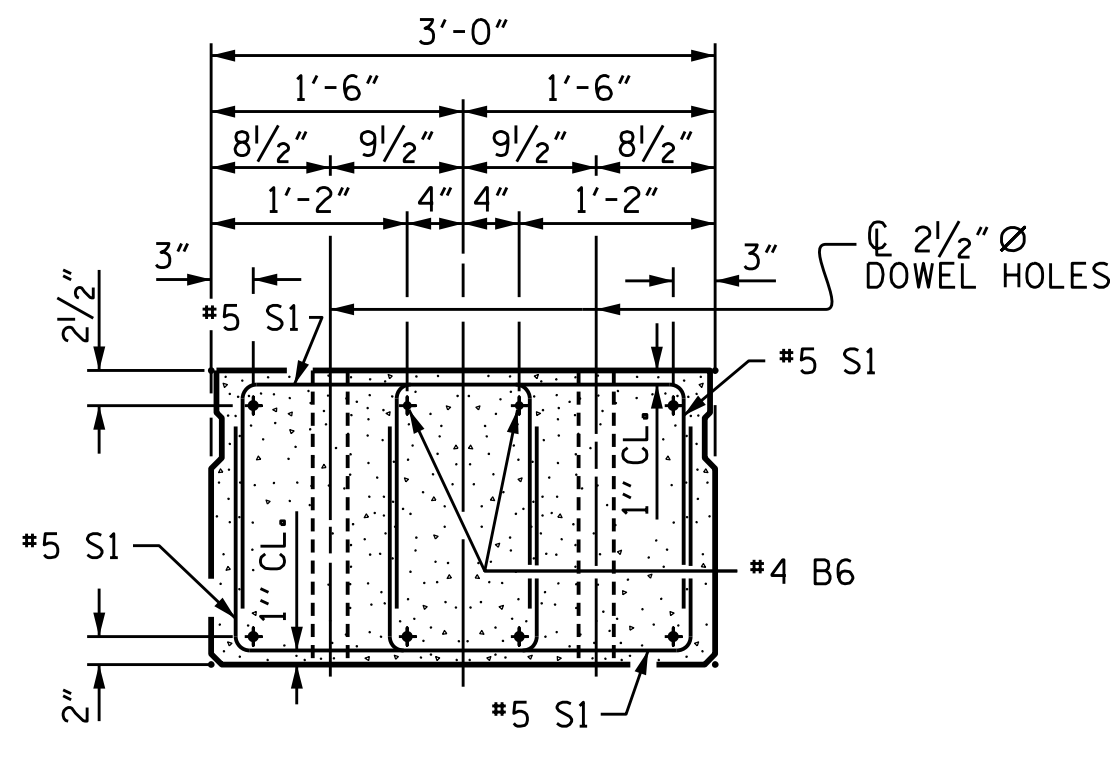
TYPICAL SECTION

* - THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.

SEE SHEET 2 OF 5 FOR SECTION B-B AND VIEWS A-A AND C-C. TYPES I, II, AND III UNITS HAVE 2 SETS OF POST-TENSIONING STRAND HOLES. TYPES IV AND V UNITS HAVE 1 SET OF POST-TENSIONING STRAND HOLES. SEE SHEET 2 OF 5 FOR DETAILS.

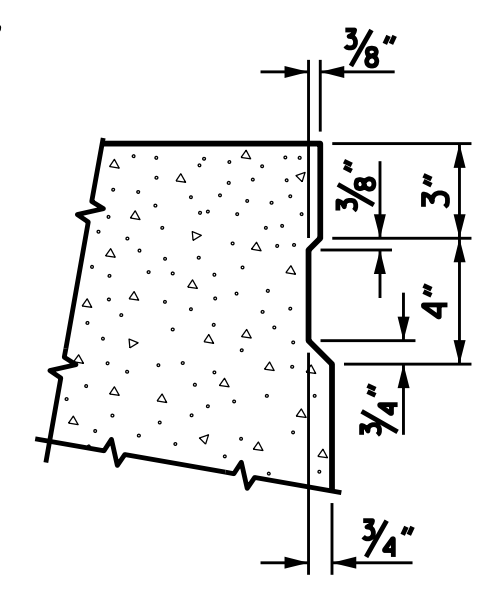


SECTION AT END BENT



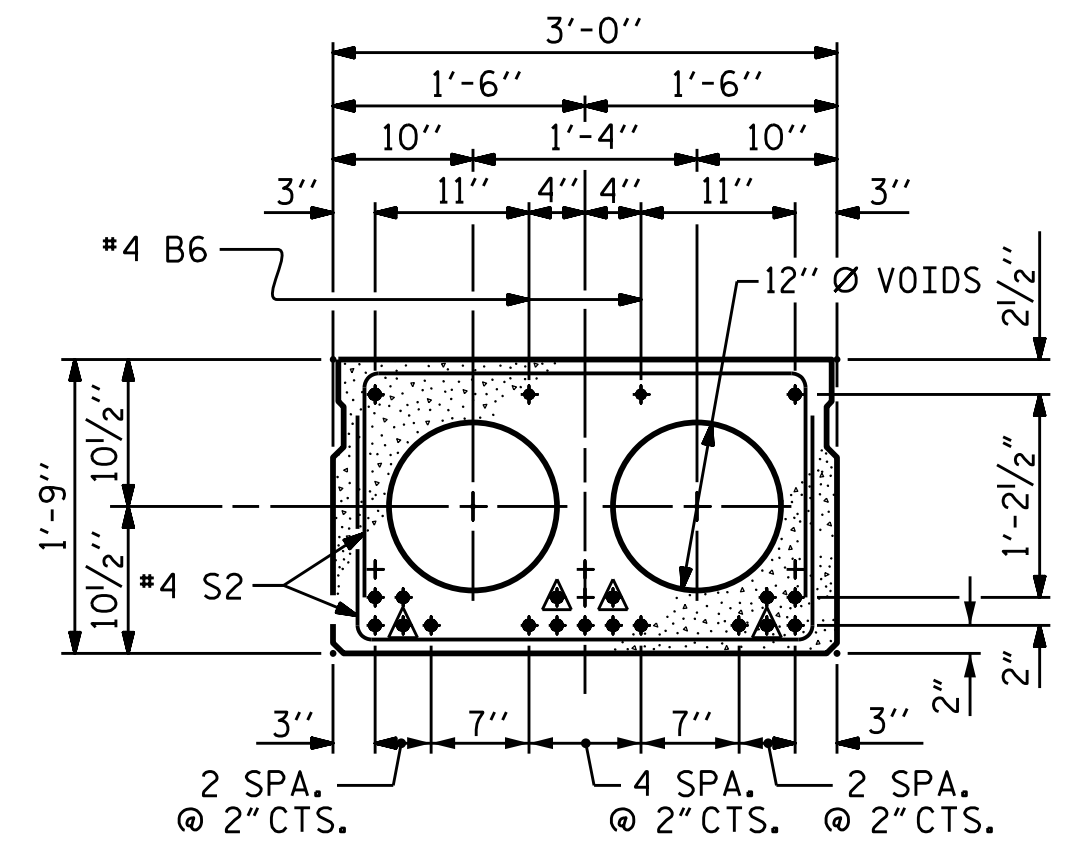
END ELEVATION

SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.) INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.



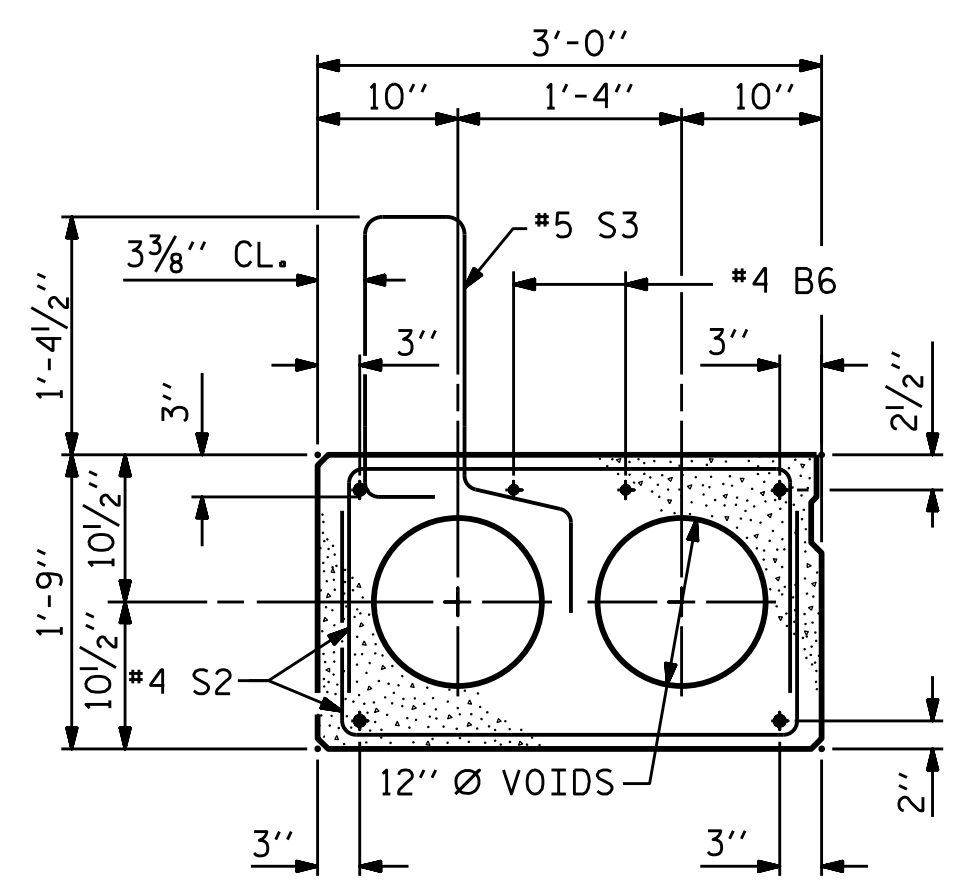
SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLABS.



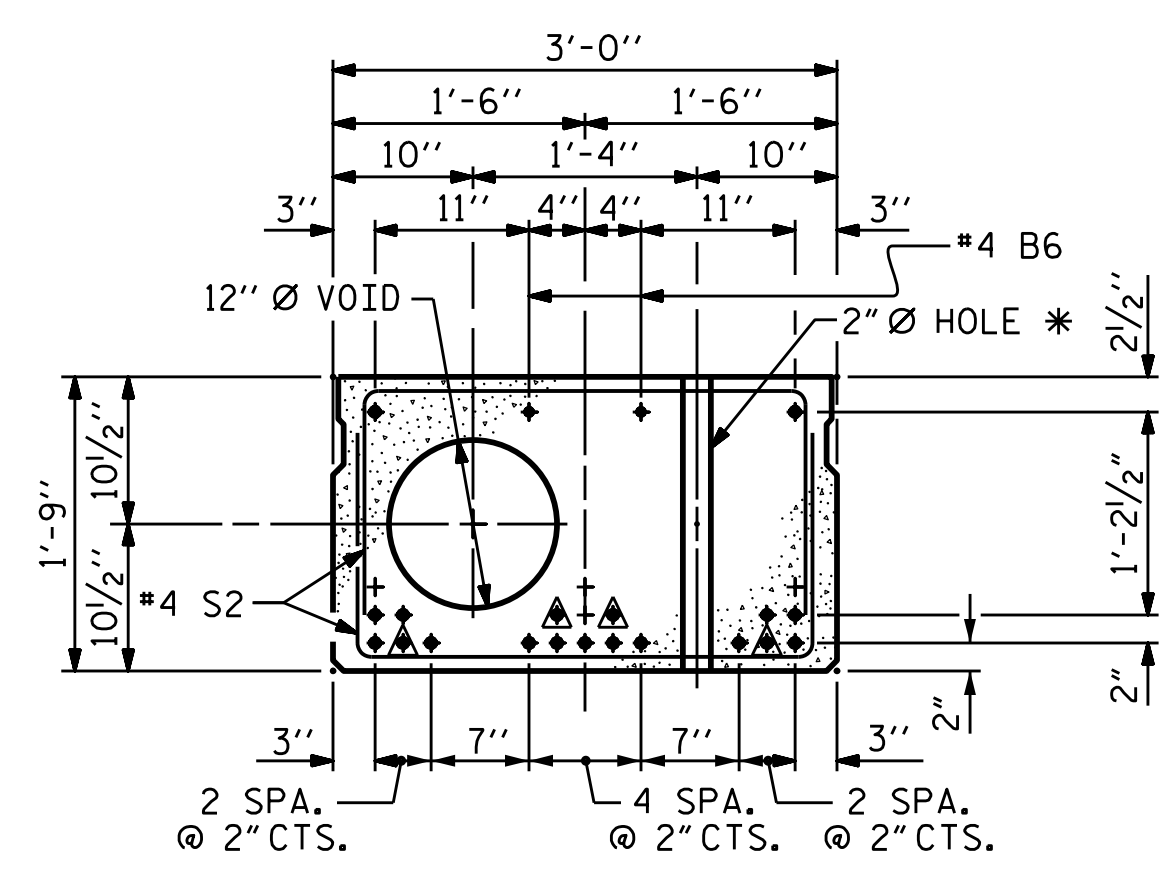
INTERIOR SLAB SECTION (50' UNIT)

TYPE II & TYPE IV (19 STRANDS REQUIRED)



EXTERIOR SLAB SECTION (50' UNIT)

TYPE I & TYPE V (FOR PRESTRESSED STRAND LAYOUT, SEE TYPE II & TYPE IV SLAB SECTION.)



INTERIOR SLAB SECTION (50' UNIT)

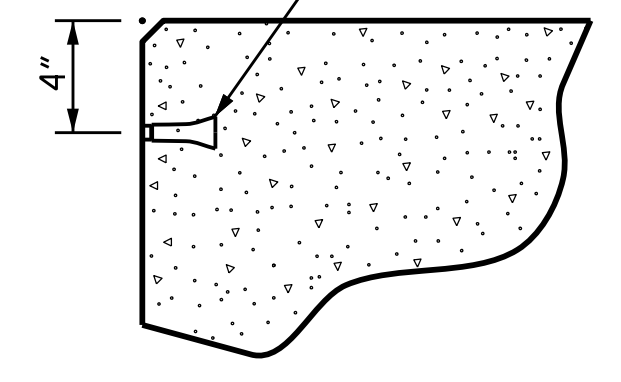
TYPE III (19 STRANDS REQUIRED) * 2" FORMED HOLE IS FOR TEMPORARY CONCRETE BARRIER ANCHOR BOLT LOCATIONS. SEE PLAN OF UNIT ON "PLAN OF 50' UNIT, 24'-10" CLEAR ROADWAY 105° SKEW (PHASE 1)" SHEET (SHEET 3 OF 5)

0.6" LOW RELAXATION STRAND LAYOUT

▲ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

DEBONDING LEGEND

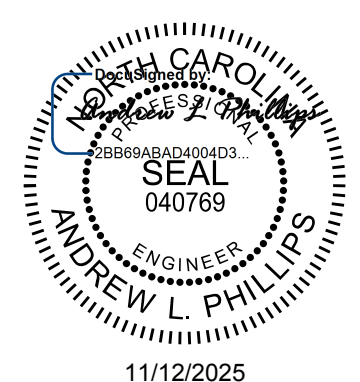
PERMITTED THREADED INSERT CAST IN OUTSIDE FACE OF EXTERIOR UNIT AND RECESSED 3/8" SIZE TO BE DETERMINED BY CONTRACTOR.



THREADED INSERT DETAIL

PROJECT NO. **DF18311.200593.PR**
ASHE COUNTY
 STATION: **12+13.00 -L-**

SHEET 1 OF 5



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT 105° SKEW

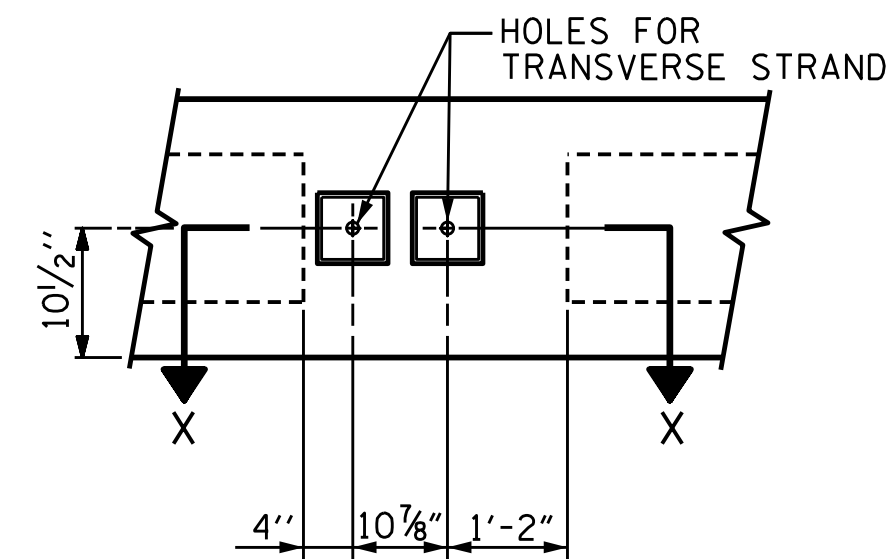
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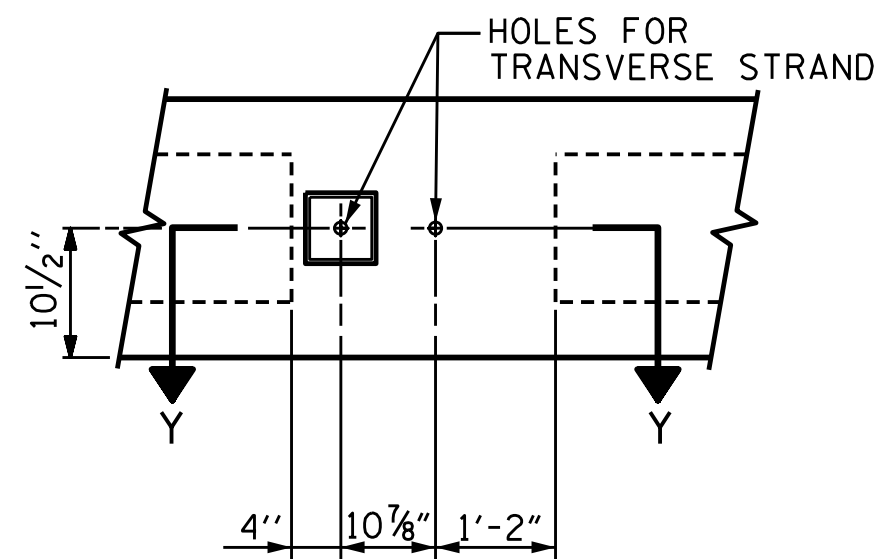
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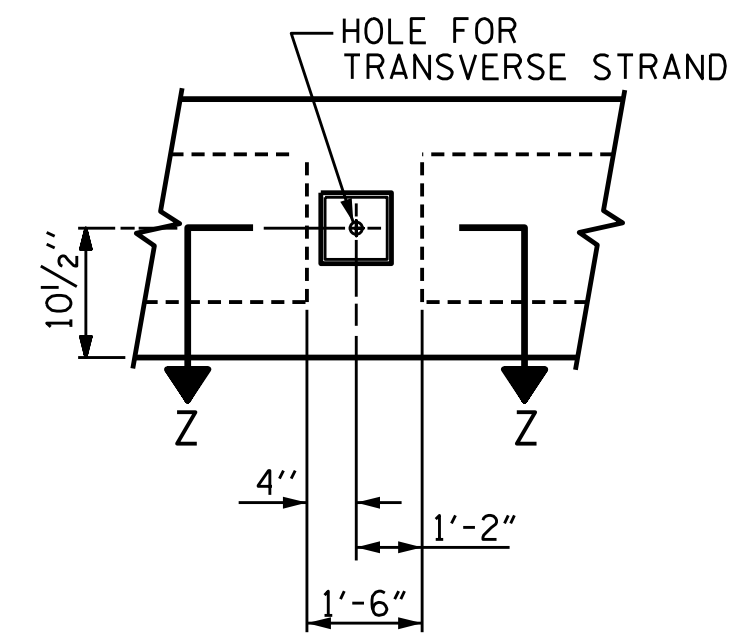
S-7
TOTAL SHEETS 19



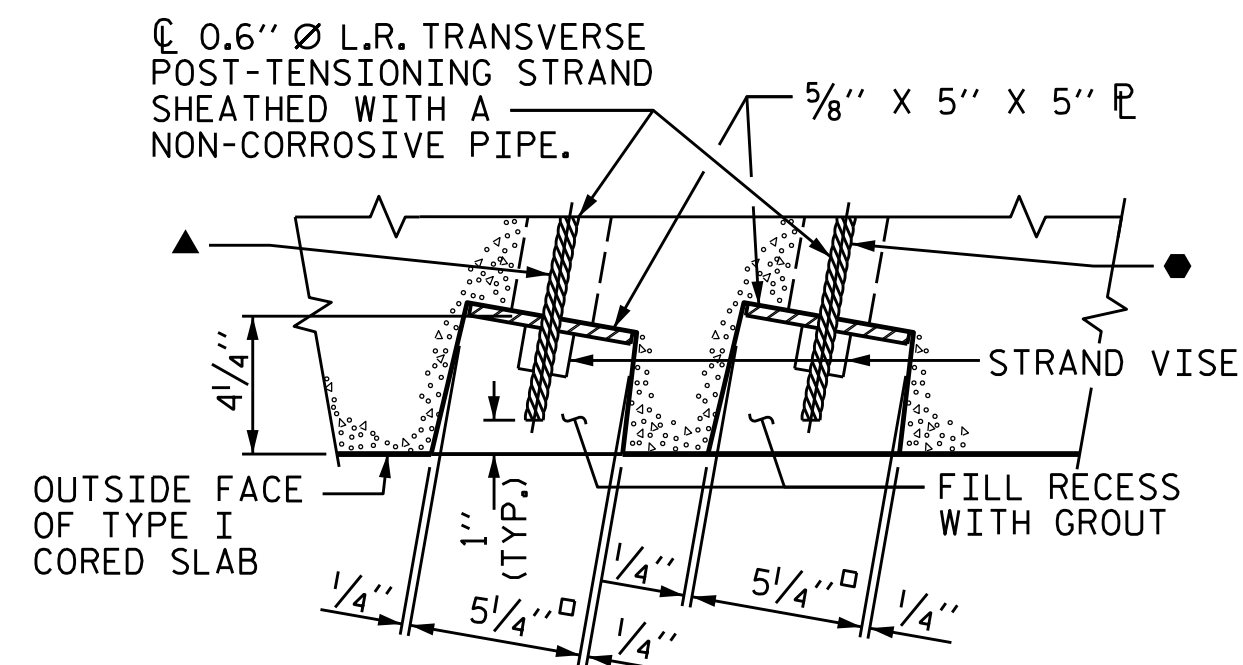
VIEW A-A
SEE SHEET 1 OF 5



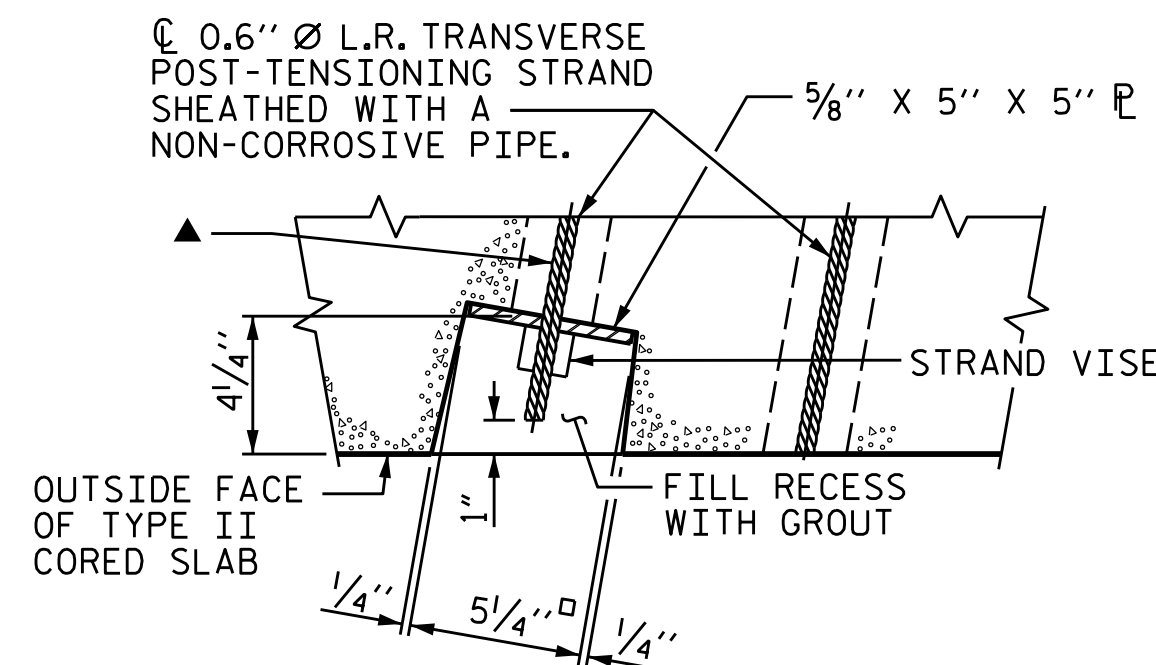
SECTION B-B
SEE SHEET 1 OF 5



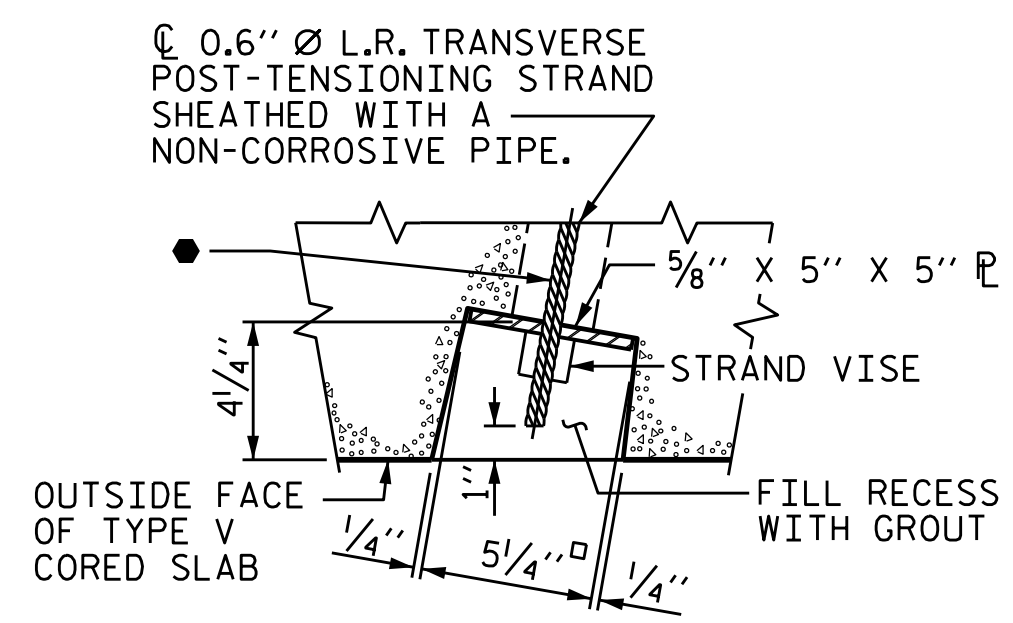
VIEW C-C
SEE SHEET 1 OF 5



SECTION X-X



SECTION Y-Y



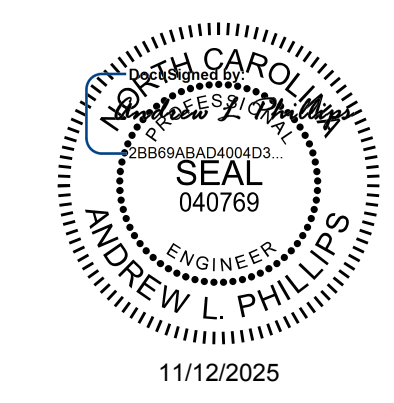
SECTION Z-Z

GROUTED RECESS AT END OF POST-TENSIONED STRAND OF CORED SLABS

- ▲ STRAND GROUP #1 TO PASS THROUGH 6 CORED SLAB UNITS (TO BE TENSIONED DURING PHASE 1 CONSTRUCTION)
- STRAND GROUP #2 TO PASS THROUGH ALL 9 CORED SLAB UNITS (TO BE TENSIONED DURING PHASE 2 CONSTRUCTION)

PROJECT NO. DF18311.2005593.PR
ASHE COUNTY
 STATION: 12+13.00 -L-

SHEET 2 OF 5
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
3' - 0" X 1' - 9"
PRESTRESSED CONCRETE
CORED SLAB UNIT



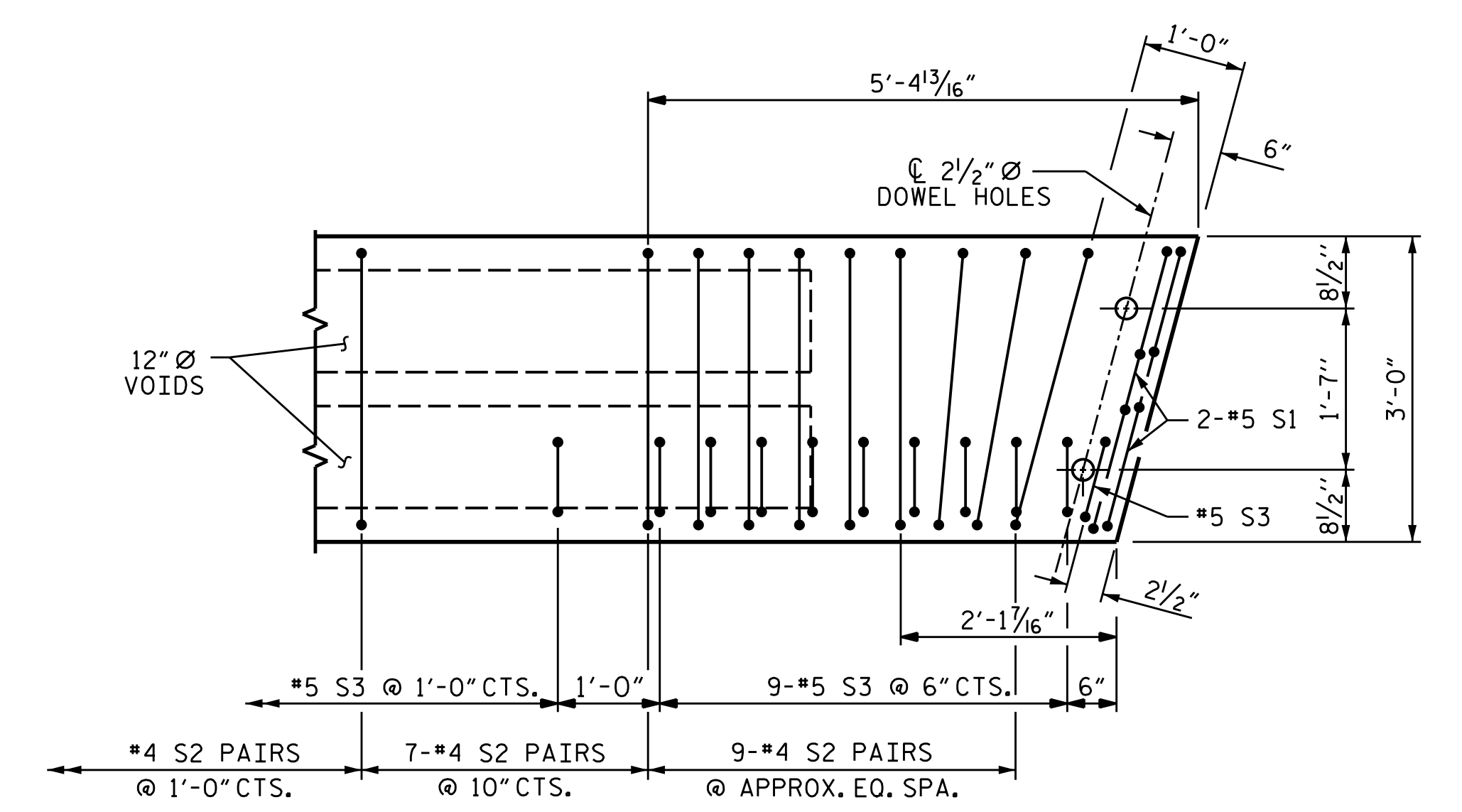
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DRAWN BY : T. K. BOYD DATE : 08/2025
 CHECKED BY : J. R. LOGAN DATE : 08/2025
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE : 08/2025

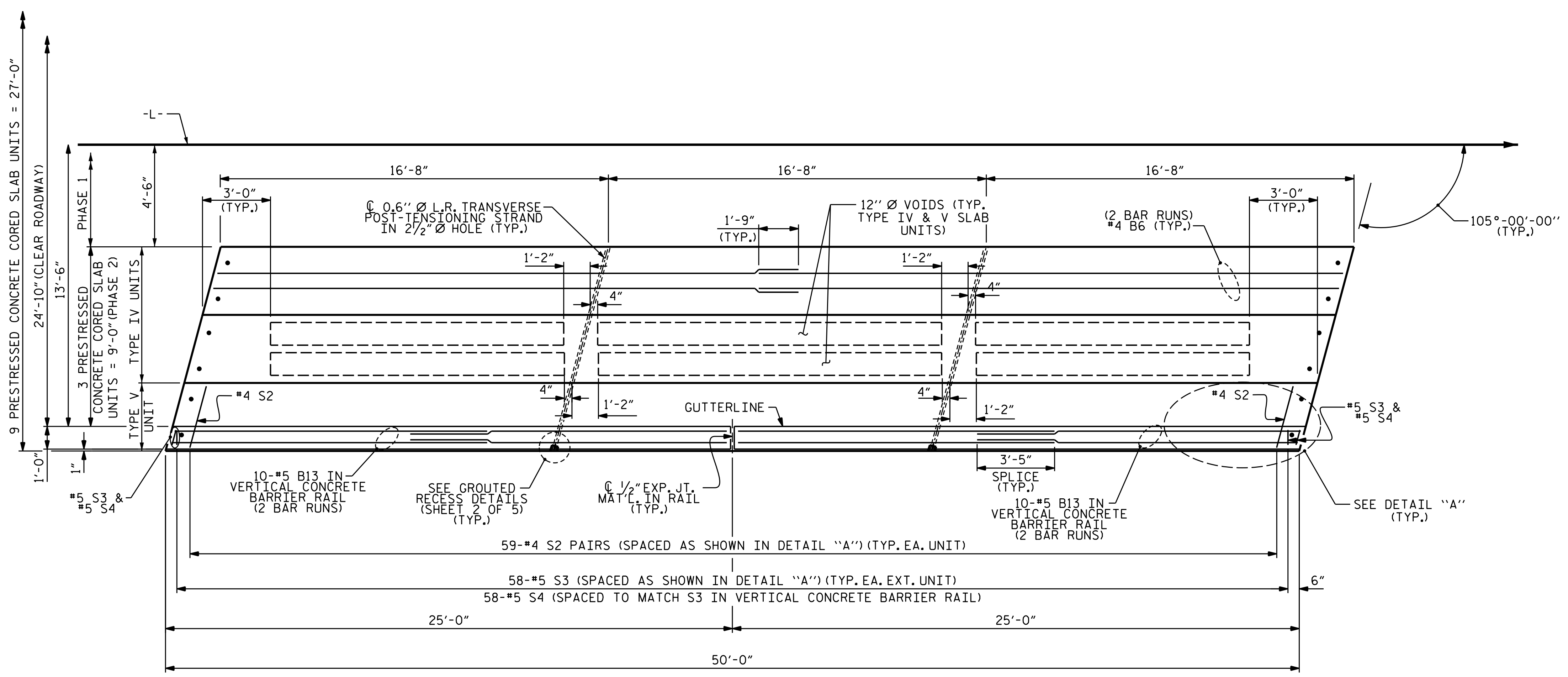
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2			4			

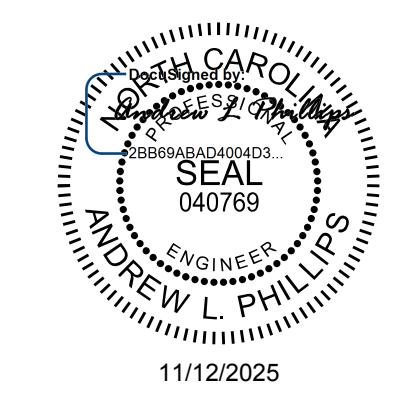


DETAIL "A"
 (SIMILAR EACH END OF UNIT)
 NOTE: TYPE V UNIT SHOWN - TYPE IV
 UNIT SIMILAR EXCEPT OMIT #5 S3 BARS.



PLAN OF UNIT
 (PHASE 2)

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ASHE COUNTY
 STATION: **12+13.00 -L-**
 SHEET 4 OF 5



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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF 50' UNIT 24'-10" CLEAR ROADWAY 105° SKEW (PHASE 2)					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-10
					TOTAL SHEETS 19

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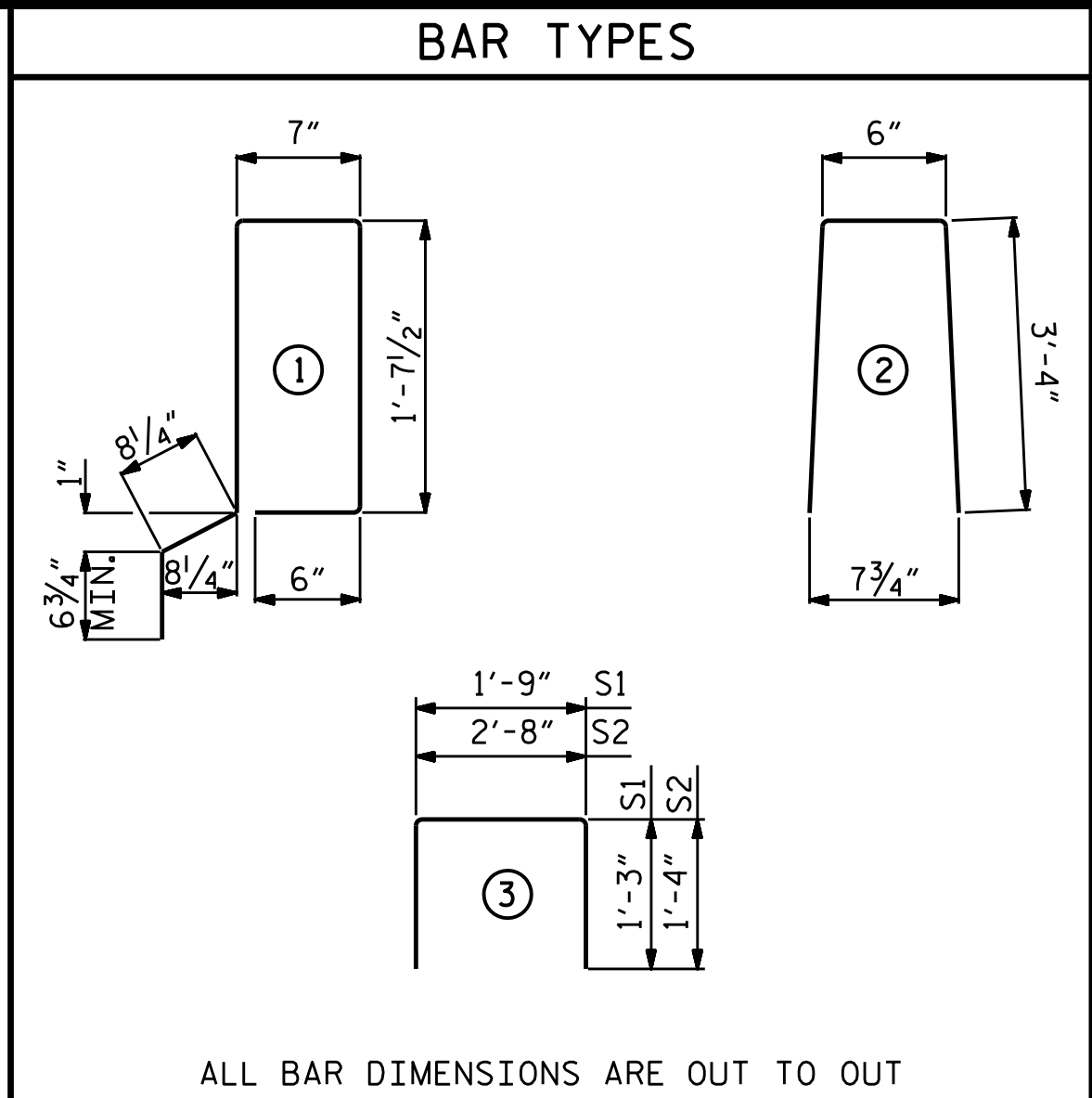
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CORED SLABS REQUIRED			
50' UNIT	NUMBER	LENGTH	TOTAL LENGTH
TYPE I	1	50'-0"	50'-0"
TYPE II	4	50'-0"	200'-0"
TYPE III	1	50'-0"	50'-0"
TYPE IV	2	50'-0"	100'-0"
TYPE V	1	50'-0"	50'-0"
TOTAL	9		450'-0"

DEAD LOAD DEFLECTION AND CAMBER	
50' CORED SLAB UNIT	3'-0" x 1'-9" 0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1/2" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	3/8" ↓
FINAL CAMBER	1/8" ↑

** INCLUDES FUTURE WEARING SURFACE

GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT		
	ASPHALT OVERLAY THICKNESS	RAIL HEIGHT
	@ MID-SPAN	@ MID-SPAN
50' UNIT	1 5/8"	3'-7 5/8"



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE 50' CORED SLAB UNIT									
BAR	NUMBER	SIZE	TYPE	TYPE I & V LENGTH	TYPE I & V WEIGHT	TYPE II & IV LENGTH	TYPE II & IV WEIGHT	TYPE III LENGTH	TYPE III WEIGHT
B6	4	#4	STR	25'-9"	69	25'-9"	69	25'-9"	69
S1	8	#5	3	4'-3"	35	4'-3"	35	4'-3"	35
S2	118	#4	3	5'-4"	420	5'-4"	420	5'-4"	420
* S3	60	#5	1	5'-7"	349				
REINFORCING STEEL			LBS.		524		524		524
* EPOXY COATED REINFORCING STEEL			LBS.		349				
6500 P.S.I. CONCRETE			CU. YDS.		7.3		7.3		8.2
0.6" Ø L.R. STRANDS			No.		19		19		19

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL						
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
* B13	80	80	#5	STR	14'-2"	1182
* S4	120	120	#5	2	7'-2"	897
* EPOXY COATED REINFORCING STEEL					LBS.	2079
CLASS AA CONCRETE					CU. YDS.	12.8
TOTAL VERTICAL CONCRETE BARRIER RAIL					LN. FT.	100.25

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

ALL REINFORCING STEEL IN THE VERTICAL CONCRETE BARRIER RAIL SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

THE #4 S2 STIRRUPS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO THE GROUTED RECESSES.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

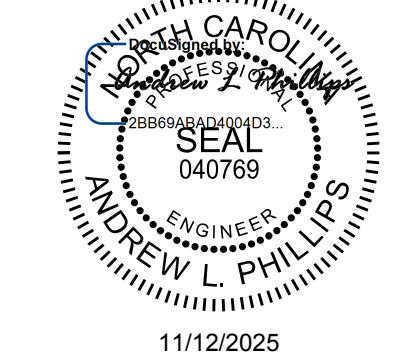
THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

CONCRETE RELEASE STRENGTH	
UNIT	PSI
50' UNIT	4900

GRADE 270 STRANDS	
0.6" Ø L.R.	
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



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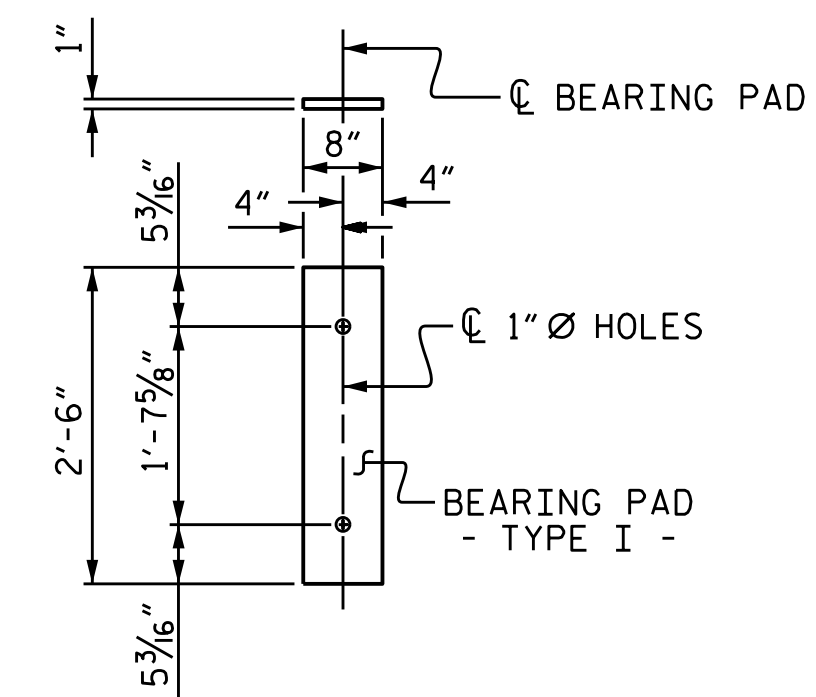
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ASHE COUNTY
 STATION: **12+13.00 -L-**

SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
3'-0" X 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT

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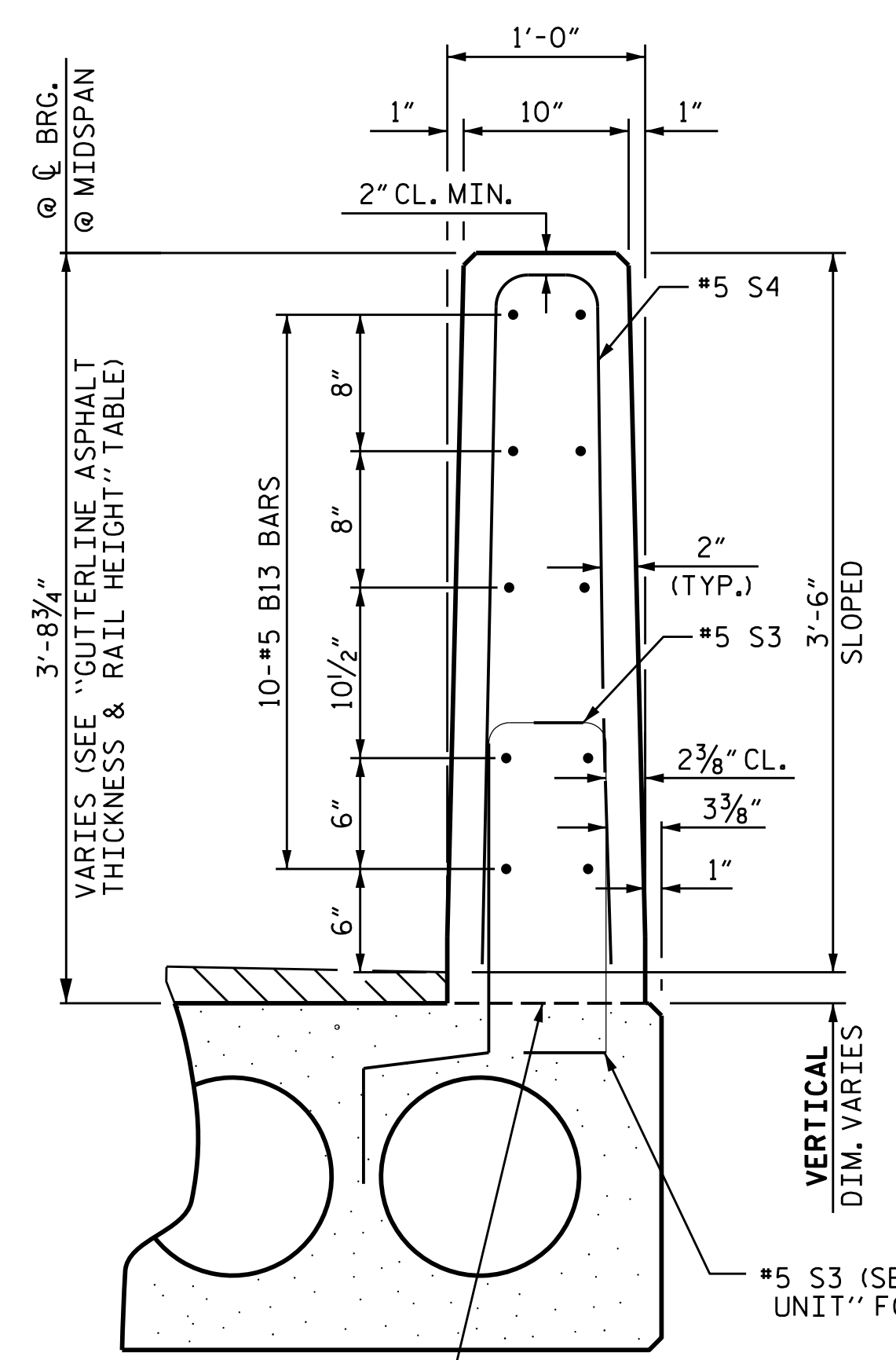
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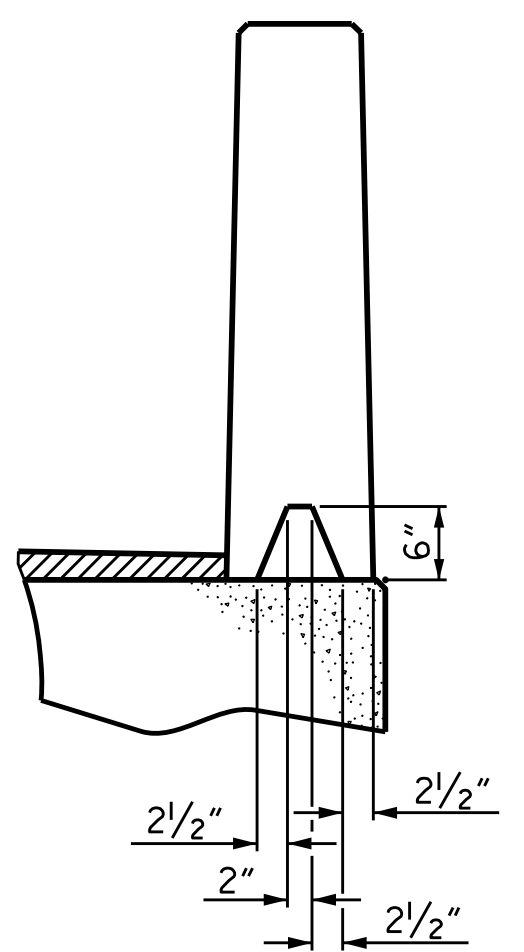
FIXED END
(TYPE I - 18 REQ'D)

ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 50 DUROMETER HARDNESS.

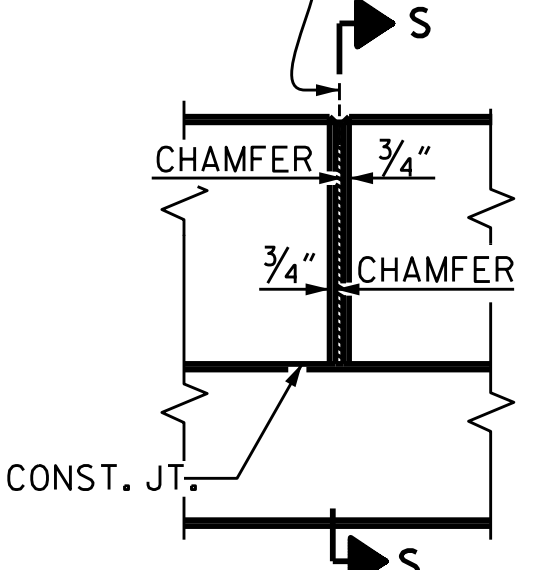


VERTICAL CONCRETE BARRIER RAIL SECTION

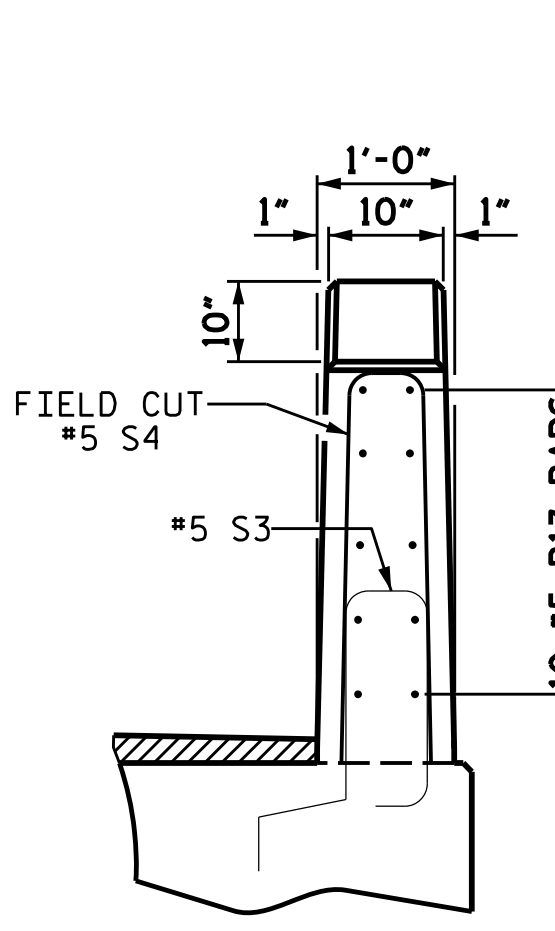


SECTION S-S
 AT DAM IN OPEN JOINT
 (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

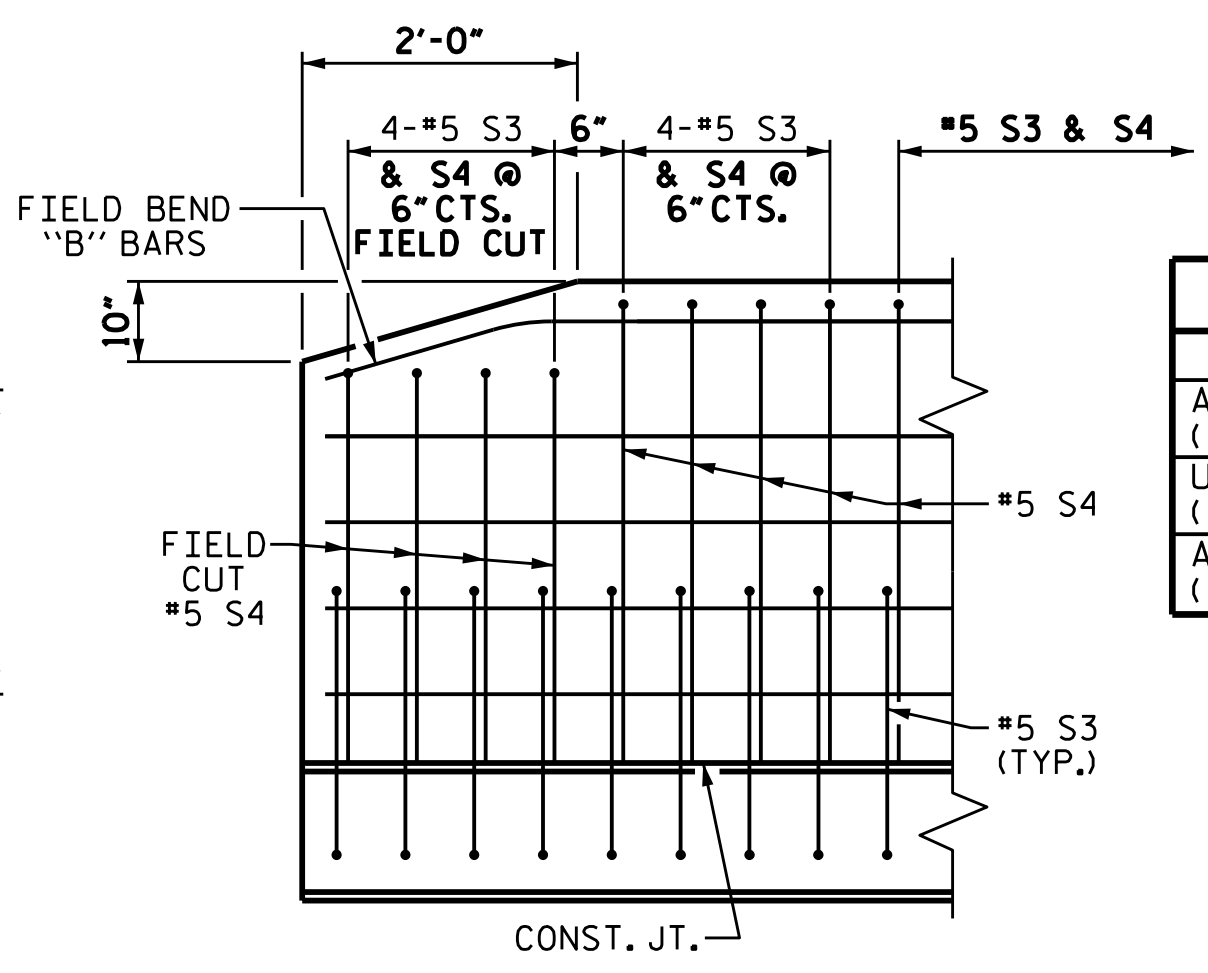
1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L. WHEN SLIP FORM IS USED)



ELEVATION AT EXPANSION JOINTS



END VIEW



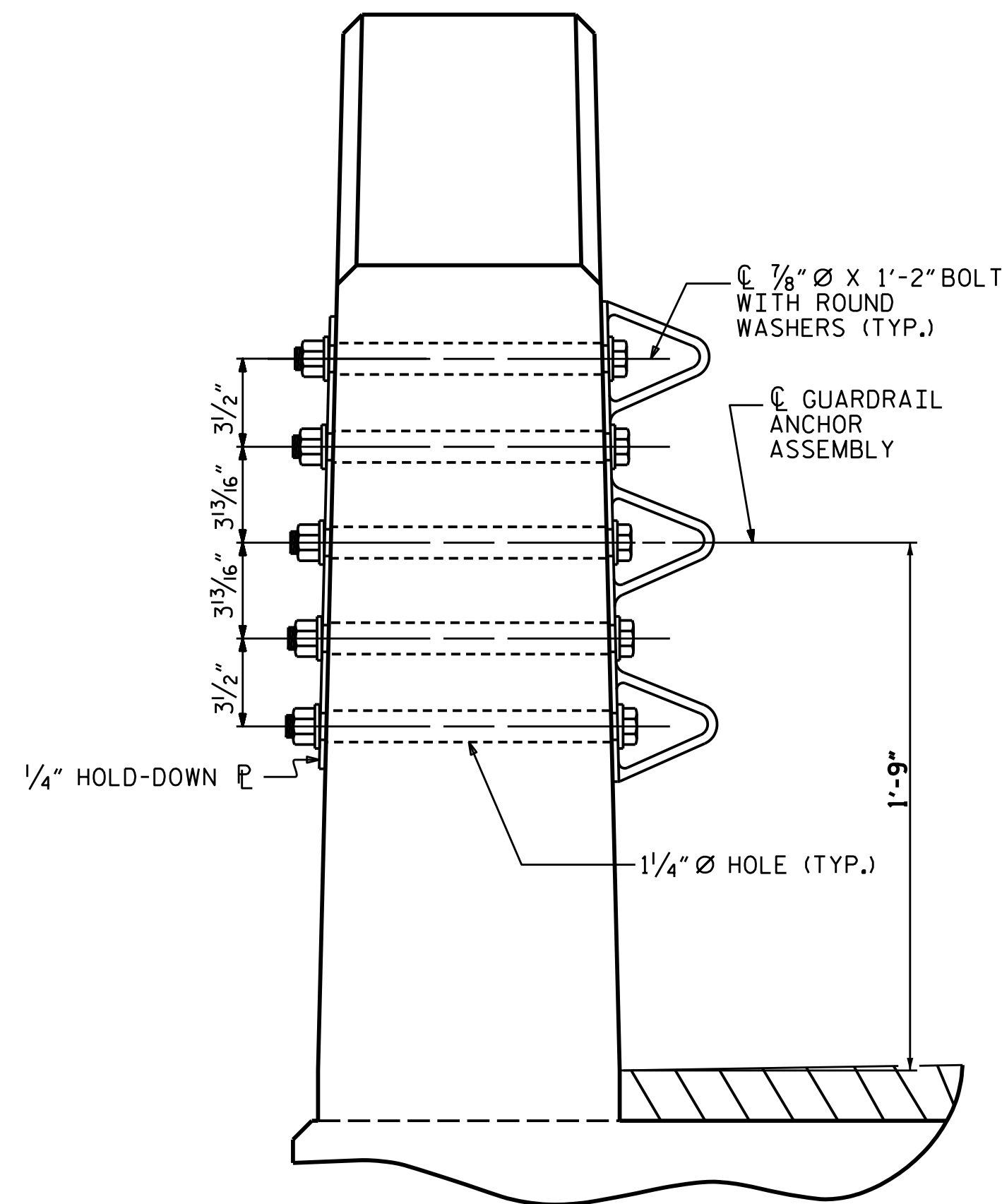
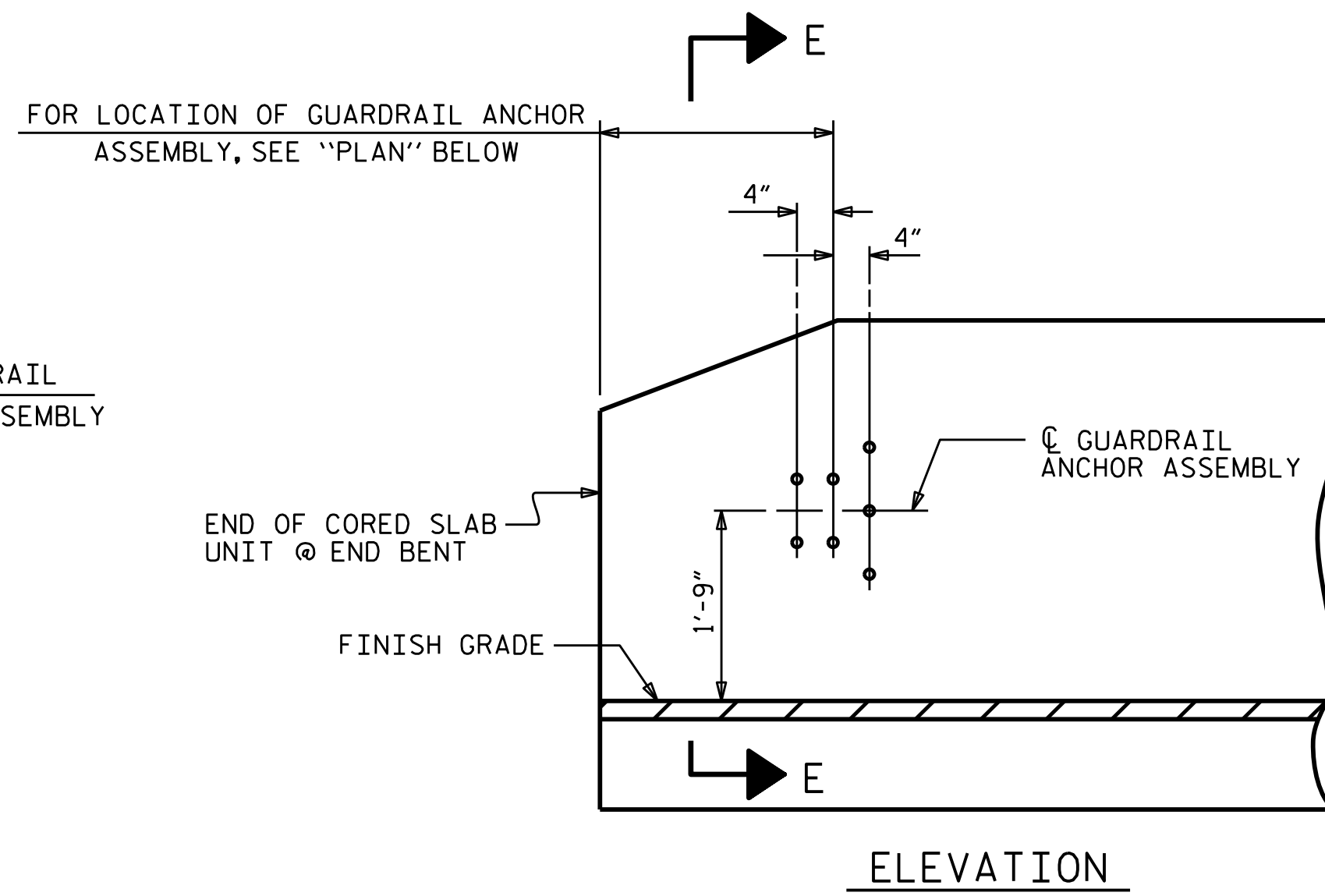
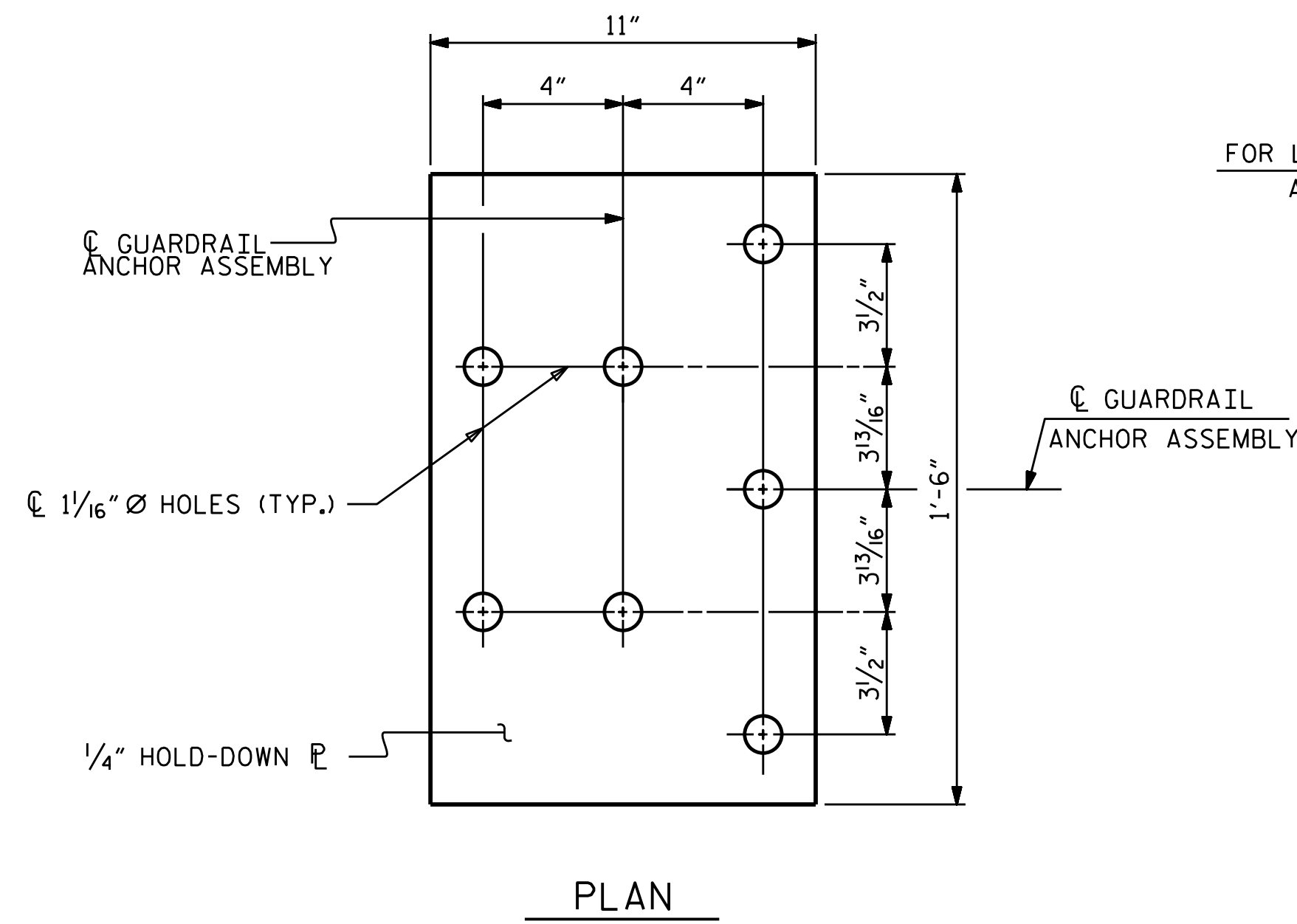
SIDE VIEW

END OF RAIL DETAILS

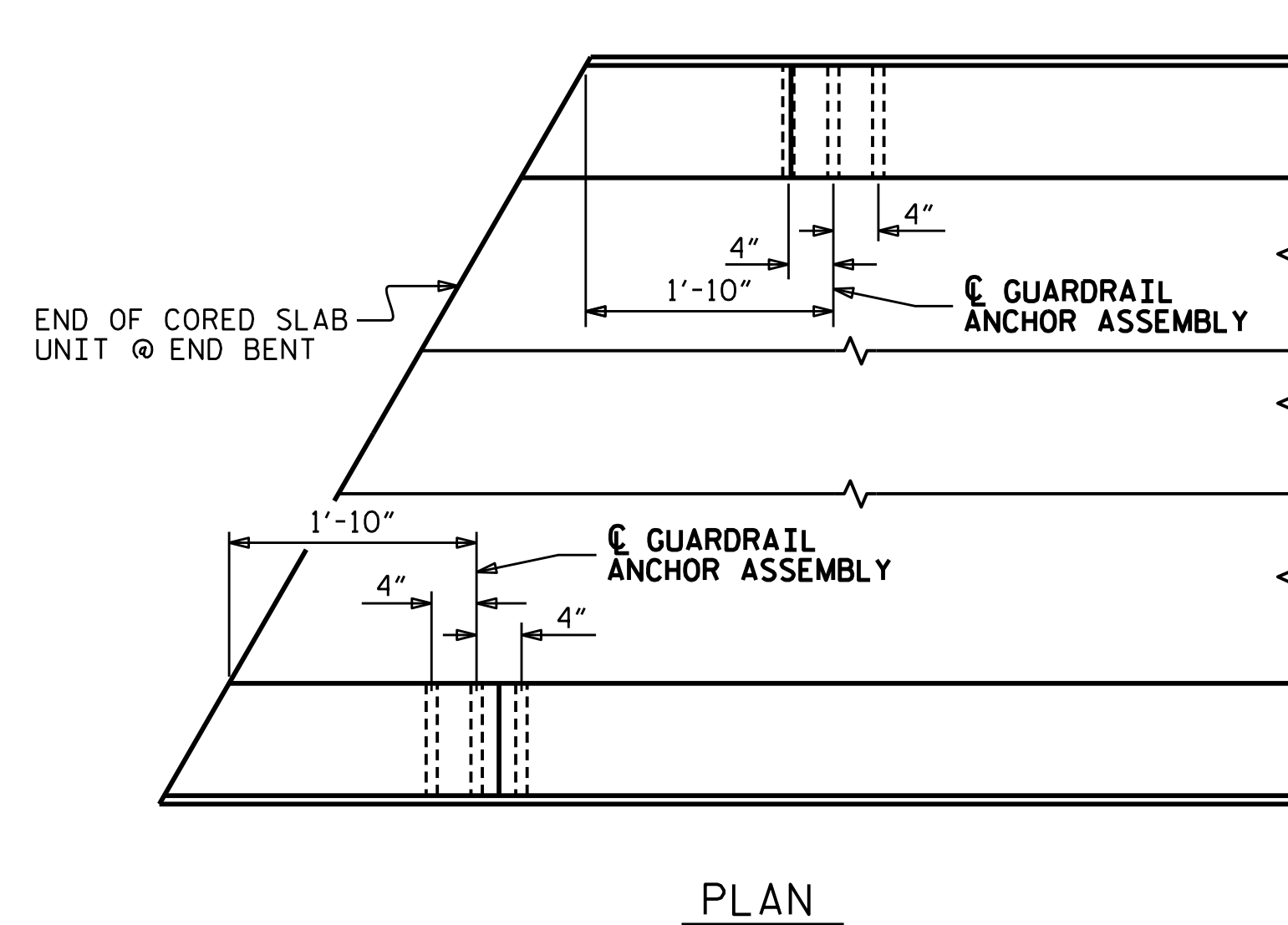
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SECTION E-E
GUARDRAIL ANCHOR ASSEMBLY DETAILS



LOCATION OF ANCHORS FOR GUARDRAIL
END BENT #1 SHOWN, END BENT #2 SIMILAR.

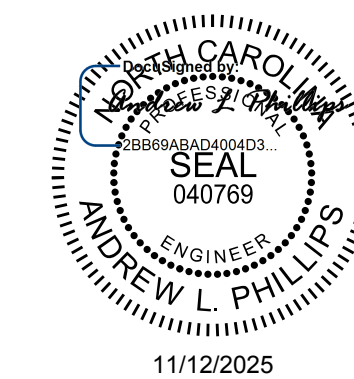


SKETCH SHOWING POINTS OF ATTACHMENT

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

NOTES

- THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.
- THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
- THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.
- AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.
- THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.
- THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.
- THE 1 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



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ASHE COUNTY
STATION: **12+13.00 -L-**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
**GUARDRAIL ANCHORAGE
DETAILS
FOR VERTICAL CONCRETE
BARRIER RAIL**

DRAWN BY : T. K. BOYD DATE : 08/2025
CHECKED BY : J. R. LOGAN DATE : 08/2025
DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE : 08/2025

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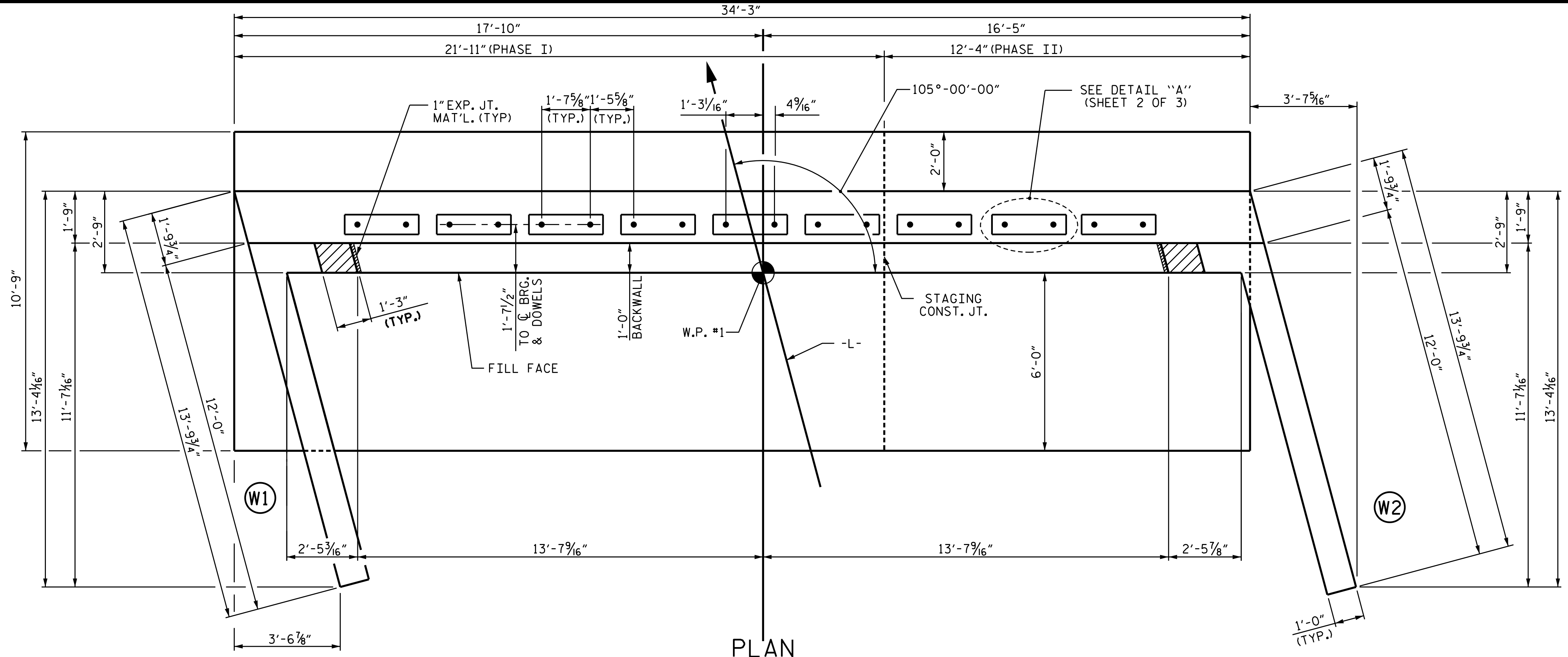
NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

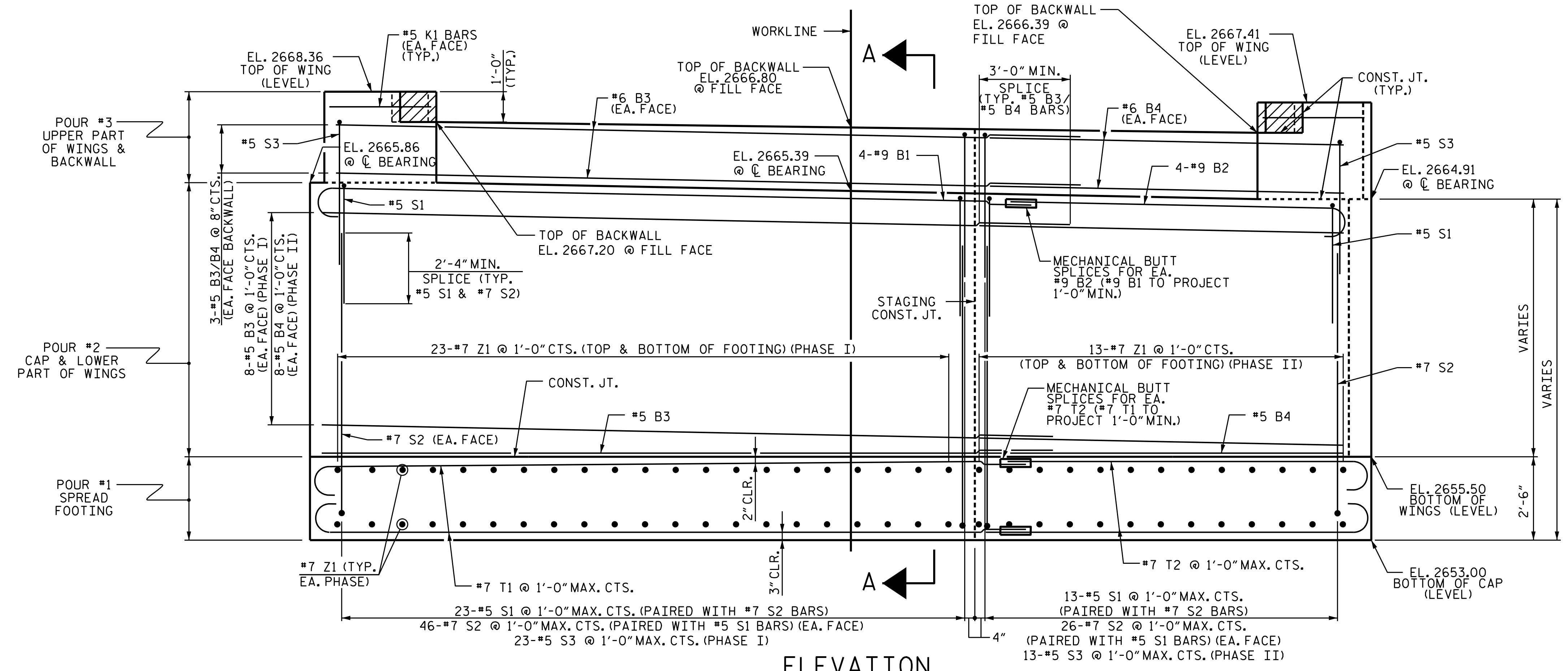
FOR WING DETAILS, SEE SHEET 2 OF 3.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

TO PROVIDE FOR ADEQUATE DRAINAGE BEHIND THE VERTICAL ABUTMENT, USE TYPE A1 FILL AND PROVIDE A DRAIN PIPE THROUGH THE WING WALL AS PRESCRIBED IN ROADWAY STANDARD DETAIL 423.02.

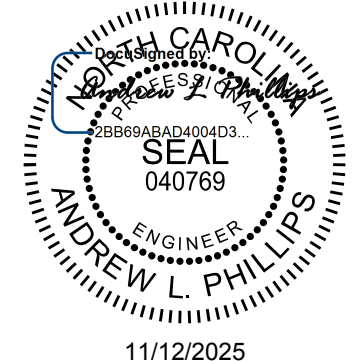


PLAN



ELEVATION

WINGS NOT SHOWN FOR CLARITY. FOR SECTION A-A, SEE SHEET 3 OF 3.



PROJECT NO. **DF18311.200593.PR**

ASHE COUNTY

STATION: **12+13.00 -L-**

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE

END BENT No. 1

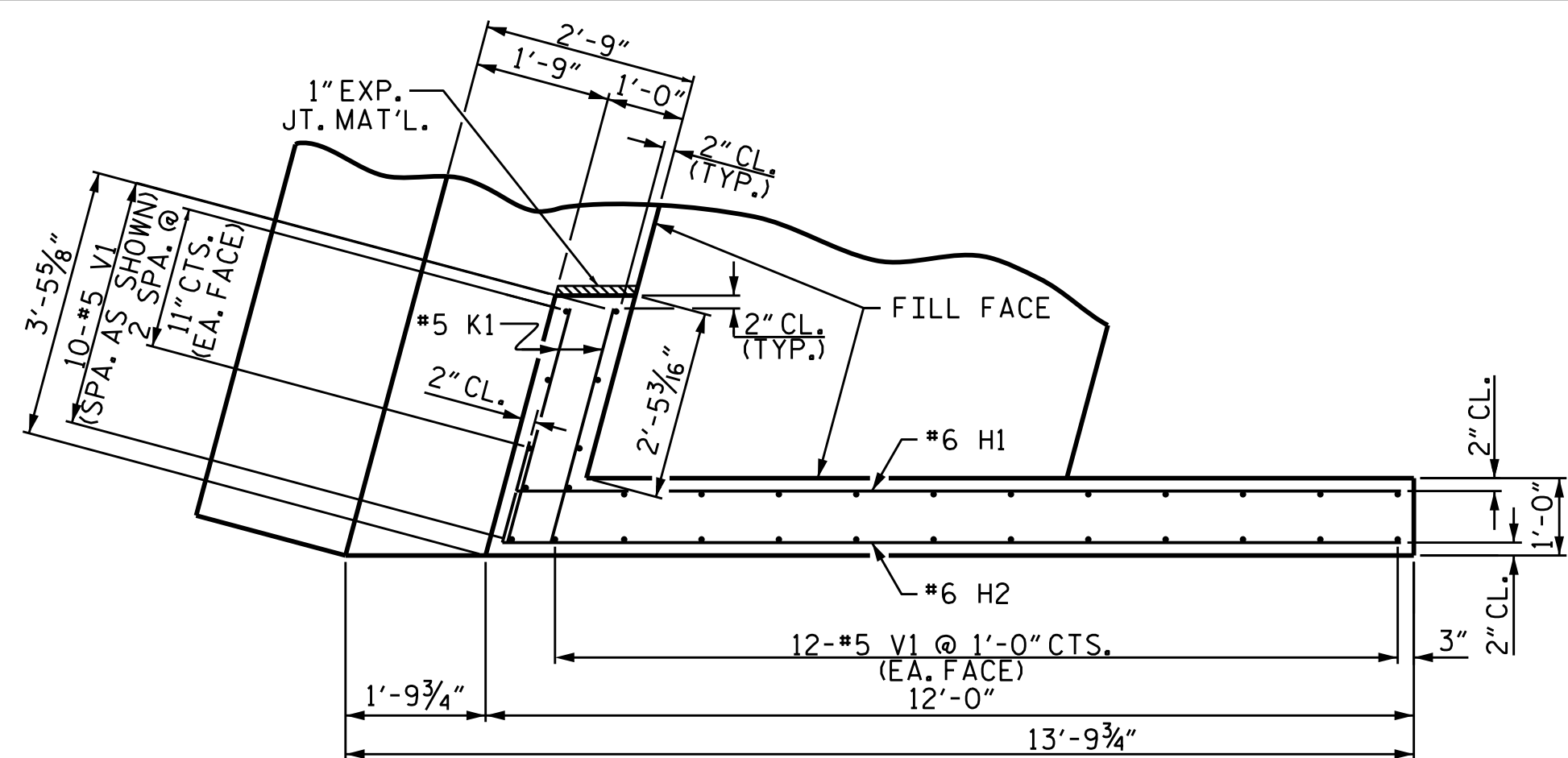
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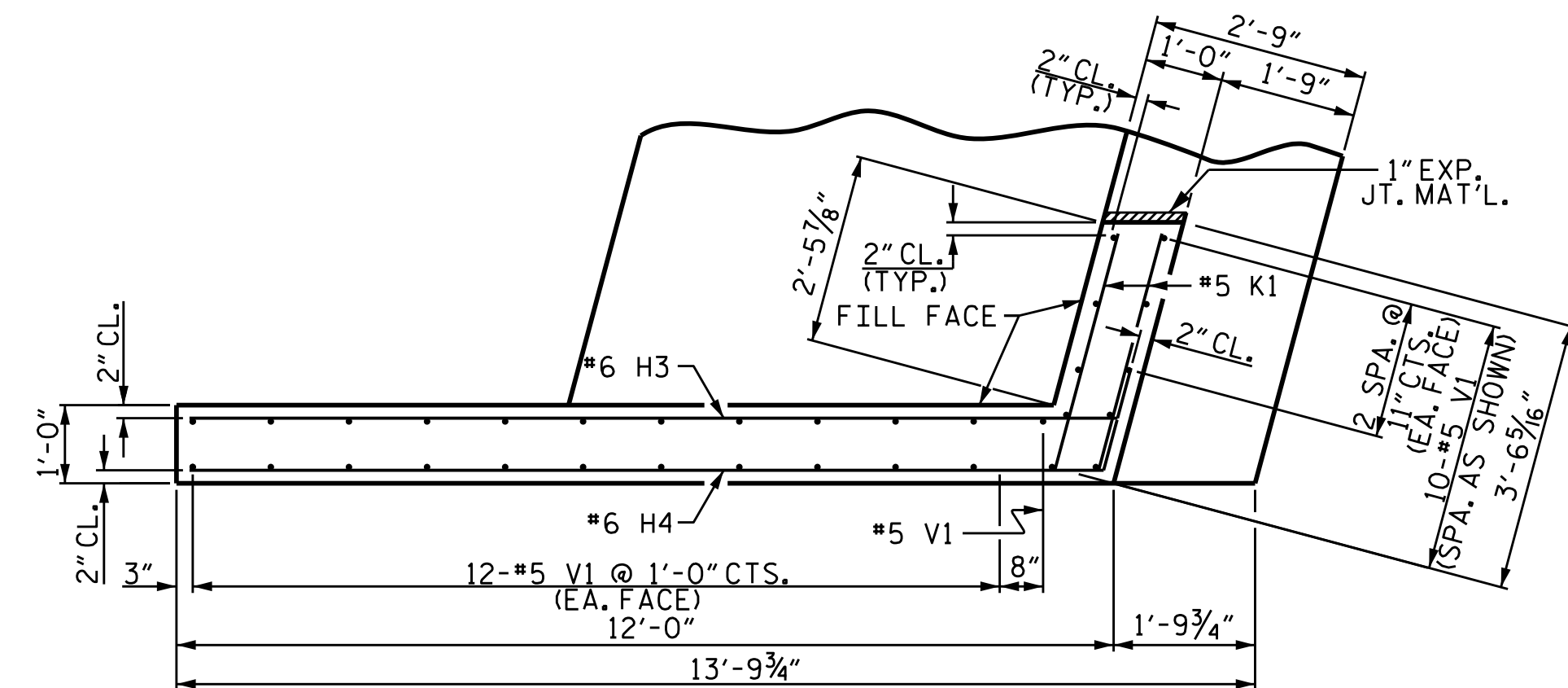
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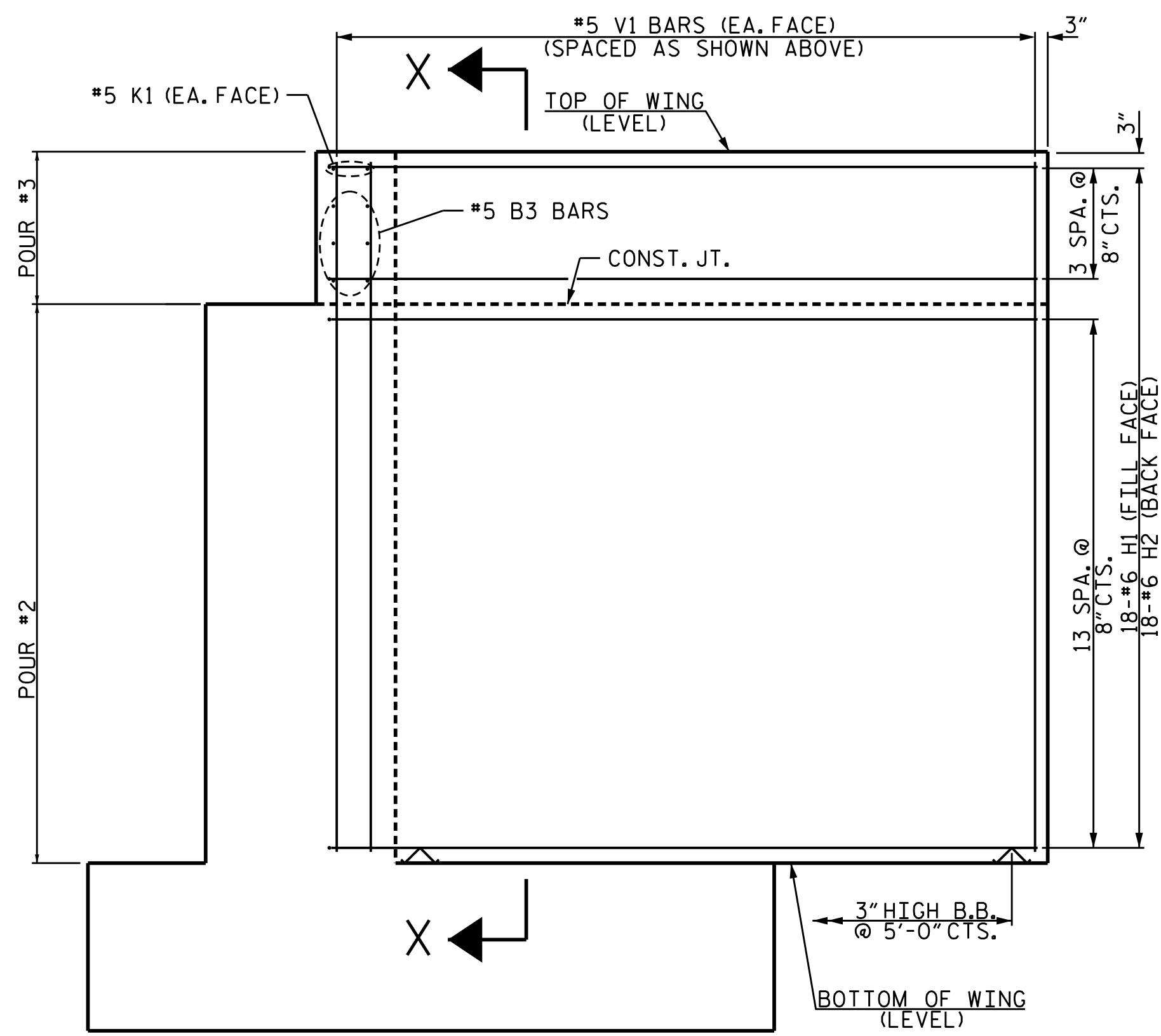
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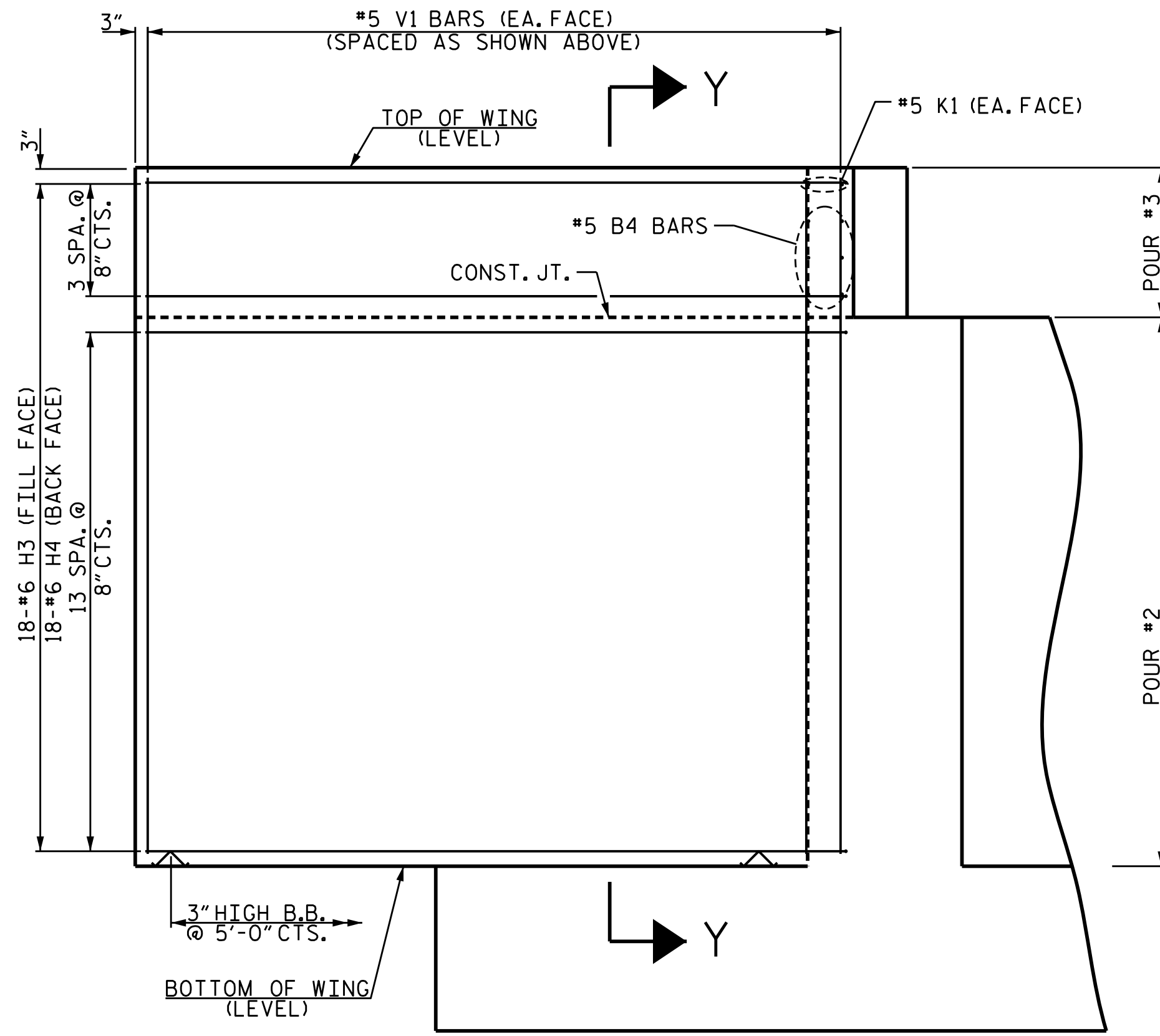
PLAN OF WING (W1)



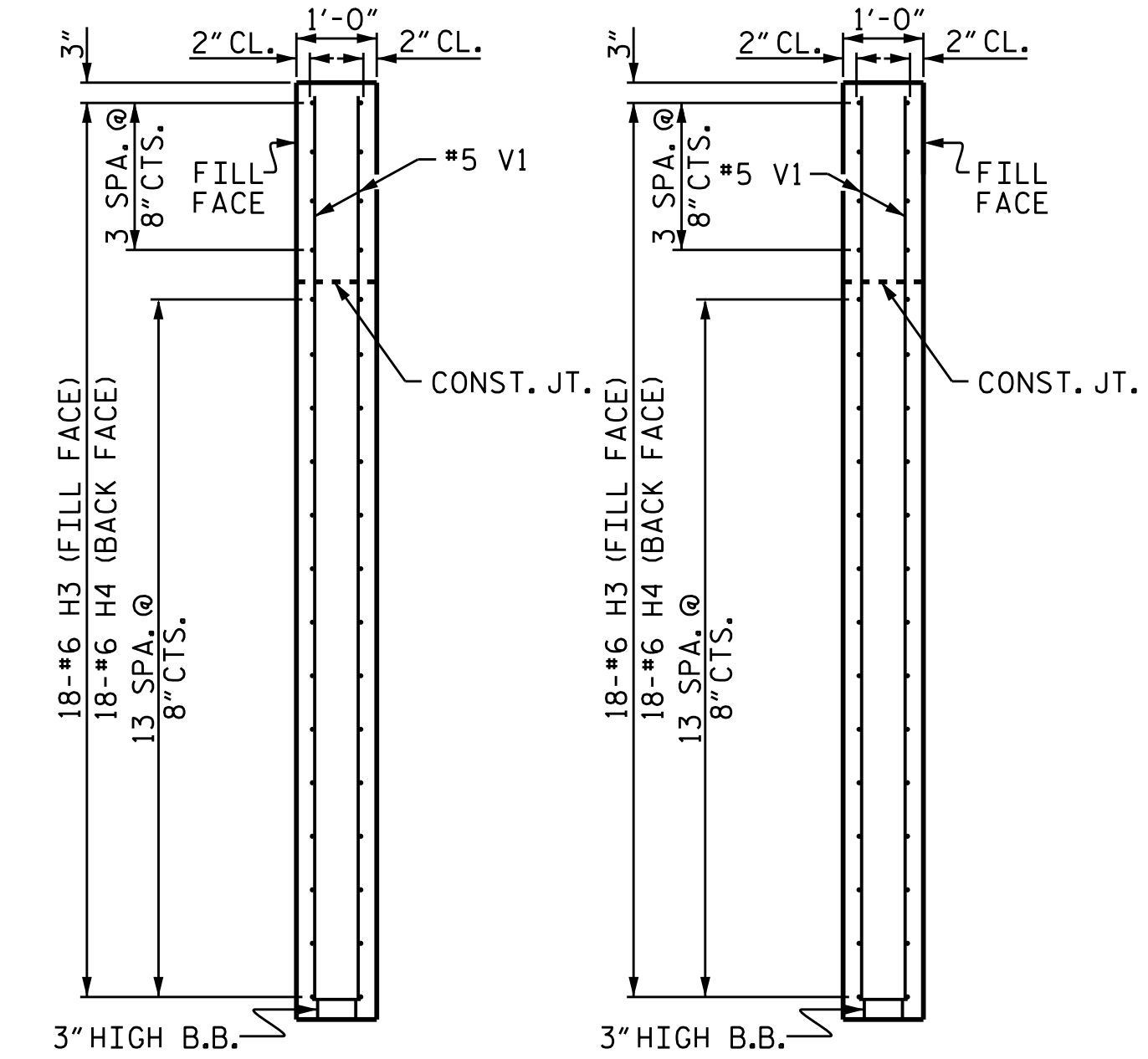
PLAN OF WING (W2)



ELEVATION OF WING (W1)



ELEVATION OF WING (W2)



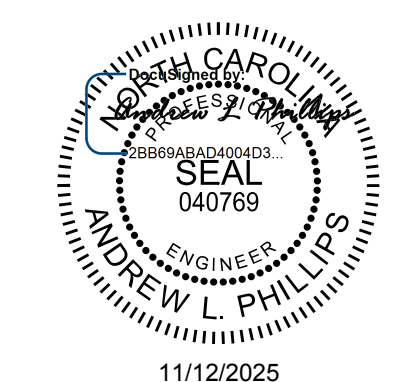
SECTION Y-Y

SECTION X-X

WING DETAILS

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ASHE COUNTY
 STATION: **12+13.00 -L-**

SHEET 2 OF 3



11/12/2025

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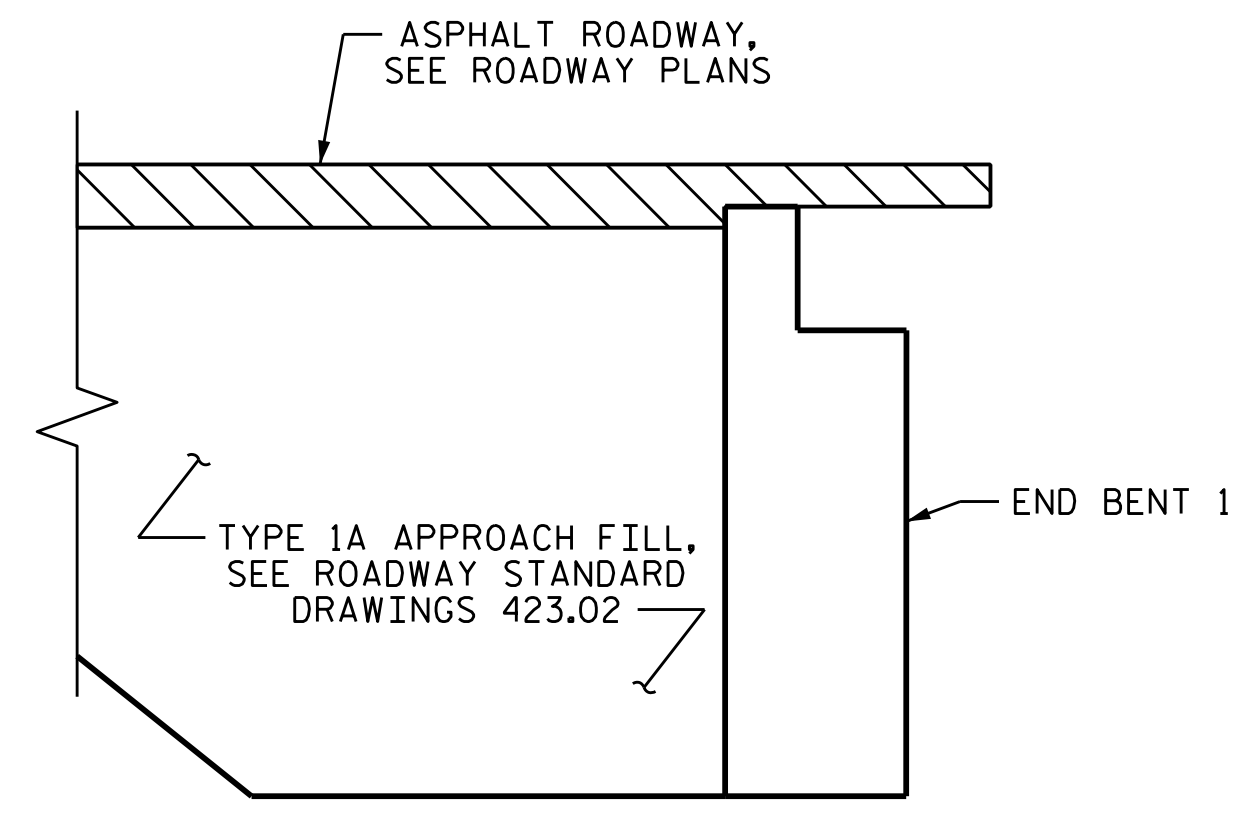
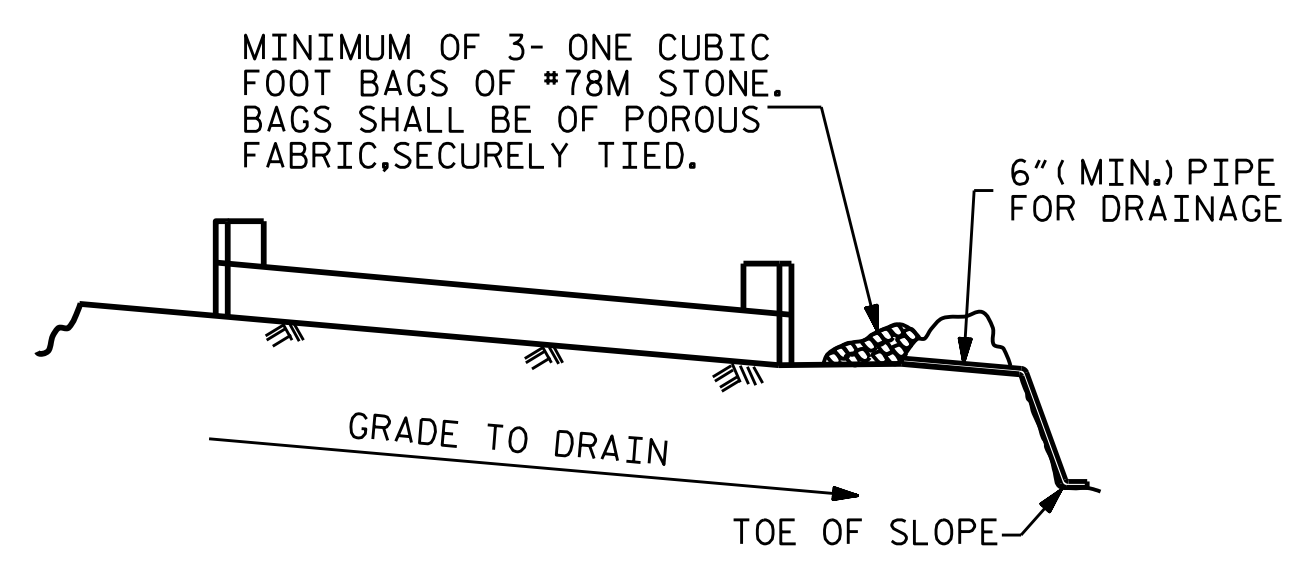
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
END BENT 1
WING DETAILS

DRAWN BY : T. K. BOYD DATE : 08/2025
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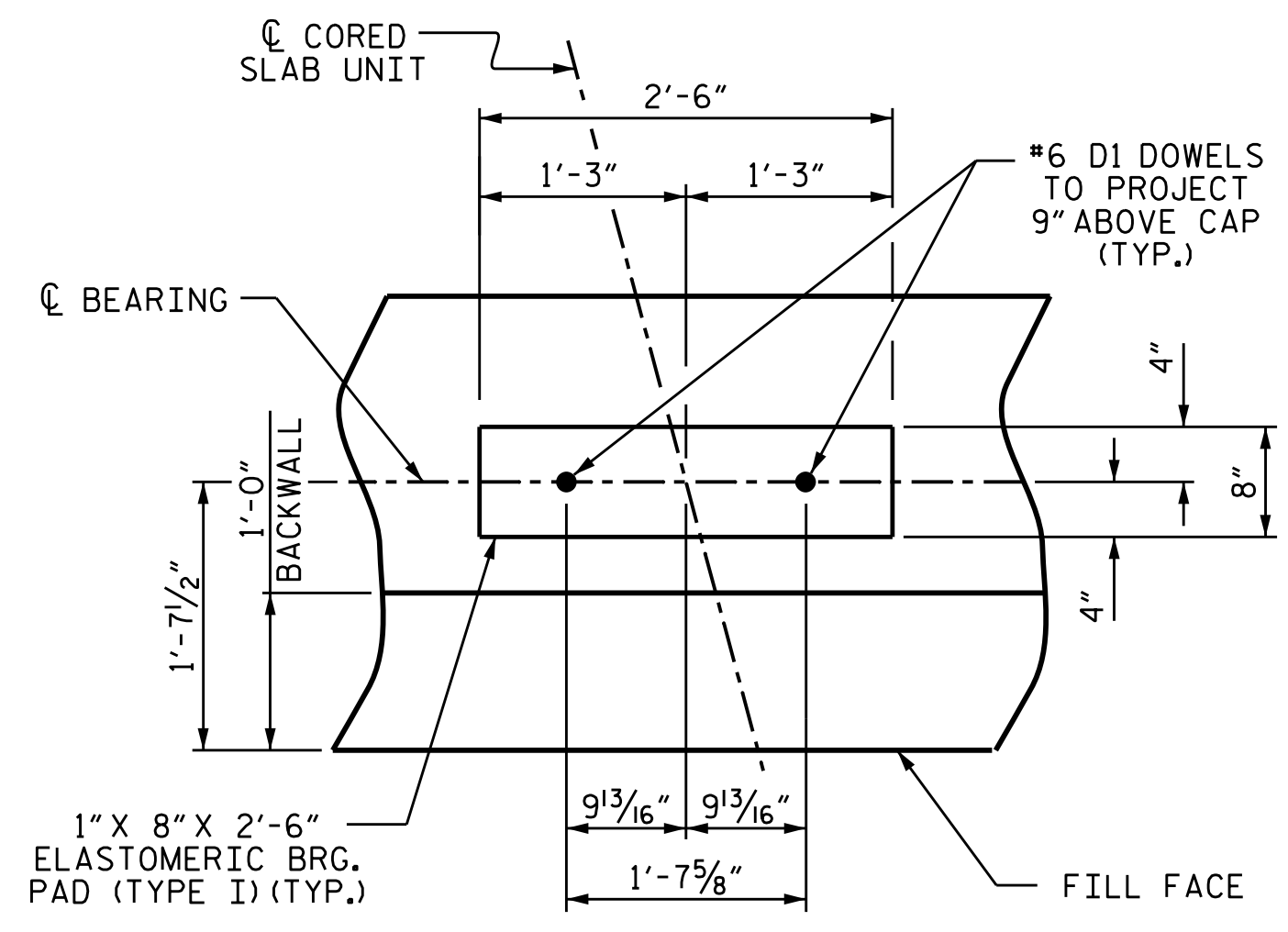
BACK FILL DETAILS

BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

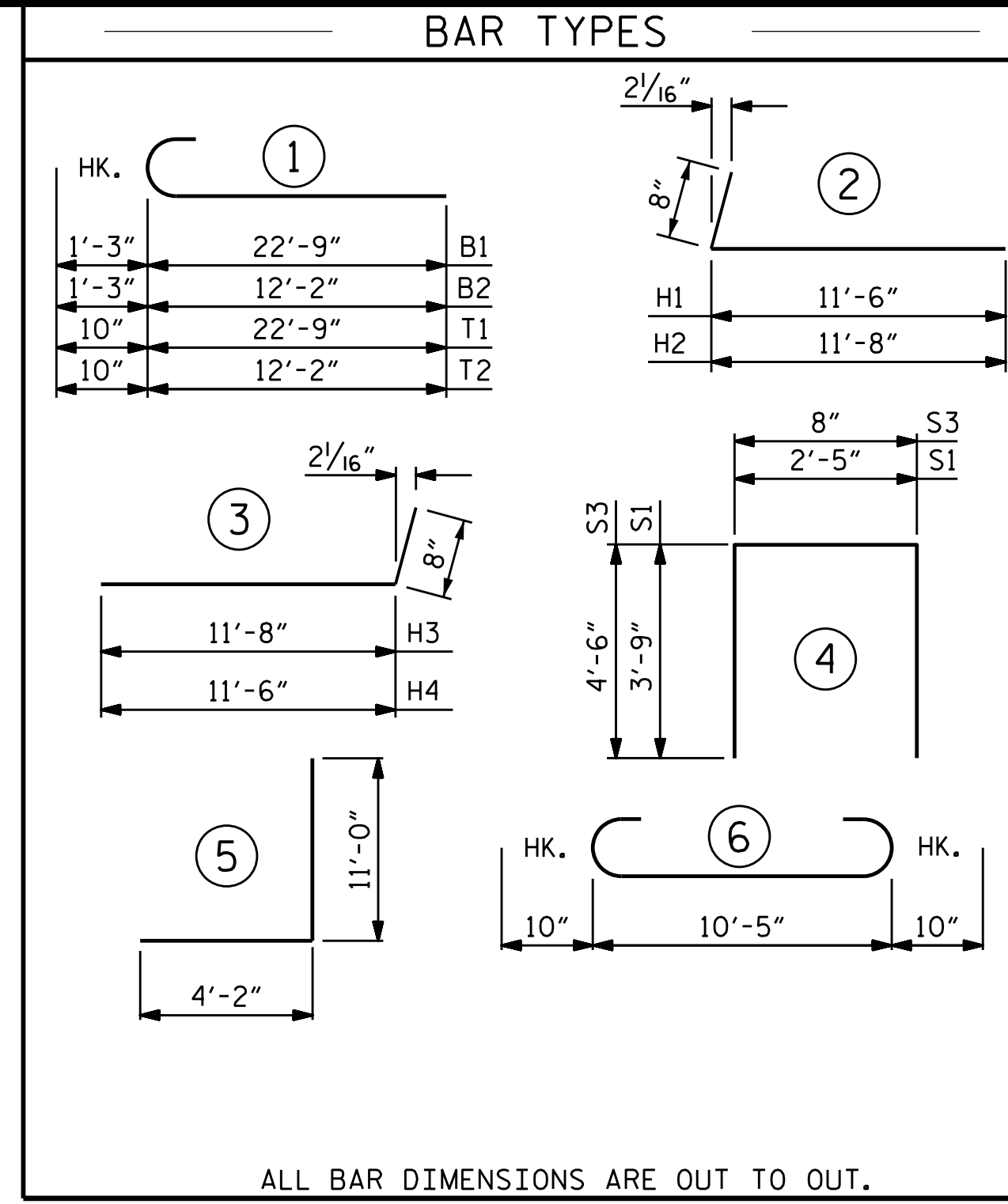
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

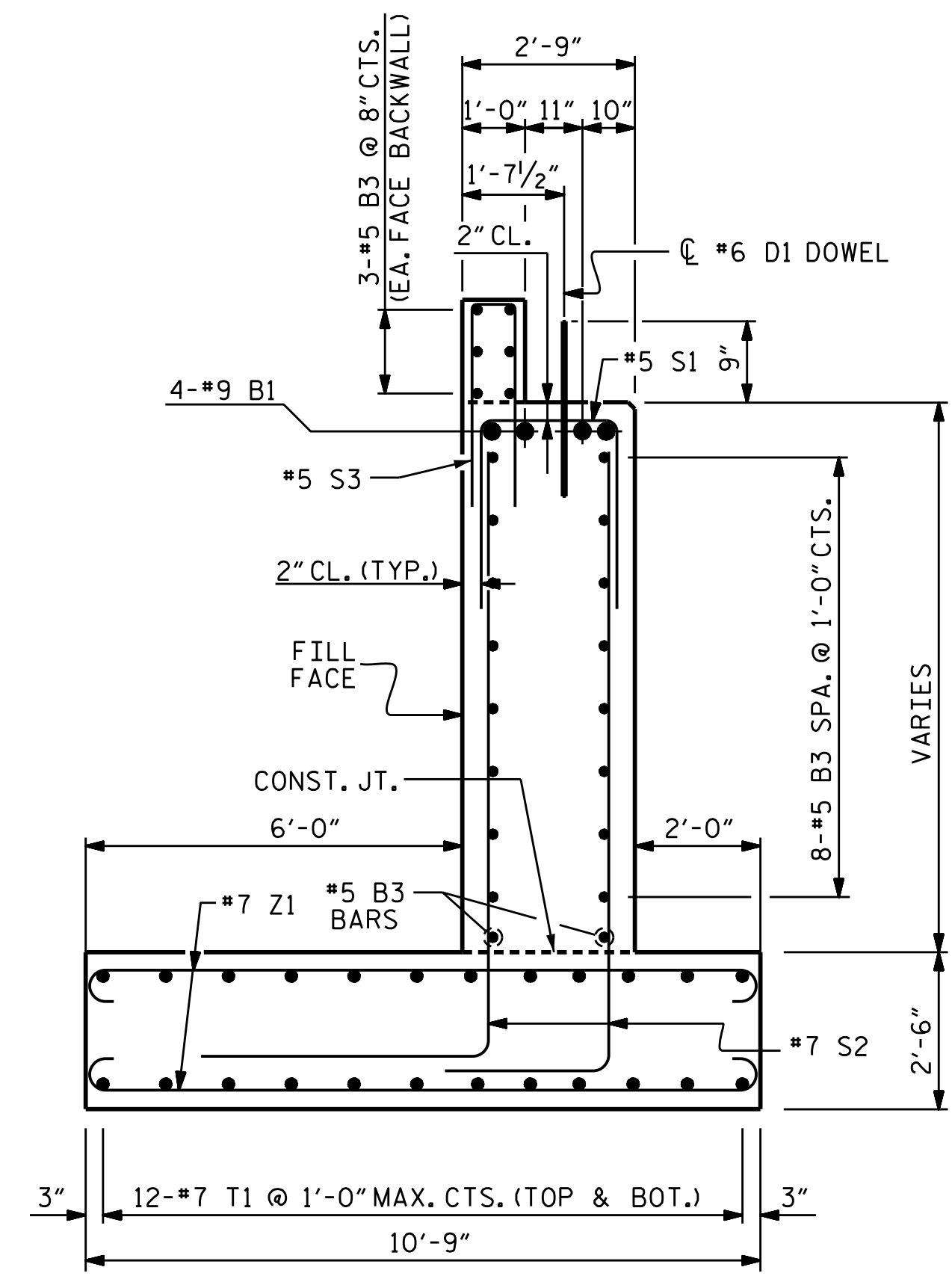
TEMPORARY DRAINAGE AT END BENT



DETAIL "A"



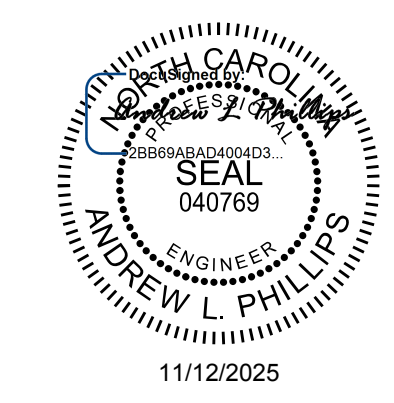
BILL OF MATERIAL FOR END BENT 1 PHASE I						BILL OF MATERIAL FOR END BENT 1 PHASE II					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9		24'-0"	326	B2	4	#9		13'-5"	182
B3	24	#5	STR	24'-9"	620	B4	24	#5	STR	12'-2"	305
D1	12	#6	STR	1'-6"	27	D1	6	#6	STR	1'-6"	14
H1	18	#6		12'-2"	329	H3	18	#6		12'-4"	333
H2	18	#6		12'-4"	333	H4	18	#6		12'-3"	331
K1	2	#5	STR	3'-1"	6	K1	2	#5	STR	3'-1"	6
S1	23	#5		9'-11"	238	S1	13	#5		9'-11"	134
S2	46	#7		15'-2"	1,426	S2	26	#7		15'-2"	806
S3	23	#5		9'-8"	232	S3	13	#5		9'-8"	131
T1	24	#7		23'-7"	1,157	T2	24	#7		13'-0"	638
V1	34	#5	STR	11'-3"	399	V1	34	#5	STR	11'-3"	399
Z1	46	#7		12'-1"	1,136	Z1	26	#7		12'-1"	642
REINFORCING STEEL (FOR PHASE I)						REINFORCING STEEL (FOR PHASE II)					
TOTAL REINFORCING STEEL (PHASE I & II)						TOTAL REINFORCING STEEL (PHASE I & II)					
CLASS A CONCRETE BREAKDOWN (FOR PHASE I)						CLASS A CONCRETE BREAKDOWN (FOR PHASE II)					
POUR #1 SPREAD FOOTING						POUR #1 SPREAD FOOTING					
POUR #2 CAP, LOWER PART OF WINGS						POUR #2 CAP, LOWER PART OF WINGS					
POUR #3 UPPER PART OF WINGS & BACKWALL						POUR #3 UPPER PART OF WINGS & BACKWALL					
TOTAL CLASS A CONCRETE						TOTAL CLASS A CONCRETE					
TOTAL CLASS A CONCRETE (PHASE I & II)						TOTAL CLASS A CONCRETE (PHASE I & II)					



SECTION A-A

PHASE I SECTION AND REINFORCING SHOWN, PHASE II SECTION AND REINFORCING SIMILAR. SEE ELEVATION VIEW ON END BENT NO. 1, SHEET 1 OF 3, FOR DETAILS.

PROJECT NO. **DF18311.200593.PR**
ASHE COUNTY
 STATION: **12+13.00 -L-**
 SHEET 3 OF 3



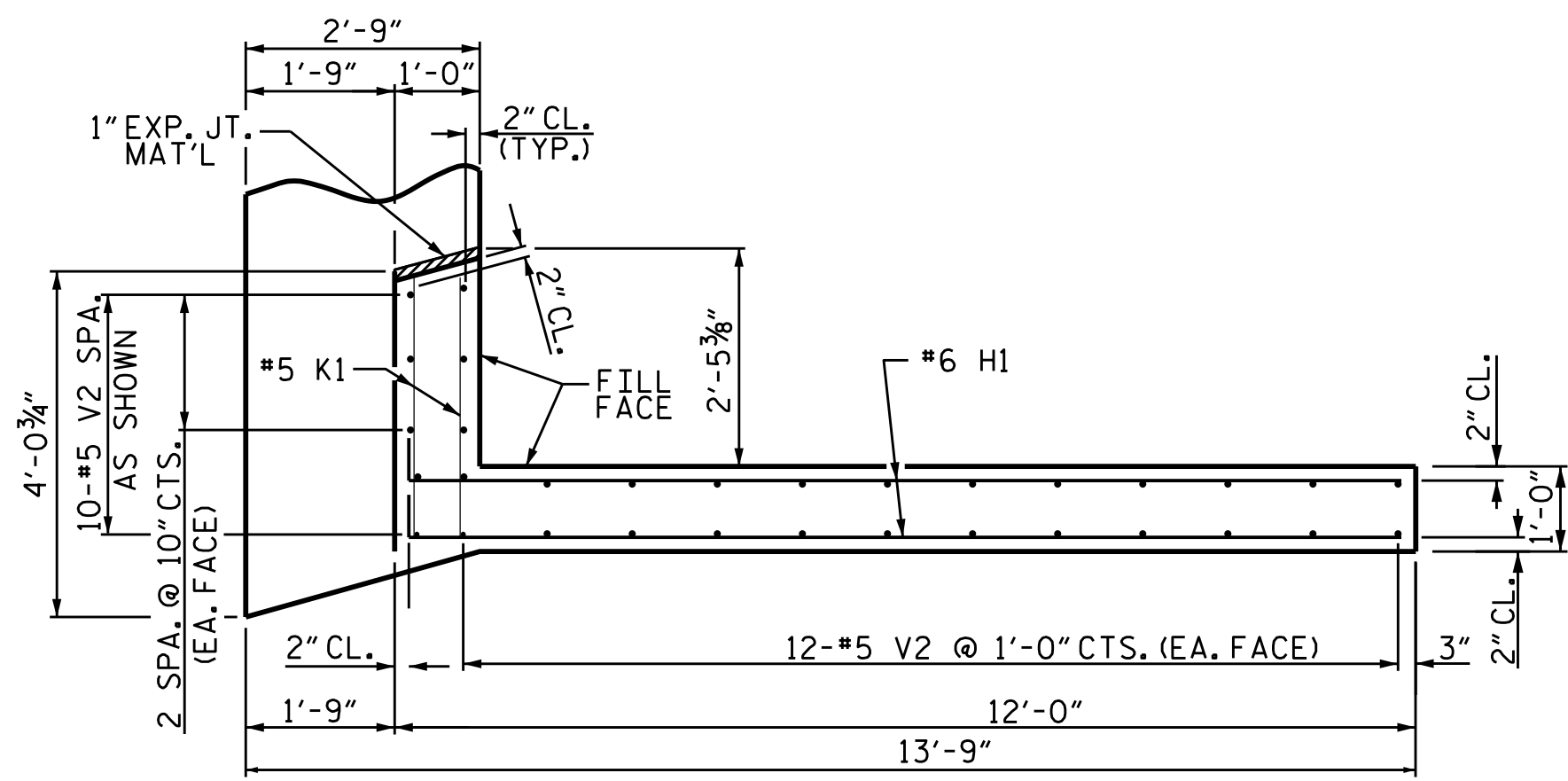
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
END BENT No. 1
DETAILS

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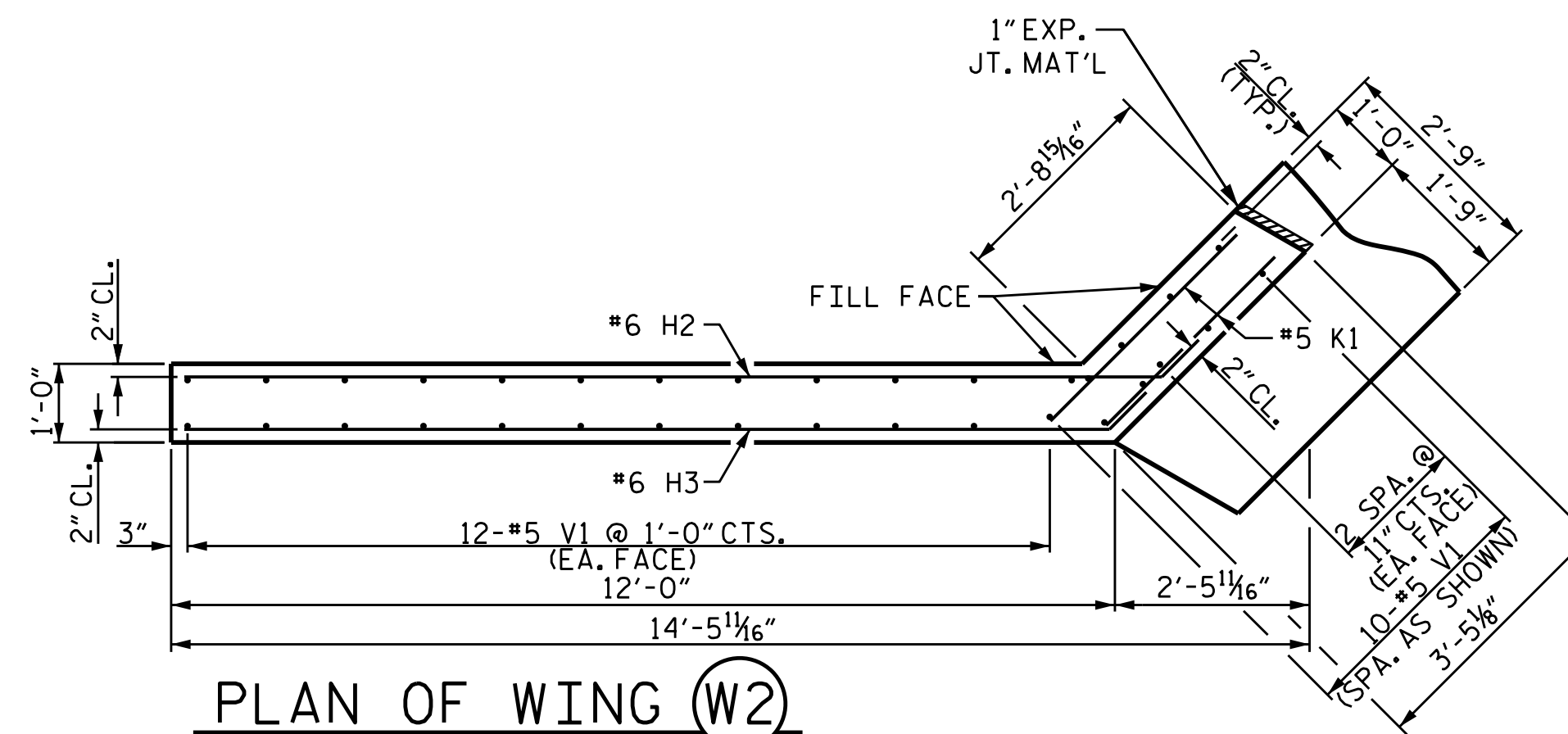
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REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

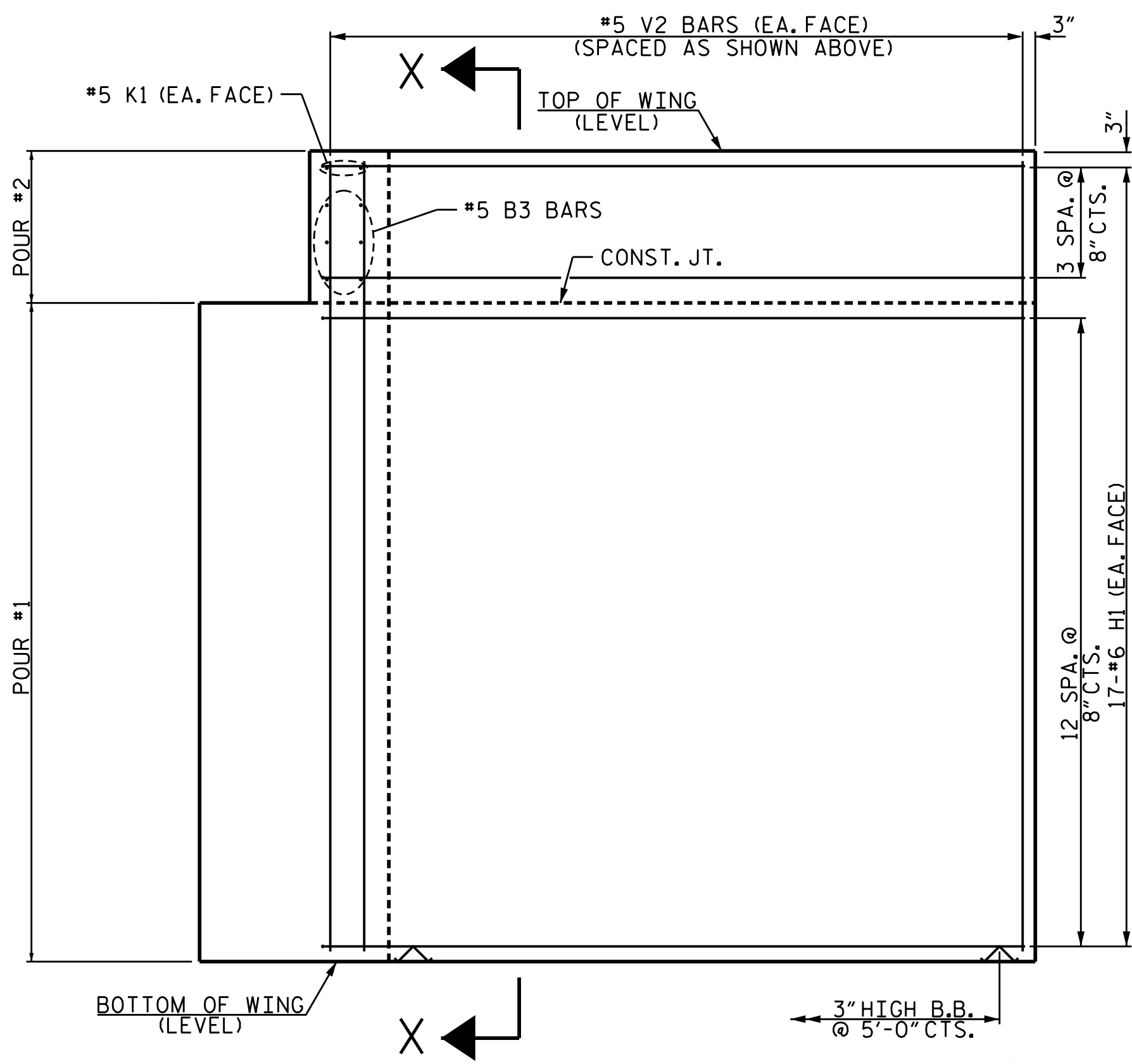
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 CHECKED BY: **J. R. LOGAN** DATE: **08/2025**
 DESIGN ENGINEER OF RECORD: **A. L. PHILLIPS** DATE: **08/2025**



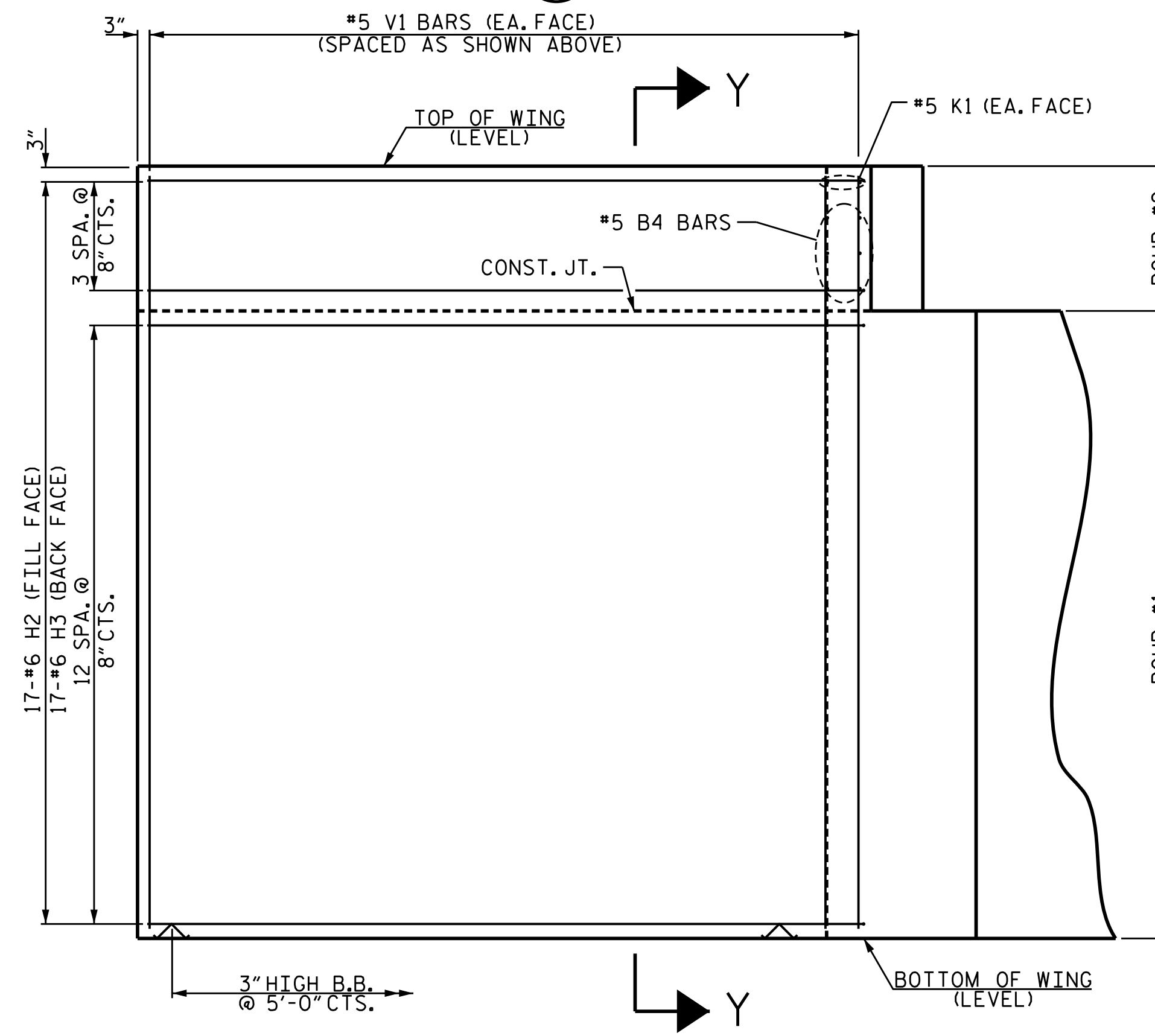
PLAN OF WING (W1)



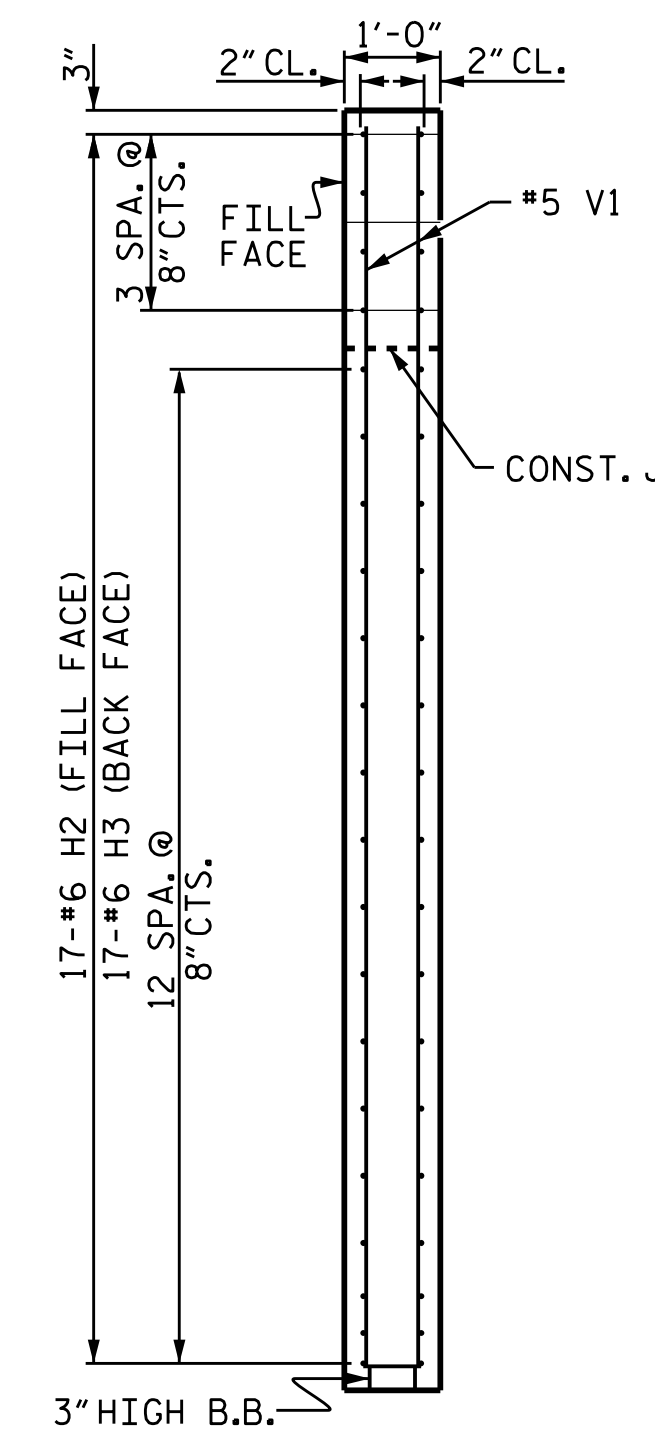
PLAN OF WING (W2)



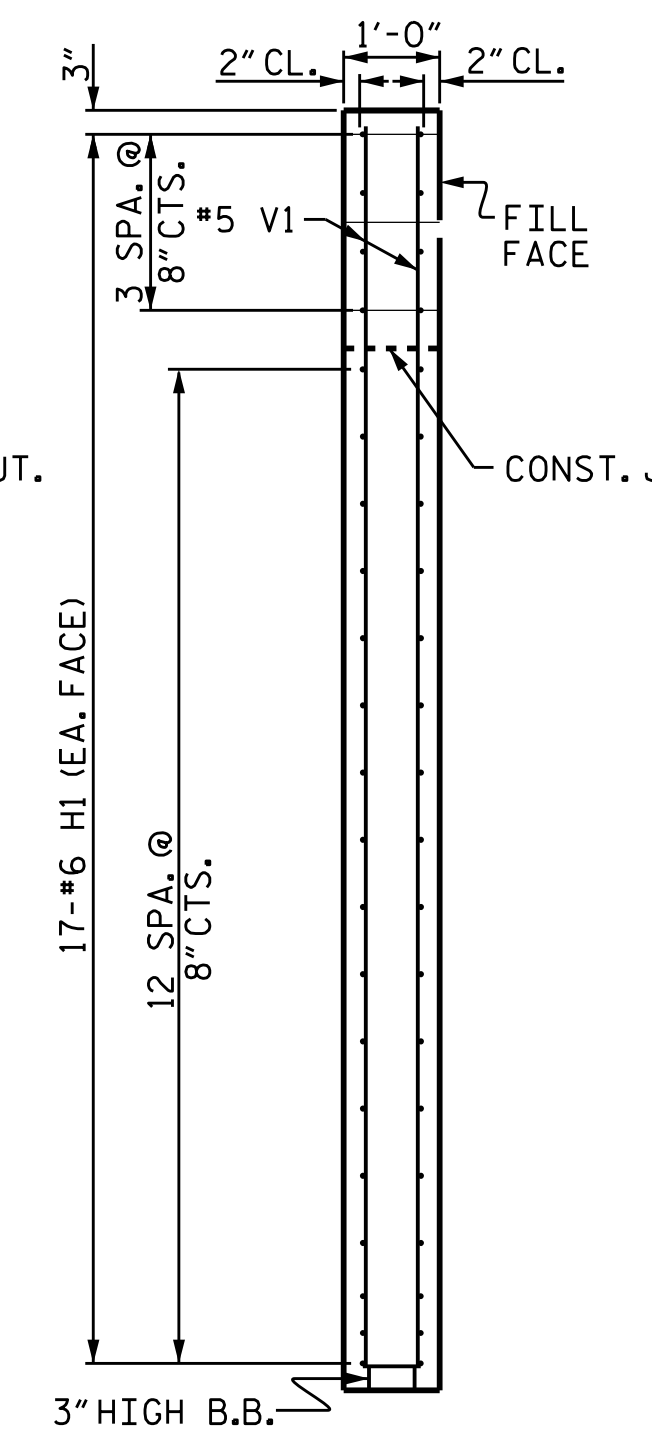
ELEVATION OF WING (W1)



ELEVATION OF WING (W2)



SECTION Y-Y



SECTION X-X

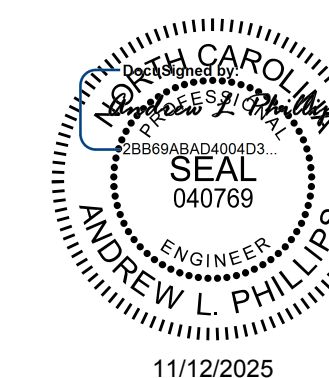
WING DETAILS

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SHEET 2 OF 3



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**END BENT 2
WING DETAILS**

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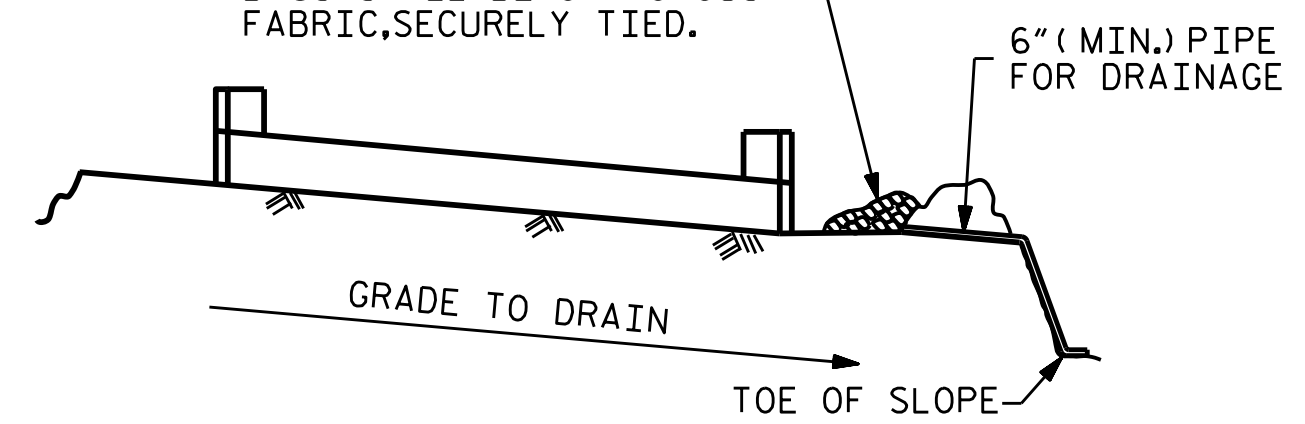
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REVISIONS						SHEET NO.
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1			3			S-17
2			4			TOTAL SHEETS 19

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DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE : 08/2025

MINIMUM OF 3- ONE CUBIC FOOT BAGS OF #78M STONE. BAGS SHALL BE OF POROUS FABRIC, SECURELY TIED.

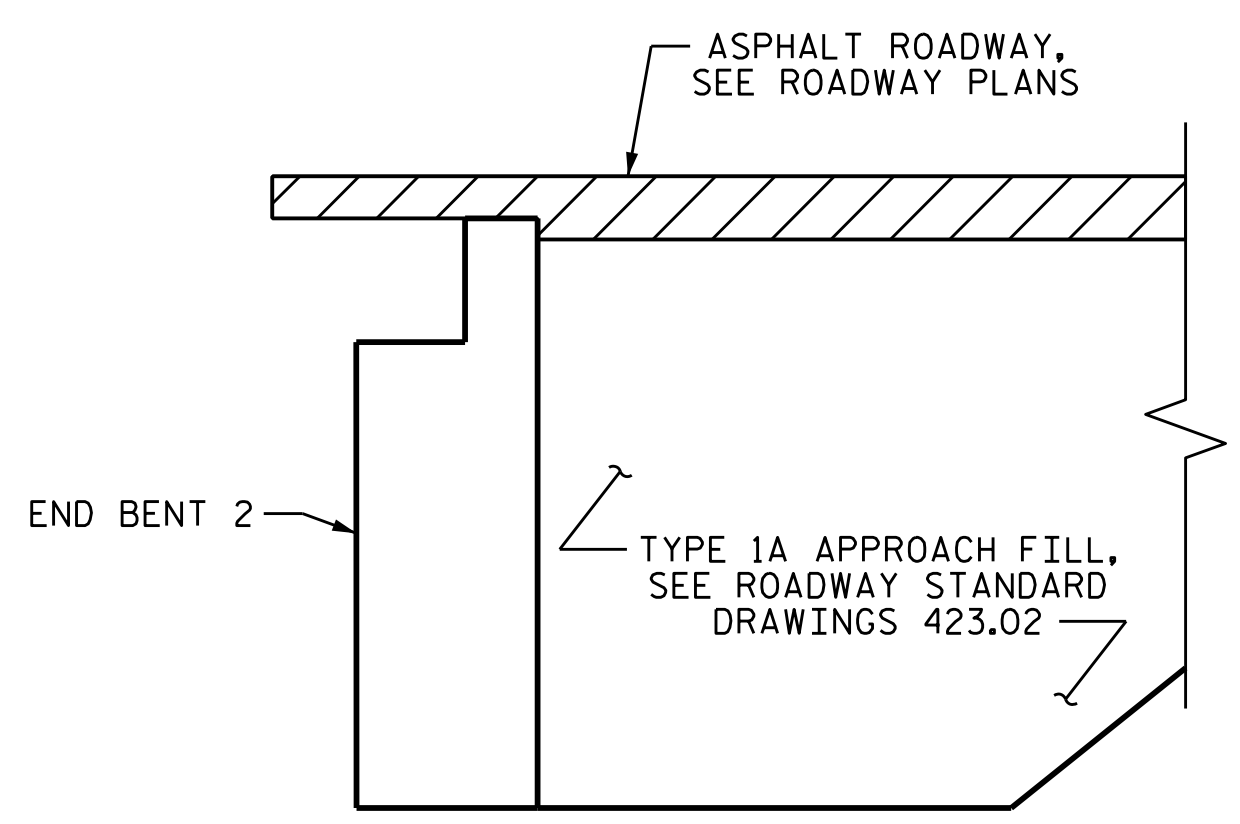


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

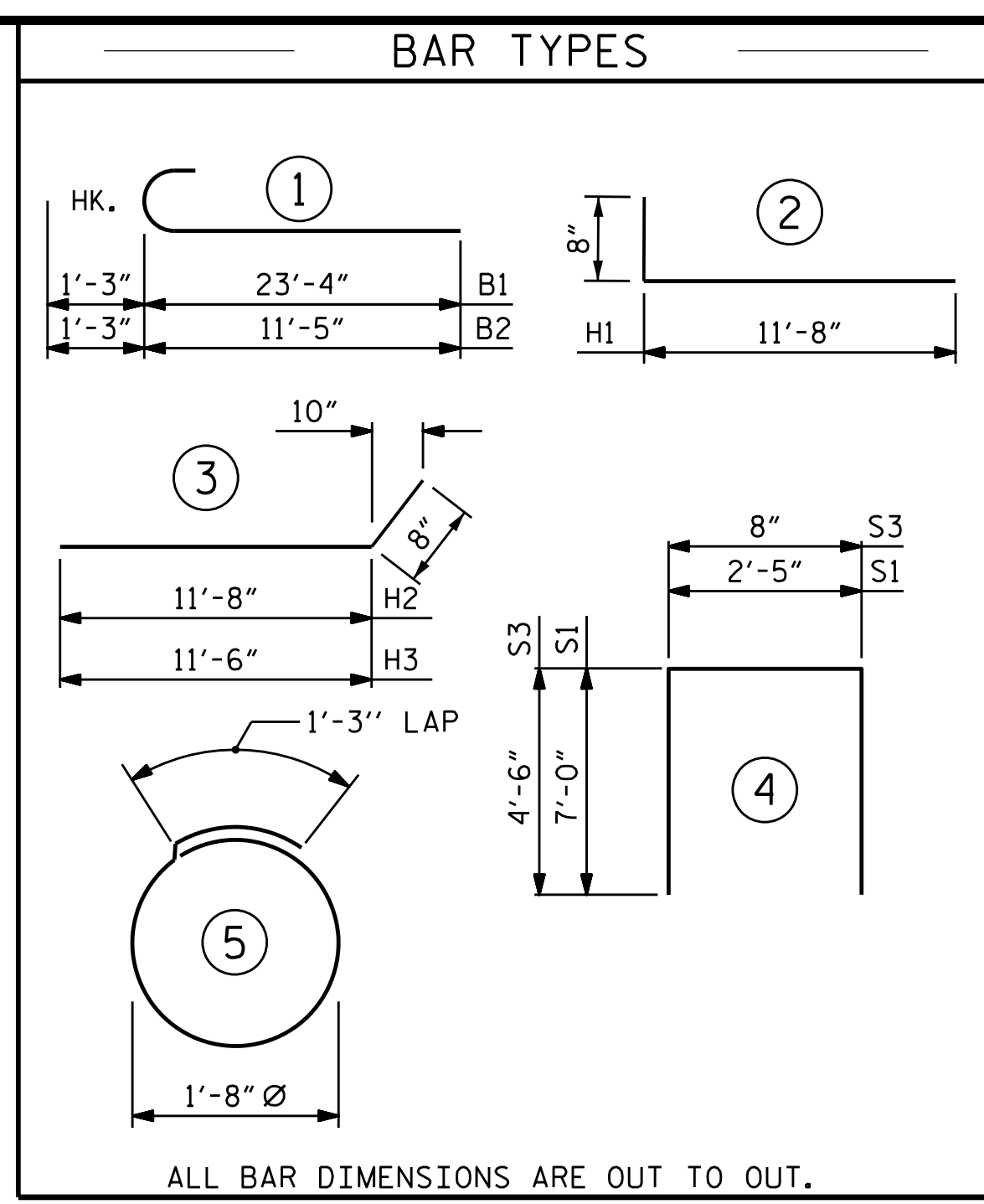
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TEMPORARY DRAINAGE AT END BENT

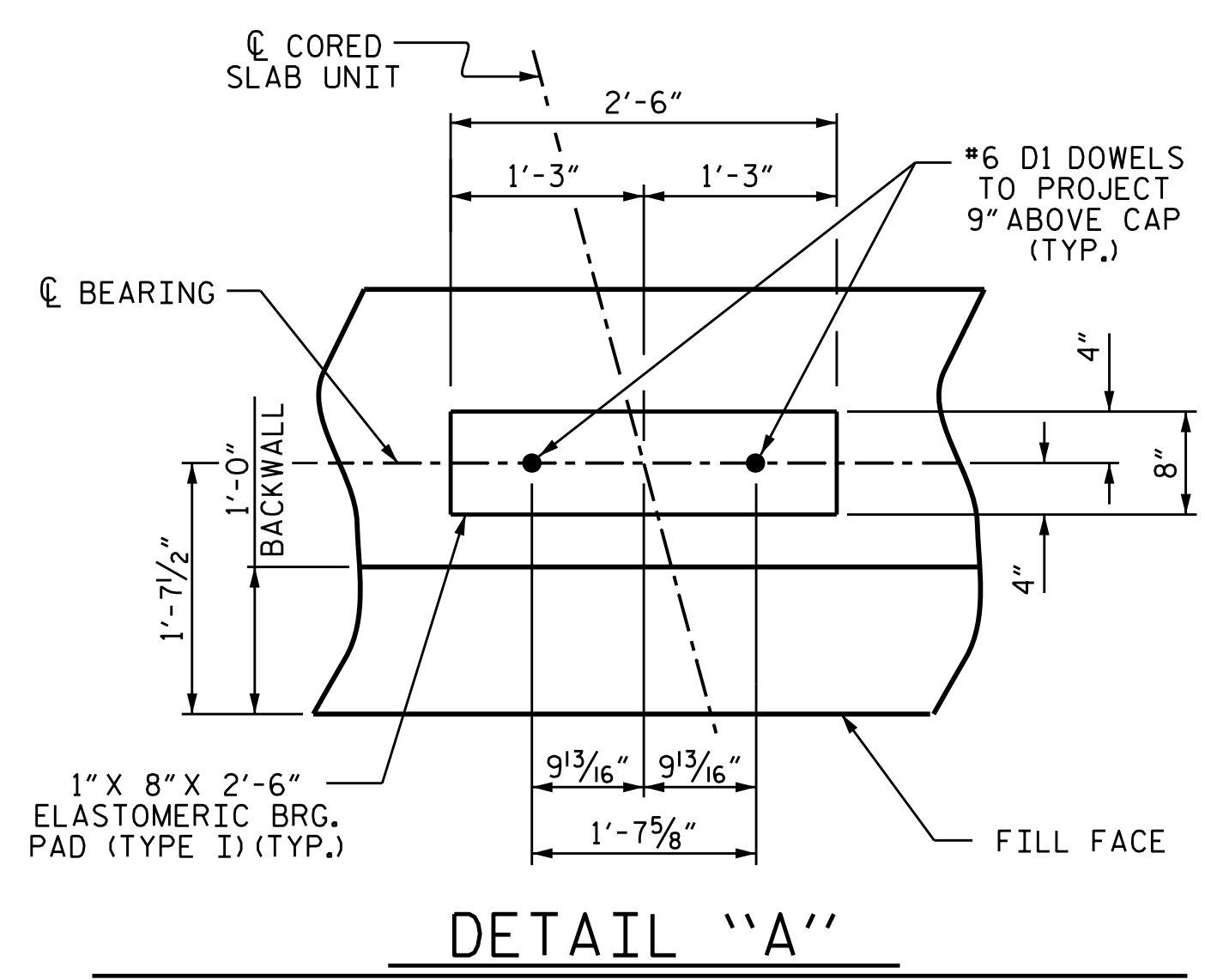


BACK FILL DETAILS

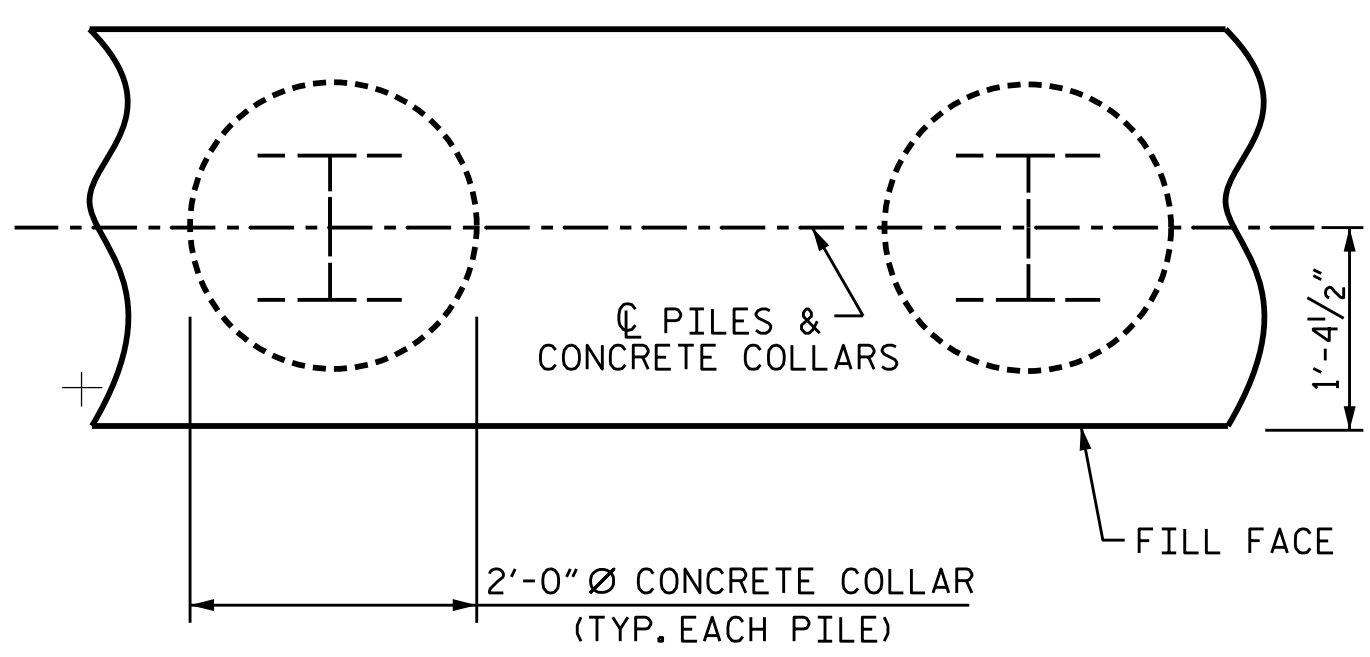


ALL BAR DIMENSIONS ARE OUT TO OUT.

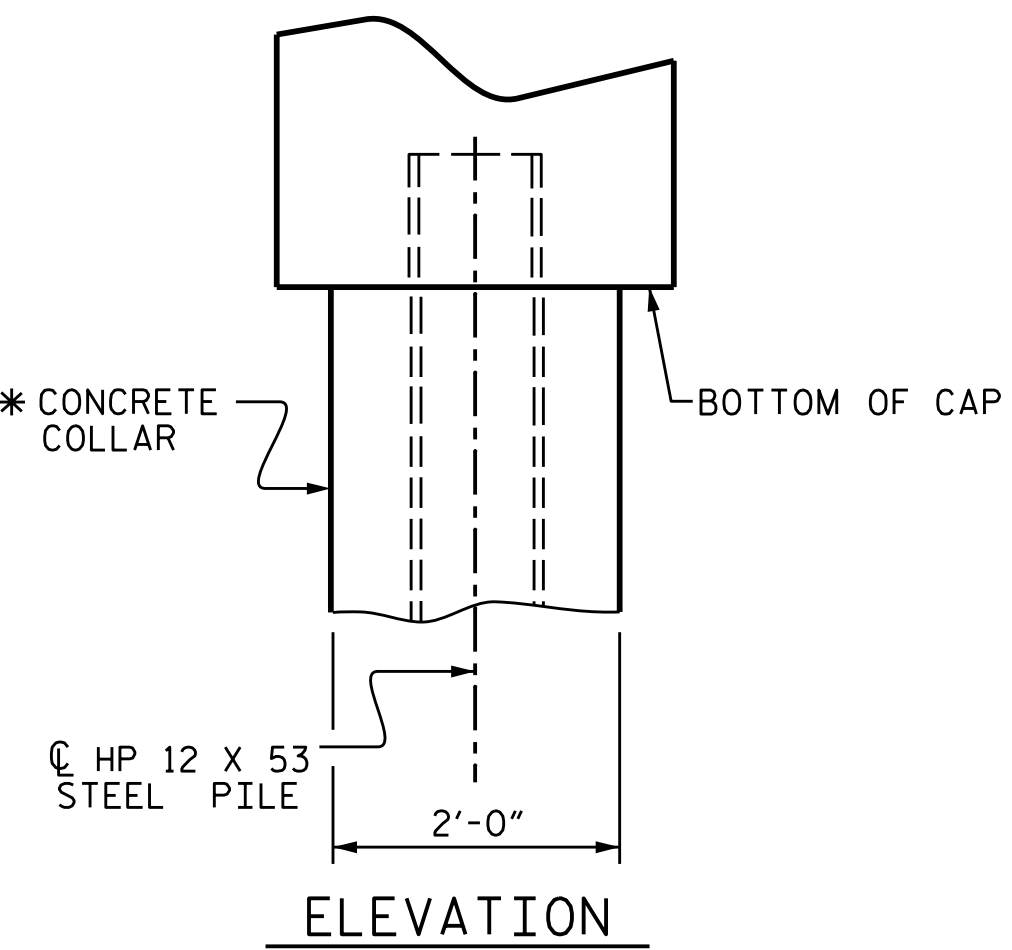
BILL OF MATERIAL FOR END BENT 2 PHASE I						BILL OF MATERIAL FOR END BENT 2 PHASE II					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT		BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	#8	#9	24'-7"	669		B2	#8	#9	12'-8"	345	
B3	20	#6	STR	25'-11"	779	B4	20	#6	STR	11'-5"	343
B5	4	#4	STR	24'-9"	66	B6	4	#4	STR	11'-5"	31
B7	6	#4	STR	2'-5"	10	B7	4	#4	STR	2'-5"	6
D1	12	#6	STR	1'-6"	27	D1	6	#6	STR	1'-6"	14
H2	17	#6	3	12'-4"	315	H1	34	#6	2	12'-4"	630
H3	17	#6	3	12'-2"	311						
						K1	8	#4	STR	3'-1"	16
						K1	8	#4	STR	3'-1"	16
S1	44	#9	4	16'-5"	2,456	S1	24	#9	4	16'-5"	1,340
S2	12	#4	5	6'-6"	52	S2	8	#4	5	6'-6"	35
S3	22	#5	4	9'-8"	222	S3	14	#5	4	9'-8"	141
						V2	34	#5	STR	9'-6"	337
V1	34	#5	STR	10'-5"	369						
REINFORCING STEEL (FOR PHASE I)					5,292 LBS.	REINFORCING STEEL (FOR PHASE II)					3,238 LBS.
TOTAL REINFORCING STEEL (PHASE I & II)						TOTAL REINFORCING STEEL (PHASE I & II)					8,530 LBS.
CLASS A CONCRETE BREAKDOWN (FOR PHASE I)						CLASS A CONCRETE BREAKDOWN (FOR PHASE II)					
POUR #1 CAP, LOWER PART OF WINGS & CONCRETE COLLARS			27.8 C.Y.	POUR #1 CAP, LOWER PART OF WINGS & CONCRETE COLLARS			15.8 C.Y.				
POUR #2 UPPER PART OF WINGS & BACKWALL			2.8 C.Y.	POUR #2 UPPER PART OF WINGS & BACKWALL			1.5 C.Y.				
TOTAL CLASS A CONCRETE			30.6 C.Y.	TOTAL CLASS A CONCRETE			17.3 C.Y.				
TOTAL CLASS A CONCRETE (PHASE I & II)				TOTAL CLASS A CONCRETE (PHASE I & II)			47.9 C.Y.				



DETAIL "A"



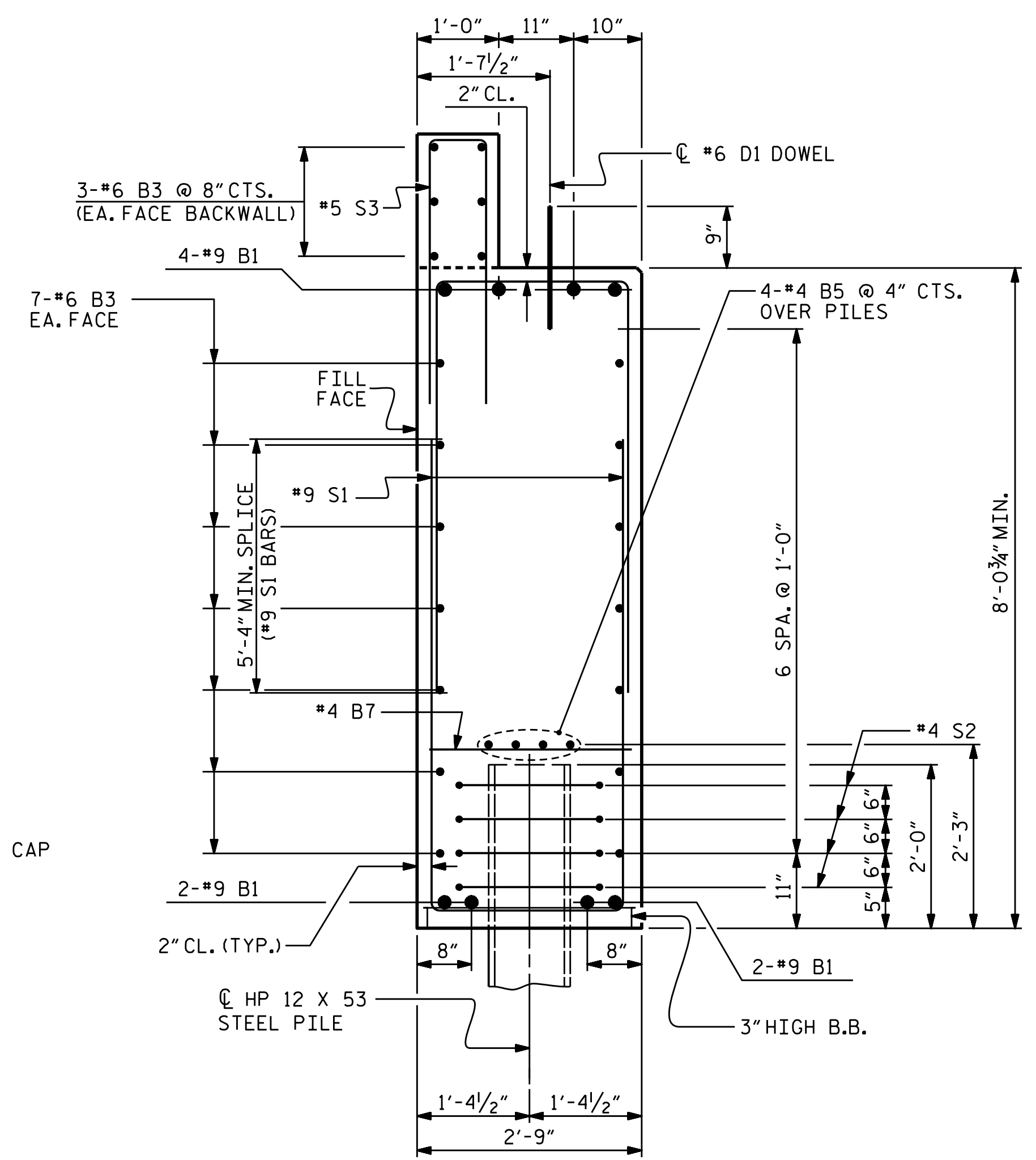
PLAN



ELEVATION

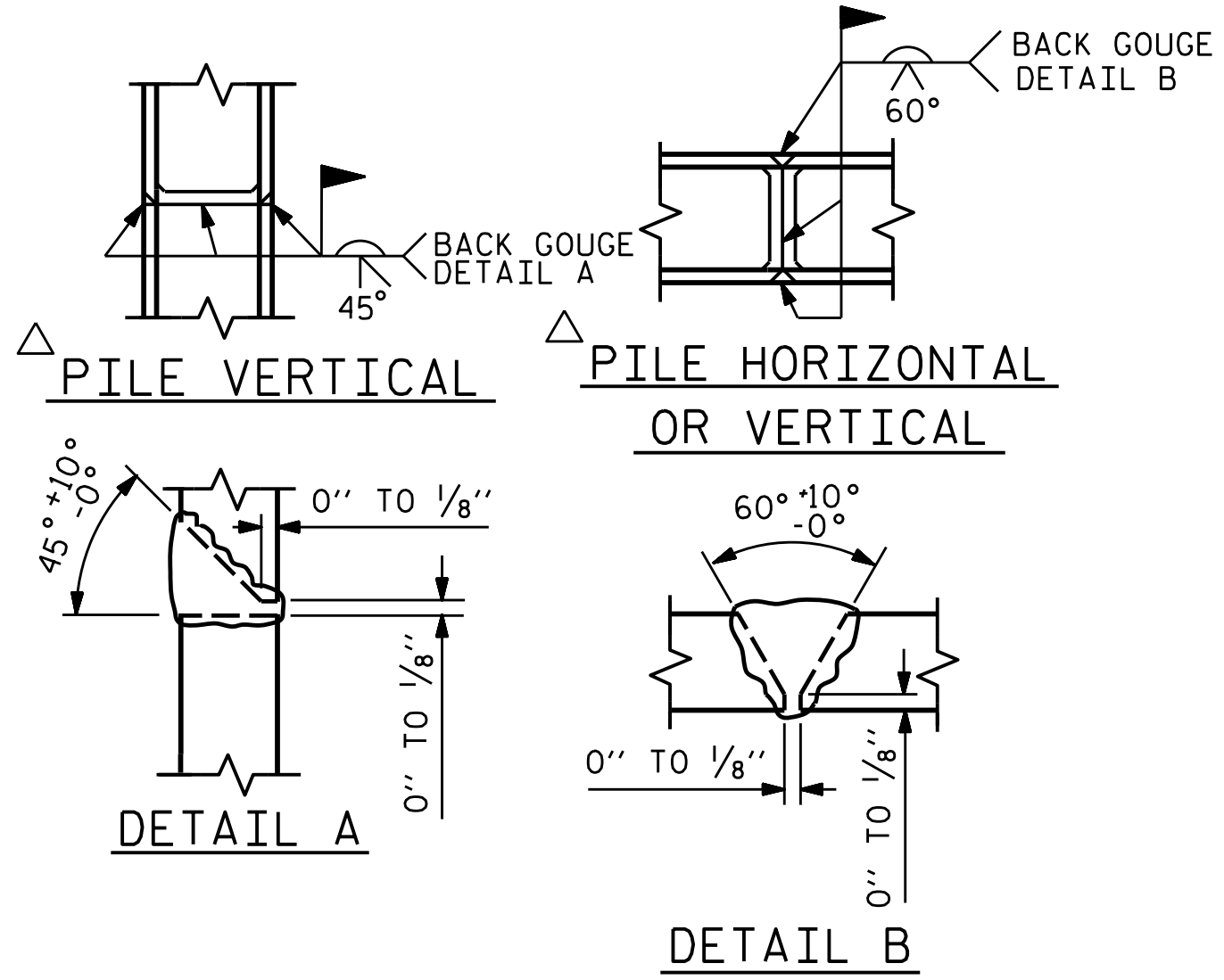
CORROSION PROTECTION FOR STEEL PILES DETAIL

* CONCRETE COLLAR TO EXTEND DOWN TO ROCK SOCKET FOR ALL PILES (EST. 10'-0" PER PILE)



SECTION B-B

(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.") PHASE I SECTION AND REINFORCING SHOWN, PHASE II SECTION AND REINFORCING SIMILAR. SEE ELEVATION VIEW ON END BENT No. 2, SHEET 1 OF 3, FOR DETAILS.



PILE SPLICE DETAILS

POSITION OF PILE DURING WELDING.

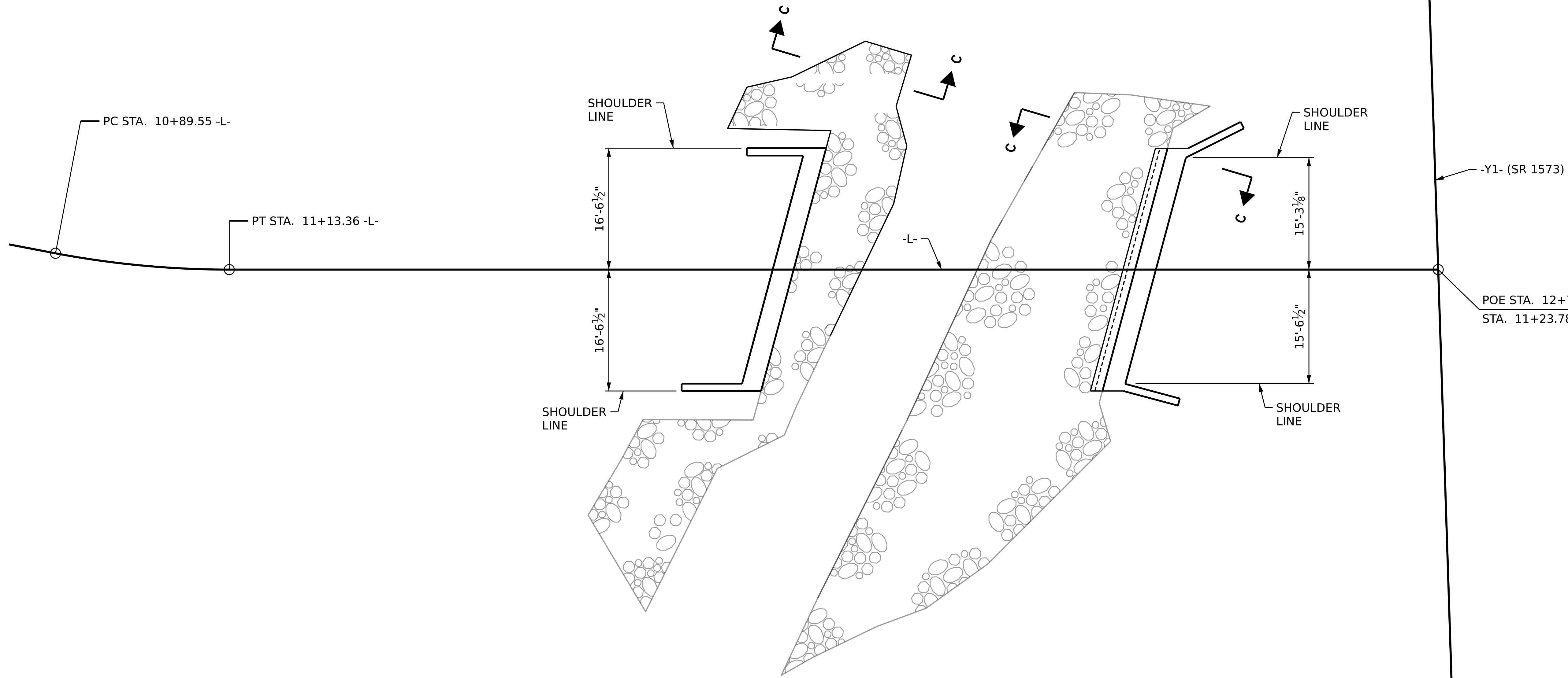
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 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE: 08/2025

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 SEAL 040769
 ENGINEER
 ANDREW L. PHILLIPS
 11/12/2025

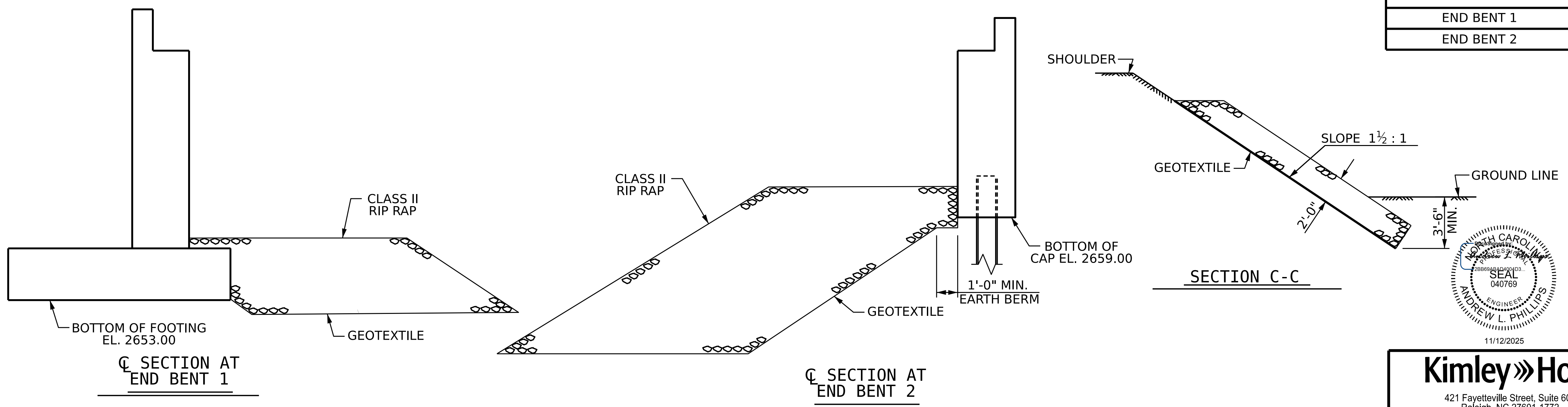
PROJECT NO. **DF18311.2005593.PR**
ASHE COUNTY
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH			
SUBSTRUCTURE			
END BENT No. 2 DETAILS			
REVISIONS			
NO.	BY:	DATE:	SHEET NO.
1			S-18
2			19



PLAN OF RIP RAP
 END BENT 1 END BENT 2

ESTIMATED QUANTITIES		
BRIDGE @ STA. 12+13.00 -L-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	160.0	178.00
END BENT 2	200.0	223.0

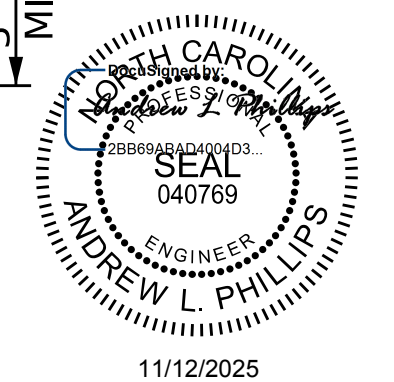


**SECTION AT
END BENT 1**

**SECTION AT
END BENT 2**

SECTION C-C

BERM RIP RAPPED



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STATE OF NORTH CAROLINA
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 RALEIGH

**RIP RAP
DETAILS**

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

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W ...	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE AASHTO
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1 1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 3/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT,
ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.