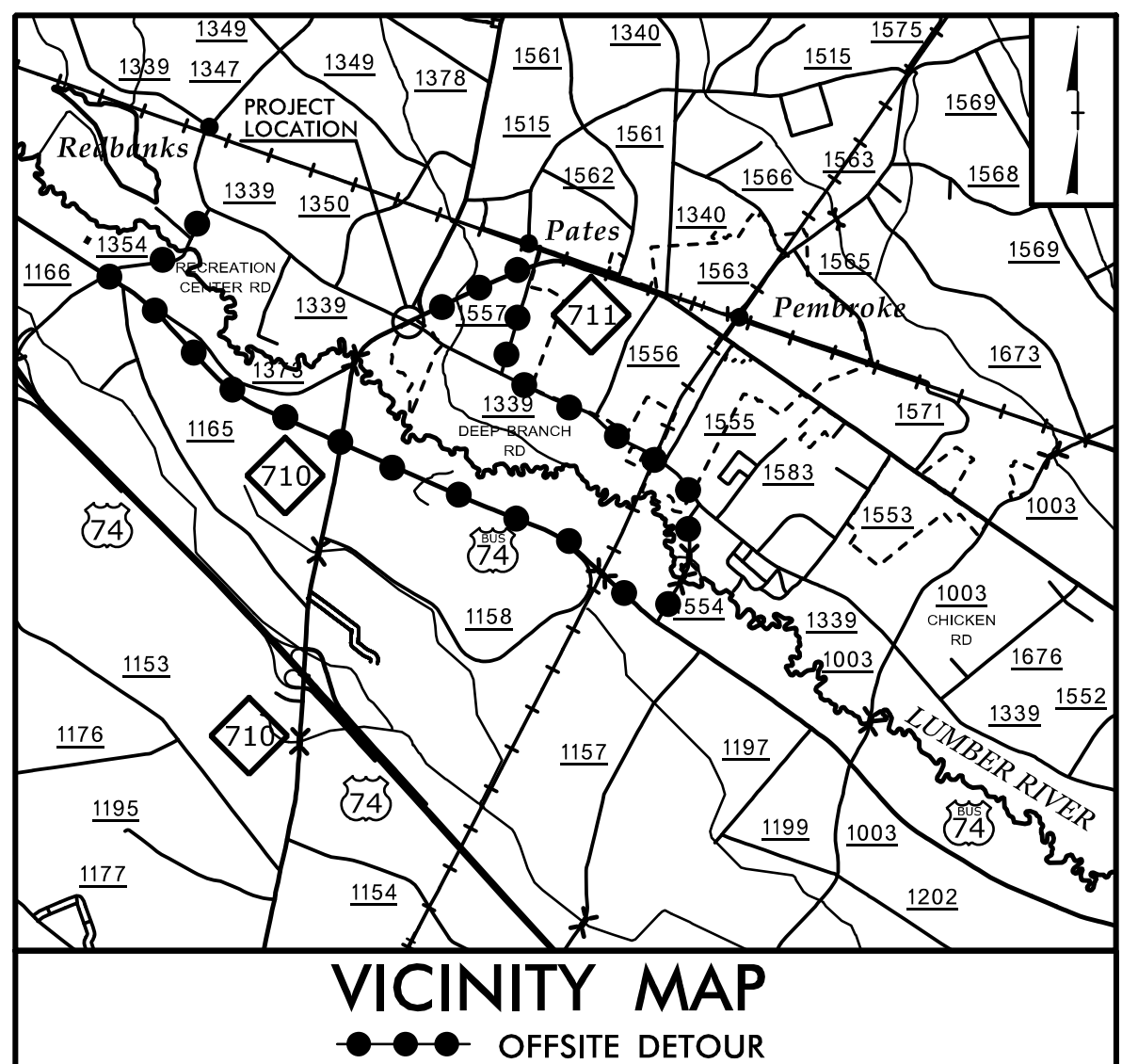


09/28/2019

See Sheet 1A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

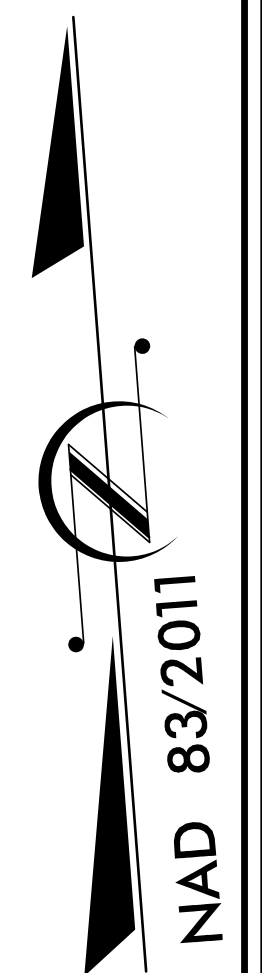
ROBESON COUNTY

LOCATION: INTERSECTION OF NC HIGHWAY 710 & SR 1339 (DEEP BRANCH ROAD)

TYPE OF WORK: GRADING, DRAINAGE, & PAVEMENT

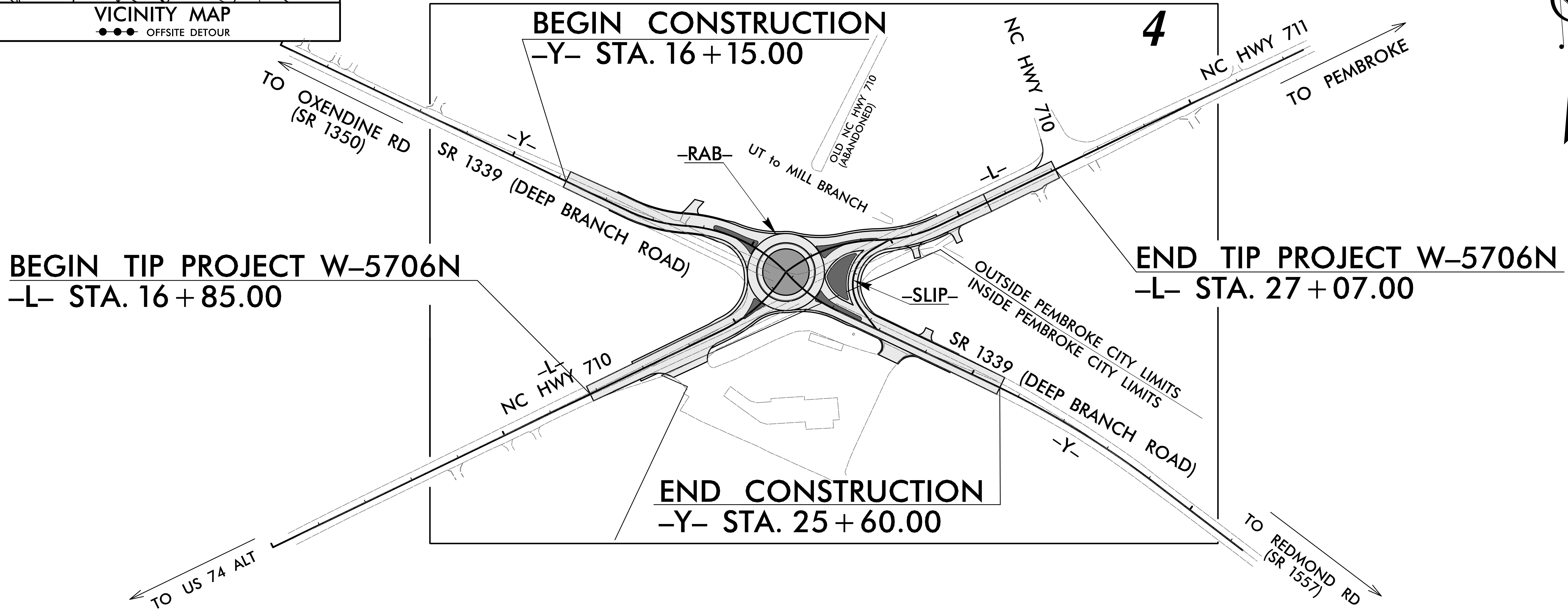
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5706N	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44852.1.14	HSIP-0710(037)	PE	
44852.2.14	HSIP-0710(037)	R/W	
44852.2.31	HSIP-0710(037)	UTIL	
44852.3.14	HSIP-0710(037)	CONST.	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TIP PROJECT: W-5706N

CONTRACT: DF00480

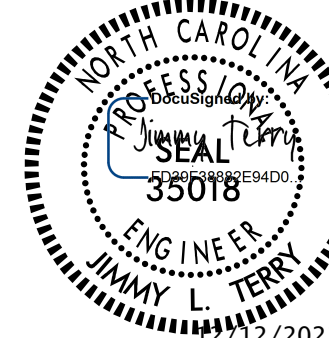


CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF PEMBROKE.

<p>GRAPHIC SCALES</p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>10 5 0 10 20 PROFILE (VERTICAL)</p>	<p>DESIGN DATA</p> <table border="0"> <tr> <td>NC 710/NC 711</td> <td>SR 1339</td> </tr> <tr> <td>ADT 2024 = 10,700</td> <td>ADT 2024 = 4,900</td> </tr> <tr> <td>ADT 2045 = 11,900</td> <td>ADT 2045 = 5,500</td> </tr> <tr> <td>K = 9 %</td> <td>K = 12 %</td> </tr> <tr> <td>D = 60 %</td> <td>D = 55 %</td> </tr> <tr> <td>T = 3 % *</td> <td>T = 3 % *</td> </tr> <tr> <td>V = 40 MPH</td> <td>V = 40 MPH</td> </tr> <tr> <td>* TTST = 1% DUAL = 2%</td> <td>* TTST = 1% DUAL = 2%</td> </tr> </table>	NC 710/NC 711	SR 1339	ADT 2024 = 10,700	ADT 2024 = 4,900	ADT 2045 = 11,900	ADT 2045 = 5,500	K = 9 %	K = 12 %	D = 60 %	D = 55 %	T = 3 % *	T = 3 % *	V = 40 MPH	V = 40 MPH	* TTST = 1% DUAL = 2%	* TTST = 1% DUAL = 2%	<p>PROJECT LENGTH</p> <p>LENGTH ROADWAY TIP PROJECT W-5706N (NC 710/711) = 0.194 MILES</p> <p>LENGTH ROADWAY TIP PROJECT W-5706N (SR 1339) = 0.179 MILES</p> <p>TOTAL LENGTH TIP PROJECT W-5706N = 0.373 MILES</p>	<p>NCDOT CONTACT: JOHN GAUTHIER DIVISION DESIGN ENGINEER</p> <p>PLANS PREPARED BY:</p> <p>TGS ENGINEERS 201 W. MARION ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO. C-0275</p>	<p>PLANS PREPARED FOR:</p> <p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 6 431 Transportation Drive Fayetteville, NC 28301</p>	<p>HYDRAULICS ENGINEER</p> <p>4/17/2024</p> <p>DocuSigned by: <i>Benjamin J. Henegar</i> P.E.</p> <p>SEAL 044158 BENJAMIN J. HENEGAR</p>
		NC 710/NC 711	SR 1339																		
ADT 2024 = 10,700	ADT 2024 = 4,900																				
ADT 2045 = 11,900	ADT 2045 = 5,500																				
K = 9 %	K = 12 %																				
D = 60 %	D = 55 %																				
T = 3 % *	T = 3 % *																				
V = 40 MPH	V = 40 MPH																				
* TTST = 1% DUAL = 2%	* TTST = 1% DUAL = 2%																				
<p>2024 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: DECEMBER 2, 2021</p> <p>LETTING DATE: MAY 15, 2024</p>	<p>JIMMY L. TERRY, PE PROJECT ENGINEER</p> <p>CLINTON B. PRUETT, PE PROJECT DESIGN ENGINEER</p>	<p>ROADWAY DESIGN ENGINEER</p> <p>4/17/2024</p> <p>DocuSigned by: <i>Jimmy Terry</i> P.E.</p> <p>SEAL 35018 JIMMY L. TERRY</p>																			

4/17/2024 X:\NCDOT\W-5706N\Roadway\Proj\W-5706N_Rdy_t.sh.dgn User:cbpruett

TCS
ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>1A</i>
ROADWAY DESIGN ENGINEER	
	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	ROADWAY DETAILS - CURVE DATA
2B-2	ROADWAY DETAILS - ROUNDABOUT LATOUT
2B-3	ROADWAY DETAILS - CONCRETE ISLAND LAYOUTS
2B-4	ROADWAY DETAILS - DITCH DETAILS
3B-1	SUMMARY OF EARTHWORK AND PAVEMENT REMOVAL SUMMARY
3D-1	DRAINAGE SUMMARIES
3P-1	PARCEL INDEX SHEET
4	PLAN SHEETS
5 THRU 6	PROFILE SHEETS
RW-1 THRU RW-04	SURVEY CONTROL SHEETS
TMP-1 THRU TMP-5	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-06	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-4	SIGNING PLANS
UC-1 THRU UC-4	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION INDEX SHEET
X-1B	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-9	CROSS-SECTIONS

GENERAL NOTES

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

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

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

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

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

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

UTILITIES:
 UTILITY OWNERS ON THIS PROJECT ARE AT&T, DUKE, LUMBEE RIVER EMC, ROBESON COUNTY PUBLIC UTILITIES, TOWN OF PEMBROKE, MCNC, AND CHARTER
 ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

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

STANDARD DRAWINGS

EFF. 01-16-2024
 REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

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

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
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	
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
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
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
852.01	Concrete Islands
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets

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

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	_____
County Line	_____
Township Line	_____
City Line	_____
Reservation Line	_____
Property Line	_____
Existing Iron Pin (EIP)	○
Computed Property Corner	×
Existing Concrete Monument (ECM)	□
Parcel/Sequence Number	(23)
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	-S-S-
Potential Contamination Area: Soil	-S-S-
Known Contamination Area: Water	-W-W-
Potential Contamination Area: Water	-W-W-
Contaminated Site: Known or Potential	☠ ☢

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

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

Woods Line	_____
Orchard	_____
Vineyard	_____

EXISTING STRUCTURES:

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

UTILITIES:

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

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	⊠
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊙
U/G Power Line (SUE - LOS B)*	_____
U/G Power Line (SUE - LOS C)*	_____
U/G Power Line (SUE - LOS D)*	_____

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	⊠
U/G Telephone Test Hole (SUE - LOS A)*	⊙
U/G Telephone Cable (SUE - LOS B)*	_____
U/G Telephone Cable (SUE - LOS C)*	_____
U/G Telephone Cable (SUE - LOS D)*	_____
U/G Telephone Conduit (SUE - LOS B)*	_____
U/G Telephone Conduit (SUE - LOS C)*	_____
U/G Telephone Conduit (SUE - LOS D)*	_____
U/G Fiber Optics Cable (SUE - LOS B)*	_____
U/G Fiber Optics Cable (SUE - LOS C)*	_____
U/G Fiber Optics Cable (SUE - LOS D)*	_____

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

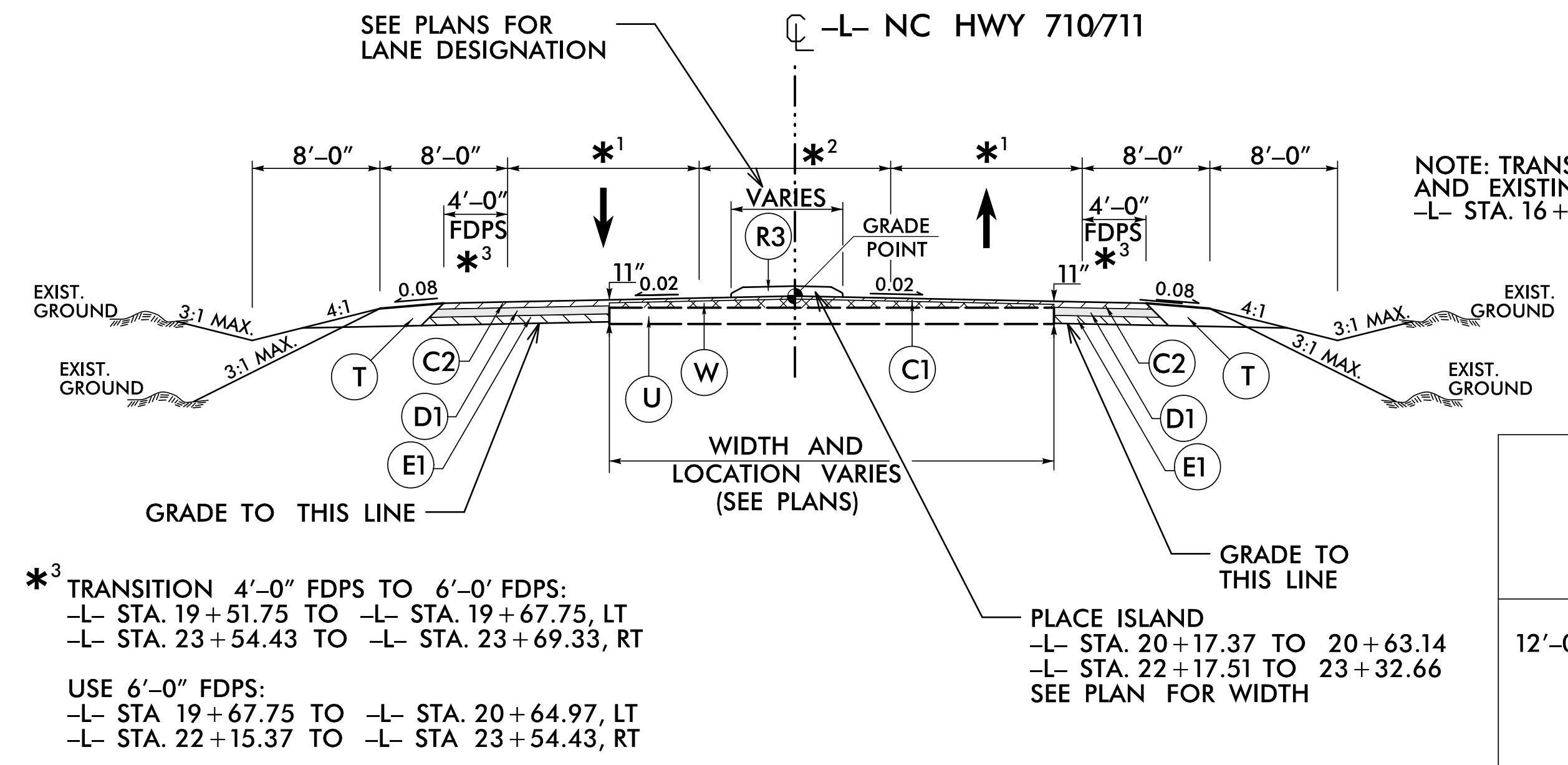
MISCELLANEOUS:

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

FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	2'-0" CONCRETE CURB AND GUTTER WITH ROLLED CURB (SEE SHEET 2A-2 FOR DETAIL).
R2	9"x18" CONCRETE CURB.
R3	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
R4	4" CONCRETE ISLAND COVER
R5	10" CONCRETE TRUCK APRON
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING, SEE THIS SHEET FOR DETAIL
W	WEDGING EXISTING PAVEMENT, SEE THIS SHEET FOR DETAILS

PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



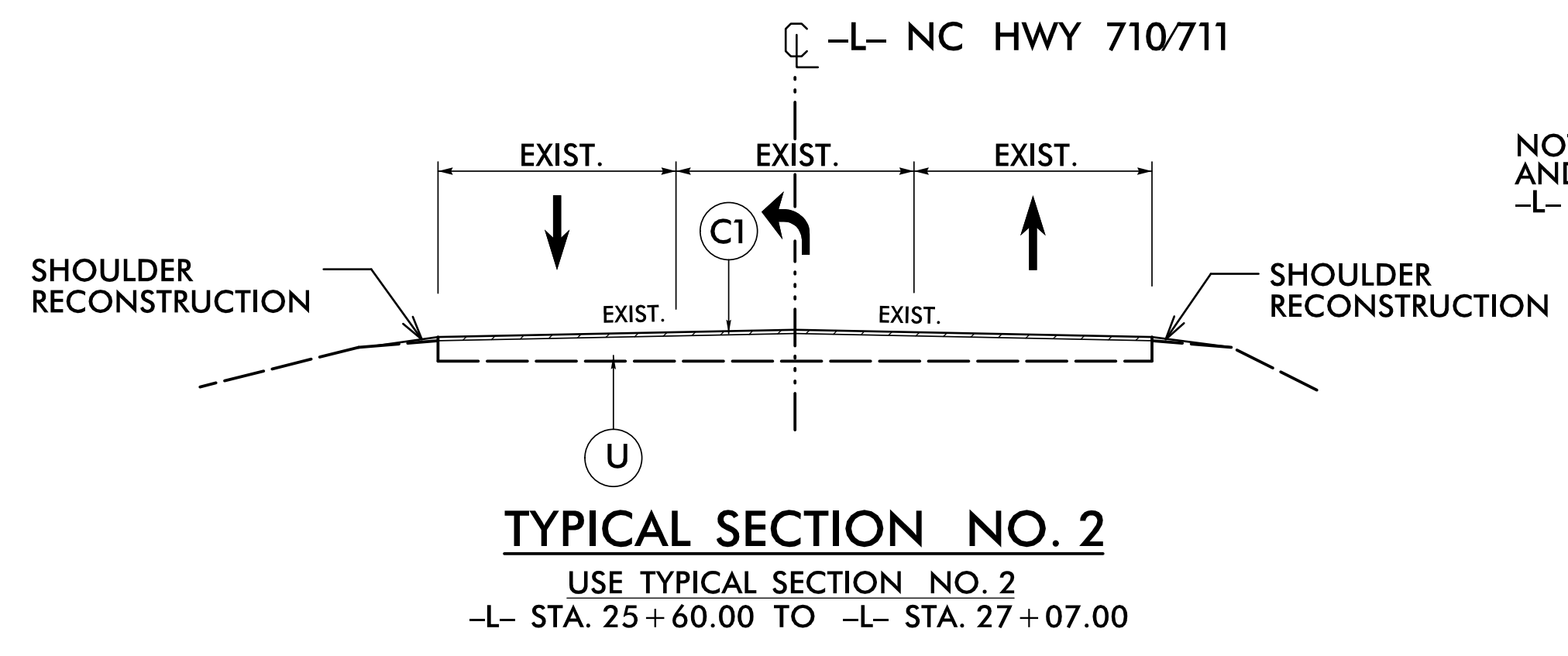
*³ TRANSITION 4'-0" FDPS TO 6'-0" FDPS:
-L- STA. 19+51.75 TO -L- STA. 19+67.75, LT
-L- STA. 23+54.43 TO -L- STA. 23+69.33, RT

USE 6'-0" FDPS:
-L- STA. 19+67.75 TO -L- STA. 20+64.97, LT
-L- STA. 22+15.37 TO -L- STA. 23+54.43, RT

TYPICAL SECTION NO. 1

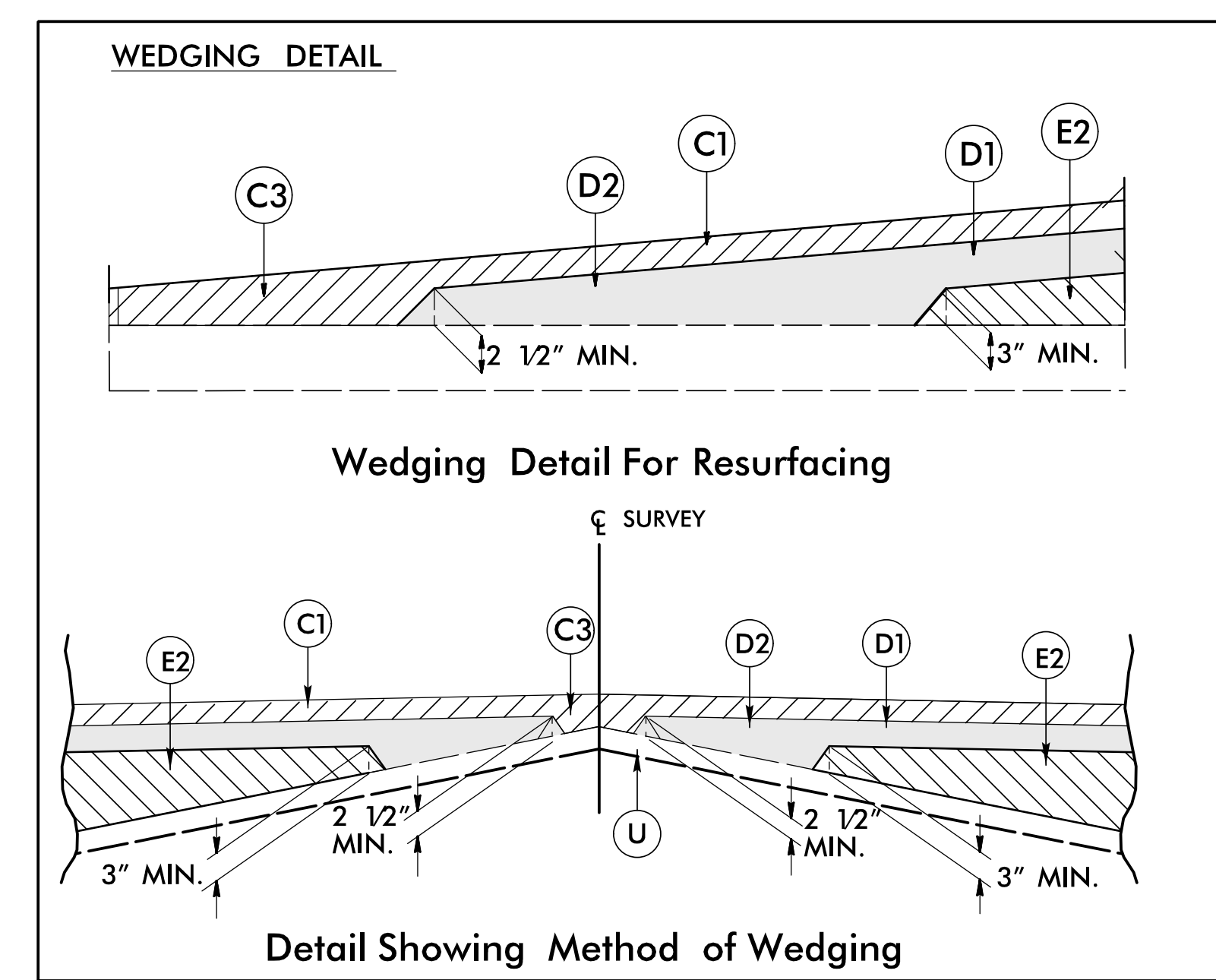
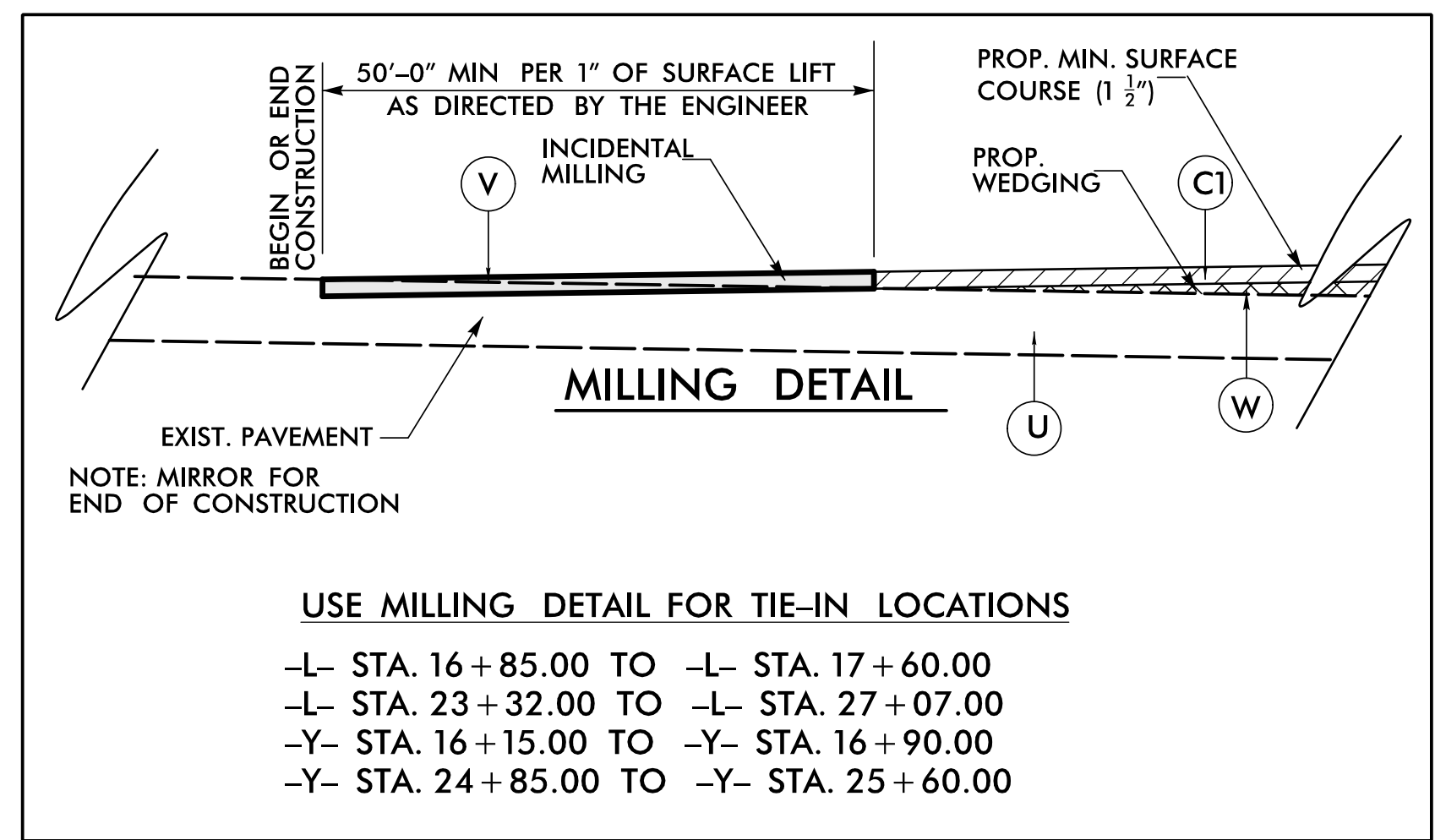
USE TYPICAL SECTION NO. 1
-L- STA. 18+95.00 TO -L- STA. 20+64.97
-L- STA. 22+15.37 TO -L- STA. 24+60.00

12'-0"	* ¹	-L- STA. 18+95.00 TO -L- STA. 19+87.43, LT -L- STA. 22+69.41 TO -L- STA. 24+60.00, LT -L- STA. 18+95.00 TO -L- STA. 20+31.33, RT -L- STA. 22+83.41 TO -L- STA. 24+60.00, RT
12'-0" TO 16'-0"	* ¹	-L- STA. 19+87.43 TO -L- STA. 20+64.97, LT -L- STA. 22+15.37 TO -L- STA. 22+69.41, LT -L- STA. 20+31.33 TO -L- STA. 20+64.97, RT -L- STA. 22+15.37 TO -L- STA. 22+83.41, RT
12'-0"	* ²	-L- STA. 18+95.00 TO -L- STA. 19+68.00 -L- STA. 22+76.00 TO -L- STA. 24+60.00
VARIES (SEE PLANS)	* ²	-L- STA. 19+68.00 TO -L- STA. 20+64.97 -L- STA. 22+15.37 TO -L- STA. 22+76.00



TYPICAL SECTION NO. 2

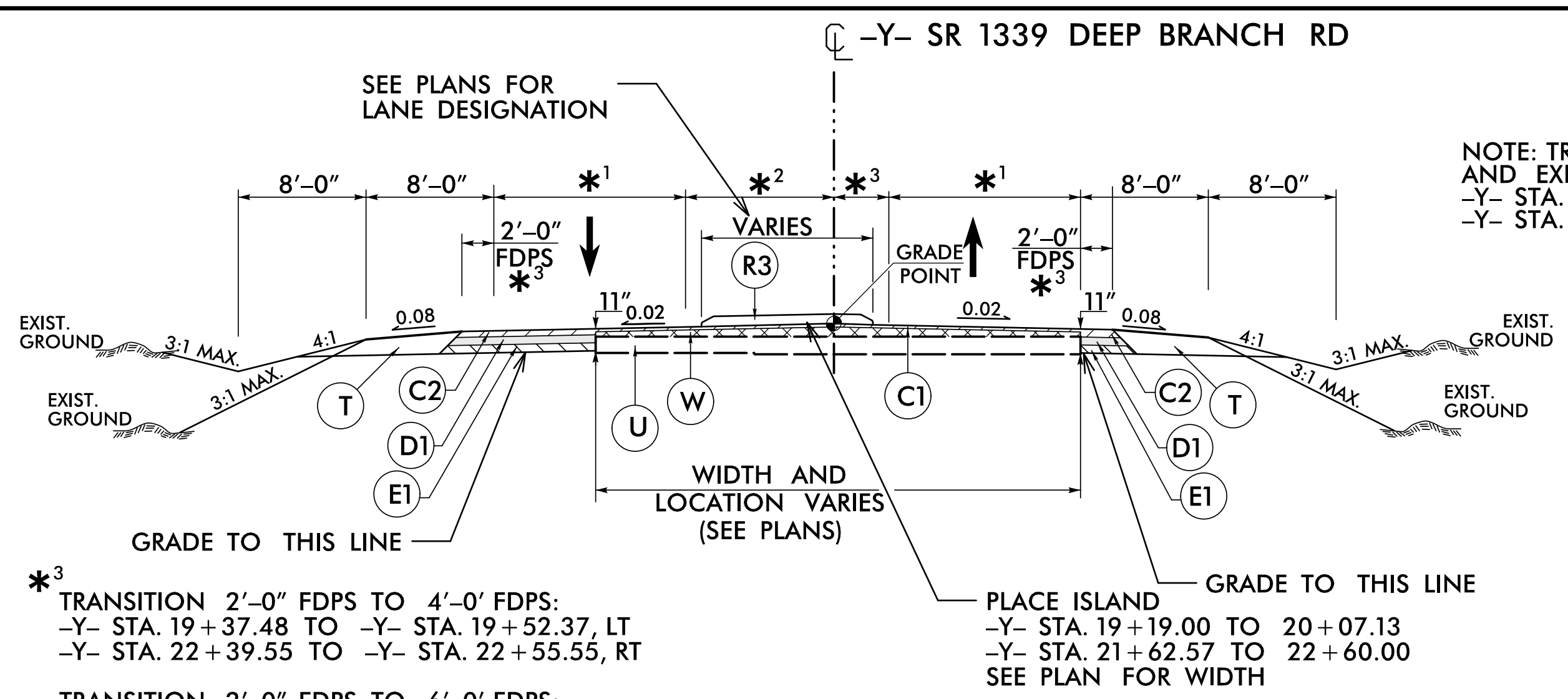
USE TYPICAL SECTION NO. 2
-L- STA. 25+60.00 TO -L- STA. 27+07.00



PROJECT REFERENCE NO. W-5706N	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER JIMMY L. TERRILL 35018 12/2023	PAVEMENT DESIGN ENGINEER ANDREW D. WARGO 044590 12/2023
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

6/2/2023

FINAL PAVEMENT SCHEDULE	
C1	1 1/2" S9.5C
C2	3" S9.5C
D1	4" I19.5C
E1	4" B25.0C
R1	2'-0" C&G (ROLLED CURB)
R2	9" X 18" CURB
R3	5" MCI (SURFACE MOUNTED)
R4	4" CONCRETE ISLAND COVER
R5	10" CONCRETE TRUCK APRON
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING



NOTE: TRANSITION BETWEEN TYP. SECT. NO. 3 AND EXISTING AS FOLLOWS:
 -Y- STA. 16+15.00 TO -Y STA. 17+15.00
 -Y- STA. 24+60.00 TO -Y STA. 25+60.00

***³** TRANSITION 2'-0" FDPS TO 4'-0" FDPS:
 -Y- STA. 19+37.48 TO -Y- STA. 19+52.37, LT
 -Y- STA. 22+39.55 TO -Y- STA. 22+55.55, RT

TRANSITION 2'-0" FDPS TO 6'-0" FDPS:
 -Y- STA. 19+00.00 TO -Y- STA. 19+33.13, RT

USE 4'-0" FDPS:
 -Y- STA. 19+52.37 TO -Y- STA. 20+09.29, LT
 -Y- STA. 21+59.68 TO -Y- STA. 22+39.55, RT

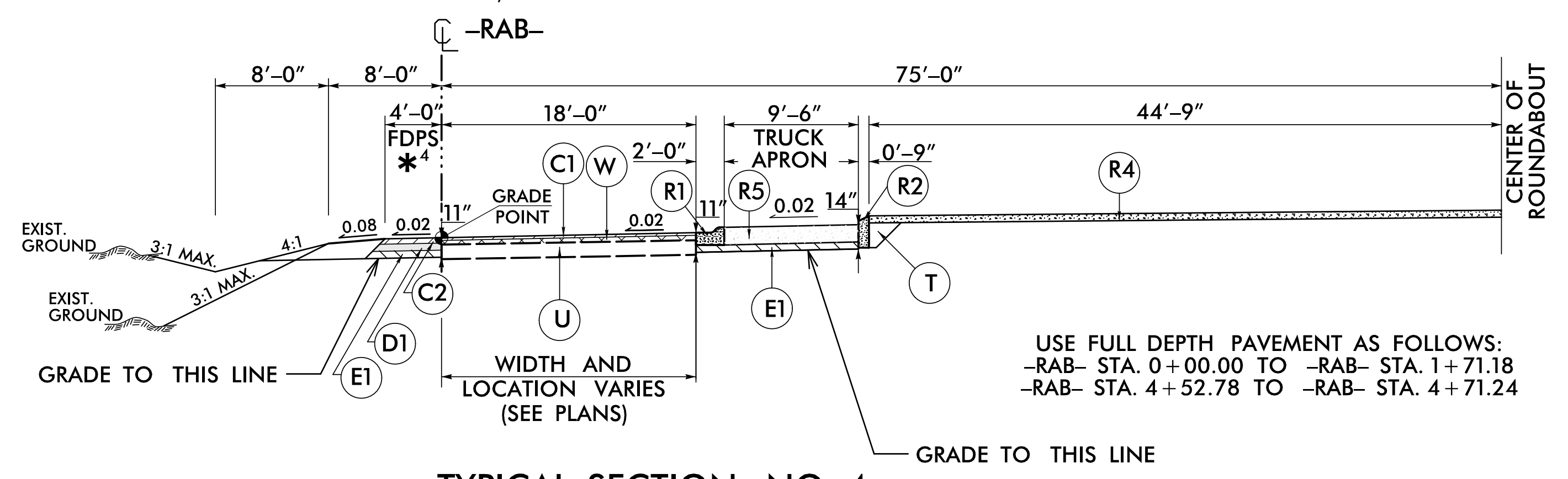
USE 6'-0" FDPS:
 -Y- STA. 19+33+13 TO -Y- STA. 20+09.29, RT

TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
 -Y- STA. 17+15.00 TO -Y- STA. 20+09.29
 -Y- STA. 21+59.68 TO -Y- STA. 24+60.00

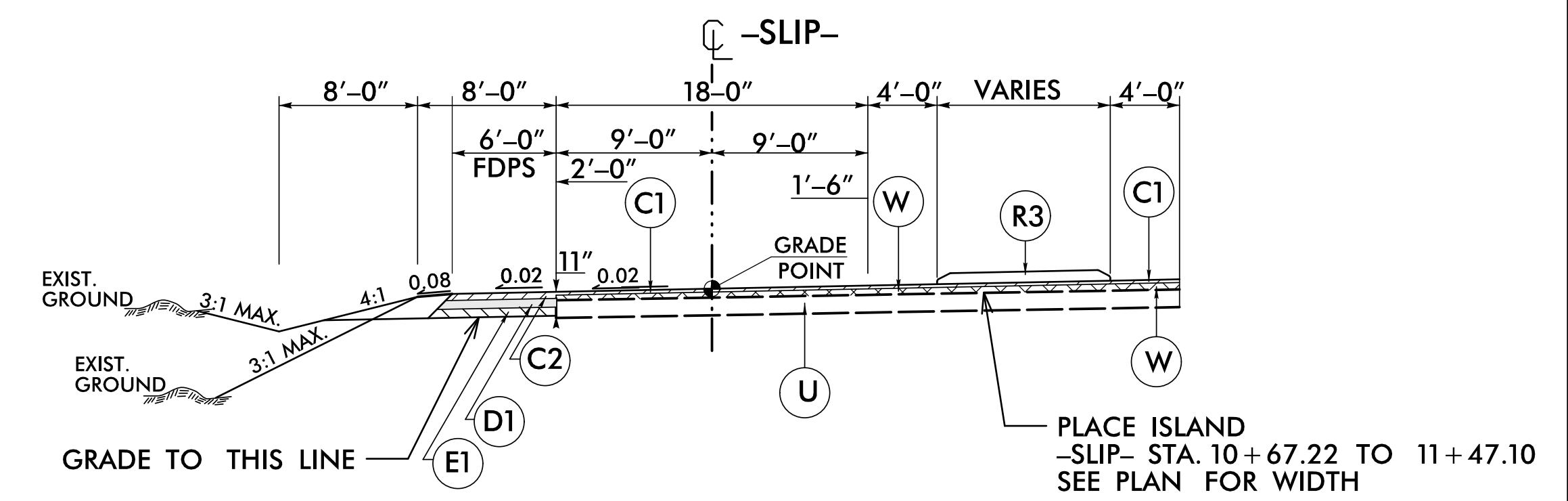
12'-0"		-Y- STA. 17+15.00 TO -Y- STA. 19+60.47, LT -Y- STA. 22+12.40 TO -Y- STA. 24+60.00, RT
12'-0" TO 16'-0"	* ¹	-Y- STA. 17+15.00 TO -Y- STA. 19+38.55, RT -Y- STA. 22+11.55 TO -Y- STA. 24+60.00, RT
11'-0"	* ²	-Y- STA. 17+15.00 TO -Y- STA. 19+71.39 -Y- STA. 22+03.84 TO -Y- STA. 24+60.00
VARIES (SEE PLANS)		-Y- STA. 19+71.39 TO -Y- STA. 20+09.29 -Y- STA. 21+59.68 TO -Y- STA. 22+03.84
1'-0"	* ³	-Y- STA. 17+15.00 TO -Y- STA. 19+44.91 -Y- STA. 22+00.69 TO -Y- STA. 24+60.00
VARIES (SEE PLANS)		-Y- STA. 19+44.91 TO -Y- STA. 20+09.29 -Y- STA. 21+59.68 TO -Y- STA. 22+00.69

***⁴** USE 6'-0" FDPS:
 -RAB- STA. 3+53.30 TO -RAB- STA. 4+71.24, LT



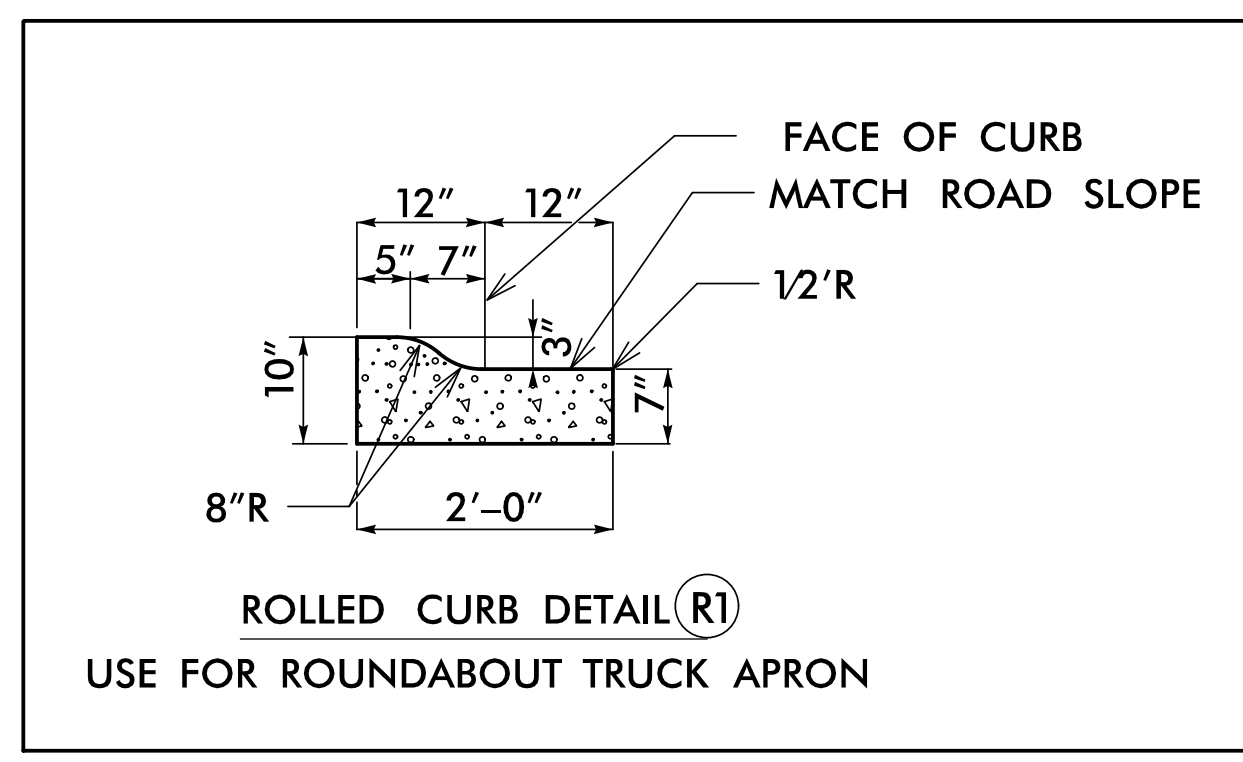
TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
 -RAB- STA. 0+00.00 TO -RAB- STA. 4+71.24



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5
 -SLIP- STA. 10+39.72 TO -SLIP- STA. 11+72.39



PROJECT REFERENCE NO. W-5706N	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER JIMMY L. TERRY	PAVEMENT DESIGN ENGINEER ANDREW D. WARGO
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 201 W. MARION ST., STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

X:\2023\W-5706N\Roadway\Proj\W-5706N_Rdwy_Typ.dgn
 User: jstam1
 Date: 6/2/2023 10:58:11 AM

8/17/99

W-5706 CURVE DATA

-L-

<i>PI Sta 20+56.41</i>	<i>PI Sta 22+38.94</i>	<i>PI Sta 23+96.47</i>
$\Delta = 32^{\circ} 55' 45.1''$ (LT)	$\Delta = 36^{\circ} 26' 46.0''$ (RT)	$\Delta = 24^{\circ} 37' 24.8''$ (LT)
$D = 19^{\circ} 05' 54.9''$	$D = 19^{\circ} 05' 54.9''$	$D = 19^{\circ} 05' 54.9''$
$L = 172.42'$	$L = 190.83'$	$L = 128.93'$
$T = 88.66'$	$T = 98.77'$	$T = 65.48'$
$R = 300.00'$	$R = 300.00'$	$R = 300.00'$
SE = NC	SE = NC	SE = NC
DS = 25 MPH	DS = 25 MPH	DS = 25 MPH

-RAB-

<i>PI Sta 1+09.15</i>	<i>PI Sta 1+99.99</i>	<i>PI Sta 3+10.61</i>	<i>PI Sta 4+28.43</i>
$\Delta = 111^{\circ} 00' 42.2''$ (RT)	$\Delta = 72^{\circ} 11' 07.9''$ (RT)	$\Delta = 86^{\circ} 42' 28.1''$ (RT)	$\Delta = 90^{\circ} 05' 41.8''$ (RT)
$D = 76^{\circ} 23' 39.7''$	$D = 76^{\circ} 23' 39.7''$	$D = 76^{\circ} 23' 39.7''$	$D = 76^{\circ} 23' 39.7''$
$L = 145.31'$	$L = 94.49'$	$L = 113.50'$	$L = 117.93'$
$T = 109.15'$	$T = 54.68'$	$T = 70.81'$	$T = 75.12'$
$R = 75.00'$	$R = 75.00'$	$R = 75.00'$	$R = 75.00'$

-Y-

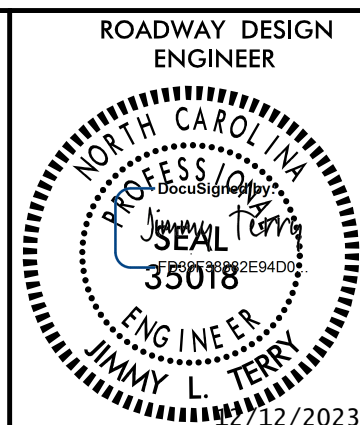

<i>PI Sta 18+07.29</i>	<i>PI Sta 19+79.47</i>	<i>PI Sta 21+47.03</i>	<i>PI Sta 27+31.35</i>
$\Delta = 21^{\circ} 54' 46.2''$ (LT)	$\Delta = 42^{\circ} 07' 09.3''$ (RT)	$\Delta = 23^{\circ} 33' 13.2''$ (LT)	$\Delta = 12^{\circ} 01' 15.0''$ (RT)
$D = 19^{\circ} 05' 54.9''$	$D = 19^{\circ} 05' 54.9''$	$D = 19^{\circ} 05' 54.9''$	$D = 3^{\circ} 14' 59.6''$
$L = 114.74'$	$L = 220.54'$	$L = 123.33'$	$L = 369.88'$
$T = 58.08'$	$T = 115.52'$	$T = 62.55'$	$T = 185.62'$
$R = 300.00'$	$R = 300.00'$	$R = 300.00'$	$R = 1,763.00'$
SE = NC	SE = NC	SE = NC	
DS = 25 MPH	DS = 25 MPH	DS = 25 MPH	

-SLIP-

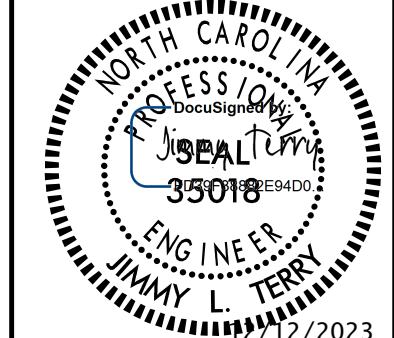

<i>PI Sta 11+28.45</i>
$\Delta = 97^{\circ} 10' 25.9''$ (LT)
$D = 72^{\circ} 31' 34.7''$
$L = 133.98'$
$T = 89.57'$
$R = 79.00'$
SE = 0.02
DS = 15 MPH

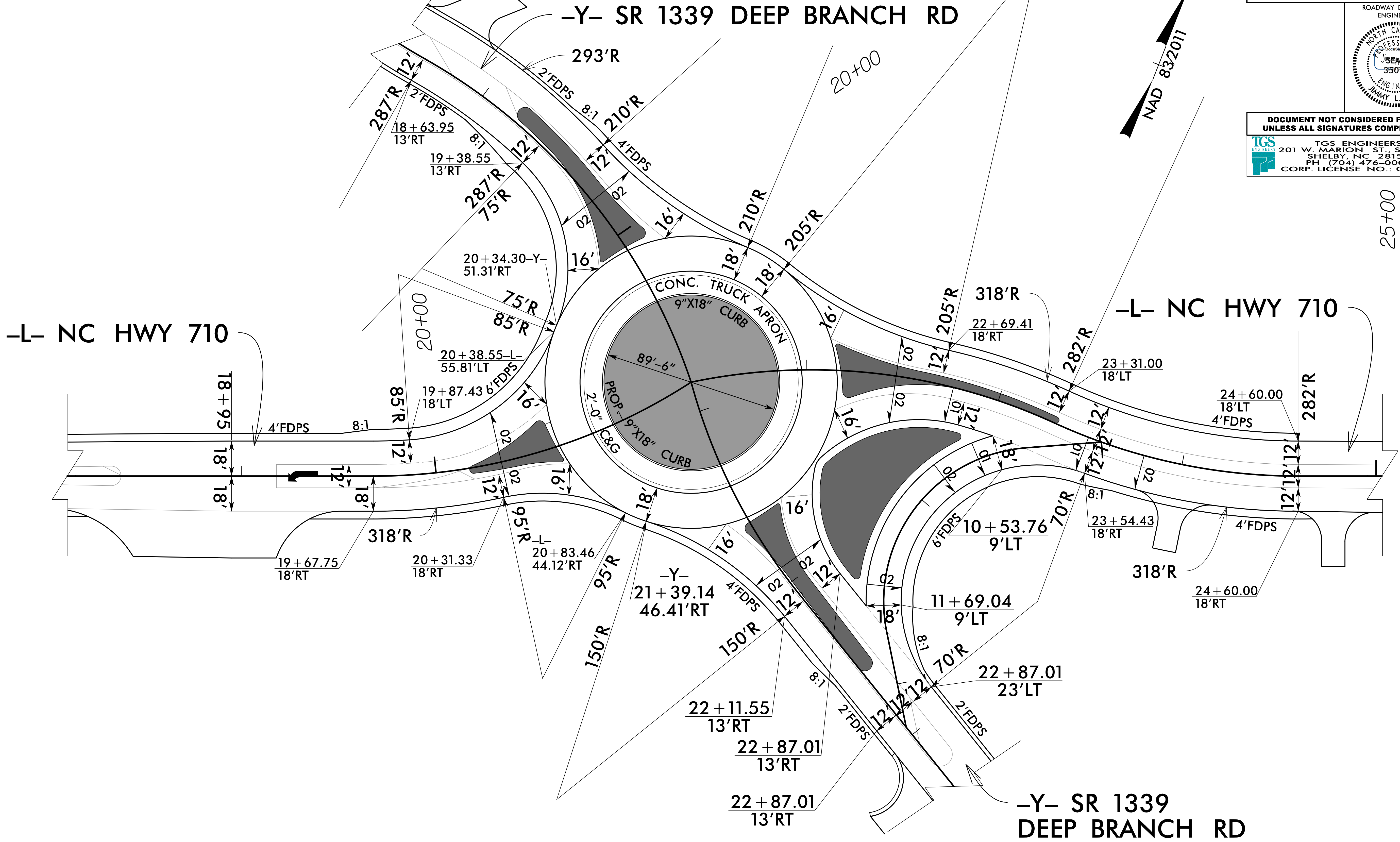
REVISIONS

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licetame\ltp

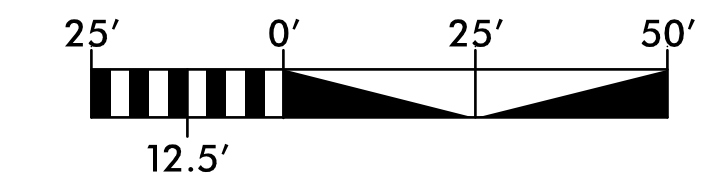
PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>2B-1</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 201 W. MARION ST., STE 200 SHELBY, NC 28150 PH: (704) 476-0003 CORP. LICENSE NO.: C-0275	

8/17/99

PROJECT REFERENCE NO. W-5706N	SHEET NO. 2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 201 W. MARION ST., STE 200 SHELBY, NC 28150 PH: (704) 476-0003 CORP. LICENSE NO.: C-0275	



ROUNDABOUT LAYOUT



REVISIONS

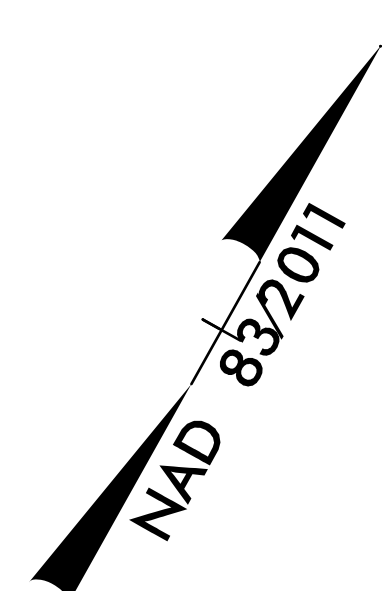
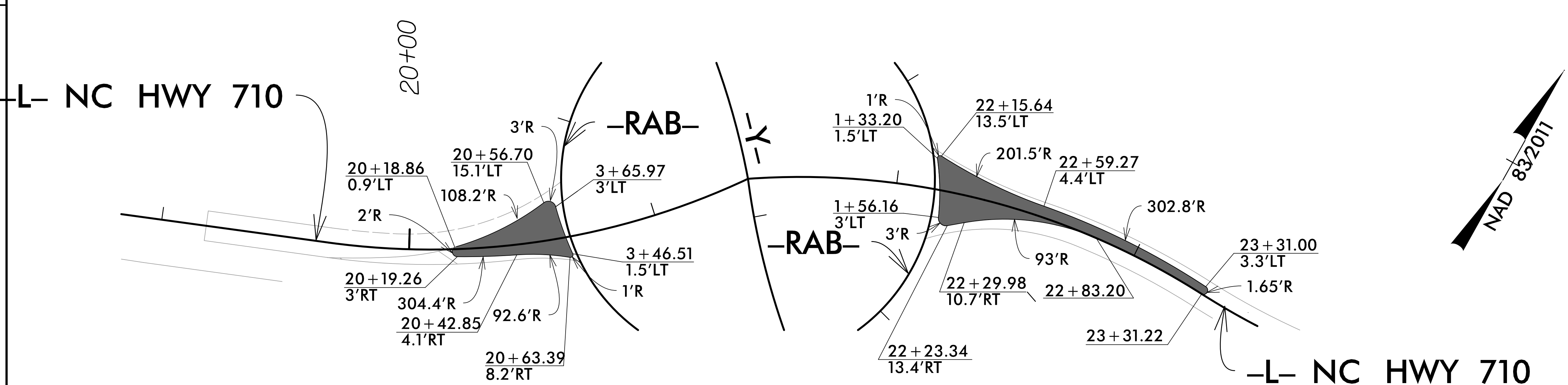
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12/21/2023
JL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
201 W. MARION ST., STE 200
SHELBY, NC 28150
PH: (704) 476-0003
CORP. LICENSE NO.: C-0275

8/17/99

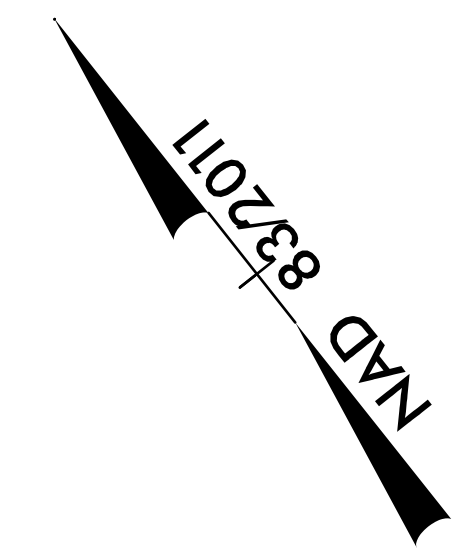
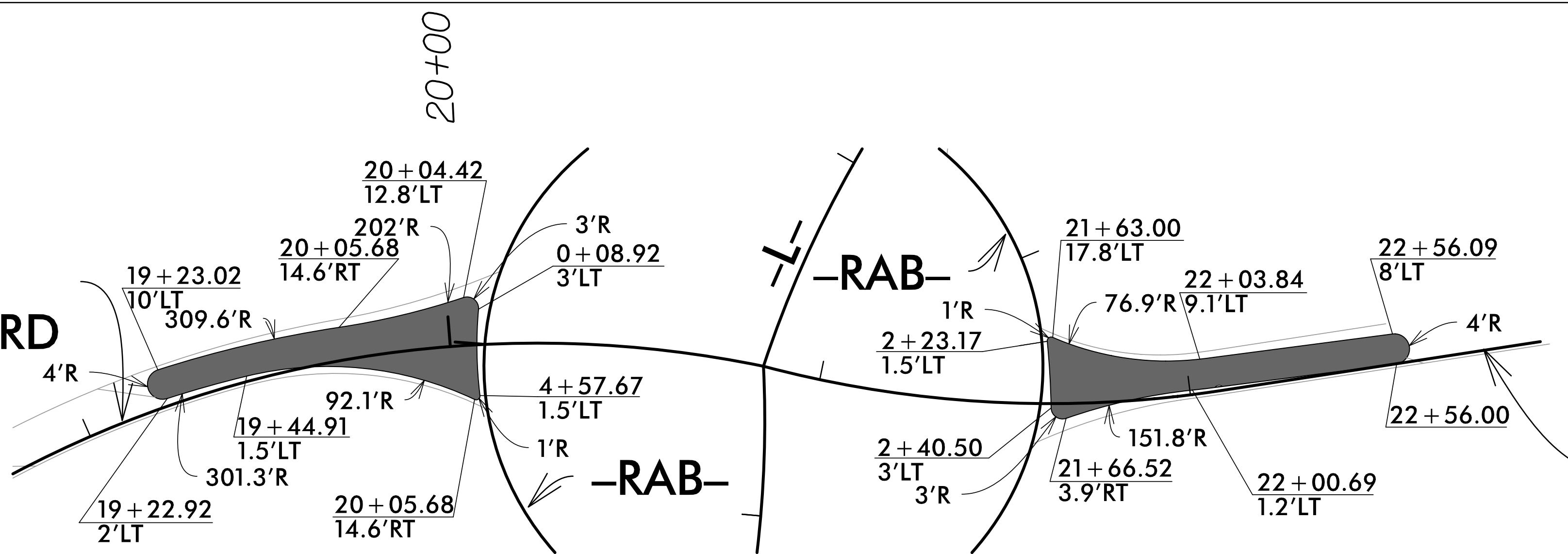
L- NC HWY 710



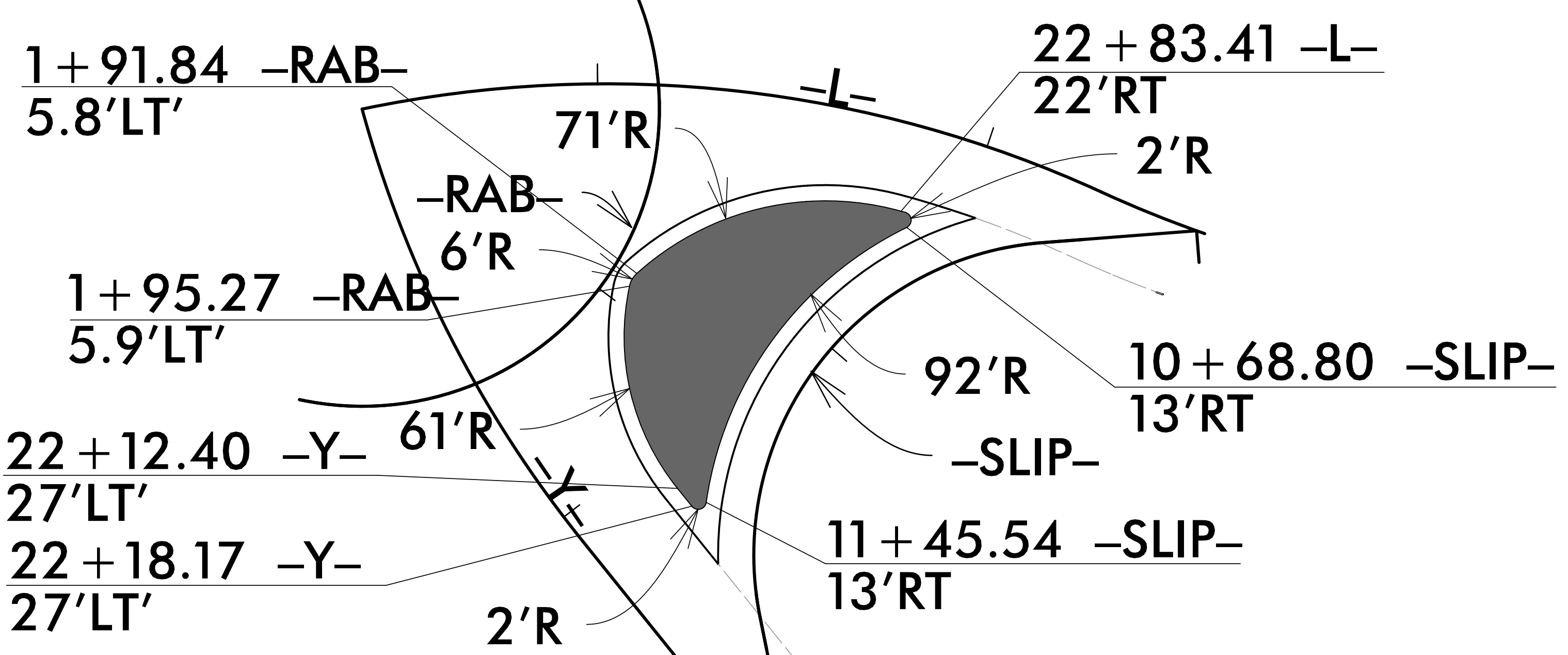
-L- NC HWY 710

REVISIONS

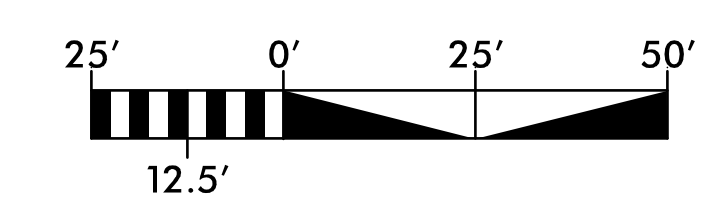
-Y- SR 1339
DEEP BRANCH RD



-Y- SR 1339
DEEP BRANCH RD



ISLAND LAYOUT

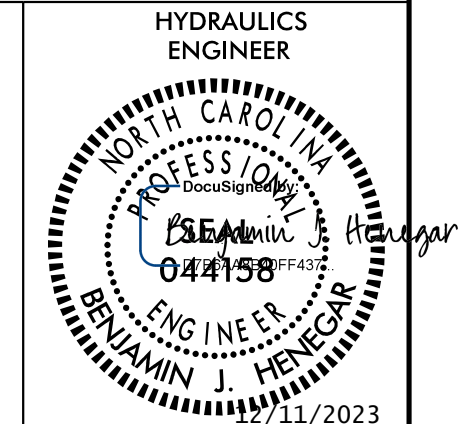


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 JLT

8/17/99

W-5706N DITCH DETAILS

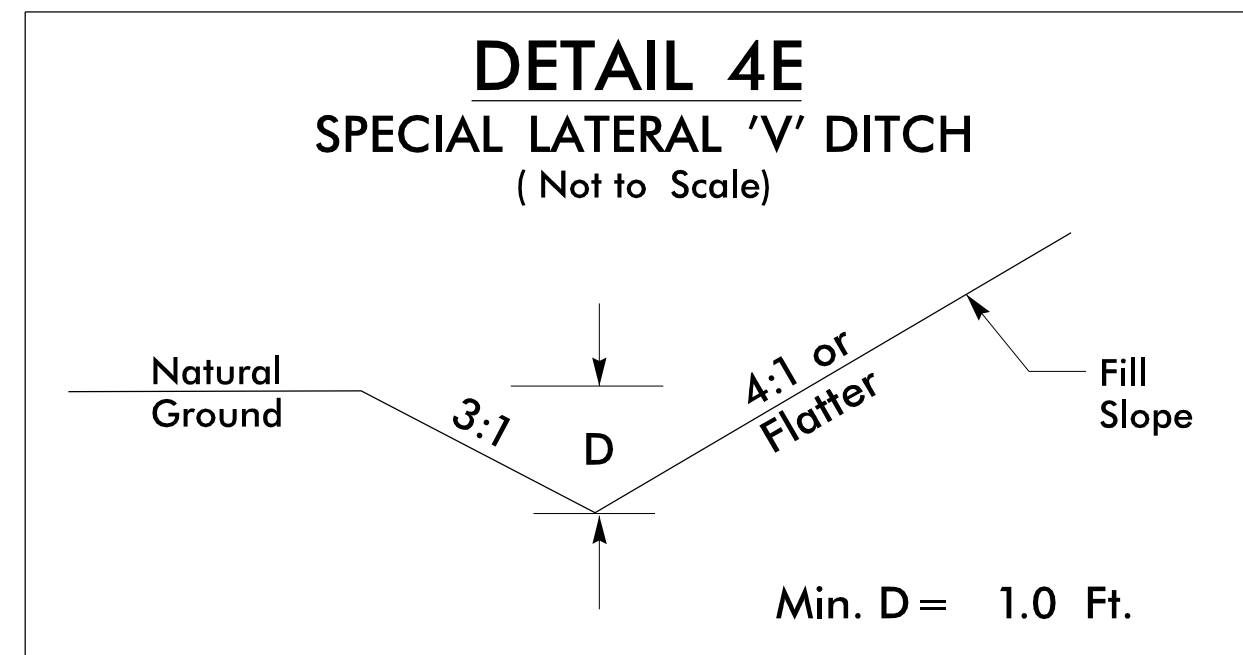
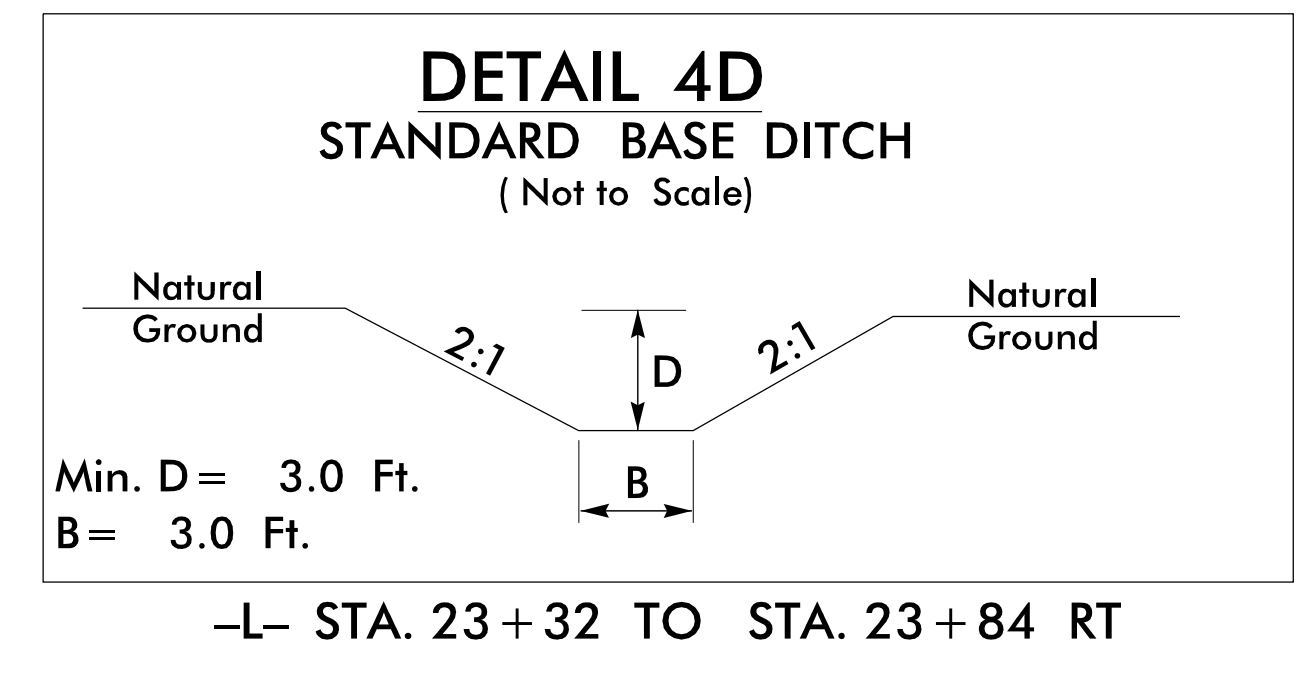
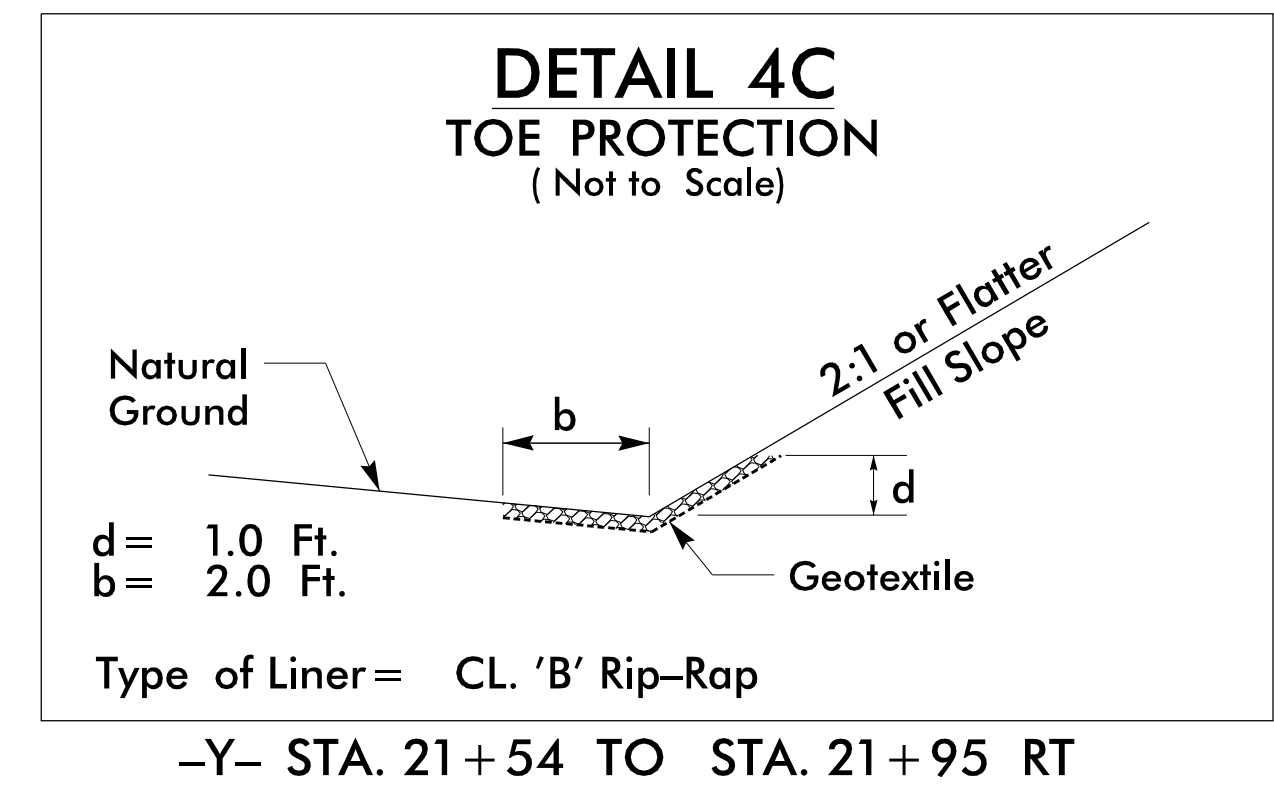
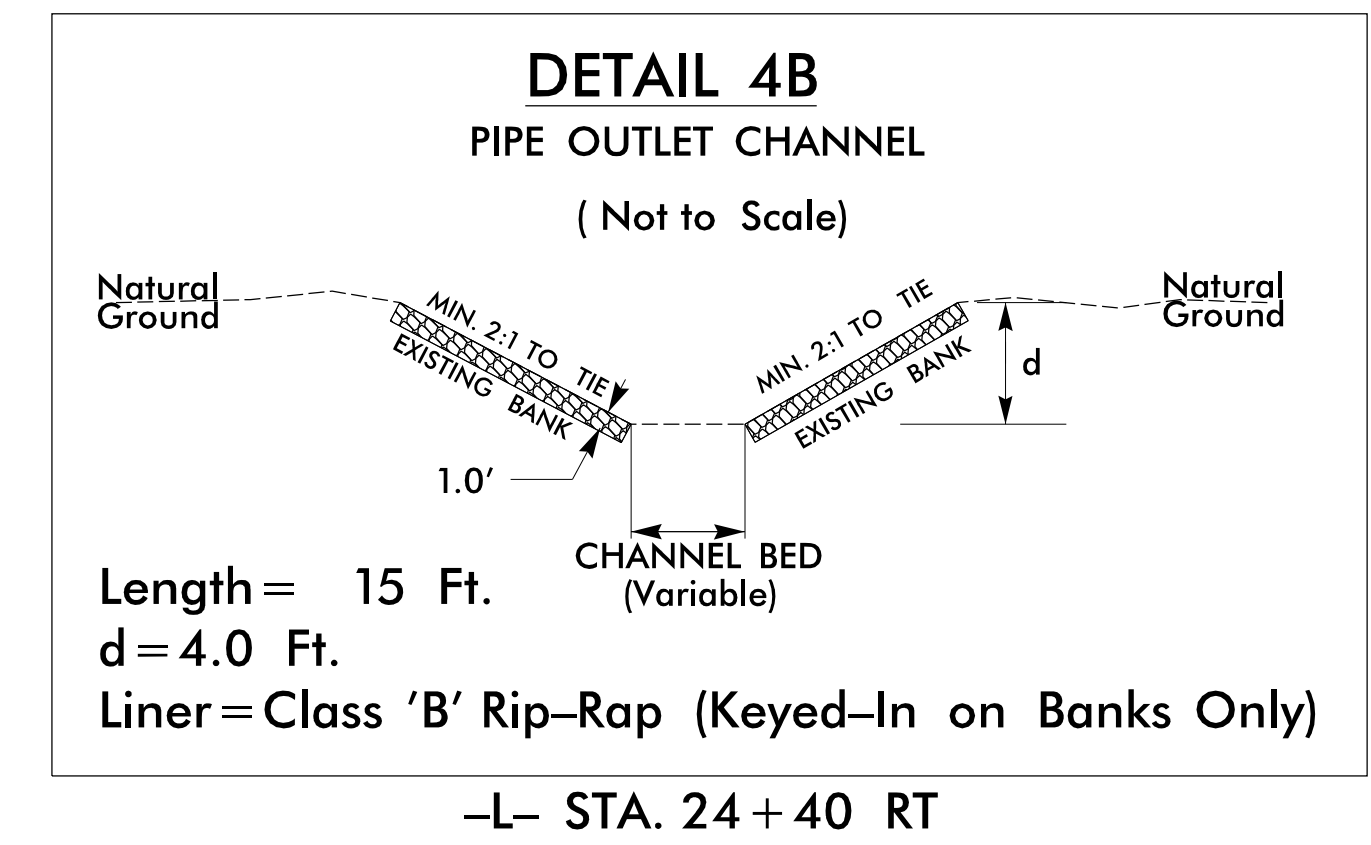
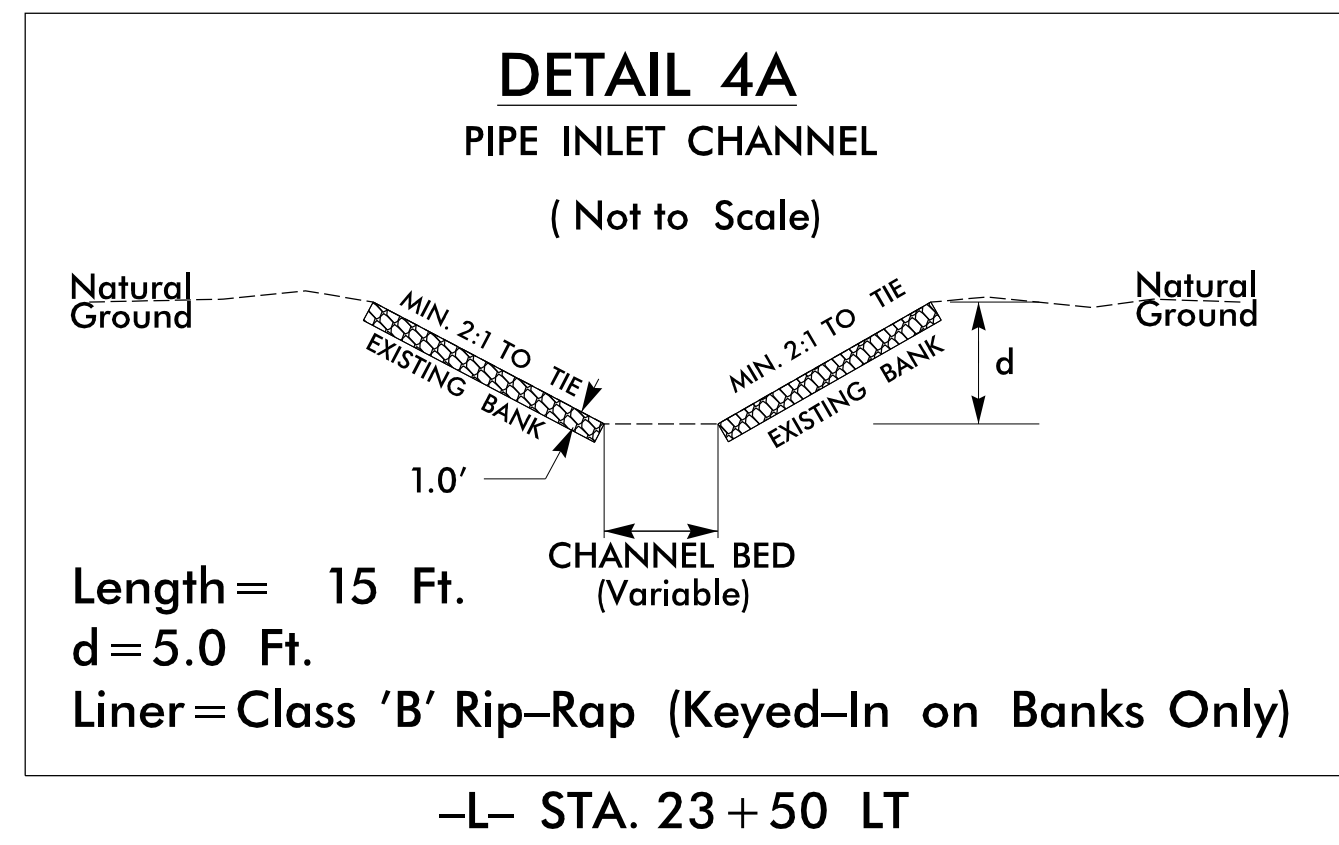
PROJECT REFERENCE NO. W-5706N	SHEET NO. 2B-4
RW SHEET NO.	



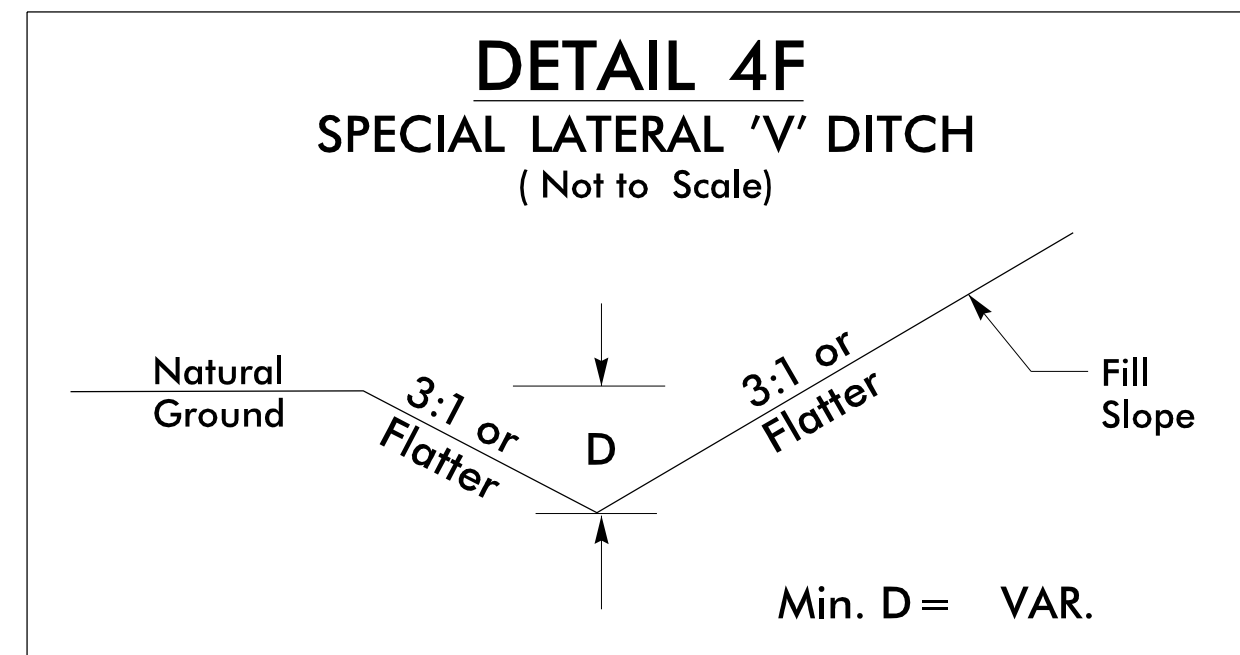
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
 201 W. MARION ST., STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

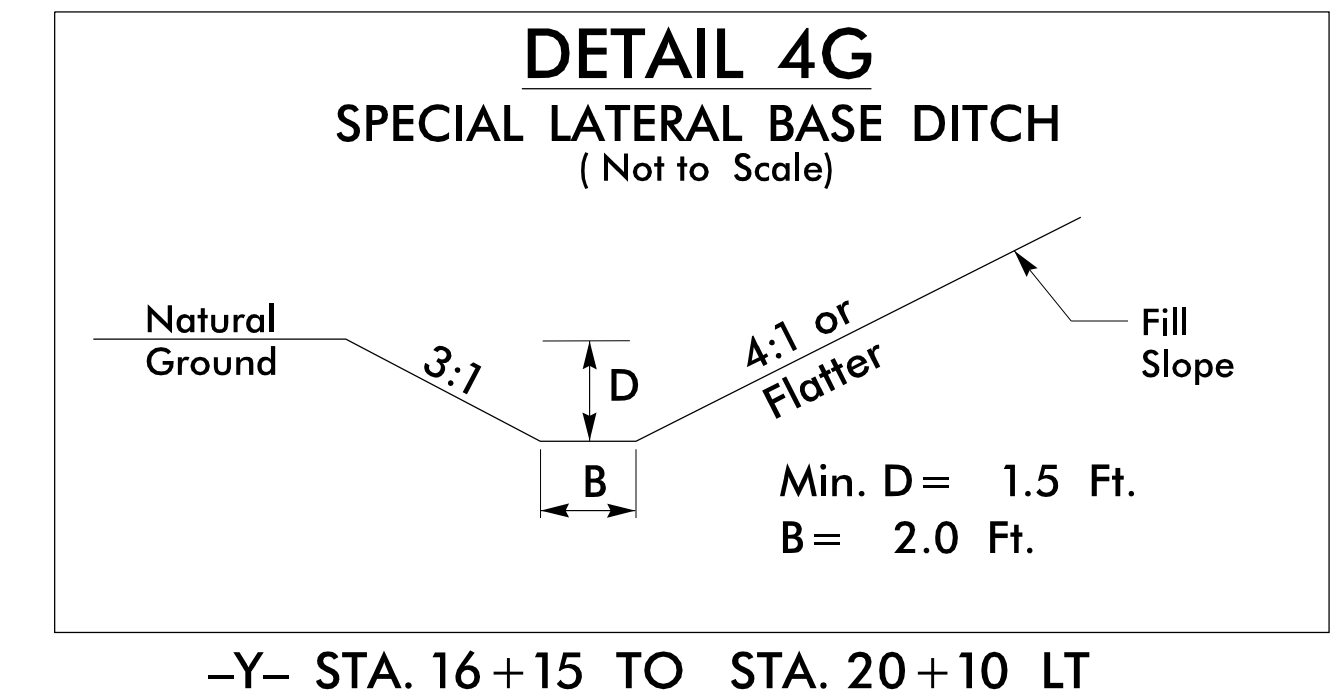
REVISIONS



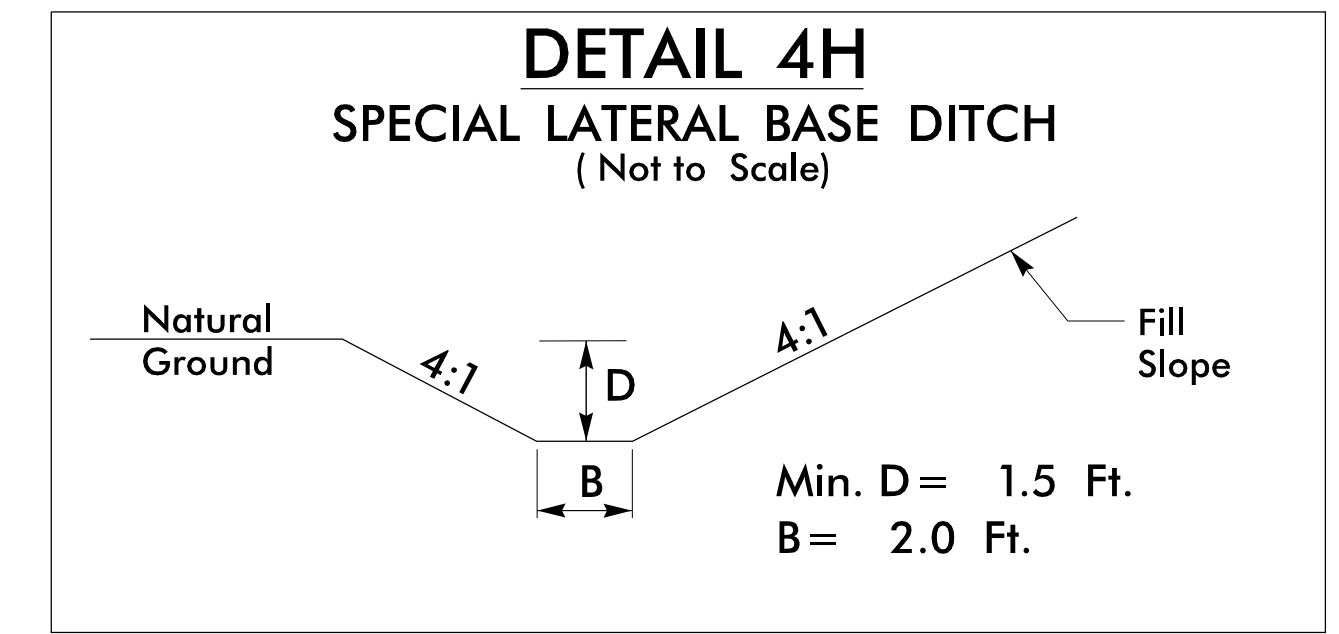
- L- STA. 19+00 TO STA. 20+50 LT
- L- STA. 21+90 TO STA. 22+90 LT
- L- STA. 25+00 TO STA. 25+50 RT
- Y- STA. 17+50 TO STA. 20+27 RT
- Y- STA. 22+71 TO STA. 23+76 LT
- Y- STA. 23+85 TO STA. 25+50 RT



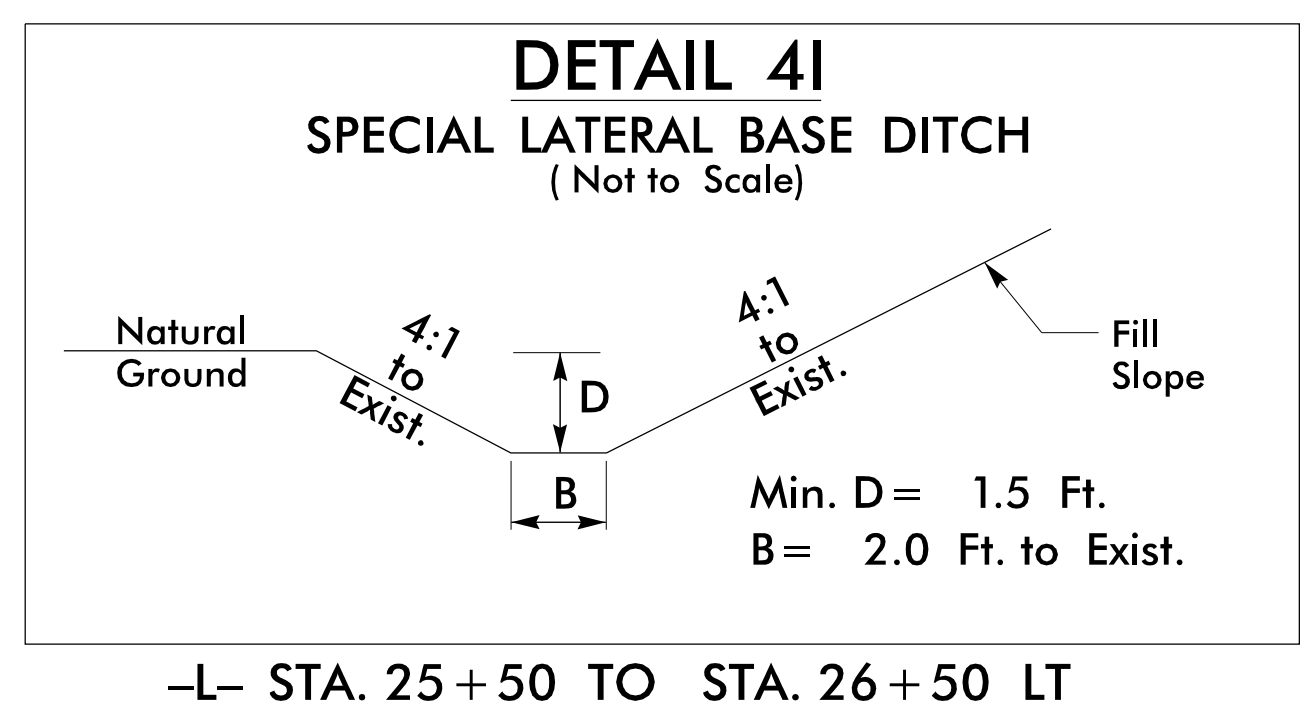
- L- STA. 15+80 TO STA. 19+00 LT
- L- STA. 16+85 TO STA. 18+41 RT
- L- STA. 19+21 TO STA. 20+00 RT



-Y- STA. 16+15 TO STA. 20+10 LT



-L- STA. 23+50 TO STA. 25+50 LT



-L- STA. 25+50 TO STA. 26+50 LT

11/29/2023 X:\NCE\DOT\W-5706N\Roadway\Proj\W5706N_Rdy_Detail_Sht_2B04 (D:\tch_Details\dgn User:benegar

COMPUTED BY: SGM DATE: 11/07/2023
 CHECKED BY: JLT DATE: 12/7/2023

PROJECT NO. W-5706N	SHEET NO. 3B-1
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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK in Cubic Yards

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L- 16+85.00	-L- 20+64.97	244	28		216
-L- 22+15.37	-L- 27+07.00	986	414		572
-Y- 16+15.00	-Y- 20+09.29	806	434		372
-Y- 21+59.68	-Y- 25+60.00	290	20		270
-RAB- 0+00.00	-RAB- 4+71.24	376	2,604	2,228	
-SLIP- 10+39.72	-SLIP- 11+72.39	17	0		17
TOTALS:		2,719	3,500	2,228	1,447
Material for Shoulder Construction			625	625	
Loss Due to Clearing & Grubbing		-250		250	
Waste in Lieu of Borrow				-1,447	-1,447
PROJECT TOTALS:		2,469	4,125	1,656	0
Est. % to Replace Top Soil on Borrow Pits				83	
GRAND TOTAL:		2,469	4,125	1,739	0
SAY:		2,500		1,800	

PAVEMENT REMOVAL SUMMARY IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	17+00	18+35	RT	81.63			
-L-	19+25	21+03	RT	300.08			
-L-	22+77	24+67	RT	695.12			
-L-	23+75	27+00	LT	374.54			
-Y-	17+68	20+42	RT	619.71			
TOTAL:				2,071.08			
SAY:				2,200			

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY TGS ENGINEERS.
 THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

TOTAL SHALLOW UNDERCUT = 650 CUBIC YARDS
 TOTAL QUANTITY OF UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN TOP 3 FT OF EMBANKMENT OR BACKFILL: 1,650 CY

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

COMPUTED BY: BJH DATE: 11-29-23
CHECKED BY: REL DATE: 11-29-23

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. W-5706N SHEET NO. 3D-1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for Line & Station, Offset, Structure Number, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), R. C. Pipe Class III, IV, V, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Remarks. Includes sub-totals for SHEET TOTALS and PROJECT TOTALS.

ABBREVIATIONS table listing codes like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. and their corresponding descriptions.

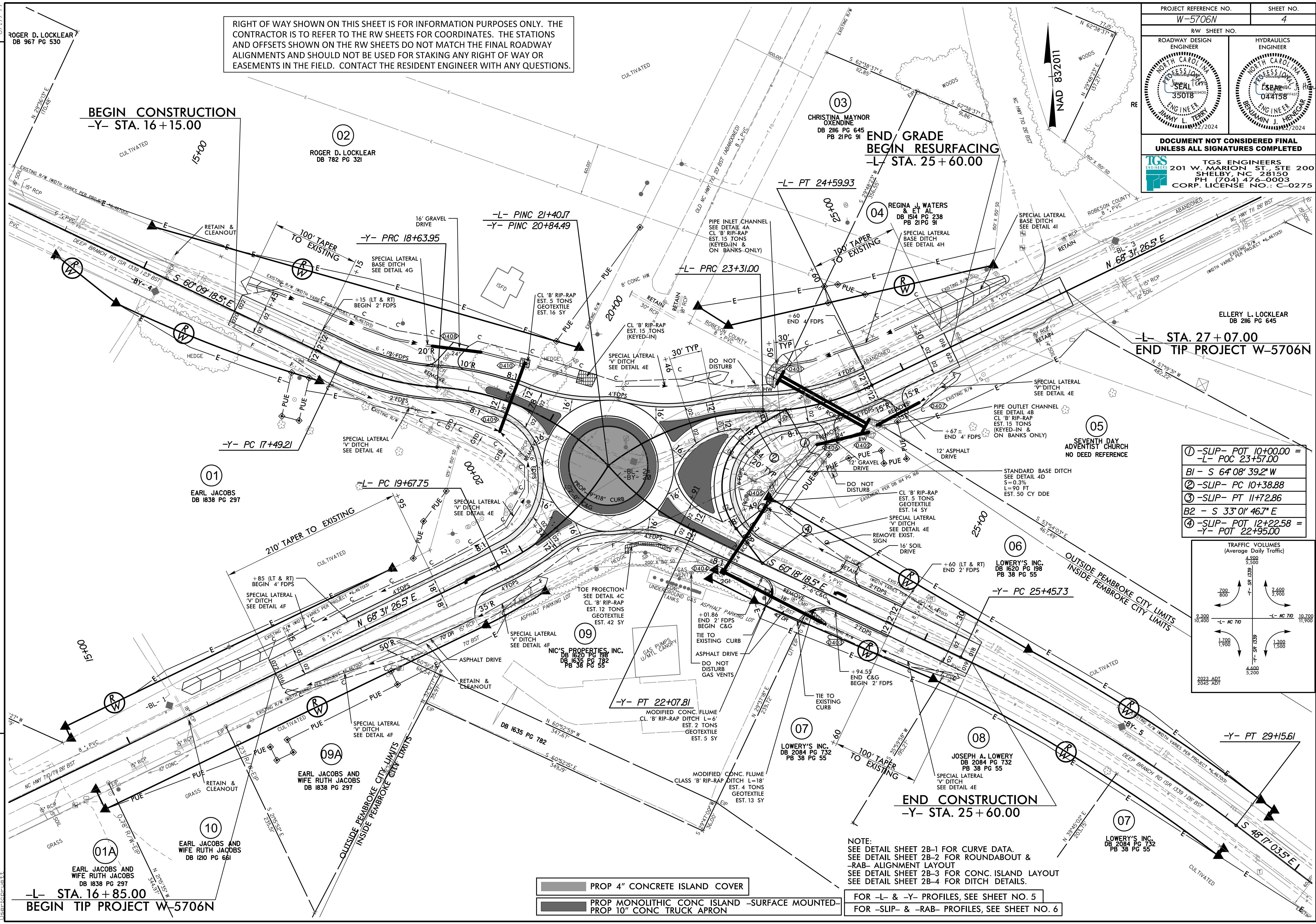
PROJECT REFERENCE NO. W-5706N	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER JIMMY L. TERRY NORTH CAROLINA PROFESSIONAL SEAL 35018 EXPIRES 12/22/2024	HYDRAULICS ENGINEER BENJAMIN J. HENEGAR NORTH CAROLINA PROFESSIONAL SEAL 044158 EXPIRES 12/22/2024
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 201 W. MARION ST., STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

RIGHT OF WAY SHOWN ON THIS SHEET IS FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR IS TO REFER TO THE RW SHEETS FOR COORDINATES. THE STATIONS AND OFFSETS SHOWN ON THE RW SHEETS DO NOT MATCH THE FINAL ROADWAY ALIGNMENTS AND SHOULD NOT BE USED FOR STAKING ANY RIGHT OF WAY OR EASEMENTS IN THE FIELD. CONTACT THE RESIDENT ENGINEER WITH ANY QUESTIONS.

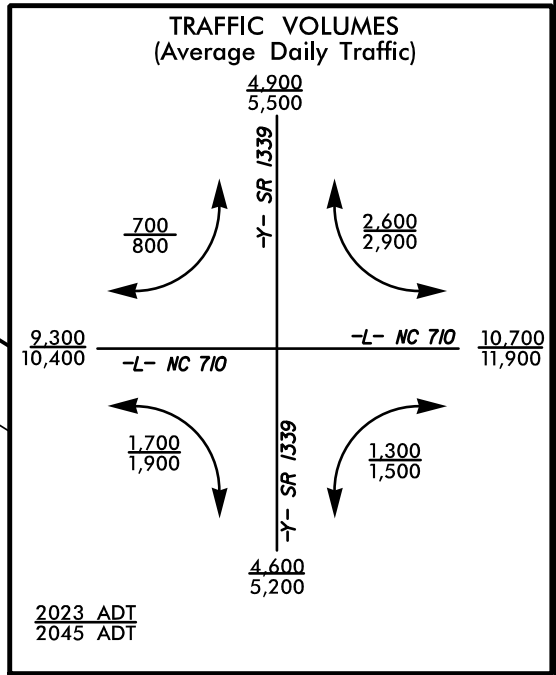
BEGIN CONSTRUCTION
-Y- STA. 16+15.00

END GRADE
BEGIN RESURFACING
-L- STA. 25+60.00

END TIP PROJECT W-5706N
-L- STA. 27+07.00



① -SLIP- POT 10+00.00 = -L- POC 23+57.00
B1 - S 64°08' 39.2" W
② -SLIP- PC 10+38.88
③ -SLIP- PT 11+72.86
B2 - S 33°01' 46.7" E
④ -SLIP- POT 12+22.58 = -Y- POT 22+95.00



NOTE:
SEE DETAIL SHEET 2B-1 FOR CURVE DATA.
SEE DETAIL SHEET 2B-2 FOR ROUNDABOUT &
-RAB- ALIGNMENT LAYOUT
SEE DETAIL SHEET 2B-3 FOR CONC. ISLAND LAYOUT
SEE DETAIL SHEET 2B-4 FOR DITCH DETAILS.

- FOR -L- & -Y- PROFILES, SEE SHEET NO. 5
- FOR -SLIP- & -RAB- PROFILES, SEE SHEET NO. 6

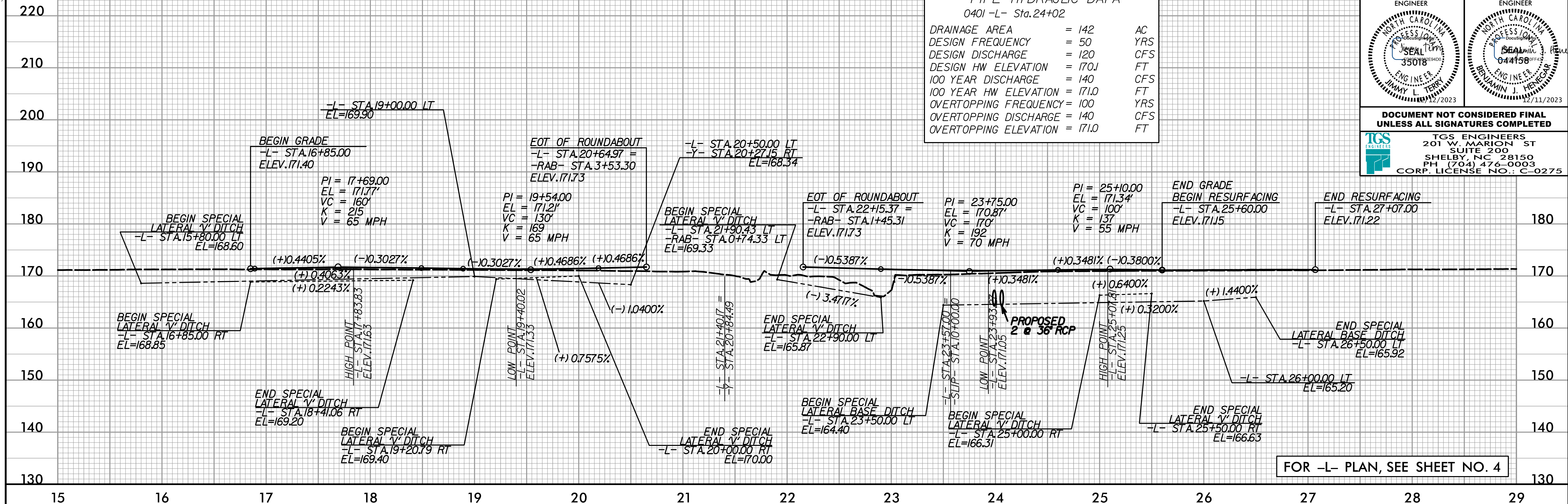
BEGIN TIP PROJECT W-5706N
-L- STA. 16+85.00

REVISIONS

1/22/2024 W-5706N\Roadway\Proc\W-5706N_RdLn.dgn
 1/22/2024 W-5706N\Roadway\Proc\W-5706N_RdLn.dgn
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5/28/24

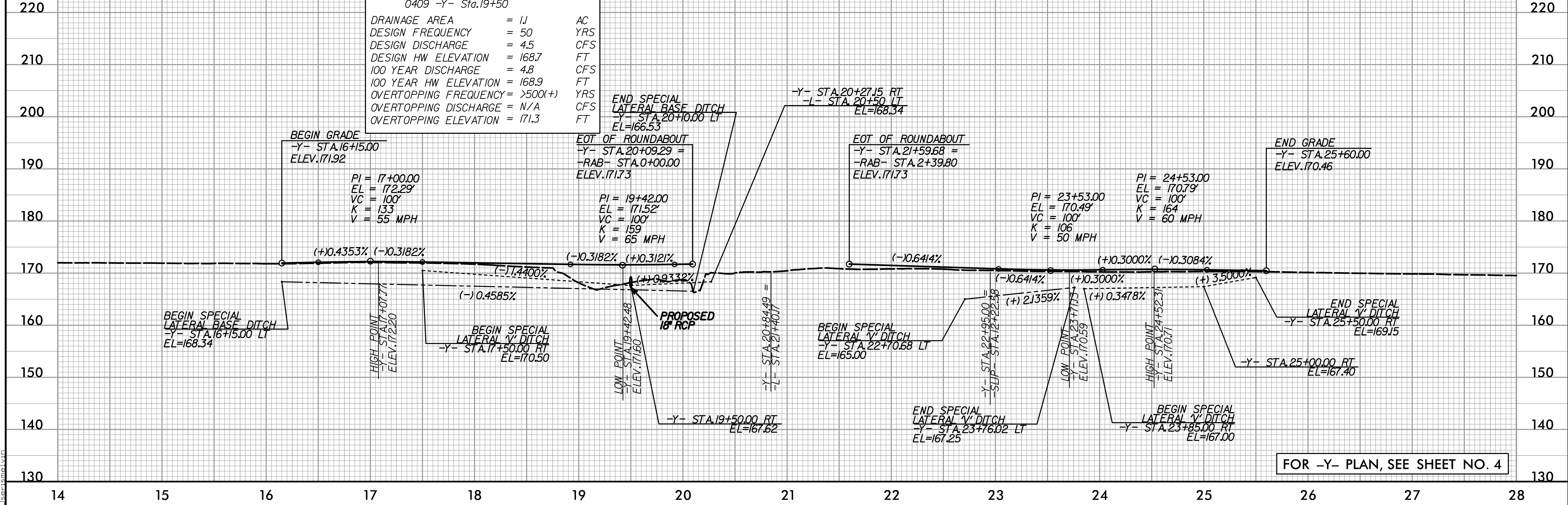
-L-



PROJECT REFERENCE NO.	W-5706N	SHEET NO.	5
ROADWAY DESIGN ENGINEER	JAMES TERRY	HYDRAULICS ENGINEER	BENJAMIN J. HEWITT
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
TGS ENGINEERS 201 W. MARION ST SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			

FOR -L- PLAN, SEE SHEET NO. 4

-Y-



FOR -Y- PLAN, SEE SHEET NO. 4

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5/28/99

-SLIP-

220
210
200
190
180
170
160
150
140
130

BEGIN GRADE
 -SLIP- STA. 10+39.72 =
 -L- STA. 23+21.67, 18' RT
 ELEV. 171.00

PI = 10+65.00
 EL = 171.08'
 VC = 50'
 K = 74
 V = 45 MPH

END GRADE
 -SLIP- STA. 11+72.39 =
 -Y- STA. 22+50.39, 23' LT
 ELEV. 170.69

(+0.3165% (-)0.3632%

HIGH POINT
 STA. 10+63.28
 ELEV. 171.04

FOR -SLIP- PLAN, SEE SHEET NO. 4

10 11 12

-RAB-

220
210
200
190
180
170
160
150
140
130

BEGIN GRADE
 -RAB- STA. 0+00.00
 ELEV. 171.73

END GRADE
 -RAB- STA. 4+71.24
 ELEV. 171.73

(+0.0000%

FOR -RAB- PLAN, SEE SHEET NO. 4

0 1 2 3 4

PROJECT REFERENCE NO. W-5706N	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 201 W. MARION ST SUITE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

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09/08/99

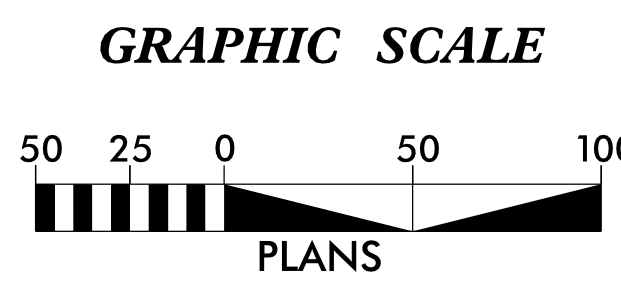
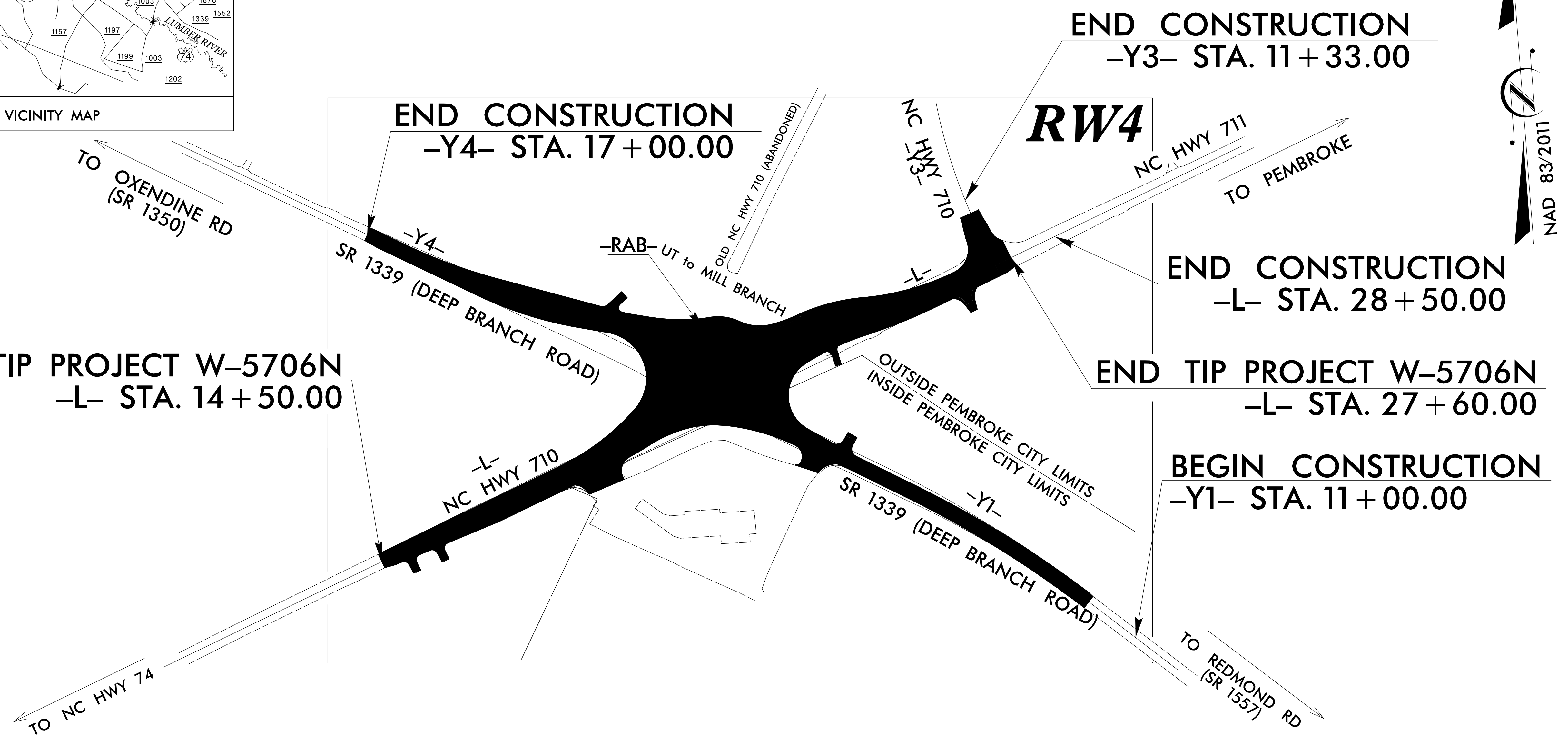
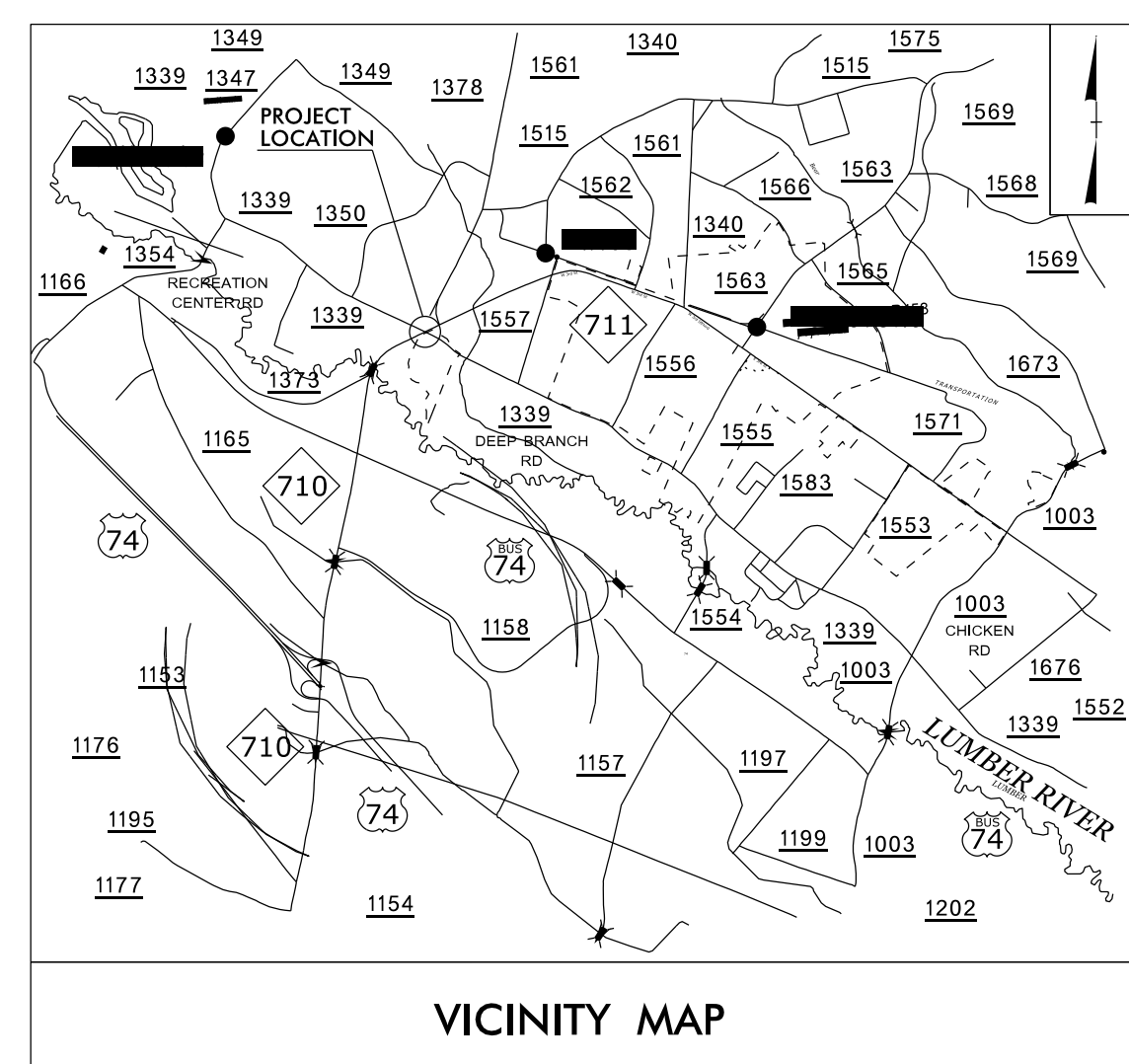
TIP PROJECT: W-5706N

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5706N	RW01	6

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

ROBESON COUNTY



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U-5925-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 339483.961(ft) EASTING: 1939699.959(ft) ELEVATION: 170.53(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999163969 (1/X= 1.00008361009)

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U-5925-1" TO -L- STATION 10+00.00 IS S 88° 48' 09.46" W 9,772.42(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

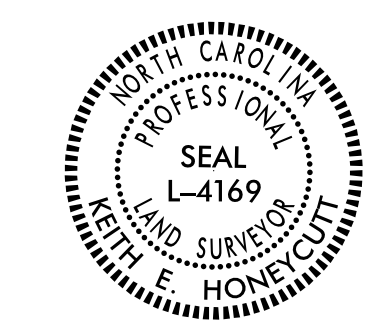
NCDOT DIVISION 6
LOCATION AND SURVEYS
4834 US HWY 301 S
HOPE MILLS, NC 28348

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
12/02/2021

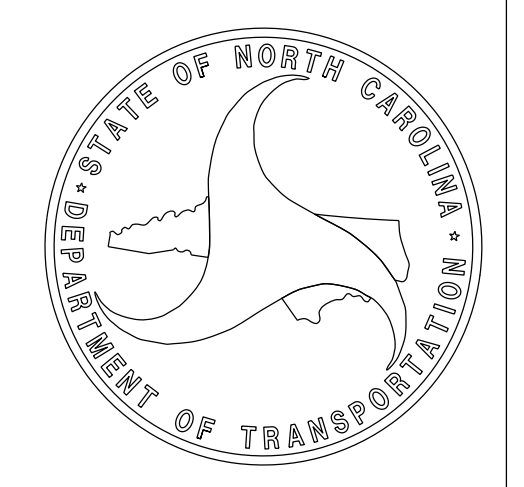
LETTING DATE:
03/15/2023

PROFESSIONAL LAND SURVEYOR



DocuSigned by:
Keith E. Honeycutt
SIGNATURE

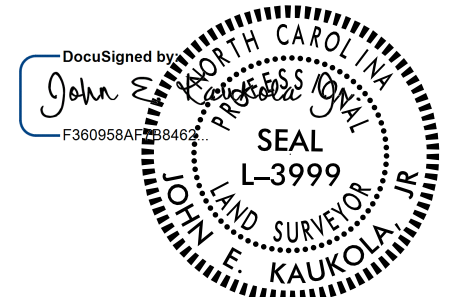
10/10/2022
Date:



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wimilson AT DIV06-314142

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
W-5706N	RW02C-1
Location and Surveys	
NCDOT DIVISION 6 LOCATION AND SURVEYS 4834 US HWY 301 S HOPE MILLS, NC 28348	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, John E. Kaukola, Jr., PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

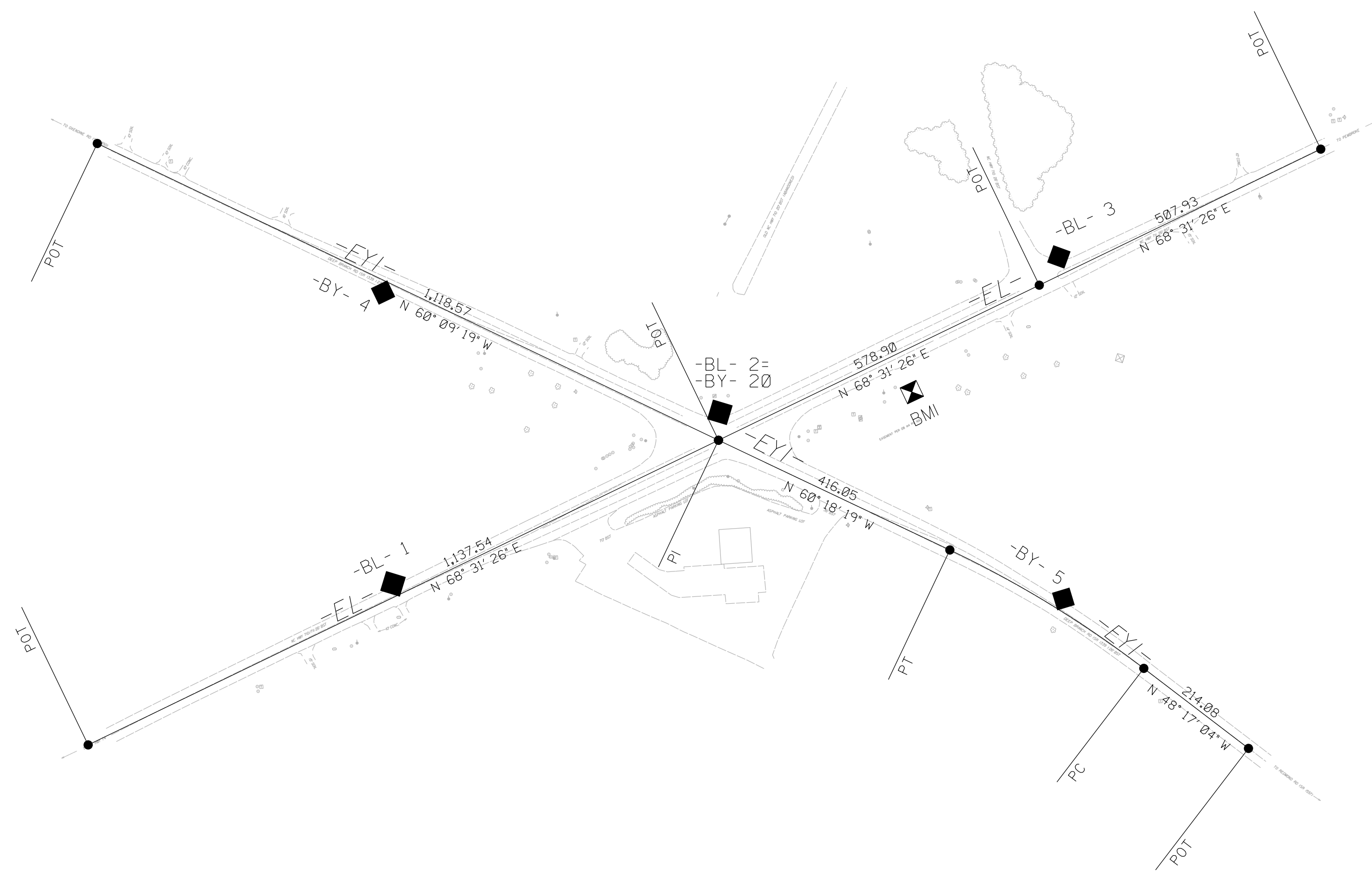
Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: October 2018
 Datum/Epoch: NAD83/NA 2011
 Published/Fixed-control use: N/A
 Localized around: U-5925-1
 Northing: 339483.961
 Easting: 1939699.959
 Combined grid factor: 0.9999163969
 Geoid model: G12BNC
 Units: US Survey Feet

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 in October 2018, 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 1st day of November, 2021.

DocuSigned by:

 F30095A1F7B442
 Professional Land Surveyor L-3999

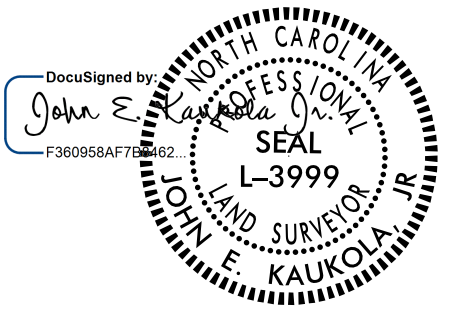


NOTES:

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. W-5706N	SHEET NO. RW02C-2
Location and Surveys	
NCDOT DIVISION 6 LOCATION AND SURVEYS 4834 US HWY 301 S HOPE MILLS, NC 28348	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1	W-5706N	BL1	339503.2221	1930443.2003	170.43
2	W-5706N	BL2	339741.1538	1930993.7888	169.85
3	W-5706N	BL3	339951.4752	1931562.0177	170.38

BY	POINT	DESC.	NORTH	EAST	ELEVATION
4	W-5706N	BY4	339976.4966	1930462.6373	170.88
20	W-5706N	BY20	339741.1538	1930993.7888	169.85
5	W-5706N	BY5	339396.9593	1931527.4789	169.57

 BM1 ELEVATION = 168.55
 N 339751 E 1931307
 RR SPIKE IN BASE OF 20" PINE

EL				
POINT	N	E	BEARING	DIST
POT	339279.751	1929929.673		
LINE			N 68°31'26.5" E	1137.54
POT	339696.217	1930988.235		
LINE			N 68°31'26.5" E	578.90
POT	339908.159	1931526.943		
LINE			N 68°31'26.5" E	507.93
POT	340094.116	1931999.604		

EY1									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	339132.190	1931809.246							
LINE			N 48°17'03.5" W	214.08					
PC	339274.646	1931649.444							
CURVE			N 54°17'41.0" W	369.19	12°01'15.0"(LT)	03°15'00.0"	369.87	185.62	1762.95
PT	339490.114	1931349.648							
LINE			N 60°18'18.5" W	416.05					
POT	339696.217	1930988.235							
LINE			N 60°09'18.5" W	1118.57					
POT	340252.877	1930018.014							

I, John E. Kaukola, Jr., PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**
 Type of GPS field procedure: RTN
 Dates of survey: October 2021
 Datum/Epoch: NAD83/NA 2011
 Published/Fixed-control use: N/A
 Localized around: U-5925-1
 Northing: 339483.961
 Easting: 1939699.959
 Combined grid factor: 0.9999163969
 Geoid model: G12BNC
 Units: US Survey Feet

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 in October 2018, 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 1st day of November, 2021.

DocuSigned by:

 F30055A7708462
 Professional Land Surveyor L-3999

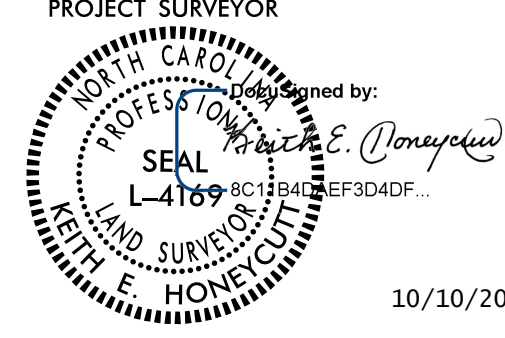


REVISIONS

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.

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. W-5706N	SHEET NO. RW02D-1
Location and Surveys	
NCDOT DIVISION 6 LOCATION AND SURVEYS 4834 US HWY 301 S HOPE MILLS, NC 28348	
PROJECT SURVEYOR  10/10/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Keith E. Honeycutt, PLS, certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

This 4th day of October, 2022.

Professional Land Surveyor L-4169

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	339279.7510	1929929.6730
PC	19+25.79	339618.6929	1930791.1861
PT	20+83.71	339698.5697	1930926.6586
POT	21+77.26	339758.1673	1930998.7697
PC	23+51.62	339811.5220	1931164.7564
PRC	24+52.29	339832.5063	1931263.0486
PT	26+51.17	339880.0734	1931455.5560
POT	32+35.81	340094.1163	1931999.6044

Y3

TYPE	STATION	NORTH	EAST
POT	10+00.00	339908.1587	1931526.9425
PC	10+74.84	339977.8027	1931499.5428
PT	13+24.57	340219.4402	1931439.3669

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	339758.1673	1930998.7697
PC	11+28.18	339826.3611	1930890.2338
PT	12+06.19	339856.9701	1930818.8257
PC	12+06.19	339856.9701	1930818.8257
PT	16+14.11	340009.6665	1930441.9135
POT	21+02.84	340252.8804	1930018.0079

RAB

TYPE	STATION	NORTH	EAST
PC	10+00.00	339701.1275	1931045.9127
PCC	11+93.73	339831.1367	1930986.4626
PT	14+64.96	339701.1275	1931045.9127

Y1

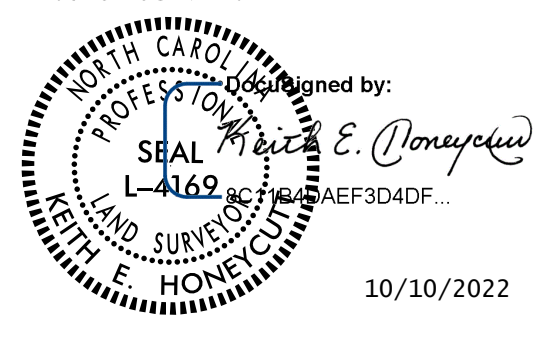
TYPE	STATION	NORTH	EAST
POT	10+00.00	339132.1899	1931809.2457
PC	12+09.15	339271.3684	1931653.1212
PT	16+01.22	339501.9988	1931336.8460
PC	18+24.34	339615.1909	1931144.5609
PT	19+82.38	339719.8506	1931027.5163
POT	20+30.28	339758.1673	1930998.7697

REVISIONS

NOTES:

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

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. W-5706N	SHEET NO. RW03E-1
Location and Surveys	
NCDOT DIVISION 6 LOCATION AND SURVEYS 4834 US HWY 301 S HOPE MILLS, NC 28348	
PROJECT SURVEYOR  Signed by: Keith E. Honeycutt Professional Land Surveyor L-4169	
10/10/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Keith E. Honeycutt, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 9/28/2022 to 10/03/2022, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 4th day of October, 2022.

DocuSigned by:
 Keith E. Honeycutt
 Professional Land Surveyor L-4169

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	14+42.00	30.00	339413.6550	1930351.9687
L	14+42.00	55.00	339390.3907	1930361.1215
L	14+42.00	-34.88	339474.0309	1930328.2153
L	14+42.00	-50.00	339488.1007	1930322.6799
L	18+57.48	-50.00	339640.2125	1930709.3136
L	19+25.79	55.00	339567.5115	1930811.3222
L	19+96.06	55.00	339601.0672	1930881.6661
L	23+02.13	-122.00	339912.5241	1931080.3060
L	23+26.00	-88.58	339888.0162	1931113.2618
L	26+37.23	-63.00	339934.1354	1931420.5663

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+43.00	73.00	339447.2288	1930554.7563
L	16+43.00	90.00	339431.4091	1930560.9802
L	16+64.00	90.00	339439.0974	1930580.5222
L	16+64.00	74.00	339453.9865	1930574.6644
L	18+05.00	72.00	339507.4693	1930705.1427
L	18+05.00	55.00	339523.2890	1930698.9188
L	18+84.00	-50.00	339649.9218	1930733.9923
L	19+13.00	-83.00	339691.2479	1930748.8972
L	19+58.00	-102.04	339723.7990	1930777.3649
L	23+54.70	105.51	339711.8152	1931199.3661
L	23+82.68	90.45	339732.4427	1931216.8829
L	24+08.00	101.00	339726.6948	1931239.1854
L	24+30.00	-96.00	339924.4340	1931226.2032
L	24+30.00	-76.75	339905.4100	1931229.1609
L	24+43.00	-95.00	339925.6235	1931241.6723
L	24+55.00	116.00	339717.5507	1931278.8497
L	24+55.00	101.00	339732.4546	1931277.1543
L	24+72.00	-77.65	339911.8518	1931272.0847
L	24+77.00	72.07	339764.2778	1931297.8004
L	24+78.00	116.00	339720.9563	1931305.1867

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	11+90.00	40.00	339288.4807	1931694.0364
Y1	11+90.00	30.00	339281.0161	1931687.3821
Y1	12+09.15	40.00	339301.2266	1931679.7386
Y1	12+09.15	-30.00	339248.9747	1931633.1582
Y1	12+09.15	-40.00	339241.5102	1931626.5038
Y1	15+20.00	40.00	339493.0075	1931427.6541
Y1	16+01.22	-40.00	339467.5279	1931316.5541
Y1	18+24.34	-50.00	339572.1024	1931119.1960
Y1	18+68.74	61.61	339689.0928	1931144.5690
Y1	18+75.00	-41.36	339610.8724	1931077.3316
Y1	18+75.00	-53.00	339601.4516	1931070.0399

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	18+36.59	61.53	339673.6095	1931166.9219

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y4	11+11.29	68.91	339875.7208	1930941.1965
Y4	13+72.89	-50.00	339860.1309	1930642.2610
Y4	16+14.11	-50.00	339966.2977	1930417.0309
Y4	16+15.00	47.00	340050.8717	1930464.5325
Y4	17+00.00	-30.00	340026.3870	1930352.4878

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y4	11+13.94	223.14	340007.7252	1931021.0092
Y4	11+35.74	63.46	339885.0172	1930915.8969
Y4	13+82.00	-100.00	339816.7897	1930615.5577
Y4	13+84.67	-50.00	339864.4650	1930630.8848
Y4	14+01.00	-101.00	339823.2362	1930596.3111
Y4	14+05.00	-50.00	339872.1552	1930611.3312

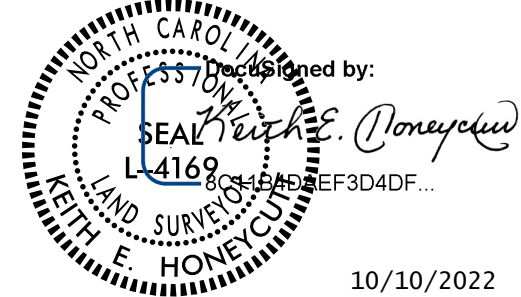
REVISIONS

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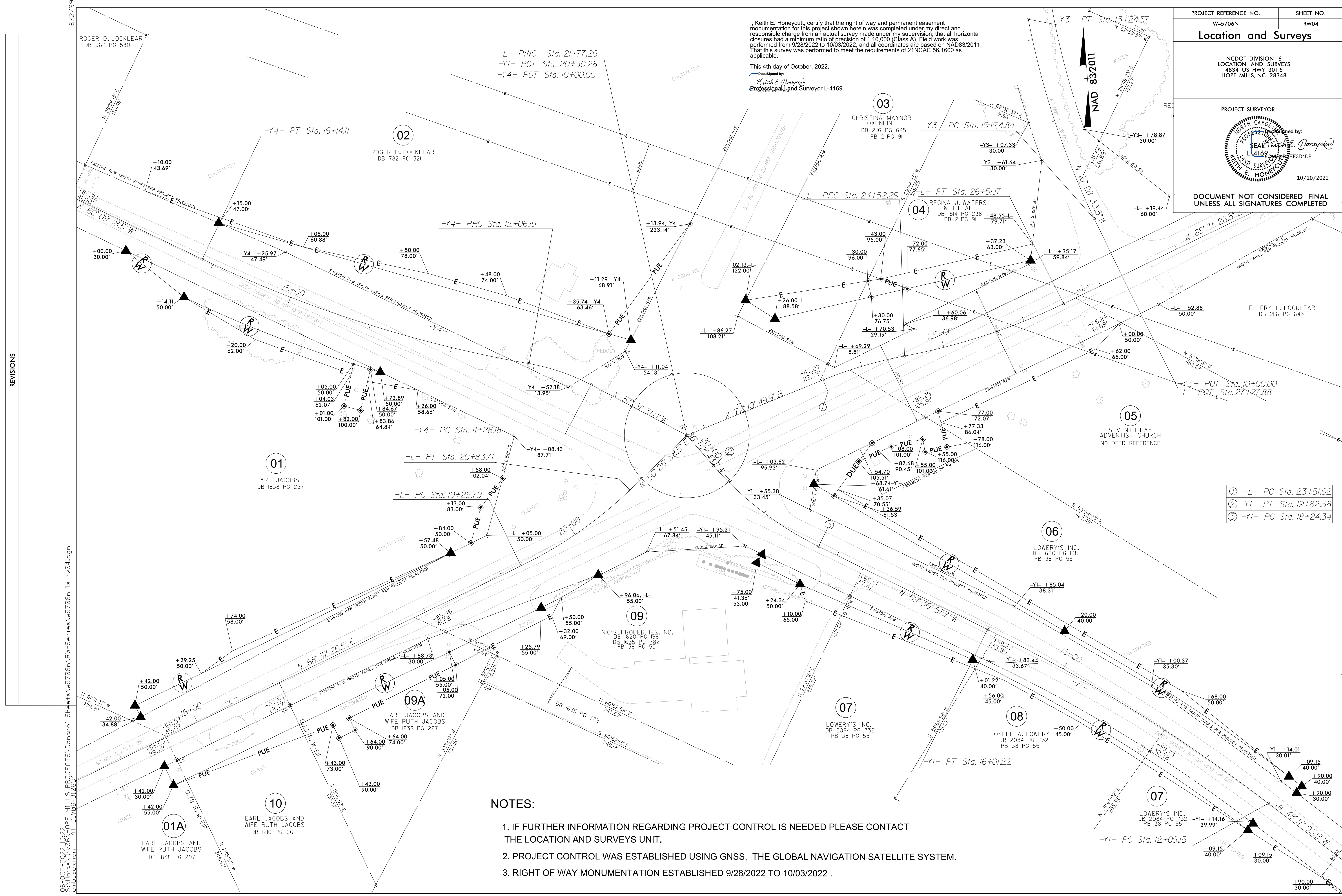
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 9/28/2022 TO 10/03/2022 .

6/2/09

PROJECT REFERENCE NO.	SHEET NO.
W-5706N	RW04
Location and Surveys	
NCDOT DIVISION 6 LOCATION AND SURVEYS 4834 US HWY 301 S HOPE MILLS, NC 28348	
PROJECT SURVEYOR  Keith E. Honeycutt Professional Land Surveyor L-4169 10/10/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Keith E. Honeycutt, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 9/28/2022 to 10/03/2022, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 4th day of October, 2022.
 DocuSigned by:
 Keith E. Honeycutt
 Professional Land Surveyor L-4169



NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 9/28/2022 TO 10/03/2022 .

- ① -L- PC Sta. 23+51.62
- ② -Y1- PT Sta. 19+82.38
- ③ -Y1- PC Sta. 18+24.34

REVISIONS

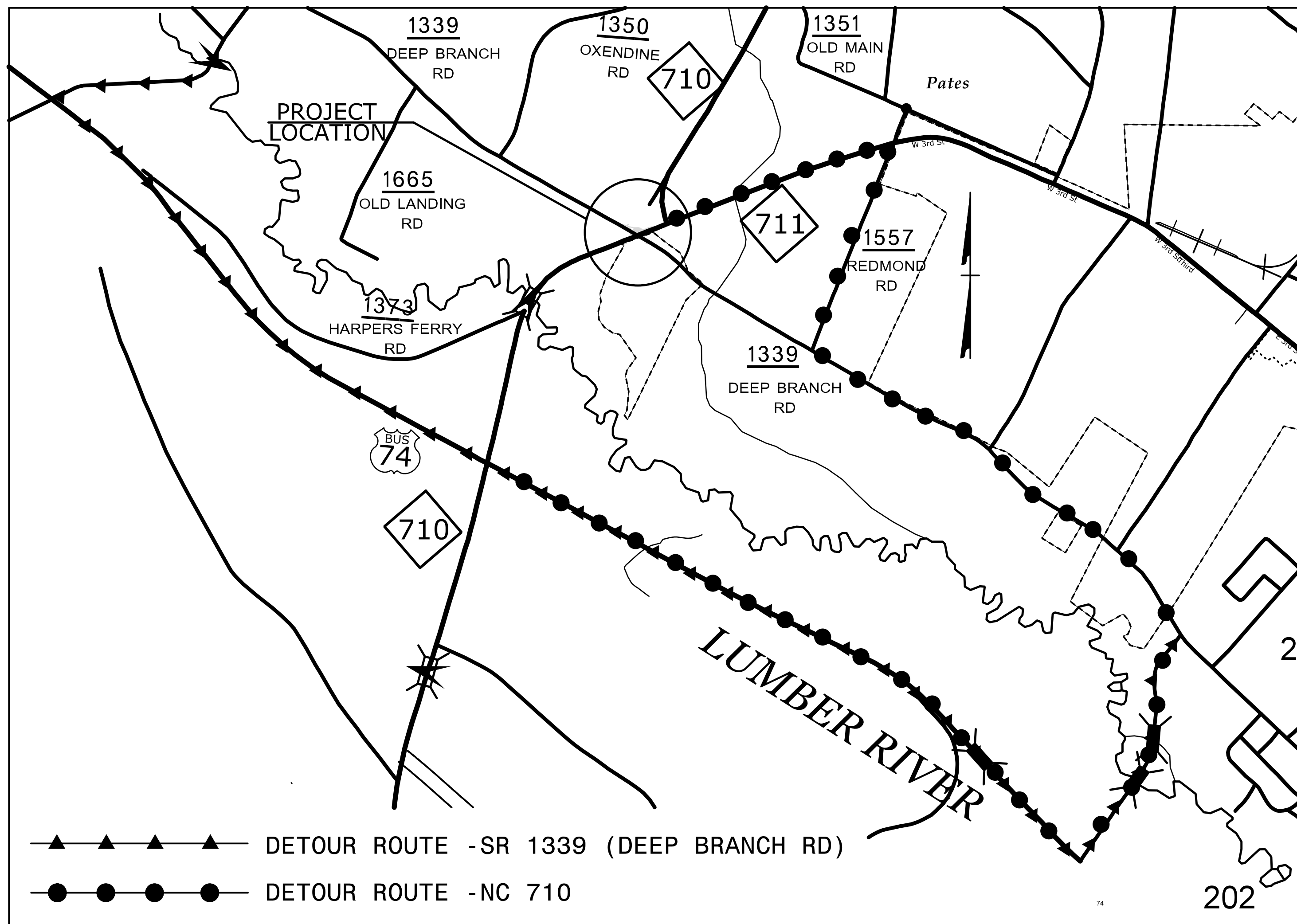
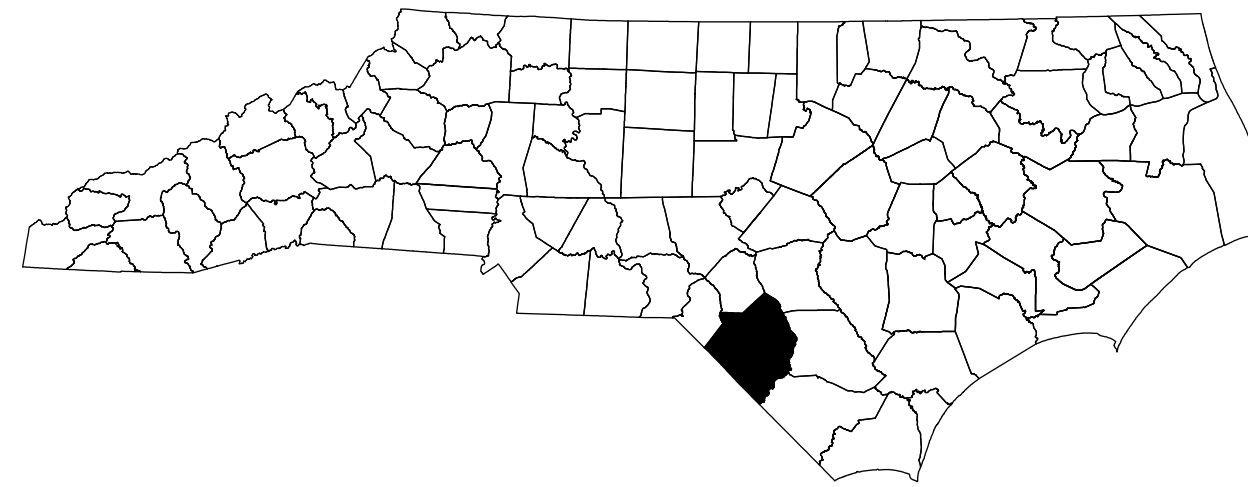
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY

LOCATION: INTERSECTION OF NC HIGHWAY 710 AND SR 1339 (DEEP BRANCH RD)



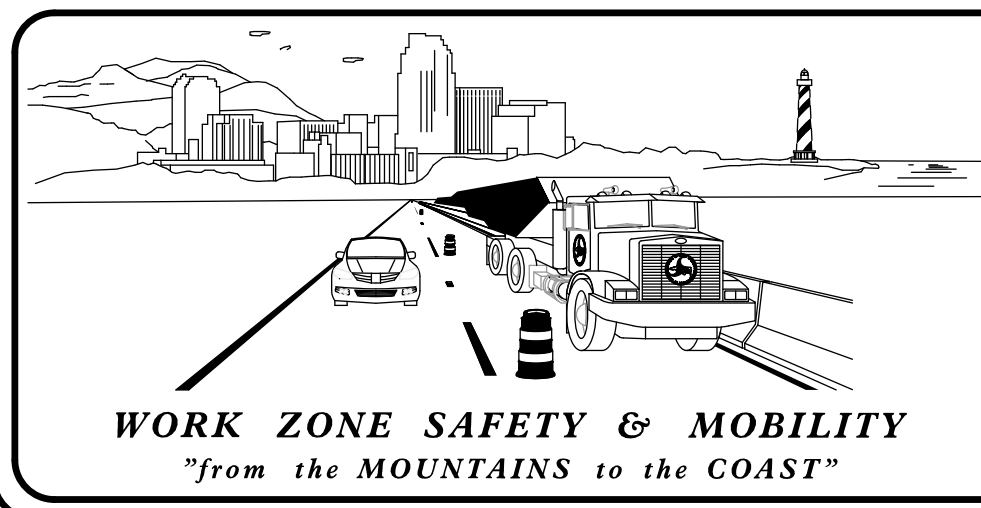
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, AND GENERAL NOTES)
TMP-2A THRU TMP-2B	OFFSITE DETOURS NC 710 & SR 1339
TMP-2C	SPECIAL SIGN DESIGN
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

SHEET NO.
TMP-1

TIP PROJECT: W-5706N

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User: smelvin

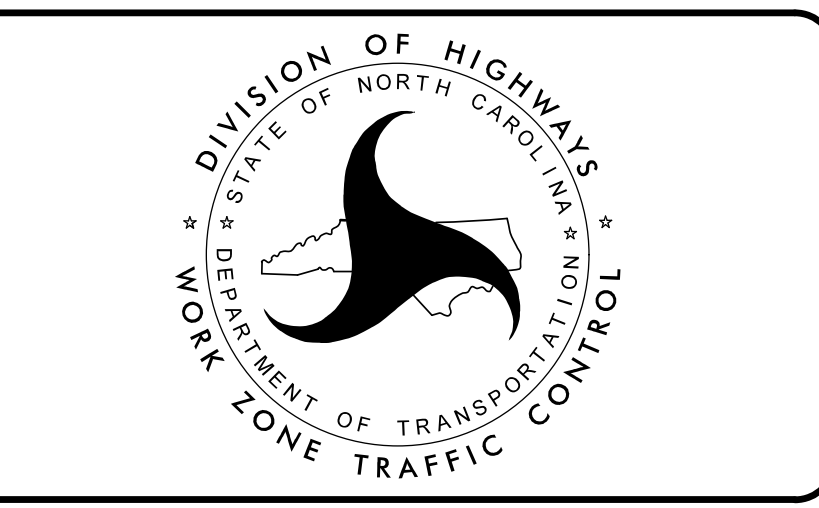


PLANS PREPARED BY:

JIMMY TERRY, PE *PROJECT ENGINEER*
SANDRA MELVIN *DESIGN ENGINEER*

NCDOT CONTACTS:

JOHN GAUTHIER
DIVISION DESIGN ENGINEER



TGS ENGINEERS
201 W. MARION ST.
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003

CORP. LICENSE NO.: C-0275

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

APPROVED: *Jimmy Terry*
DATE: 12/12/2023

ROADWAY STANDARD DRAWINGS

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

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS

LEGEND

GENERAL

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

- WORK AREA
- REMOVAL

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY
- PORTABLE

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

11/21/2023
V:\NCDOT\W-5706N\Traffic\Traffic Control\TCP\W-5706N.LC.TMP_01A.dgn
User: jsmelvin

APPROVED: DATE: 12/12/2023		
ROADWAY STANDARD DRAWINGS & LEGEND		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR 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 PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAMES	DAY AND TIME RESTRICTIONS
NC 710/711 SR 1339 (DEEP BRANCH RD)	MONDAY THRU FRIDAY 6:00 AM TO 8:30 AM

NOTE: THESE RESTRICTIONS DO NOT APPLY TO PHASE II ROAD CLOSURE.

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

ROAD NAME
NC 710/711 SR 1339 (DEEP BRANCH RD)

NOTE: THESE RESTRICTIONS DO APPLY TO PHASE II ROAD CLOSURE.

HOLIDAY

- 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 ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- J) 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.

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

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

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

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

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

TRAFFIC CONTROL DEVICES

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

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

PAVEMENT MARKINGS AND MARKERS

- P) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE.
Q) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MISCELLANEOUS

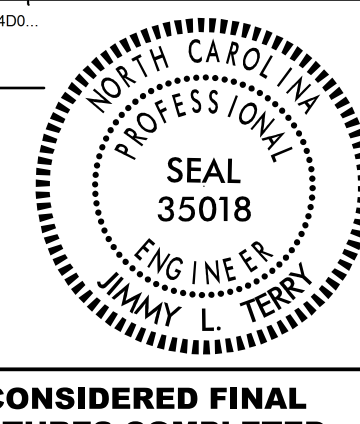
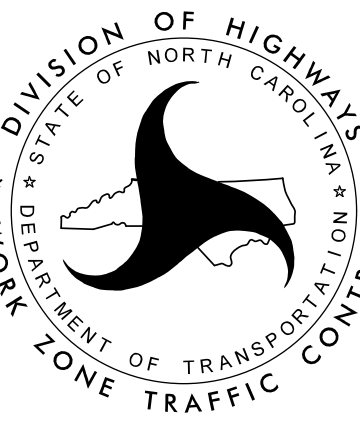
- R) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

MANAGEMENT STRATEGIES

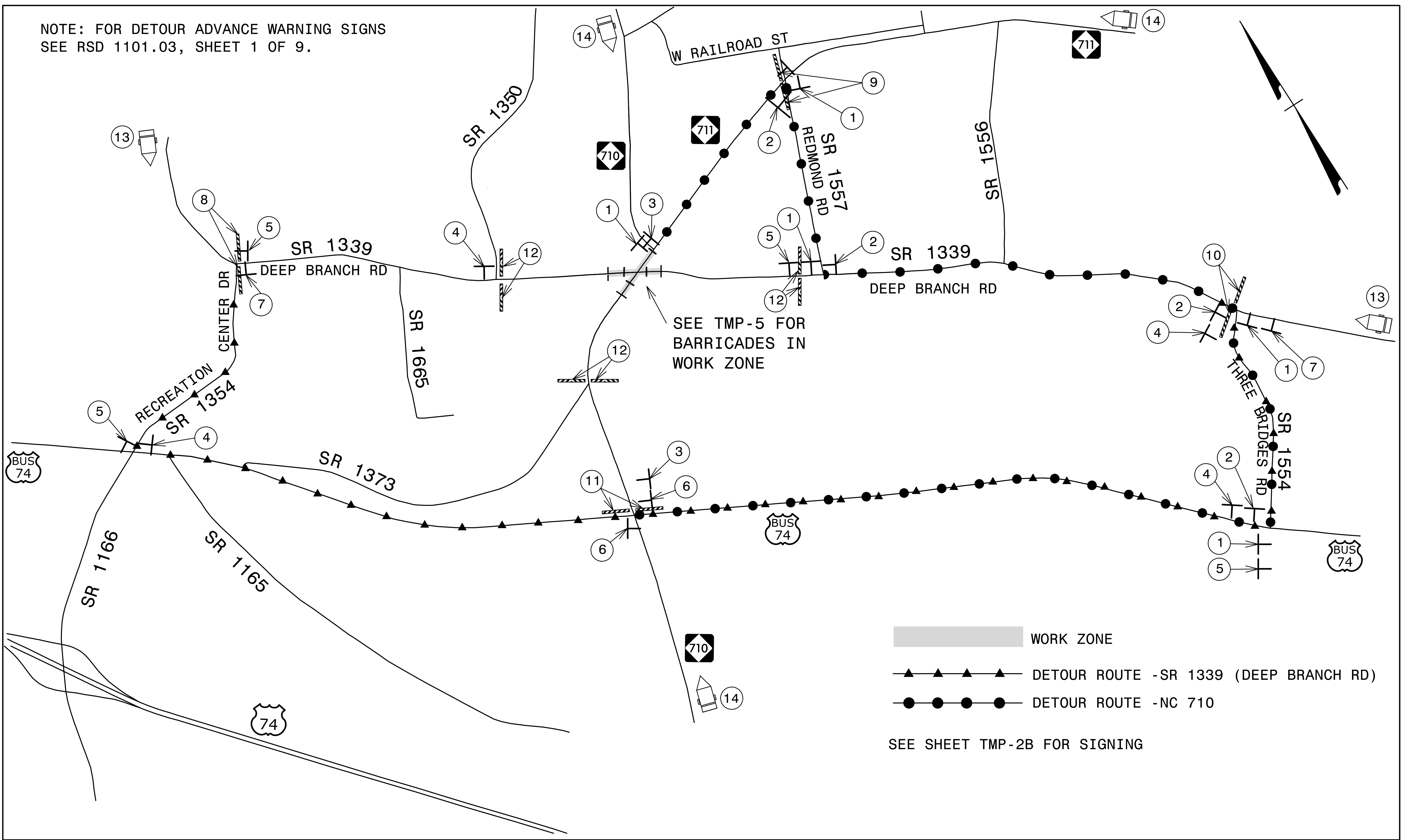
THE PROPOSED ROUNDABOUT AT NC 710/SR 1339 WILL BE CONSTRUCTED USING A COMBINATION OF STRATEGIES: TEMPORARY LANE CLOSURES AND FLAGGERS

OFF-SITE DETOURS FOR NC 710 AND SR 1339: UTILIZING SR 1557 (REDMOND RD), SR 1339 (DEEP BRANCH RD), SR 1554 (THREE BRIDGES RD), US BUS 74 AND SR 1354 (RECREATIONAL CENTER RD) AS PART OF EITHER OR BOTH DETOURS.

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<p>APPROVED: <i>Jimmy Terry</i> DATE: 4/10/2024</p> 		<p align="center">TRANSPORTATION OPERATIONS PLAN</p>
<p align="center">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

NOTE: FOR DETOUR ADVANCE WARNING SIGNS
SEE RSD 1101.03, SHEET 1 OF 9.



SEE TMP-5 FOR
BARRICADES IN
WORK ZONE

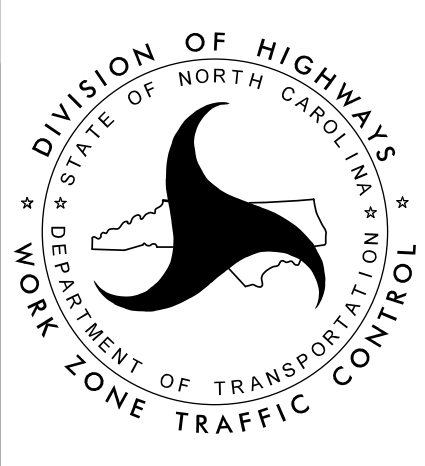
- WORK ZONE
 - DETOUR ROUTE -SR 1339 (DEEP BRANCH RD)
 - DETOUR ROUTE -NC 710
- SEE SHEET TMP-2B FOR SIGNING

I:\27\2023\12\12\2023\W-5706N\Traffic\Traffic Control\TCP\W-5706N\TC_TMP_02A(Detour).dgn
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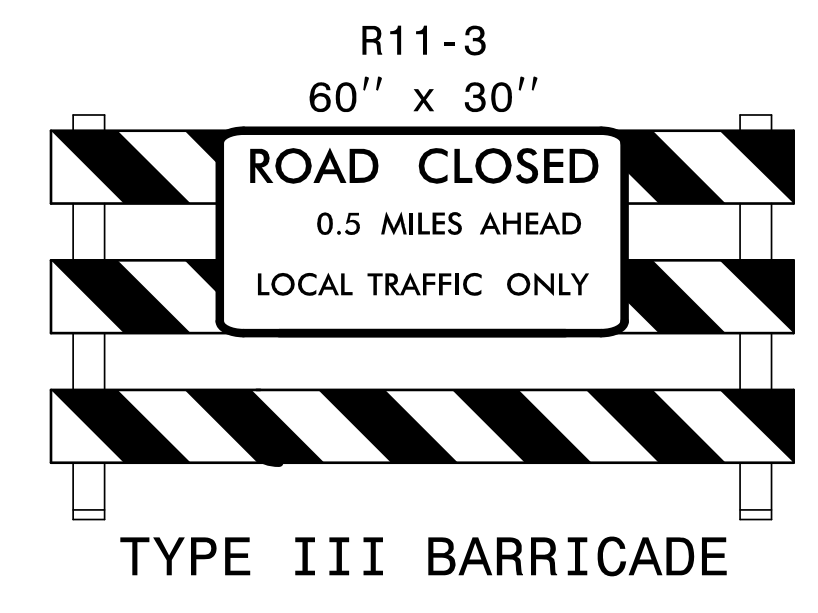
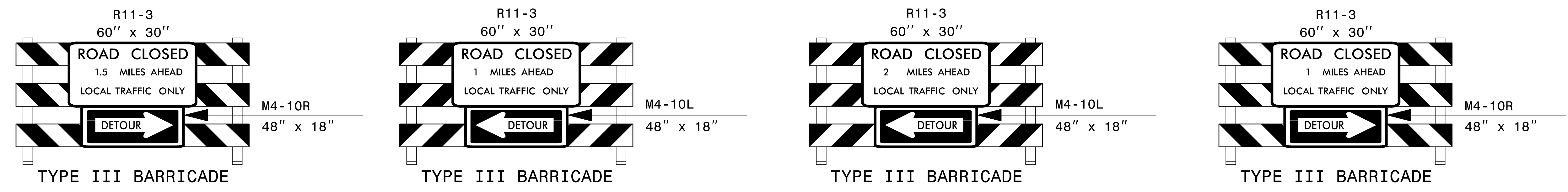
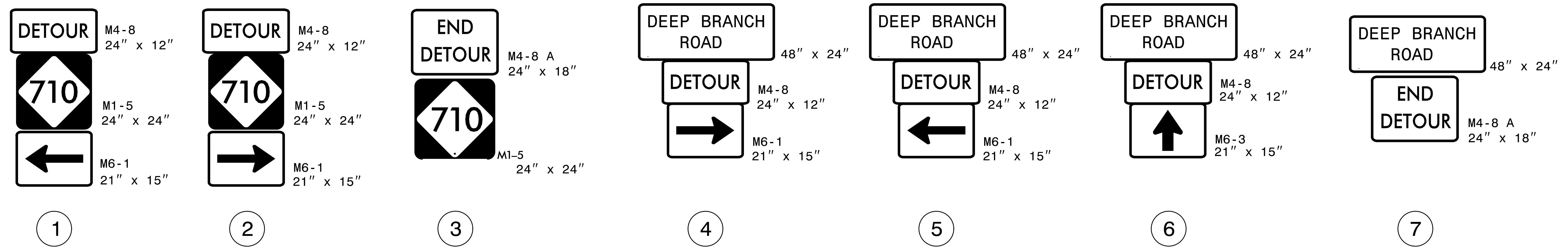
DATE: 12/12/2023

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 35018
 ENGINEER
 JIMMY L. TERRY



OFFSITE
DETOURS
NC 710 &
SR 1339

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MESSAGE NO. 1	MESSAGE NO. 2
ROAD TO CLOSE	MM DD TO MM DD

CHANGEABLE MESSAGE SIGN

1 WEEK PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

DURING CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
NC 710 TO CLOSE	MM DD TO MM DD

CHANGEABLE MESSAGE SIGN

1 WEEK PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
NC 710 CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

DURING CLOSURE

12

13

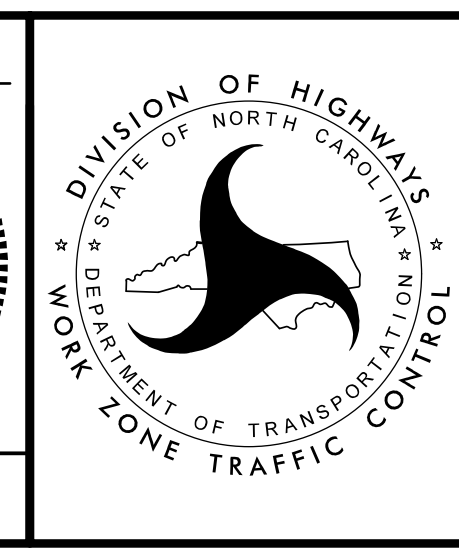
14

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APPROVED: *Jimmy Perry*
 DATE: 12/12/2023


Seal: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 35018 JIMMY L. PERRY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



OFFSITE
 DETOURS
 NC 710 &
 SR 1339

PHASING

PROJ. REFERENCE NO.	SHEET NO.
W-5706N	TMP-3
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY INSTALL ADVANCED WARNING SIGNS ON ALL ALIGNMENTS IN ACCORDANCE WITH NCDOT RDY STD DRAWING 1101.01, SHEET 3 OF 3.

UNLESS OTHERWISE NOTED PROVIDE ACCESS TO DRIVEWAYS AND SIDE STREETS AT ALL TIMES.

UNLESS OTHERWISE NOTED USE ROADWAY STANDARD 1101.02, SHEET 1 OF 19 FOR TEMPORARY LANE CLOSURES.

PHASE I

WITH TRAFFIC IN THE EXISTING PATTERN USING FLAGGERS/ LAW ENFORCEMENT AS NEEDED CONSTRUCT THE ROUNDABOUT FROM -Y- STA. 17+15± TO -L STA. 23+91± UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON PLANS.

BEGIN DRAINAGE CONSTRUCTION

USING TEMPORARY LANE CLOSURES INSTALL 36" RCP PIPES.

NOTE: THE CONTRACTOR HAS THE OPTION TO INSTALL 36" RCP PIPES EITHER IN PHASE I OR PHASE II.

ONE WEEK PRIOR TO ROAD CLOSURE PLACE CHANGEABLE MESSAGE SIGNS AS DESCRIBED ON TMP-2A & TMP-2B. PLACE DETOUR SIGNAGE AS SHOWN ON TMP-2A & TMP-2B. KEEP SIGNS COVERED

PHASE II

NOTE:
THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE II, STEP 1 IN 60 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT AND LIQUIDATED DAMAGES.

STEP 1:

UNCOVER DETOUR SIGNS, PLACE TYPE III BARRICADES, AND CLOSE THE NC 710 (-L-) /SR 1339 DEEP BRANCH ROAD INTERSECTION TO TRAFFIC. SEE TMP-2A FOR DETOUR ROUTE.

COMPLETE THE ROUNDABOUT CONSTRUCTION , INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- L- STA. 16+85± TO -L- STA. 27+07±
- Y- STA. 16+15± TO -Y- STA. 25+60±
- SLIP- STA. 10+40± TO -SLIP- STA. 11+72±

COMPLETE ALL DRAINAGE CONSTRUCTION

PLACE ISLANDS AND TRUCK APRON

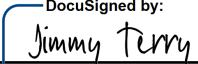
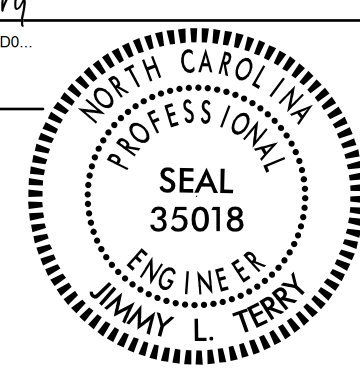

INSTALL TEMPORARY PAINT PAVEMENT MARKINGS IN THE FINAL PATTERN AND OPEN ROUNDABOUT TO TRAFFIC.


STEP 2:

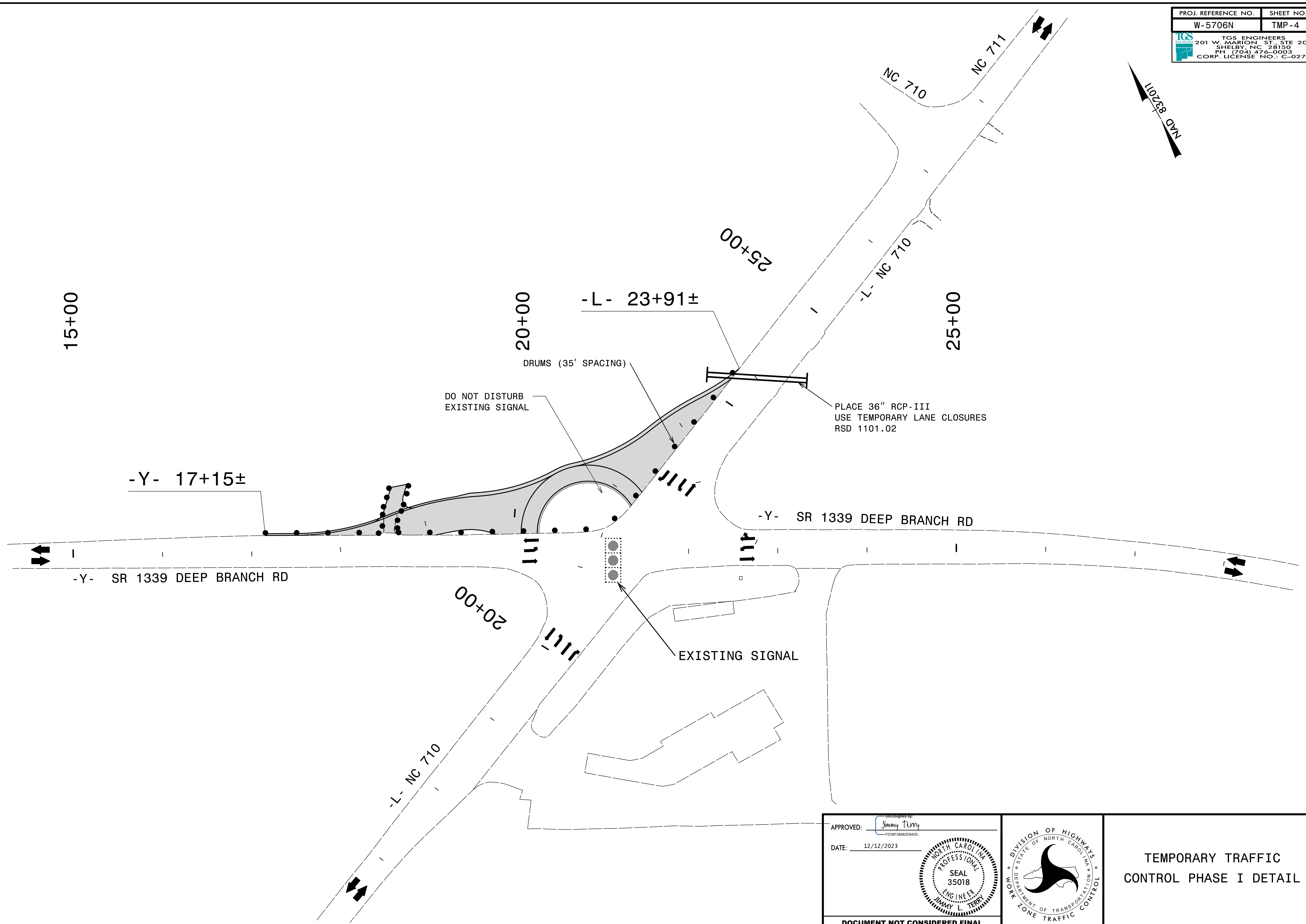
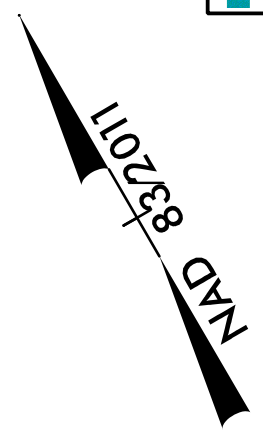
PLACE FINAL PAVEMENT MARKINGS IN FINAL PATTERN. SEE FINAL PAVEMENT MARKING PLANS.

OPEN THE ROUNDABOUT TO TRAFFIC. REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

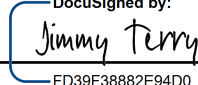
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APPROVED:  <small>DocuSigned by: Jimmy Terry FD39F3882E94D0</small> DATE: 4/10/2024			TEMPORARY TRAFFIC CONTROL PHASING
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

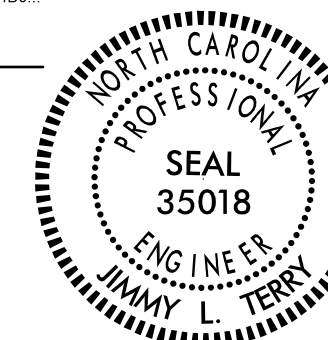
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W-5706N	TMP-4
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	



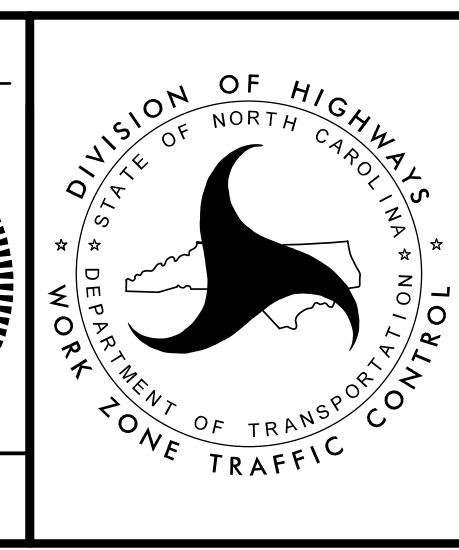
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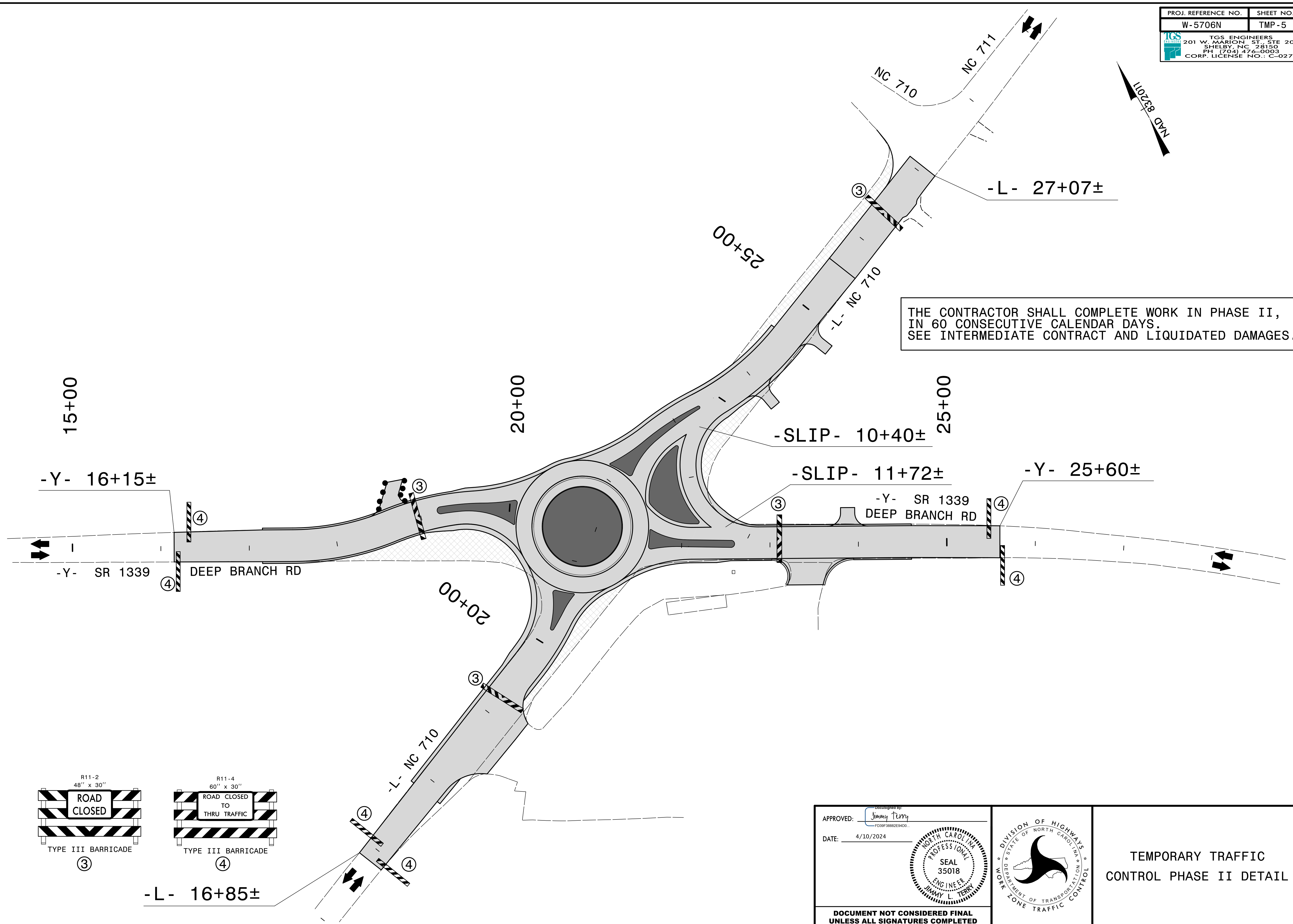
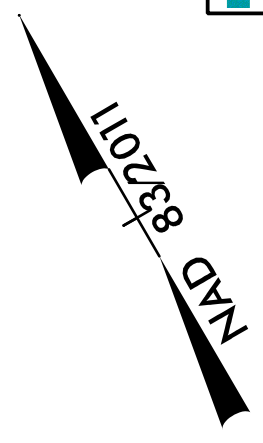
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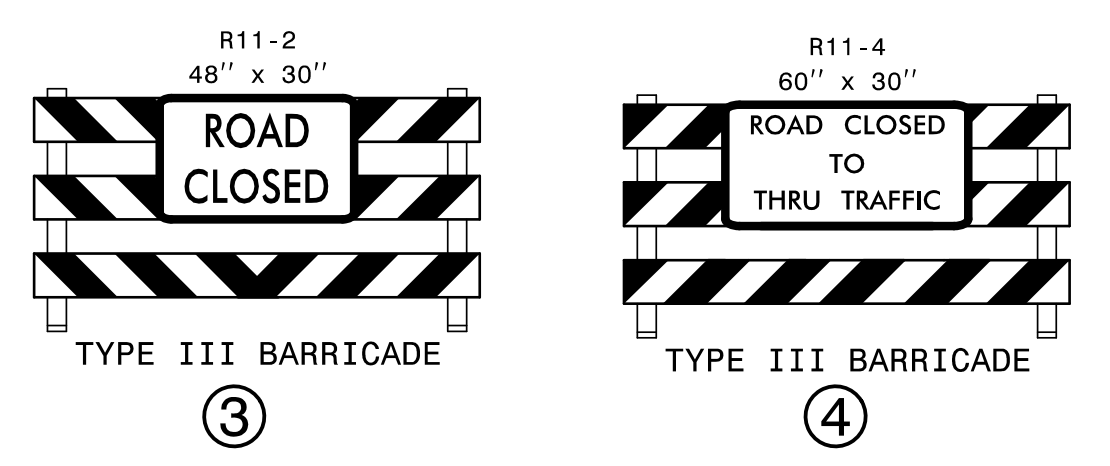
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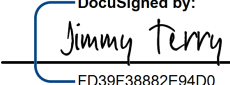


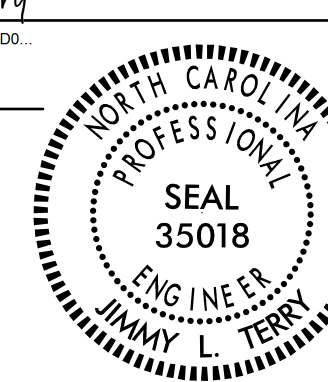
**TEMPORARY TRAFFIC
CONTROL PHASE I DETAIL**



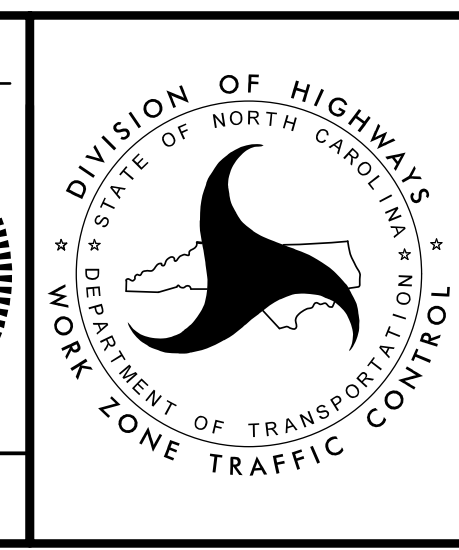
THE CONTRACTOR SHALL COMPLETE WORK IN PHASE II, IN 60 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT AND LIQUIDATED DAMAGES.



APPROVED: 
 DATE: 4/10/2024



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TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

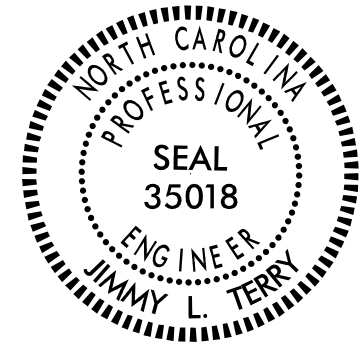
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 User: jcp@hht

T.I.P.: W-5706N

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
ROBESON COUNTY**

LOCATION: INTERSECTION OF NC HIGHWAY 710 AND SR 1339 (DEEP BRANCH RD)

<small>TIP NO.</small> W-5706N	<small>SHEET NO.</small> PMP-1
<small>Designed by:</small> APPROVED: <u>Jimmy Terry</u> <small>FD39F388B2E94D0...</small>	
<small>DATE:</small> 12/12/2023	
	
<small>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</small>	

INDEX	
<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2	PAVEMENT MARKING DETAIL

GENERAL NOTES

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

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

<small>ROAD NAME</small> NC 710/711 DEEP BRANCH RD	<small>MARKING</small> THERMOPLASTIC THERMOPLASTIC	<small>MARKER</small> PERMANENT RAISED PERMANENT RAISED
----------------------------------------------------------	----------------------------------------------------------	---------------------------------------------------------------

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

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

D) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED

IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

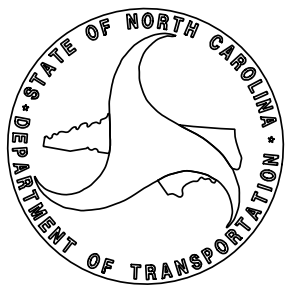
ROADWAY STANDARD DRAWING

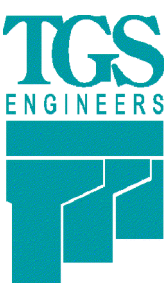
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

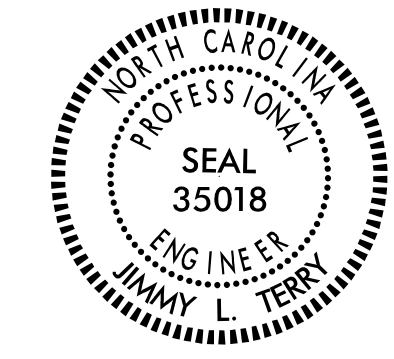

FINAL PAVEMENT MARKING SCHEDULE

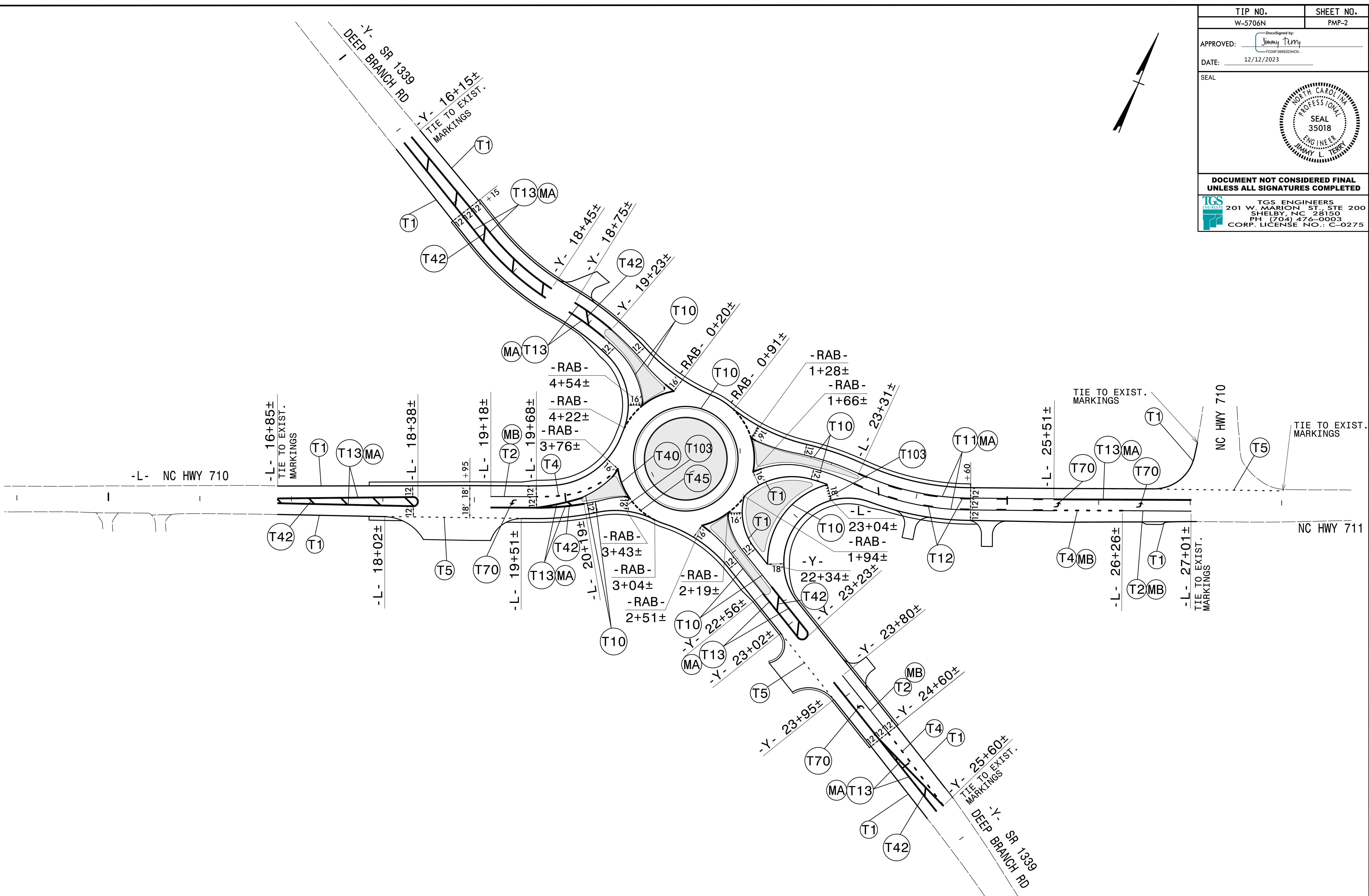
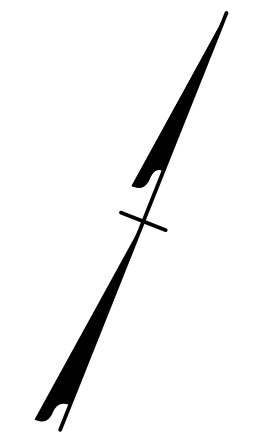
<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>SYMBOL</u>	<u>DESCRIPTION</u>
PAVEMENT MARKINGS		PAVEMENT MARKINGS	
THERMOPLASTIC (4", 90 MILS)		THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)	
T1	(4") WHITE EDGELINE	T70	LEFT TURN ARROW
T2	(4") WHITE SOLID LANE LINE	MARKERS	
T4	(4") 3 FT. - 9 FT./SP WHITE MINISKIP	PERMANENT RAISED PAVEMENT MARKERS	
T5	(4") 2 FT. - 6 FT./SP WHITE MINISKIP	MA	YELLOW & YELLOW
T10	(4") YELLOW EDGELINE	MB	CRYSTAL & RED
T11	(4") YELLOW SINGLE CENTER		
T12	(4") 10 FT. YELLOW SKIP		
T13	(4") YELLOW DOUBLE CENTER		
THERMOPLASTIC (8", 90 MILS)			
T40	(8") WHITE GORELINE		
T42	(8") YELLOW DIAGONAL		
T45	(8") 3 FT. - 3 FT./SP WHITE MINISKIP		

PLAN SUBMITTED TO: NCDOT DIVISION 6	
<u>JOHN GAUTHIER</u>	
<i>Division Design Engineer</i>	

PLAN PREPARED BY: TGS ENGINEERS	
<u>JIMMY TERRY, PE</u> PROJECT ENGINEER	
<u>SANDRA MELVIN</u> DESIGN TECHNICIAN	

TGS ENGINEERS
 201 W. MARION ST
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

TIP NO. W-5706N	SHEET NO. PMP-2
APPROVED: <i>Jimmy Terry</i> TDS98882E3400	
DATE: 12/12/2023	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 201 W. MARION ST., STE 200 SHELBY, NC 28150 PH: (704) 476-0003 CORP. LICENSE NO.: C-0275	

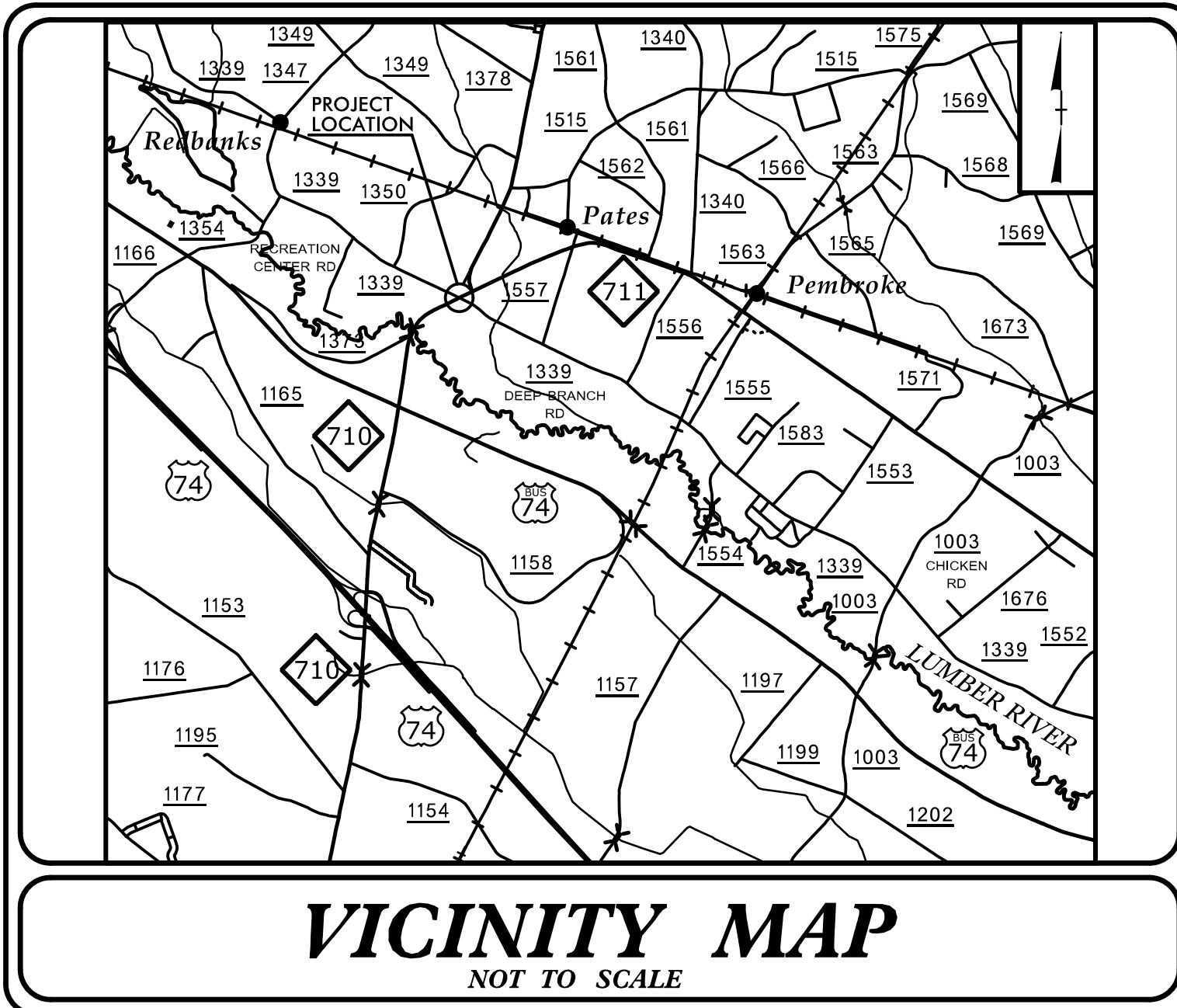


NOTES:
 SEE SHEET PMP-1 FOR FINAL PAVEMENT MARKING SCHEDULE.
 PLACE PAVEMENT MARKING SYMBOLS & CHARACTERS AS DIRECTED BY THE ENGINEER IN ACCORDANCE TO NCDOT STANDARDS.
 PLACE MARKERS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH NCDOT RDY STD 1250.01.

PAVEMENT MARKING DETAIL

R:\2023\Projects\NCDOT\W-5706N\Traffic\ Pavement Markings\W-5706N_Sgn_PMP_02.dgn
 User: jpruett

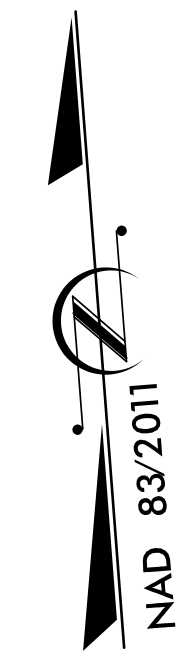
TIP PROJECT: W-5706N



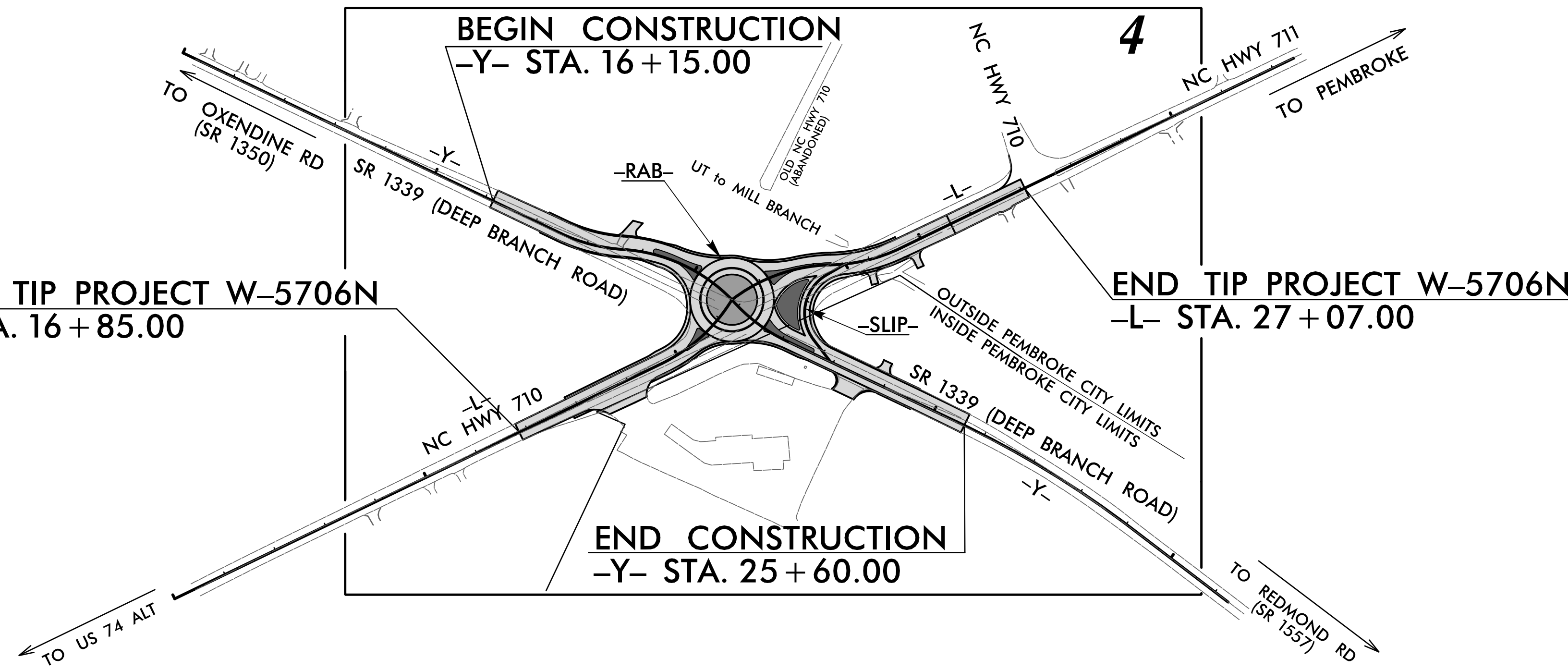
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
 ROBESON COUNTY
 LOCATION: INTERSECTION OF NC HIGHWAY 710 & SR 1339
 (DEEP BRANCH RD)

TYPE OF WORK: GRADING, DRAINAGE, & PAVEMENT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5706N	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44852.1.14	HSIP-0710(037)	PE	
44852.2.14	HSIP-0710(037)	RW	
44852.2.31	HSIP-0710(037)	UTIL	
44852.3.14	HSIP-0710(037)	CONST.	



BEGIN TIP PROJECT W-5706N
 -L- STA. 16 + 85.00

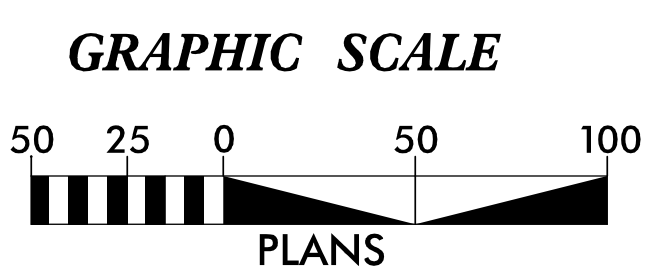


END TIP PROJECT W-5706N
 -L- STA. 27 + 07.00

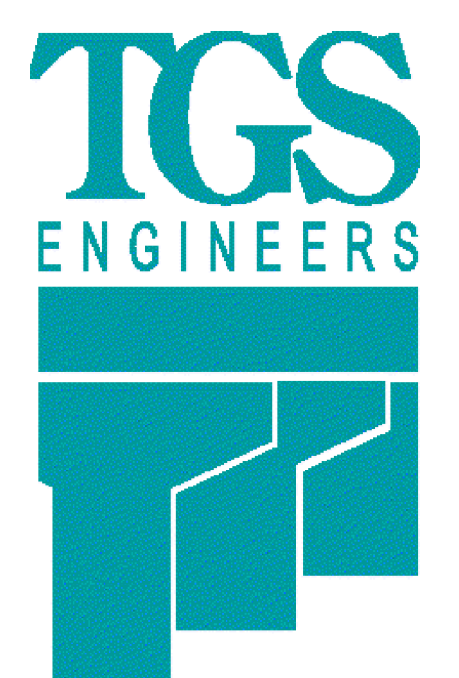
THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT
 High Quality Water Zone(s) Exist
 From Sta. Begin
 to Sta. End
 Refer To E. C. Special Provisions for Special Considerations.



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



Prepared In the Office of:
TGS ENGINEERS
 201 W. MARION ST-STE 200
 SHELBY, NC 28150

Designed by:
Andrew H. Cochran, PE 3015
 NAME LEVEL III CERTIFICATION NO.

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

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

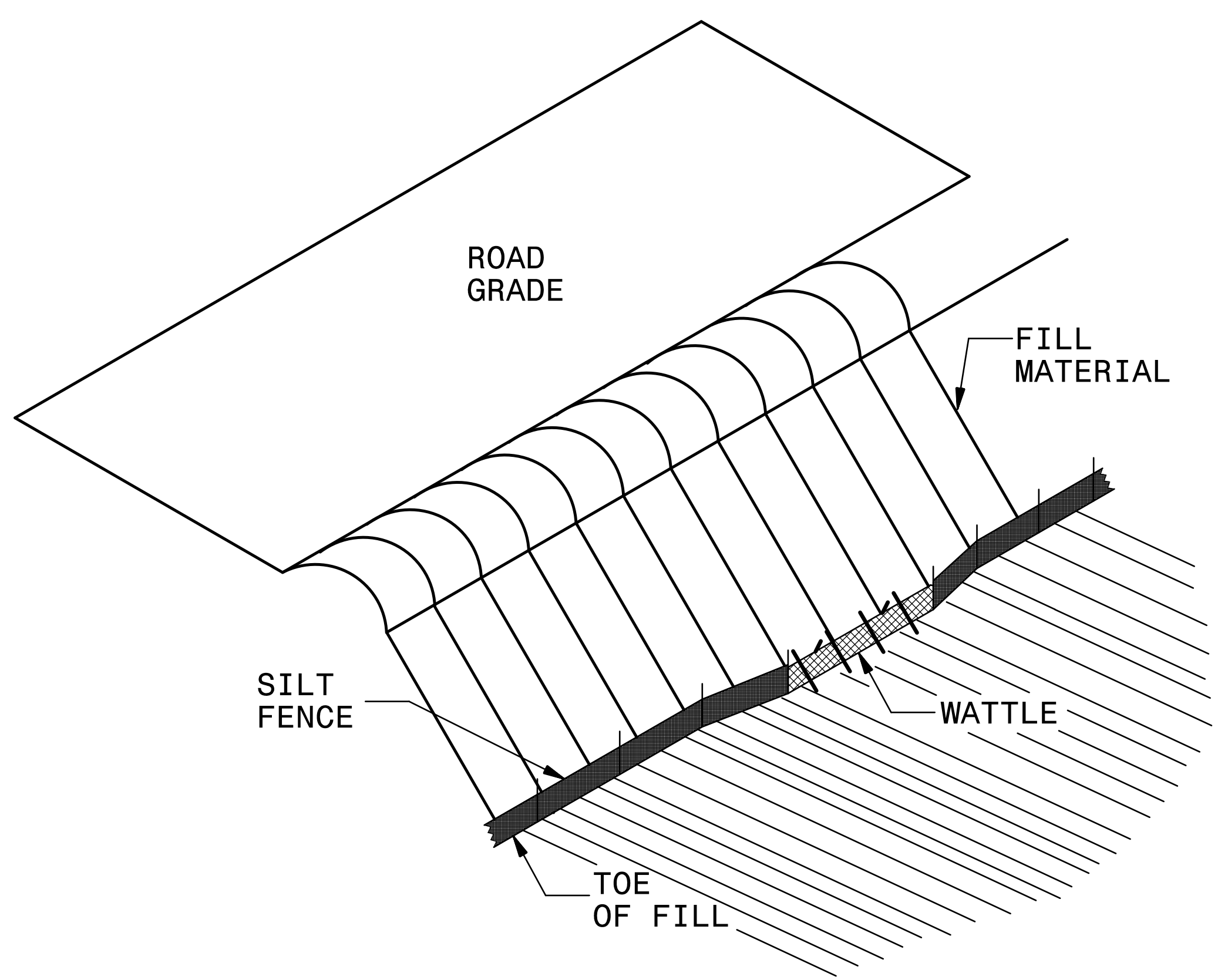
PROJECT REFERENCE NO. W-5706N	SHEET NO. EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EROSION & SEDIMENT CONTROL LEGEND

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

PROJECT REFERENCE NO.		SHEET NO.	
W-5706N		EC-2A	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

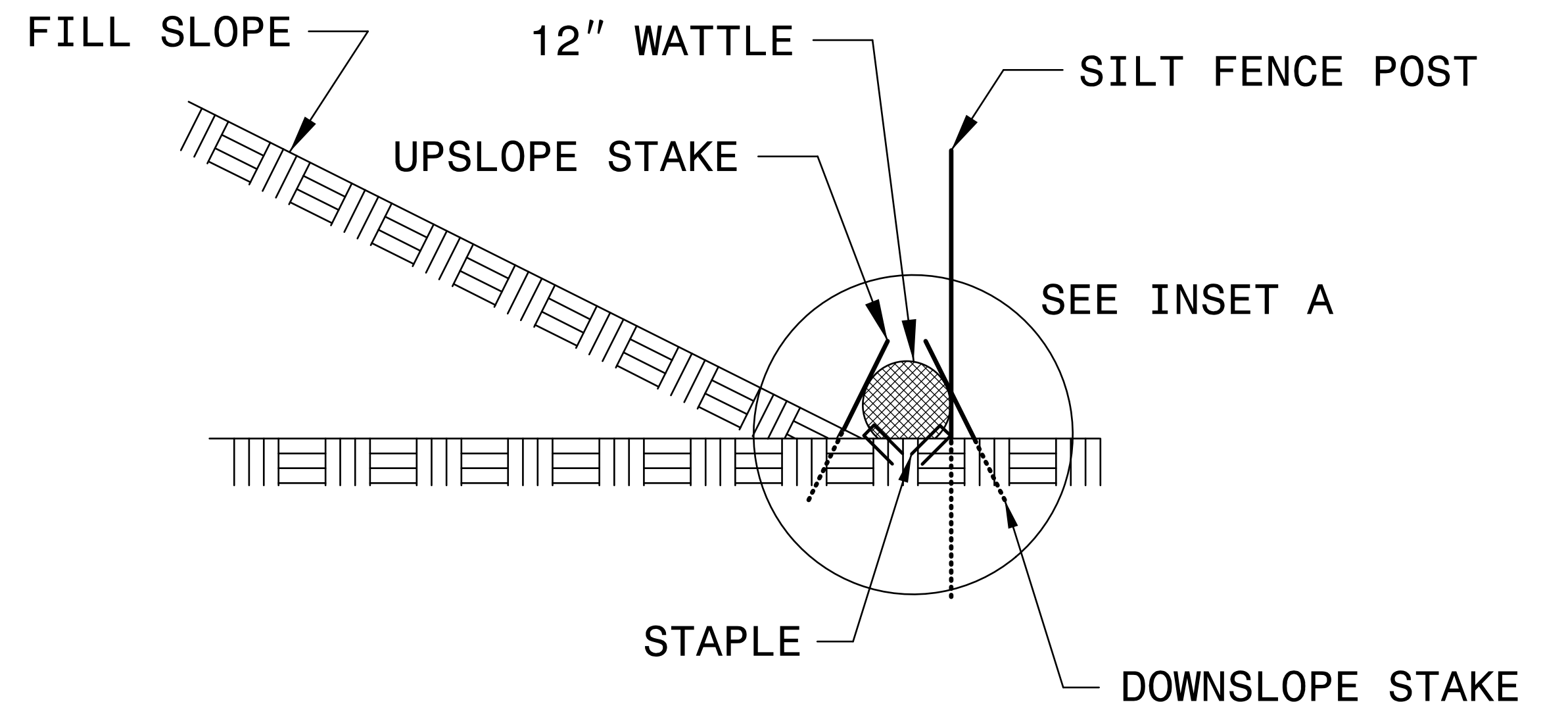
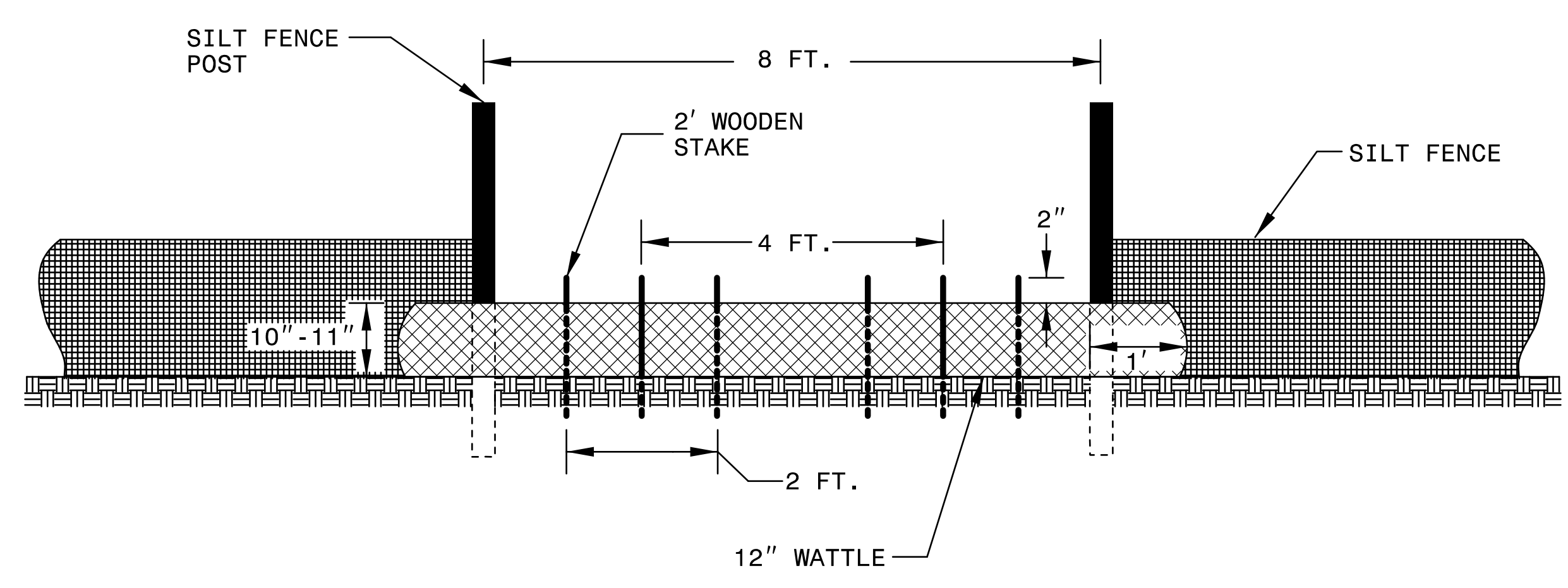
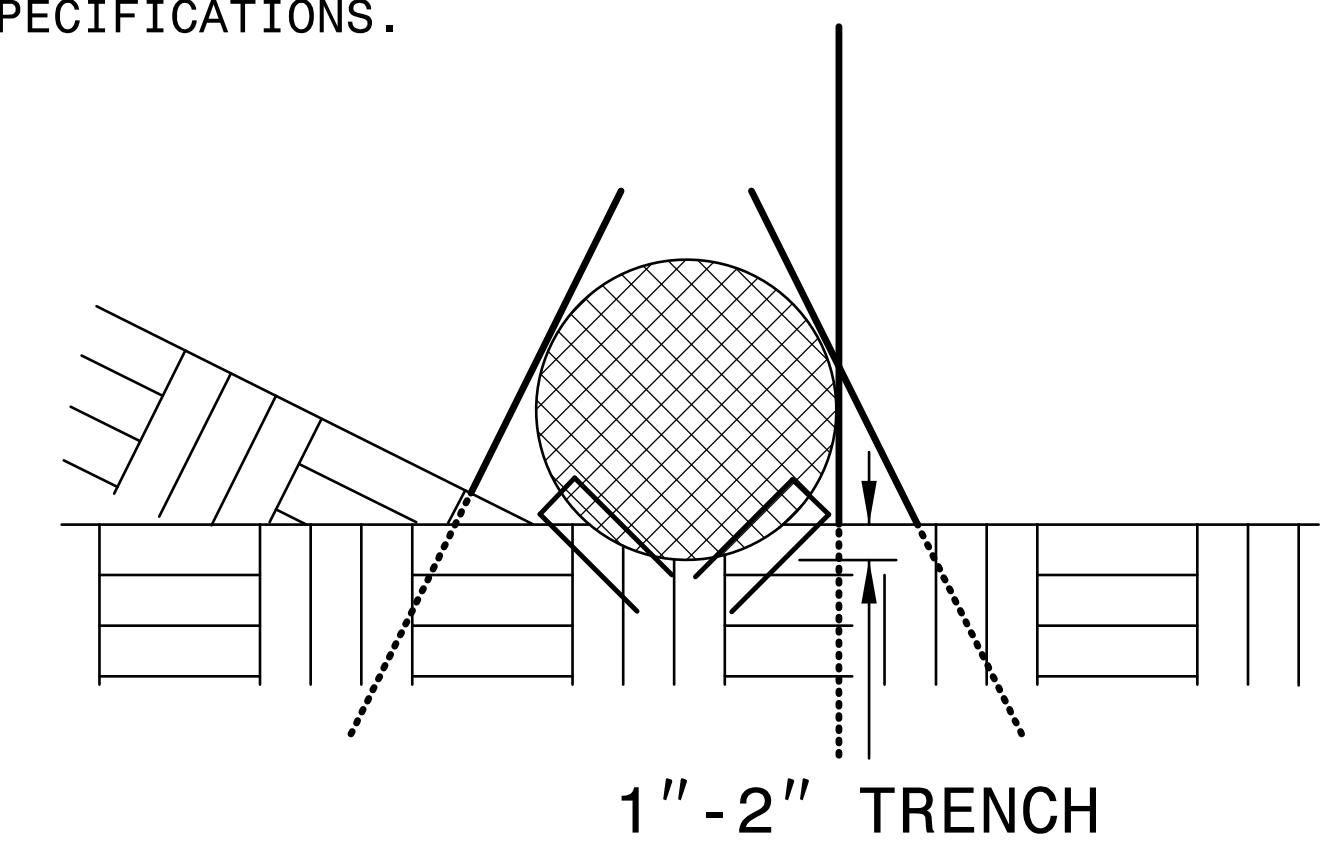
SILT FENCE COIR FIBER WATTLE BREAK DETAIL



NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 11 GAUGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

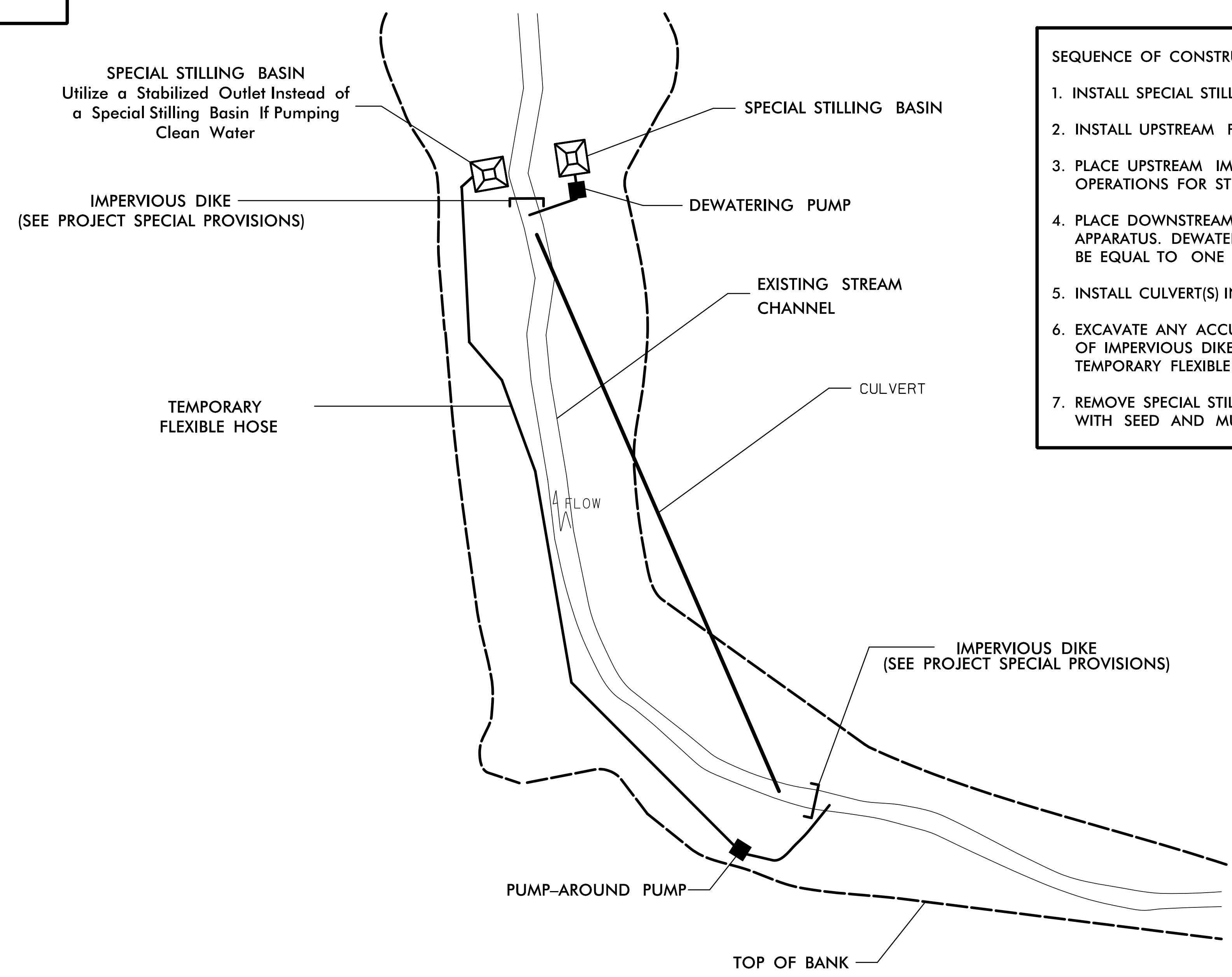
INSET A



PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>EC-2B</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

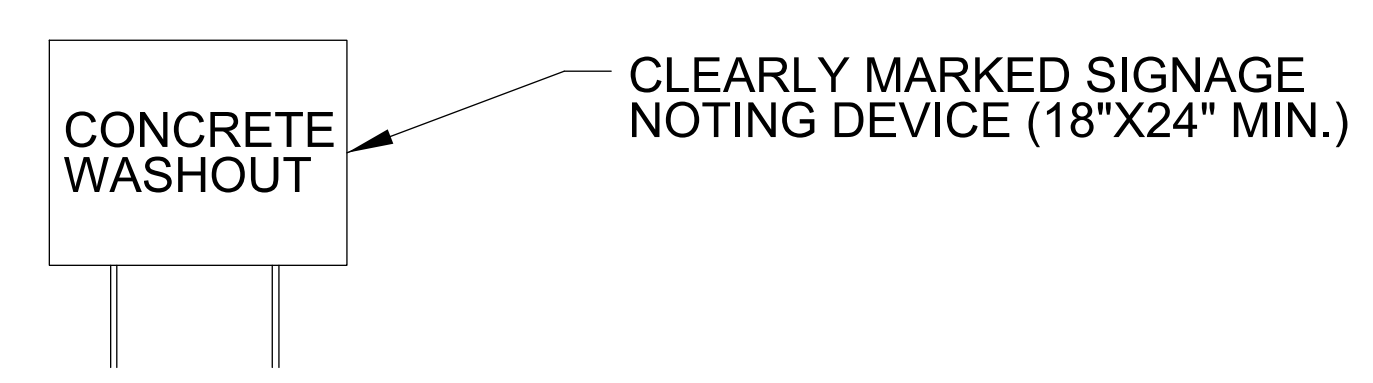
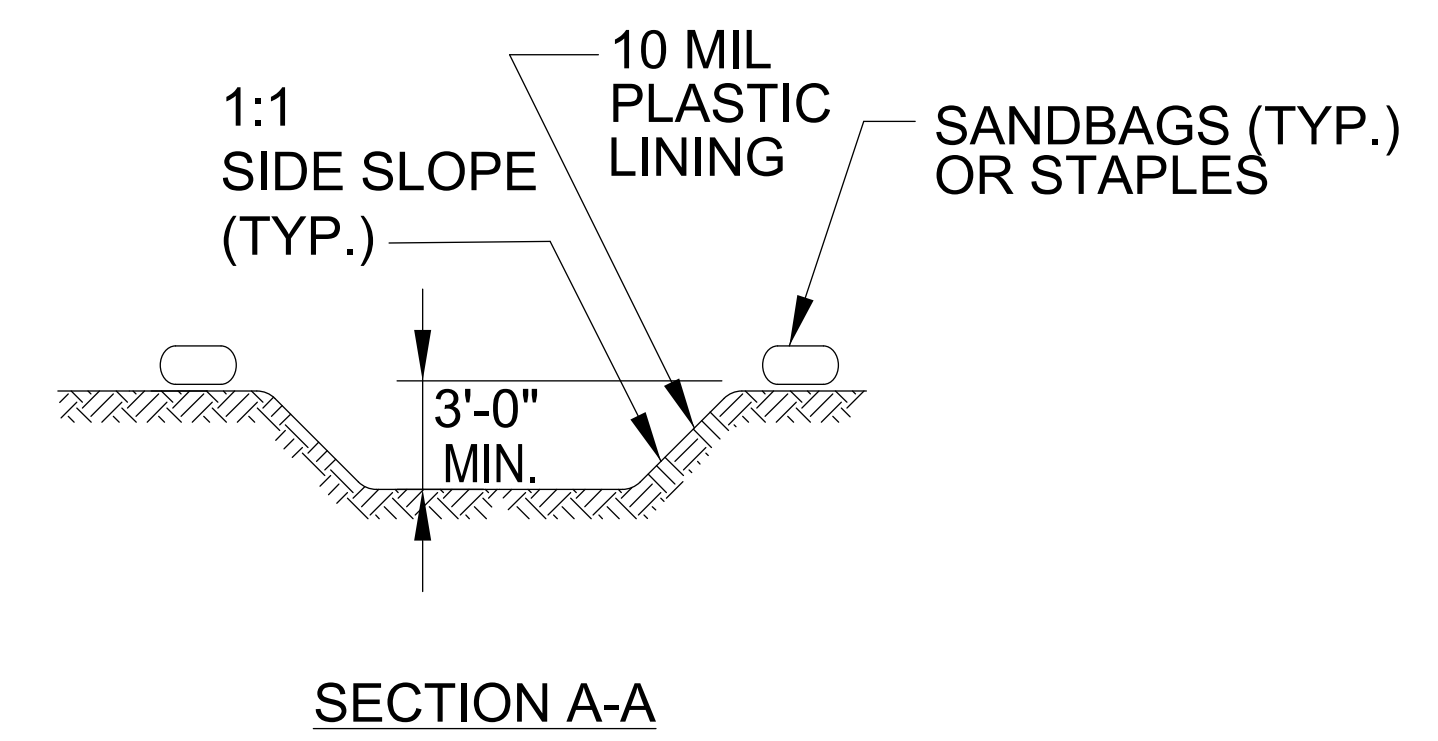
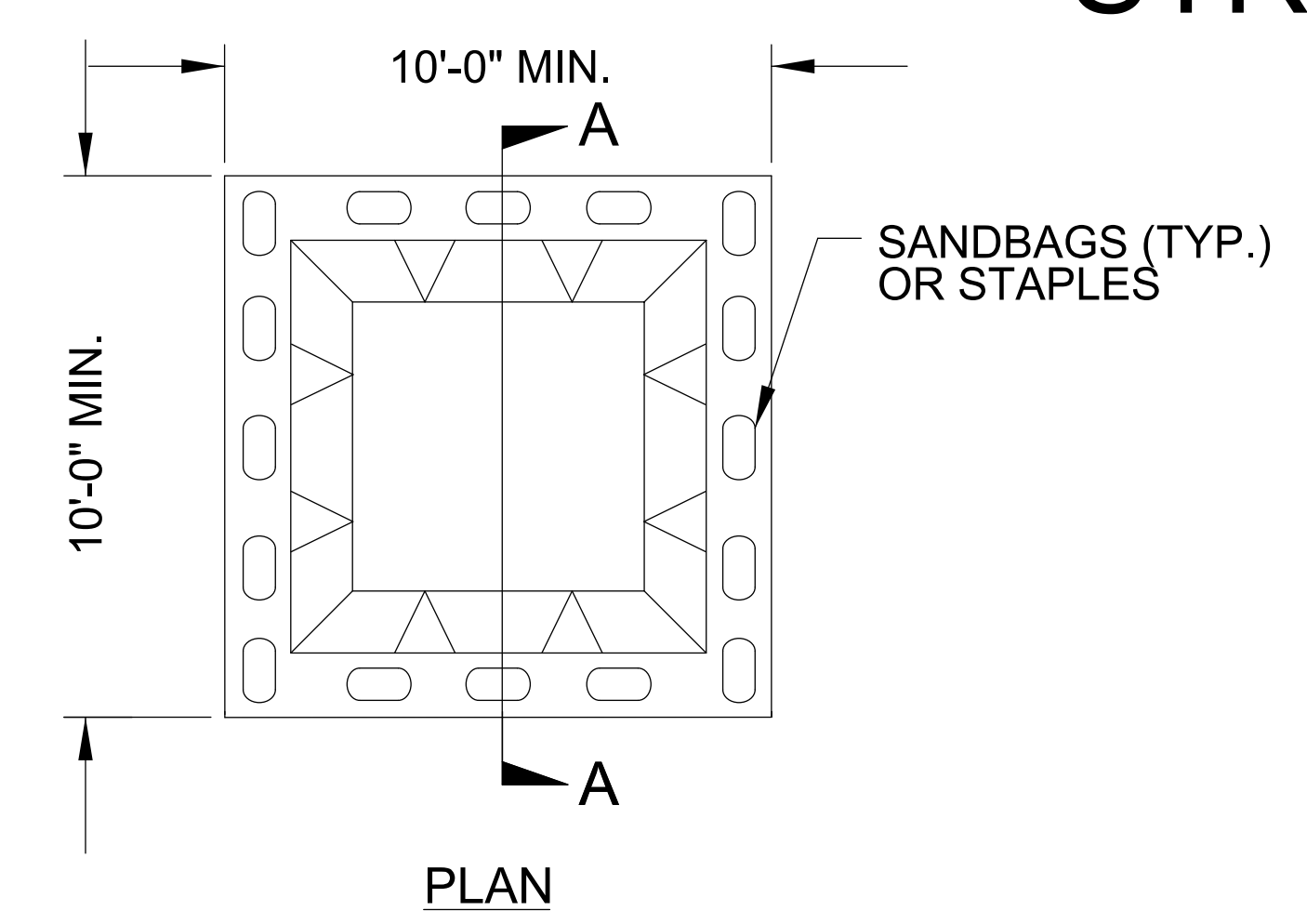
- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
 - 4) Pumps and hoses shall be of sufficient size to dewater the work area.



- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

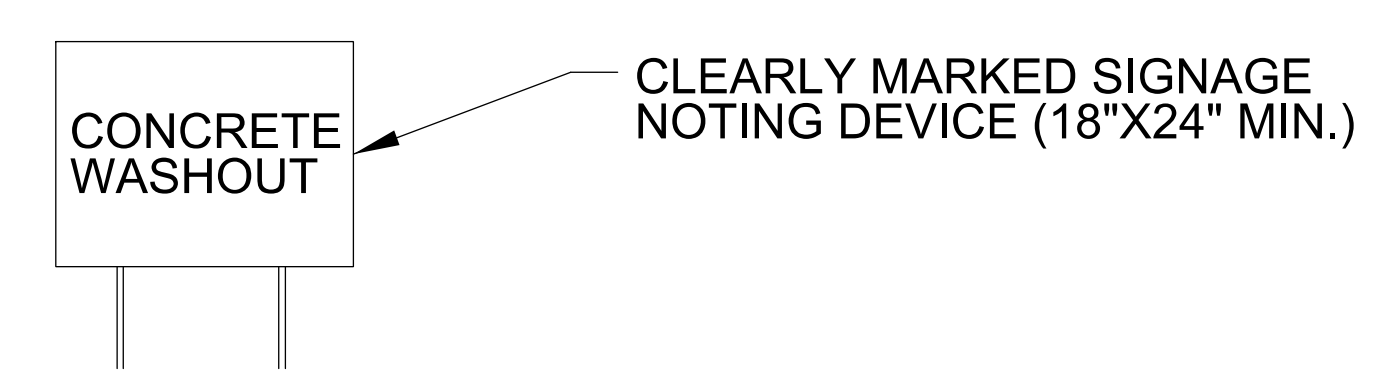
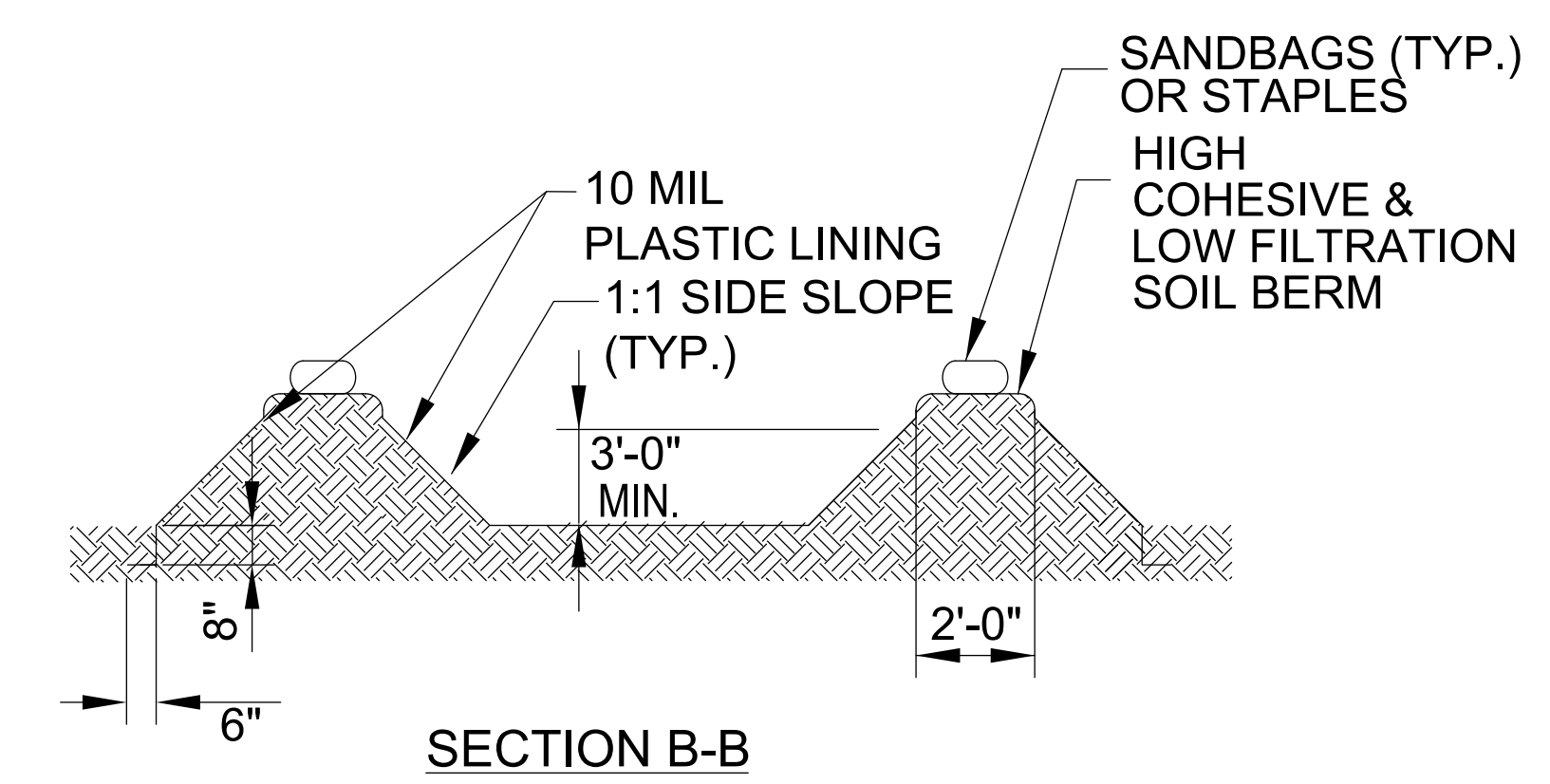
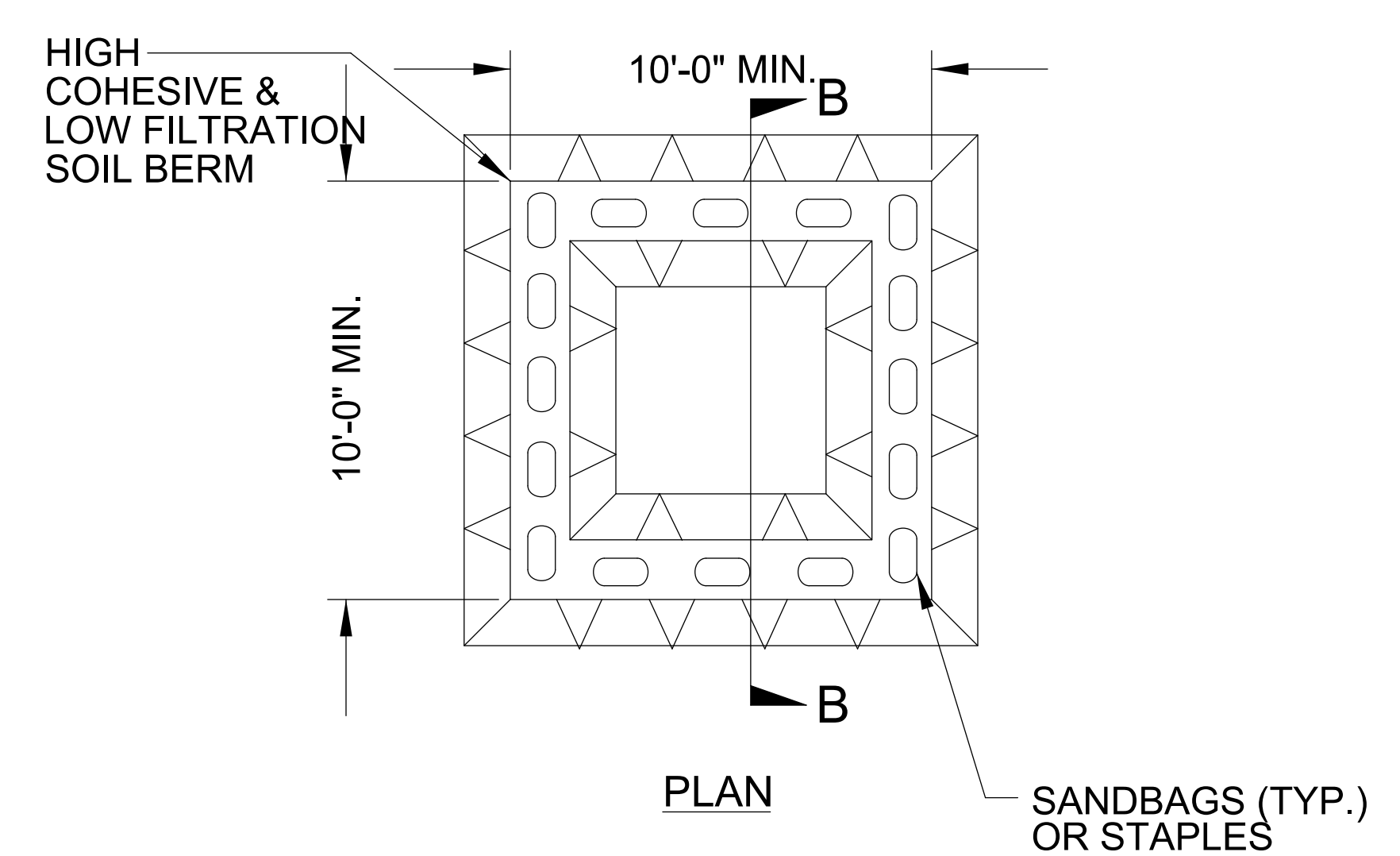
PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>EC-2C</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

SLOPE MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
SLOPE MATTING SUBTOTAL					0

DITCHLINE EXCELSIOR MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
DITCHLINE EXCELSIOR MATTING SUBTOTAL					0

DITCHLINE MATTING FOR EROSION CONTROL

4	L	19+00	20+50	LT	135
4	L	19+21	20+00	RT	260
4	L	21+90	22+90	LT	265
4	L	23+50	25+50	LT	350
4	L	25+00	25+50	RT	45
4	L	25+50	26+50	LT	175
4	L	17+50	20+27	RT	245
4	Y	22+71	23+76	LT	95
4	Y	23+85	25+50	RT	150
DITCHLINE MATTING SUBTOTAL					1,720


SLOPE MATTING SUBTOTAL					0
DITCHLINE MATTING SUBTOTAL					1,720
DITCHLINE EXCELSIOR MATTING SUBTOTAL					0
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1,250
TOTAL					2,970
GAY					3,000

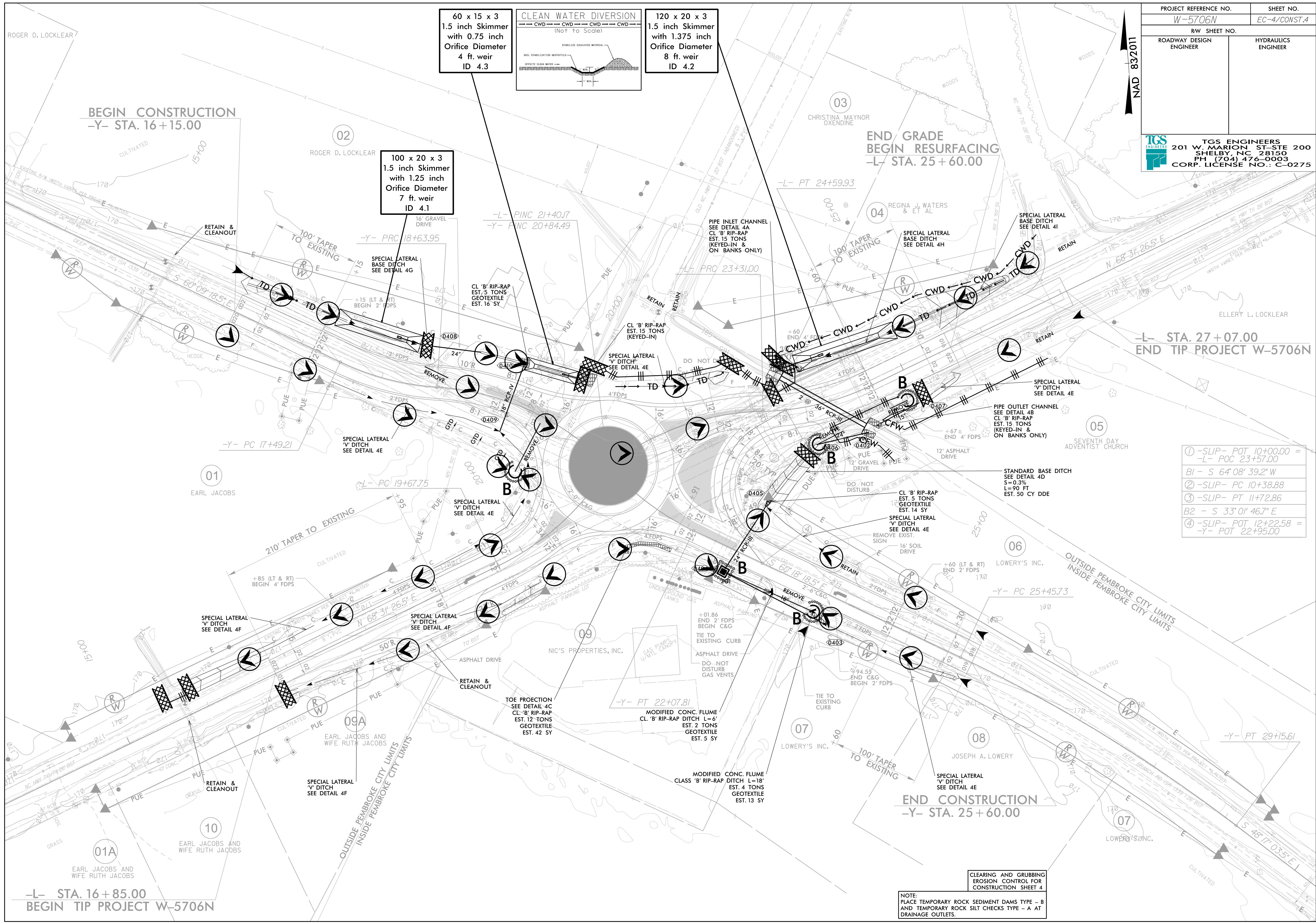
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>W-5706N</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

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

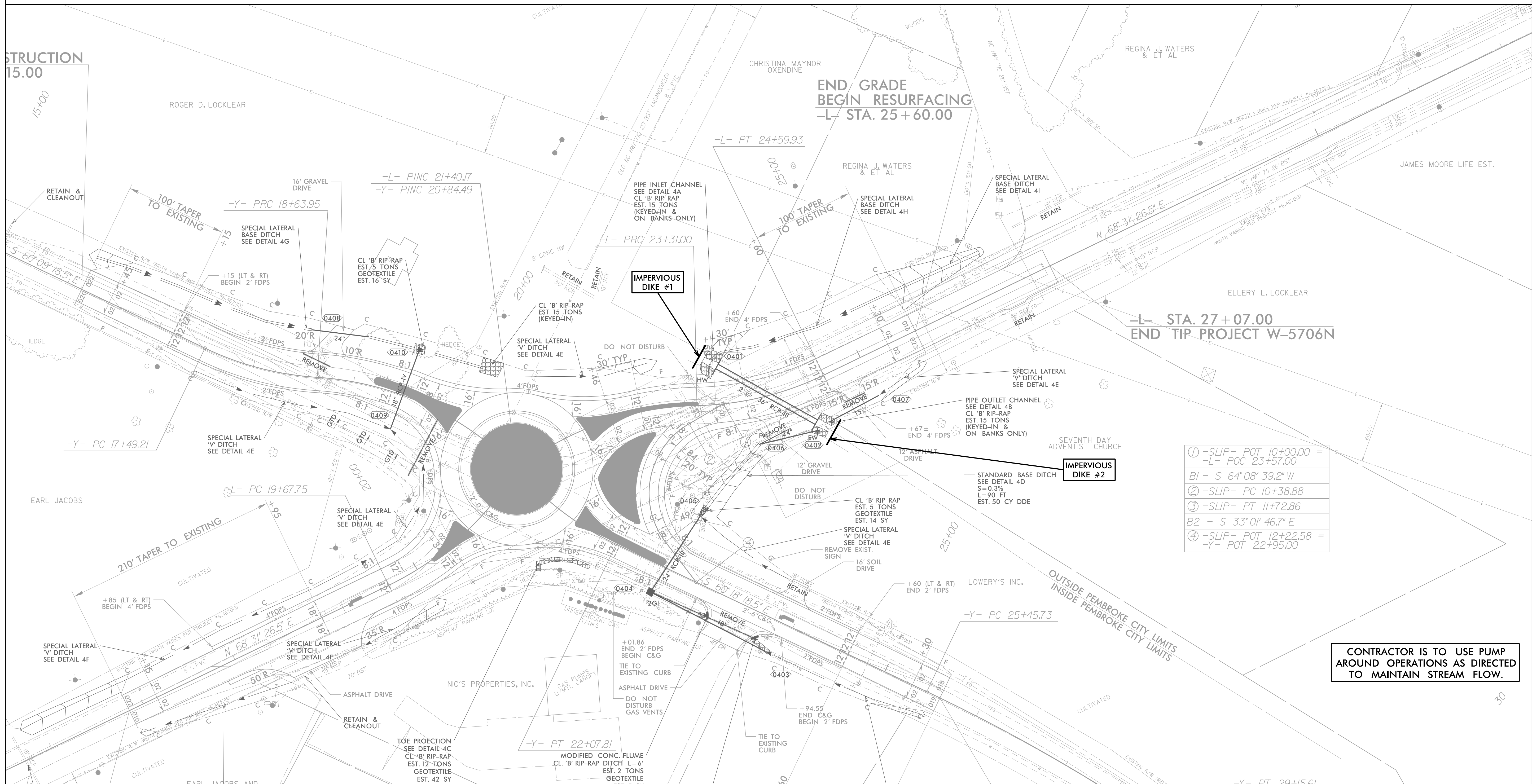
PROJECT REFERENCE NO. W-5706N		SHEET NO. EC-4/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			



PROJECT REFERENCE NO.	SHEET NO.
W-5706N	EC-05/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER


PIPE CONSTRUCTION SEQUENCE STA. 24+02 -L-

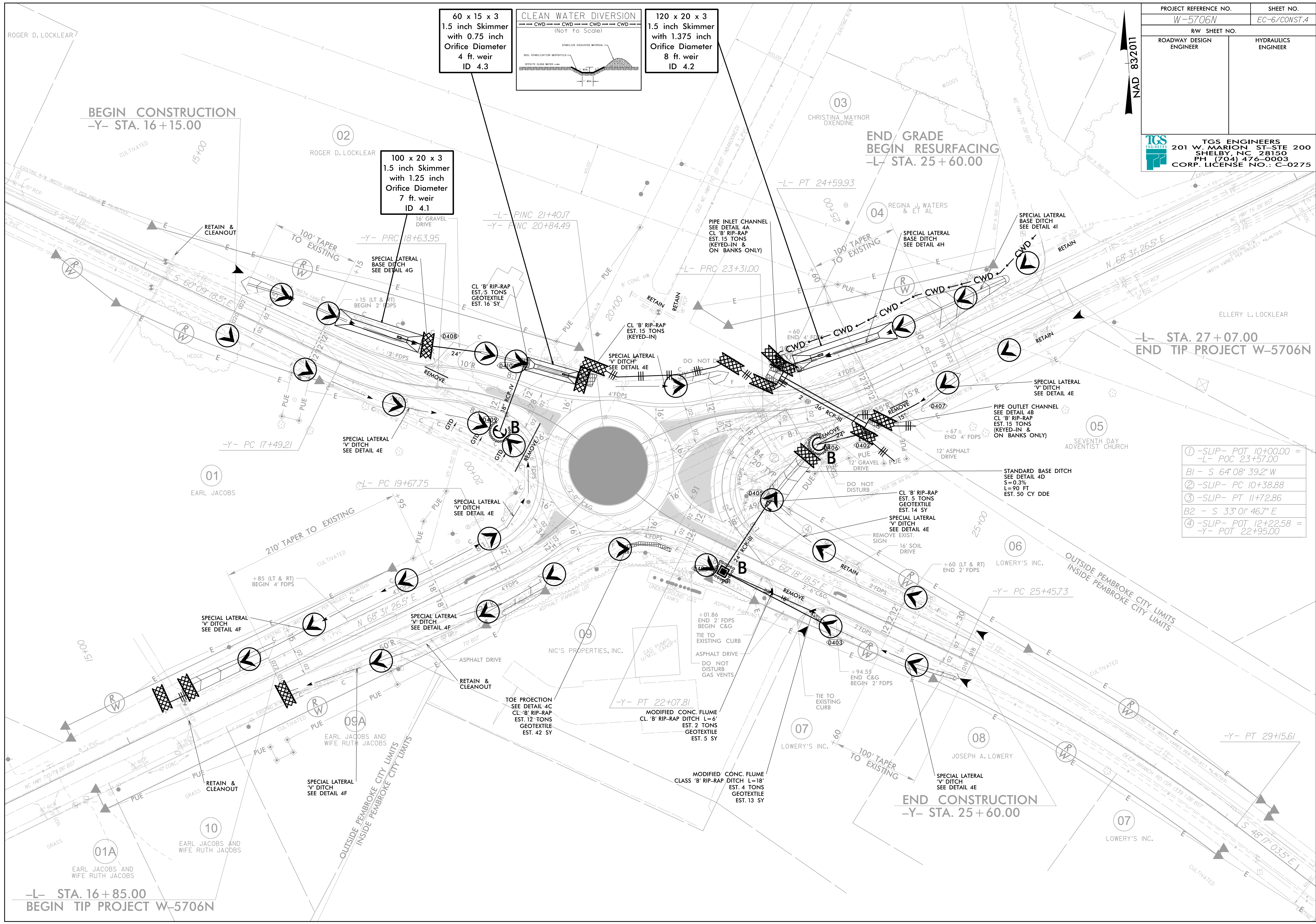
1. INSTALL IMPERVIOUS DIKES #1 & #2 AND BEGIN PUMP AROUND.
2. DEWATER WORK SITE AS NEEDED INTO SPECIAL STILLING BASIN(S).
3. REMOVE EXISTING 36" CMP AND CONSTRUCT 2@36" RCP-III, USING TEMPORARY LANE CLOSURES ACCORDING TO TRAFFIC CONTROL PLANS.
4. STOP PUMP AROUND OPERATION.
5. REMOVE IMPERVIOUS DIKES #1 & #2 AND REESTABLISH STREAM.
6. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S) AND COMPLETE ROADWAY.



①	-SLIP- POT 10+00.00 =
	-L- POC 23+57.00
	B1 - S 64° 08' 39.2" W
②	-SLIP- PC 10+38.88
	S=0.3%
③	-SLIP- PT 11+72.86
	B2 - S 33° 01' 46.7" E
④	-SLIP- POT 12+22.58 =
	-Y- POT 22+95.00

CONTRACTOR IS TO USE PUMP AROUND OPERATIONS AS DIRECTED TO MAINTAIN STREAM FLOW.

PROJECT REFERENCE NO. W-5706N		SHEET NO. EC-6/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			



①	-SLIP- POT 10+00.00 = -L- POC 23+57.00
B1	-S 64° 08' 39.2\" W
②	-SLIP- PC 10+38.88
③	-SLIP- PT 11+72.86
B2	-S 33° 01' 46.7\" E
④	-SLIP- POT 12+22.58 = -Y- POT 22+95.00

-L- STA. 16+85.00
BEGIN TIP PROJECT W-5706N

END CONSTRUCTION
-Y- STA. 25+60.00

END GRADE
BEGIN RESURFACING
-L- STA. 25+60.00

T.I.P.: W-5706N

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
ROBESON COUNTY**

LOCATION: INTERSECTION OF NC HIGHWAY 710 AND SR 1339 (DEEP BRANCH RD)

<small>TIP NO.</small> W-5706N	<small>SHEET NO.</small> SIGN-1
<small>APPROVED:</small> <small>DATE:</small> 12/12/2023	
<small>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</small>	

ROADWAY STANDARD DRAWING

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

<u>STD. NO.</u>	<u>TITLE</u>
901.50	ARROWS AND SHIELDS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
910.40	SINGLE LANE ROUNDABOUT

GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- . ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

SUMMARY OF QUANTITIES

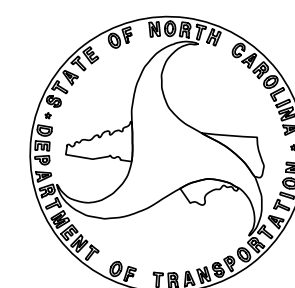
ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	740	LF
4096000000	904	SIGN ERECTION, TYPE D	2	EA
4102000000	904	SIGN ERECTION, TYPE E	34	EA
4108000000	904	SIGN ERECTION, TYPE F	7	EA
4116100000	904	SIGN ERECTION, RELOCATE SIGN TYPE D (GROUND MOUNTED)	4	EA
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	9	EA
4192000000	907	DISPOSAL OF SUPPORT, U-CHANNEL	2	EA

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
SIGN-1	TITLE SHEET
SIGN-2	SIGN DESIGN
SIGN-3	TYPE "E" & "F" SIGNS
SIGN-4	EXISTING AND PROPOSED SIGNING PLAN SHEETS

PLAN SUBMITTED TO: NCDOT DIVISION 6

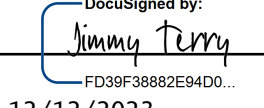
JOHN GAUTHIER
Division Design Engineer

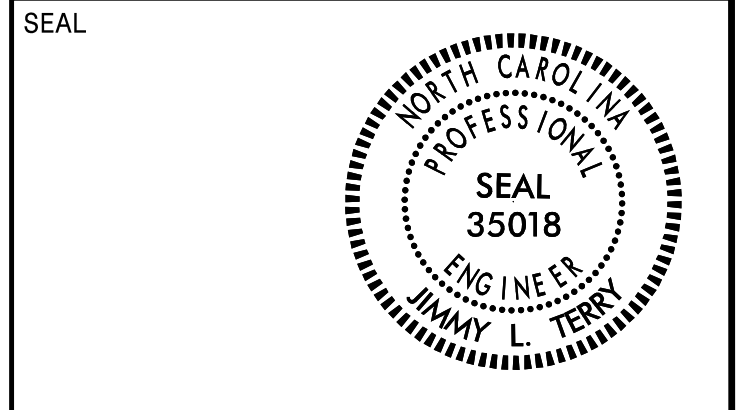


PLAN PREPARED BY: TGS ENGINEERS

JIMMY TERRY, PE PROJECT ENGINEER
SANDRA MELVIN DESIGN TECHNICIAN

TGS ENGINEERS
201 W. MARION ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

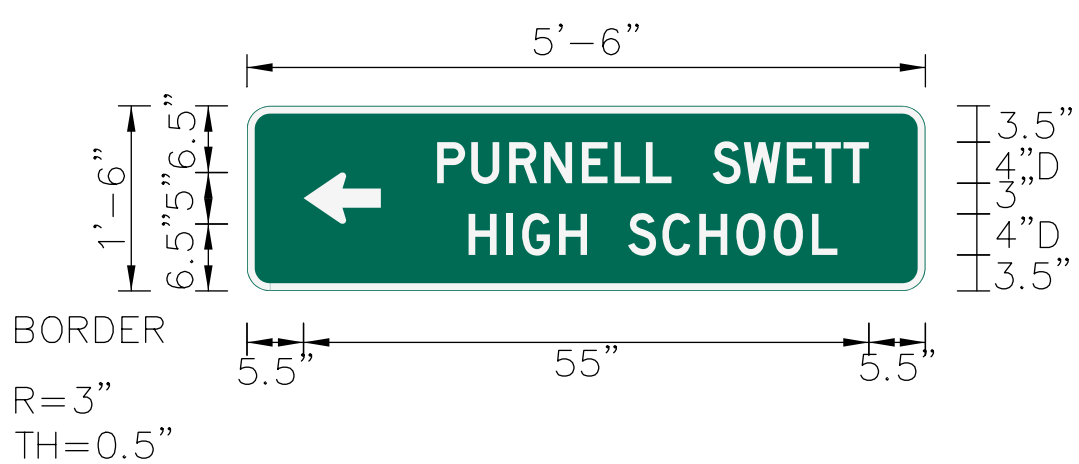
APPROVED: 
 DATE: 12/12/2023



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

TGS ENGINEERS
 201 W. MARION ST., STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

SIGN NUMBER: 301 TYPE: D QUANTITY: 1 SIGN WIDTH: 5'-6" HEIGHT: 1'-6" TOTAL AREA: 8.9 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.5" RADII: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White <table border="1"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr> <td>AR_Type D</td> <td>5.5</td> <td>6.5</td> <td>5</td> <td>7.5</td> </tr> </table> MAT'L: 0.125" (3.2 mm) ALUMINUM	SYMBOL	X	Y	WID	HT	AR_Type D	5.5	6.5	5	7.5	DESIGN BY: SGM PROJECT ID: W-5706N CHECKED BY: LOCATION: ROBESON CO Sept 22, 2023 DIV: 6
SYMBOL	X	Y	WID	HT								
AR_Type D	5.5	6.5	5	7.5								



BORDER R=3" TH=0.5"

USE NOTES: 1,2
 1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
 2. Background shall be Grade C reflective sheeting.

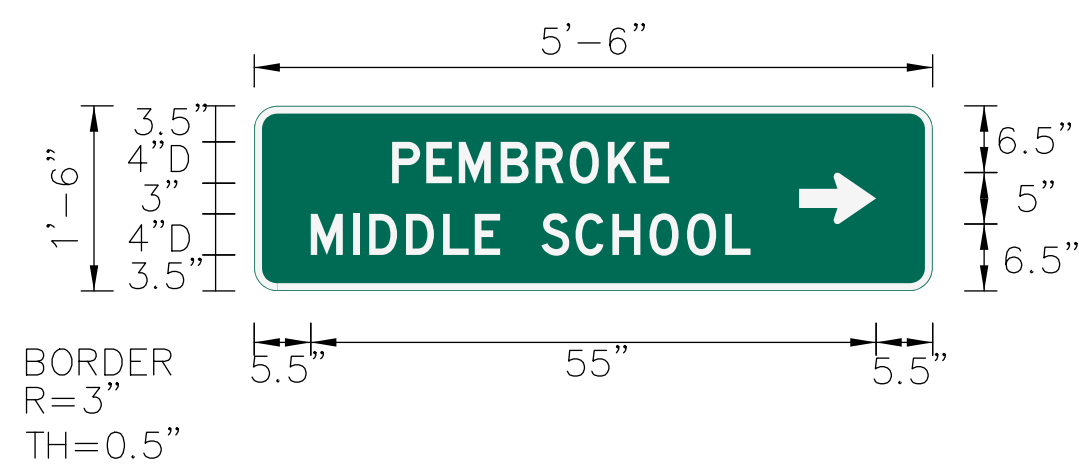
Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size	
															Text Length	
P	U	R	N	E	L	L	S	W	E	T	T					D 2000
18.5	3.3	3.7	3.4	3.7	3.2	3.1	2.5	4	3	4.2	2.8	2.7	2.5	5.5		42
H	I	G	H	S	C	H	O	O	L							D 2000
21.6	3.7	1.5	3.6	2.7	4	3.3	3.6	3.6	3.6	3.7	2.5	8.6				35.9

FILENAME: W-5706_Sgn_SGN NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 302 TYPE: D QUANTITY: 1 SIGN WIDTH: 5'-6" HEIGHT: 1'-6" TOTAL AREA: 8.3 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.5" RADII: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White <table border="1"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr> <td>AR_Type D</td> <td>5.3</td> <td>6.5</td> <td>5</td> <td>7.5</td> </tr> </table> MAT'L: 0.125" (3.2 mm) ALUMINUM	SYMBOL	X	Y	WID	HT	AR_Type D	5.3	6.5	5	7.5	DESIGN BY: SGM PROJECT ID: W-5706N CHECKED BY: LOCATION: ROBESON CO Sept 22, 2023 DIV: 6
SYMBOL	X	Y	WID	HT								
AR_Type D	5.3	6.5	5	7.5								



BORDER R=3" TH=0.5"

USE NOTES: 1,2
 1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
 2. Background shall be Grade C reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

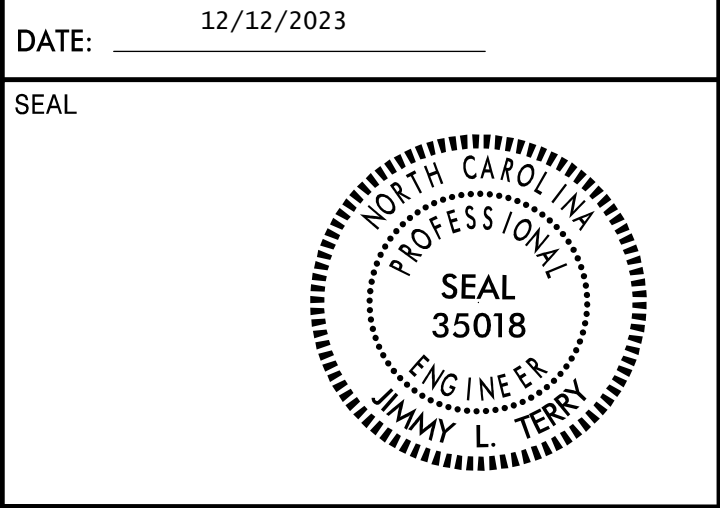
Letter spacings are to start of next letter															Series/Size	
															Text Length	
P	E	M	B	R	O	K	E									D 2000
13.4	3.3	3.2	4.1	3.4	3.3	3.7	3.5	2.5	25.6							27
M	I	D	D	L	E	S	C	H	O	O	L					D 2000
5.5	4.1	1.6	3.6	3.6	3.1	2.5	4	3.3	3.6	3.6	3.7	2.5	17.7			42.8

FILENAME: W-5706_Sgn_SGN NORTH CAROLINA D.O.T. SIGN DETAIL

\$\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$\$\$\$SUBPARALLEL\$\$\$\$\$

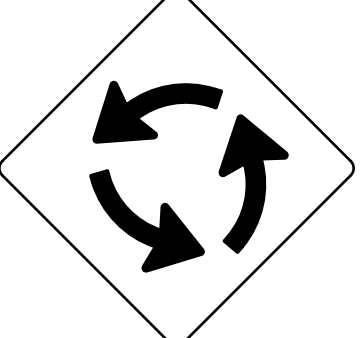
SIGN DESIGN

APPROVED: *Jimmy Terry*
DATE: 12/12/2023



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

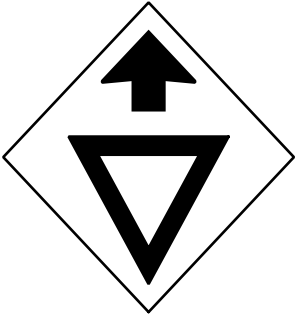
401 QUANTITY REQ'D 4



30 X 30
W2-6

ONE "U" POST PER SIGN

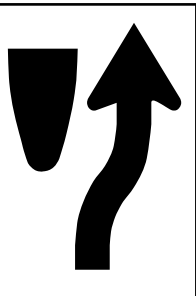
402 QUANTITY REQ'D 4



30 X 30
W3-2

ONE "U" POST PER SIGN

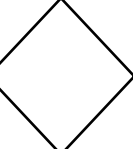
403 QUANTITY REQ'D 4



24 X 30
R4-7

ONE "U" POST PER SIGN

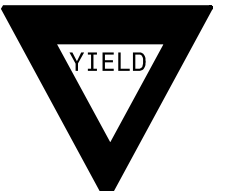
404 QUANTITY REQ'D 4



18 X 18
OM1-3

MOUNT BELOW SIGN 403
IN 4 INSTALLATIONS

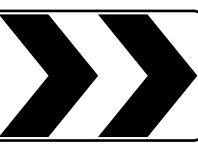
405 QUANTITY REQ'D 10



36 X 36 X 36
R1-2

ONE "U" POST PER SIGN

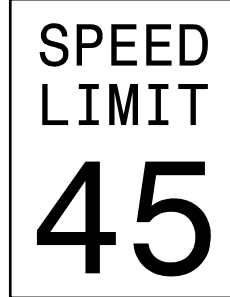
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30 X 24
R6-4

ONE "U" POST PER SIGN

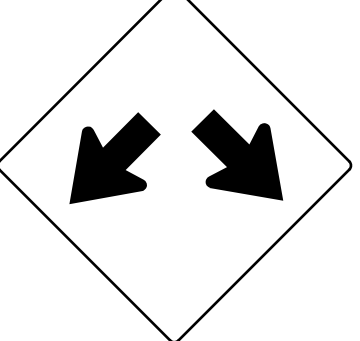
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24 X 30
R2-1

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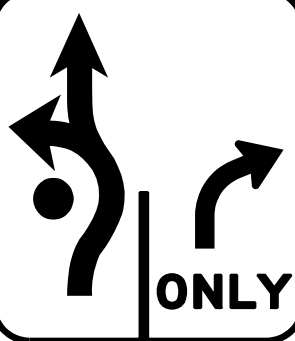
408 QUANTITY REQ'D 1



30 X 30
W12-1

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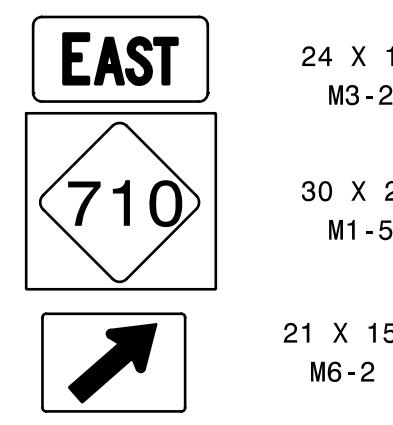
409 QUANTITY REQ'D 1



36 X 36
R3-8

ONE "U" POST PER SIGN

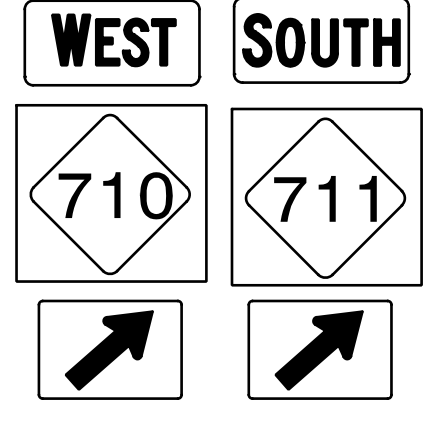
501



24 X 12 M3-2
30 X 24 M1-5
21 X 15 M6-2

ONE "U" POST PER ASSEMBLY

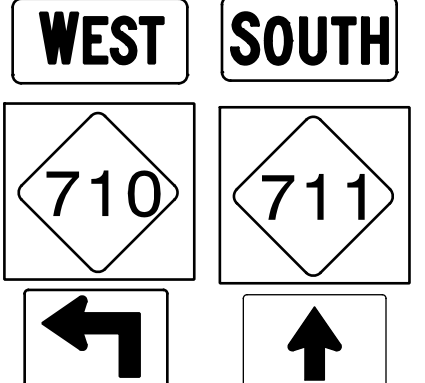
502



24 X 12 M3-4 24 X 12 M3-3
30 X 24 M1-5 30 X 24 M1-5
21 X 15 M6-2 21 X 15 M6-2

TWO "U" POSTS PER ASSEMBLY


503



24 X 12 M3-4 24 X 12 M3-3
30 X 24 M1-5 30 X 24 M1-5
21 X 15 M5-1 21 X 15 M6-3

TWO "U" POSTS PER ASSEMBLY

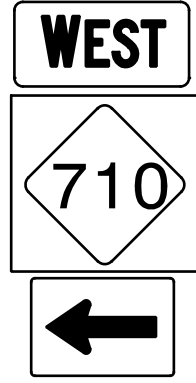
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24 X 12 M3-2
30 X 24 M1-5

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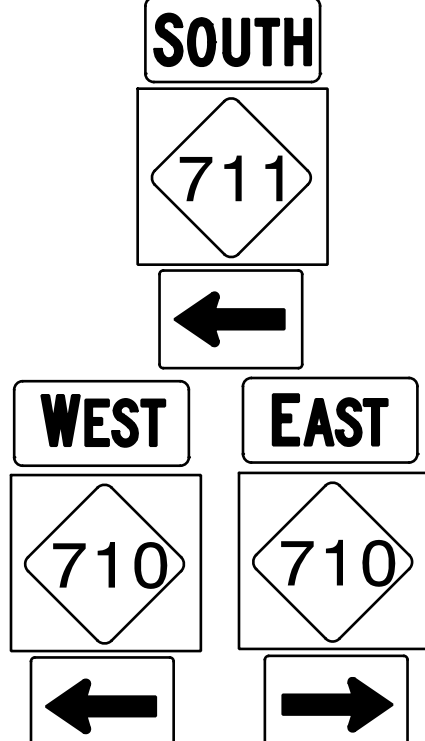
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30 X 24 M1-5
21 X 15 M6-1

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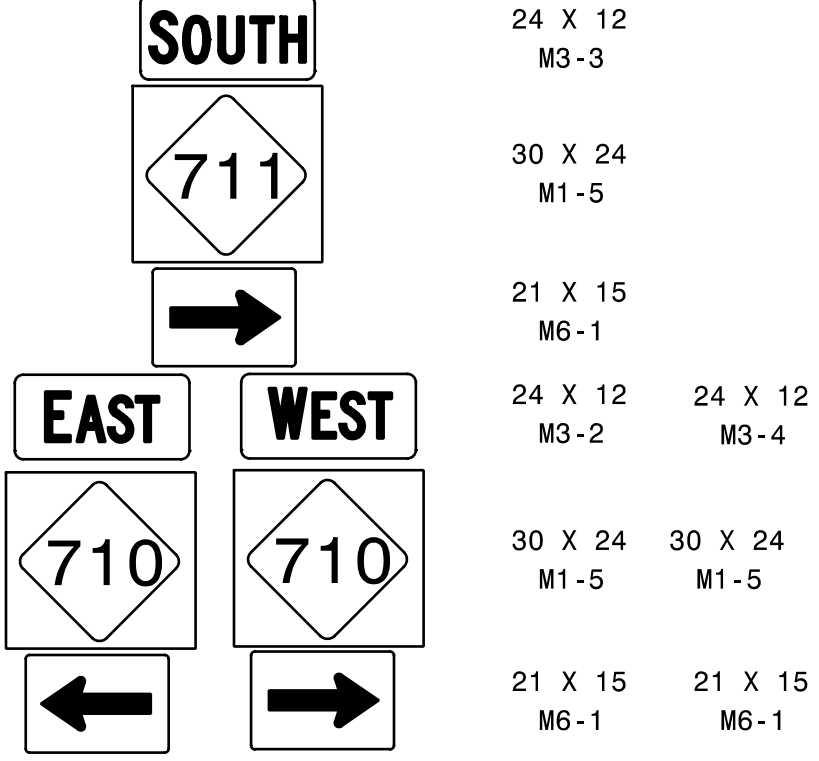
506



24 X 12 M3-3
30 X 24 M1-5
21 X 15 M6-1
24 X 12 M3-4 24 X 12 M3-2
30 X 24 M1-5 30 X 24 M1-5
21 X 15 M6-1 21 X 15 M6-1

TWO "U" POSTS PER ASSEMBLY

507

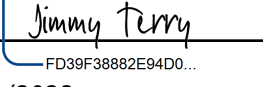
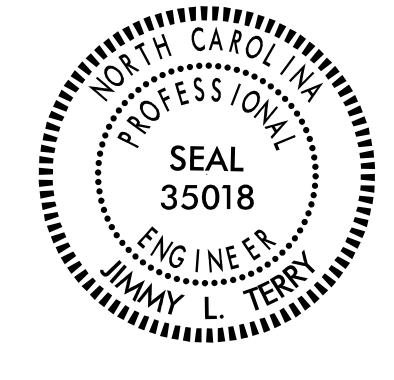


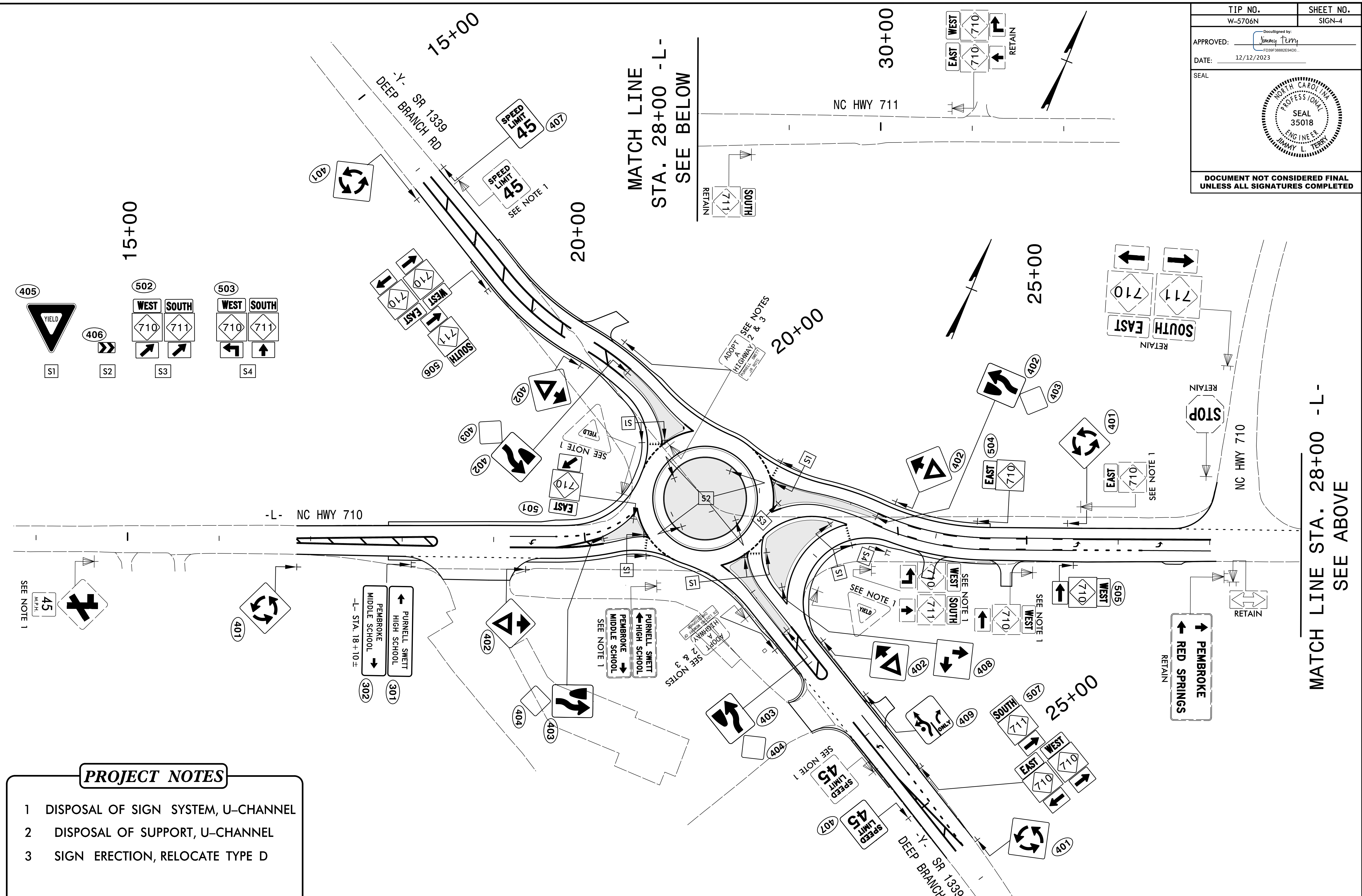
24 X 12 M3-3
30 X 24 M1-5
21 X 15 M6-1
24 X 12 M3-2 24 X 12 M3-4
30 X 24 M1-5 30 X 24 M1-5
21 X 15 M6-1 21 X 15 M6-1

TWO "U" POSTS PER ASSEMBLY

TYPE "E" & "F" SIGNS

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User:smelvrn

TIP NO. W-5706N	SHEET NO. SIGN-4
APPROVED:  FD39F3880E540D	
DATE: 12/12/2023	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- PROJECT NOTES**
- DISPOSAL OF SIGN SYSTEM, U-CHANNEL
 - DISPOSAL OF SUPPORT, U-CHANNEL
 - SIGN ERECTION, RELOCATE TYPE D

EXISTING & PROPOSED SIGNS

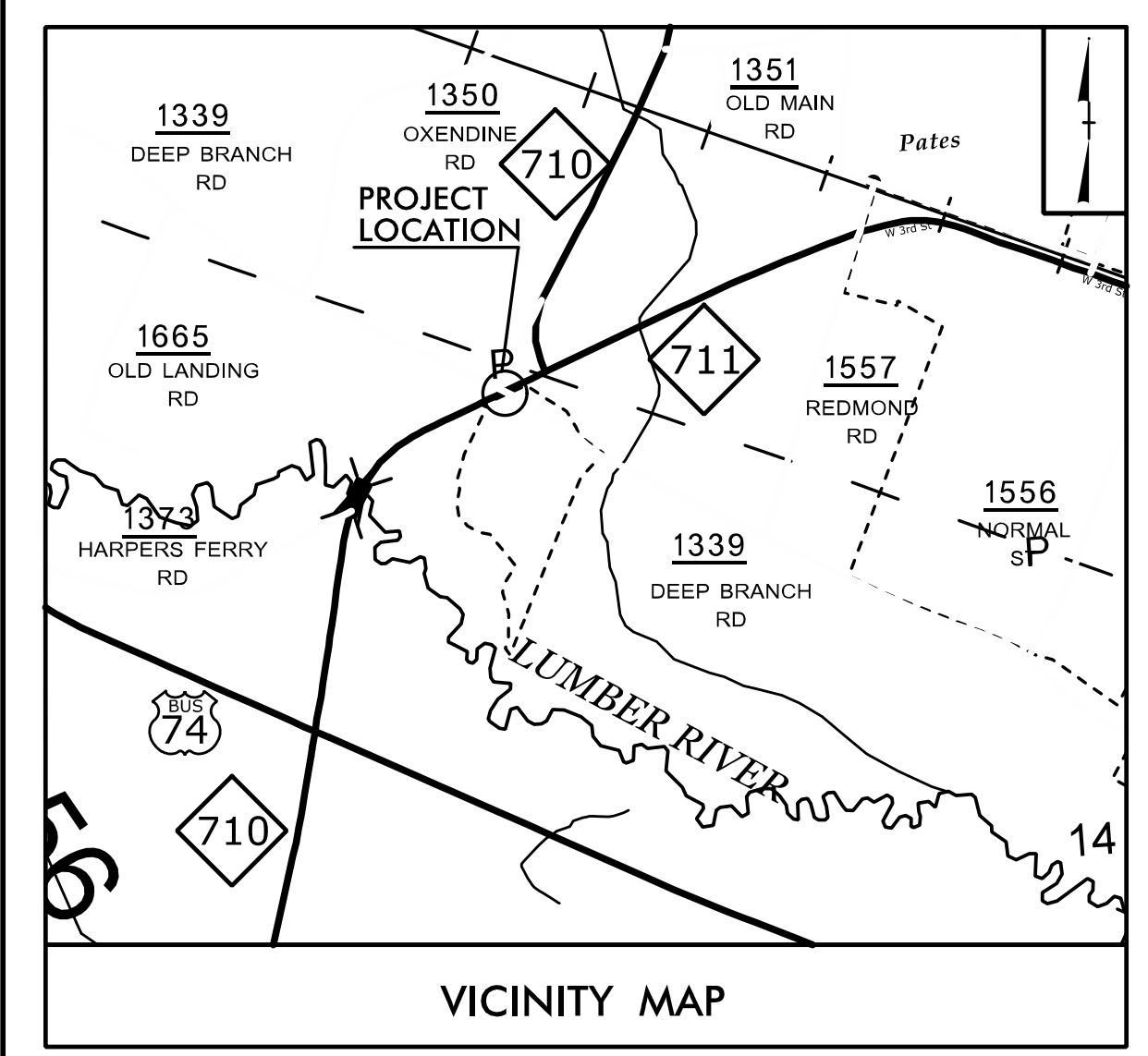
I:\3\2023\X:\NC6061\W-5706N\Traffic\Signing\CADD\Signing_Layout_Plans\W-5706N_Sgn_SGN_04.dgn
User:smelvin

MATCH LINE STA. 28+00 -L-
SEE ABOVE

MATCH LINE
STA. 28+00 -L-
SEE BELOW

09/28/2019

See Sheet 1A For Index of Sheets



TIP PROJECT: W-5706N

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

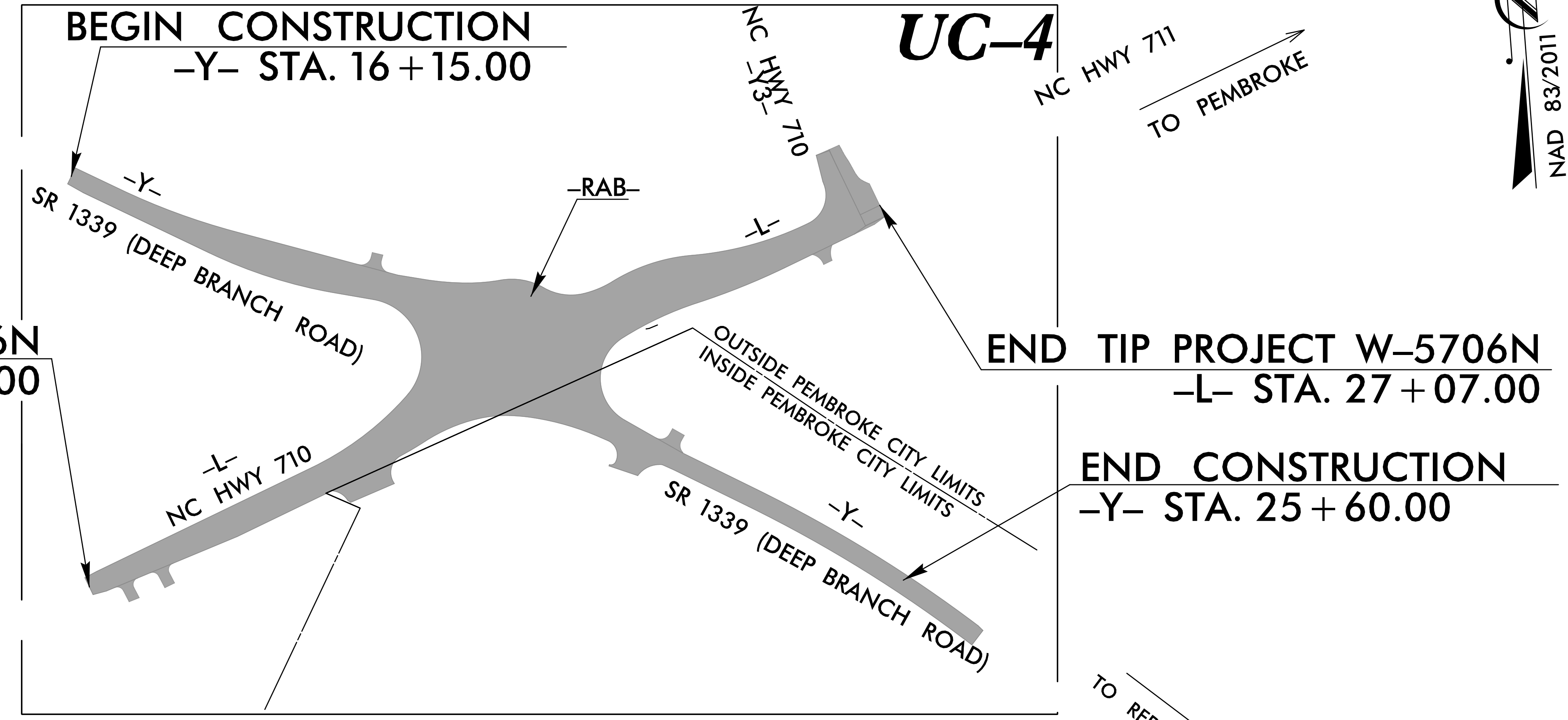
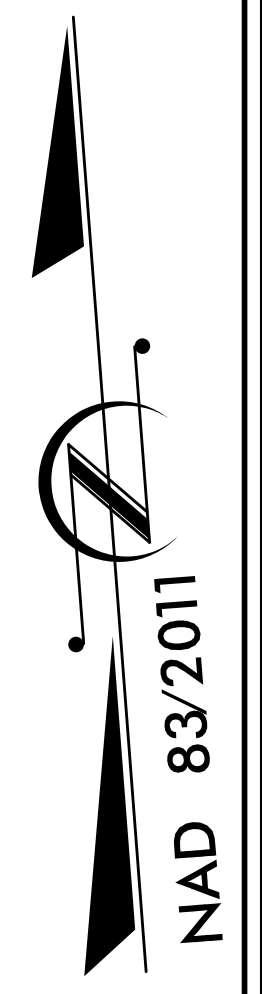
ROBESON COUNTY

LOCATION: INTERSECTION OF NC HIGHWAY 710 & SR 1339 (DEEP BRANCH ROAD)

TYPE OF WORK: WET UTILITIES RELOCATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5706N	UC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44852.114	N/A	PE	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



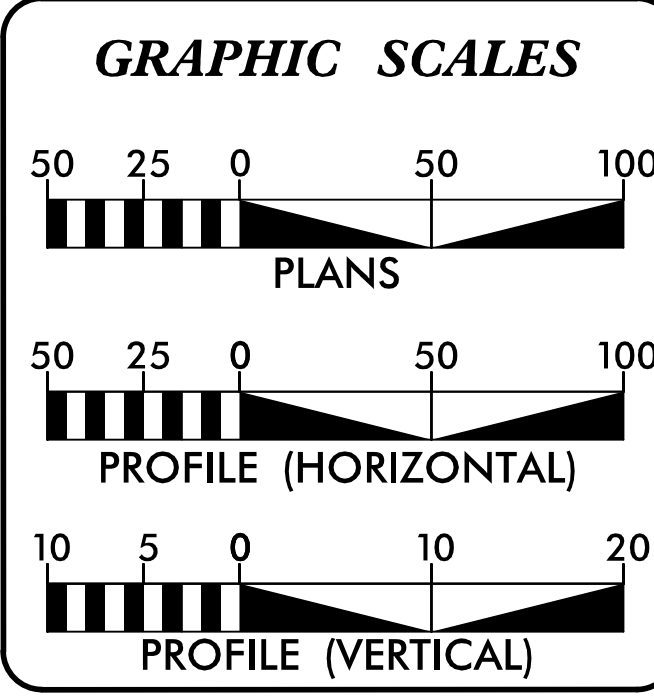
TO OXENDINE RD
(SR 1350)

TO PEMBROKE

TO NC HWY 74

TO REDMOND RD
(SR 1557)

CONTRACT:



INDEX OF SHEETS

UC-1	TITLE SHEET
UC-2	DETAIL SHEET
UC-3	UTILITY CONSTRUCTION PROFILE SHEET
UC-4	UTILITY CONSTRUCTION PLAN SHEET

WET UTILITY OWNERS ON PROJECT

A) ROBESON COUNTY PUBLIC UTILITIES
B) TOWN OF PEMBROKE

PROJECT LENGTH

LENGTH OF 8" WATER MAIN = 671 FT. (A)
LENGTH OF 6" FORCE MAIN = 35 FT. (B)

Prepared for:
NCDOT HIGHWAY DIVISION 6
558 GILLESPIE STREET, FAYETTEVILLE, NC 28301

By:
vhb VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

2018 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
NOVEMBER 30, 2021

LETTING DATE:
MARCH, 2024

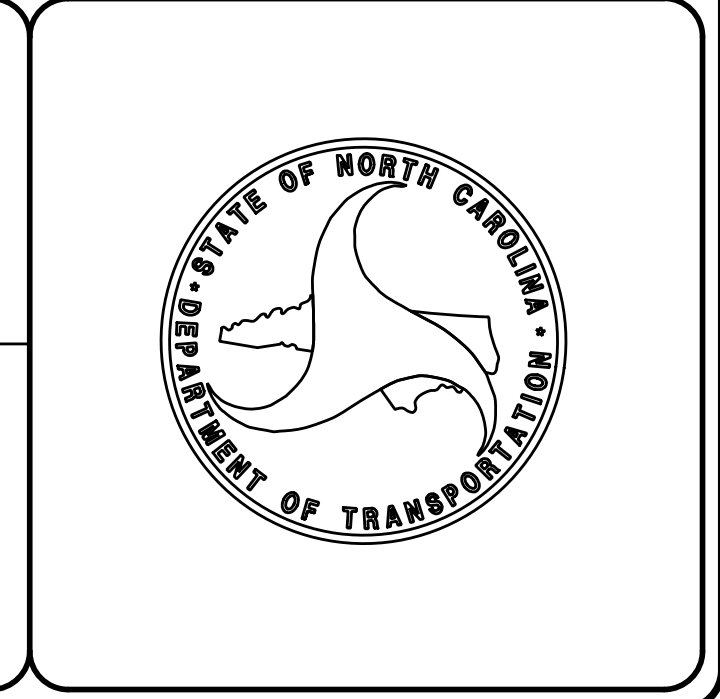
JOHN M. KAMPRATH, PE
PROJECT ENGINEER

JOHN GAUTHIER
DIVISION 6 DESIGN ENGINEER

UTILITIES ENGINEER

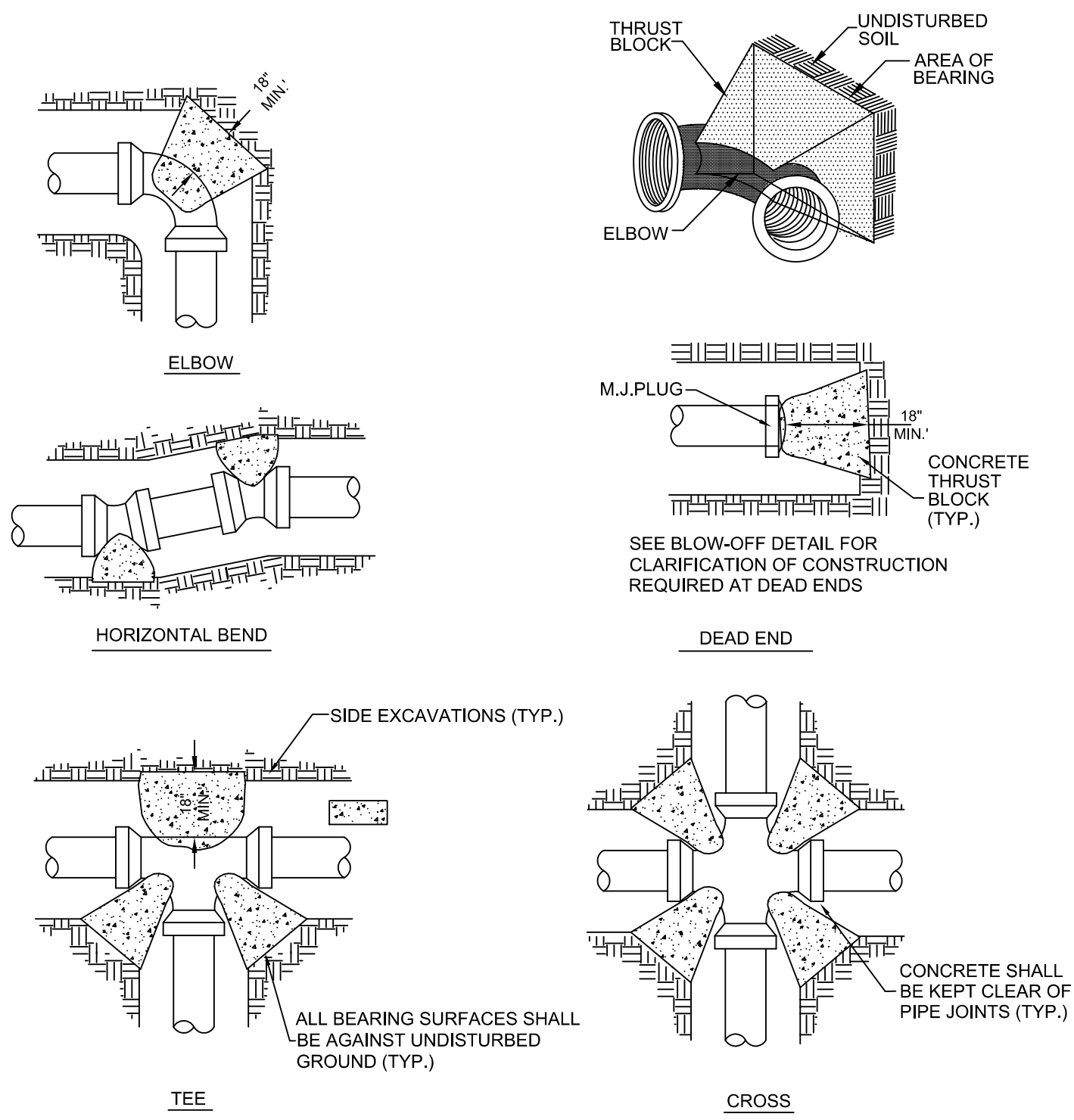
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8/17/99

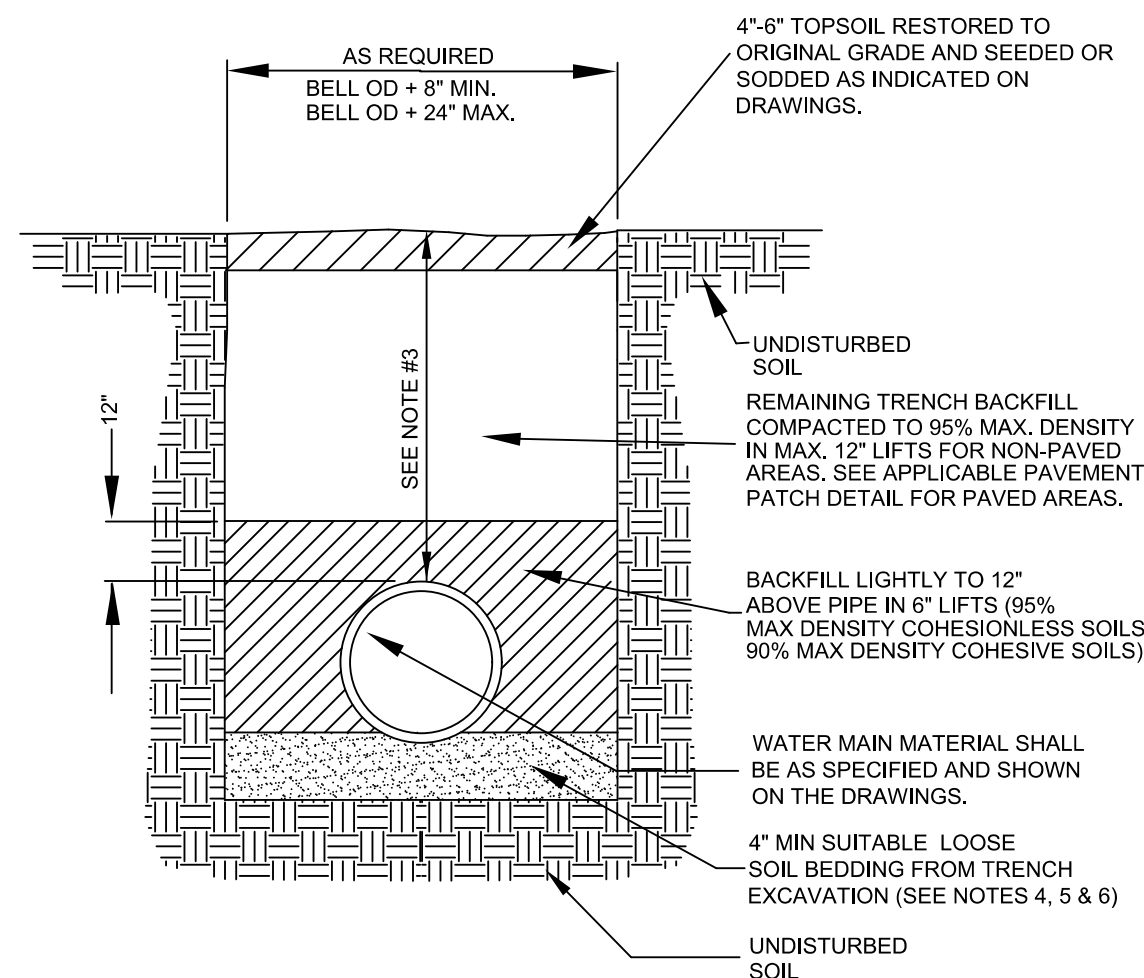


CONCRETE THRUST BLOCK DETAIL

FITTING SIZE (IN.)	THRUST BLOCKING SCHEDULE					
	MINIMUM BLOCKING AREA AND VOLUME IN S.F. AND (C.Y.)					
	11 1/4"	22 1/2"	45°	90°	TEE	PLUG
2			0.23 (0.11)	0.38 (0.11)	0.30 (0.11)	0.30 (0.11)
4			0.83 (0.18)	1.35 (0.18)	0.98 (0.18)	0.98 (0.18)
6	0.40 (0.01)	0.80 (0.02)	1.73 (0.20)	3.00 (0.33)	2.17 (0.25)	2.17 (0.25)
8	0.80 (0.02)	1.50 (0.04)	3.08 (0.34)	5.40 (0.60)	3.83 (0.42)	3.83 (0.42)
10	1.20 (0.03)	2.30 (0.07)	4.72 (0.52)	8.40 (0.94)	5.92 (0.66)	5.92 (0.66)
12	1.70 (0.05)	3.30 (0.12)	6.82 (0.75)	12.00 (1.33)	8.48 (0.94)	8.48 (0.94)
16	3.00 (0.33)	5.90 (0.65)	11.80 (0.86)	21.30 (1.57)	15.00 (0.97)	15.00 (0.97)
20	4.60 (0.52)	9.20 (0.76)	18.00 (1.32)	33.30 (3.60)	23.30 (1.87)	23.30 (1.87)
24	6.70 (0.75)	13.20 (0.97)	26.00 (2.28)	48.00 (5.29)	33.60 (3.24)	33.60 (3.24)
30	10.40 (0.77)	20.70 (1.80)	40.60 (4.45)	75.00 (10.30)	52.50 (6.32)	52.50 (6.32)
36	15.00 (1.28)	29.80 (3.11)	58.40 (7.67)	108.0 (17.90)	75.60 (10.90)	75.60 (10.90)

NOTE: Values given are based on 150 psi water pressure and 2000 lb/sf soil bearing capacity. Soils with less bearing capacity such as muck, peat or soft clay will require greater blocking areas and volumes.

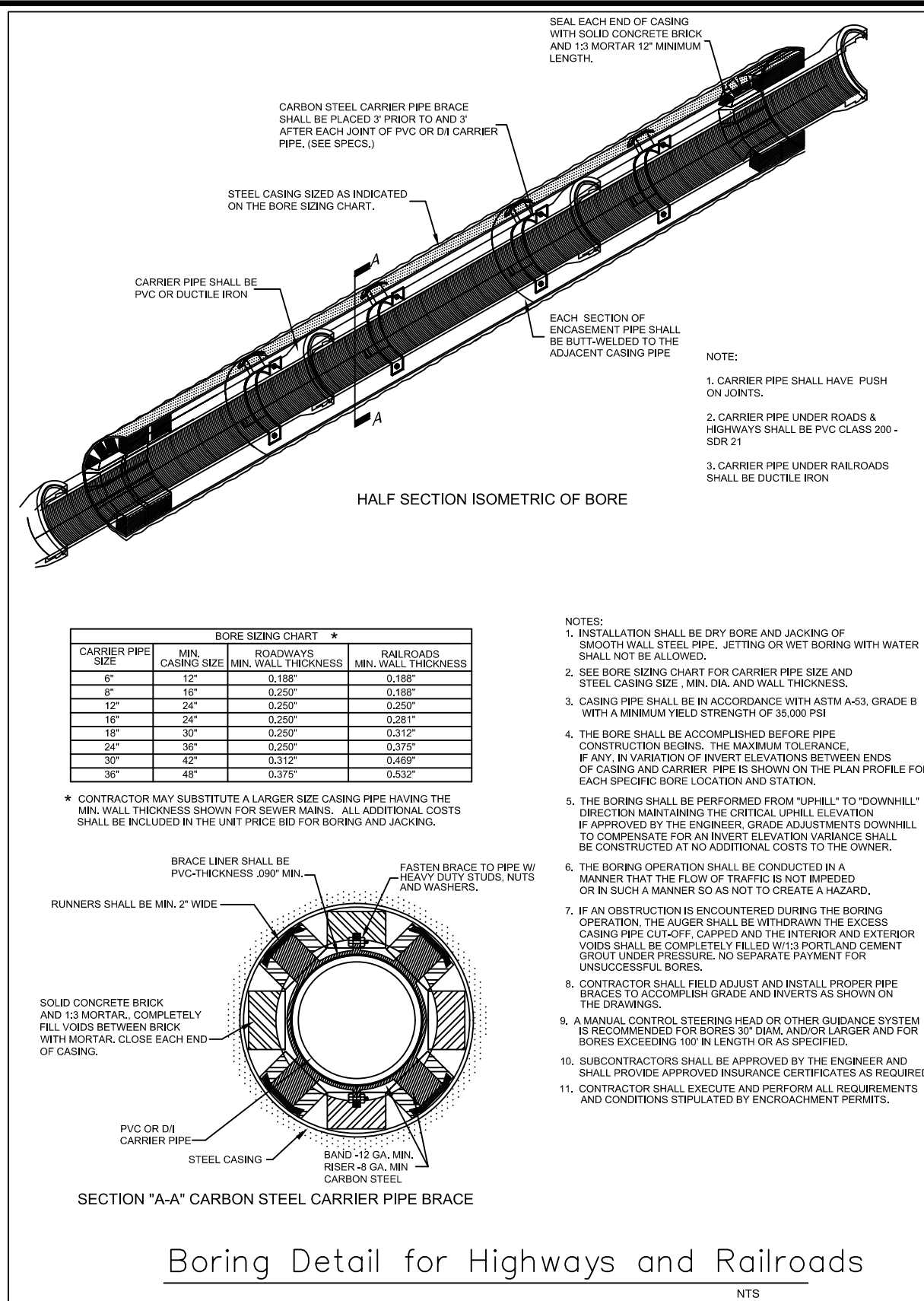
The thrust blocking shown above is based on the use of mechanical joint as shown on plans.



WATER MAIN BEDDING DETAIL

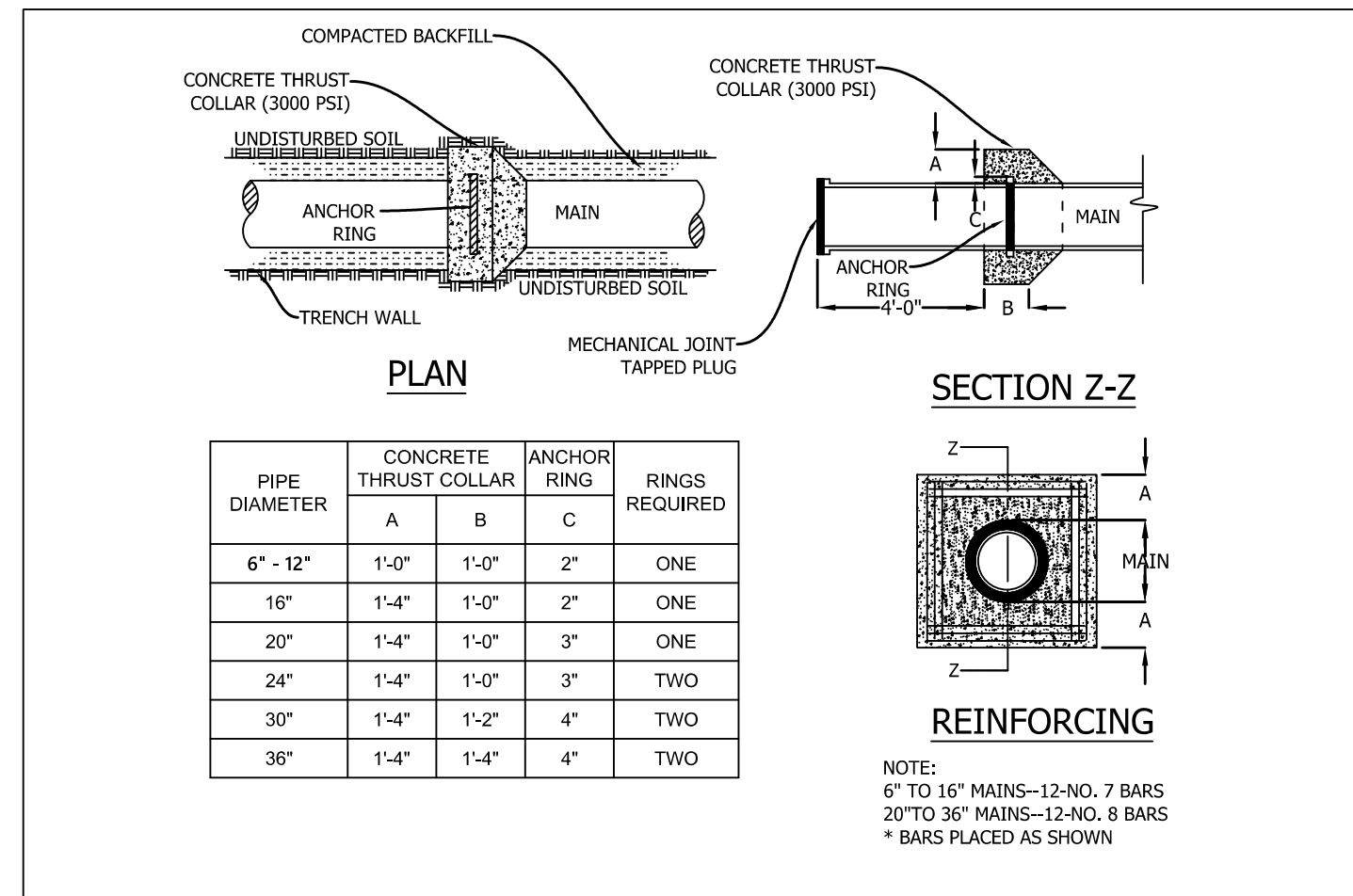
NTS

- NOTES:
- THRUST BLOCKS SHALL BE INSTALLED ON PVC WATER DISTRIBUTION LINES 6" THRU 12" DIA. IN THE MANNER SHOWN.
 - PIPE GREATER THAN 12 INCH DIAMETER SHALL REQUIRE RESTRAINT JOINT PIPE FOR THE PROPER LENGTH.
 - SAC-CRETE SHALL NOT BE ALLOWED.
 - NO CONCRETE SHALL BE PLACED ON BOLTS. WRAP JOINT FITTINGS WITH PLASTIC.
 - CONCRETE SHALL BE A MINIMUM 3,000 PSI.
 - ALL BEARING SURFACES SHALL BE AGAINST UNDISTURBED SOIL.



Boring Detail for Highways and Railroads

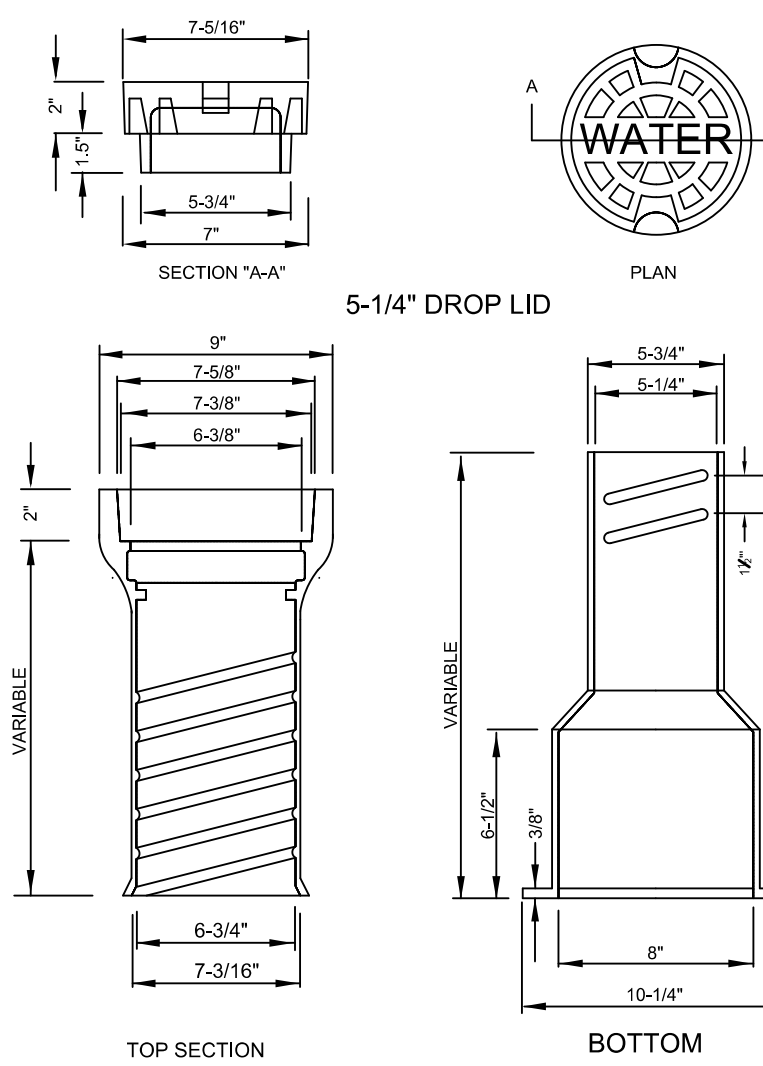
NTS



THRUST COLLAR INSTALLATION

N.T.S.

Source: VHB



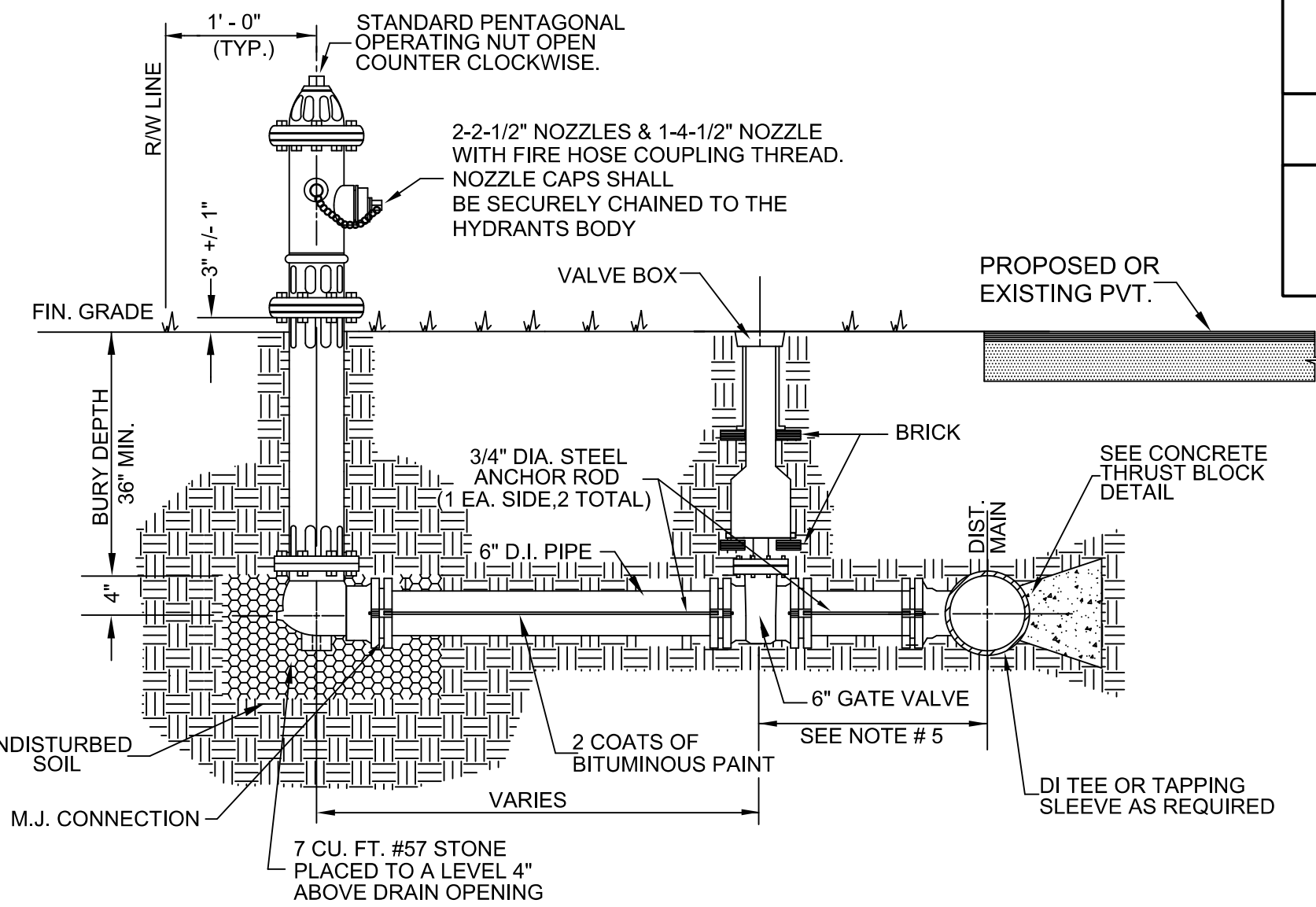
VALVE BOX

Valve Box Detail

NTS

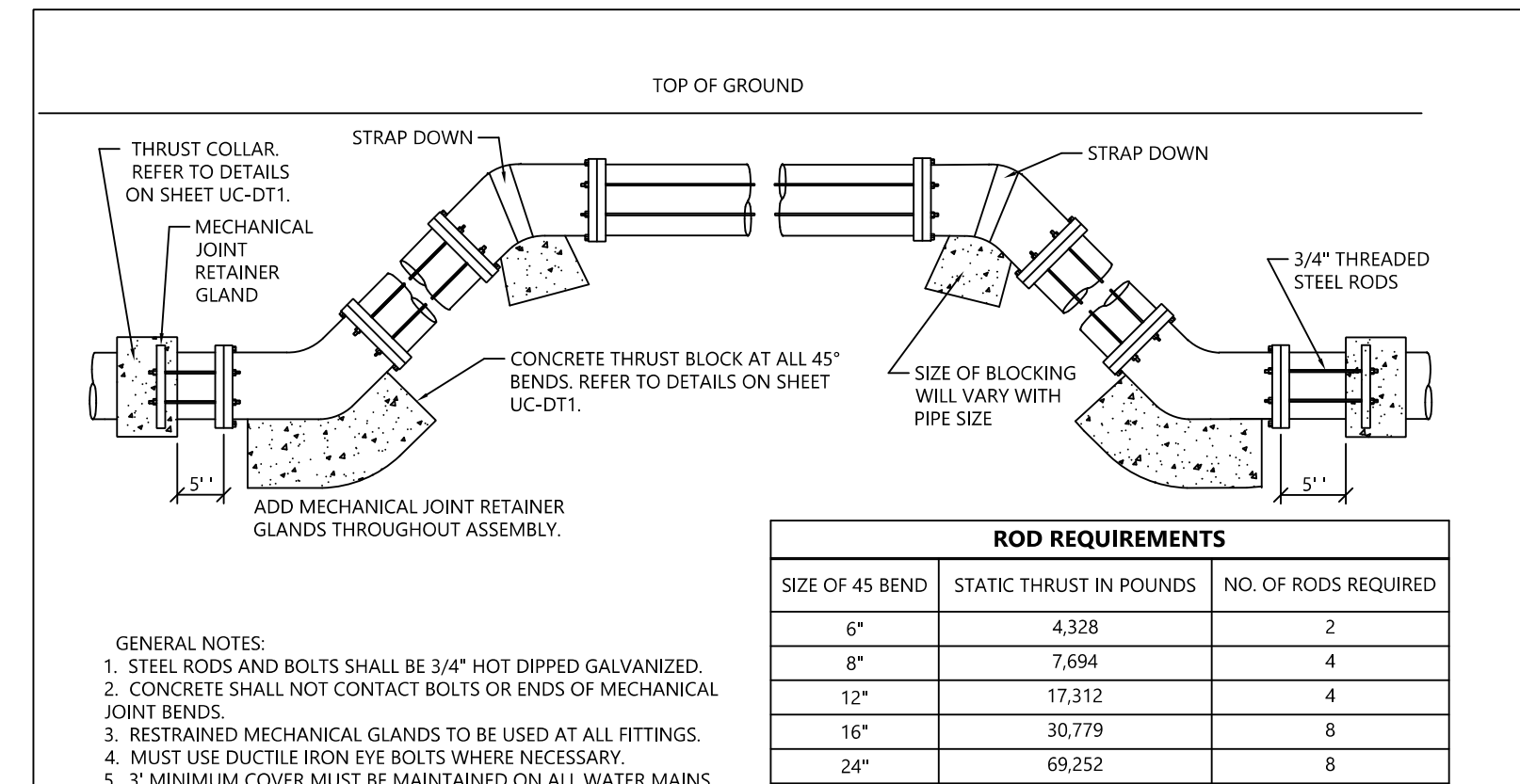
NOTES:

- ALL VALVES AND HYDRANTS SHALL HAVE M.J. CONNECTIONS WITH IRON RETAINING GLAND M.J. RESTRAINT OR ANCHOR LUGS AND 3/4" DIA. STEEL ANCHOR RODS.
- 3/4" DIA. STEEL RODS AND ALL BURIED SURFACES SHALL BE PAINTED WITH 2 COATS OF BITUMINOUS PAINT. MARRED OR SCRATCHED SURFACES SHALL BE REPAINTED. PAINT SHALL CURE PRIOR TO BACK FILLING TRENCH.
- FIRE HYDRANTS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
- HYDRANT BRANCH SHALL NOT BE BACK FILLED UNTIL INSPECTED AND APPROVED BY ENGINEER.
- HYDRANT EXTENSIONS SHALL BE APPROVED BY ENGINEER.



HYDRANT DETAIL

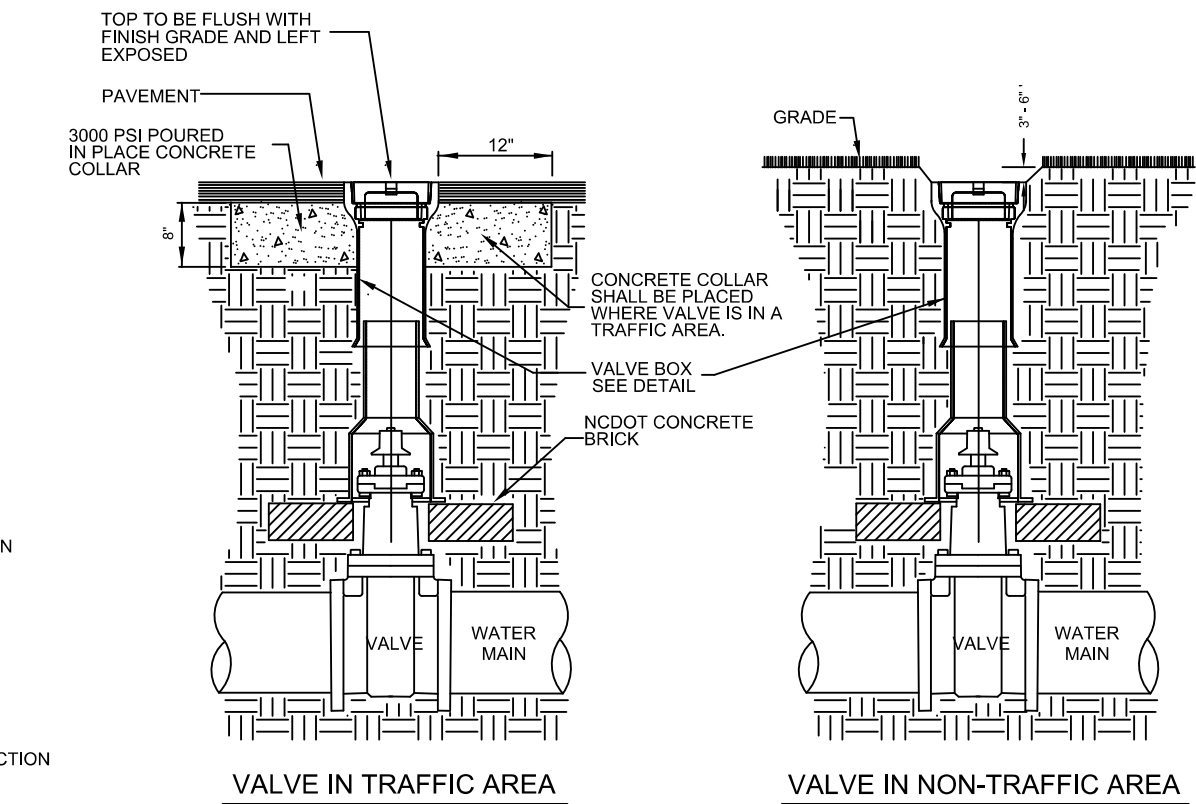
NTS



STANDARD VERTICAL BEND

N.T.S.

Source: VHB



VALVE IN TRAFFIC AREA

VALVE IN NON-TRAFFIC AREA

5/9

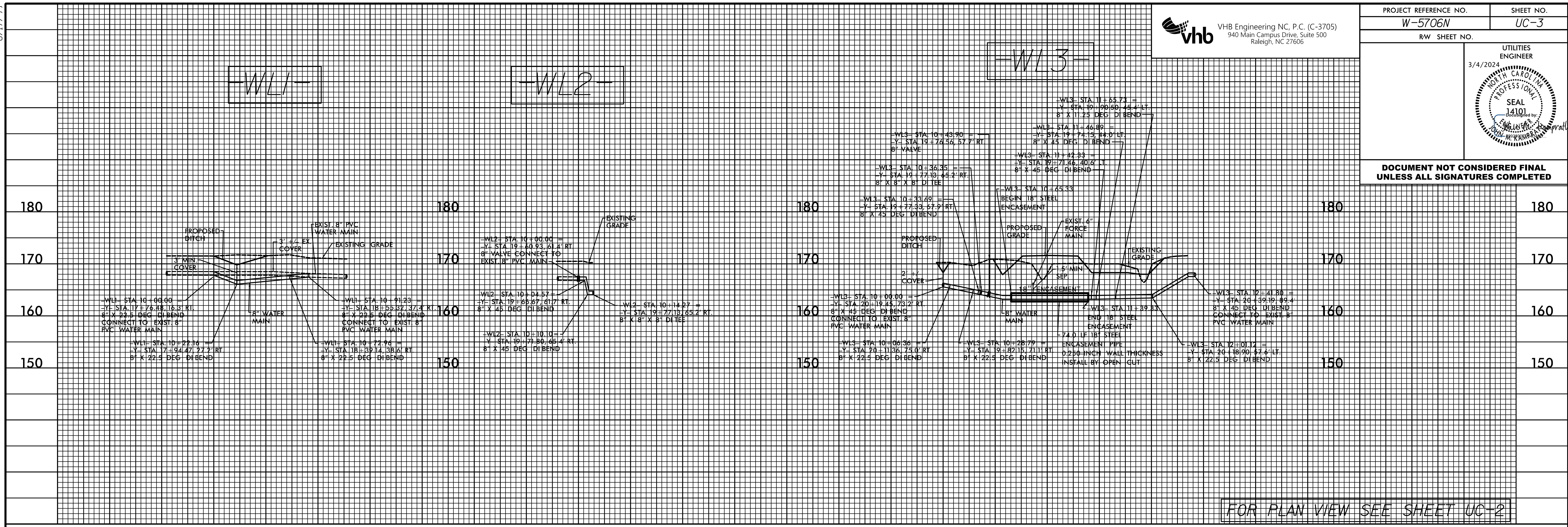
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RW SHEET NO.	
UTILITIES ENGINEER	
1/31/2024	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

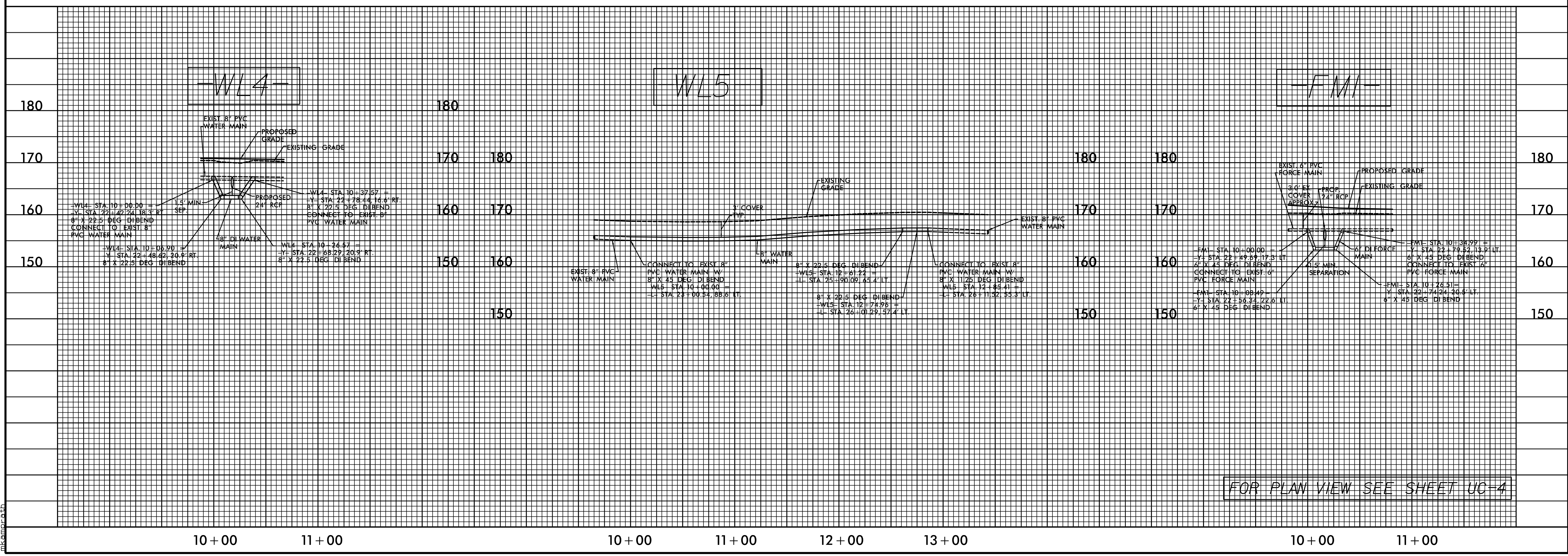
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mkamcarath

8.17.19

PROJECT REFERENCE NO. W-5706N	SHEET NO. UC-3
RW SHEET NO.	
UTILITIES ENGINEER 3/4/2024 SEAL 14101 PROFESSIONAL SEAL	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FOR PLAN VIEW SEE SHEET UC-2




FOR PLAN VIEW SEE SHEET UC-4

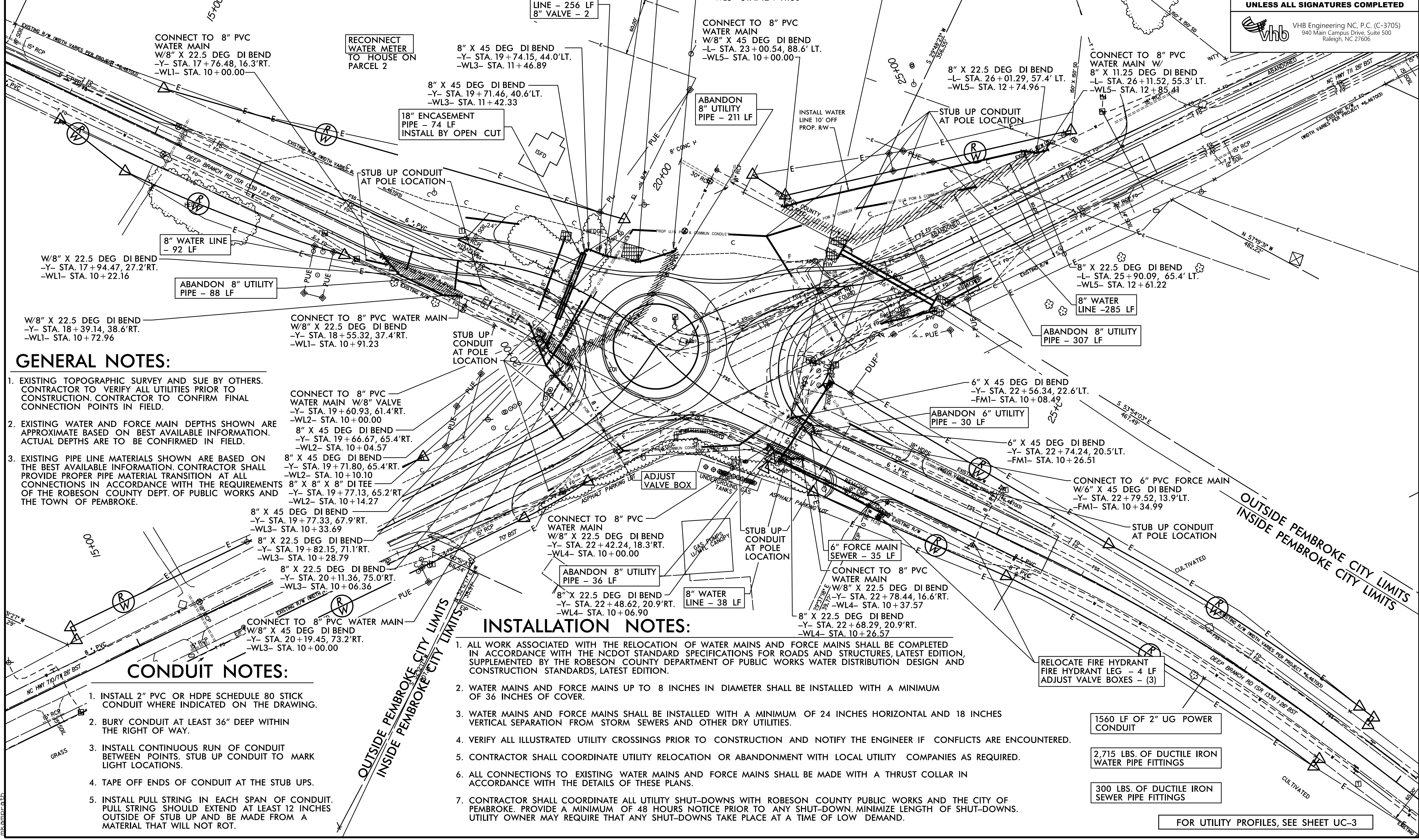
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8/17/99
8/5/06 AM
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mhammond

LEGEND

EXIST. WATER MAIN TO REMAIN	---
EXIST. FORCE MAIN TO REMAIN	---
EXIST. WATER MAIN OR FORCE MAIN TO BE ABANDONED	////
PROPOSED WATER MAIN	— 8" WL —
PROPOSED FORCE MAIN	— 6" FMS —
PROPOSED UG POWER CONDUIT	— PROP U/G POW & COMMUN CONDUIT —

PROJECT REFERENCE NO. W-5706N	SHEET NO. UC-4
RW SHEET NO.	
UTILITIES ENGINEER 3/31/2024 NORTH CAROLINA PROFESSIONAL SEAL 74104 JOHN M. KAMP	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	



GENERAL NOTES:

- EXISTING TOPOGRAPHIC SURVEY AND SUE BY OTHERS. CONTRACTOR TO VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM FINAL CONNECTION POINTS IN FIELD.
- EXISTING WATER AND FORCE MAIN DEPTHS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION. ACTUAL DEPTHS ARE TO BE CONFIRMED IN FIELD.
- EXISTING PIPE LINE MATERIALS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL PROVIDE PROPER PIPE MATERIAL TRANSITION AT ALL CONNECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ROBESON COUNTY DEPT. OF PUBLIC WORKS AND THE TOWN OF PEMBROKE.

CONDUIT NOTES:

- INSTALL 2" PVC OR HDPE SCHEDULE 80 STICK CONDUIT WHERE INDICATED ON THE DRAWING.
- BURY CONDUIT AT LEAST 36" DEEP WITHIN THE RIGHT OF WAY.
- INSTALL CONTINUOUS RUN OF CONDUIT BETWEEN POINTS. STUB UP CONDUIT TO MARK LIGHT LOCATIONS.
- TAPE OFF ENDS OF CONDUIT AT THE STUB UPS.
- INSTALL PULL STRING IN EACH SPAN OF CONDUIT. PULL STRING SHOULD EXTEND AT LEAST 12 INCHES OUTSIDE OF STUB UP AND BE MADE FROM A MATERIAL THAT WILL NOT ROT.

INSTALLATION NOTES:

- ALL WORK ASSOCIATED WITH THE RELOCATION OF WATER MAINS AND FORCE MAINS SHALL BE COMPLETED IN ACCORDANCE WITH THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, LATEST EDITION, SUPPLEMENTED BY THE ROBESON COUNTY DEPARTMENT OF PUBLIC WORKS WATER DISTRIBUTION DESIGN AND CONSTRUCTION STANDARDS, LATEST EDITION.
- WATER MAINS AND FORCE MAINS UP TO 8 INCHES IN DIAMETER SHALL BE INSTALLED WITH A MINIMUM OF 36 INCHES OF COVER.
- WATER MAINS AND FORCE MAINS SHALL BE INSTALLED WITH A MINIMUM OF 24 INCHES HORIZONTAL AND 18 INCHES VERTICAL SEPARATION FROM STORM SEWERS AND OTHER DRY UTILITIES.
- VERIFY ALL ILLUSTRATED UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IF CONFLICTS ARE ENCOUNTERED.
- CONTRACTOR SHALL COORDINATE UTILITY RELOCATION OR ABANDONMENT WITH LOCAL UTILITY COMPANIES AS REQUIRED.
- ALL CONNECTIONS TO EXISTING WATER MAINS AND FORCE MAINS SHALL BE MADE WITH A THRUST COLLAR IN ACCORDANCE WITH THE DETAILS OF THESE PLANS.
- CONTRACTOR SHALL COORDINATE ALL UTILITY SHUT-DOWNS WITH ROBESON COUNTY PUBLIC WORKS AND THE CITY OF PEMBROKE. PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY SHUT-DOWN. MINIMUM LENGTH OF SHUT-DOWNS. UTILITY OWNER MAY REQUIRE THAT ANY SHUT-DOWNS TAKE PLACE AT A TIME OF LOW DEMAND.

RELOCATE FIRE HYDRANT
FIRE HYDRANT LEG - 4 LF
ADJUST VALVE BOXES - (3)

1560 LF OF 2" UG POWER CONDUIT

2,715 LBS. OF DUCTILE IRON WATER PIPE FITTINGS

300 LBS. OF DUCTILE IRON SEWER PIPE FITTINGS

FOR UTILITY PROFILES, SEE SHEET UC-3

OUTSIDE PEMBROKE CITY LIMITS
INSIDE PEMBROKE CITY LIMITS

OUTSIDE PEMBROKE CITY LIMITS
INSIDE PEMBROKE CITY LIMITS

09/08/99

TIP PROJECT: W-5706N

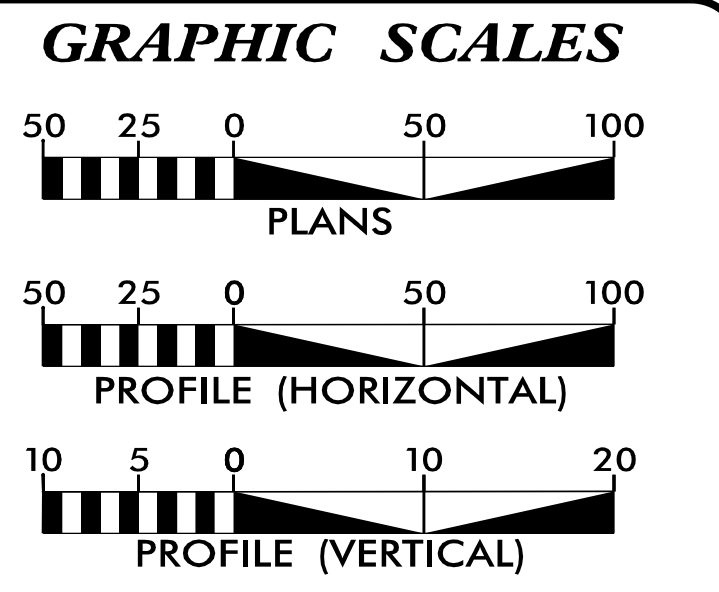
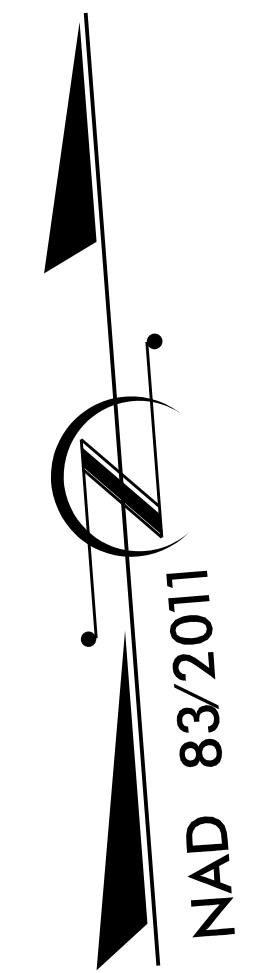
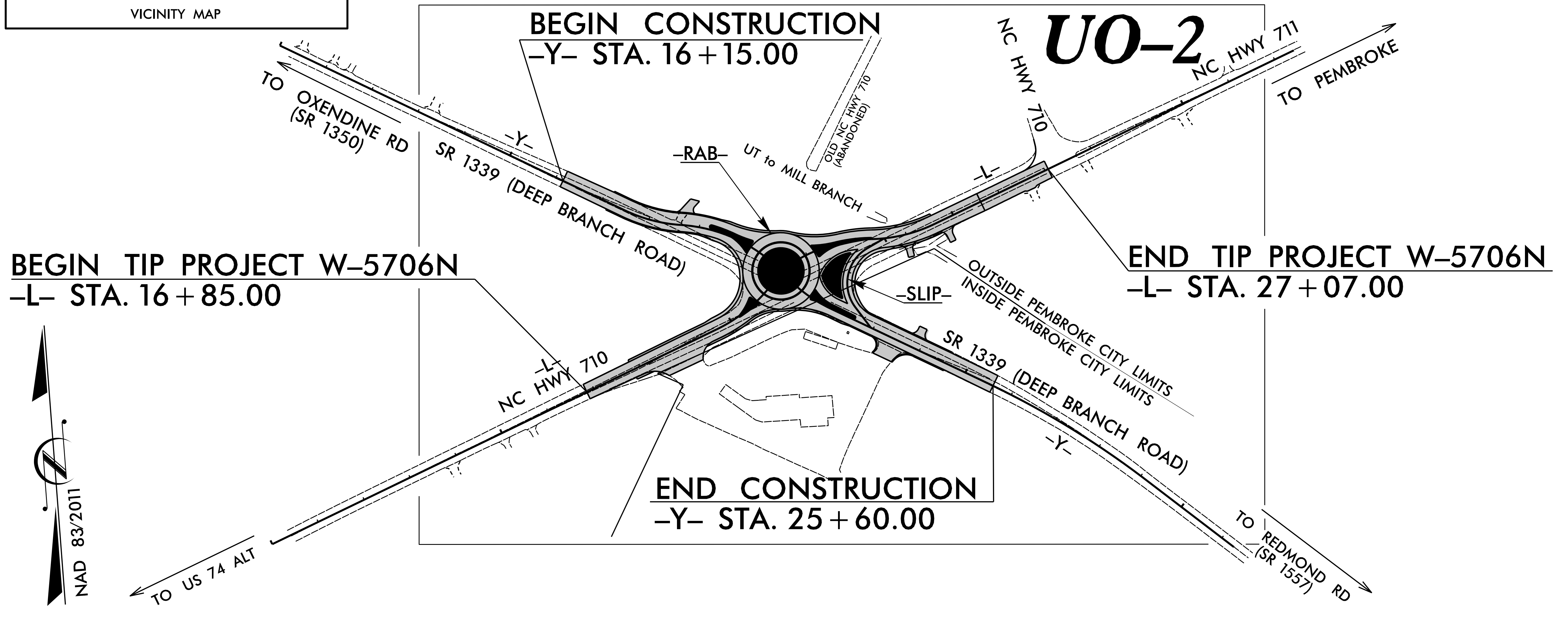
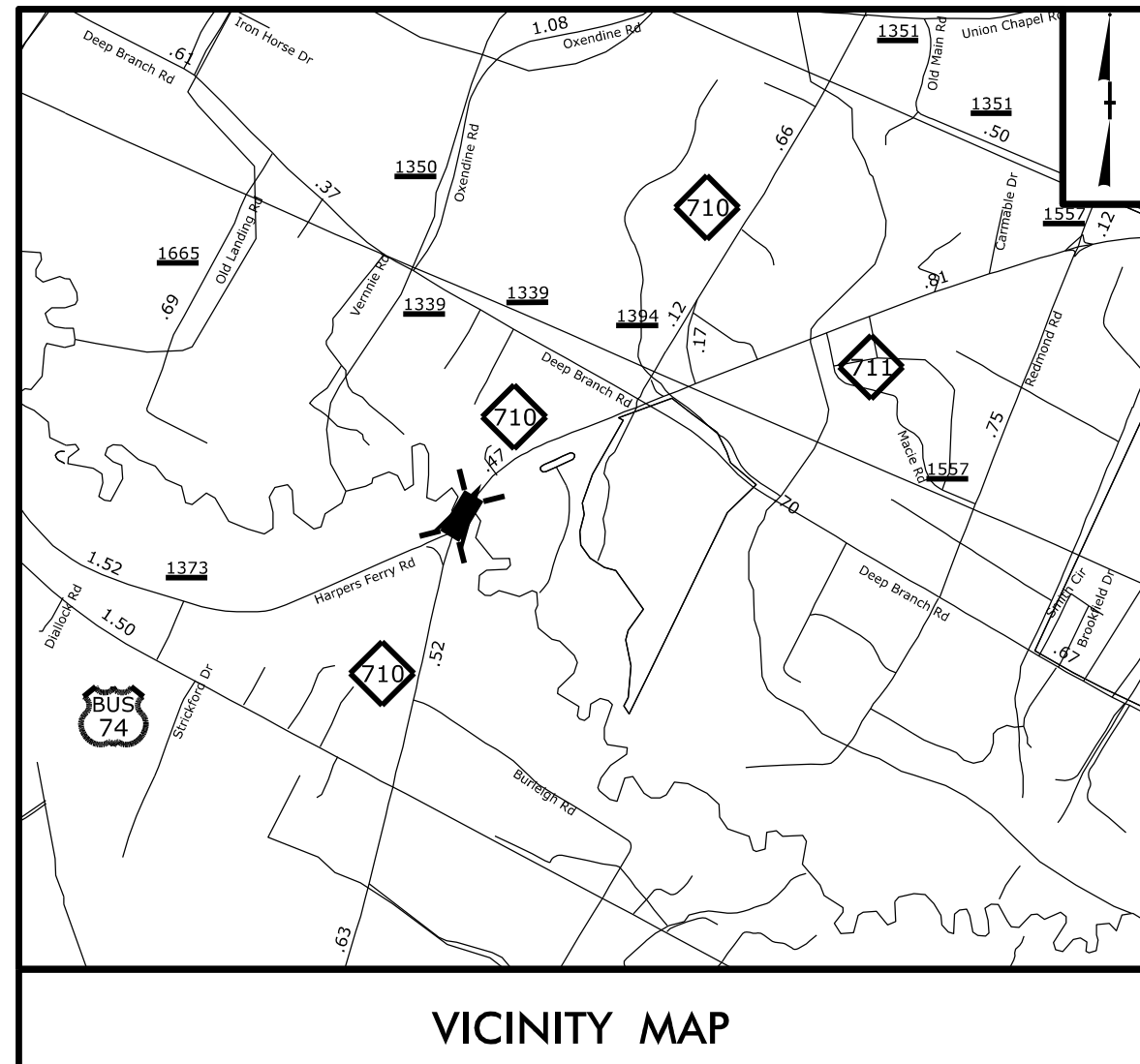
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
W-5706N	UO-1

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

UTILITIES BY OTHERS PLANS ROBESON COUNTY

LOCATION: INTERSECTION OF NC HIGHWAY 710 & SR 1339
 (DEEP BRANCH RD)
 TYPE OF WORK: POWER (DISTRIBUTION) & COMMUNICATIONS



INDEX OF SHEETS

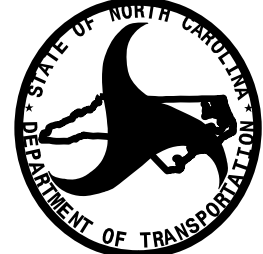
SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEET

- UTILITY OWNERS WITH CONFLICTS**
- (A) POWER DISTRIBUTION-DUKE ENERGY
 - (B) COMMUNICATIONS-AT&T
 - (C) COMMUNICATIONS-LUMBEE ELECTRIC FIBER
 - (D) COMMUNICATIONS-CHARTER
 - (E) COMMUNICATIONS-MCNC

PREPARED IN THE OFFICE OF:

SAM™
 2641 SUMNER BOULEVARD
 SUIT 116
 RALEIGH, NC 27616
 (919) 878-7466

FREDDIE BUNN UTILITY PROJECT MANAGER
 PAT JONES PROJECT UTILITY COORDINATOR

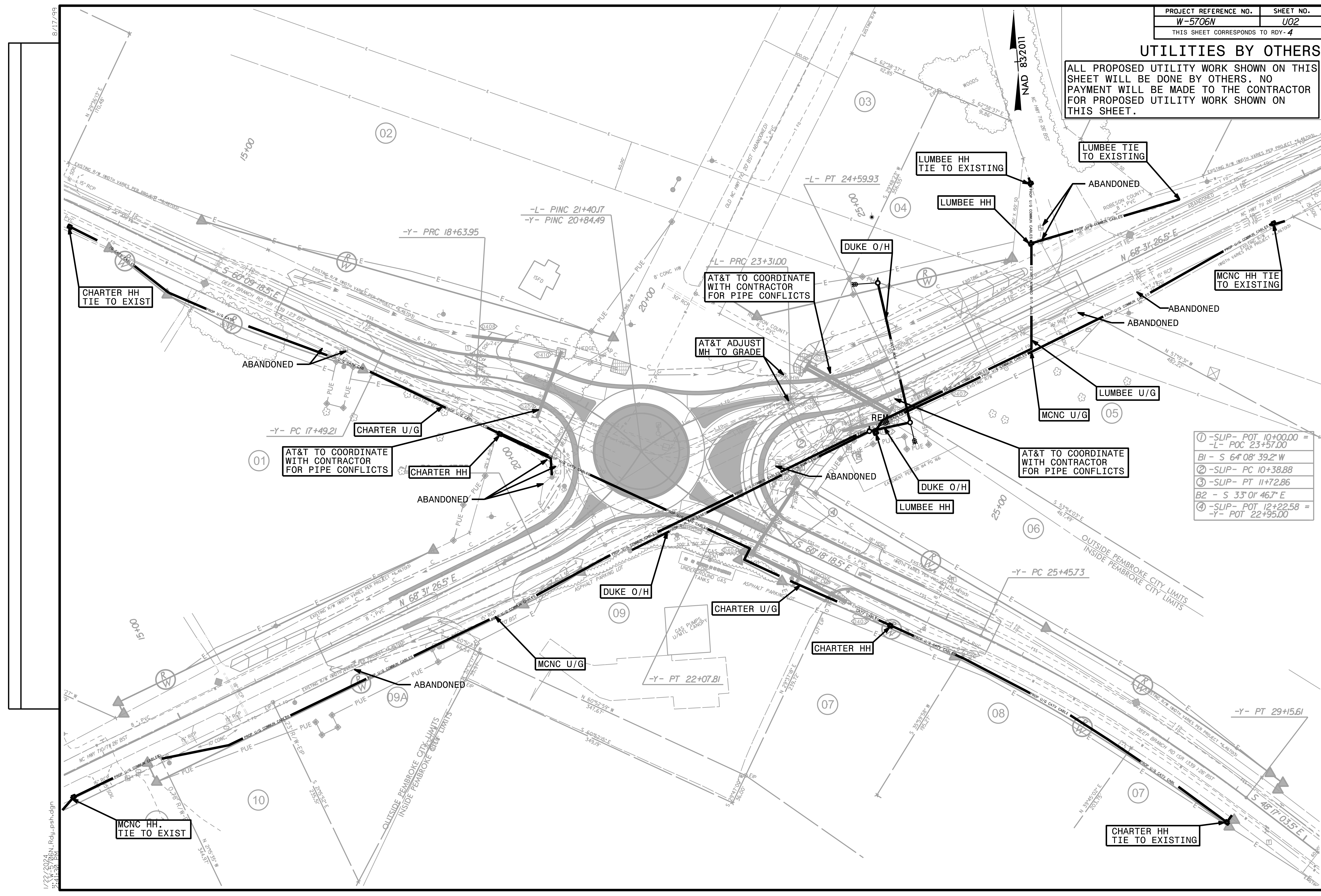


DIVISION OF HIGHWAYS
 DIVISION 6
 558 GILLESPIE ST, 28301
 FAYETTEVILLE, NC

RICK HANDLIN DIVISION UTILITY ENGINEER
 RICK BOUNDS DIVISION UTILITY COORD.

UTILITIES BY OTHERS

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



CHARTER HH TIE TO EXIST

ABANDONED

AT&T TO COORDINATE WITH CONTRACTOR FOR PIPE CONFLICTS

CHARTER HH

ABANDONED

DUKE O/H

CHARTER U/G

MCNC U/G

ABANDONED

AT&T TO COORDINATE WITH CONTRACTOR FOR PIPE CONFLICTS

AT&T ADJUST MH TO GRADE

DUKE O/H

LUMBEE HH TIE TO EXISTING

LUMBEE HH

LUMBEE TIE TO EXISTING

ABANDONED

MCNC HH TIE TO EXISTING

ABANDONED

LUMBEE U/G

MCNC U/G

AT&T TO COORDINATE WITH CONTRACTOR FOR PIPE CONFLICTS

DUKE O/H

LUMBEE HH

ABANDONED

CHARTER HH

MCNC HH. TIE TO EXIST

CHARTER HH TIE TO EXISTING

①	-SLIP- POT 10+00.00 =
	-L- POC 23+57.00
	B1 - S 64°08'39.2" W
②	-SLIP- PC 10+38.88
③	-SLIP- PT 11+72.86
	B2 - S 33°01'46.7" E
④	-SLIP- POT 12+22.58 =
	-Y- POT 22+95.00

8/17/99
 1/22/2024
 W-5706N-Rdy_psh.dgn
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8/17/99

REVISIONS

W-5706N CROSS-SECTION INDEX

X - INDEX	X - 1A
EARTHWORK VOLUME SUMMARY	X - 1B
- L -	X - 1 THRU X - 4
- Y -	X - 5 THRU X - 7
- SLIP -	X - 8
- RAB -	X - 9

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 X:\NCB01_W-5706N_Roadway\XSC\W-5706N_Rdy_xpl_Index.dgn
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PROJ. REFERENCE NO.	SHEET NO.
W-5706N	X-1B

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

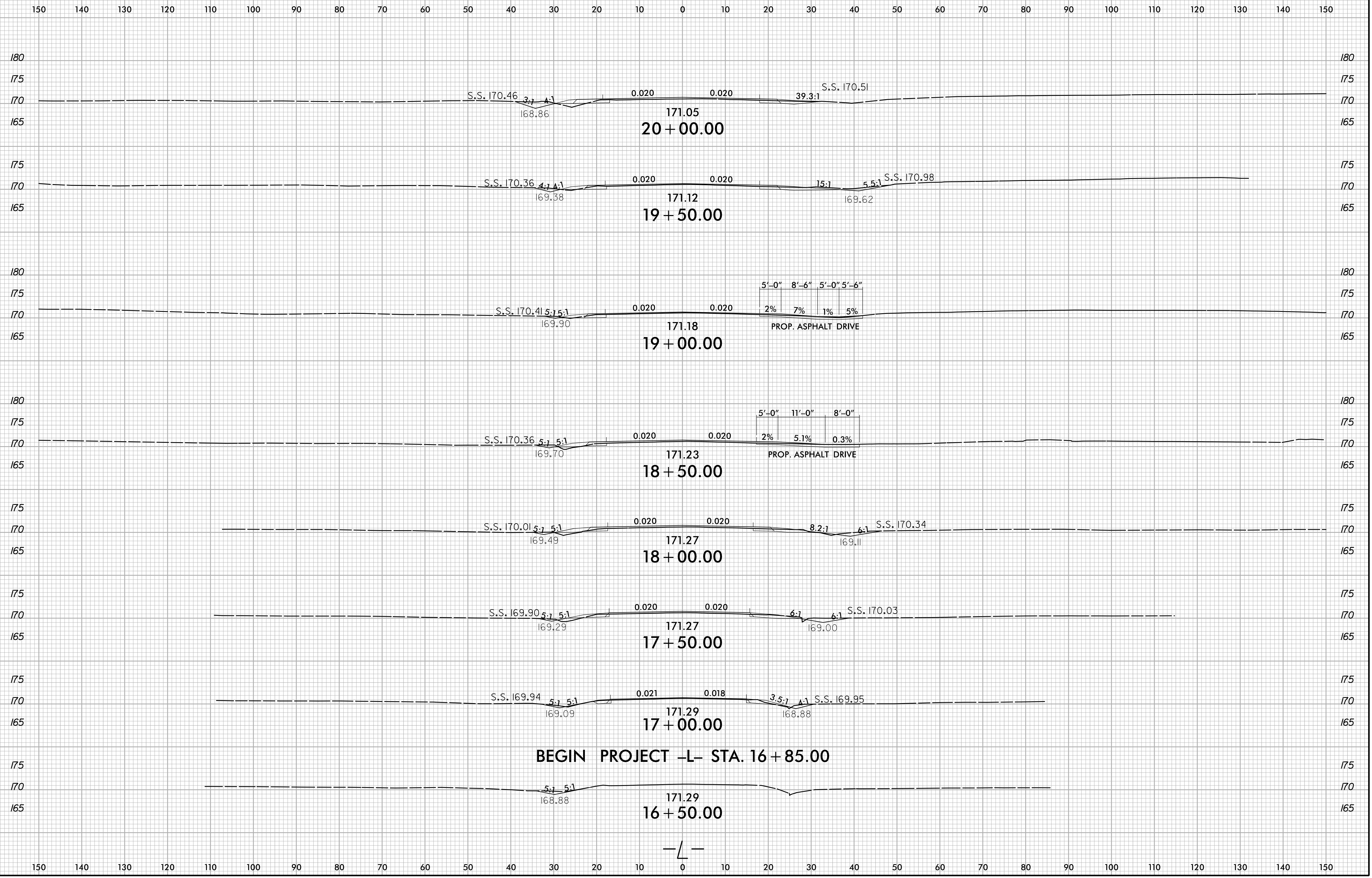
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDES BACKFILL FOR UNDERCUT

CROSS-SECTION SUMMARY

Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt
L	(cu. yd.)	(cu. yd.)	Y	(cu. yd.)	(cu. yd.)
16+85.00	0	0	25+50.00	21	1
17+00.00	3	1	25+60.00	1	0
17+50.00	25	4			
18+00.00	30	6	Station	Uncl. Exc.	Embt
18+50.00	29	4	Rab	(cu. yd.)	(cu. yd.)
19+00.00	30	1	0+00.00	0	0
19+50.00	36	0	0+74.33	104	328
20+00.00	37	3	2+98.31	195	983
20+50.00	40	3	4+13.44	31	513
20+64.97	14	0	4+71.24	46	259
Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt
L	(cu. yd.)	(cu. yd.)	Slip	(cu. yd.)	(cu. yd.)
22+15.37	0	0	10+39.72	0	0
22+50.00	47	55	10+75.00	10	0
23+00.00	34	84	11+00.00	5	0
23+50.00	11	78	11+25.00	2	0
24+00.00	105	43	11+50.00	0	0
24+50.00	181	40	11+72.39	0	0
24+75.00	92	16			
25+00.00	103	5			
25+50.00	212	10			
26+00.00	152	0			
26+50.00	49	0			
27+07.00	0	0			
Station	Uncl. Exc.	Embt			
Y	(cu. yd.)	(cu. yd.)			
16+15.00	0	0			
16+50.00	9	2			
17+00.00	38	10			
17+50.00	63	18			
18+00.00	88	33			
18+50.00	130	39			
18+70.00	49	8			
19+00.00	79	24			
19+50.00	172	85			
20+00.00	153	106			
20+09.29	25	22			
Station	Uncl. Exc.	Embt			
Y	(cu. yd.)	(cu. yd.)			
21+59.68	0	0			
22+00.00	6	0			
22+50.00	9	0			
23+00.00	49	4			
23+50.00	74	4			
24+00.00	55	0			
24+50.00	42	3			
25+00.00	33	4			

Approximate quantities only. Unclassified excavation, borrow excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price for "Grading".

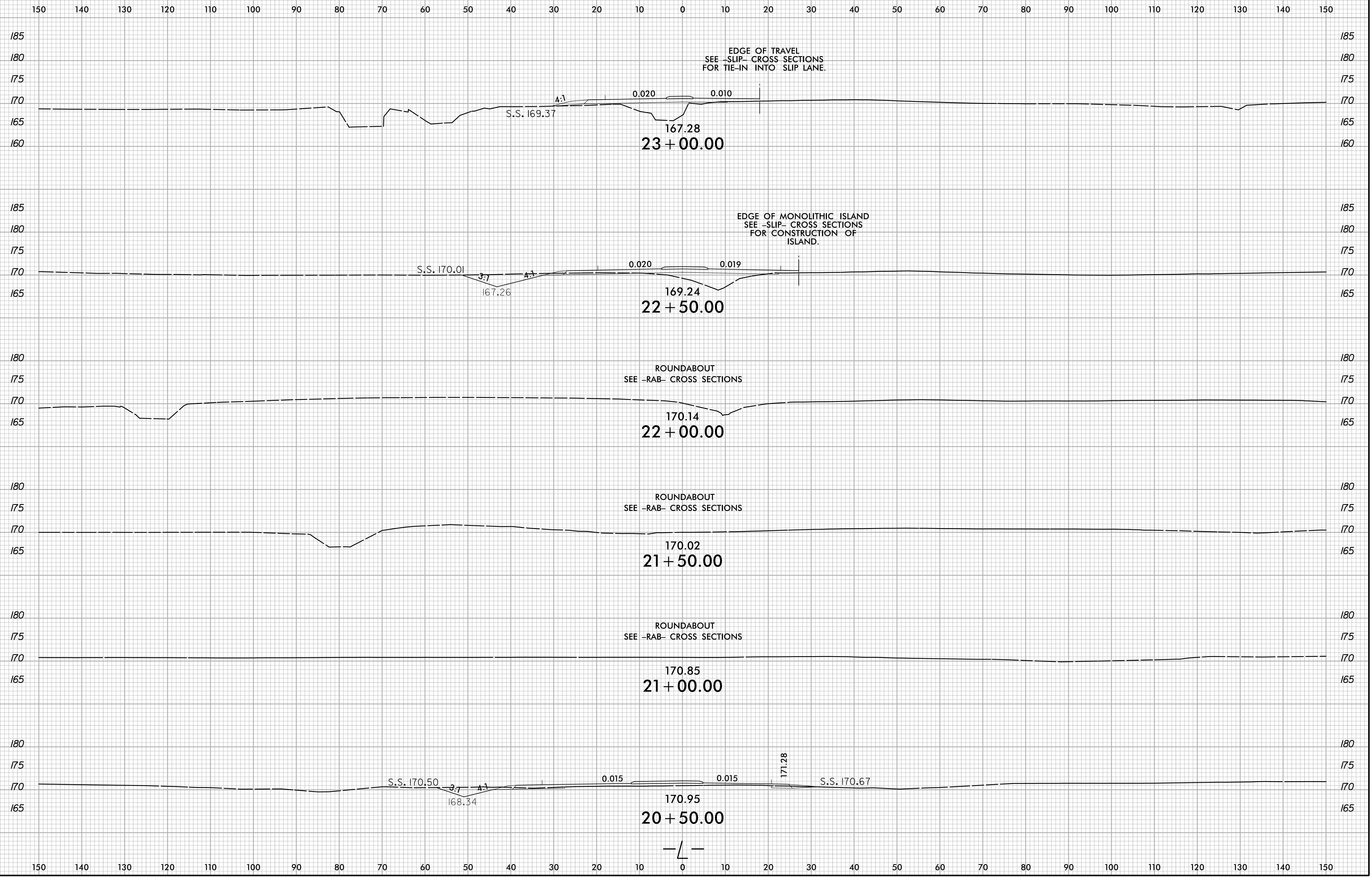
6/23/16



BEGIN PROJECT -L- STA. 16 + 85.00

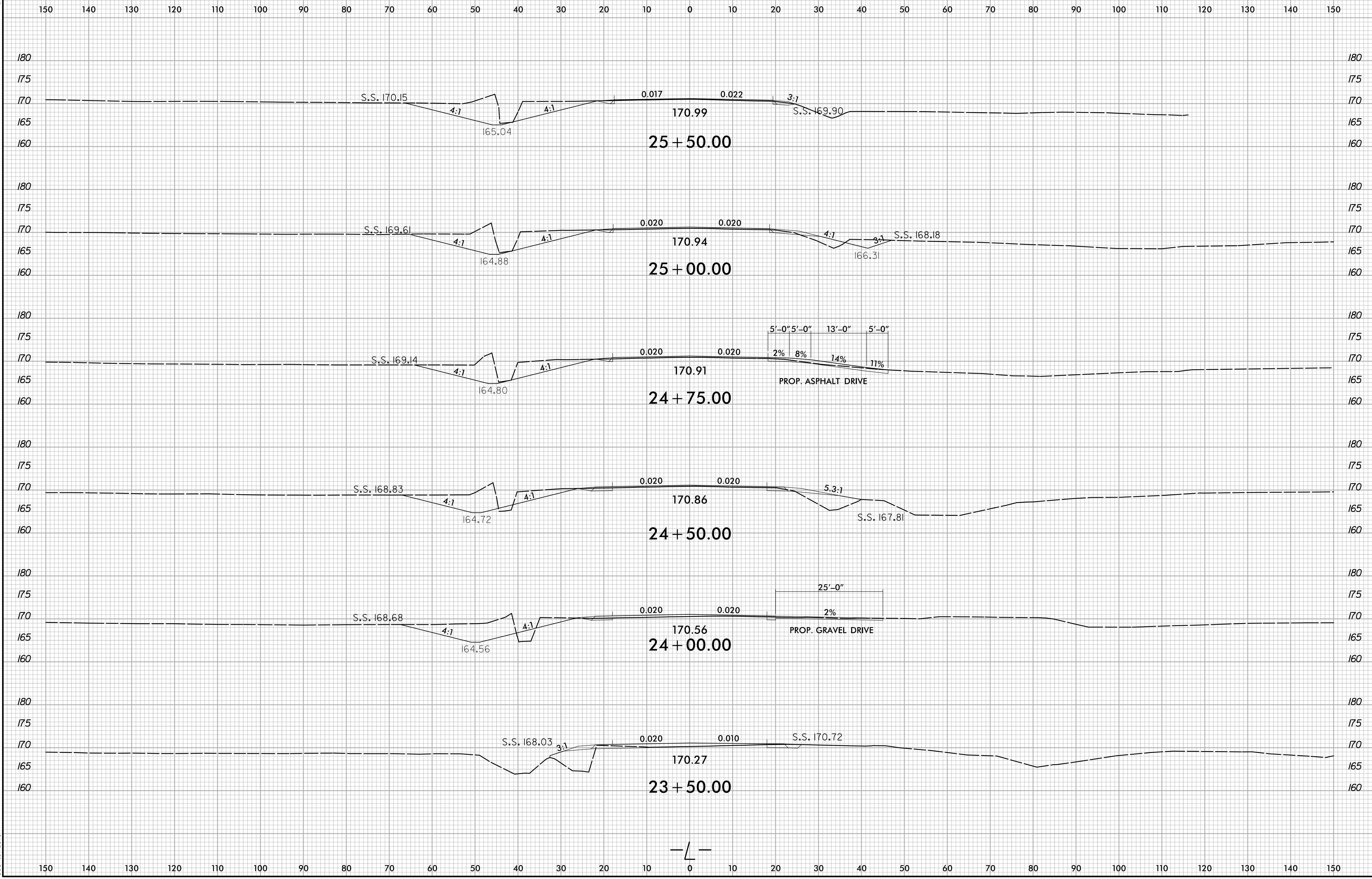
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6/23/16

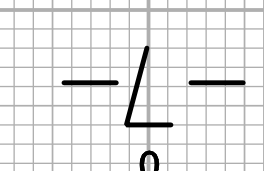


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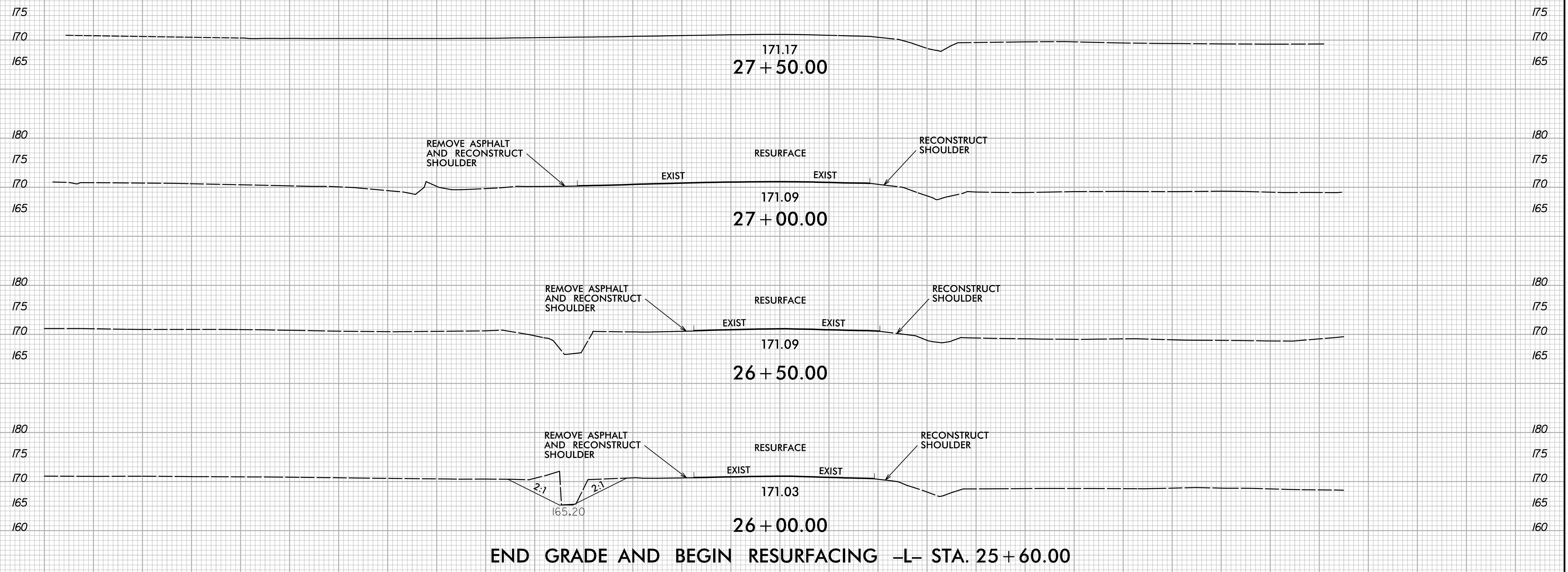


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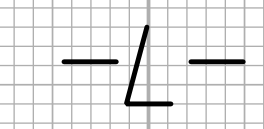


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END PROJECT -L- STA. 27+07.00

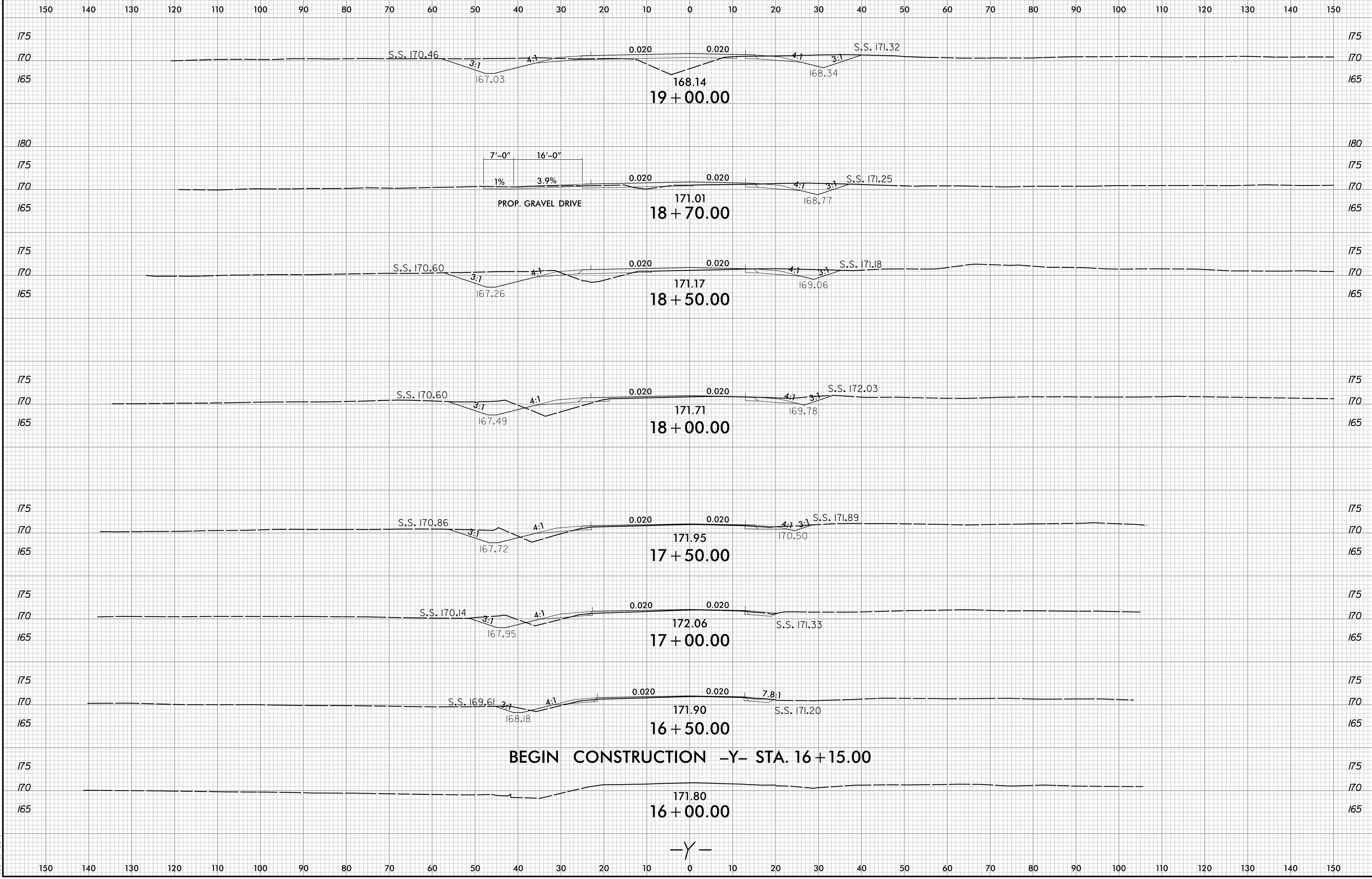


END GRADE AND BEGIN RESURFACING -L- STA. 25+60.00

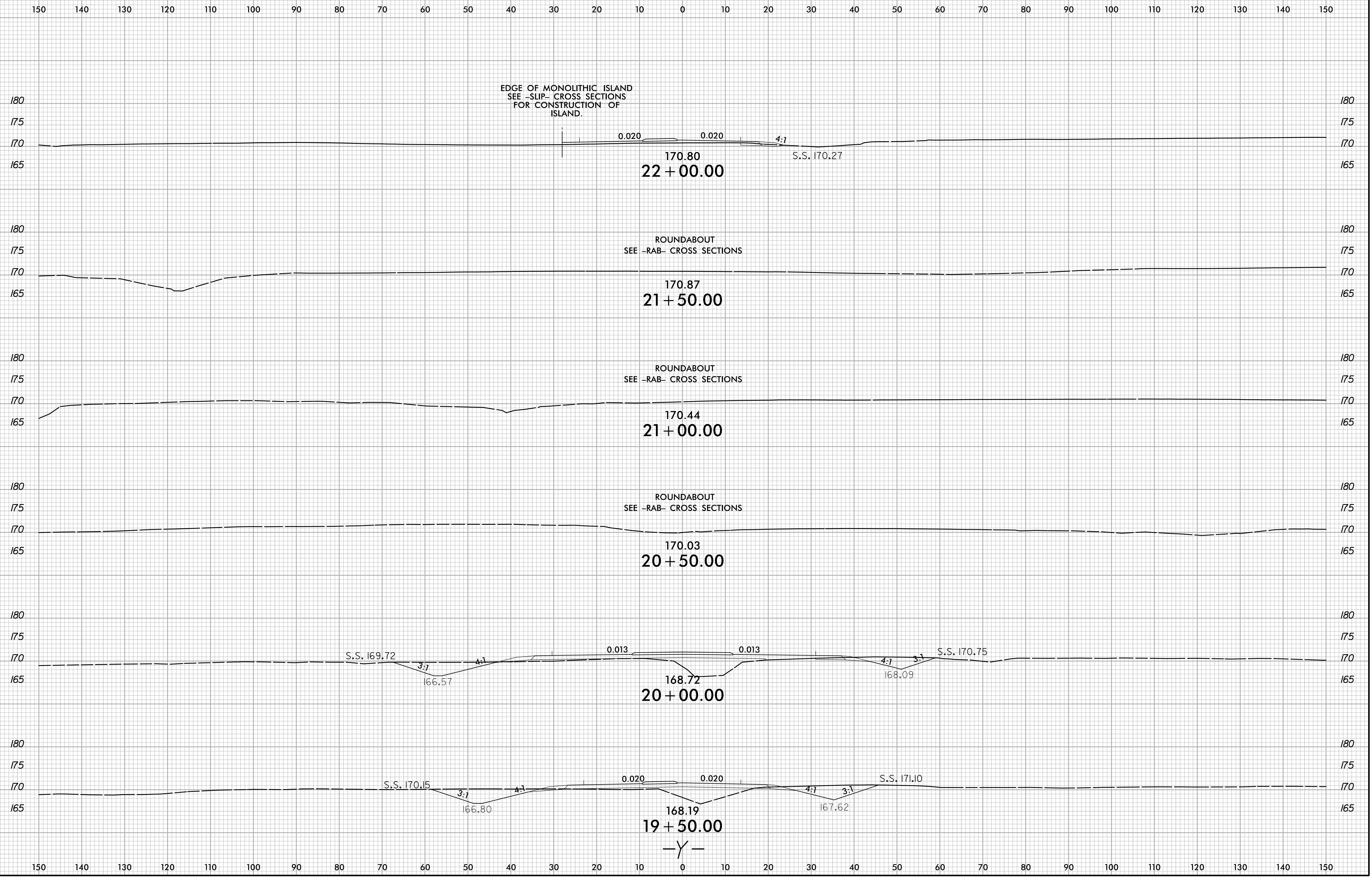


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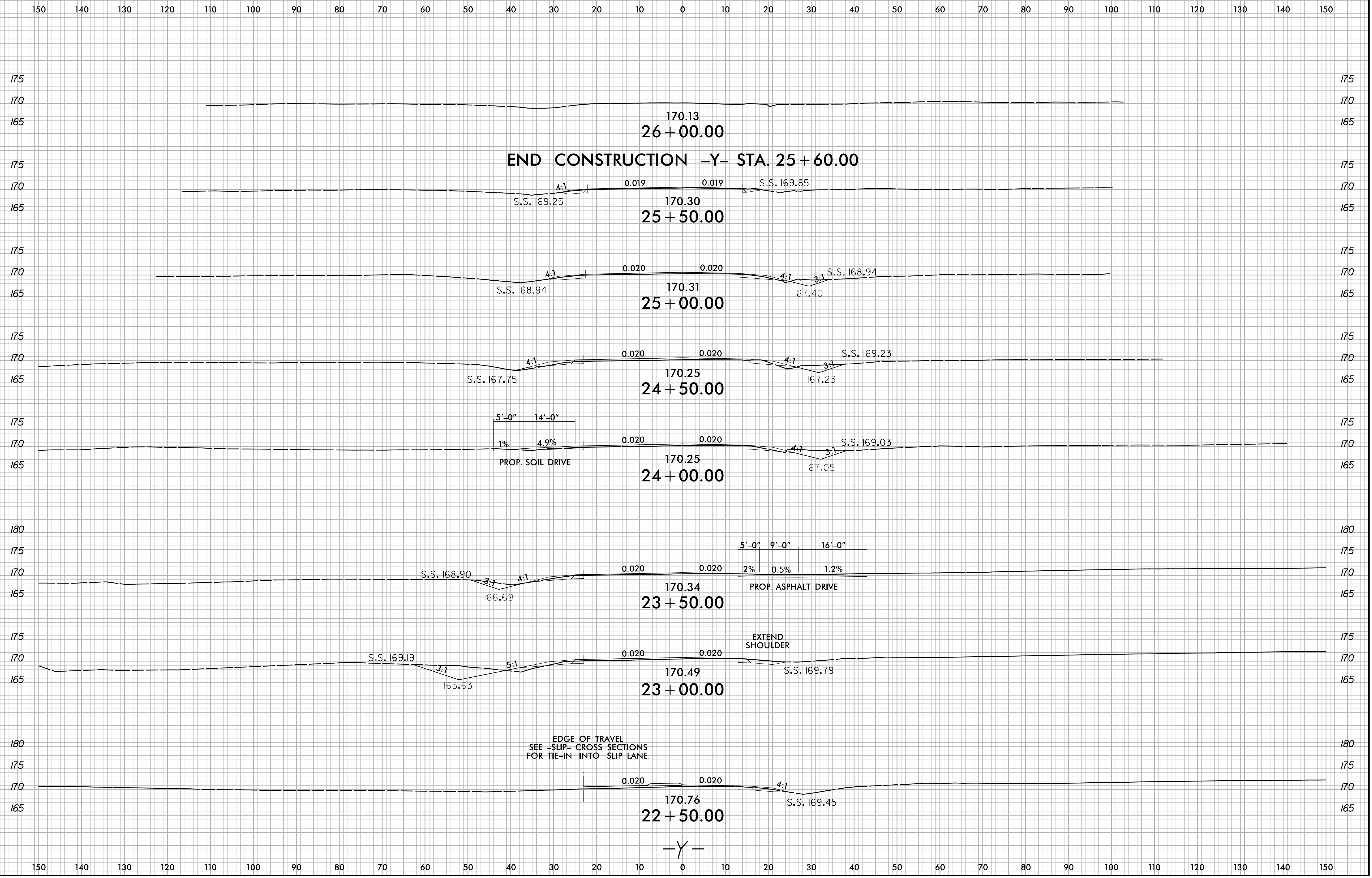
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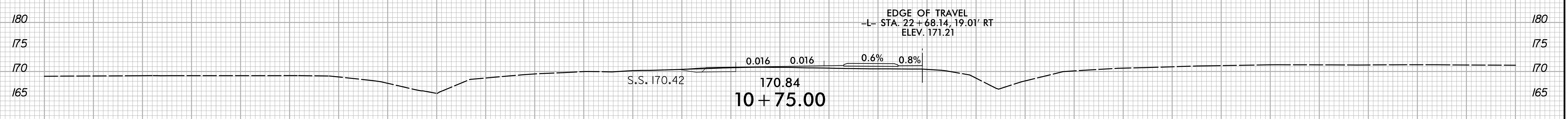
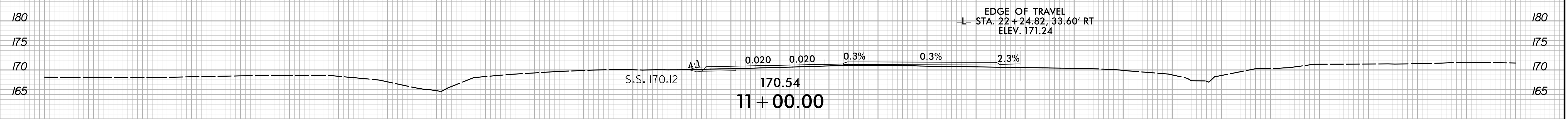
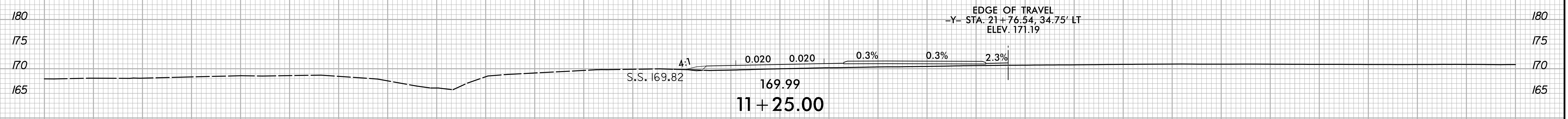
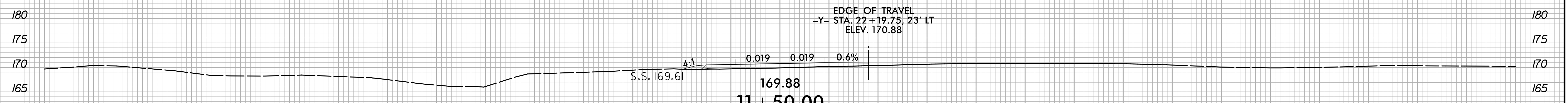
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-SLIP-

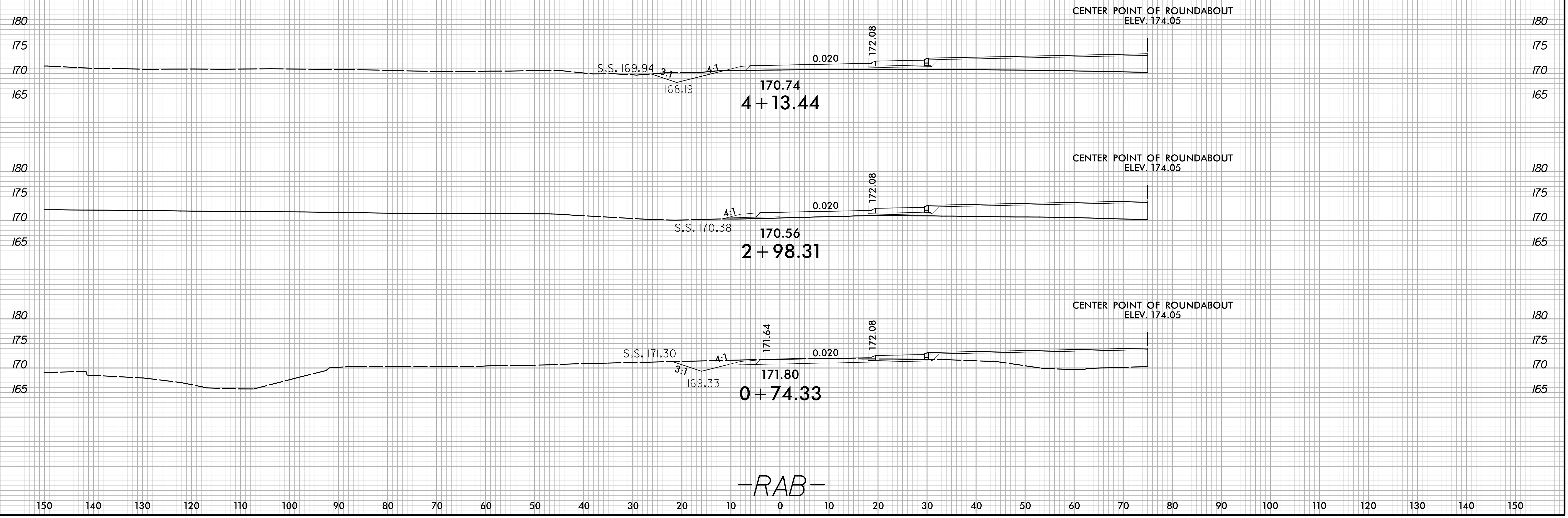
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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
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-RAB-

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