

PROJECT: 17BP.11.R.155

CONTRACT: DK00348

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS WILKES COUNTY

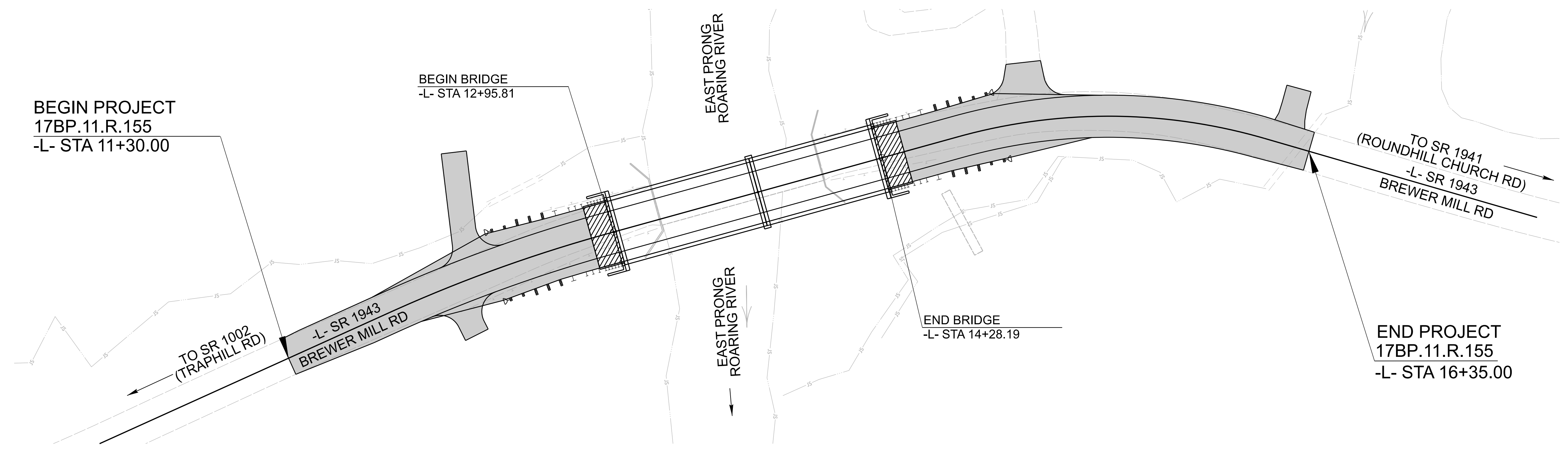
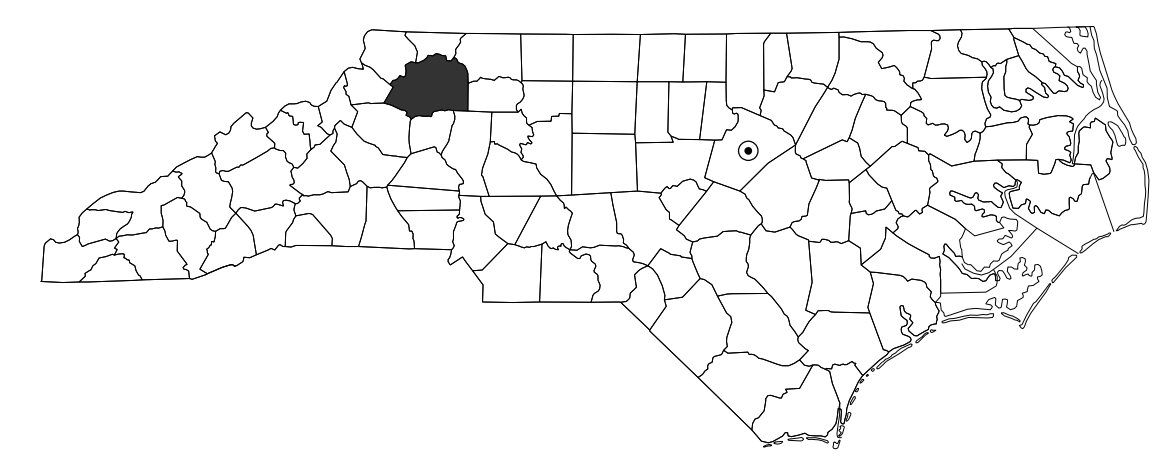
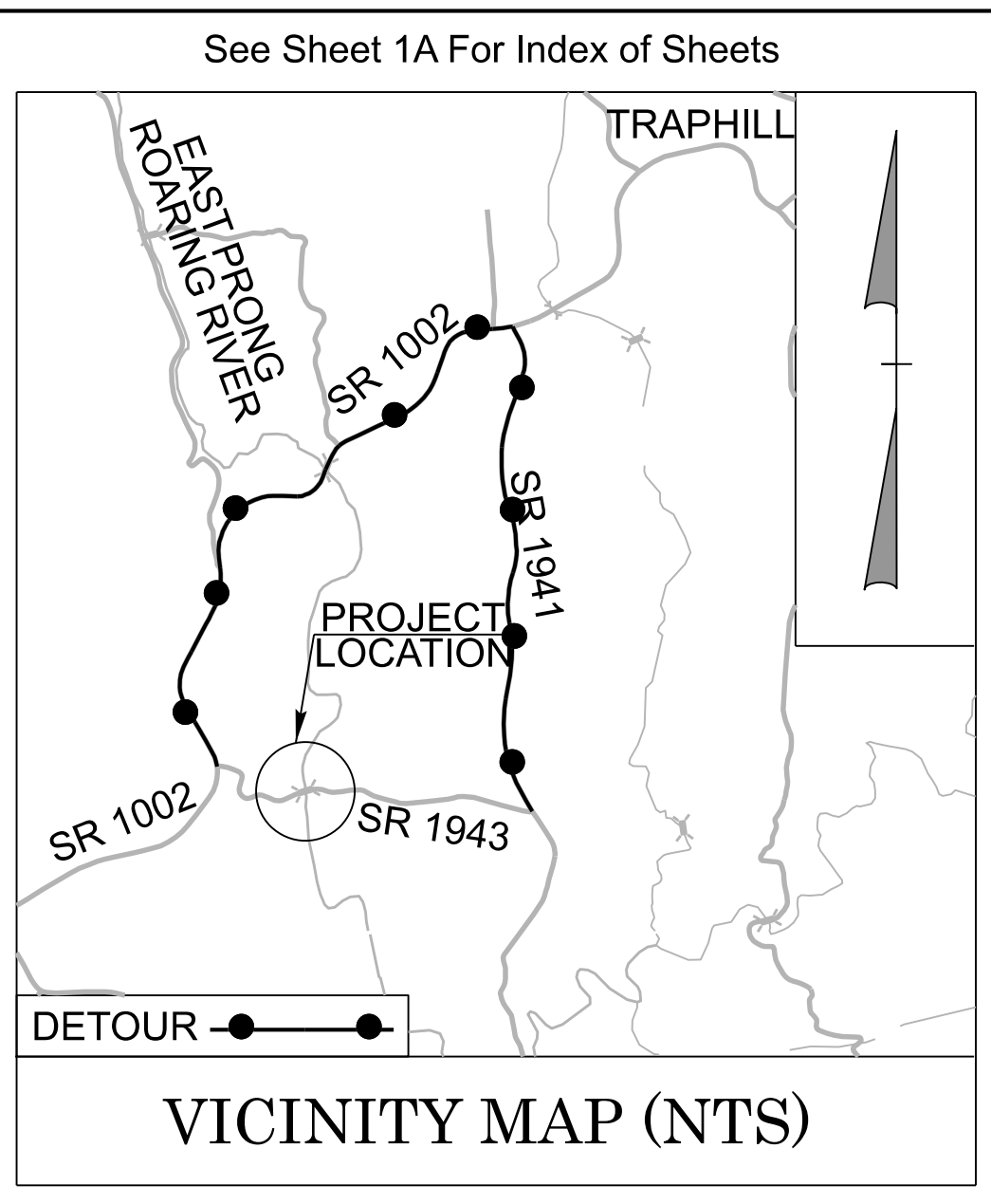
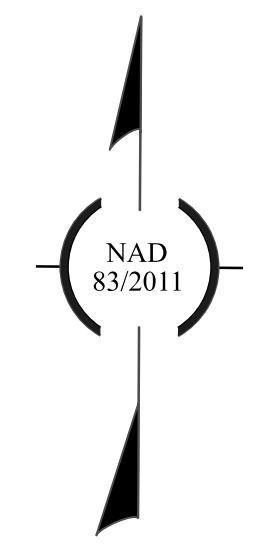
LOCATION: *BRIDGE NO. 960436 ON SR 1943 (BREWER MILL RD)
OVER EAST PRONG ROARING RIVER*

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.R.155	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
17BP.11.PE.155		PE	
17BP.11.ROW.155		RW, UTILITIES	
17BP.11.R.155		CONSTRUCTION	

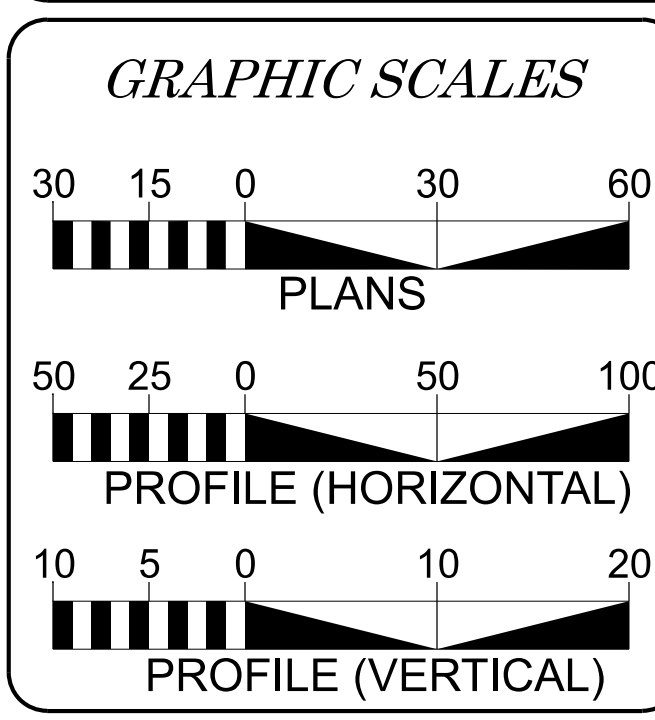
FINAL PLANS (4RD1)

Plans Developed with
OpenRoads (ORD)



**** DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED
THIS IS NOT A CONTROL OF ACCESS PROJECT.**

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



DESIGN DATA

ADT 2024 = 209
ADT 2045 = 315

K = %
D = %
T = 6% % *
V = 30 MPH**

* TTST = 3% DUAL 3%
FUNC CLASS =
LOCAL RURAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT 17BP.11.R.155 = 0.071 MILES
LENGTH STRUCTURE PROJECT 17BP.11.R.155 = 0.025 MILES
TOTAL LENGTH OF PROJECT 17BP.11.R.155 = 0.096 MILES

NCDOT Contact: ROB N. WEISZ, P.E.

Prepared in the Office of: **KCA**
KISINGER CAMPO & ASSOCIATES
NC FIRM LICENSE No: C-1506
301 Fayetteville St., Suite 1500
Raleigh, NC 27601
(919) 882-7839

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 14, 2022

LETTING DATE:
DECEMBER 19, 2024

ANDREA B. GORDON, P.E.
PROJECT ENGINEER

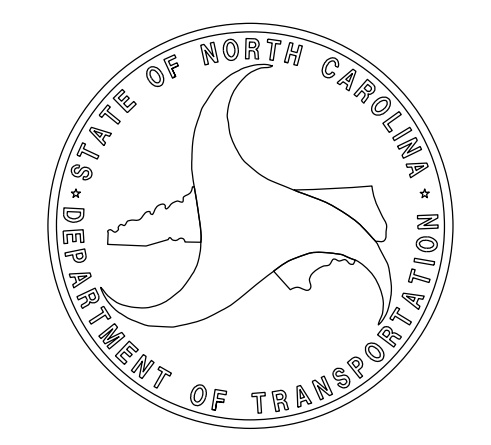
JACOB H. DUKE, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

11/19/2024
Signed by: *Erik P. Radland*
SEAL 049338
ENGINEER
ERIK P. RADLAND
P.E.

ROADWAY DESIGN ENGINEER

11/19/2024
Signed by: *Andrea B. Gordon*
SEAL 056183
ENGINEER
ANDREA B. GORDON
P.E.



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
3B-1	ROADWAY SUMMARIES
3D-1	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
4	PLAN SHEET
5	PROFILE SHEET
RW-1 THRU RW-4	SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENT AND PROPERTY TIES
TMP-1 THRU TMP-3	TRAFFIC MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1 THRU X-6	CROSS-SECTIONS
S-1 THRU S-21	STRUCTURE PLANS

NOTES TO REVIEWER AND DESIGN NOTES:

- A DESIGN EXCEPTION FOR DESIGN SPEED IS REQUIRED.

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 4 - MAJOR STRUCTURES
- 423.01 Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment
- DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
- 560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I
- DIVISION 8 - INCIDENTALS
- 815.02 Subsurface Drain
- 838.01 Concrete 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
- 840.25 Anchorage for Frames - Brick or Concrete or Precast
- 840.29 Frames and Narrow Slot Flat Grates
- 840.35 Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
- 840.46 Traffic Bearing Precast Drainage Structure
- 846.01 Concrete Curb, Gutter and Curb & Gutter
- 846.04 Drop Inlet Installation in Shoulder Berm Gutter
- 862.01 Guardrail Placement
- 862.02 Guardrail Installation
- 862.03 Structure Anchor Units
- 876.01 Rip Rap in Channels and Ditches
- 876.02 Guide for Rip Rap at Pipe Outlets

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

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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

SUBSURFACE DRAINS:

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

GUARDRAIL:

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

SUBSURFACE PLANS:

ONLY STRUCTURES SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS FOR THE ROADWAY.

END BENTS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

DUKE ENERGY

WILKES COMMUNICATION

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

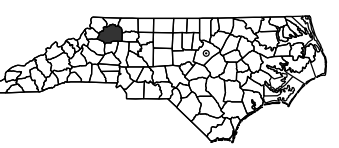
RIGHT-OF-WAY MARKERS:

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

178P.11.R.155

4RDI IA

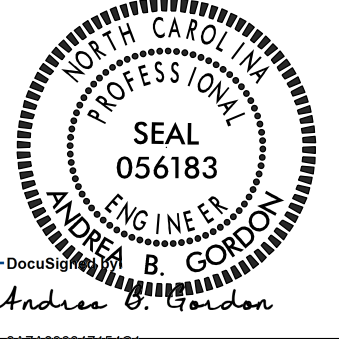
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WILKES COUNTY



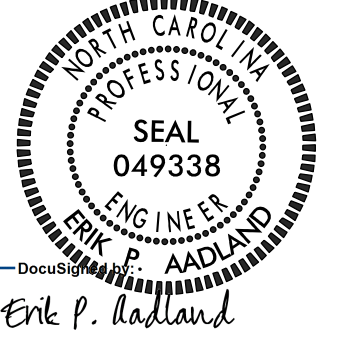
HIGHWAY DIVISION 11

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER 1/31/2024



HYDRAULICS ENGINEER 1/31/2024



PREPARED BY



REVISIONS

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

*S.U.E. = Subsurface Utility Engineering

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	-----	X
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	-----	MLB
Proposed Wetland Boundary	-----	MLB
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	-----	CSX TRANSPORTATION
RR Signal Milepost	-----	MILEPOST 35
Switch	-----	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	-----	E
Proposed Temporary Construction Easement	-----	E
Proposed Temporary Drainage Easement	-----	TDE
Proposed Permanent Drainage Easement	-----	PDE
Proposed Permanent Drainage/Utility Easement	-----	DUE
Proposed Permanent Utility Easement	-----	PUE
Proposed Temporary Utility Easement	-----	TUE
Proposed Aerial Utility Easement	-----	AUE

ROADS AND RELATED FEATURES:

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

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

EXISTING STRUCTURES:

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

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)*	-----	P
U/G Power Line (SUE - LOS C)*	-----	P
U/G Power Line (SUE - LOS D)*	-----	P

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)*	-----	T
U/G Telephone Cable (SUE - LOS C)*	-----	T
U/G Telephone Cable (SUE - LOS D)*	-----	T
U/G Telephone Conduit (SUE - LOS B)*	-----	TC
U/G Telephone Conduit (SUE - LOS C)*	-----	TC
U/G Telephone Conduit (SUE - LOS D)*	-----	TC
U/G Fiber Optics Cable (SUE - LOS B)*	-----	T FO
U/G Fiber Optics Cable (SUE - LOS C)*	-----	T FO
U/G Fiber Optics Cable (SUE - LOS D)*	-----	T FO

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)*	-----	W
U/G Water Line (SUE - LOS C)*	-----	W
U/G Water Line (SUE - LOS D)*	-----	W
Above Ground Water Line	-----	A/G Water

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)*	-----	TV
U/G TV Cable (SUE - LOS C)*	-----	TV
U/G TV Cable (SUE - LOS D)*	-----	TV
U/G Fiber Optic Cable (SUE - LOS B)*	-----	TV FO
U/G Fiber Optic Cable (SUE - LOS C)*	-----	TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	-----	TV FO

GAS:

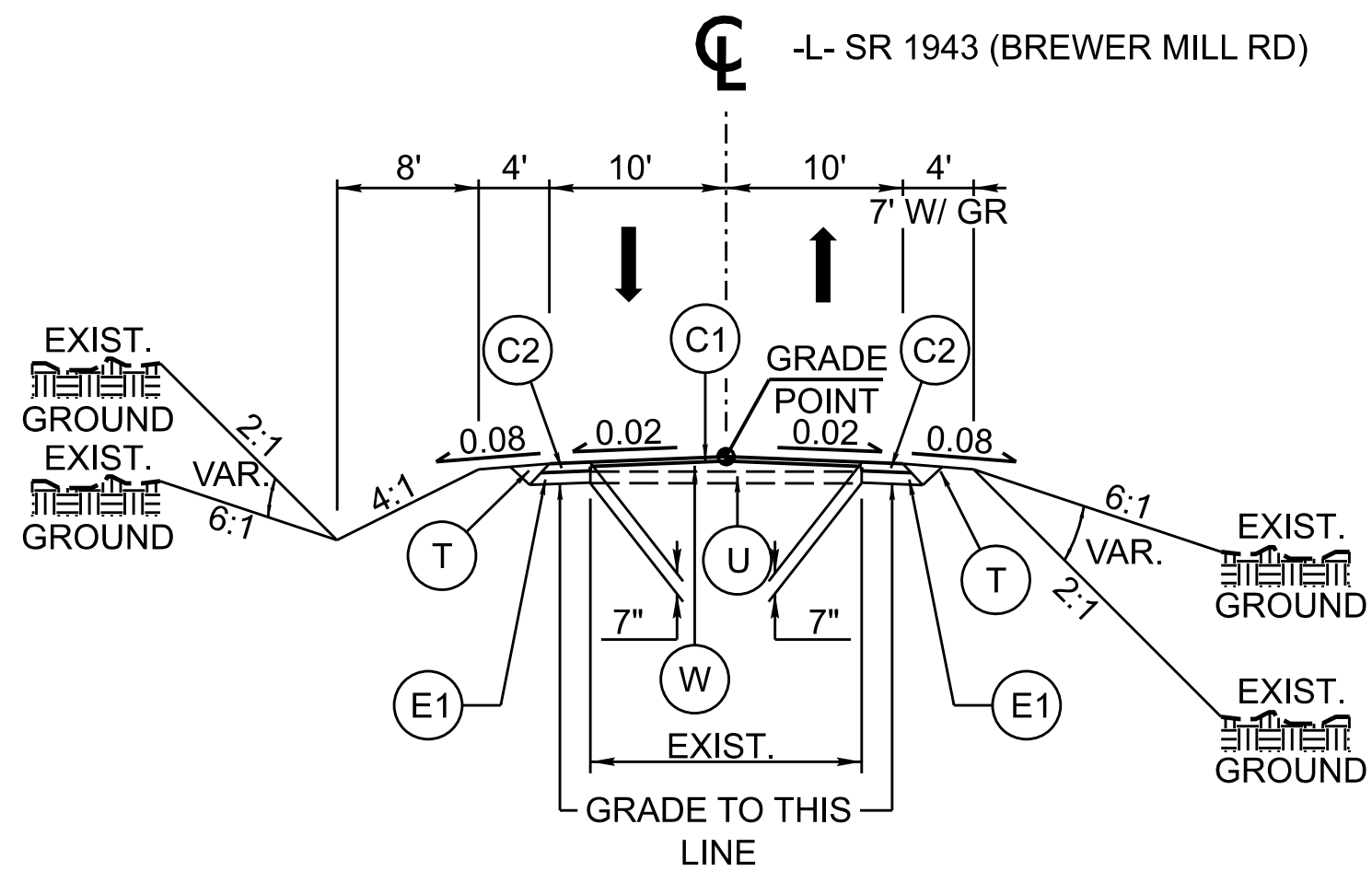
Gas Valve	-----	⊙
Gas Meter	-----	⊙
U/G Gas Line Test Hole (SUE - LOS A)*	-----	⊙
U/G Gas Line (SUE - LOS B)*	-----	G
U/G Gas Line (SUE - LOS C)*	-----	G
U/G Gas Line (SUE - LOS D)*	-----	G
Above Ground Gas Line	-----	A/G Gas

SANITARY SEWER:

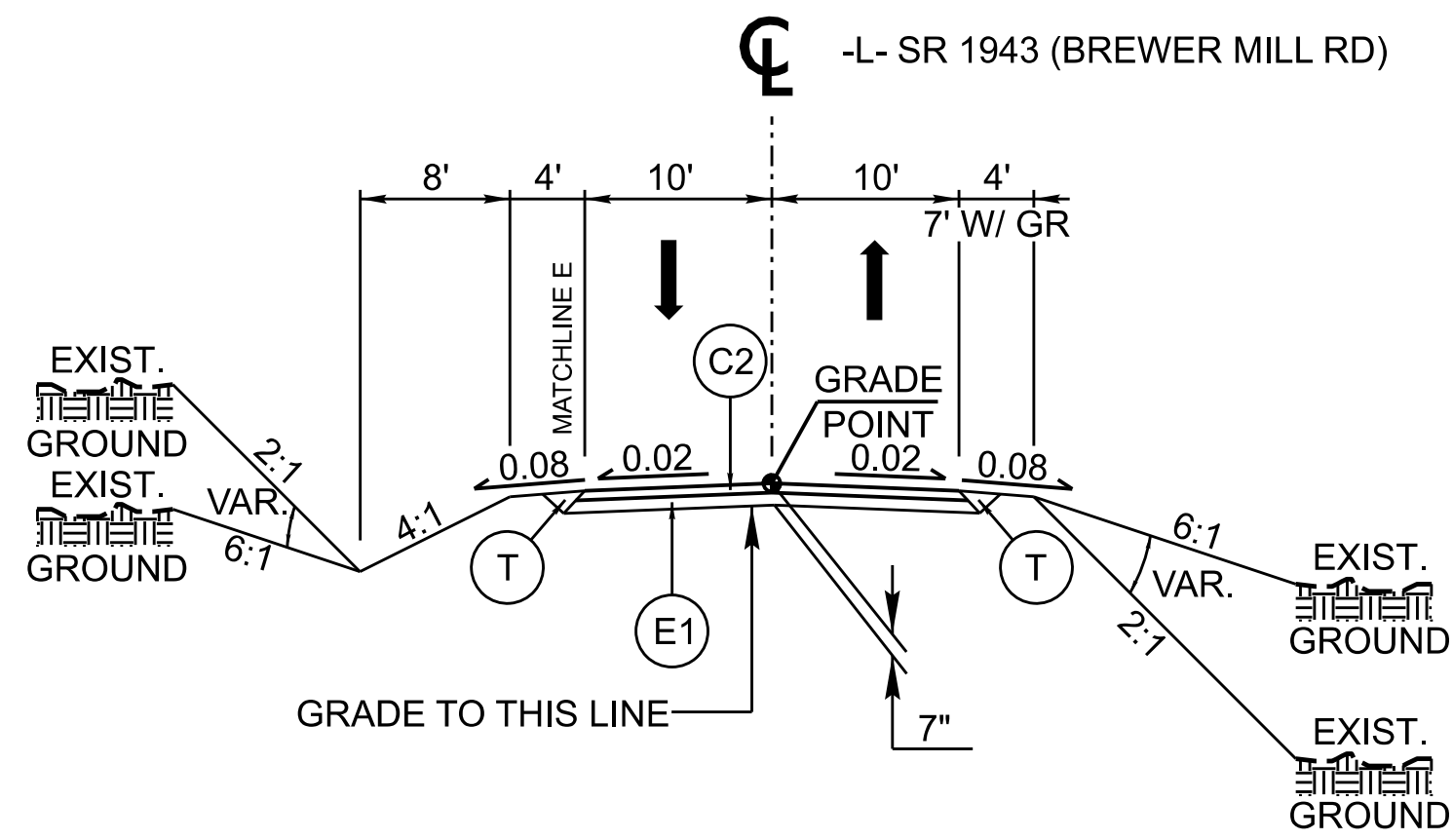
Sanitary Sewer Manhole	-----	⊙
Sanitary Sewer Cleanout	-----	⊙
U/G Sanitary Sewer Line	-----	SS
Above Ground Sanitary Sewer	-----	A/G Sanitary Sewer
SS Force Main Line Test Hole (SUE - LOS A)*	-----	⊙
SS Force Main Line (SUE - LOS B)*	-----	FSS
SS Force Main Line (SUE - LOS C)*	-----	FSS
SS Force Main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

MISCELLANEOUS:

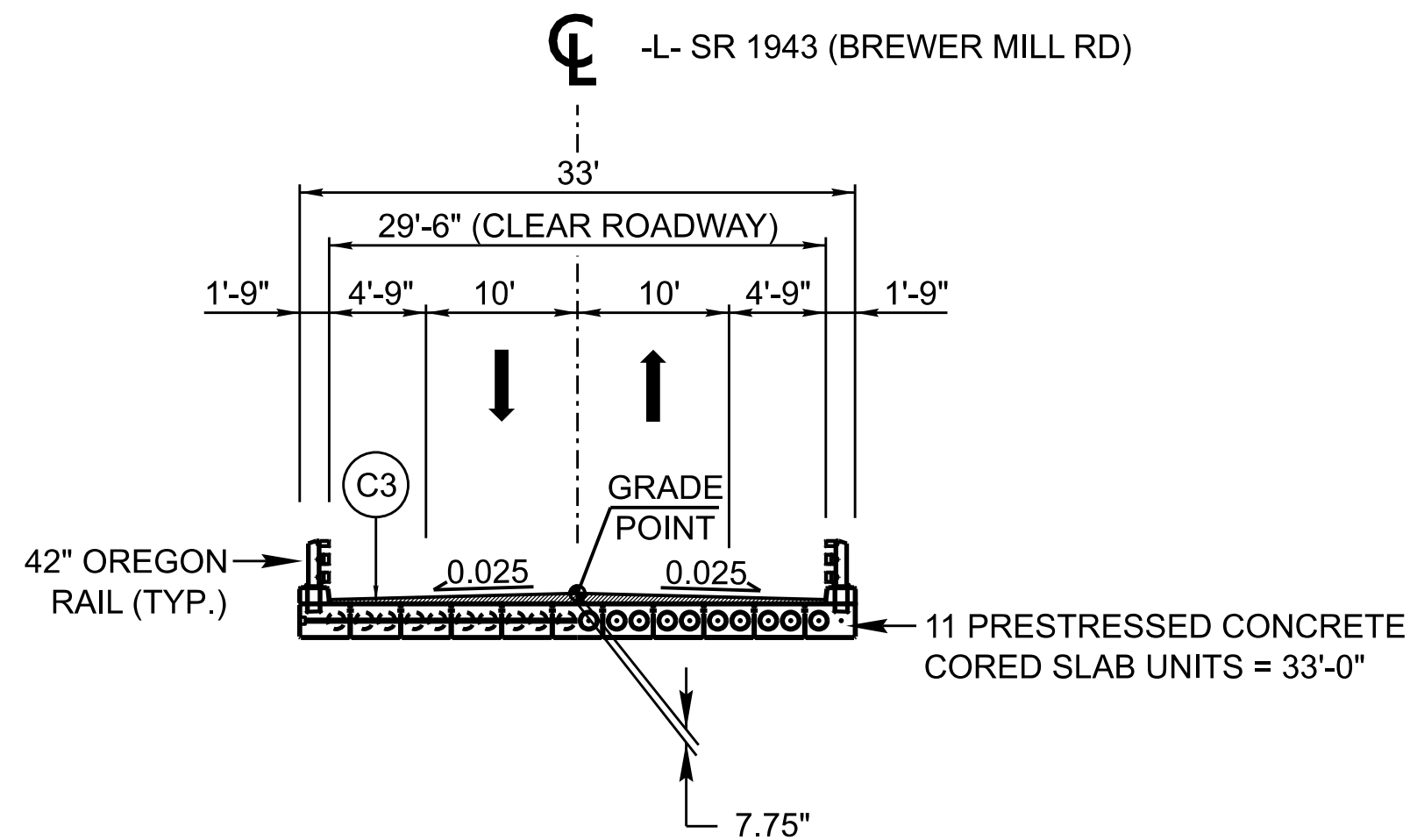
Utility Pole	-----	⊙
Utility Pole with Base	-----	⊠
Utility Located Object	-----	⊙
Utility Traffic Signal Box	-----	⊠
Utility Unknown U/G Line (SUE - LOS B)*	-----	U/L
U/G Tank; Water, Gas, Oil	-----	⊠
Underground Storage Tank, Approx. Loc.	-----	UST
A/G Tank; Water, Gas, Oil	-----	⊠
Geoenvironmental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



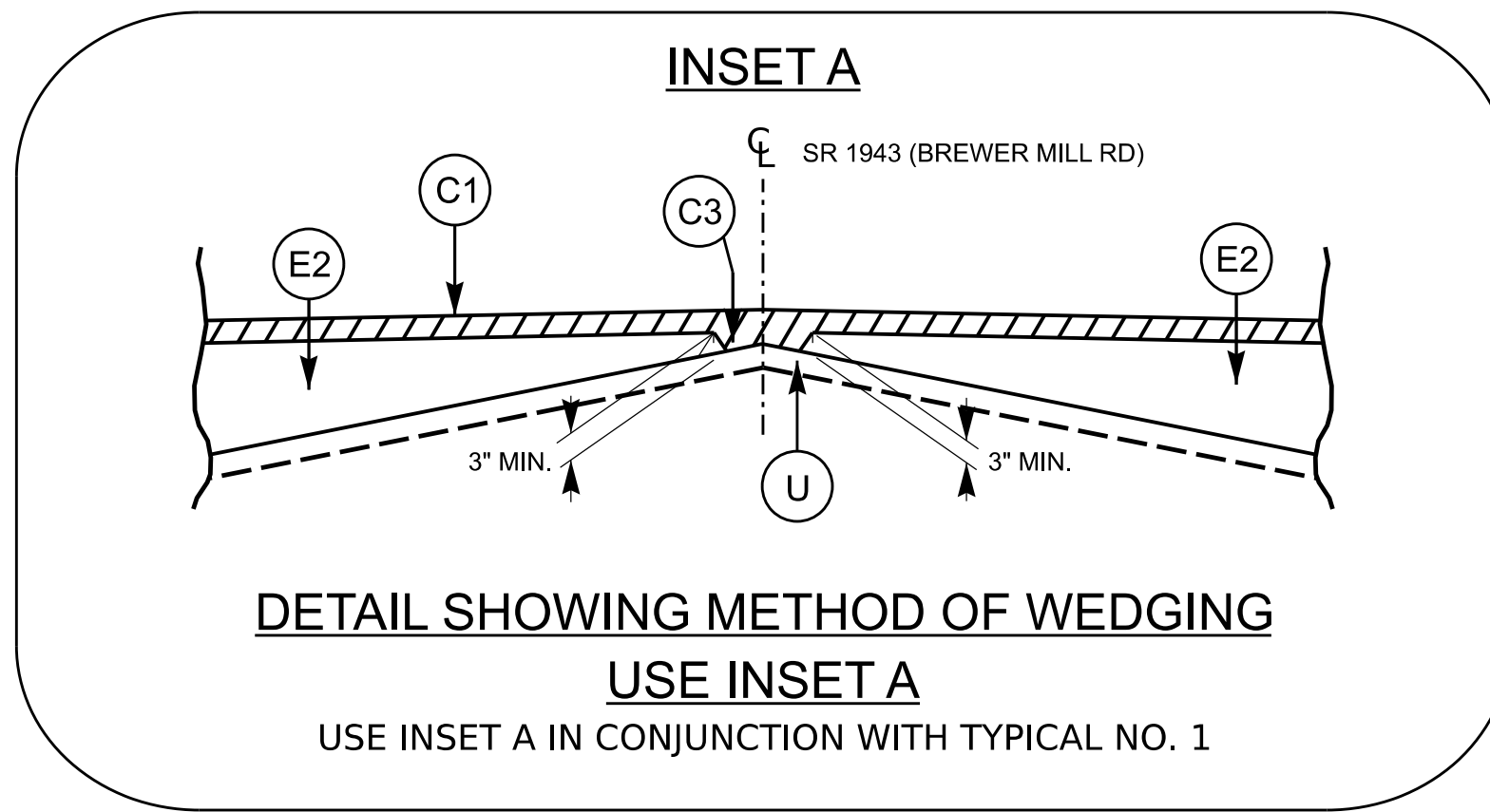
TYPICAL SECTION NO. 1
-L- STA. 11+30.00 TO 12+37.31



TYPICAL SECTION NO. 2
-L- STA. 12+37.31 TO 12+95.81 (BEGIN BRIDGE)
-L- STA. 14+28.19 (END BRIDGE) TO 16+25.00

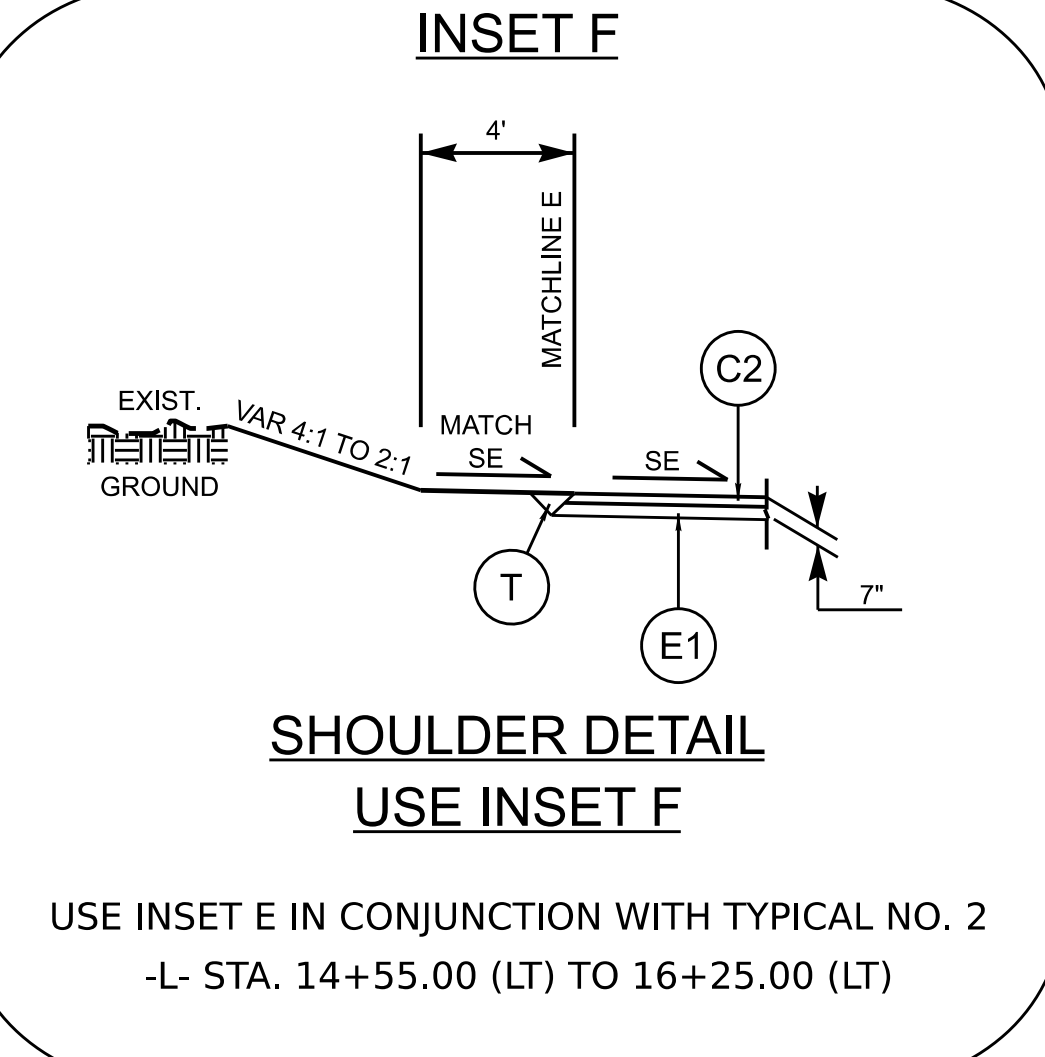
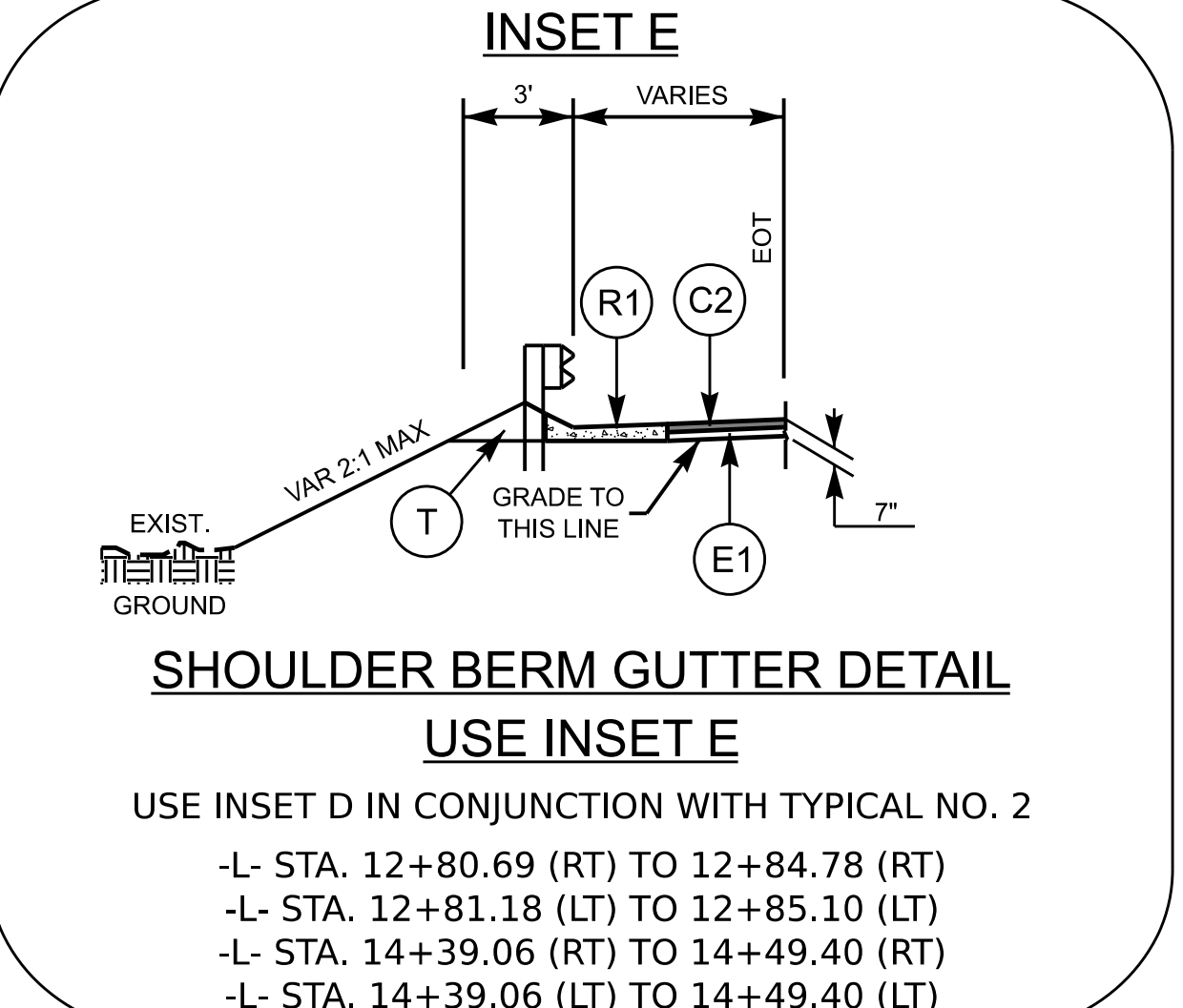
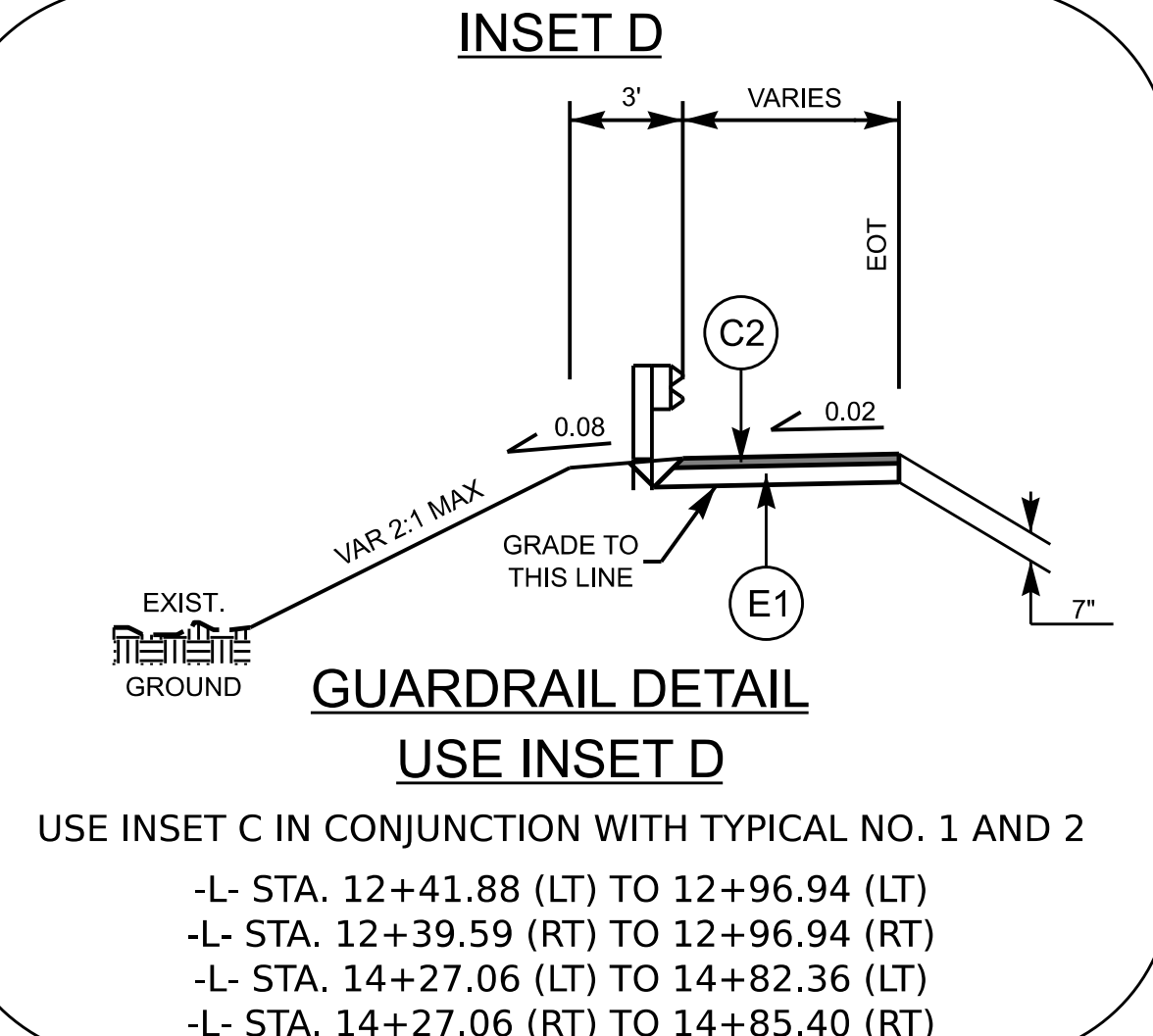
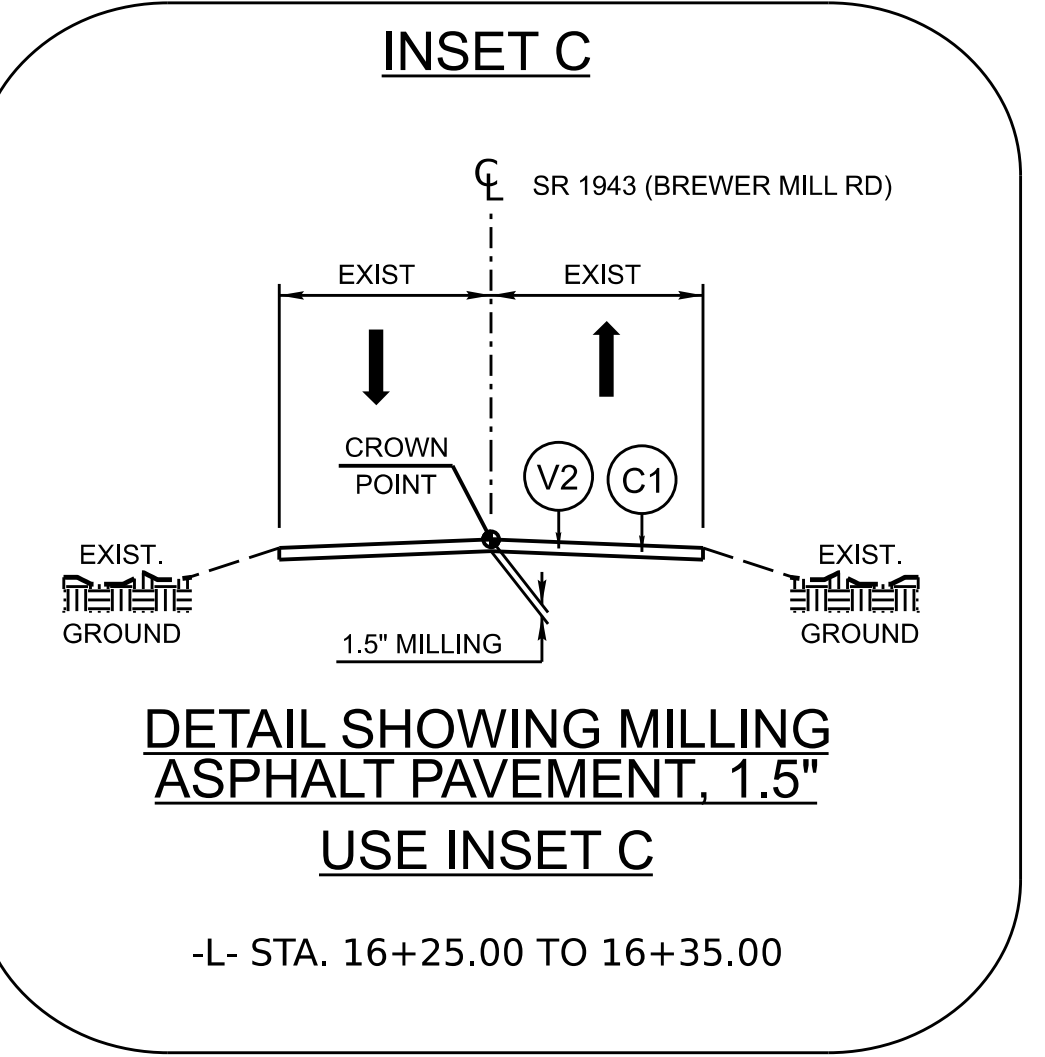
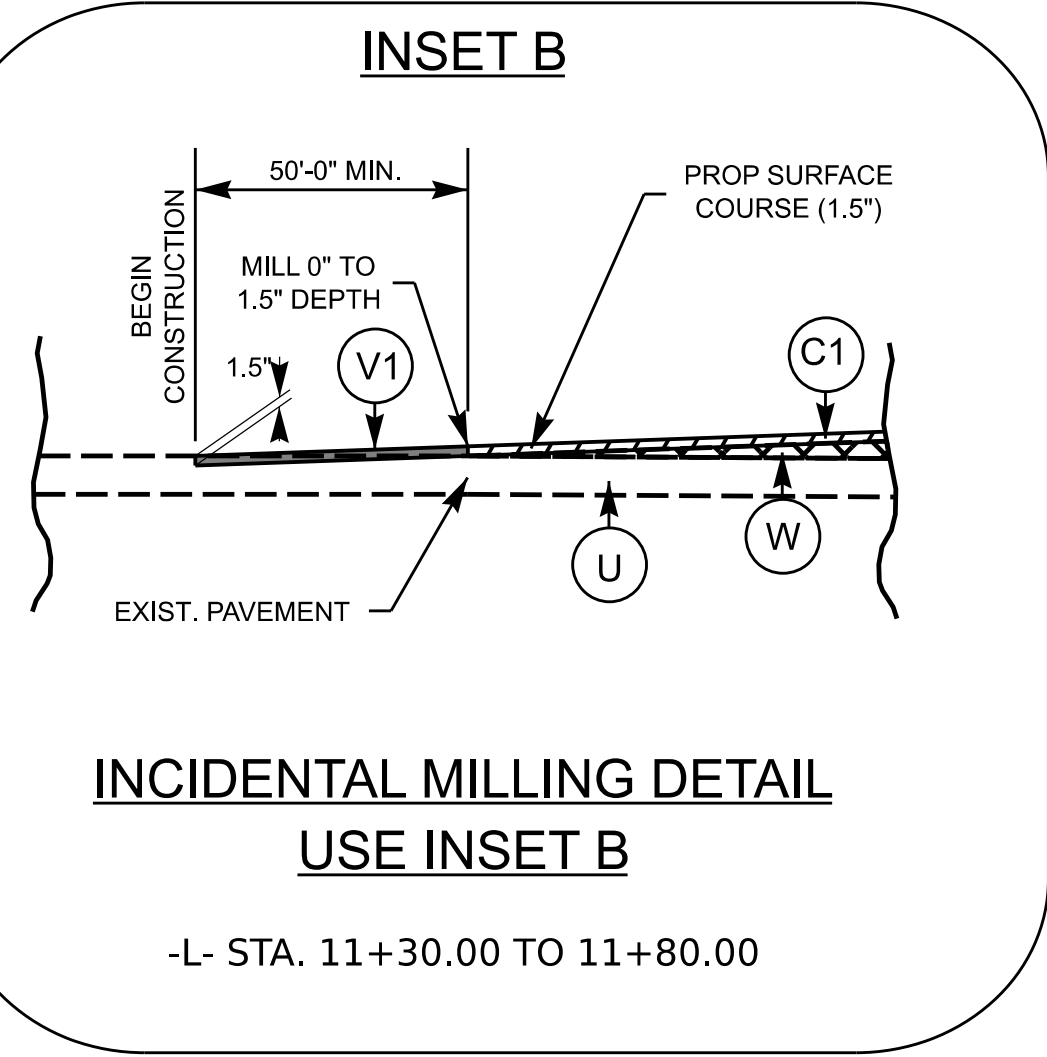


BRIDGE TYPICAL SECTION
-L- STA. 12+95.81 (BEGIN BRIDGE) TO 14+28.19 (END BRIDGE)



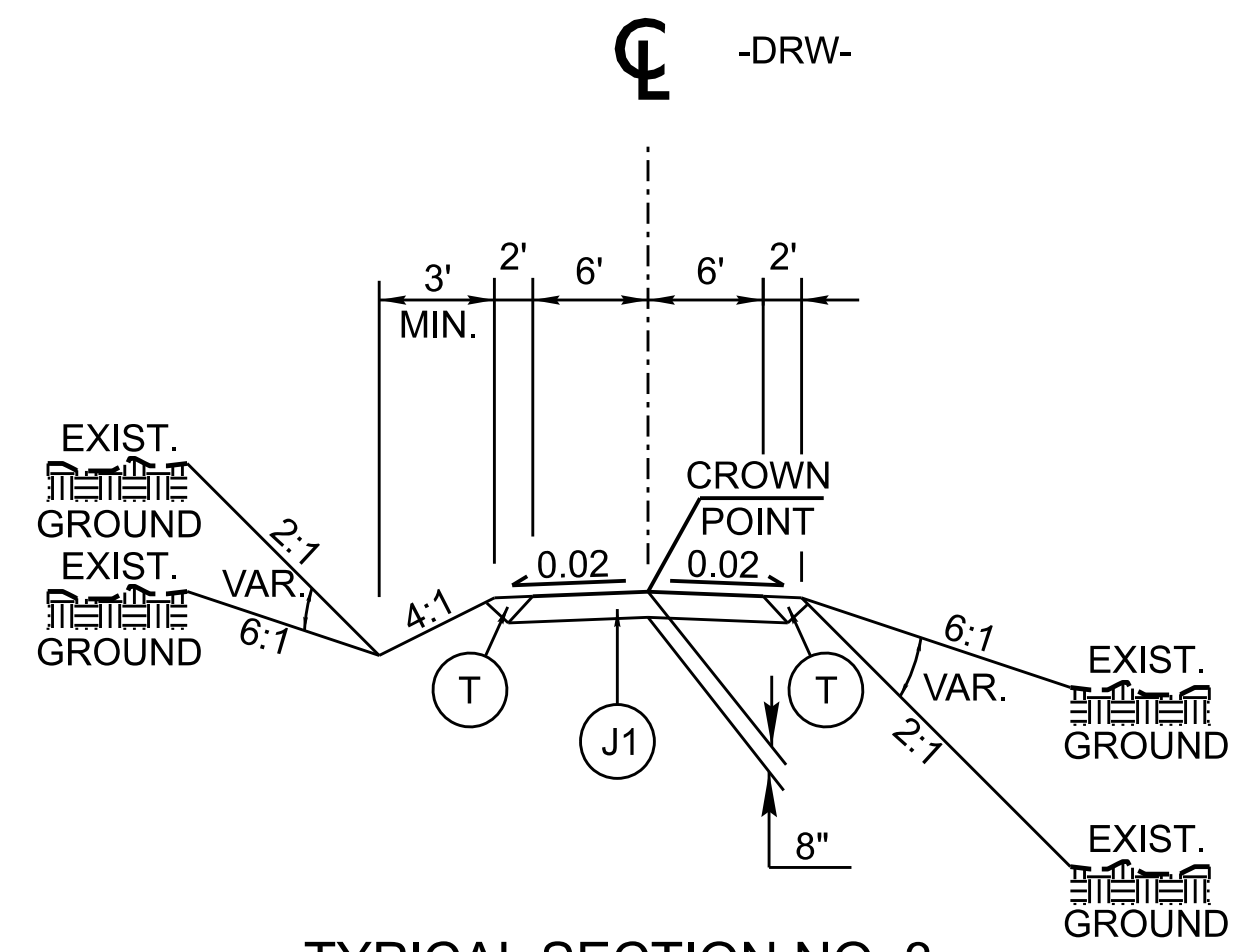
PAVEMENT SCHEDULE	
A1	PROP. APPROX. 6" PORTLAND CEMENT CONCRETE PAVEMENT
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110.0 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" OR TO EXCEED 1.5" IN DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
E2	PROP. VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114.0 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" OR TO EXCEED 5.5" IN DEPTH.
J1	PROP. APPROX. 8" AGGREGATE BASE COURSE.
R1	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	VARIABLE MILLING BITUMINOUS PAVEMENT (SEE INCIDENTAL MILLING DETAIL).
V2	MILLING 1.5" (SEE MILLING DETAIL).
W	WEDGING (SEE WEDGING DETAIL).

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

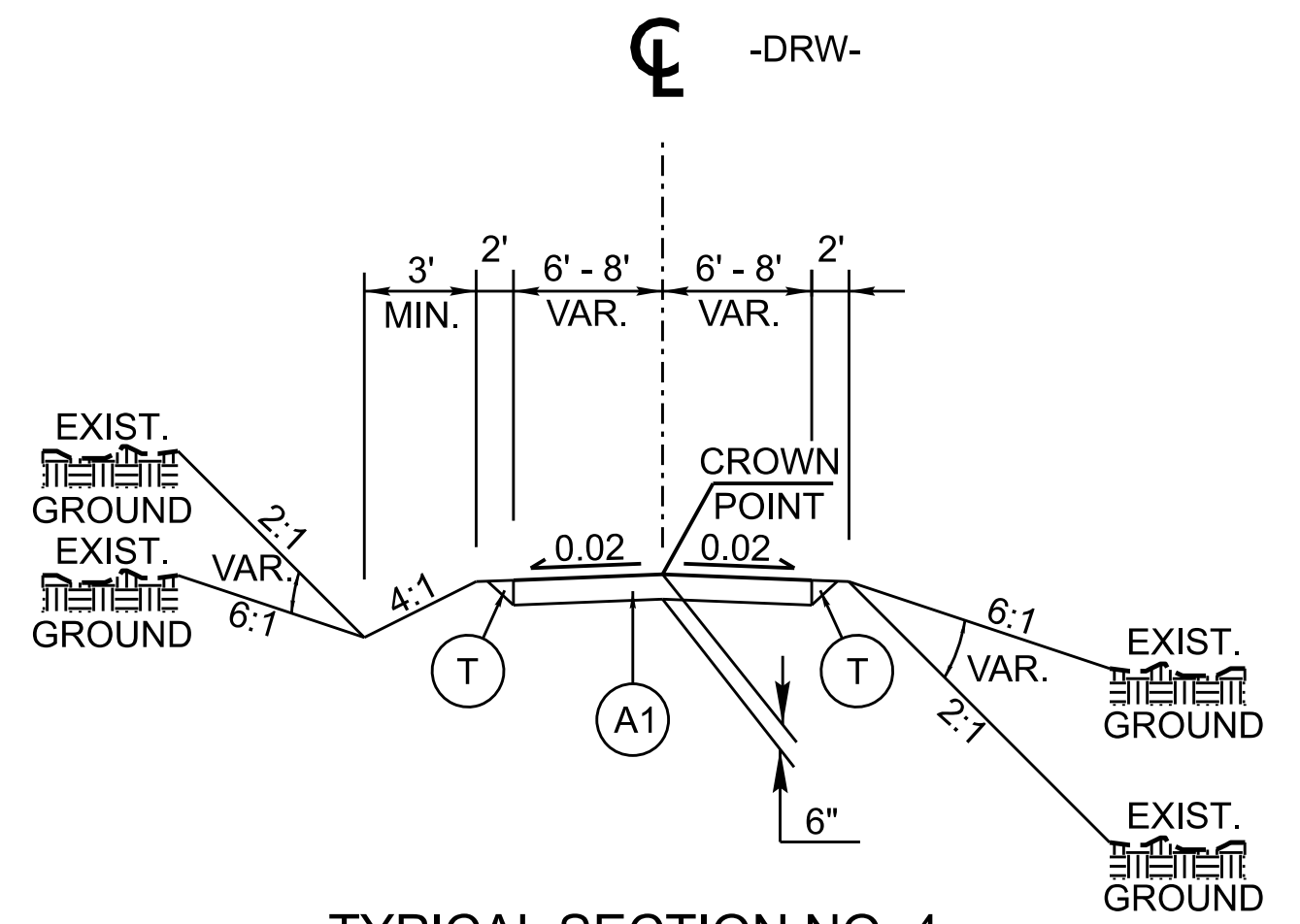


REVISIONS

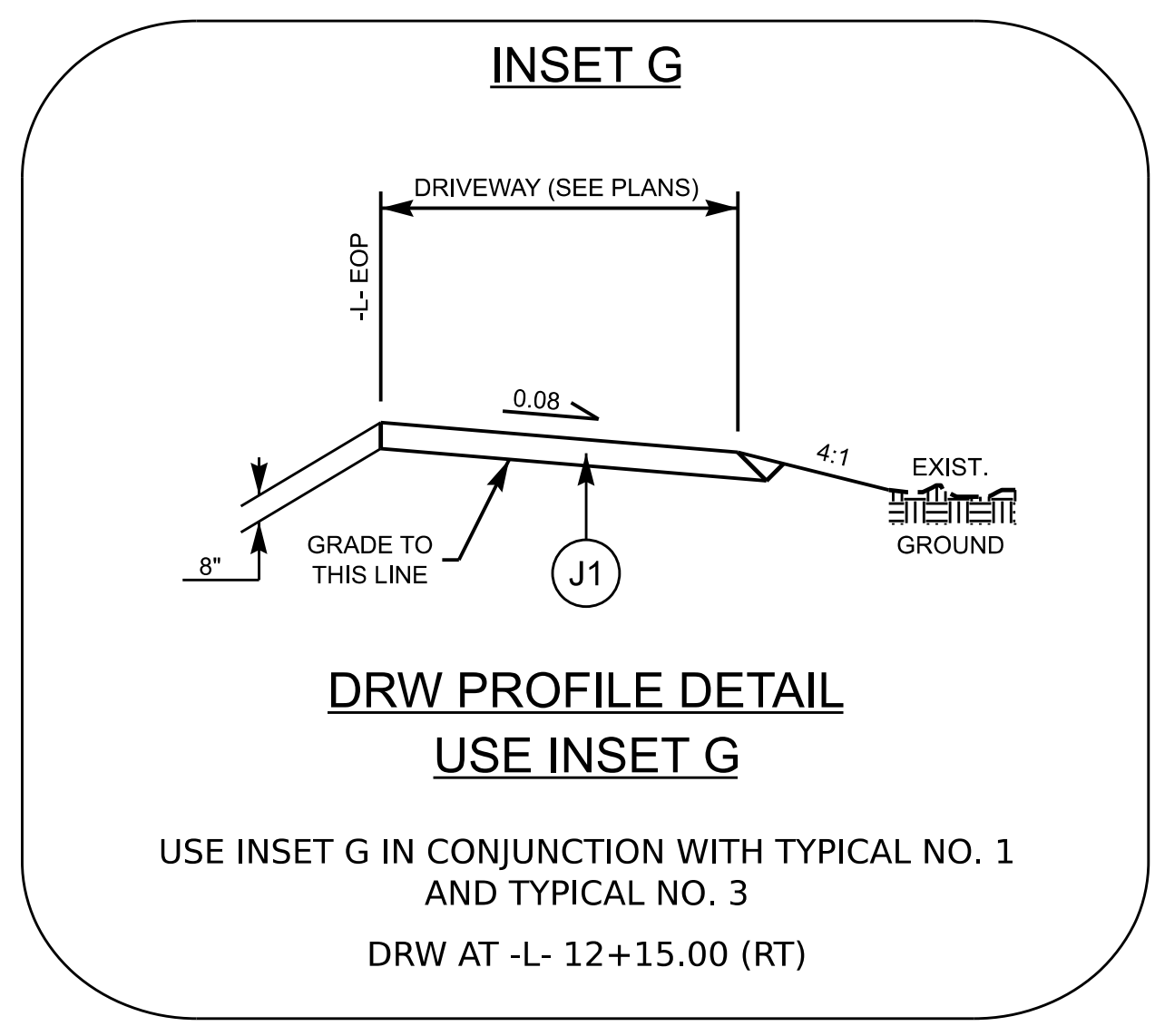
17BP.11.R.155
4RD1 2A-1
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WILKES COUNTY
HIGHWAY DIVISION 11
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
ROADWAY DESIGN ENGINEER
1/31/2024
SEAL 056183
ANDREA B. GORDON
PAVEMENT DESIGN ENGINEER
1/31/2024
SEAL 049851
RAMIE A. SHAW
PREPARED BY
KCA
KISINGER CAMPO & ASSOCIATES
NC FPM LICENSE No. C-1506
301 FAYETTEVILLE STREET, SUITE 1500
RALEIGH, NC 27601
(919) 882-7839



TYPICAL SECTION NO. 3
 DRW AT -L- STA. 12+15.00 RT
 DRW AT -L- STA. 12+30.00 LT



TYPICAL SECTION NO. 4
 DRW AT -L- STA. 15+00.00 LT
 DRW AT -L- STA. 16+20.00 LT



DRW PROFILE DETAIL
USE INSET G
 USE INSET G IN CONJUNCTION WITH TYPICAL NO. 1
 AND TYPICAL NO. 3
 DRW AT -L- 12+15.00 (RT)

PAVEMENT SCHEDULE	
A1	PROP. APPROX. 6" PORTLAND CEMENT CONCRETE PAVEMENT
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110.0 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" OR TO EXCEED 1.5" IN DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
E2	PROP. VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114.0 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" OR TO EXCEED 5.5" IN DEPTH.
J1	PROP. APPROX. 8" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	VARIABLE MILLING BITUMINOUS PAVEMENT (SEE INCIDENTAL MILLING DETAIL).
V2	MILLING 1.5" (SEE MILLING DETAIL).
W	WEDGING (SEE WEDGING DETAIL).

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

17BP.11.R.155
4RD1 2A-2
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WILKES COUNTY

HIGHWAY DIVISION 11
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED
 ROADWAY DESIGN
 ENGINEER
 2/14/2024

Andrea B. Gordon
 PROFESSIONAL ENGINEER
 2/14/2024

Ramie H. Stettin
 PROFESSIONAL ENGINEER
 2/14/2024

PREPARED BY
KCA
 KISINGER CAMPO & ASSOCIATES
 NC FIRM LICENSE No: C-1506
 301 FAYETTEVILLE STREET, SUITE 1500
 RALEIGH, NC 27601
 (919) 882-7839

REVISIONS

SUMMARY OF EARTHWORK IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L- 11+30.00	-L- 12+95.81 (Bridge)	72	388	316	
-L- 14+28.19 (Bridge)	-L- 16+25.00	50	113	63	
PROJECT TOTALS:		122	501	379	0
Replace Topsoil on Borrow Pitt (5%)				19	
Waste in Lieu of Borrow					
GRAND TOTALS:		122	501	398	0
SAY:		130		400	

NOTE:

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

ALL EARTHWORK QUANTITIES WERE DERIVED FROM ORD QUANTITIES BY NAMED BOUNDARY REPORT(S) AS DESCRIBED IN THE ORD QUICKSTART TRAINING.

SHOULDER BERM GUTTER SUMMARY

LINE	Station	Station	LENGTH
-L- (RT)	12+80.69	12+84.78	4
-L- (LT)	12+81.18	12+85.10	4
-L- (RT)	14+39.06	14+49.40	10
-L- (LT)	14+39.06	14+49.40	10
TOTAL:			28
SAY:			32

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS							
SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	12+37	13+18	LT/RT	180			
-L-	13+99	16+25	LT/RT	502			
TOTAL:				682			
SAY:				690			

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS							ADDITIONAL GUARDRAIL POSTS	IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	XI MOD	XI	GREU TL-2	M-350	TYPE III	CAT-1	VI MOD	BIC	G		NG						
-L-	12+41.88	12+96.94	LT	56.25				12+96.94	4.75	7.75	25	25	0.5	0.5			1		1										
-L-	12+39.59	12+96.94	RT	56.25					4.75	7.75							1		1										
-L-	14+27.06	14+82.36	LT	56.25				14+27.06	4.75	7.75	25	25	0.5	0.5			1		1										
-L-	14+27.06	14+85.40	RT	56.25					4.75	7.75							1		1										
-L-	12+65.93	13+17.22	LT																					56.25					
-L-	12+14.21	13+16.42	RT																					106.25					
-L-	13+99.96	14+53.10	LT																					56.25					
-L-	14+00.63	14+52.79	RT																					56.25					
SUBTOTAL:				225														4		4					275				
Less GREU TL-2 @ 25' Each				100																									
Less Type III @ 18.75' Each				75																									
PROJECT TOTALS:				50														4		4					275				
SAY:				50																									

178P.II.R.155
4RD1 38-1
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WILKES COUNTY
HIGHWAY DIVISION 11
PREPARED BY
KCA
KISSINGER CAMPO
& ASSOCIATES
NC FIRM LICENSE No: C-1506
301 FAYETTEVILLE STREET,
SUITE 1500
RALEIGH, NC 27601
(919)882-7839

REVISIONS

COMPUTED BY: ABG DATE: 01/20/23
CHECKED BY: JHD DATE: 01/20/23

(4-21-15)

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

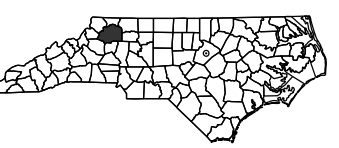
LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
	CONTINGENCY			SD	200
				TOTAL LF:	200

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

178P.II.R.155

4RD1 3G-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WILKES COUNTY



HIGHWAY DIVISION 11

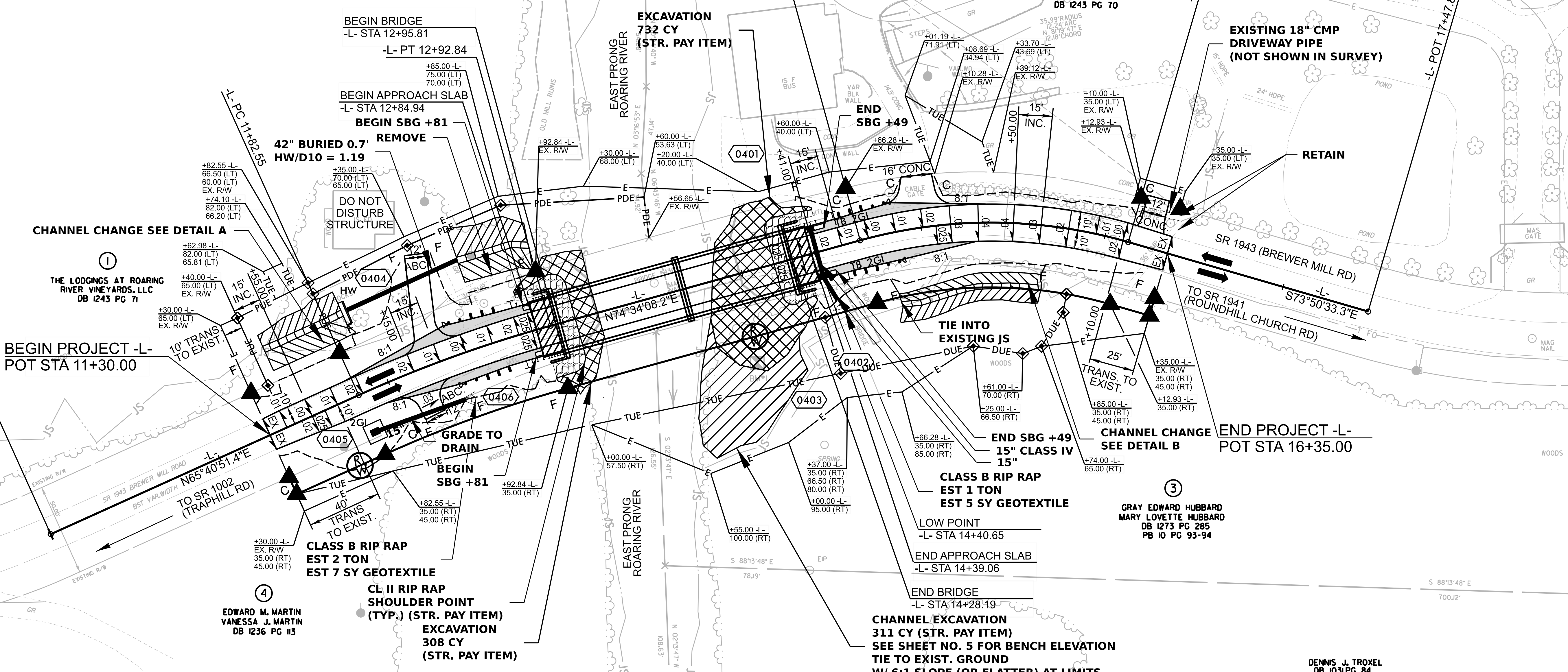
PREPARED BY

KCA
KISINGER CAMPO
& ASSOCIATES
NC FIRM LICENSE No: C-1506
301 Fayetteville Street,
Suite 1500
Raleigh, NC 27601
(919)882-7839

REVISIONS

CUR DATA -L-
 Plc 12+37.81
 $\Delta c = 08^{\circ}53'16.8''$ (RT)
 $D = 08^{\circ}03'30.5''$
 $Lc = 110.29$
 $Tc = 55.26$
 $R = 711$
 **DS = 30 MPH
 SE = RC (0.02)

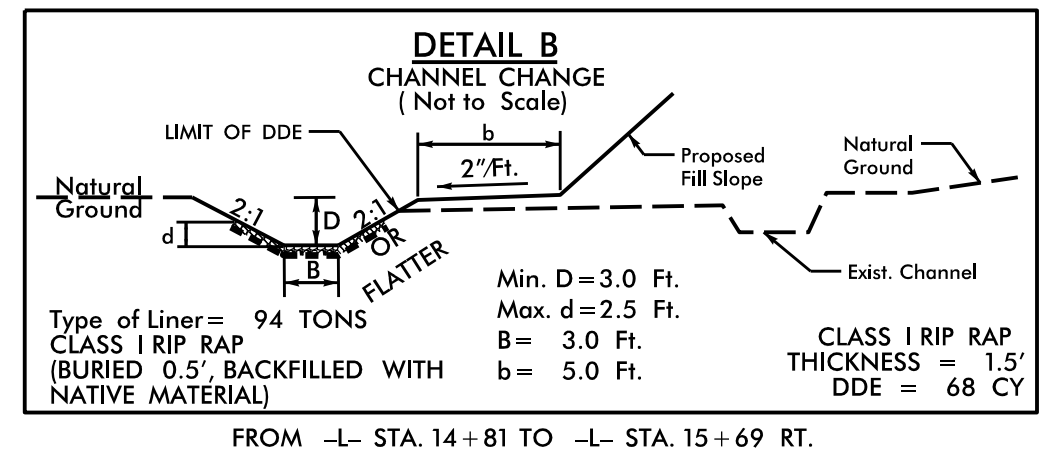
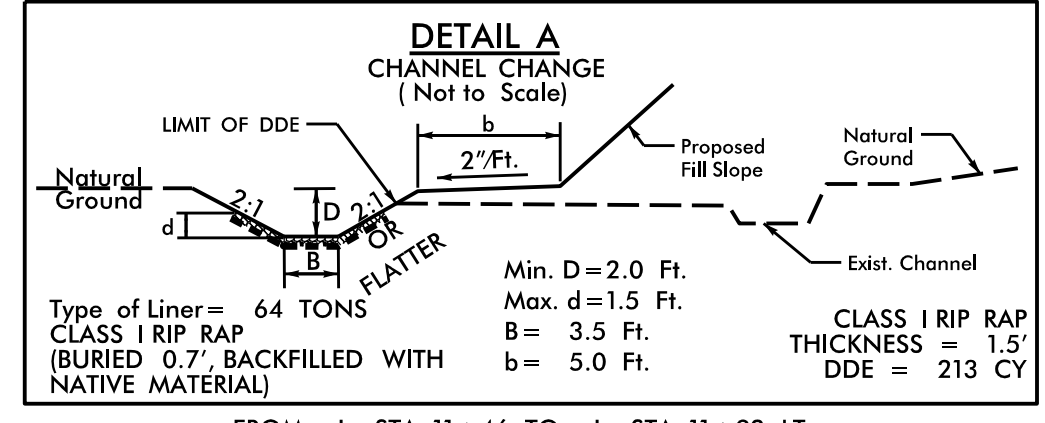
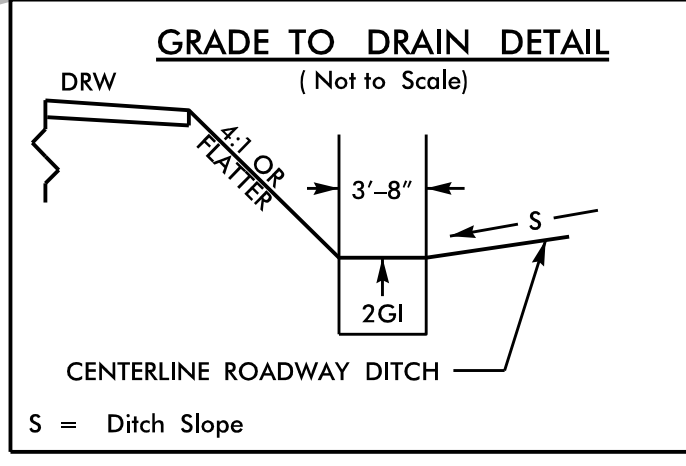
CUR DATA -L-
 Plc 15+41.52
 $\Delta c = 31^{\circ}35'18.5''$ (RT)
 $D = 21^{\circ}32'23.2''$
 $Lc = 146.65$
 $Tc = 75.24$
 $R = 266$
 **DS = 30 MPH
 SE = 0.4
 RO = 60'



EDWARD M. MARTIN
 VANESSA J. MARTIN
 DB 1288 PG 47
 PB 10 PG 346

EDWARD M. MARTIN
 VANESSA J. MARTIN
 DB 1236 PG 13

DENNIS J. TROXEL
 DB 1031 PG 84
 PB 10 PG 93-94



NOTES:

- 1.) ALL BRIDGE ANCHOR UNITS ARE TYPE III.
- 2.) ALL GUARDRAIL ANCHOR UNITS ARE GRU TL-2.
- 3.) BENCHMARK INFORMATION:
 NORTHING: 940840 EASTING: 1395929
 8" SPIKE IN ROOT OF 24" WHITE OAK
 ELEVATION: 1116.18'
- 4.) ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
- 5.) **DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED.

FOR -L- PROFILE, SEE SHEET NO. 5

FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-21

- UNCLASSIFIED STRUCTURE EXCAVATION
- CHANNEL EXCAVATION

178P.11.R.155
 4RDI 4
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WILKES COUNTY

HIGHWAY DIVISION 11
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

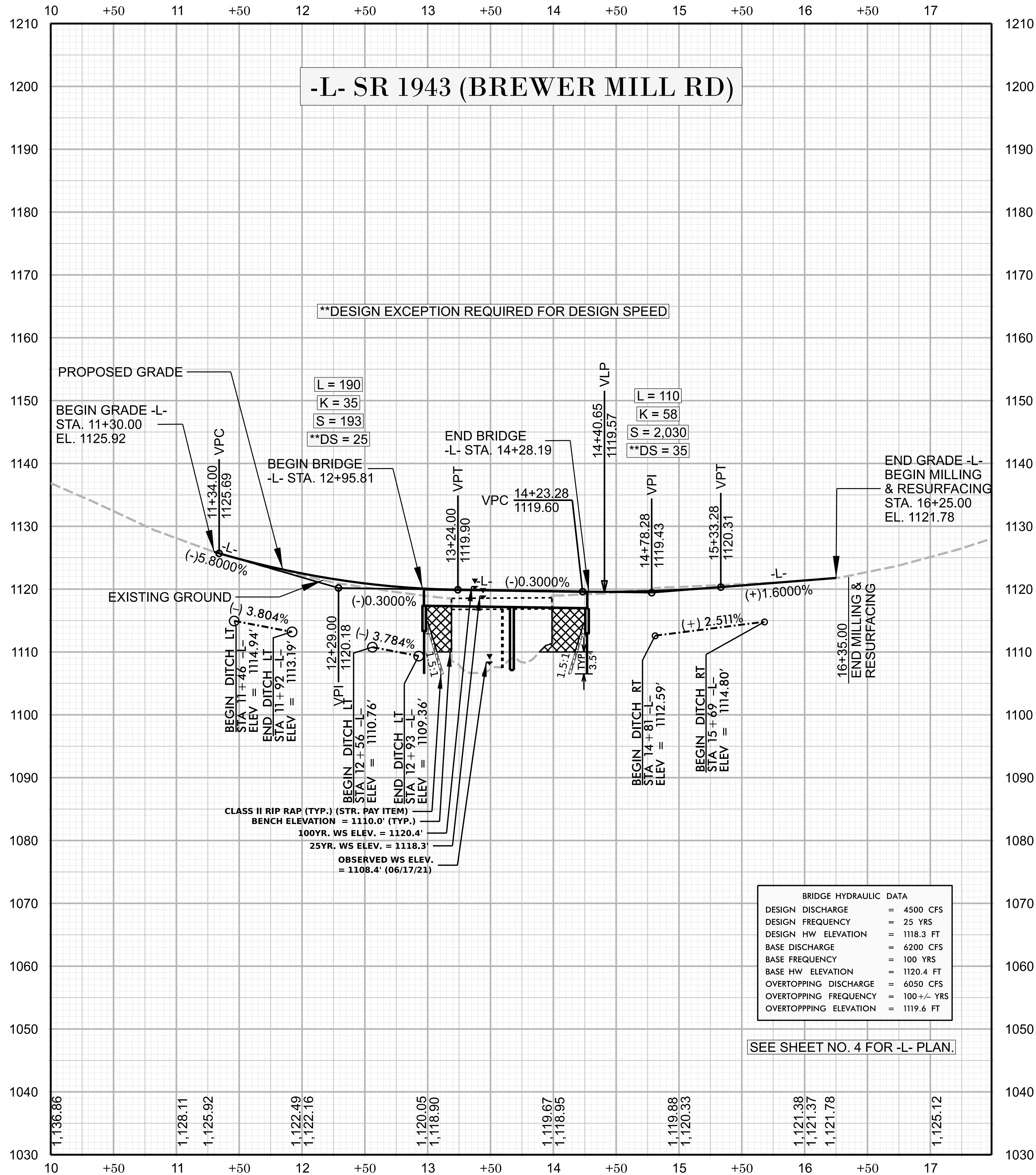
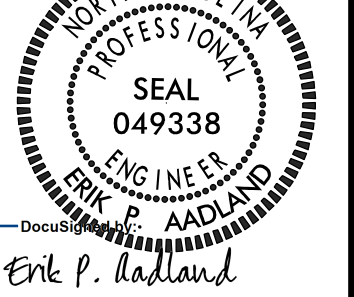
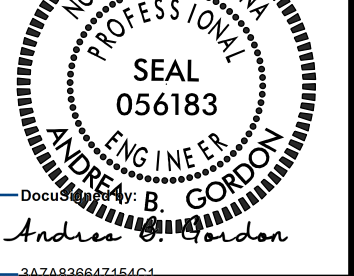
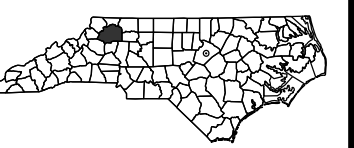
ROADWAY DESIGN
 ENGINEER
 3/18/2024

Andrew B. Gordon
 PROFESSIONAL ENGINEER
 SEAL 056183
 3/19/2024

Eric P. Ladland
 PROFESSIONAL ENGINEER
 SEAL 049338
 3/19/2024

ADJUSTED PREPARED BY
KCA
 KISINGER CAMPO & ASSOCIATES
 NC FIRM LICENSE NO. C-1506
 301 FAYETTEVILLE STREET, SUITE 1500
 RALEIGH, NC 27601
 (919) 882-7829

REVISIONS



REVISIONS

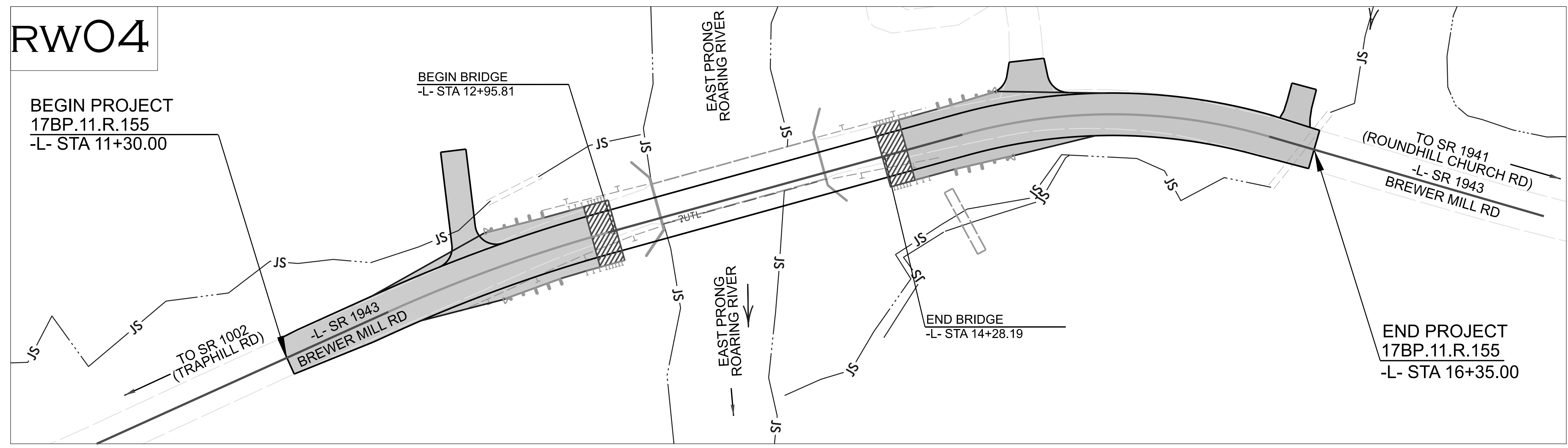
TIP PROJECT: 17BP.11.R.155

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.R.155	RW01	7

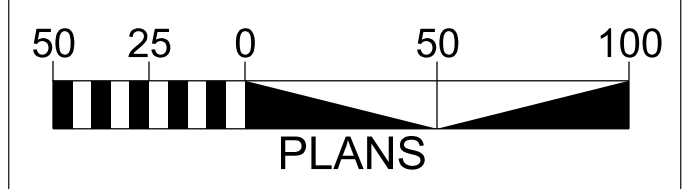
SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

WILKES COUNTY



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B5525-1" WITH NAD83/NA2011 STATE PLANE GRID COORDINATES OF NORTHING: 940707.5341 USFT EASTING: 1395457.9744 USFT ELEVATION: 1142.2321'

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999962214

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

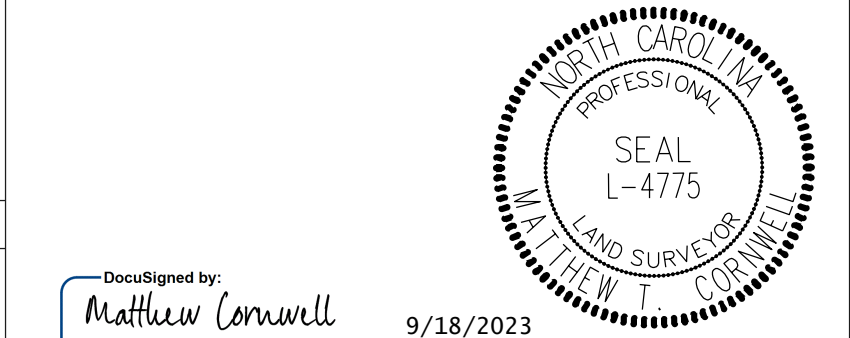
TGS ENGINEERS
201 WEST MARION STREET
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 14, 2022

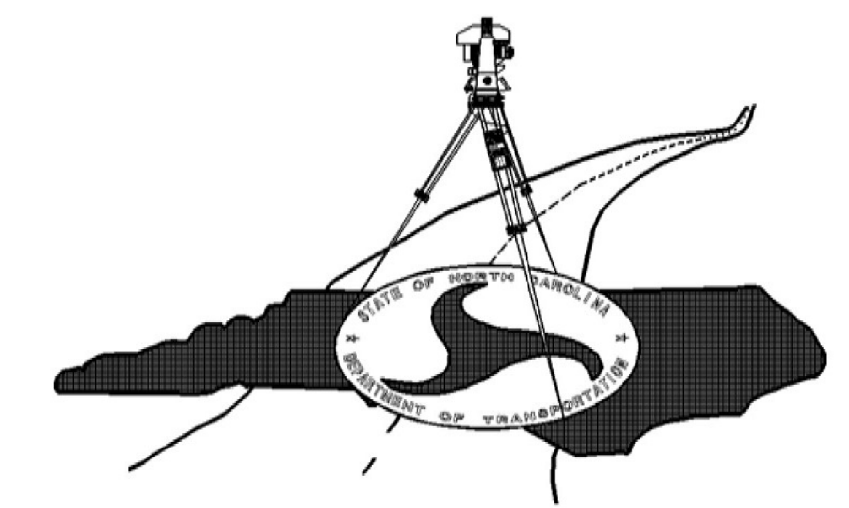
LETTING DATE:
AUGUST 17, 2023

PROFESSIONAL LAND SURVEYOR



DocuSigned by:
Matthew Cornwell
EID38F11473E475
SIGNATURE:

9/18/2023
DATE:



SURVEY CONTROL SHEET

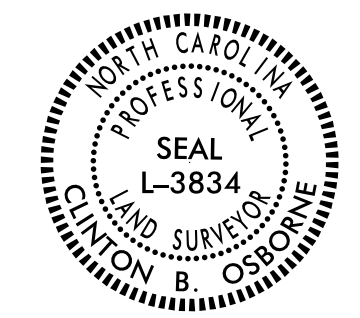
W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

I, Clinton B. Osborne, PLS, certify that the Baseline Control was verified under my supervision from an actual survey made under my supervision; that this project was updated with to existing conditions under my direct and responsible charge from an actual survey made under my supervision; that field work was performed from 3/17/21 to 3/18/21; 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 25th day of March, 2021.

DocuSigned by:
Clinton Osborne

Professional Land Surveyor L-3834

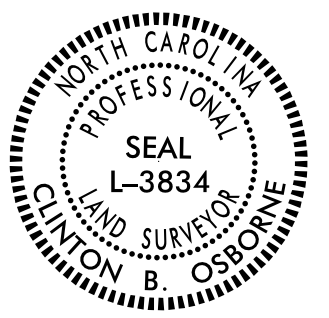
PROJECT REFERENCE NO. 96-0436 (B-5525)	SHEET NO. RW2C-1
Location and Surveys	
ALLIED ASSOCIATES, PA 4720 KESTER MILL ROAD WINSTON-SALEM, NC 27106 (336) 765-2377 C-2198	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- 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. 96-0436 (B-5525)	SHEET NO. RW2C-2
Location and Surveys	
ALLIED ASSOCIATES, PA 4720 KESTER MILL ROAD WINSTON-SALEM, NC 27106 (336) 765-2377 C-2198	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DocuSigned by:
Clinton Osborne
049F6B065F6440B...

BL	POINT	DESC.	NORTH	EAST	ELEVATION
B55251	NCDOT GPS	B5525	940707.5341	1395457.9744	1142.23
B55252	NCDOT GPS	B5525	940910.9312	1395931.0326	1118.93
BL3		BL-3	940868.5760	1396405.5770	1139.34

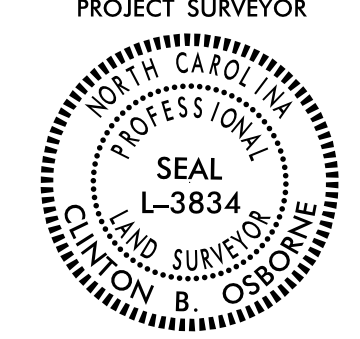
.....
 BM1 ELEVATION = 1116.18
 N 940840 E 1395929
 EL STATION 15+28.00 56 RIGHT
 BM+1 8' SPIKE IN ROOT OF 24' WHITE OAK

NOTES:

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

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 96-0436 (B-5525)	SHEET NO. RW2C-3
Location and Surveys	
ALLIED ASSOCIATES, PA 4720 KESTER MILL ROAD WINSTON-SALEM, NC 27106 (336) 765-2377 C-2198	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DocuSigned by:

 0A9F6B08F6449B

EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PDT	940720.248	1395419.504							
LINE			S 89°46'50.1" E	2.73					
PC	940720.237	1395422.232							
CURVE			N 77°57'00.7" E	128.17	24°32'18.5"(LT)	19°00'00.0"	129.15	65.58	301.56
PT	940746.993	1395547.573							
LINE			N 65°40'51.4" E	225.87					
PC	940840.010	1395753.401							
CURVE			N 70°07'06.1" E	110.82	08°52'29.2"(RT)	08°00'00.0"	110.93	55.58	716.20
PT	940877.699	1395857.619							
LINE			N 74°33'20.7" E	62.52					
PC	940894.348	1395917.880							
CURVE			N 75°45'51.0" E	24.17	02°25'00.6"(RT)	10°00'00.0"	24.17	12.09	572.96
PT	940900.291	1395941.304							
LINE			N 76°58'21.3" E	47.03					
PC	940910.892	1395987.124							
CURVE			S 88°26'06.0" E	134.28	29°11'05.4"(RT)	21°30'00.0"	135.74	69.38	266.49
PT	940907.225	1396121.355							
LINE			S 73°50'33.3" E	143.42					
PC	940867.315	1396259.109							
CURVE			S 87°14'07.4" E	176.01	26°38'27.9"(LT)	15°00'00.0"	177.61	90.44	381.97
PT	940858.825	1396434.915							
LINE			N 79°26'38.6" E	44.00					
PDT	940866.885	1396478.169							

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

I, MATTHEW T. CORNWELL, 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 9/18/2023

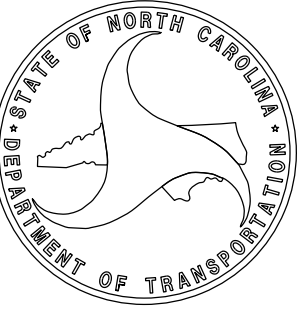
DocuSigned by:
Matthew Cornwell
EBD36F11473E475

PROFESSIONAL LAND SURVEYOR L-4775

17BP.11.R.155

R/W 020-1

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR



DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL SIGNATURES
ARE COMPLETED

2018 STANDARD
SPECIFICATIONS

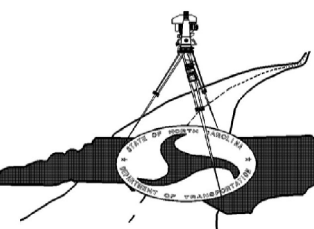
TIP PROJECT: 17BP.11.R.155
County: Wilkes

PROPOSED ALIGNMENT NAME:L									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
START	940746.9931	1395547.5729							
LINE			N65°40'51.4"E	182.5498					
PC	940822.1702	1395713.9244							
CURVE					08°53'16.8" Right	08°03'30.5"	110.29	55.26	711.00
PT	940859.6292	1395817.5447							
LINE			N74°34'08.2"E	173.4326					
PC	940905.7759	1395984.7253							
CURVE					31°35'18.5" Right	21°32'23.2"	146.65	75.24	266.00
PT	940904.8580	1396129.5239							
LINE			S73°50'33.3"E	134.9137					
END	940867.3146	1396259.1086							

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 INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

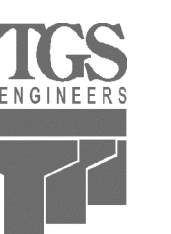
PREPARED FOR



LOCATION AND
SURVEYS UNIT

PREPARED BY

TGS ENGINEERS
201 WEST MARION ST.
SUITE 200
SHELBY, NC 28150
704-476-0003



RIGHT OF WAY & PERMANENT EASEMENT CONTROL SHEET

I, MATTHEW T. CORNWELL, 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 9/11/2023 TO 9/13/2023, AND ALL COORDINATES ARE BASED ON NAD83/2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 9/18/2023

DocuSigned by:
Matthew Cornwell
EB028F11473E475

PROFESSIONAL LAND SURVEYOR L-4775

PERMANENT ROW MARKER IRON PIN AND CAP: L			
STATION	OFFSET	NORTH	EAST
11+30.00	35.0000	940768.6350	1395680.4512
11+30.00	25.0000	940777.7476	1395676.3330
11+30.00	-25.0000	940823.3110	1395695.7421
11+82.55	35.0000	940790.2759	1395728.3390
11+82.55	-25.0000	940844.9519	1395703.6290
12+92.84	35.0000	940825.8909	1395826.8574
12+92.84	-30.4719	940889.0026	1395809.4367
14+66.28	35.0000	940872.0376	1395994.0380
14+66.28	-29.4697	940934.1832	1395976.8840
16+12.93	-25.0000	940928.8705	1396136.4808
16+12.93	35.0000	940871.2405	1396119.7842
16+35.00	35.0000	940865.0983	1396140.9844
16+35.00	-25.0000	940922.7284	1396157.6811
16+35.00	25.0000	940874.7034	1396143.7672

60D NAIL SET
BRIDGE SPIKE SET
NOT SET - FALLS IN CREEK

PERMANENT EASEMENT MARKER IRON PIN AND CAP: L			
STATION	OFFSET	NORTH	EAST
11+40.00	-25.0000	940827.4291	1395664.8548
11+40.00	-64.9501	940863.8343	1395648.4027
11+82.55	-30.0000	940876.8462	1395689.2154
11+82.55	-66.5000	940882.7694	1395686.5386
12+35.00	-65.0000	940903.0325	1395740.1438
12+85.00	-70.0000	940924.7676	1395790.6268
13+56.65	-31.7602	940907.2230	1395870.6037
13+60.00	-53.6254	940929.1904	1395868.0117
14+37.00	35.0000	940864.2478	1395965.8173
14+37.00	66.5000	940833.8834	1395974.1987
15+25.00	66.5000	940848.6297	1396045.8190
15+61.00	70.0000	940844.6272	1396072.4901
15+74.00	65.0000	940848.5182	1396082.6851
15+85.00	35.0000	940876.7554	1396096.1778
15+85.00	45.0000	940866.9117	1396094.4169

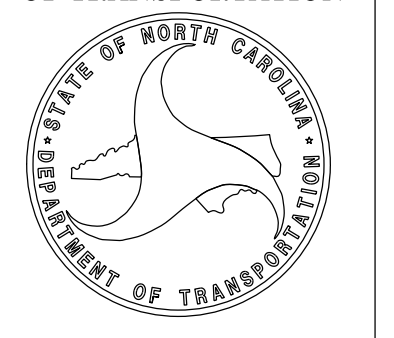
BRIDGE SPIKE SET
NOT SET - FALLS IN CREEK
NOT SET - FALLS IN CREEK
NOT SET - FALLS IN TREE

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.

17BP.11.R.155
R/W 03E-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



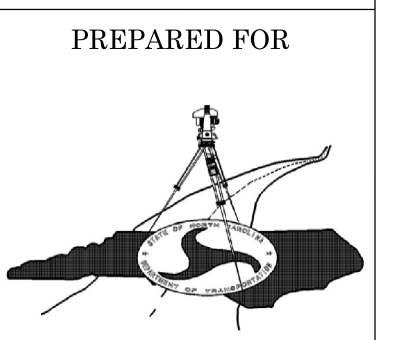
PROFESSIONAL LAND SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

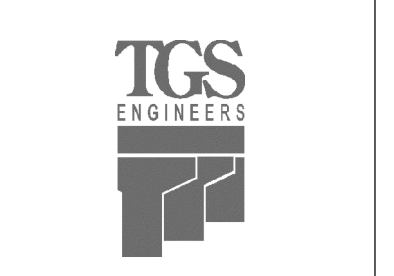
2018 STANDARD SPECIFICATIONS

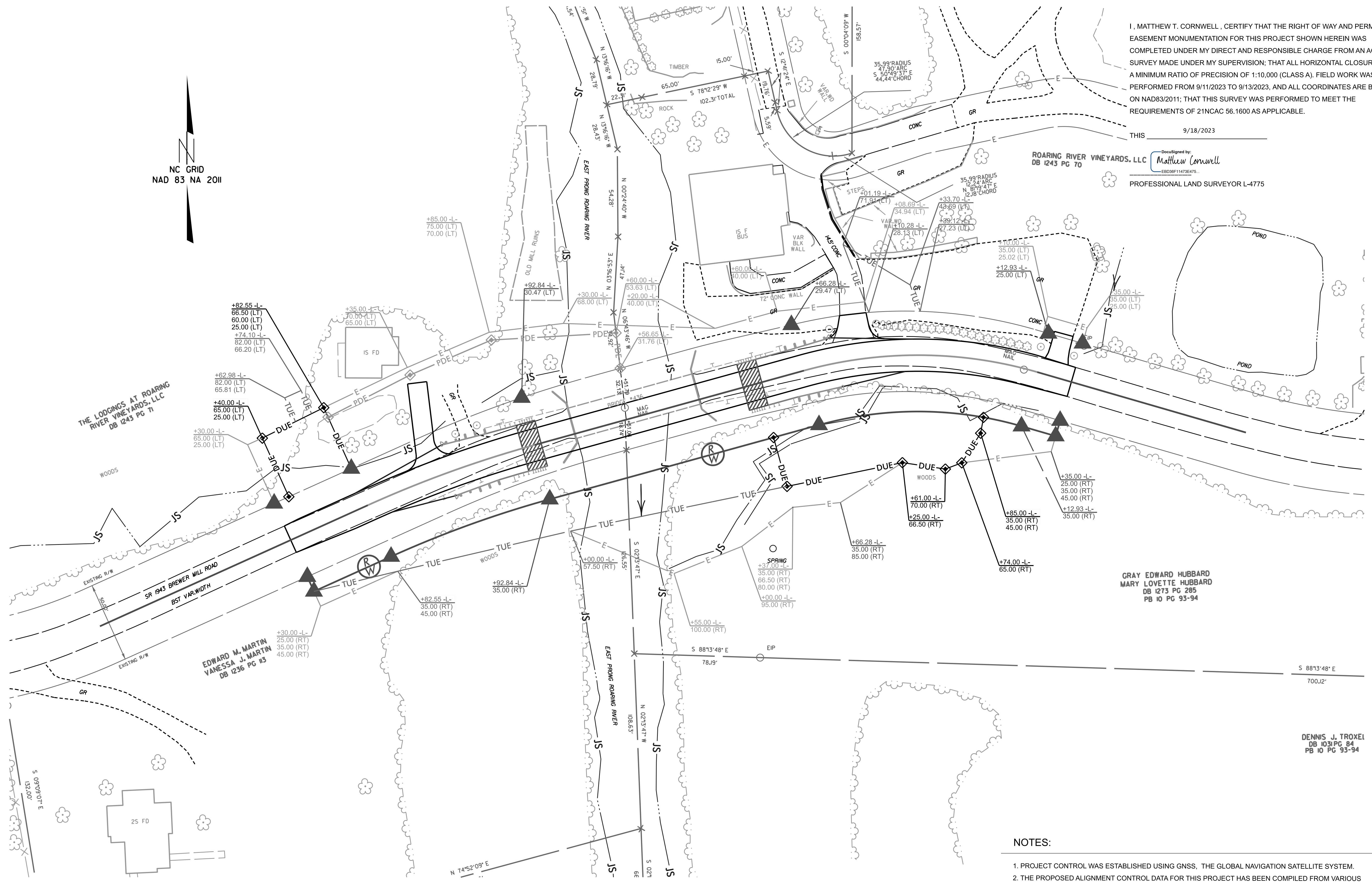
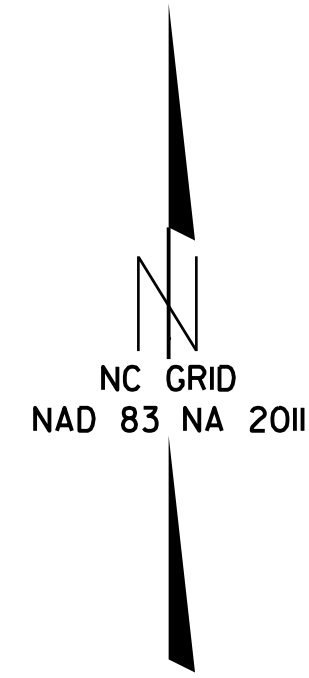
TIP PROJECT: 17BP.11.R.155
County: Wilkes



LOCATION AND SURVEYS UNIT

PREPARED BY
TGS ENGINEERS
201 WEST MARION ST.
SUITE 200
SHELBY, NC 28150
704-476-0003





I, MATTHEW T. CORNWELL, 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 9/11/2023 TO 9/13/2023, AND ALL COORDINATES ARE BASED ON NAD83/2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 9/18/2023
ROARING RIVER VINEYARDS, LLC
DB 1243 PG 70
Documented by: Matthew Cornwell
PROFESSIONAL LAND SURVEYOR L-4775

THE LODGINGS AT ROARING RIVER VINEYARDS, LLC
DB 1243 PG 71

EDWARD M. MARTIN
VANESSA J. MARTIN
DB 1236 PG 13

GRAY EDWARD HUBBARD
MARY LOVETTE HUBBARD
DB 1273 PG 285
PB 10 PG 93-94

DENNIS J. TROXEI
DB 1031 PG 84
PB 10 PG 93-94

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 INFORMATIO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

17BP.11.R.155
R/W RW04
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

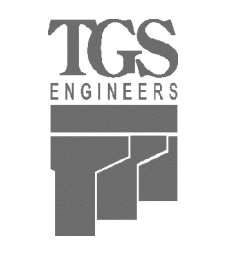
PROFESSIONAL LAND SURVEYOR
MATTHEW T. CORNWELL
SEAL L-4775

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED
2018 STANDARD SPECIFICATIONS

TIP PROJECT: 17BP.11.R.155
County: Wilkes

PREPARED FOR
Dennis J. Troxei
LOCATION AND SURVEYS UNIT

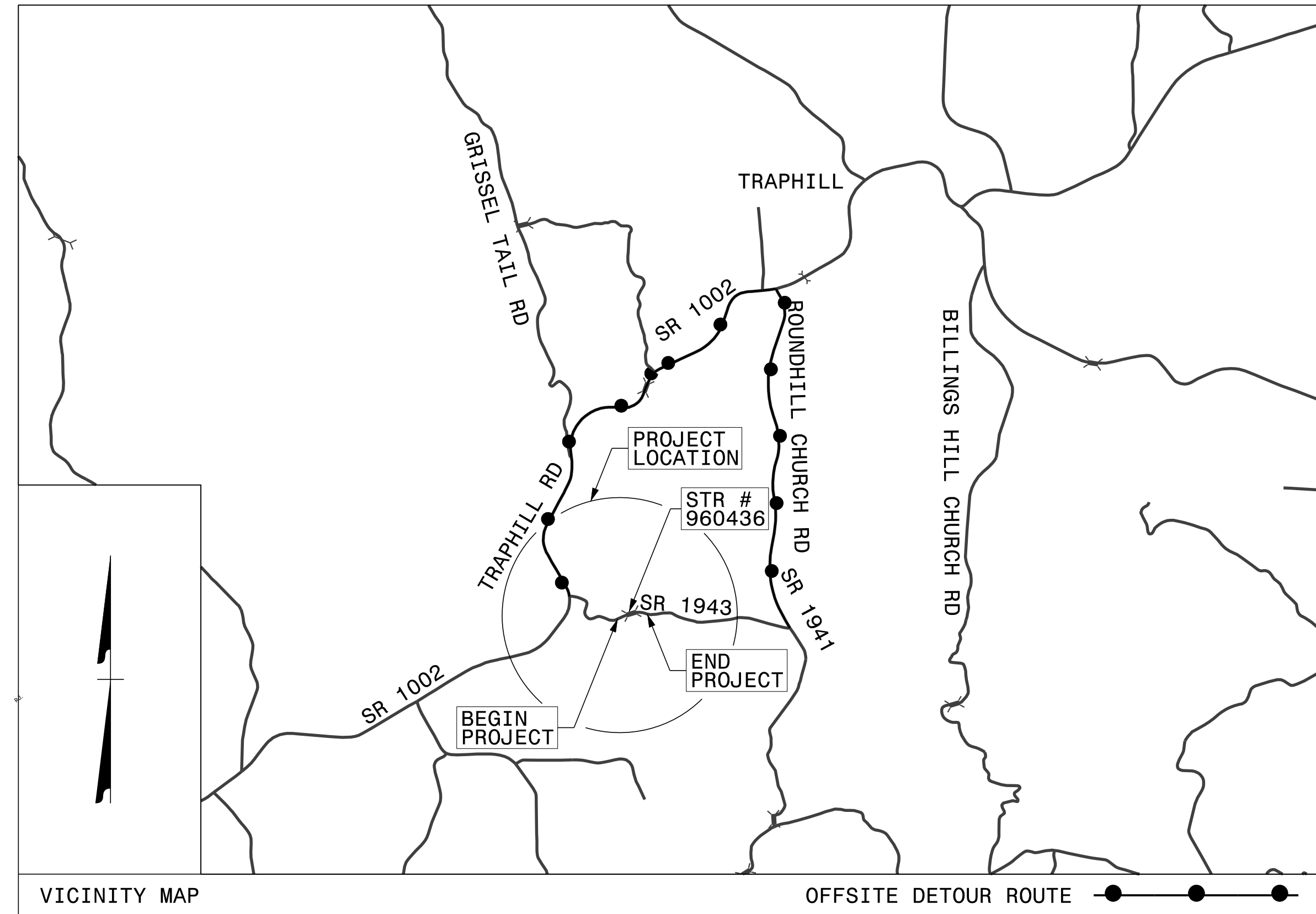
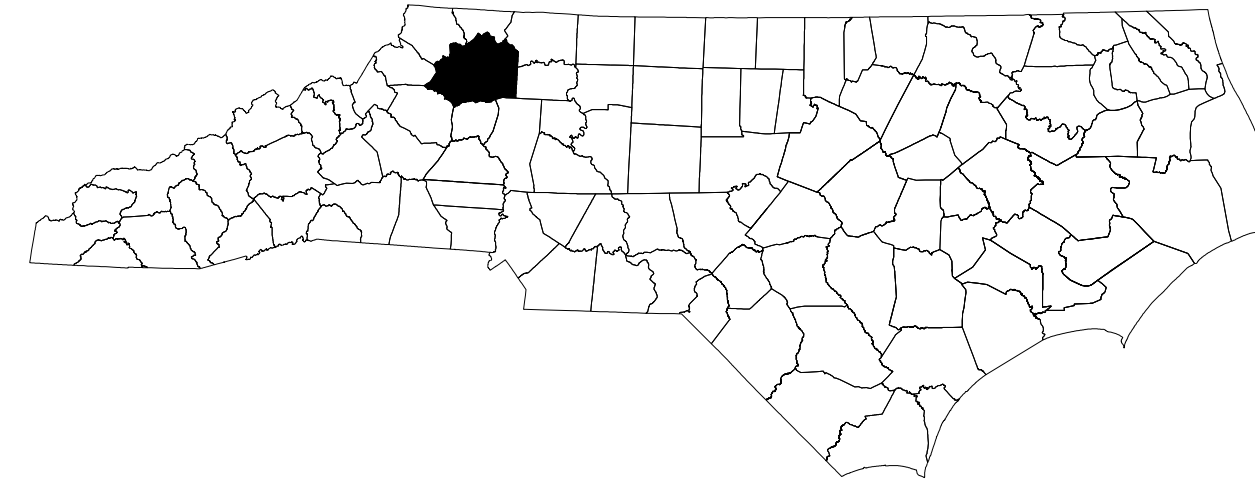
PREPARED BY
TGS ENGINEERS
201 WEST MARION ST.
SUITE 200
SHELBY, NC 28150
704-476-0003



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WILKES COUNTY



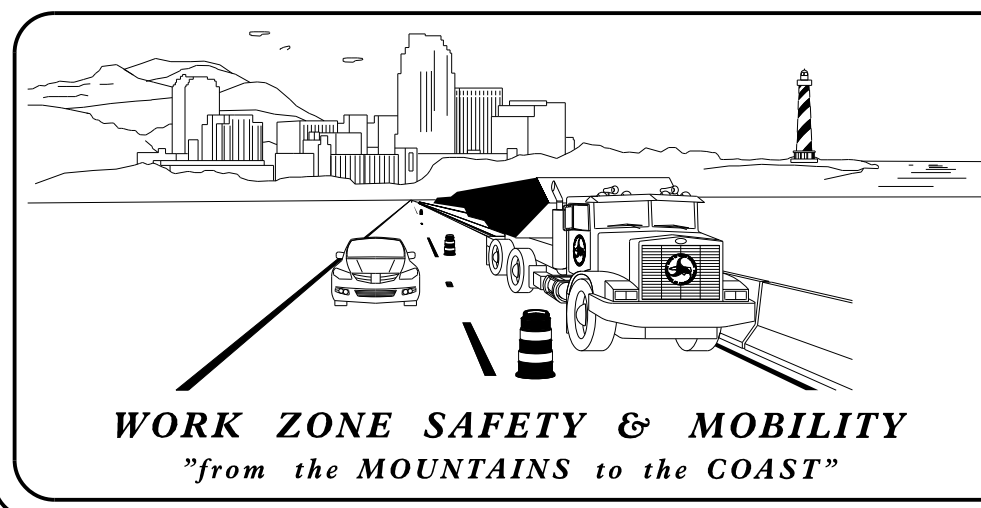
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LEGEND, ROADWAY STANDARD DRAWINGS, GENERAL NOTES, AND PHASING NOTES
TMP-2	SIGN DESIGN
TMP-3	OFFSITE DETOUR

SHEET NO.
TMP-1

17BP.11.R.155

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



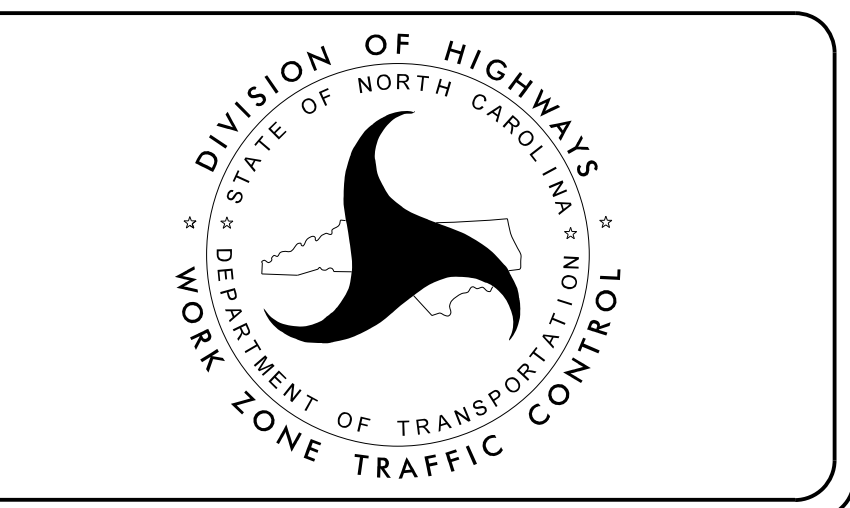
PLANS PREPARED BY:

Jacob H. Duke, P.E.
WZTC PROJECT ENGINEER

Jason M. DeBone
WZTC PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

ROB N. WEISZ, P.E.
PROJECT MANAGER



KCA
KISINGER CAMPO
& ASSOCIATES

301 FAYETTEVILLE STREET
SUITE 1500
RALEIGH, NC 27601
(919) 882-7839
NC FIRM LICENSE: C-1506

APPROVED: Jacob H. Duke
DocuSigned by: Jacob H. Duke
29630C8054E94D9

DATE: 11/1/2023

SEAL

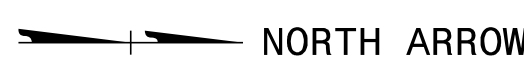
PROJECT:

11/1/2023
17BP.11.R.155.TC.TMP_01.dgn
User: JDeBone



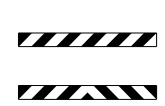
LEGEND

GENERAL



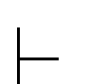
NORTH ARROW

TRAFFIC CONTROL DEVICES



BARRICADE (TYPE III)

TEMPORARY SIGNING



STATIONARY SIGN

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
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1130.01	DRUMS
1145.01	BARRICADES - TYPE III
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTI-LANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

GENERAL NOTES

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

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

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

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

PROVIDE SIGNING REQUIRED FOR THE OFFSITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFFSITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

TRAFFIC CONTROL DEVICES

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

PHASING NOTES

PHASE 1

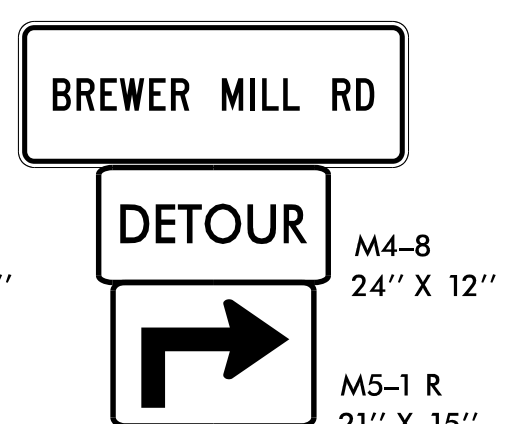
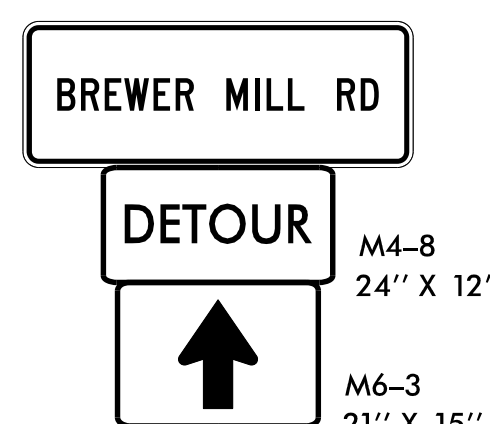
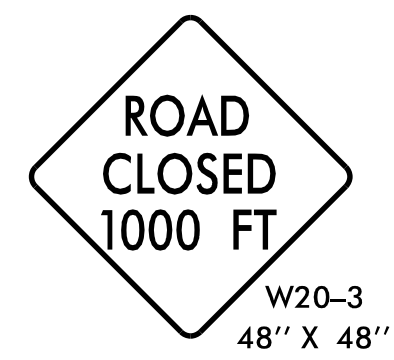
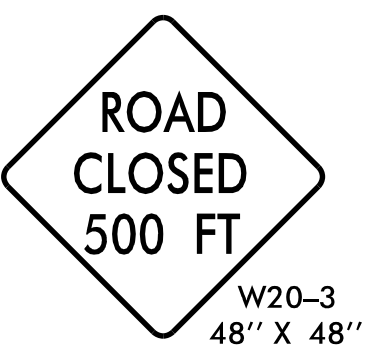
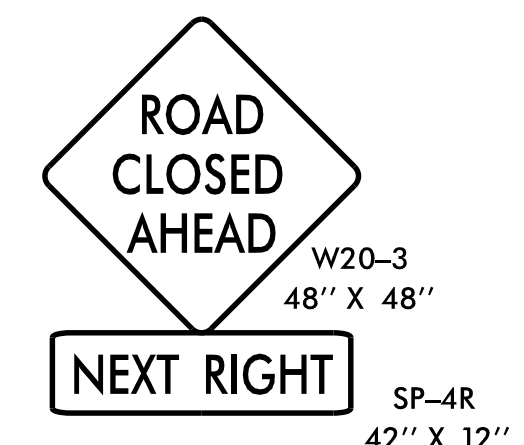
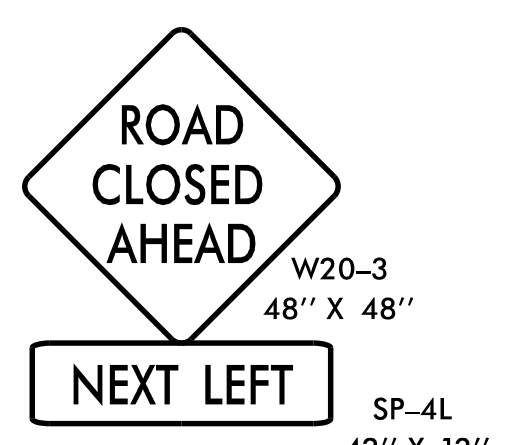
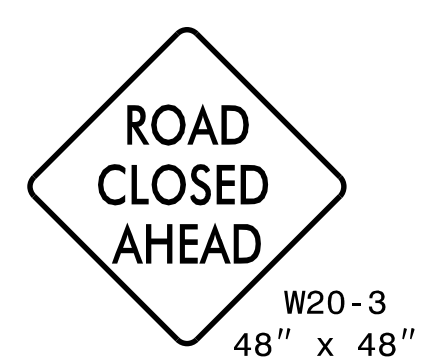
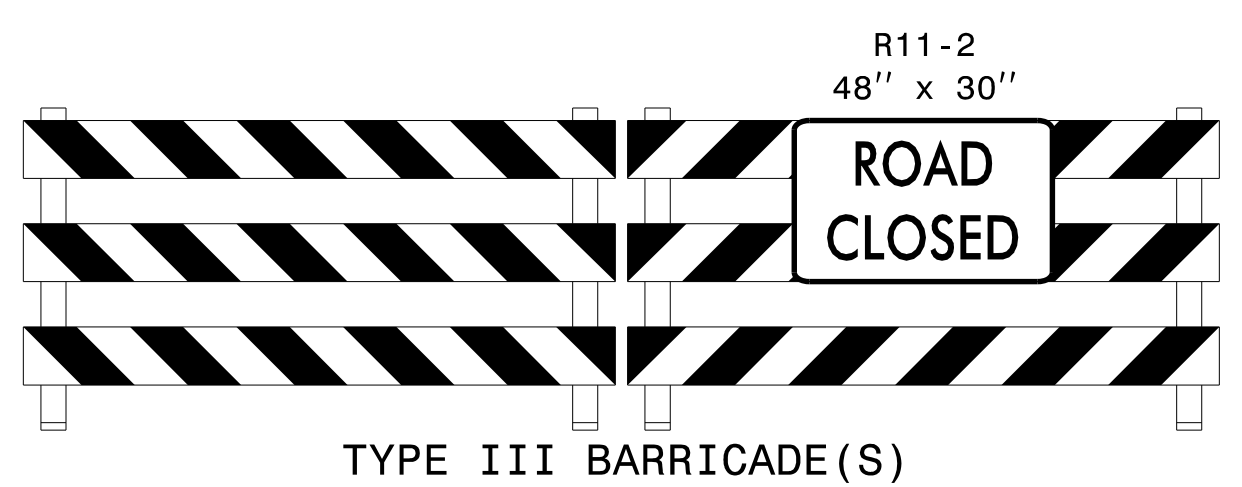
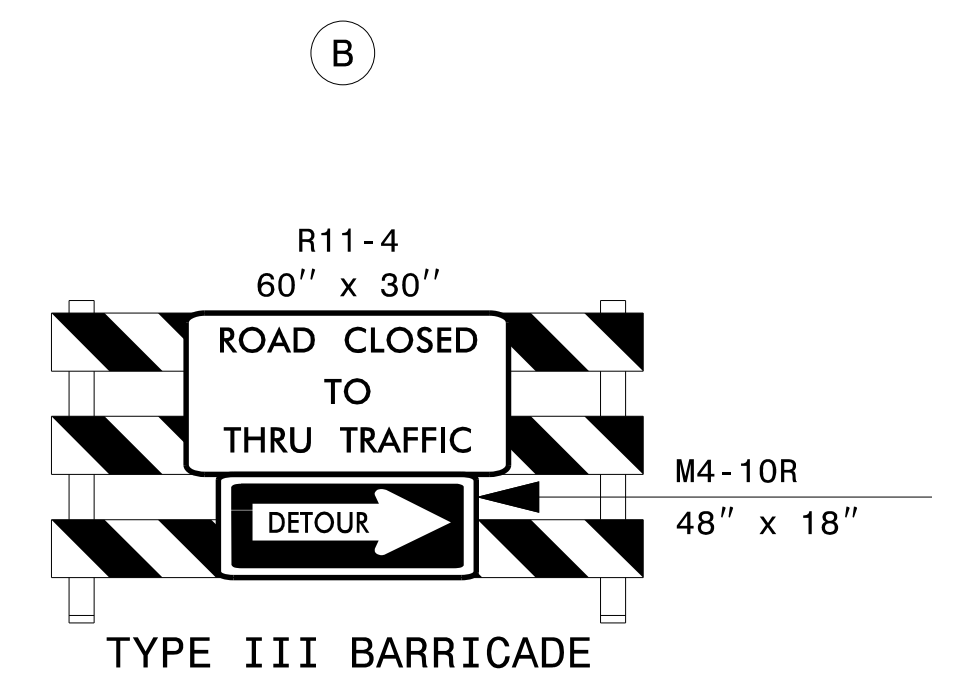
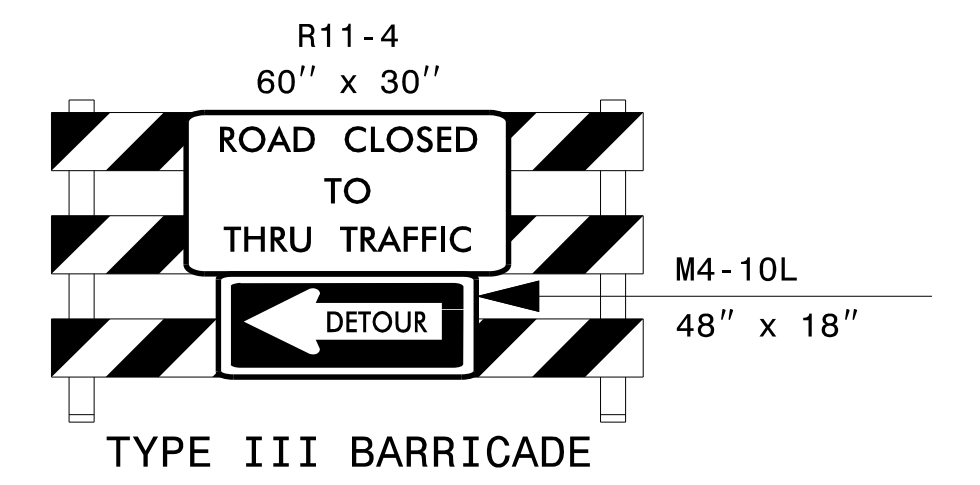
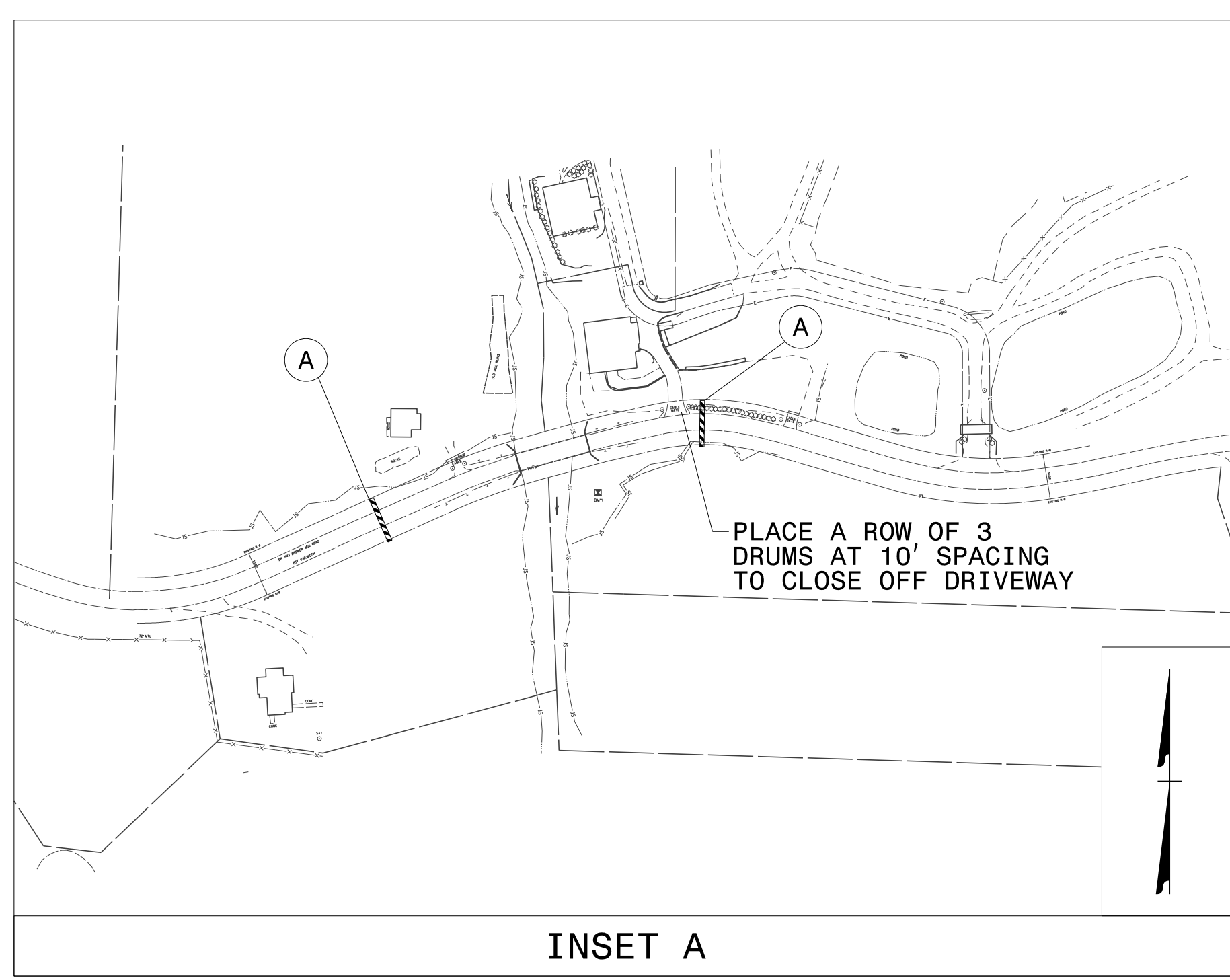
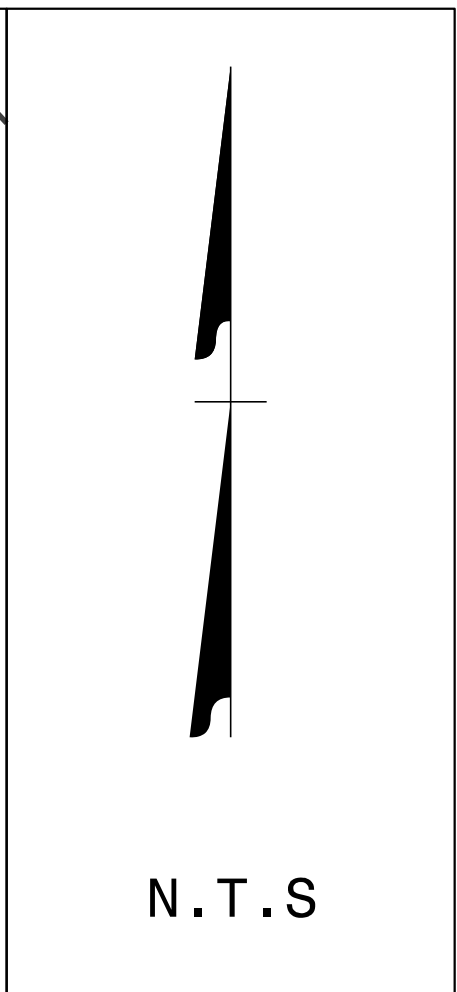
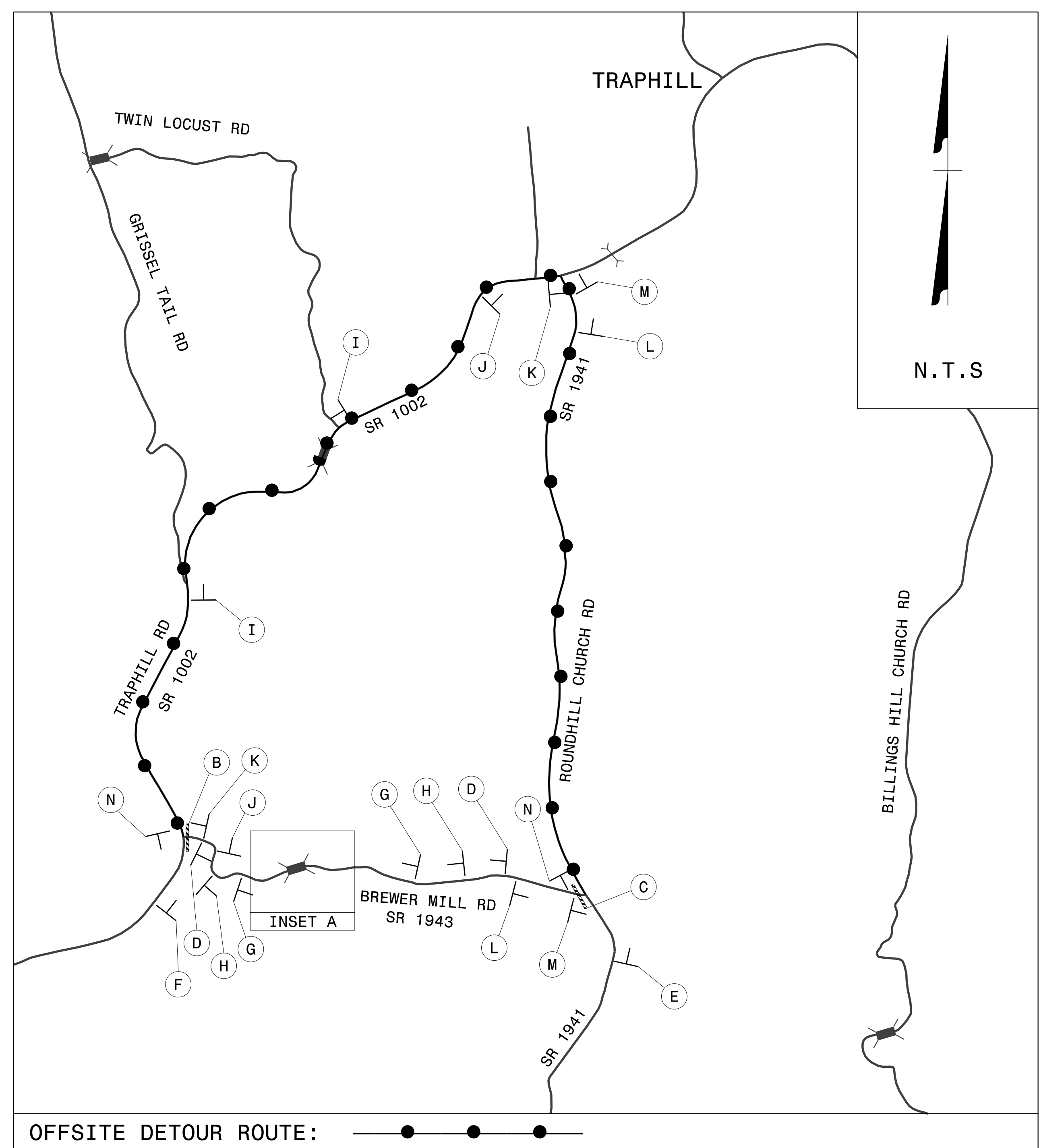
STEP 1: PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE AND COVER OFFSITE DETOUR SIGNS AND DEVICES FOR BREWER MILL RD (SR 1943), TRAPHILL RD (SR 1002), AND ROUNDHILL CHURCH RD (SR 1941) AS SHOWN ON TMP-3. PLACE ADVANCE WARNING SIGNS PER RSD 1101.01 (SHEET 3 OF 3).

STEP 2: USING THE OFFSITE DETOUR, AS SHOWN ON TMP-3, UNCOVER DETOUR SIGNS, CLOSE -L- (BREWER MILL RD/SR 1943) TO TRAFFIC AND CONSTRUCT PROPOSED BRIDGE AND ROADWAY UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE PER ROADWAY AND STRUCTURE PLANS.

STEP 3: UPON COMPLETION OF BRIDGE AND ROADWAY CONSTRUCTION, PLACE FINAL PAVEMENT MARKINGS PER PAVEMENT MARKING PLANS. REMOVE ALL SIGNS AND DEVICES AND OPEN -L- (BREWER MILL RD/SR 1943) TO TRAFFIC.

11/1/2023 17:58:14 17BP.11.R.155.TC.TMP-01A.dgn User: j1debone

<p>APPROVED: </p> <p>DATE: 11/1/2023</p> <p style="text-align: center;">SEAL</p>			<p>LEGEND, ROADWAY STANDARD DRAWINGS, GENERAL NOTES, AND PHASING NOTES</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



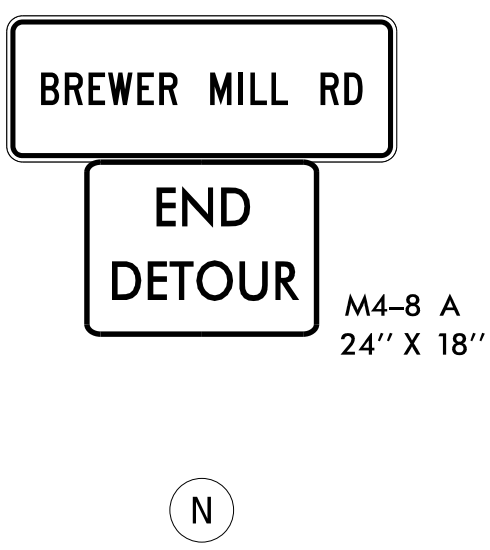
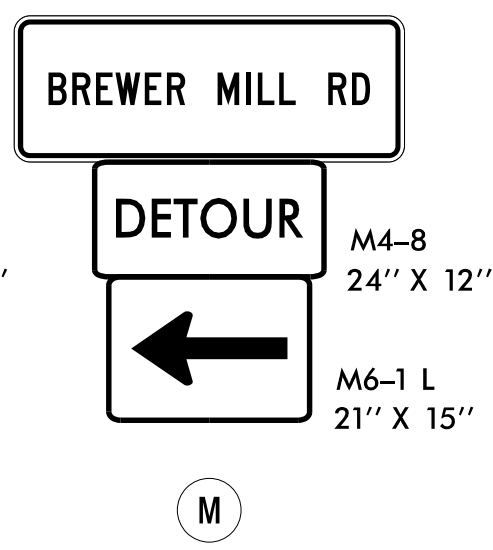
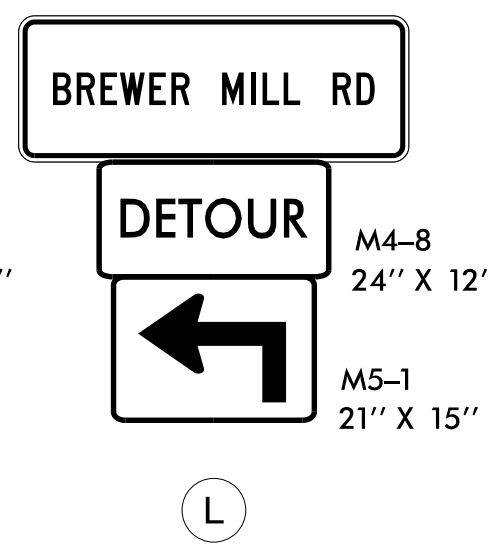
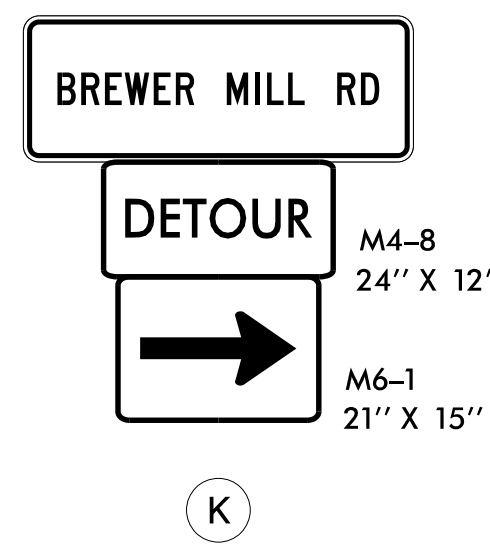
DETOUR DESCRIPTION:

BREWER MILL ROAD (SR 1943) TO TRAPHILL ROAD (SR 1002) TO ROUNDHILL CHURCH ROAD (SR 1941) BACK TO BREWER MILL ROAD (SR 1943).

BREWER MILL ROAD (SR 1943) TO ROUNDHILL CHURCH ROAD (SR 1941) TO TRAPHILL ROAD (SR 1002) BACK TO BREWER MILL ROAD (SR 1943).

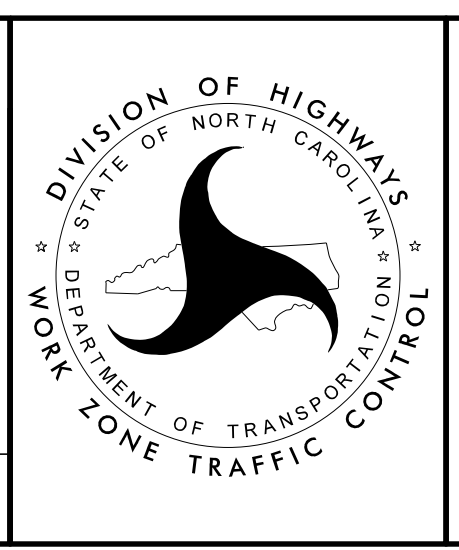
NOTES:

1. TRAFFIC CONTROL DEVICES (A) THRU (N) SHALL BE INSTALLED PER ENGINEER'S INSTRUCTIONS.
2. ALL SIGNAGE IS SPACED AT 500 FOOT INTERVALS UNLESS OTHERWISE NOTED.
3. USE THIS SHEET IN CONJUNCTION WITH RSD 1101.01 SHEET 3 OF 3 AND TMP-2.



* SIGNS (D) (G) (H) SHOULD BE PLACED ON BOTH SIDES OF THE -L- SR 1943 (BREWER MILL RD)

APPROVED: *Jacob H Duke*
 DATE: 11/1/2023
 SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER, JACOB H. DUKE, 043777
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



OFFSITE DETOUR

PROJECT: 17BP.11.R.155

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
WILKES COUNTY**

PROJECT NO. 17BP.11.R.155	SHEET NO. PMP-1
APPROVED: <small>DESIGNED BY: Jacob H. Duke 28530C8054E4D9...</small>	
DATE: 11/1/2023	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROADWAY STANDARD DRAWING

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

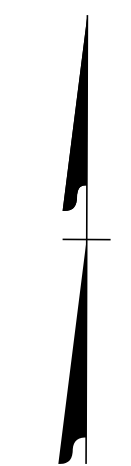
STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

GENERAL NOTES

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

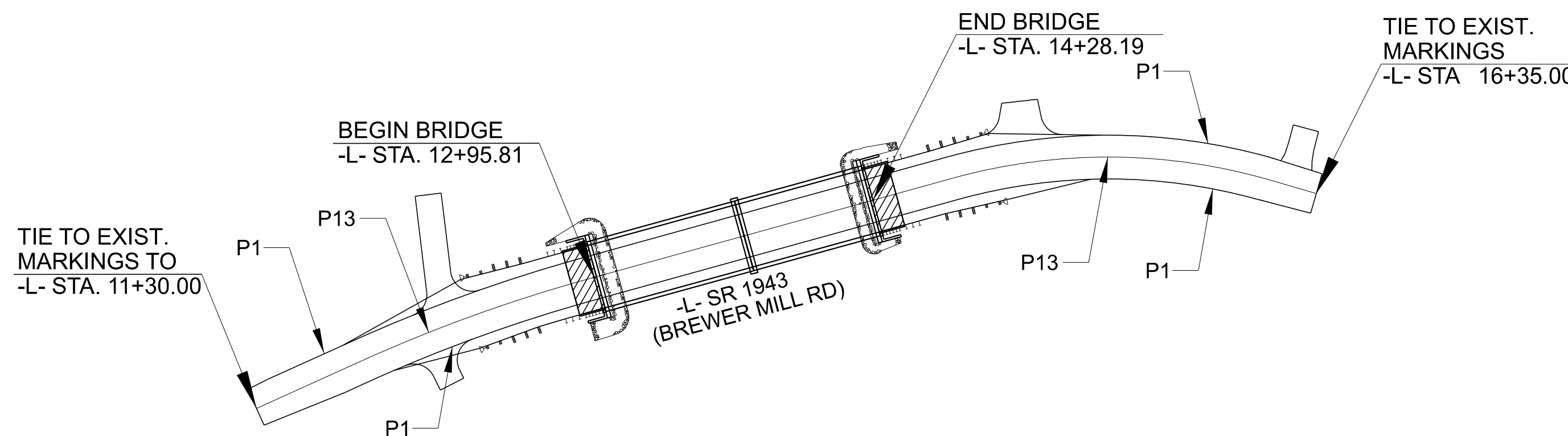
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
BREWER MILL RD (SR 1943)	PAINT	NONE
- B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- C) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- D) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.



PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY
PAINT		
P1	WHITE EDGELINE (4")	2020 LF
P13	YELLOW DOUBLE CENTER (4")	2020 LF



PLAN PREPARED BY: KISINGER CAMPO & ASSOCIATES

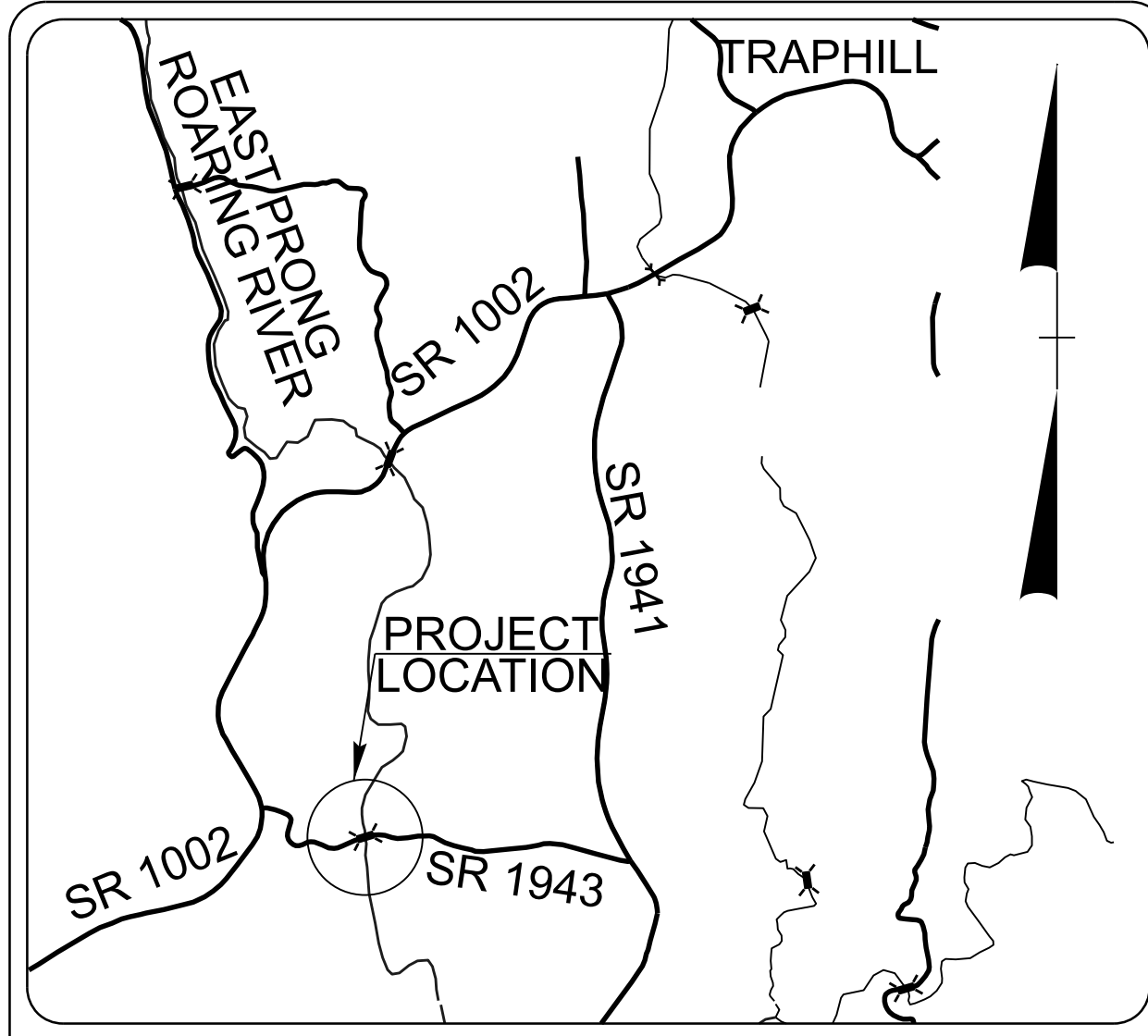
JACOB H. DUKE, PE PROJECT ENGINEER

JASON M. DEBONE PROJECT DESIGNER



NC FIRM LICENSE No: C-1506
301 Fayetteville St.,
Suite 1500
Raleigh, NC 27601
(919)882-7839

TIP PROJECT: 17BP.11.R.155

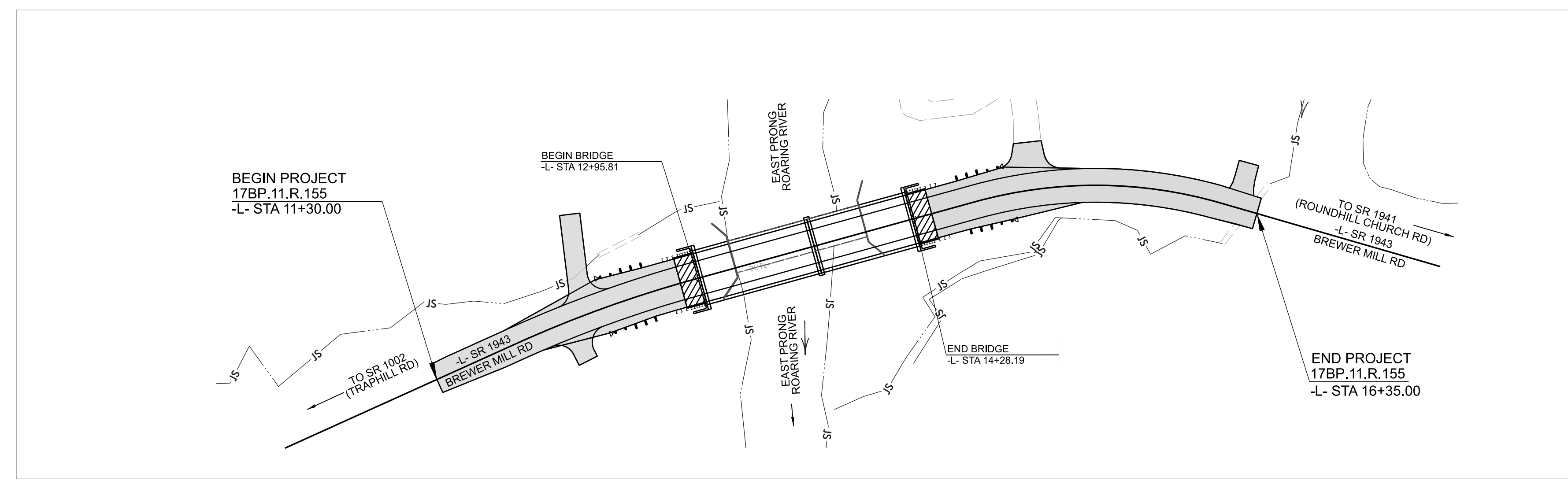


VICINITY MAP
NOT TO SCALE

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

LOCATION: *BRIDGE NO. 960436 ON SR 1943 (BREWER MILL RD)
OVER EAST PRONG ROARING RIVER*

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



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.R.155	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.11.PE.155		PE	
17BP.11.ROW.155		R/W, UTILITIES	
17BP.11.R.155		CONSTRUCTION	

EROSION AND SEDIMENT CONTROL MEASURES

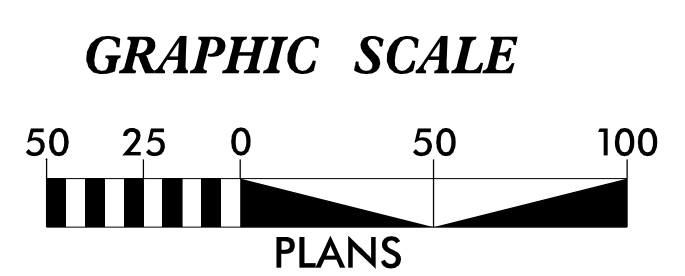
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSB
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	△△△△△
1622.01	Temporary Berms and Slope Drains	T
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	⊗
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	⊗
1633.02	Temporary Rock Silt Check Type-B	▶
	Wattle/Coir Fiber Wattle	⌒
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	⌒
1634.01	Temporary Rock Sediment Dam Type-A	▩
1634.02	Temporary Rock Sediment Dam Type-B	▩
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⊕
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊕
1630.04	Stilling Basin	▭
1630.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

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

THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.

ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT

Refer To E. C. Special Provisions
for Special Considerations.



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:
NC FIRM LICENSE No: C-1506
301 Fayetteville St.,
Suite 1500
Raleigh, NC 27601
(919)882-7839
Designed by:
JOHN MCNULTY 4263
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

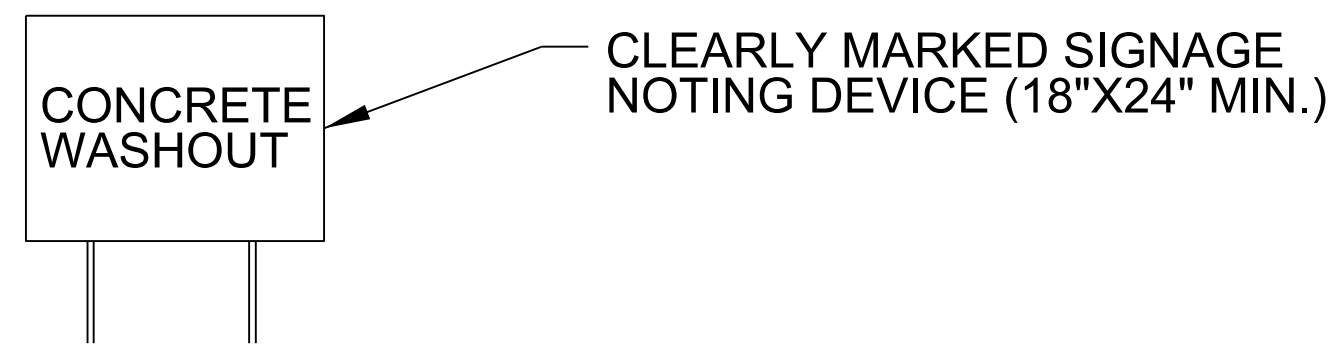
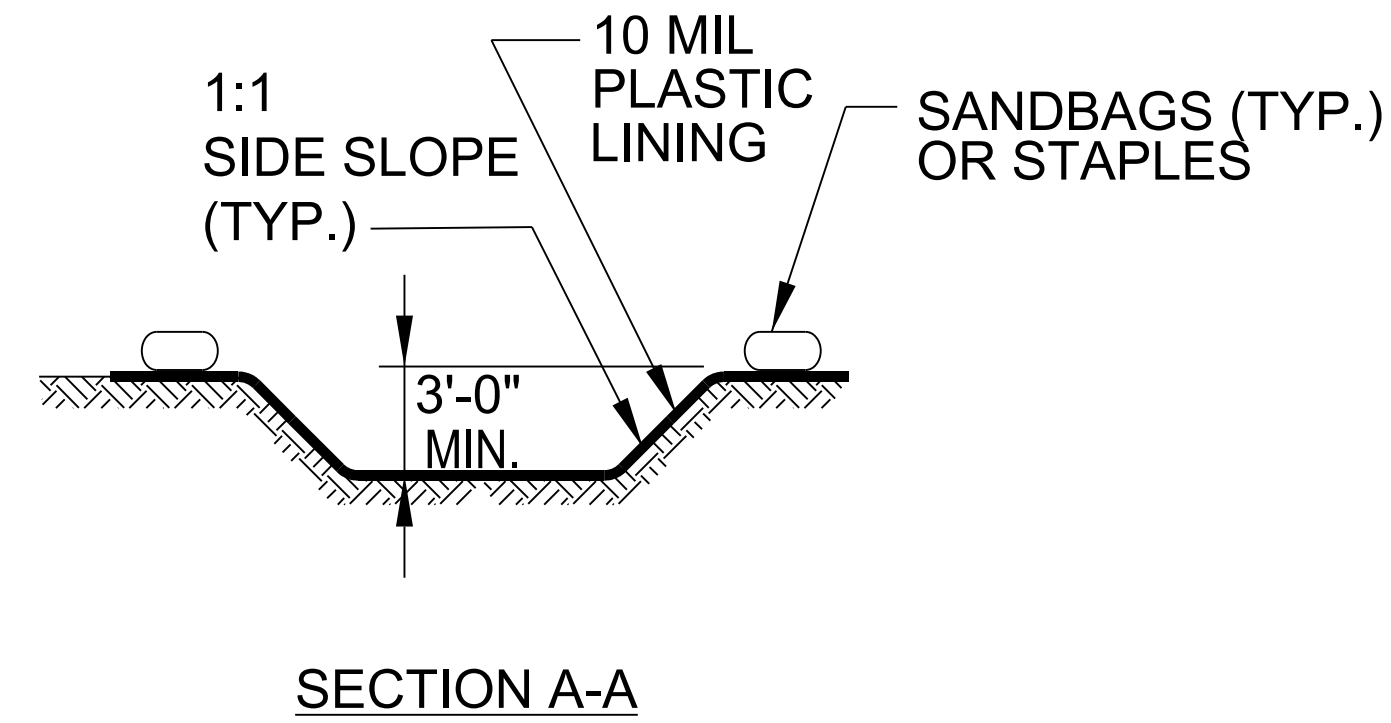
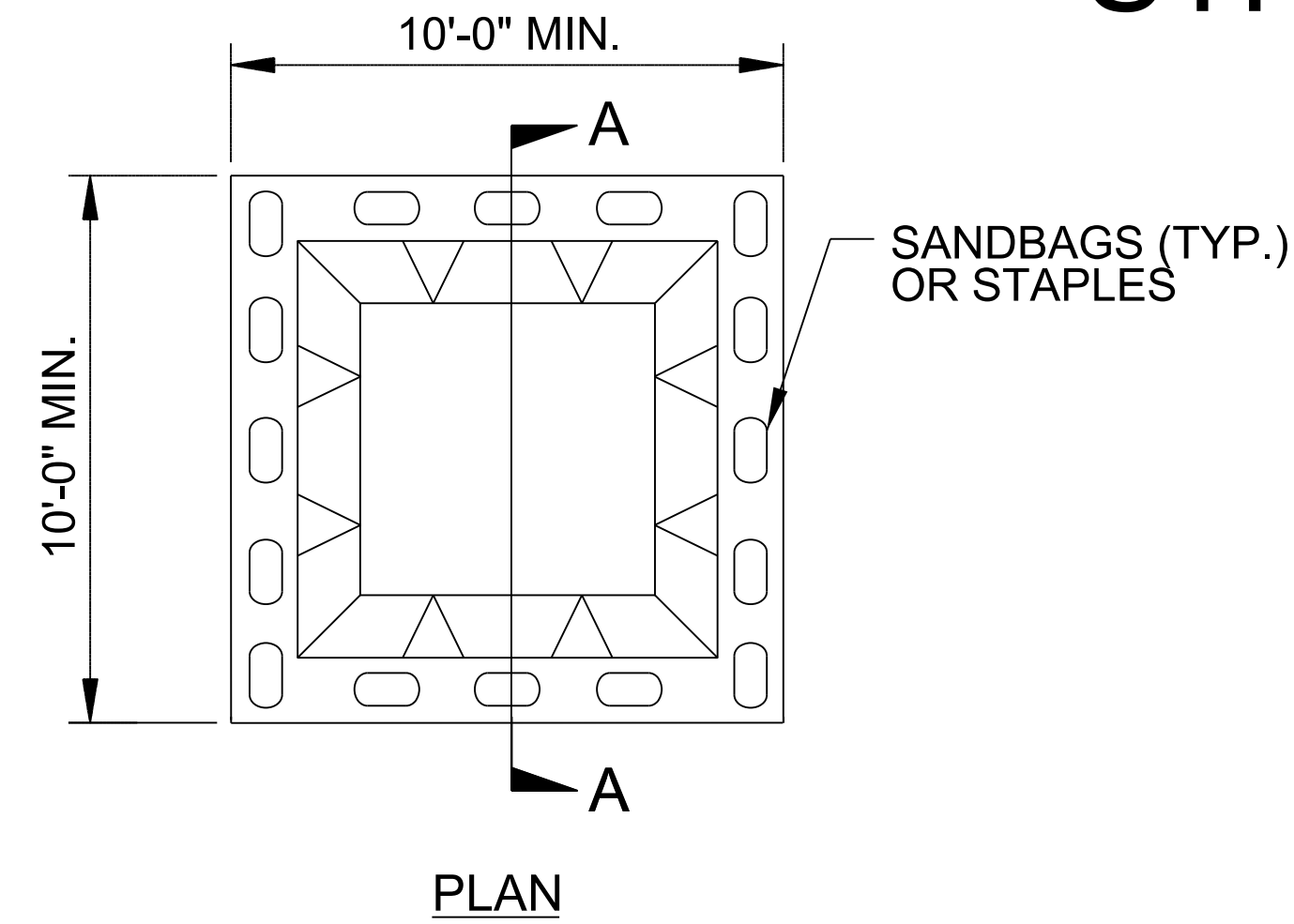
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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

25/01/2024 10:56 AM 17BP.11.R.155/Roadside Environmental/Erosion Control/Design/17BP.11.R.155_EC_tsh.dgn

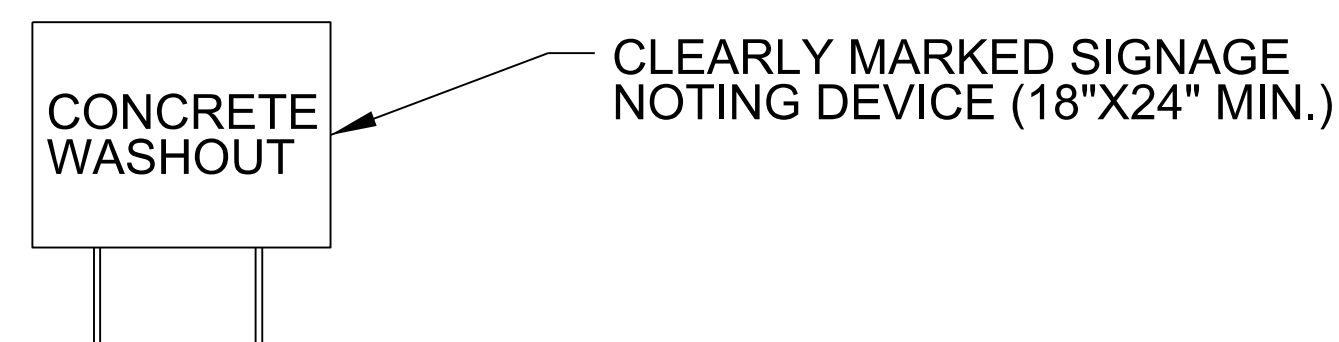
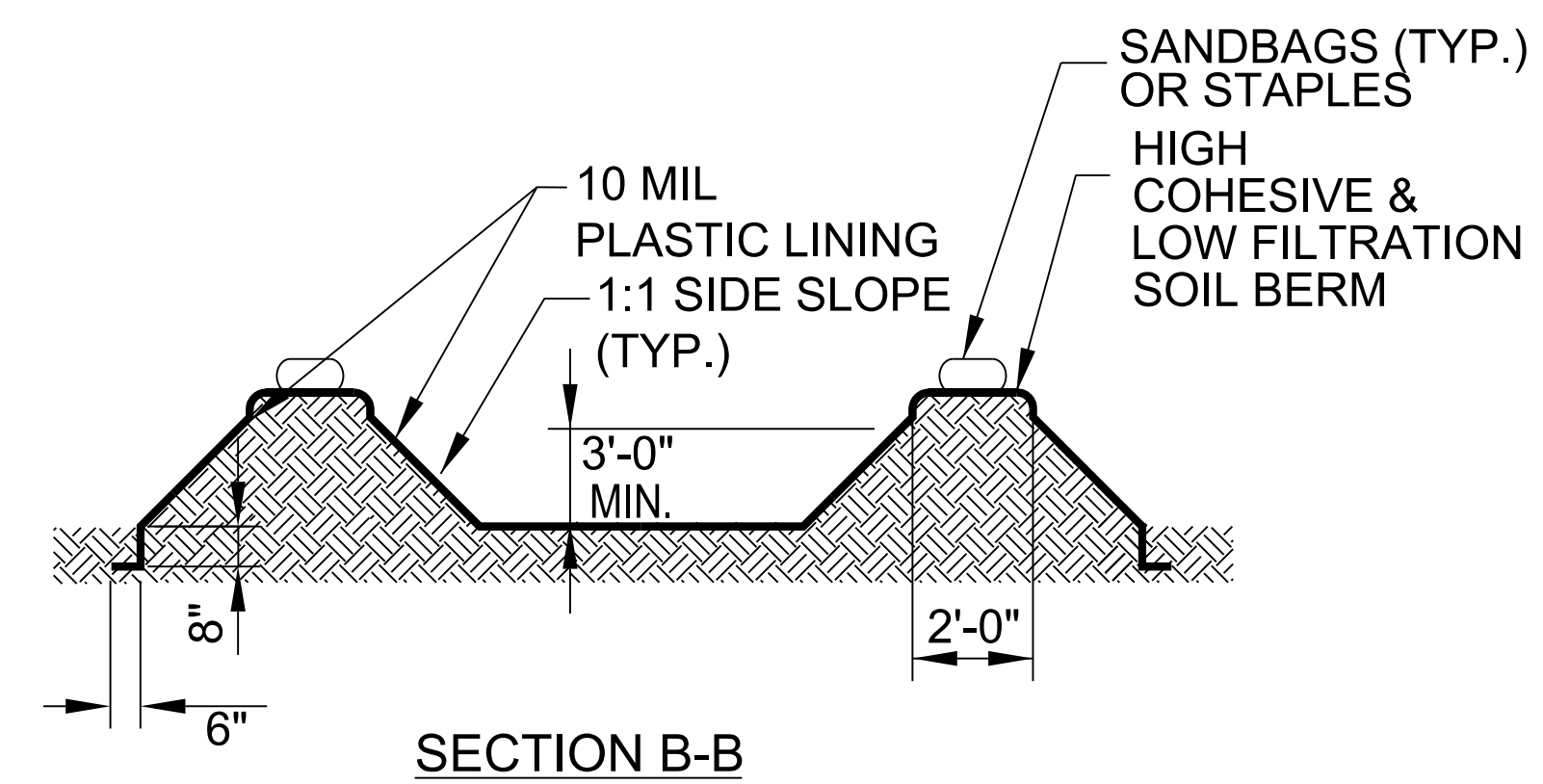
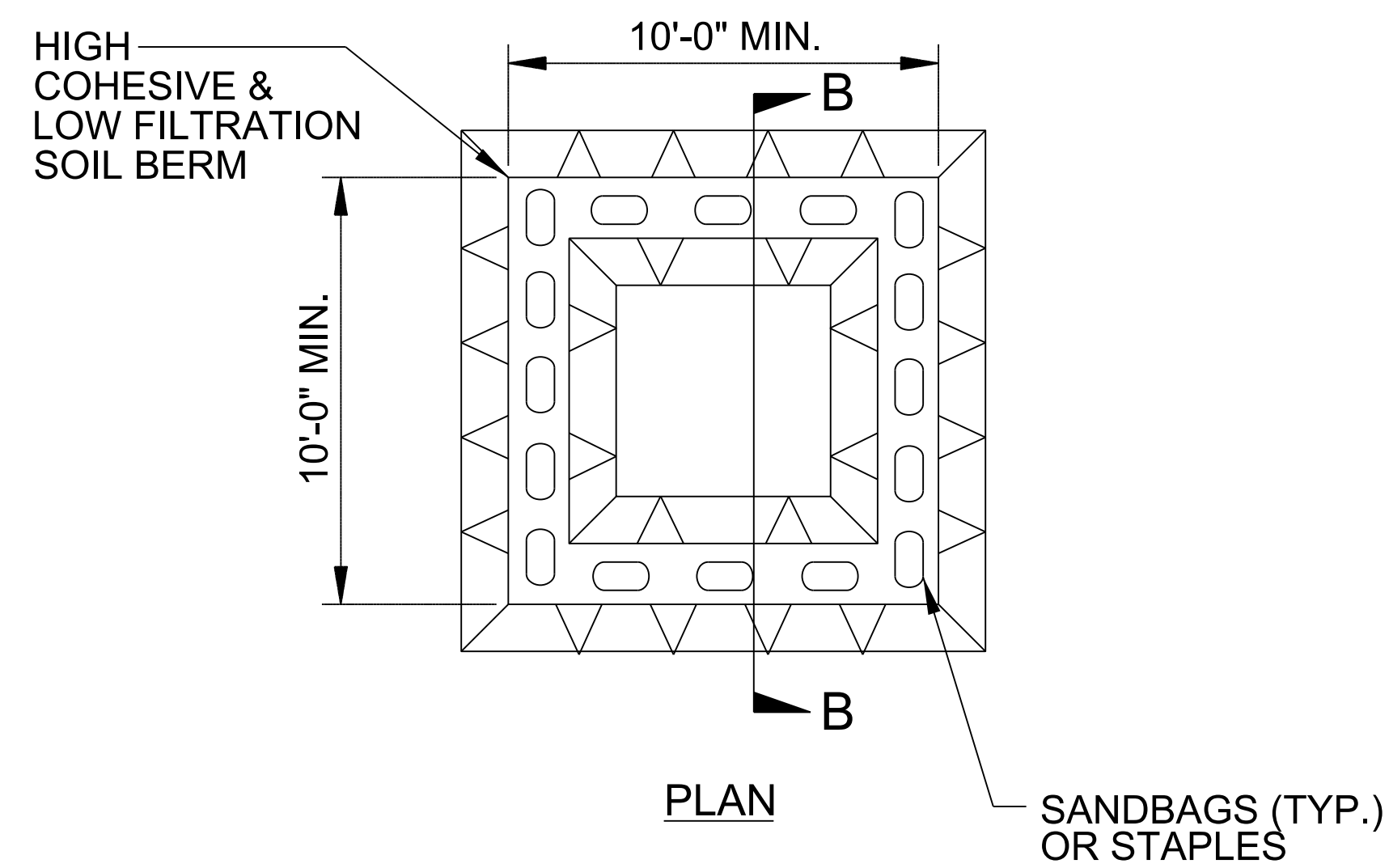
PROJECT REFERENCE NO.	SHEET NO.
17BP.11.R.155	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

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



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

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

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

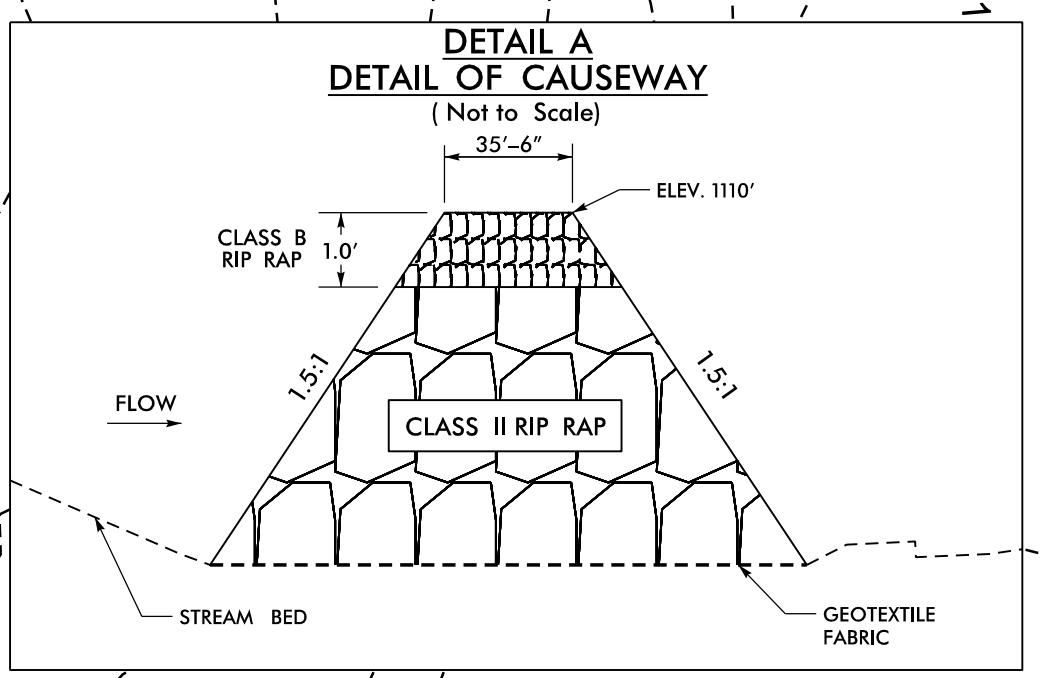
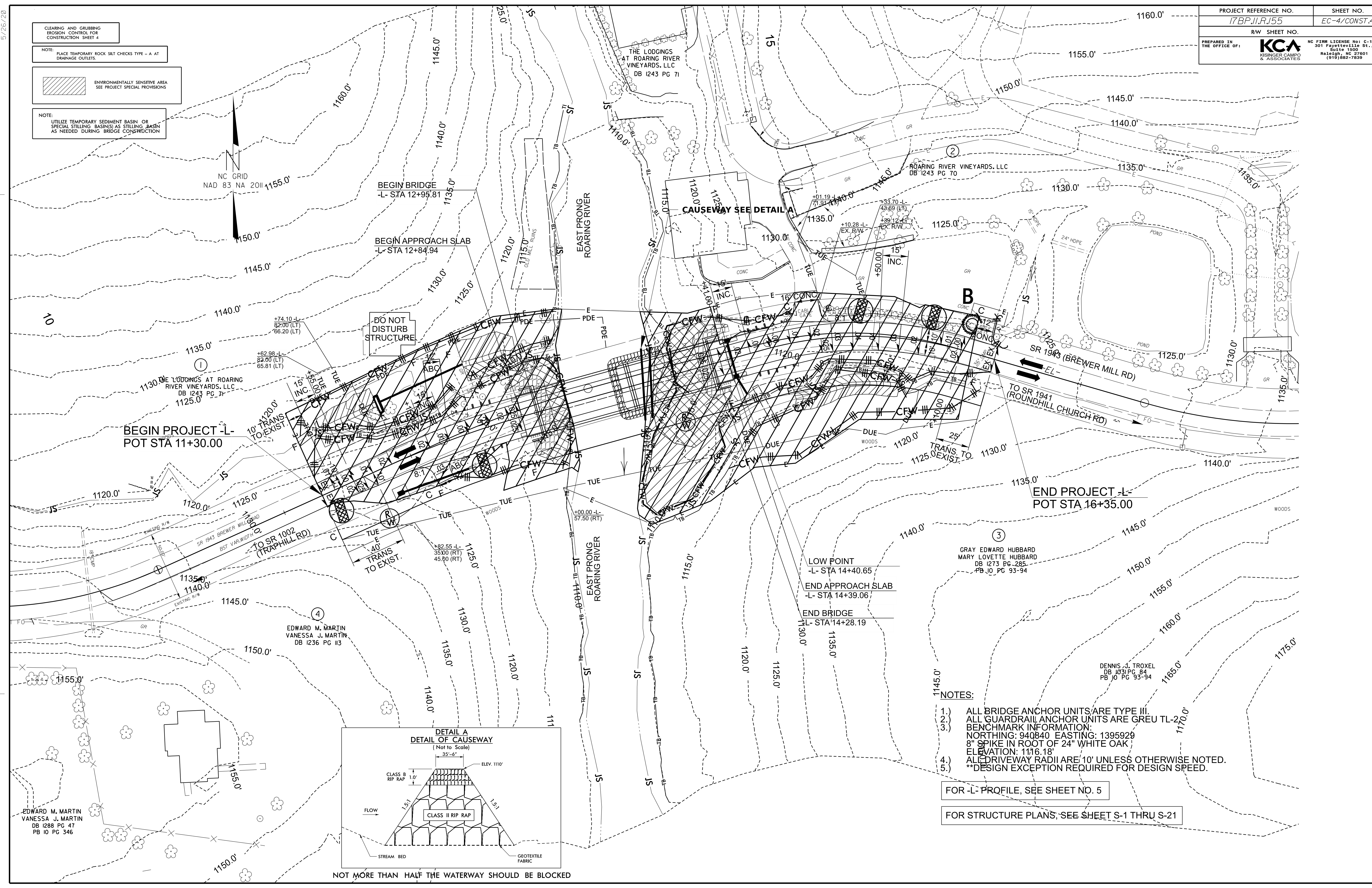
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTE: PLACE TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN AS NEEDED DURING BRIDGE CONSTRUCTION



NOT MORE THAN HALF THE WATERWAY SHOULD BE BLOCKED

- NOTES:
- 1.) ALL BRIDGE ANCHOR UNITS ARE TYPE III.
 - 2.) ALL GUARDRAIL ANCHOR UNITS ARE GRU TL-2-0.
 - 3.) BENCHMARK INFORMATION:
NORTHING: 940840 EASTING: 1395929
8" SPIKE IN ROOT OF 24" WHITE OAK
ELEVATION: 1116.18'
 - 4.) ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
 - 5.) **DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED.

FOR -L- PROFILE, SEE SHEET NO. 5

FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-21

EDWARD M. MARTIN
VANESSA J. MARTIN
DB 1288 PG 47
PB 10 PG 346

LOW POINT
-L- STA 14+40.65

END APPROACH SLAB
-L- STA 14+39.06

END BRIDGE
-L- STA 14+28.19

DENNIS J. TROXEL
DB 1031 PG 84
PB 10 PG 93-94

NC GRID
NAD 83 NA 2011
1155.0'

BEGIN BRIDGE
-L- STA 12+95.81

BEGIN APPROACH SLAB
-L- STA 12+84.94

BEGIN PROJECT -L-
POT STA 11+30.00

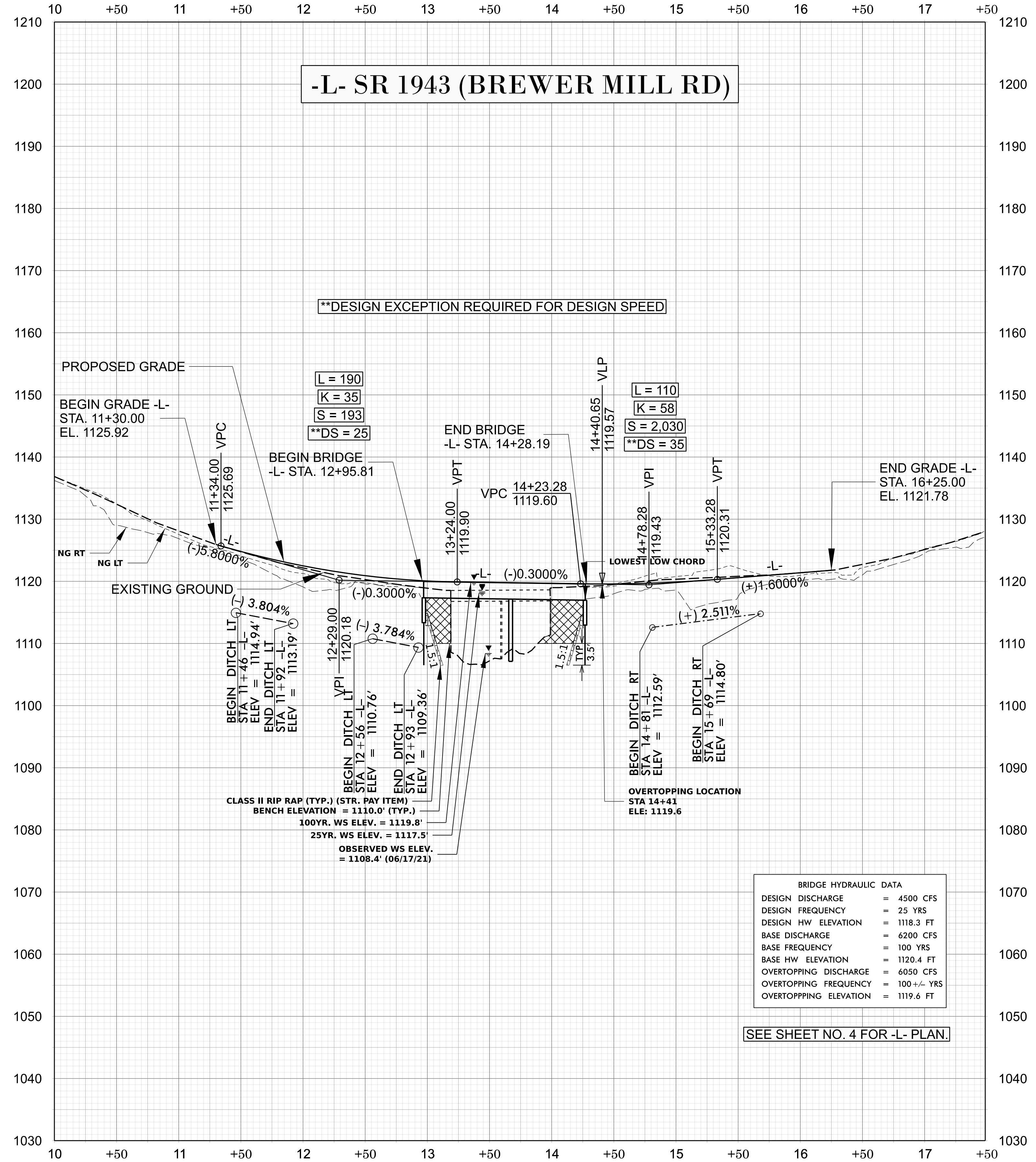
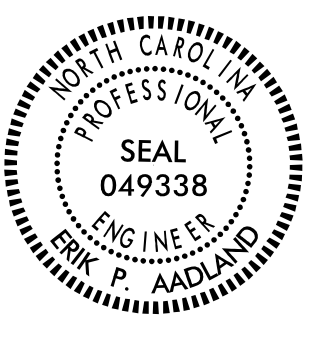
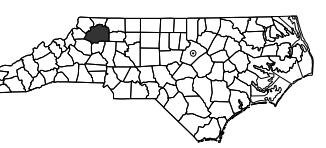
END PROJECT -L-
POT STA 16+35.00

EDWARD M. MARTIN
VANESSA J. MARTIN
DB 1236 PG 113

THE LODGINGS
AT ROARING RIVER
VINEYARDS, LLC
DB 1243 PG 71

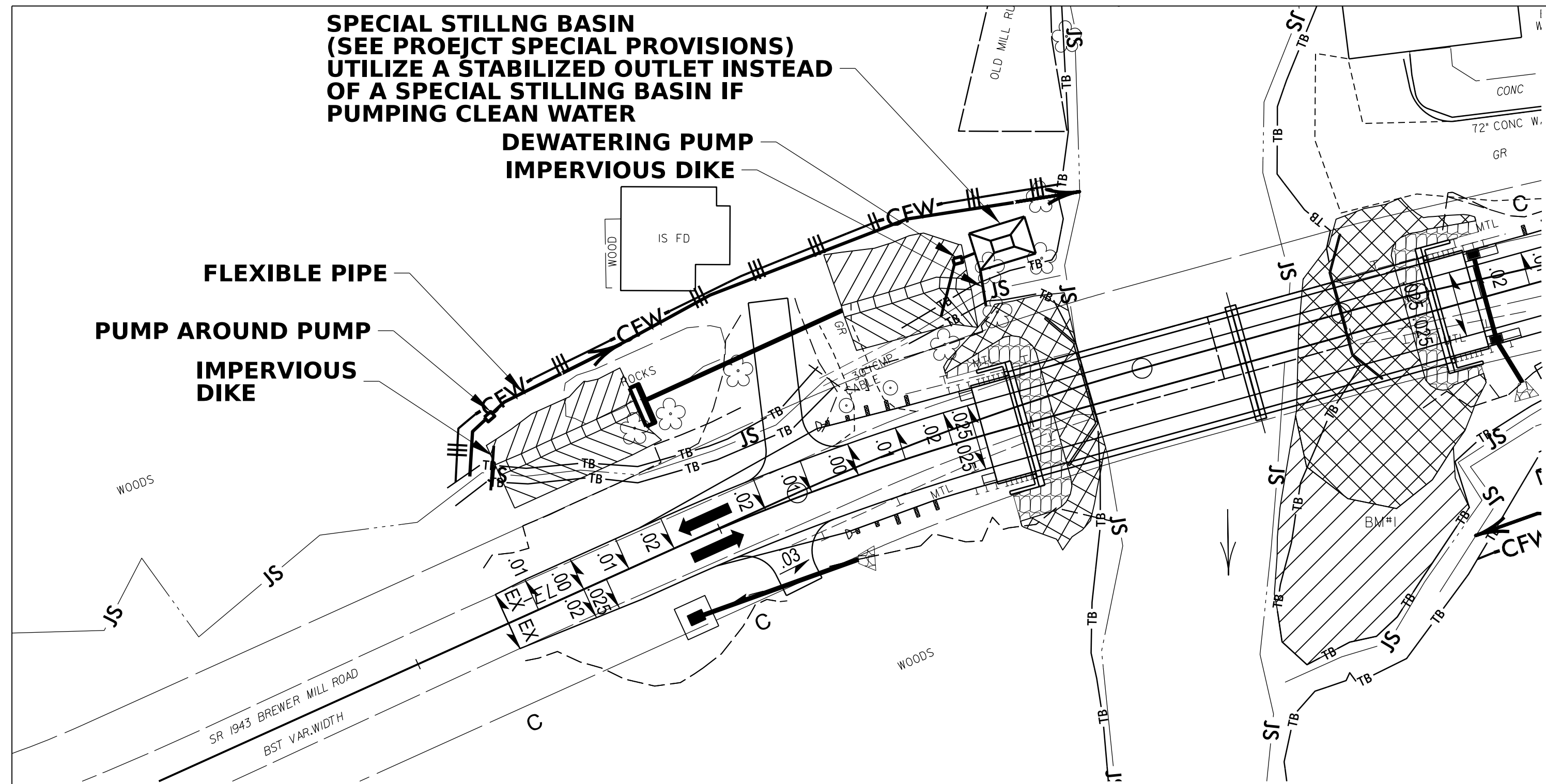
ROARING RIVER VINEYARDS, LLC
DB 1243 PG 70

GRAY EDWARD HUBBARD
MARY LOVETTE HUBBARD
DB 1273 PG 285
PB 10 PG 93-94



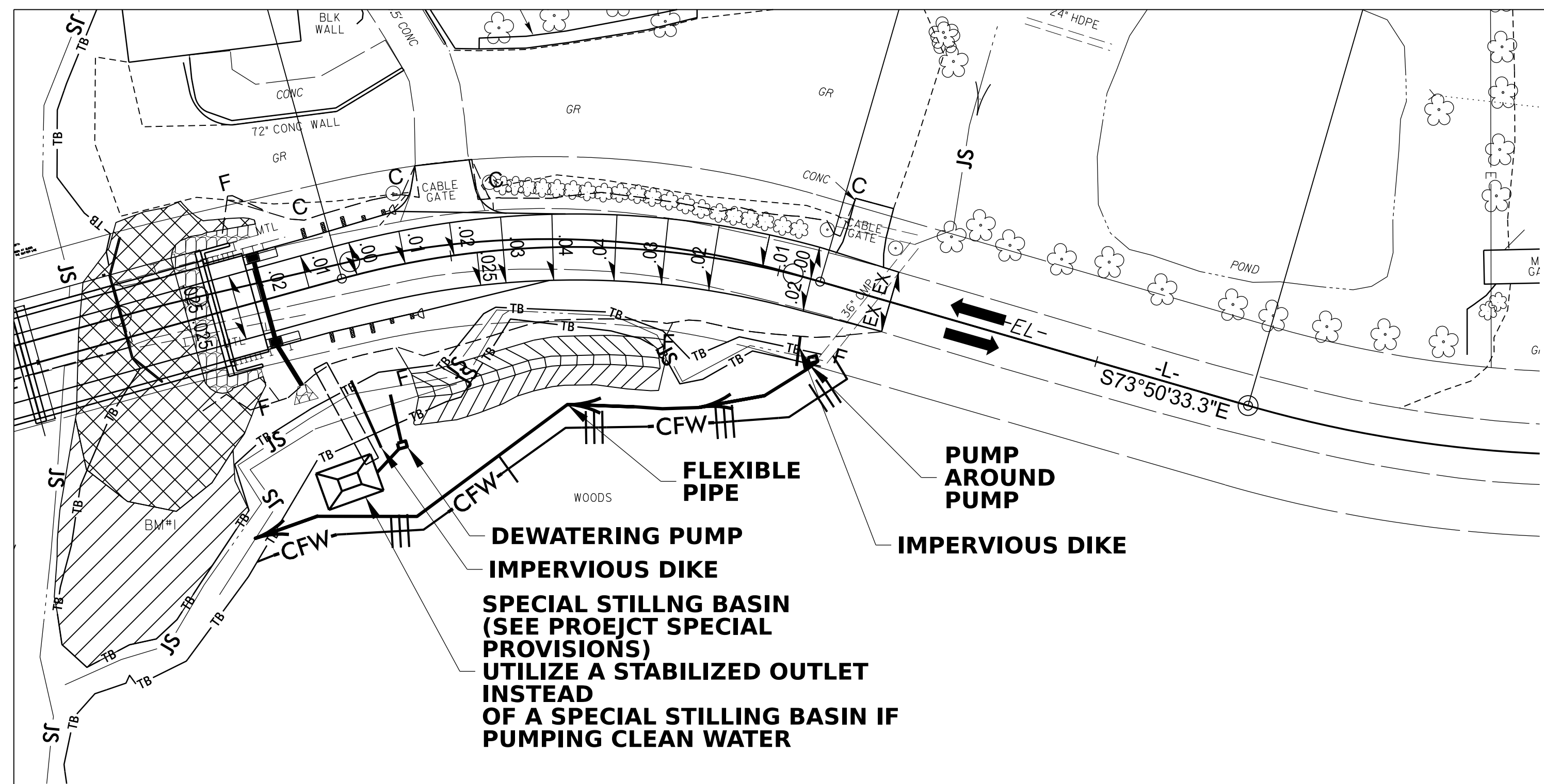
SEE SHEET NO. 4 FOR -L- PLAN.

REVISIONS



CHANNEL CHANGE AND PIPE INSTALLATION SEQUENCE

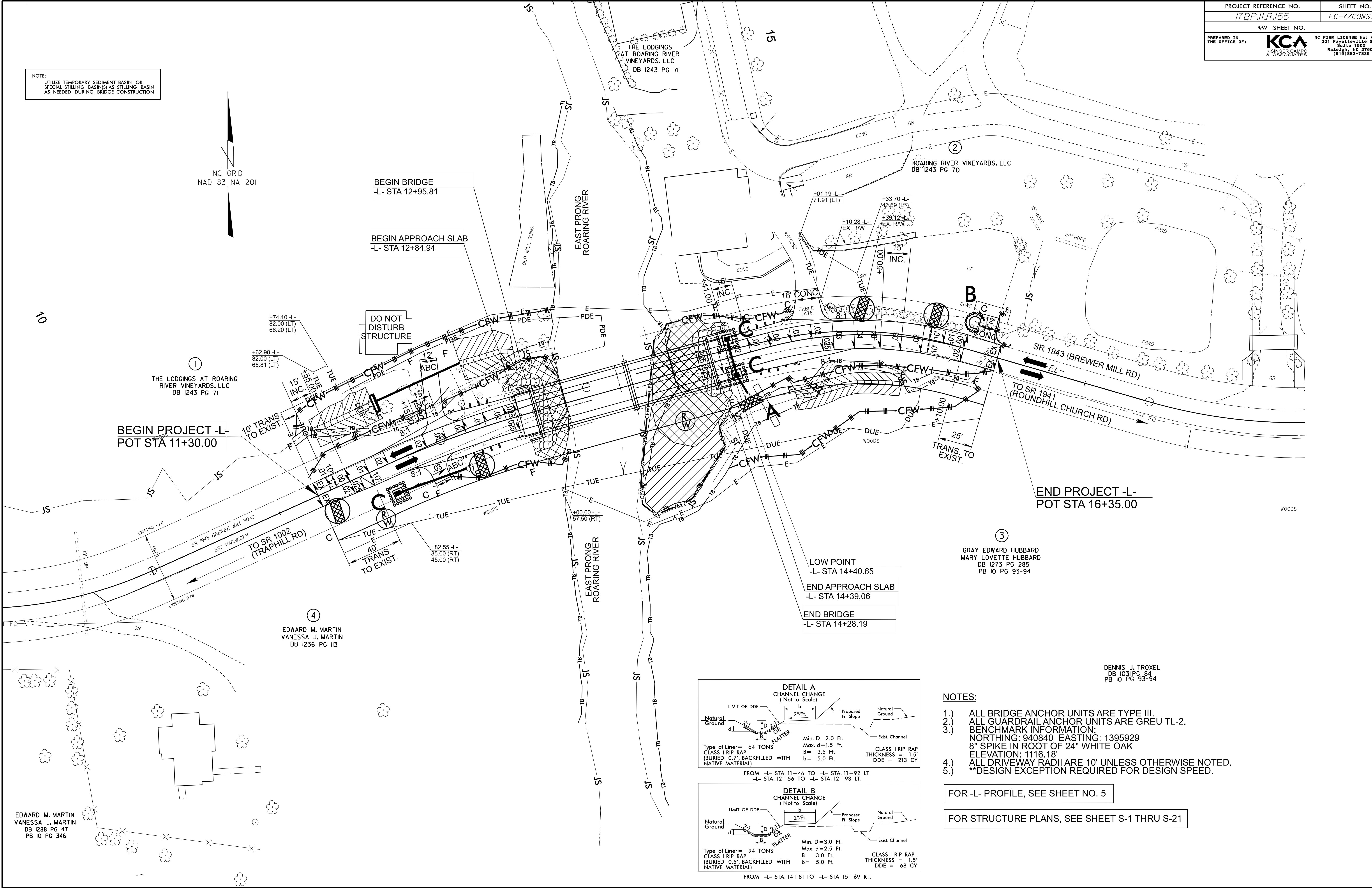
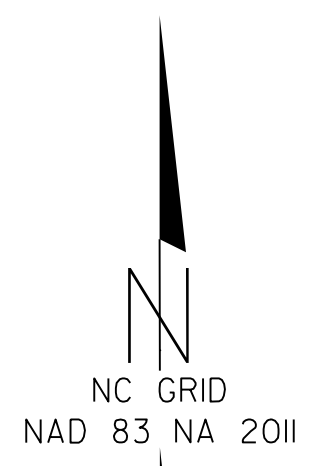
1. INSTALL SPECIAL STILLING BASINS.
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBEL HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSON.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. PERFORM CHANNEL CHANGE WORK IN ACCODRANCE 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. ALL GRADING AND STABILIZATION MUST BE COMPLETED IN ONE DAY WITHIN THE PUMP AROUND AREAS BETWEEN THE IMPERVIOUS DIKES. THE IMPERVIOUS DIKE LOCATIONS AS SHOWN ON THIS SHEET ONLY SHOW THE UPPER AND LOWER EXTENT OF WORK FOR EACH STREAM SEGMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF IMPERVIOUS DIKE(S) FOR EACH DAY'S WORK.
8. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.



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. HIS INCLUDES POLYETHYLENE SHEETING, DIVERSION PIPES, PUMPS AND HOSES.
4. PUMPS AND HOSES SHALL BE OF SUFFICIENT SIZE TO DEWATER THE WORK AREA.

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN AS NEEDED DURING BRIDGE CONSTRUCTION

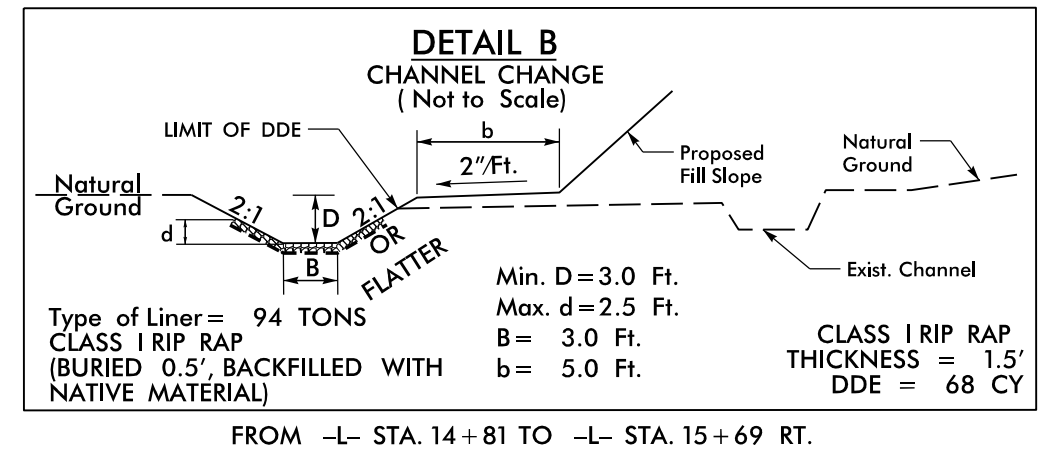
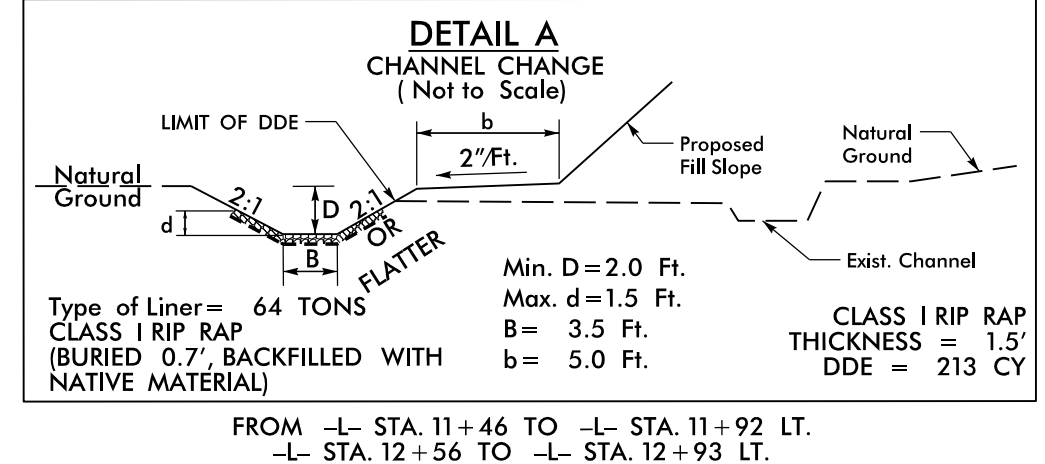


EDWARD M. MARTIN
VANESSA J. MARTIN
DB 1288 PG 47
PB 10 PG 346

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GRAY EDWARD HUBBARD
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DENNIS J. TROXEL
DB 1031 PG 84
PB 10 PG 93-94



NOTES:

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- 4.) ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
- 5.) **DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED.

FOR -L- PROFILE, SEE SHEET NO. 5

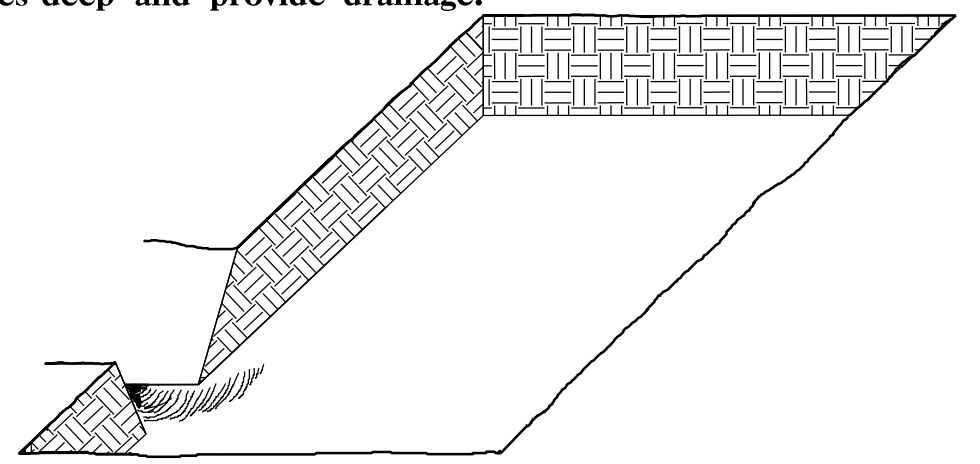
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-21

PLANTING DETAILS

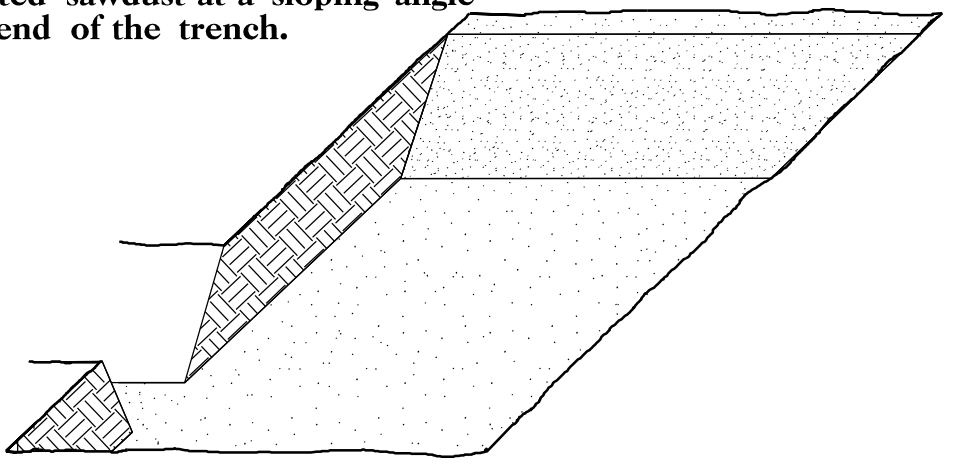
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

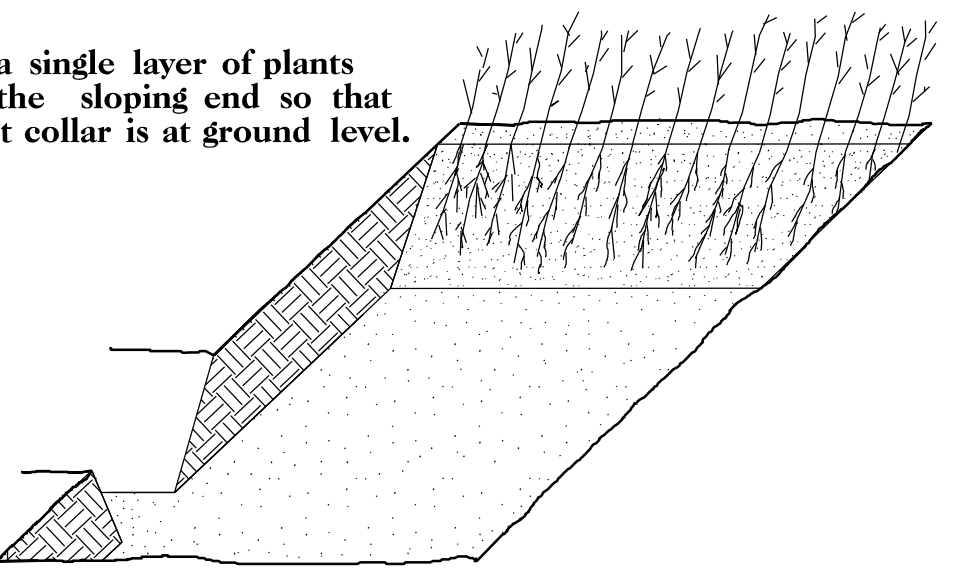
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



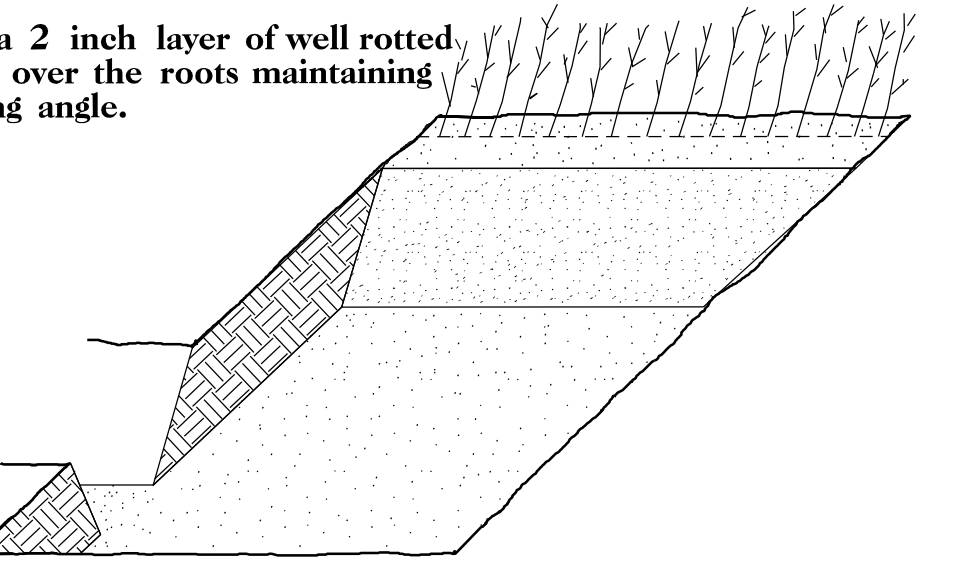
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

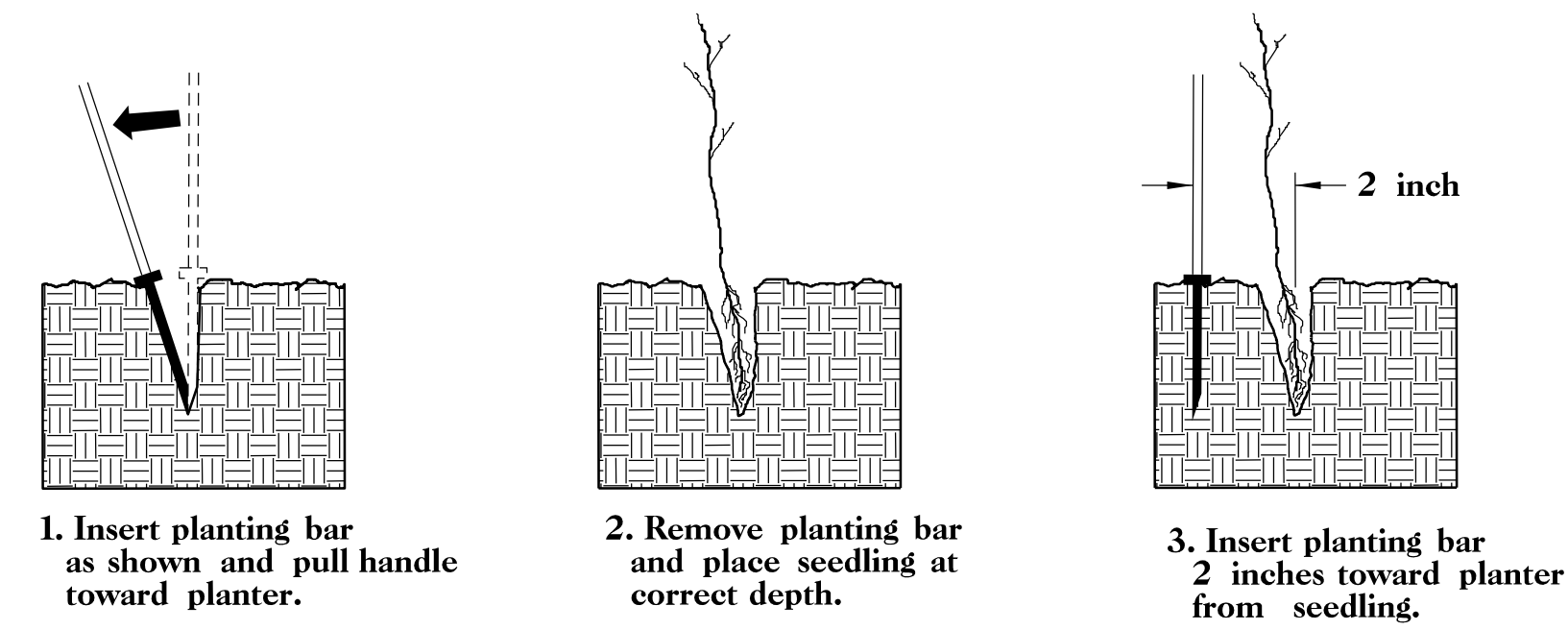


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

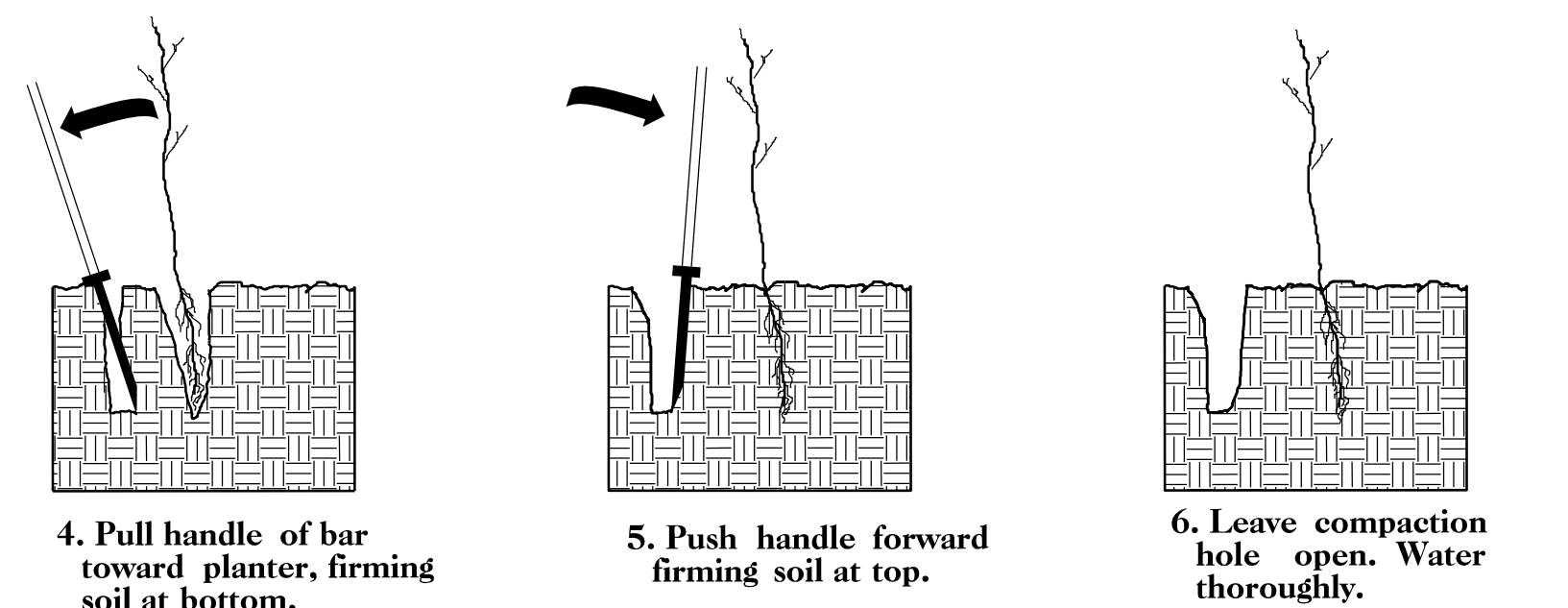


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

DOUBLE PLANTING METHOD USING THE KJC PLANTING BAR



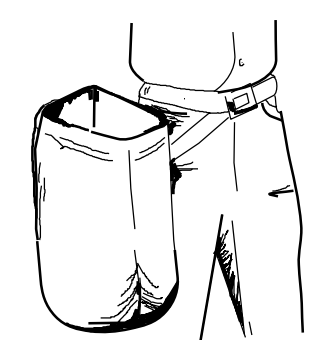
1. Insert planting bar as shown and pull handle toward planter.
2. Remove planting bar and place seedling at correct depth.
3. Insert planting bar 2 inches toward planter from seedling.



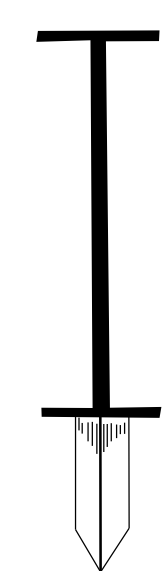
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

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



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



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

REFORESTATION

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

REFORESTATION		
MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:		
25% LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25% PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	12 in - 18 in BR
25% JUGLANS NIGRA	BLACK WALNUT	12 in - 18 in BR
25% ALNUS SERRULATA	TAG ALDER	12 in - 18 in BR

09/08/09

TIP PROJECT: 17BP.11.R.155

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

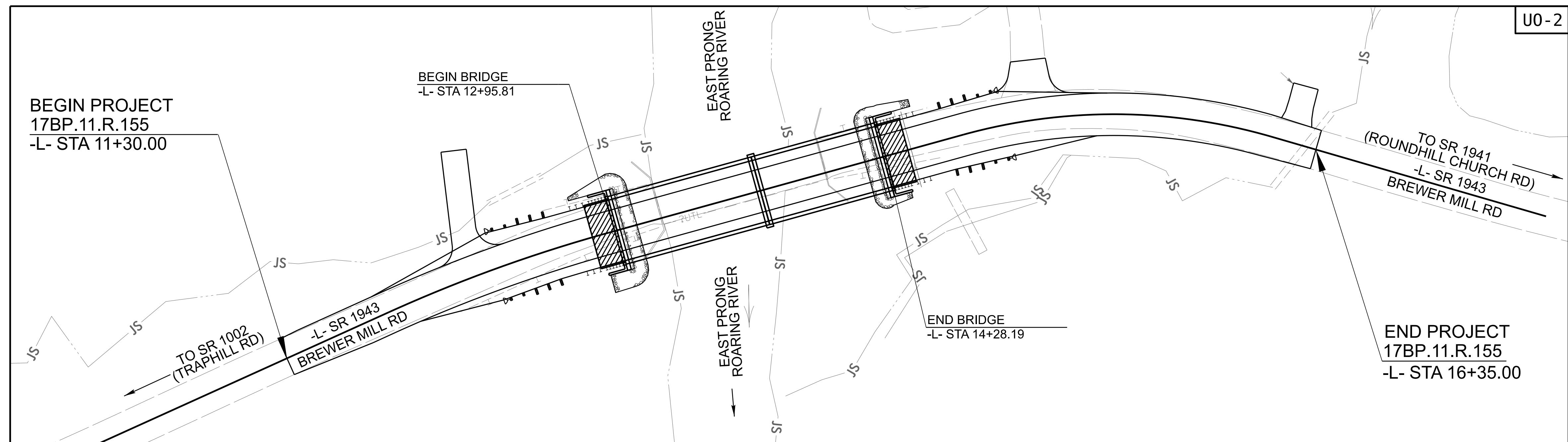
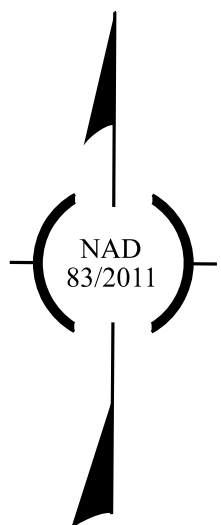
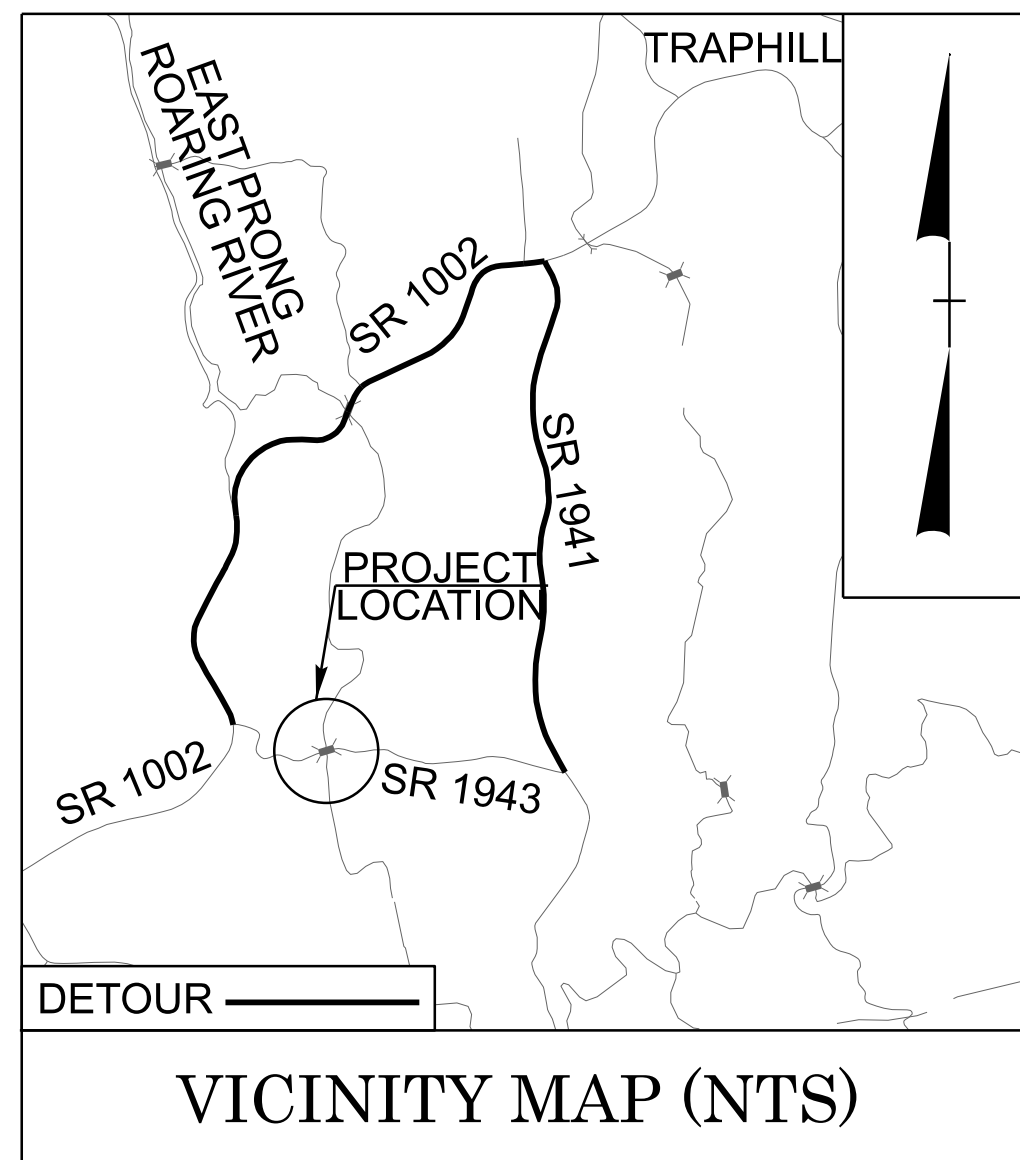
T.I.P. NO.	SHEET NO.
17BP.11.R.155	UO-1

NOTE:
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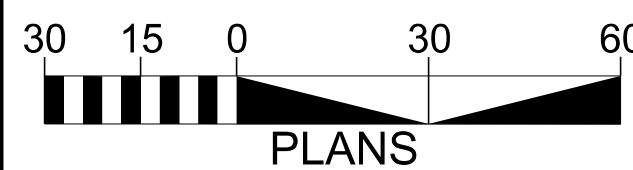
**UTILITIES BY OTHERS PLANS
WILKES COUNTY**

**LOCATION: BRIDGE NO. 960436 ON ST 1943 (BREWER MILL RD.)
OVER EAST PRONG ROARING RIVER**

TYPE OF WORK: UTILITIES BY OTHERS



GRAPHIC SCALES



INDEX OF SHEETS

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

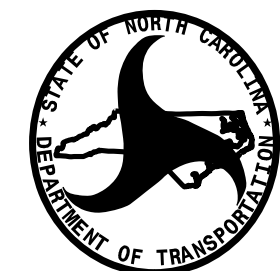
UTILITY OWNERS WITH CONFLICTS

- (A) POWER DUKE ENERGY
- (B) COMMUNICATIONS WILKES COMMUNICATION

PREPARED IN THE OFFICE OF



301 FAYETTEVILLE ST., SUITE 1500
RALEIGH, NC 27601 (919) 882-7839
NC FIRM LICENSE: C-1506



DIVISION OF HIGHWAYS
DIVISION II
801 STATESVILLE ROAD
NORTH WILKESBORO NC 28659
PHONE (336) 903-9101
FAX (336) 667-4549

<u>SAMUEL CULLUM P.E.</u>	CONSULTANT CONTACT #1
<u>JEFF BALOGA</u>	CONSULTANT CONTACT #2
<u>STEPHEN CHAMBERS</u>	CONSULTANT CONTACT #3

<u>SUSAN O. HUFFMAN</u>	UTILITY DIVISION COORDINATOR
<u>BRANDON GREER</u>	UTILITIES ENGINEER
-	UTILITIES AREA COORDINATOR
-	UTILITIES COORDINATOR

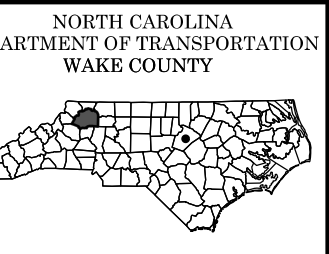
10/06/21

UTILITIES BY OTHERS

THIS SHEET CORRESPONDS TO RDY PSH 04

178P.11.R.155

00 2

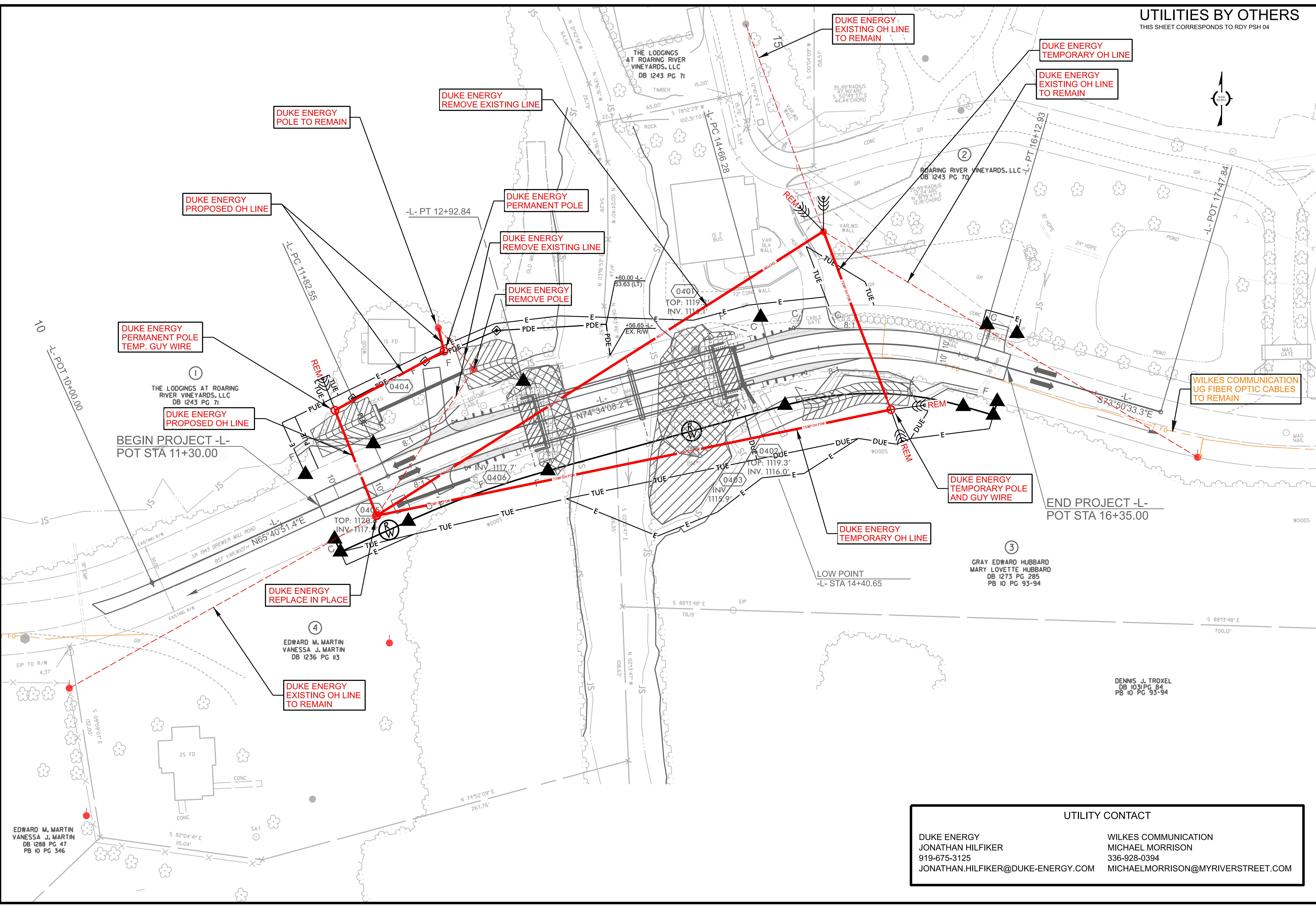


DIVISION 11

UTILITY CONSTRUCTION PLANS ONLY

ALL PROPOSED 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.

DESIGNED BY: DUKE ENERGY
 DRAWN BY: SLC
 CHECKED BY: DAA
 APPROVED BY: SC
 REVISED:
 UTILITIES ENGINEERING SEC.
 PHONE: (919)707-6690
 FAX: (919)250-4151

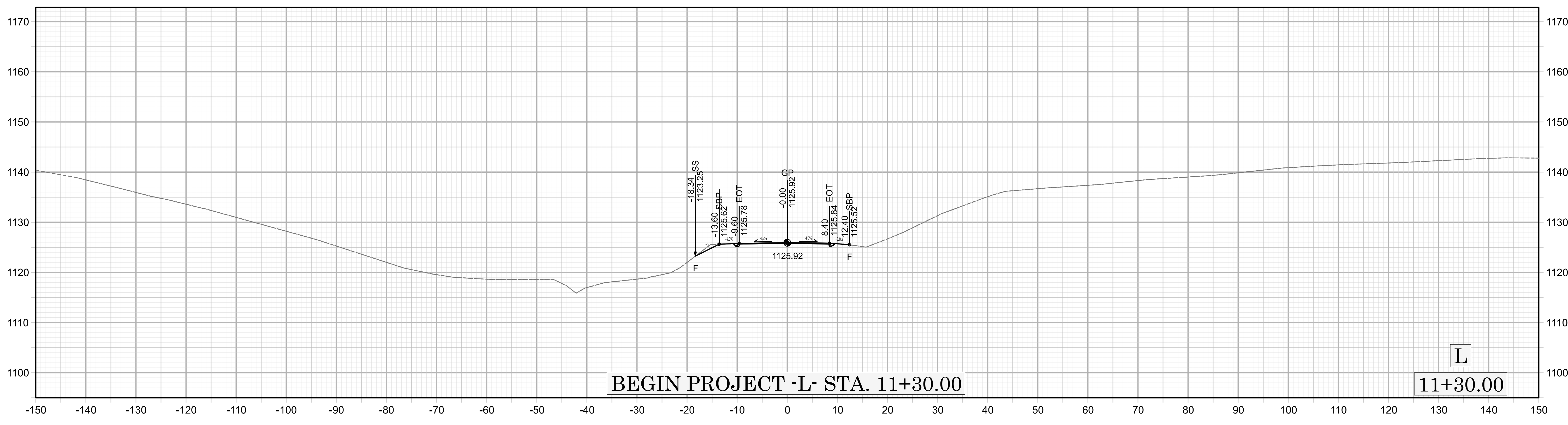
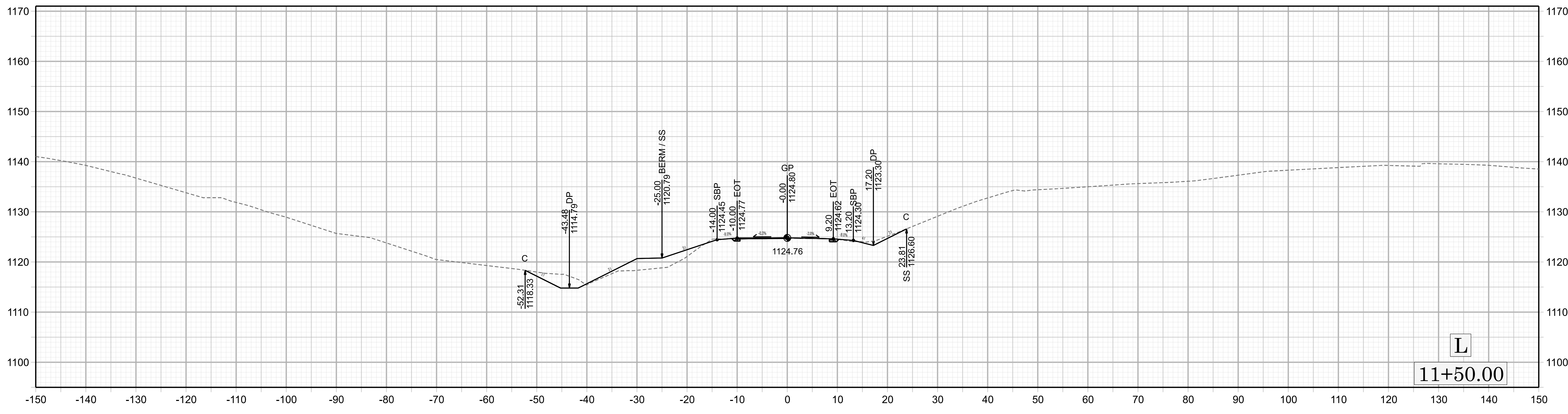


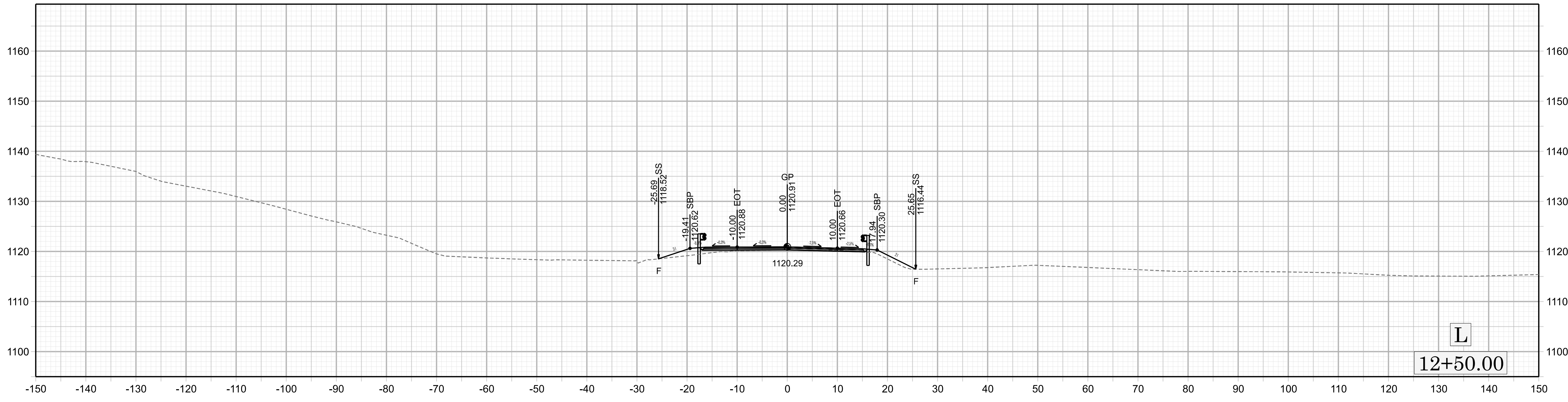
END PROJECT -L- POT STA 16+35.00

BEGIN PROJECT -L- POT STA 11+30.00

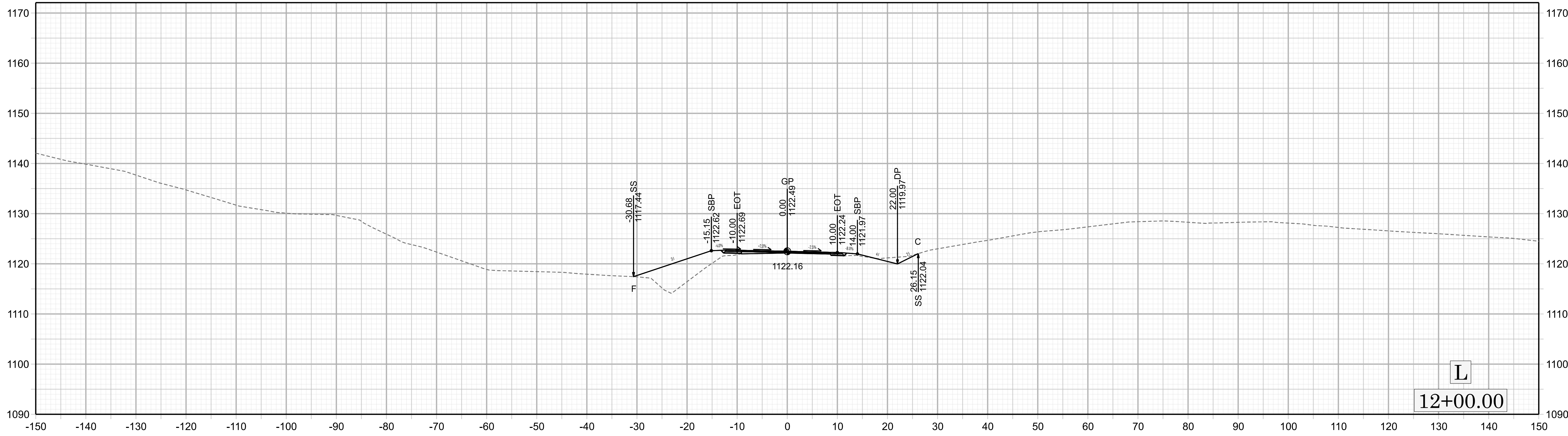
UTILITY CONTACT	
DUKE ENERGY JONATHAN HILFIKER 919-675-3125 JONATHAN.HILFIKER@DUKE-ENERGY.COM	WILKES COMMUNICATION MICHAEL MORRISON 336-928-0394 MICHAELMORRISON@MYRIVERSTREET.COM

REVISIONS

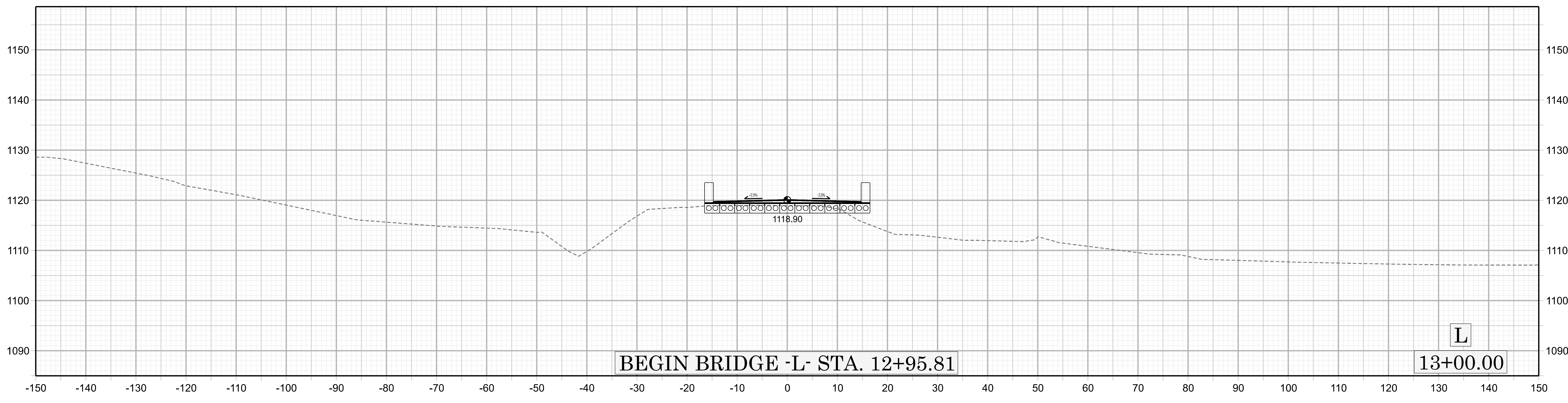
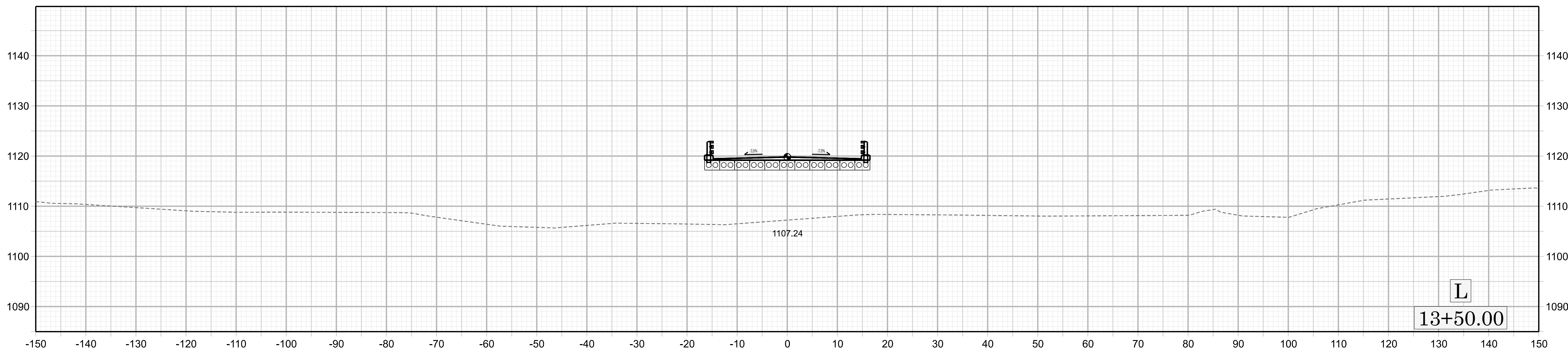


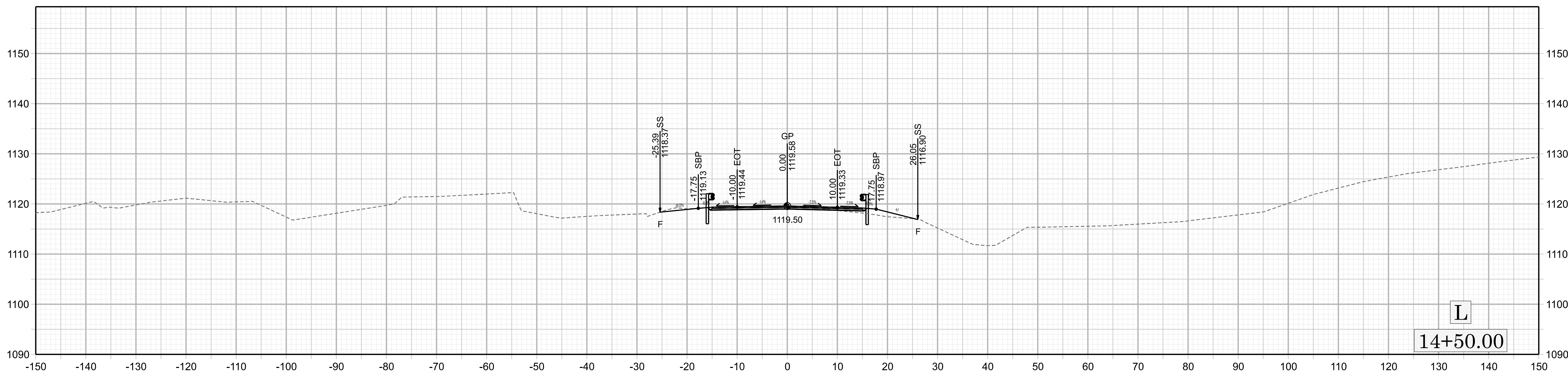


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12+50.00

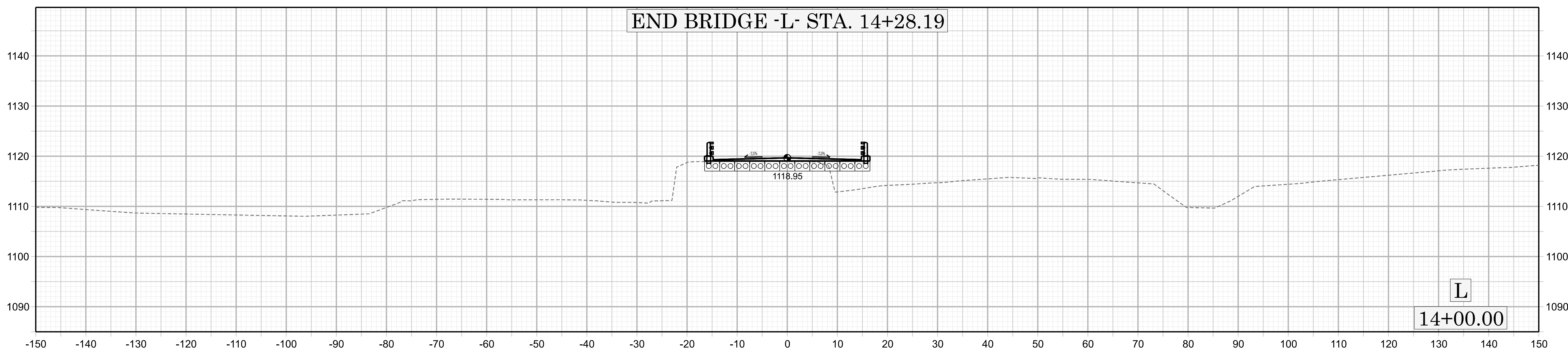


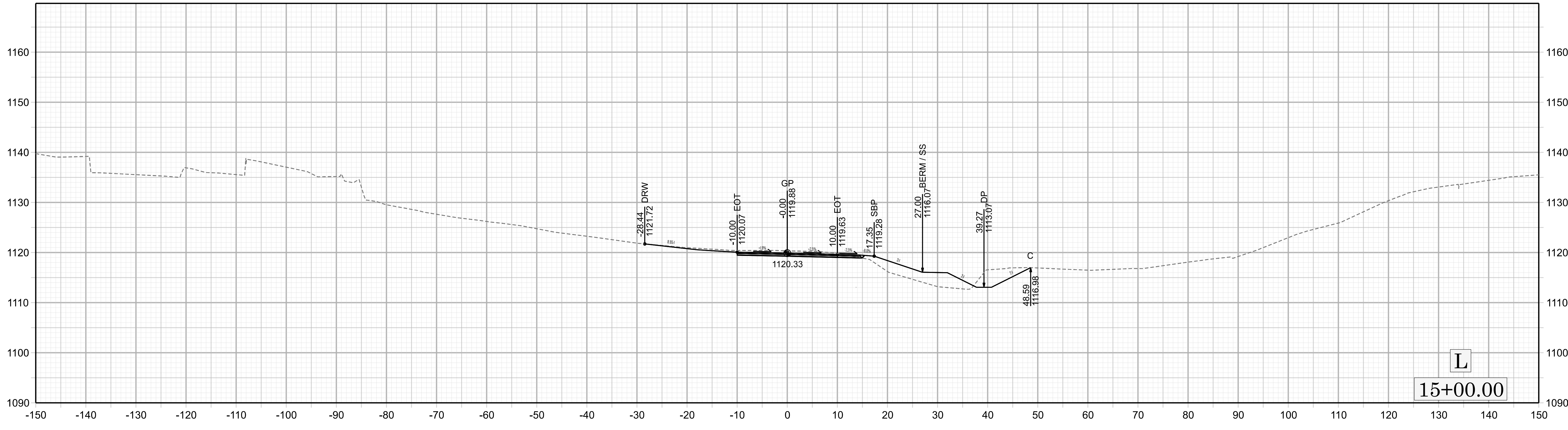
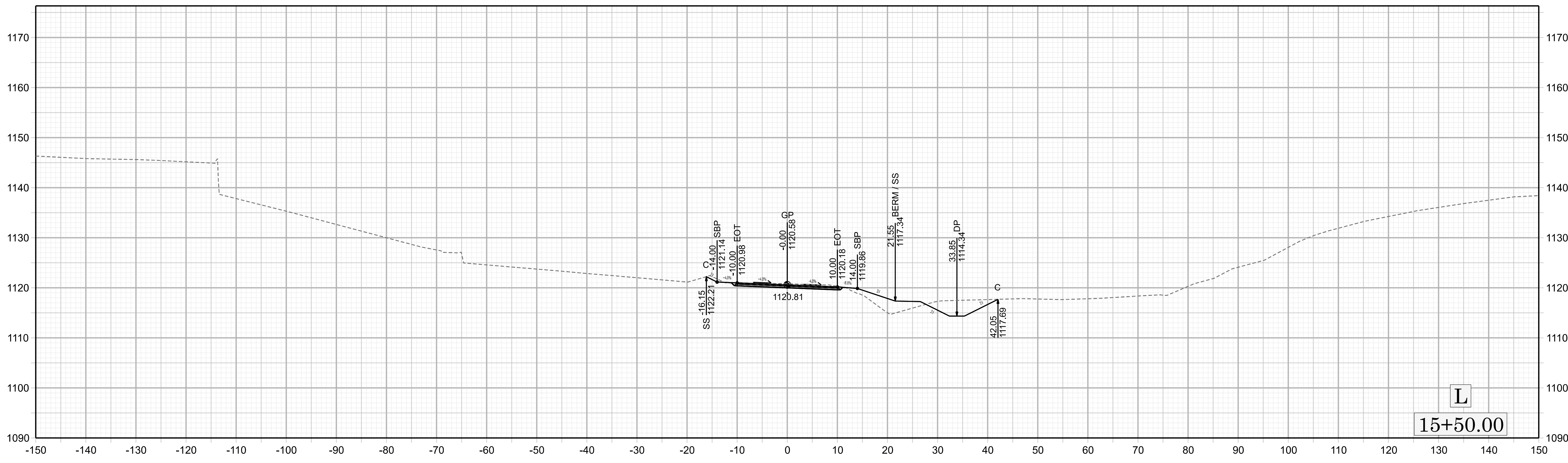
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END BRIDGE -L- STA. 14+28.19





END PROJECT -L- STA. 16+35.00

