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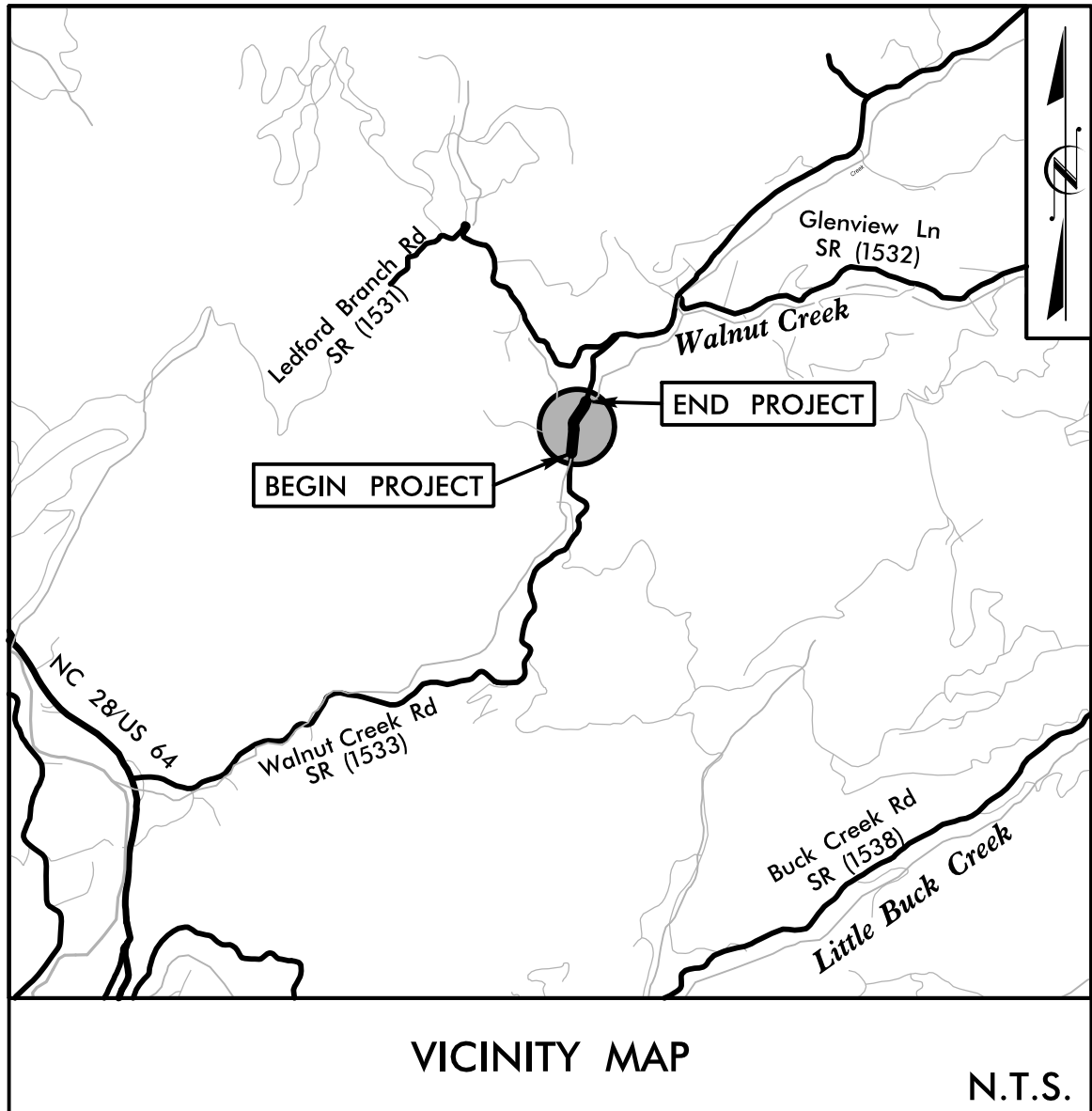
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2/14/2025
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PROJECT WBS: 17BP.14.R.159

CONTRACT: DN01048

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

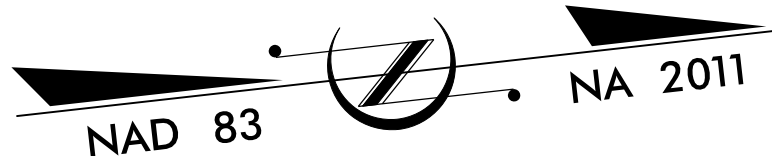
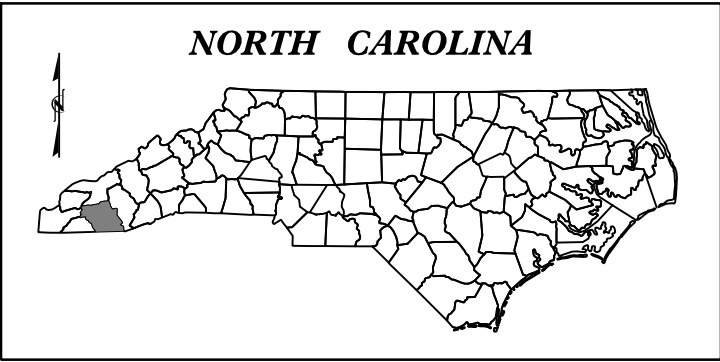


FINAL PLANS

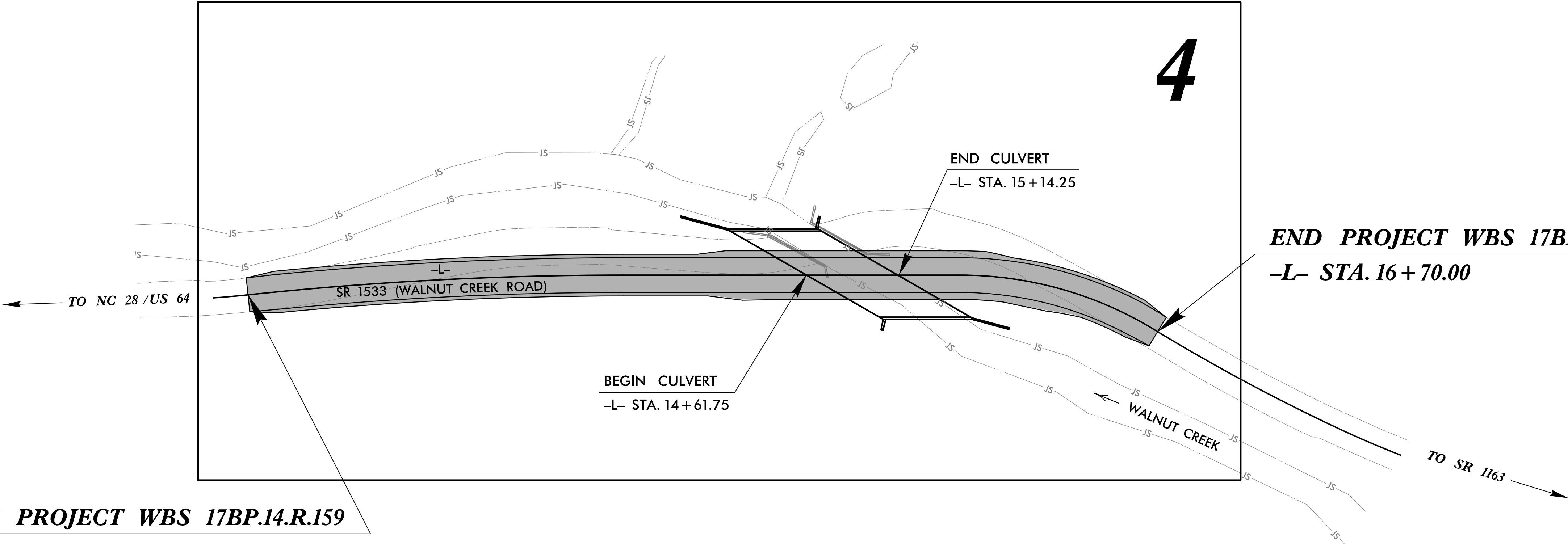
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
MACON COUNTY

**LOCATION: BRIDGE #204 OVER WALNUT CREEK ON
SR 1533 (WALNUT CREEK RD)**
TYPE OF WORK: GRADING, PAVING, DRAINAGE, & CULVERT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.159	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.R.159		P.E.	
17BP.14.R.159		ROW & UTILITIES	
17BP.14.R.159		CONSTRUCTION	



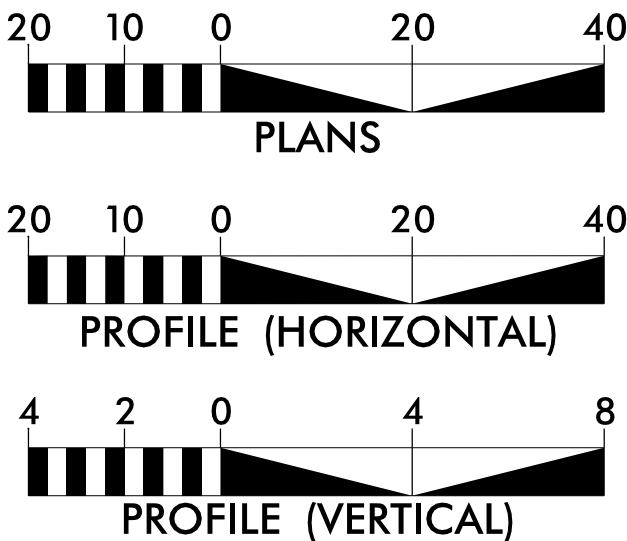
BEGIN PROJECT WBS 17BP.14.R.159
-L- STA. 11 + 40.00



END PROJECT WBS 17BP.14.R.159
-L- STA. 16 + 70.00

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2010 = 1100
ADT 2025 = 2200
DHV = N/A
D = N/A
T = 6 %
V = 25 MPH

FUNC. CLASSIFICATION:
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT WBS 17BP.14.R.159 = 0.090 MILES
LENGTH OF STRUCTURE PROJECT WBS 17BP.14.R.159 = 0.010 MILES
TOTAL LENGTH OF PROJECT WBS 17BP.14.R.159 = 0.100 MILES

NCDOT CONTACT: ADAM DOCKERY
Division Bridge Manager

PLANS PREPARED FOR THE NCDOT BY:



STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

2024 STANDARD SPECIFICATIONS

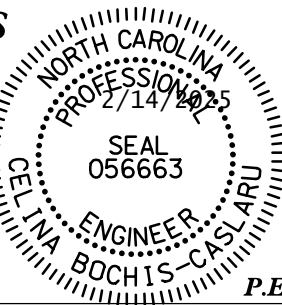
RIGHT OF WAY DATE:
AUGUST 25, 2017

LETTING DATE:
MARCH 25, 2025

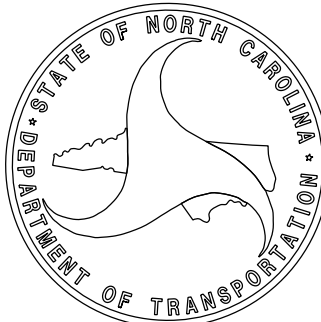
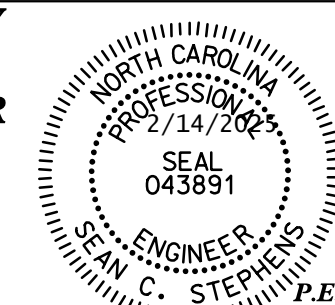
SEAN C. STEPHENS, PE
PROJECT ENGINEER

CLARK GROVES
PROJECT DESIGNER

HYDRAULICS
ENGINEER



ROADWAY
DESIGN
ENGINEER



STV

STV Engineers, Inc.

900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.

17BP14.R159

SHEET NO.

1A

R/W

SHEET NO.

ROADWAY DESIGN ENGINEER

SEAL

039234

3/5/2024

W. T. HONE

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INDEX OF SHEETS

GENERAL NOTES

STANDARD DRAWINGS

SHEET NUMBER	SHEET	GENERAL NOTES:	2024 SPECIFICATIONS EFFECTIVE: 01-01-2024
1	TITLE SHEET		
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS		
1B	CONVENTIONAL SYMBOLS		
RW01	SURVEY CONTROL TSH		
RW02C-1THRU RW02C-3	SURVEY CONTROL PLANSHEET		
RW02D-1	PROP ALIGNMENT SHEET		
RW03E-1	RIGHT OF WAY CONTROL SHEET		
RW04	RIGHT OF WAY, EASEMENT, AND PROPERTY TIES		
2A-1	TYPICAL SECTIONS AND DETAILS		
3B-1	ROADWAY SUMMARIES SHEET		
3P-1	PARCEL INDEX SHEET		
4	PLAN AND PROFILE SHEET		
TMP-1 THRU TMP-5	TRAFFIC MANAGEMENT PLANS		
PMP-1	PAVEMENT MARKING PLANS		
EC-1 THRU EC-7	EROSION CONTROL PLANS		
RF-1	REFORESTATION DETAIL SHEET		
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS		
X-1 THRU X-15	CROSS-SECTIONS		
C-1 THRU C-13	CULVERT PLANS		
SN	STANDARD NOTES		

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.
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.
RIGHT-OF-WAY MARKERS:	ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT IN ACCORDANCE WITH SECTION 810 OF THE 2018 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
SUBSURFACE PLANS:	SUBSURFACE INFORMATION IS AVAILABLE ON THE STRUCTURE PORTION OF THIS PROJECT ONLY. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.
UTILITIES:	UTILITY OWNERS ON THIS PROJECT IS FRONTIER. ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

2024 ROADWAY ENGLISH STANDARD DRAWINGS	EFF. January, 2024
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - 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
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 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Guardrail Anchors
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	Work Zone Warning Signs
1101.02	Temporary Lane Closures
1101.03	Temporary Road Closures
1101.04	Temporary Shoulder Closures
1101.05	Work Zone Vehicle Accesses
1101.11	Traffic Control Design Tables
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1110.02	Portable Work Zone Signs
1130.01	Drum
1135.01	Cones
1150.01	Flagging Devices
1180.01	Skinny Drum
1145.01	Barricades - Type III
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION	
1205.01	Pavement Markings - Line Types and Offsets
1205.02	Pavement Markings - Two Lane and Multilane Roadways
1261.01	Guardrail & Barrier Delineator Spacing
1261.02	Guardrail & Barrier Delineator Types
1262.01	Guardrail End Delineation
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1605.01	Temporary Silt Fence
1607.01	Gravel Construction Entrance
1630.04	Stilling Basin For Pumped Effluent
1630.06	Special Stilling Basin
1631.01	Matting Installation
1632.03	Rock Inlet Sediment Trap Type C
1633.01	Temporary Rock Silt Check Type A
1635.01	Rock Pipe Inlet Sediment Trap Type B
1645.01	Temporary Stream Crossing

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	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

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	
Buffer Zone 1	
Buffer Zone 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	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
VEGETATION:	
Single Tree	
Single Shrub	
Hedge	

Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

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

UTILITIES:

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

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

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Test Hole (SUE – LOS A)*	
U/G Telephone Cable (SUE – LOS B)*	
U/G Telephone Cable (SUE – LOS C)*	
U/G Telephone Cable (SUE – LOS D)*	
U/G Telephone Conduit (SUE – LOS B)*	
U/G Telephone Conduit (SUE – LOS C)*	
U/G Telephone Conduit (SUE – LOS D)*	
U/G Fiber Optics Cable (SUE – LOS B)*	
U/G Fiber Optics Cable (SUE – LOS C)*	
U/G Fiber Optics Cable (SUE – LOS D)*	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line Test Hole (SUE – LOS A)*	
U/G Water Line (SUE – LOS B)*	
U/G Water Line (SUE – LOS C)*	
U/G Water Line (SUE – LOS D)*	
Above Ground Water Line	

TV:

TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Test Hole (SUE – LOS A)*	
U/G TV Cable (SUE – LOS B)*	
U/G TV Cable (SUE – LOS C)*	
U/G TV Cable (SUE – LOS D)*	
U/G Fiber Optic Cable (SUE – LOS B)*	
U/G Fiber Optic Cable (SUE – LOS C)*	
U/G Fiber Optic Cable (SUE – LOS D)*	

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

ALL PAVEMENT SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



* 7'-0" WITH GUARDRAIL




* 7'-0" WITH GUARDRAIL



-L- STA. 14+61.75 (BEGIN CULVERT) TO 15+14.25 (END CULVERT)

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UNLESS ALL SIGNATURES COMPLETED**

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
17BP14R159	3B-1
RW SHEET NO.	

EARTHWORK SUMMARY
(IN CUBIC YARDS)

CHAIN	FROM STATION	TO STATION	SIDE	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-	11 + 40.00	16 + 70.00	LT & RT	4,276		857		3419
TOTAL				4,276		857		3419
SELECT GRANULAR MATERIAL						58	58	
ADDITIONAL UNDERCUT					50			
WASTE IN LIEU OF BORROW							-58	-58
PROJECT TOTAL				4,326		915		3,361
GRAND TOTAL				4,326		915		3,361
SAY				4,350				3,400

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."

REMOVAL OF EXISTING
PAVEMENT SUMMARY

LINE	FROM STATION	TO STATION	AREA (SY)
-L-	14 + 75(LT)	14 + 98(LT)	4
-L-	15 + 34(LT)	16 + 27(LT)	67
		TOTAL:	72
		SAY:	80

* W = MEASURED FROM "N" AT THE BEGINNING OF THE ANCHOR TO "N" AT THE END OF THE ANCHOR.
"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

GUARDRAIL SUMMARY


SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH		WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W"		ANCHORS										IMPACT ATTENUATOR TYPE 350	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END			TRAILING END	APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	B-77	GRAU 350	M-350	TYPE III	CAT-1	VI MOD	BIC	AT-1					
-L-	14 + 25.08	16 + 03.60	RT	179.00		15 + 05.00	15 + 95.00	4.0	7	25	25	0.5	0.5	2														
			TOTAL:	179.00										2 EA														
			TOTAL ANCHOR LENGTH:	100.00																								
			TOTAL GUARDRAIL LENGTH:	79.00																								
			SAY:	80.00 LF		ADD. GUARDRAIL POSTS:		14 EA																				

TEMPORARY GUARDRAIL SUMMARY

-L-	14 + 27.00	15 + 27.00	LT	100.00			15 + 14.00	14 + 61.00	4.0	7	25	25	0.5	0.5		2										
			TOTAL:	100.00												2 EA										
			TOTAL ANCHOR LENGTH:	100.00																						
			TOTAL GUARDRAIL LENGTH:	0																						
			SAY:	0.00 LF																						

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.156	3P-1
 STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

PARCEL INDEX SHEET

PARCEL NO. SHEET NO.		PROPERTY OWNER NAME	AREA TAKEN	
			ROW (SF)	TCE (SF)
1	4	U. S. FOREST SERVICE	18217	-
2	4	HERBART ARTHUR ISERMAN JR.	-	-
3	4	JOACHIM N. KELLY	-	251
4	4	CAROLINA CONNECTION PROPERTIES	1868	-

09/08/99

TIP PROJECT: 55-0204

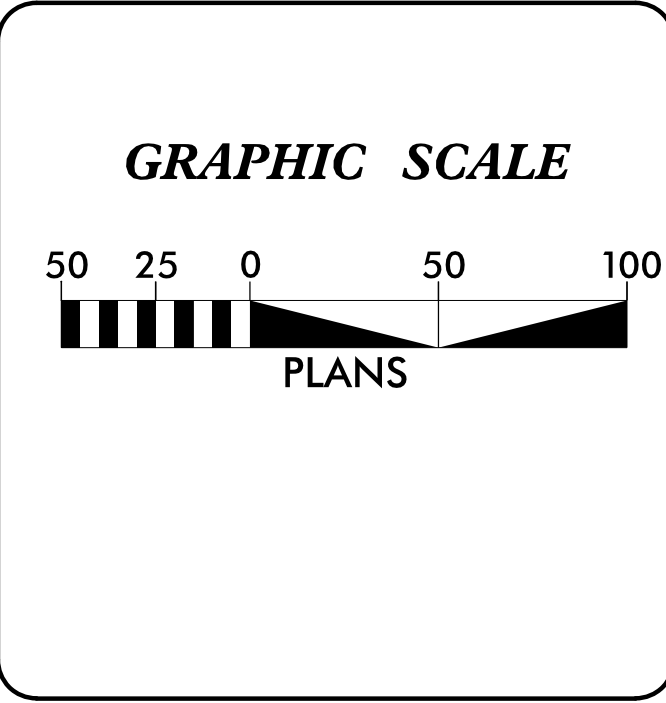
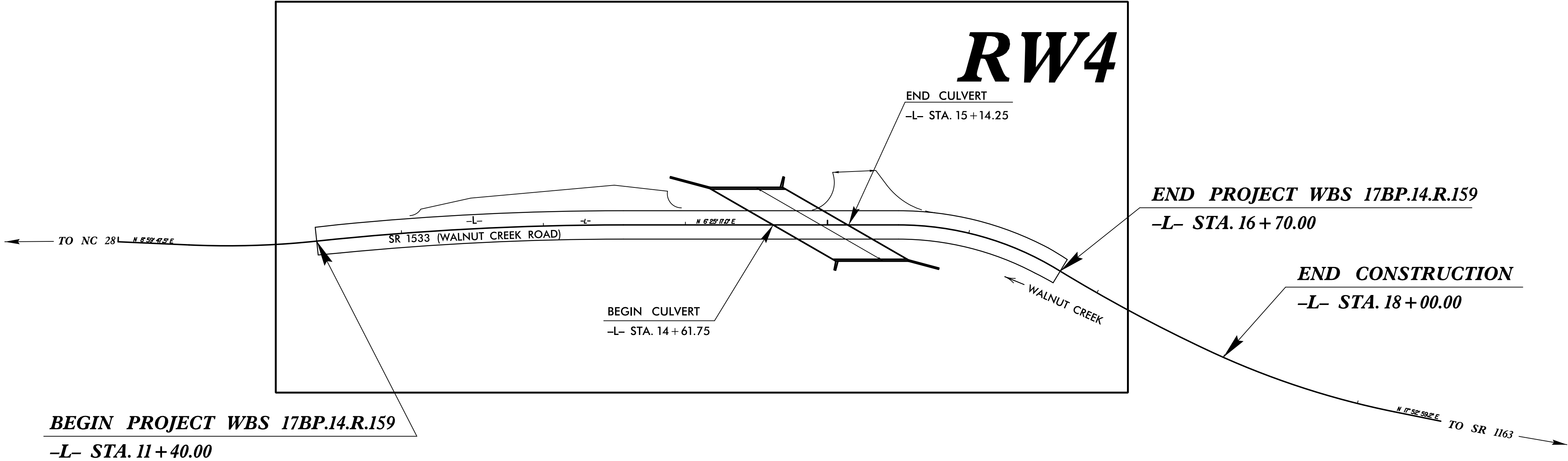
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

MACON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.159	RW01	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-101"

WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 539,017.9220(ft) EASTING: 728,710.7010(ft)
ELEVATION: 2,832.270(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99979610

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-101" TO -L- STATION 11+40.00 IS
S 39°24'58.24" W 2271.37(ft)

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

Prepared In the Office of:

DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

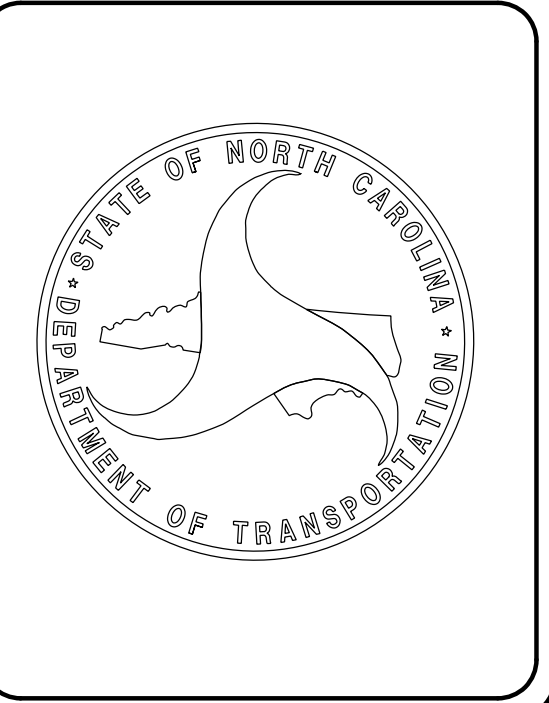
2024 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: AUGUST 25, 2017	
LETTING DATE: MAY 14, 2024	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA
PROFESSIONAL
SEAL
L-4727
BRIAN A. BARWATT
LAND SURVEYOR

DocuSigned by:
Brian Barwatt
AB350EE6A8ABACE
SIGNATURE: 7/11/2024
DATE:



SEE SHEET RW02C-3
FOR FURTHER
ALIGNMENT DETAILS

NAD 83 NA 2011

NCDOT BASELINE MONUMENT (BL-2)
LOCALIZED PROJECT COORDINATES
N = 537,607.0141
E = 727,258.7930
ELEV. = 2,767.78'

N 09°12'00"E
45.36'

N 04°22'00"W
71.27'

BM-1
ELEV. = 2,762.32'

N 11°21'00"E
38.57'

N 09°22'00"W
10.95'

N 36°01'00"E
15.24'

BM-2
ELEV. = 2,773.37'

N 36°59'00"E
336.72'

0.48 MI. +/-
TO SR 1532

NCDOT BASELINE MONUMENT (BL-3)
LOCALIZED PROJECT COORDINATES
N = 537,967.3118
E = 727,472.9907
ELEV. = 2,786.00'

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.

6/2/99

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06/01/2024

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.159	RW02C-2
Location and Surveys	

SURVEY CONTROL SHEET
W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		BL-1	537131.1662	727266.1037	2753.01
2		BL-2	537607.0141	727258.7930	2767.78
3		BL-3	537967.3118	727472.9907	2786.00

BM1 ELEVATION = 2762.32'
N 537404 E 727229
NAIL SET IN BASE OF 18" POPLAR

BM2 ELEVATION = 2773.37'
N 537685 E 727252
NAIL SET IN BASE OF 15" OAK

- NOTES:
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
 - 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.

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.159	RW02D-1
Location and Surveys	

PROPOSED ALIGNMENT CONTROL SHEET

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	537123.9636	727253.3135
PC	10+50.00	537173.3485	727261.1323
PRC	11+40.21	537263.1684	727268.5002
PT	13+56.27	537478.7560	727281.3157
PC	15+50.07	537671.3391	727302.9901
PRC	16+67.85	537779.0884	727346.7733
PCC	17+88.08	537877.9196	727415.1443
PT	19+26.37	538003.2439	727472.8229
POT	19+60.00	538035.2504	727483.1502

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.

6/22/99

6/5/2024
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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.

PI Sta 10+95.19
Δ = 8°36'50.7" (LT)
D = 9°32'57.5"
L = 90.2'
T = 45.19'
R = 600.00'

PI Sta 12+48.34
Δ = 6°02'20.1" (RT)
D = 2°47'41.7"
L = 216.07'
T = 108.13'
R = 2,050.00'

PI Sta 16+10.48
Δ = 31°23'07.0" (RT)
D = 26°38'57.1"
L = 117.77'
T = 60.40'
R = 215.00'

PI Sta 17+28.02
Δ = 6°15'45.8" (LT)
D = 5°12'31.3"
L = 120.24'
T = 60.18'
R = 1,100.00'

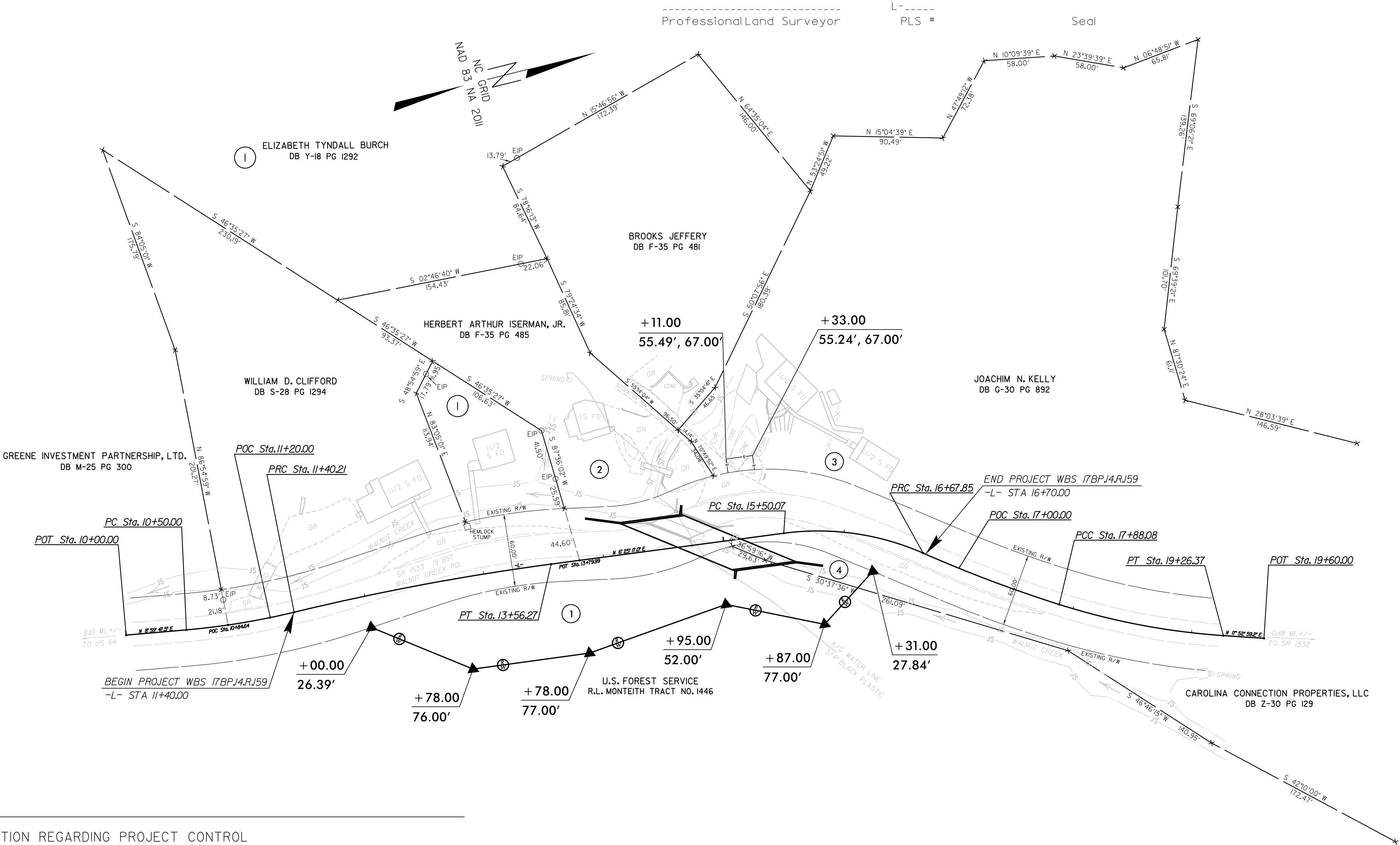
PI Sta 18+57.55
Δ = 13°39'39.0" (LT)
D = 9°52'42.9"
L = 138.29'
T = 69.47'
R = 580.00'

I, _____, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further 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.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

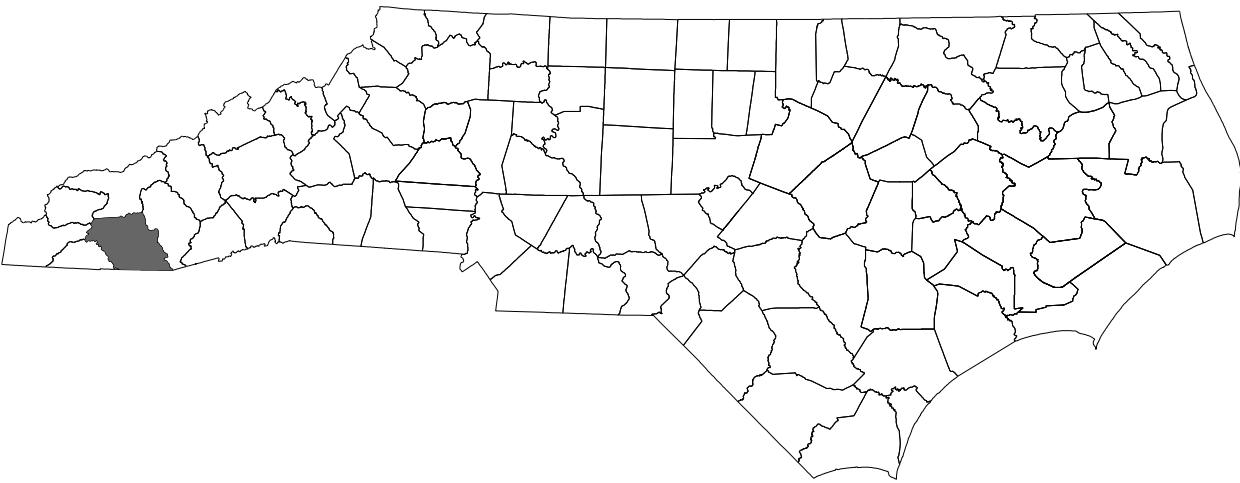
Witness my original signature, registration number and seal this ____ day of _____, 20__.



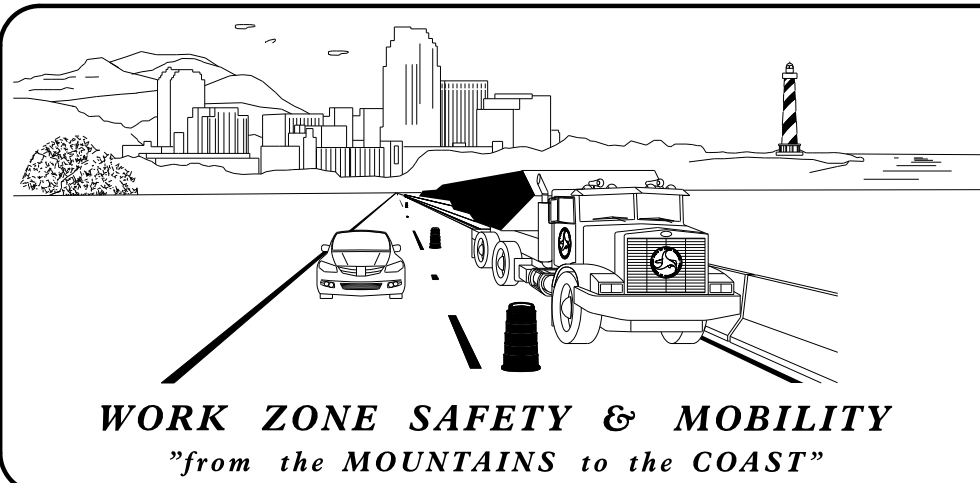
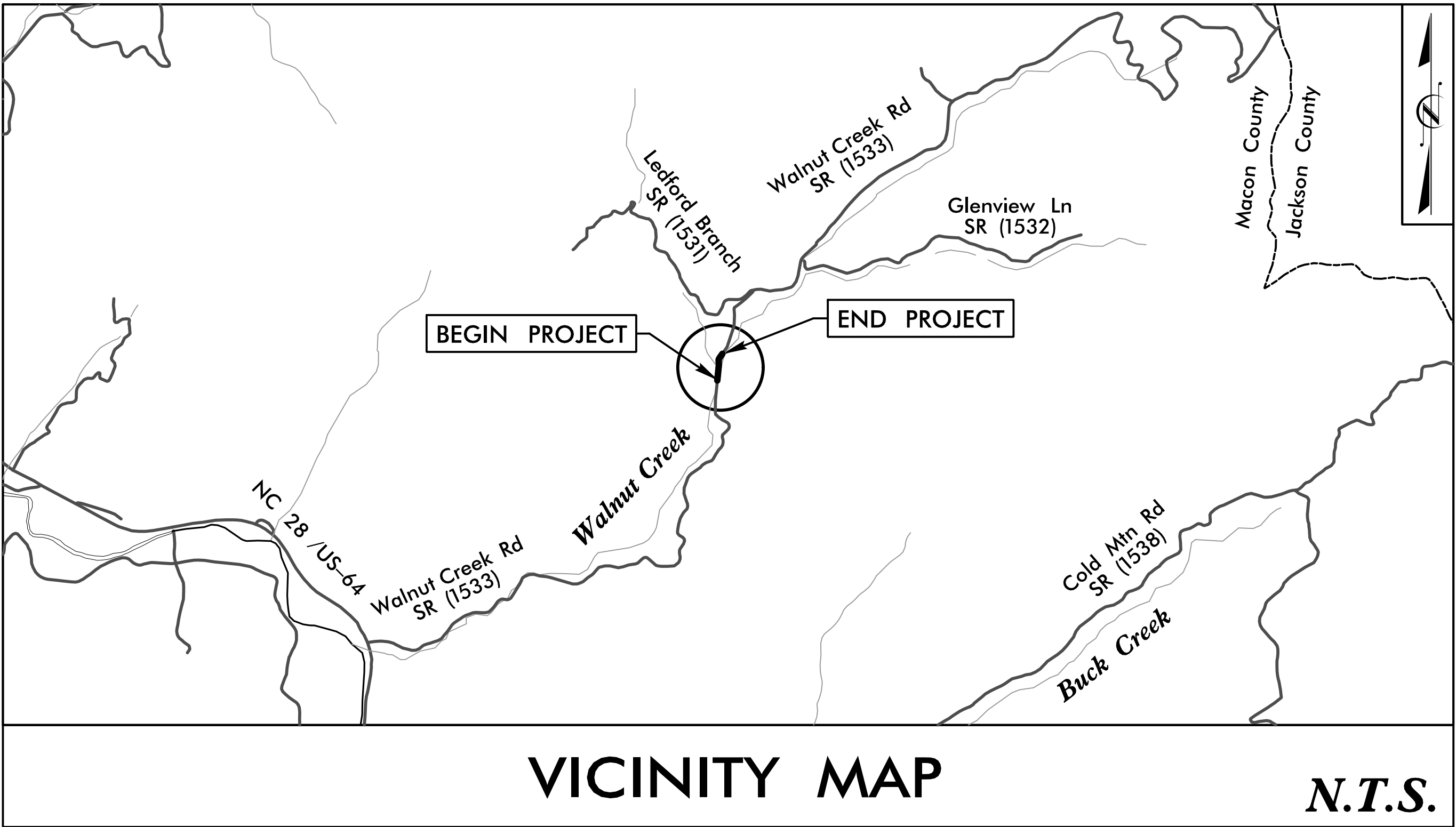
PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.159	RW04
Location and Surveys	
PROJECT SURVEYOR	
3/11/2024	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
MACON COUNTY



LOCATION: BRIDGE #204 OVER WALNUT CREEK ON
SR 1533 (WALNUT CREEK RD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

JOSEPH E. HUMMER, PE STATE TRAFFIC MANAGEMENT ENGINEER

TRAFFIC CONTROL PROJECT ENGINEER

TRAFFIC CONTROL PROJECT DESIGN ENGINEER

TRAFFIC CONTROL DESIGN ENGINEER



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-2	TRANSPORTATION OPERATIONS PLAN
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS

DOCUMENT NOT CONSIDERED FINAL
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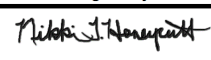
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

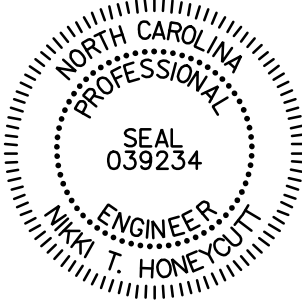
NIKKI T. HONEYCUTT, PE

TRAFFIC ENGINEER

CLARK GROVES

TRANSPORTATION DESIGNER

APPROVED: 
DATE: 3/5/2024



WBS PROJECT: 17BP.14.R.159



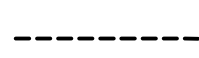


ROADWAY STANDARD DRAWINGS


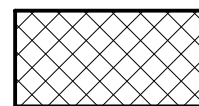
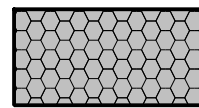
THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANAUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1150.01	FLAGGING DEVICES
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION







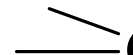



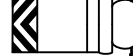
LEGEND

GENERAL




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

-  WORK AREA
-  REMOVAL/BREAKING OF PAVEMENT
-  TEMPORARY GRAVEL DRIVEWAY

TRAFFIC CONTROL DEVICES


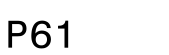


-  BARRICADE (TYPE III)
-  CONE
-  DRUM
-  SKINNY DRUM
-  TUBULAR MARKER
-  TEMPORARY CRASH CUSHION
-  FLASHING ARROW PANEL (TYPE C)
-  FLAGGER
-  LAW ENFORCEMENT
-  TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
-  CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN

-  PORTABLE TRAFFIC SIGNAL

TEMPORARY PAVEMENT MARKING

-  PAINT 24"
-  PAINT 4"
-  WHITE STOPBAR
-  WHITE SOLID EDGE LINE

PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES


PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	TMP-1A

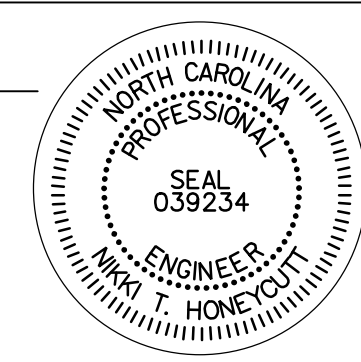
 STV Engineers, Inc.
300 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991


BRIDGE #550204

APPROVED: 

DATE: 3/5/2024

SEAL





LIST OF APPLICABLE
ROADWAY STANDARD
DRAWINGS & LEGEND

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	TMP-2

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Charlotte, NC 28202
NC License Number F-0991

BRIDGE #550204

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 UNDESIREDOVERLAPPING 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) 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.
- C) 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.

- D) 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.
- E) 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

- F) 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.

- G) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 ft IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

PROJECT NOTES

TRAFFIC PATTERN ALTERATIONS

- H) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

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

TRAFFIC CONTROL DEVICES

- K) 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.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
SR 1533 (WALNUT CREEK RD) (-L-)	PAINT	NONE

- M) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- N) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- O) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- P) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

LOCAL NOTES

1. CONTACT MACON COUNTY EMERGENCY SERVICES AND SCHOOLS AT LEAST ONE MONTH PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BUILD AS MUCH AS POSSIBLE AWAY FROM TRAFFIC.

MANAGEMENT STRATEGIES

PHASE I - TRAFFIC WILL BE MAINTAINED ON THE EXISTING ROAD, BUT REDUCED TO ONE LANE USING TEMPORARY SIGNALS AND PAVEMENT MARKINGS AS THE NEW ALIGNMENT IS CONSTRUCTED.

PHASE II - TRAFFIC WILL BE SHIFTED TO ONE LANE ON THE NEW ALIGNMENT USING TEMPORARY SIGNALS AND PAVEMENT MARKINGS WHILE THE REMAINDER IS CONSTRUCTED. A FLAGGING OPERATION WILL BE USED TO CONSTRUCT THE NEW TIE-INS.

PHASE III - THE TEMPORARY TRAFFIC SIGNALS WILL BE REMOVED AND TWO WAY TRAFFIC WILL BE MAINTAINED USING TEMPORARY LANE CLOSURES TO CONSTRUCT THE FINAL PAVEMENT SURFACE AND PAVEMENT MARKINGS.

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owensc

APPROVED:

DocuSigned by:
Nikola Stankovic

682645A9FA4473...

DATE: 3/5/2024

SEAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
OPERATIONS
PLAN

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	TMP-3

stv

STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

BRIDGE #550204

PROJECT PHASING

PHASE I

- STEP 1:
- INSTALL ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE TO NCDOT RSD. 1101.01 SHEET 3 OF 3.
- STEP 2:
- USING NCDOT RSD. 1101.02 SHEET 14 OF 14, INSTALL PORTABLE TRAFFIC SIGNALS, SIGNING, TEMPORARY PAVEMENT MARKINGS, DRUMS AND TEMPORARY SHORING NO. 1 AS SHOWN ON SHEET TMP-4. ONCE SIGNS AND DEVICES ARE IN PLACE, ACTIVATE PORTABLE TRAFFIC SIGNALS AND PLACE TRAFFIC INTO A ONE-LANE, TWO-WAY OPERATION.
- STEP 3:
- REMOVE EXISTING WING WALL ALONG THE RIGHT SIDE OF BRIDGE.
- STEP 4:
- CONSTRUCT RIGHT SIDE OF CULVERT, GUARDRAIL, AND -L- (SR 1533) FROM +/- STA. 11+40 TO 16+70, UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEET TMP-4.

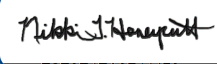
PHASE II

- STEP 1:
- USING NCDOT RSD. 1101.02 SHEET 14 OF 14, INSTALL SIGNING, TEMPORARY PAVEMENT MARKINGS, TEMPORARY GUARDRAIL, AND DRUMS AS SHOWN ON SHEET TMP-5. ONCE SIGNS AND DEVICES ARE IN PLACE, ACTIVATE PORTABLE TRAFFIC SIGNALS AND SHIFT ONE-LANE, TWO-WAY TRAFFIC ONTO THE NEWLY CONSTRUCTED RIGHT SIDE OF -L-.
- STEP 2:
- AWAY FROM TRAFFIC REMOVE EXISTING BRIDGE, TEMPORARY SHORING, CONSTRUCT LEFT SIDE OF CULVERT, AND LEFT SIDE OF -L- (SR 1533) FROM +/- STA. 11+40 TO 16+70, UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEET TMP-5. PLACE TEMPORARY GRAVEL DRIVEWAYS IN ORDER TO MAINTAIN ACCESS AT ALL TIMES.

PHASE III

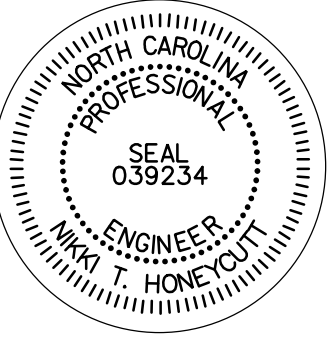
- STEP 1:
- USING NCDOT RSD. 1101.02 SHEET 14 OF 14, REMOVE TEMPORARY GUARDRAIL, TEMPORARY TRAFFIC SIGNALS, CONFLICTING TEMPORARY PAVEMENT MARKINGS, INSTALL TEMPORARY PAVEMENT MARKINGS, AND OPEN ROADWAY TO TWO-WAY TRAFFIC.
- STEP 2:
- USING NCDOT RSD. 1101.02 SHEET 14 OF 14, INSTALL FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS ON -L-.
- STEP 3:
- ONCE ALL CONSTRUCTION IS COMPLETE, REMOVE ALL SIGNS AND DEVICES AND PLACE TRAFFIC IN ITS FINAL PATTERN.

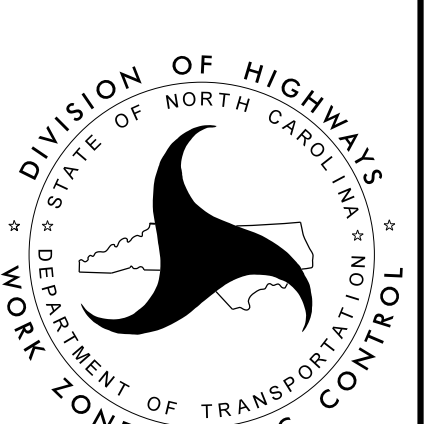
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APPROVED: 

DATE: 3/5/2024

SEAL





TEMPORARY TRAFFIC CONTROL PHASING

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	TMP-4

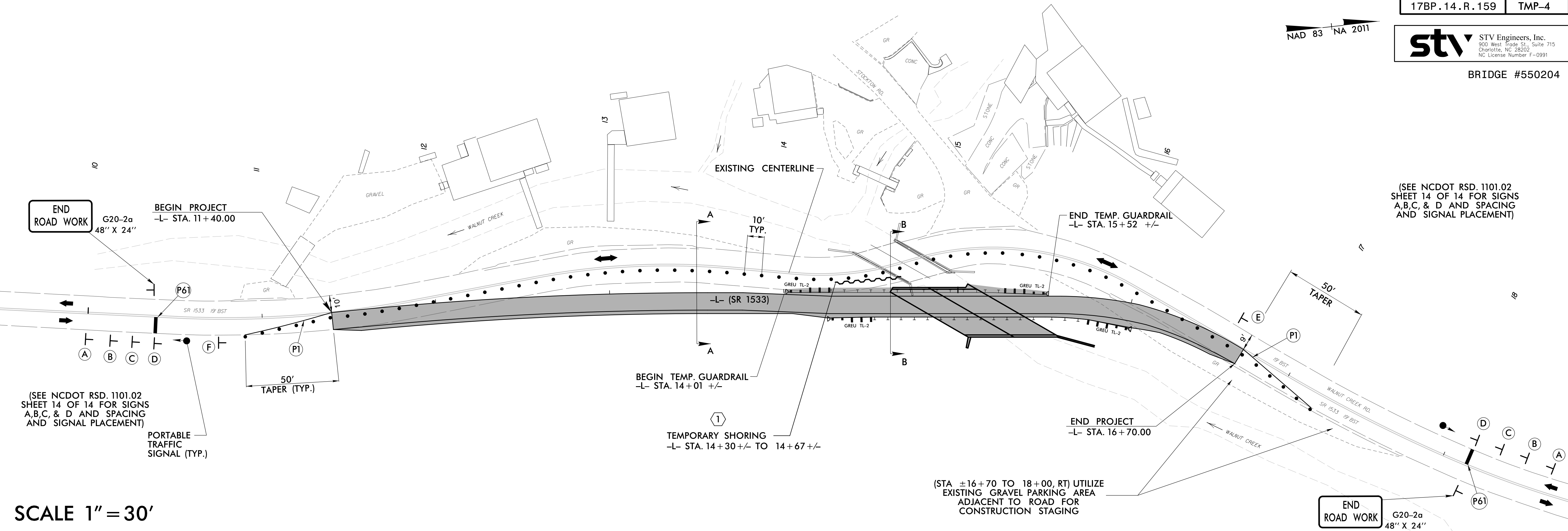
stv

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900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

BRIDGE #550204

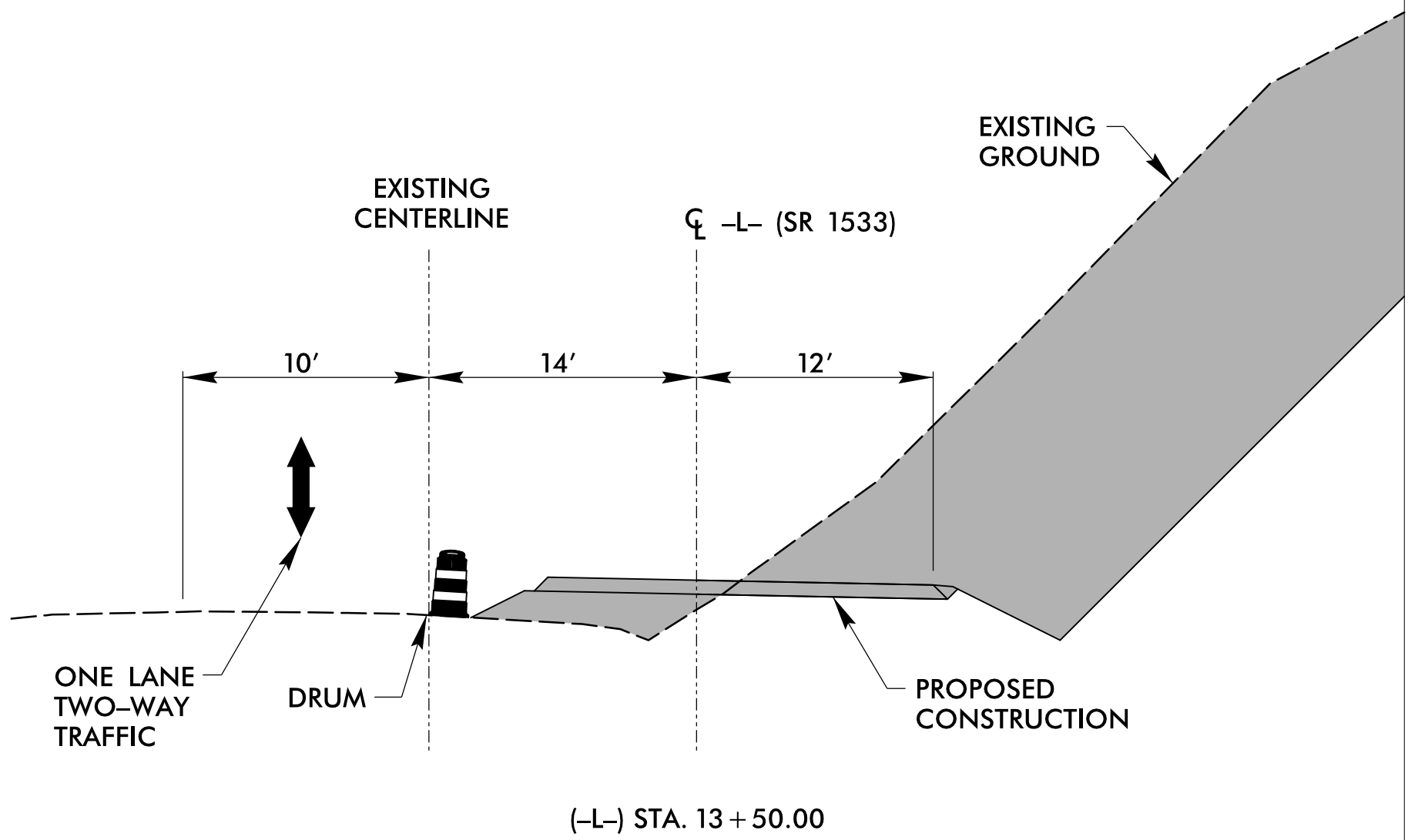
NAD 83 NA 2011

(SEE NCDOT RSD. 1101.02
SHEET 14 OF 14 FOR SIGNS
A,B,C, & D AND SPACING
AND SIGNAL PLACEMENT)



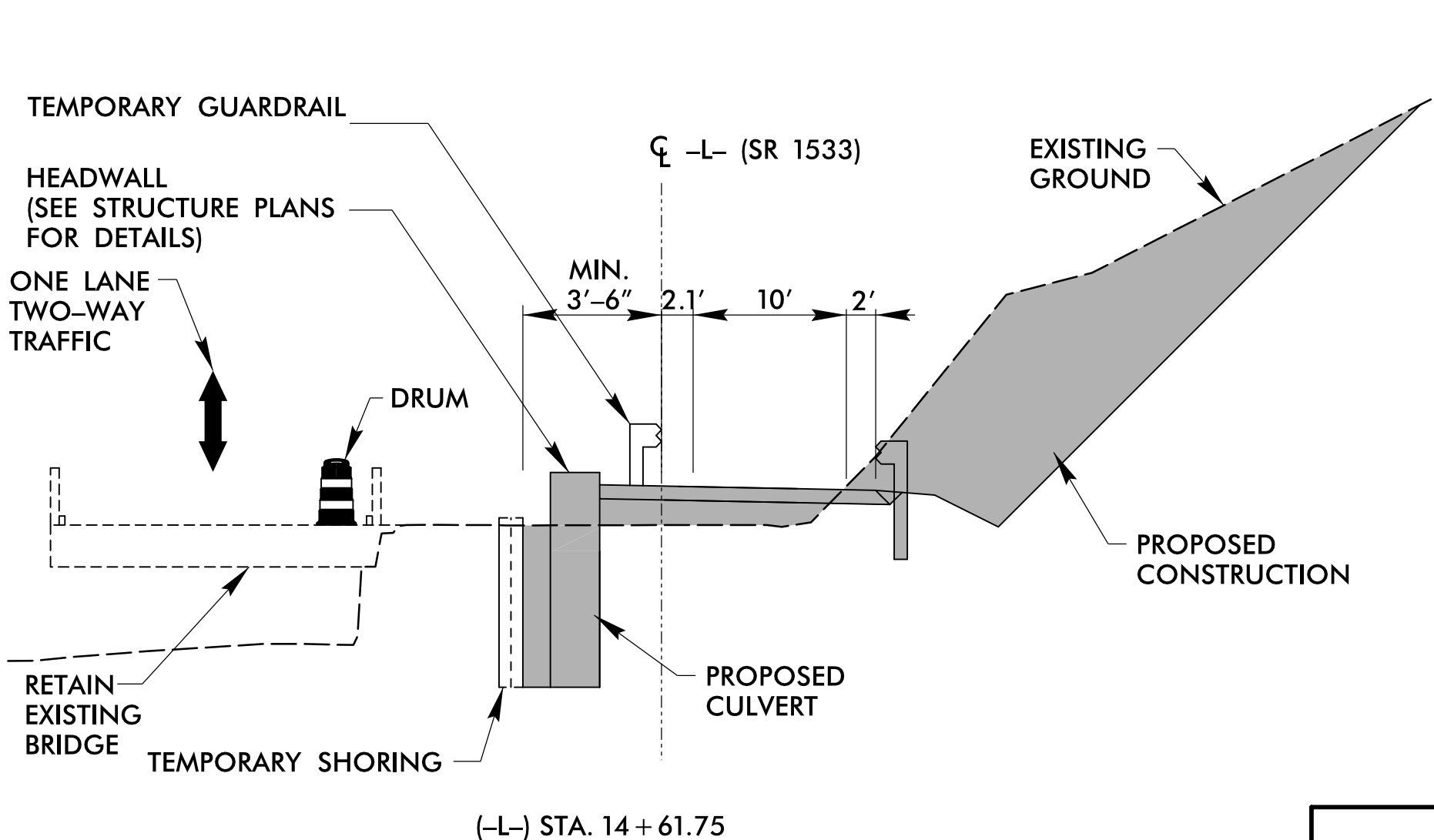
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SECTION A-A

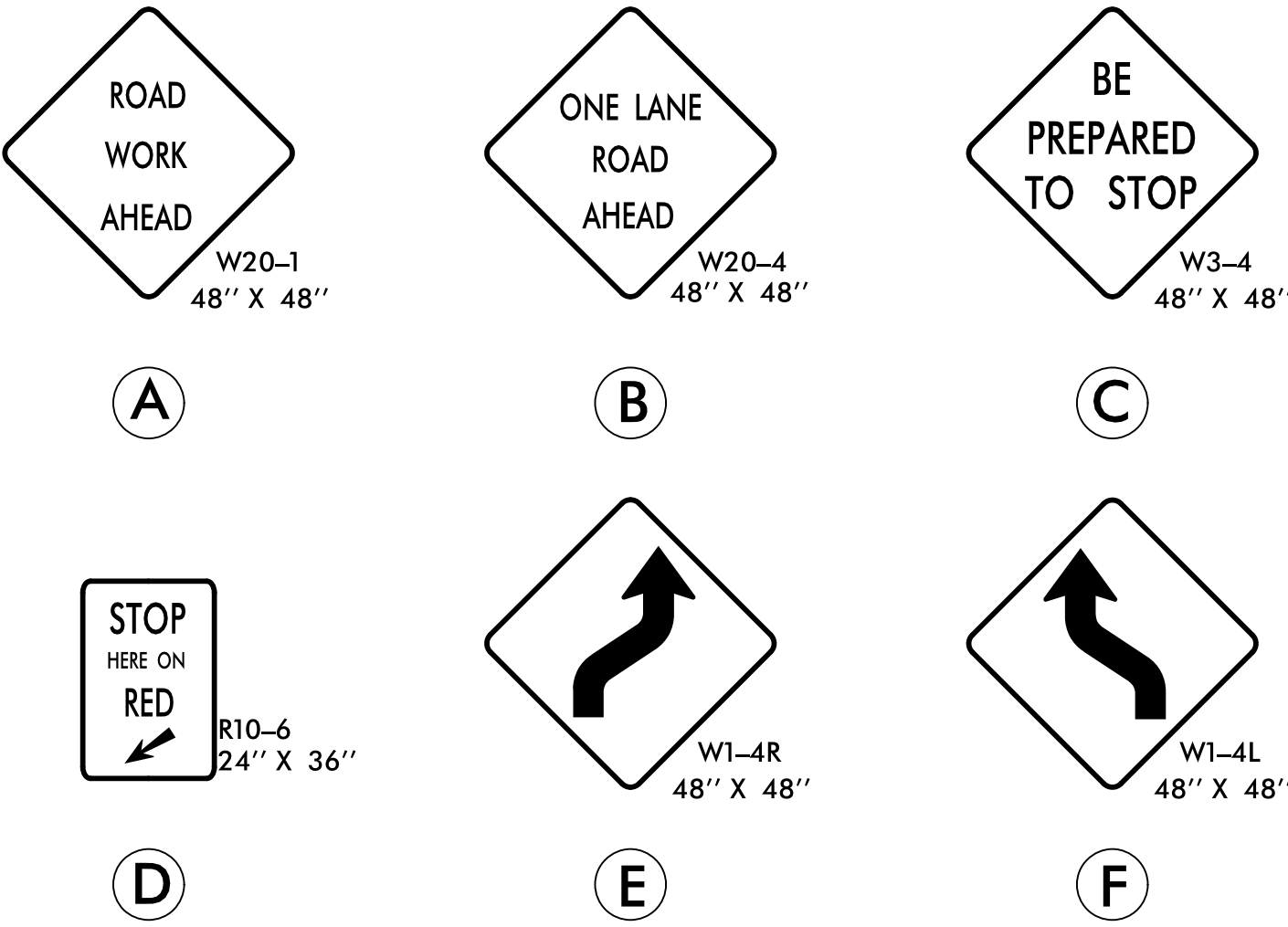


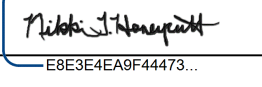
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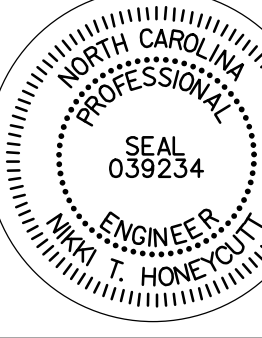
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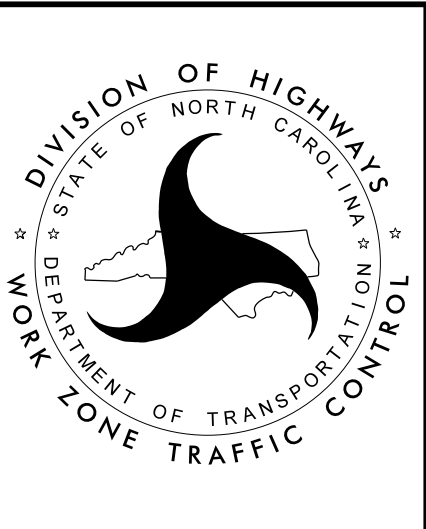
N.T.S



APPROVED: 
DATE: 3/5/2024

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TEMPORARY TRAFFIC
CONTROL PHASE I DETAILS

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	TMP-5

stv STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

BRIDGE #550204

NAD 83 NA 2011

(SEE NCDOT RSD.1101.02
SHEET 14 OF 14 FOR SIGNS
A,B,C, & D AND SPACING
AND SIGNAL PLACEMENT)

END
ROAD WORK
G20-2a
48" X 24"

BEGIN PROJECT
-L- STA. 11+40.00

(SEE NCDOT RSD.1101.02
SHEET 14 OF 14 FOR SIGNS
A,B,C, & D AND SPACING
AND SIGNAL PLACEMENT)

PORTABLE
TRAFFIC
SIGNAL (TYP.)

SCALE 1" = 30'

TEMP. GRAVEL
DRIVEWAY

END TEMP. GUARDRAIL
-L- STA. 15+52+/-

TEMP. GRAVEL
DRIVEWAY

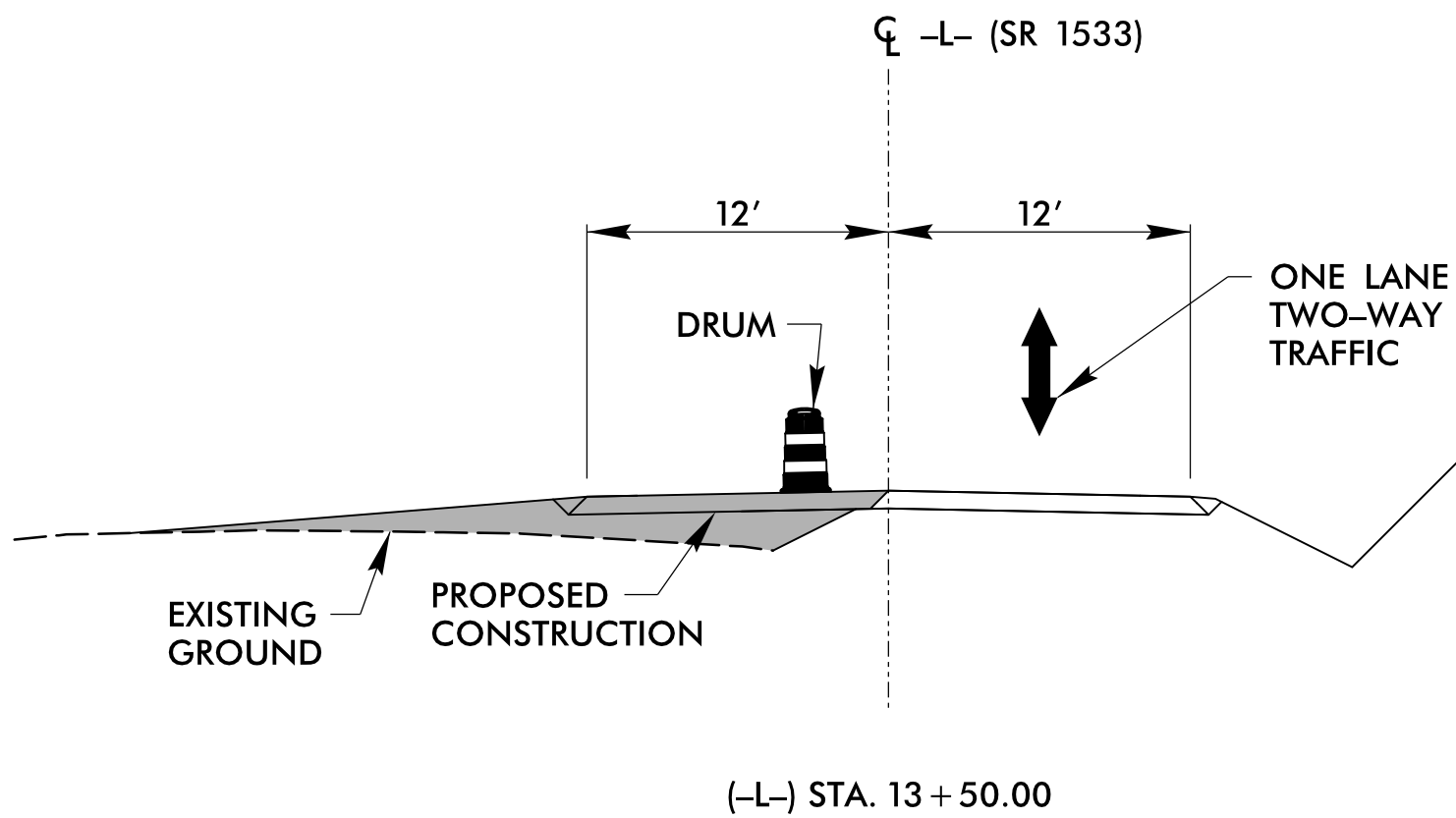
BEGIN TEMP.
GUARDRAIL
-L- STA. 14+01+/-

END PROJECT
-L- STA. 16+70.00

(STA ±16+70 TO 18+00, RT) UTILIZE
EXISTING GRAVEL PARKING AREA
ADJACENT TO ROAD FOR
CONSTRUCTION STAGING

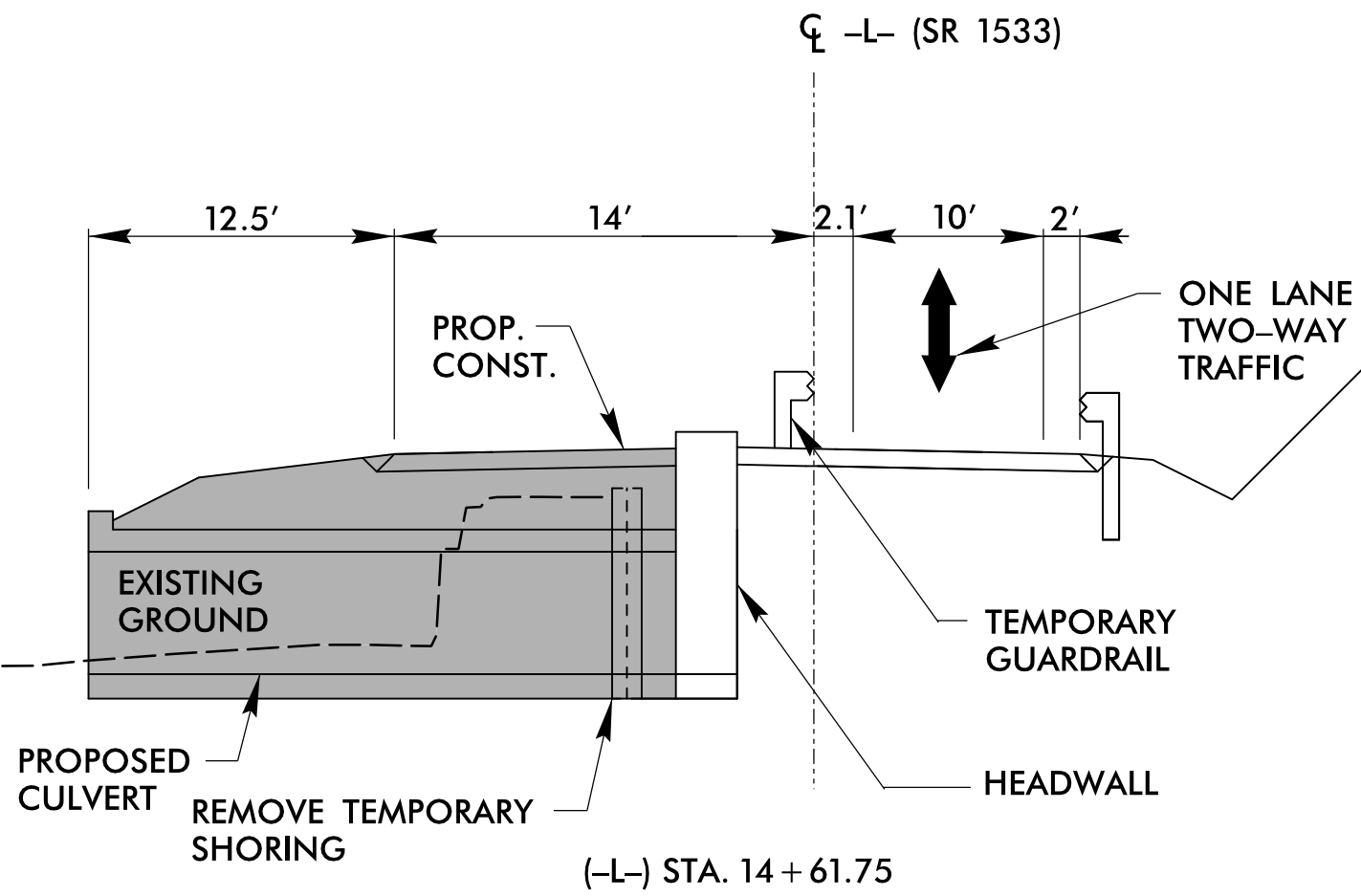
END
ROAD WORK
G20-2a
48" X 24"

SECTION A-A

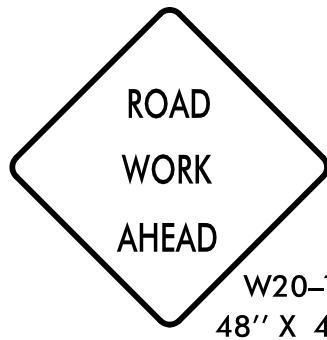


N.T.S

SECTION B-B



N.T.S



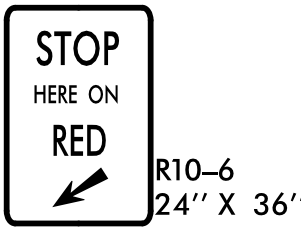
A



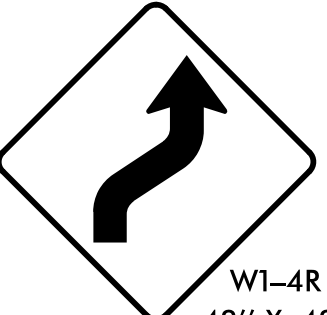
B



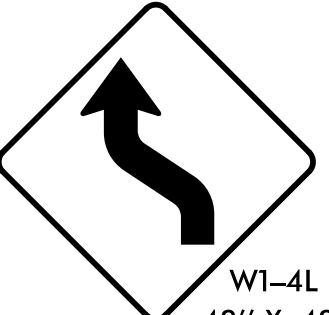
C



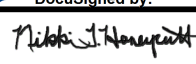
D



E

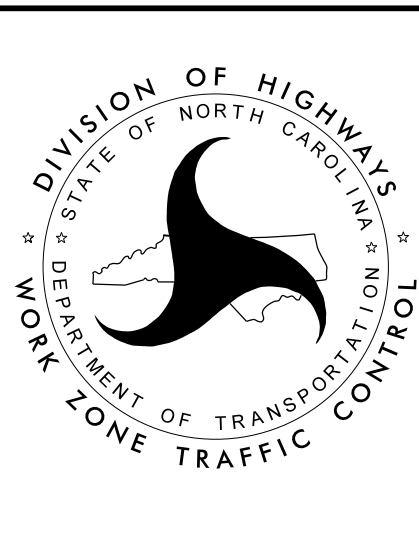


F

APPROVED: 
DATE: 3/5/2024

SEAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



TEMPORARY TRAFFIC
CONTROL PHASE II DETAILS

PAVEMENT MARKING PLAN

ROADWAY STANDARD DRAWING

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

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

GENERAL NOTES

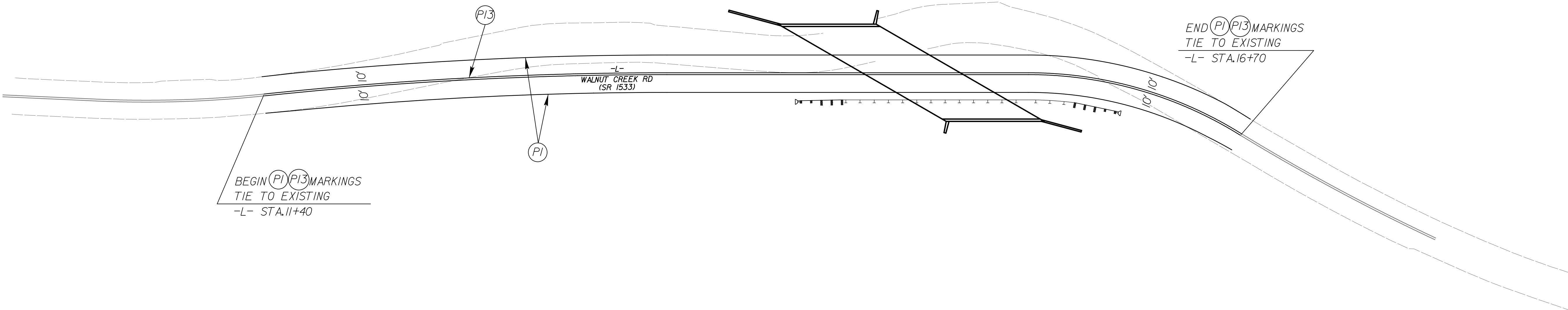
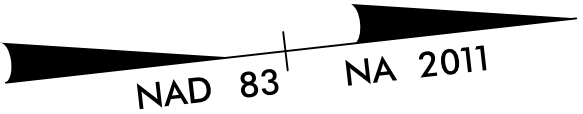
THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A. INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE.
ROAD NAME: SR 1533 (WALNUT CREEK RD) MARKING PAINT
- B. TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C. REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- C. TEMPORARY PAVEMENT MARKINGS ARE PLACED IN ONE(1) COAT OF PAINT, AND FINAL PAVEMENT MARKINGS ARE PLACED IN TWO(2) COATS OF PAINT.

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.R.159	PMP-1

stv STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

BRIDGE #550204

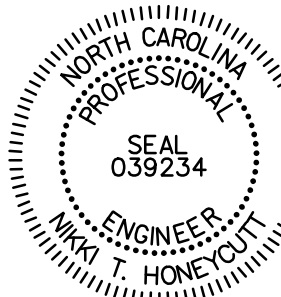


PAVEMENT MARKING SCHEDULE

P1 - PAINT (4" WHITE)	WHITE EDGELINE
P13 - PAINT (4" YELLOW)	DOUBLE YELLOW CENTER LINE

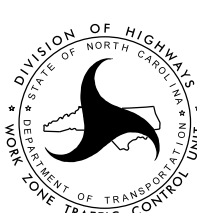
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED: [Signature] DATE: 3/5/2024



PAVEMENT MARKING DETAIL

SCALE:	30
DATE:	02/07/18
DWG. BY:	BRJ
DESIGN BY:	BRJ
REVIEWED BY:	MBE



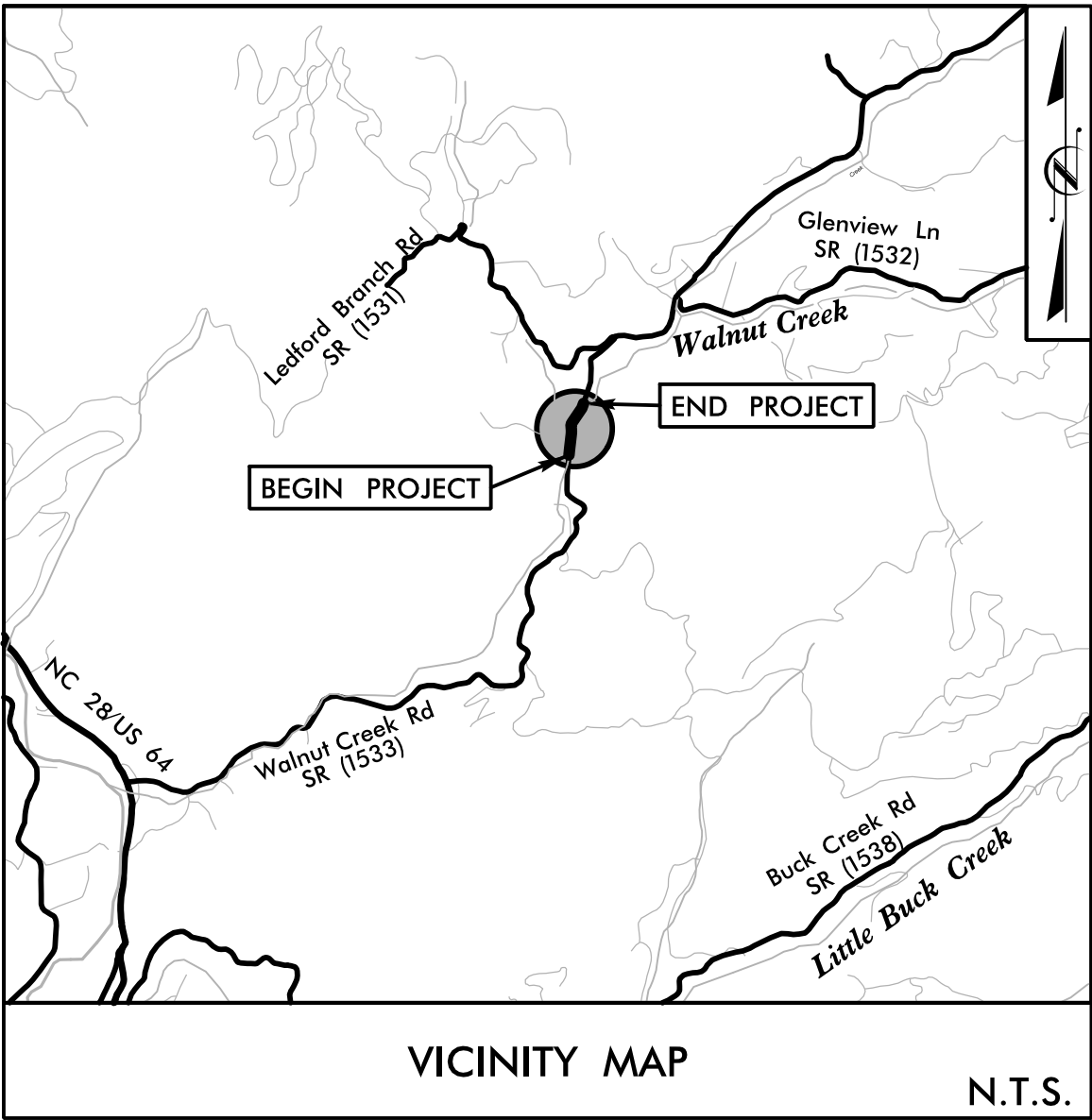
REVISIONS	
CADD FILE	

R:\TrafficControl\NMP\17BP14R159_rdy_dmp01.dgn

1/19/2024

1/9/2024 11:55:11 AM C:\Users\PSH\OneDrive\17BP14R159_hyd_EC_tch.dgn
Overlaid

PROJECT WBS: 17BP.14.R.159

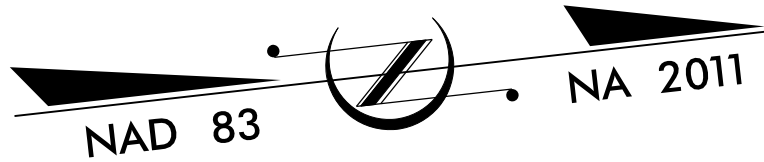


VICINITY MAP

N.T.S.

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

LOCATION: BRIDGE #550204 OVER WALNUT CREEK
ON SR 1533 (WALNUT CREEK RD)



BEGIN PROJECT WBS 17BP.14.R.159

-L- STA. 11 + 40.00

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.

TO NC 28 / US 64

SR 1533 (WALNUT CREEK ROAD)

BEGIN CULVERT

-L- STA. 14 + 61.75

END CULVERT

-L- STA. 15 + 14.25

WALNUT CREEK

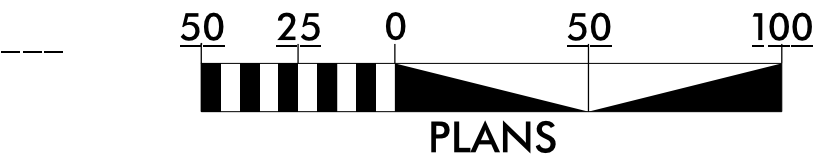
TO SR 1163

END PROJECT WBS 17BP.14.R.159

-L- STA. 16 + 70.00

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

GRAPHIC SCALE



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.



STV Engineers, Inc.
900 West Trade Street, Suite 715
Charlotte, NC 28202
NC License Number F-0991

Prepared In the Office of:

STV ENGINEERS, INC.
900 WEST TRADE STREET, SUITE 715
CHARLOTTE, NC 28202

Designed by:

EDWARD VANCE, PE

NAME

3974

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 J
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	Guide for Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type J
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type J	1634.02	Temporary Rock Sediment Dam Type J
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin for Pumped Effluent	1635.02	Rock Pipe Inlet Sediment Trap Type J
1630.05	Temporary Diversion	1640.01	Coir Fiber Wattle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.159	EC-1	8
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.R.159		P.E.	
17BP.14.R.159		RAW & UTILITIES	
17BP.14.R.159		CONSTRUCTION	

EROSION AND SEDIMENT CONTROL MEASURES

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

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
17BPJ4RJ59	EC-2
<div><div>stv</div><div>STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991</div></div>	

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.

SOIL STABILIZATION SUMMARY SHEET

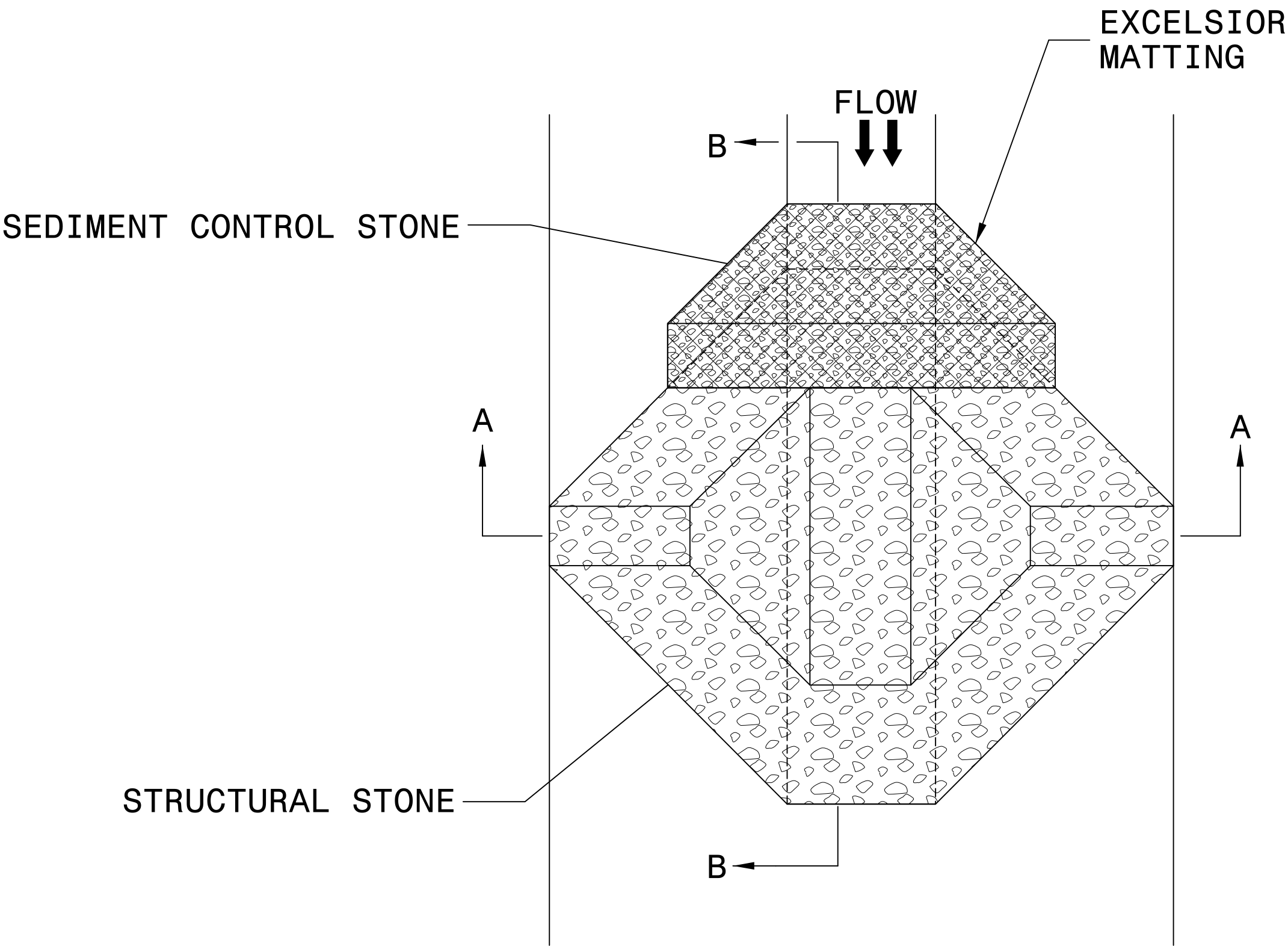
MATTING FOR EROSION CONTROL

PERMANENT SOIL REINFORCEMENT MAT

[illegible]

PROJECT REFERENCE NO.	SHEET NO.
17.BPJ4.R.159	EC-3A
RW SHEET NO.	
<div><div>stv</div><div>STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991</div></div>	

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

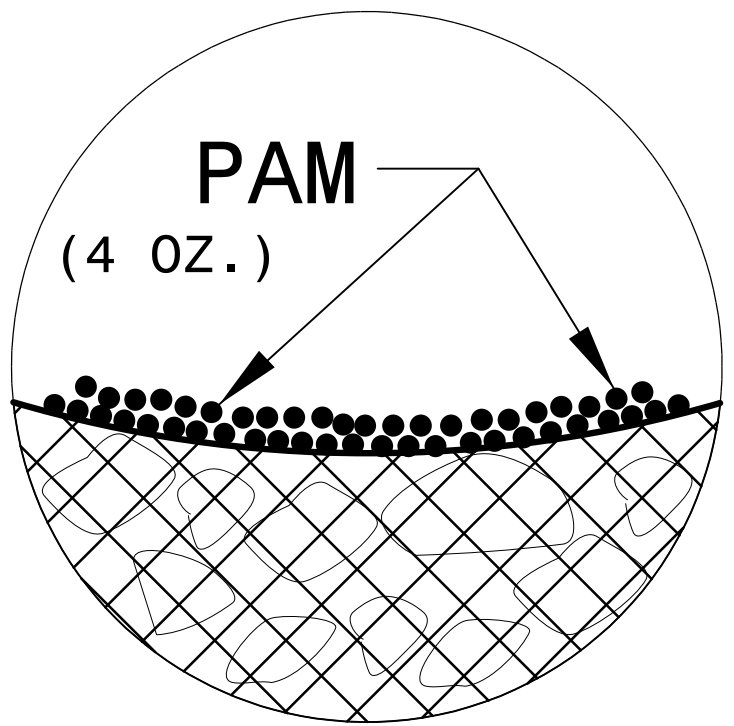
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

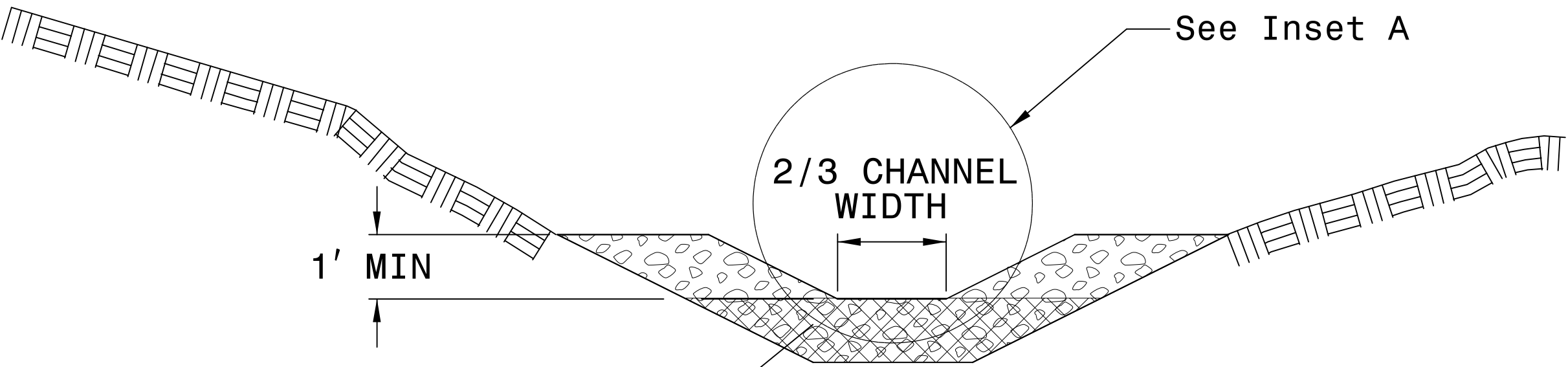
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

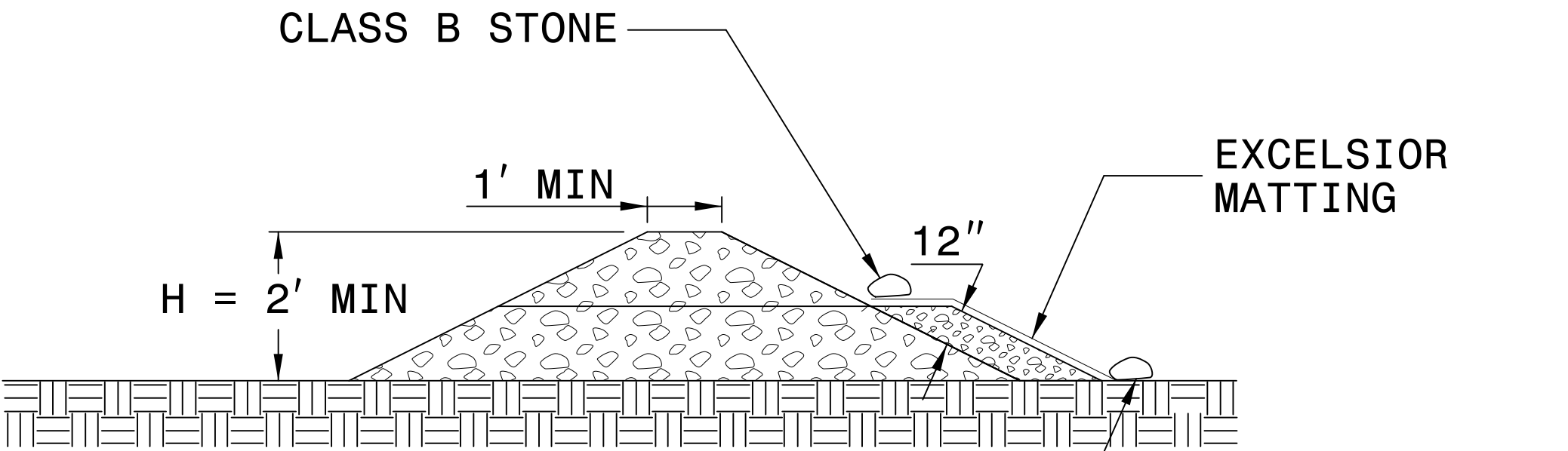
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

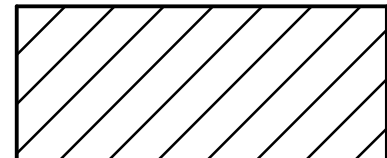
PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.159	EC-4/CONST.4

RW SHEET NO



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NC License Number F-0991

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



NOTE:

PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B
AND TEMPORARY ROCK SILT CHECKS TYPE – A AT
DRAINAGE OUTLETS.

NOTE:

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

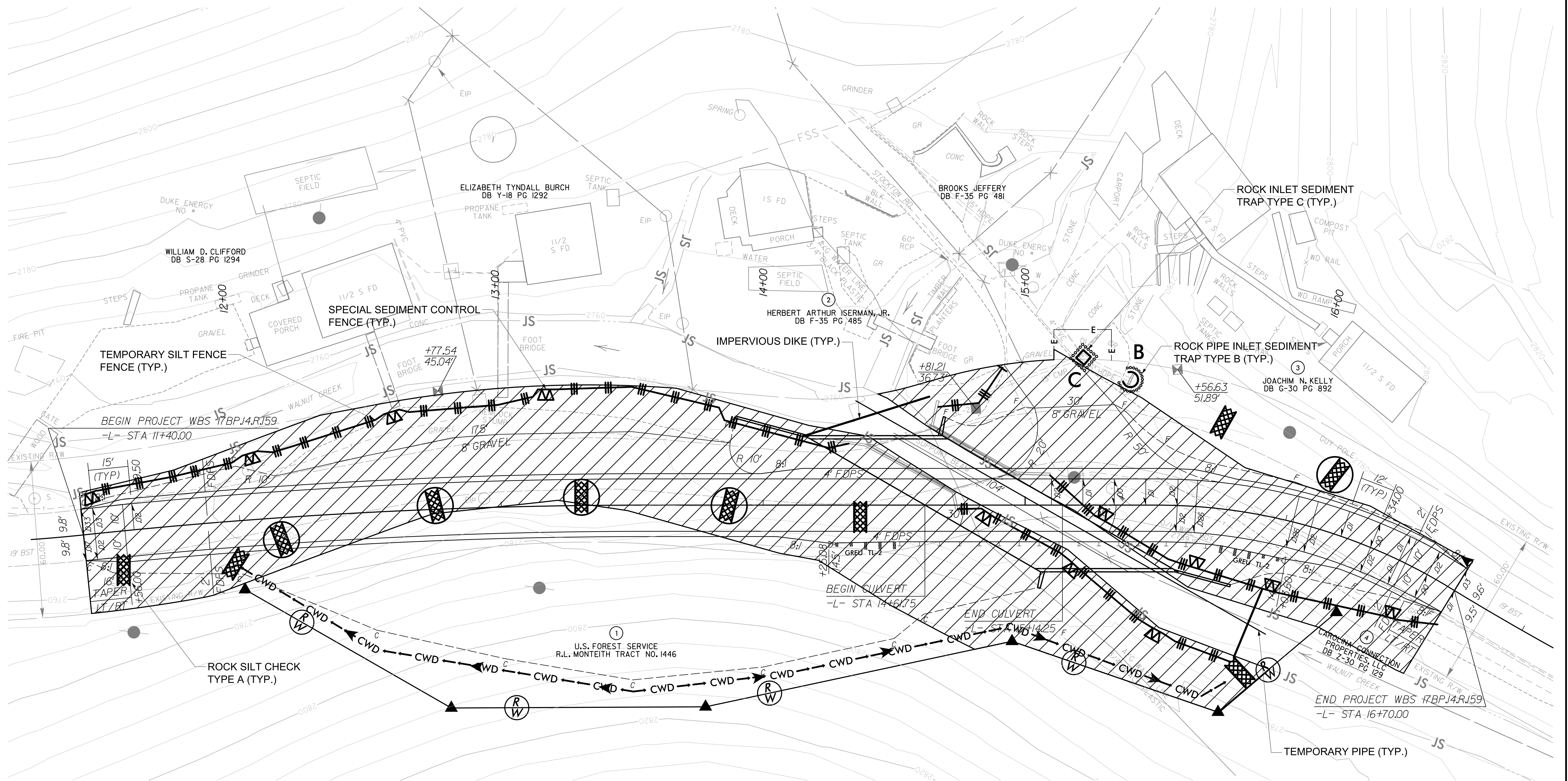
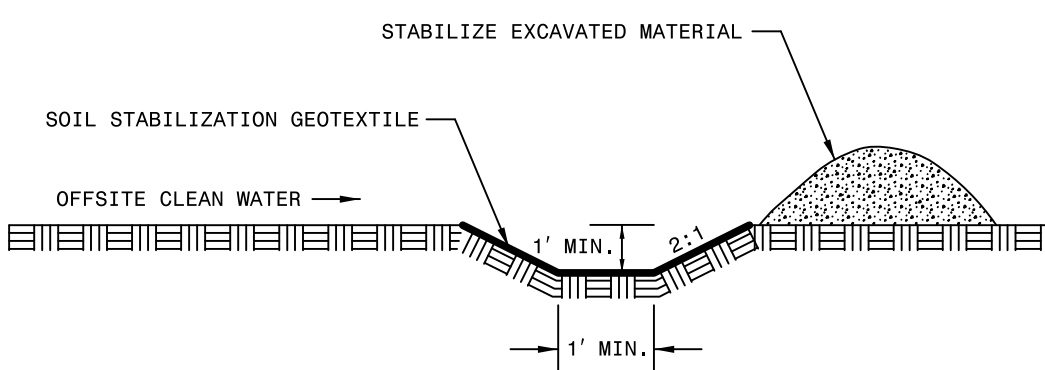
NOTE:

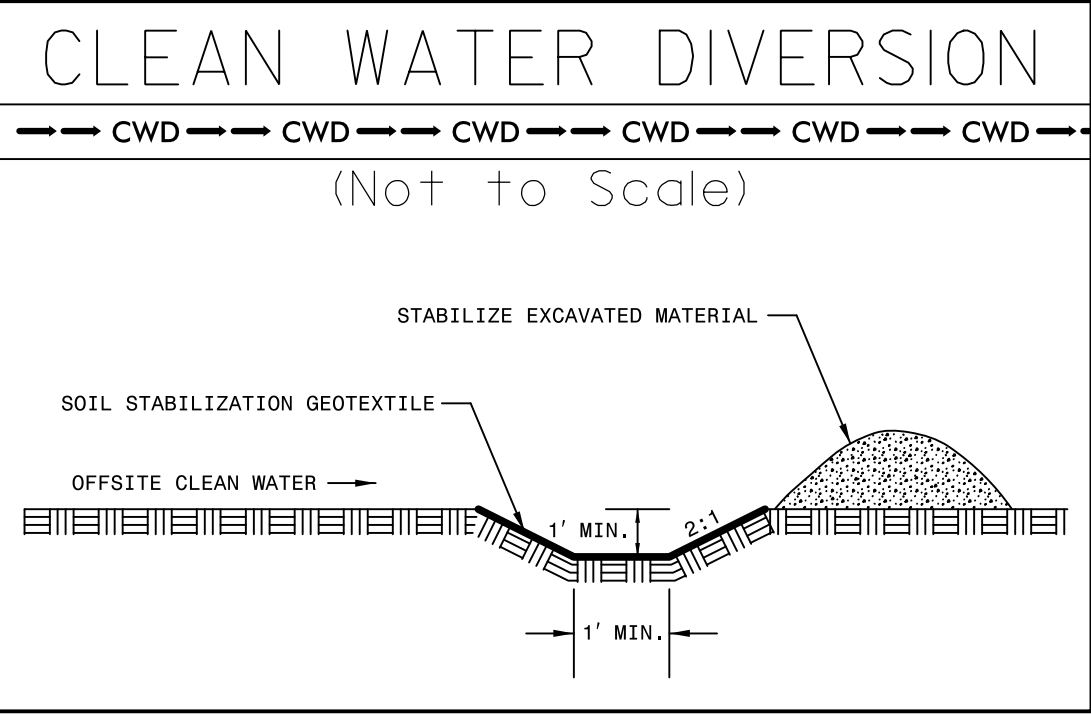
FOLLOW NCDOT BMP MANUAL FOR CONSTRUCTION
ACTIVITIES FOR THE BRIDGE DEMOLITION AND
CONSTRUCTION.

CLEAN WATER DIVERSION

→ → CWD → → CWD → → CWD → → CWD → → CWD → → CWD → →

(Not to Scale)






For Slopes Excavated Greater Than 10 feet
Install Matting for Erosion Control on
Entire Slope as Work Allows.

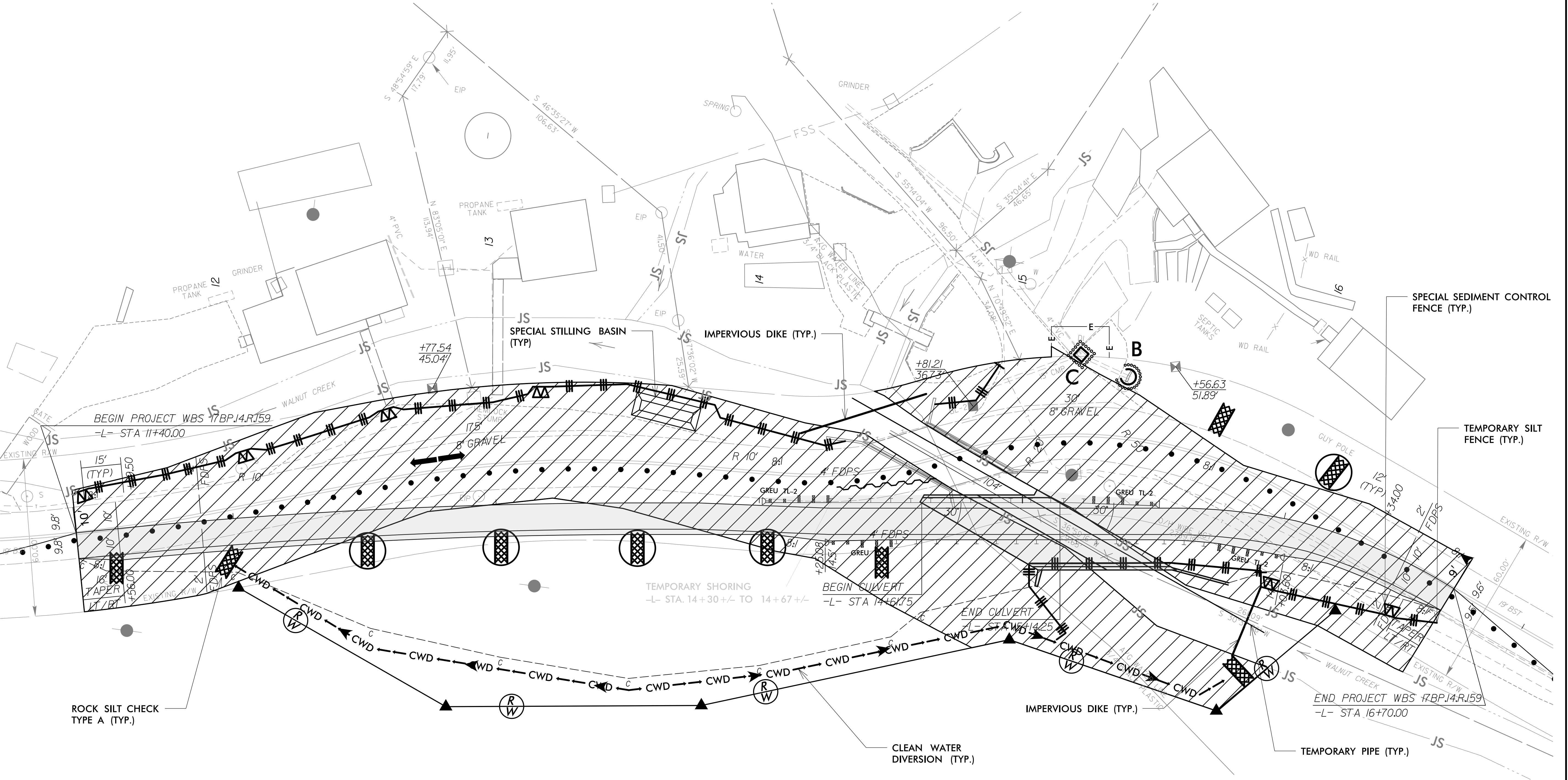
FINAL GRADING – PHASE 1

PROJECT REFERENCE NO.	SHEET NO.
17BPJ4.RJ59	EC-5/CONST.-4
RW SHEET NO.	



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NC License Number E-0991

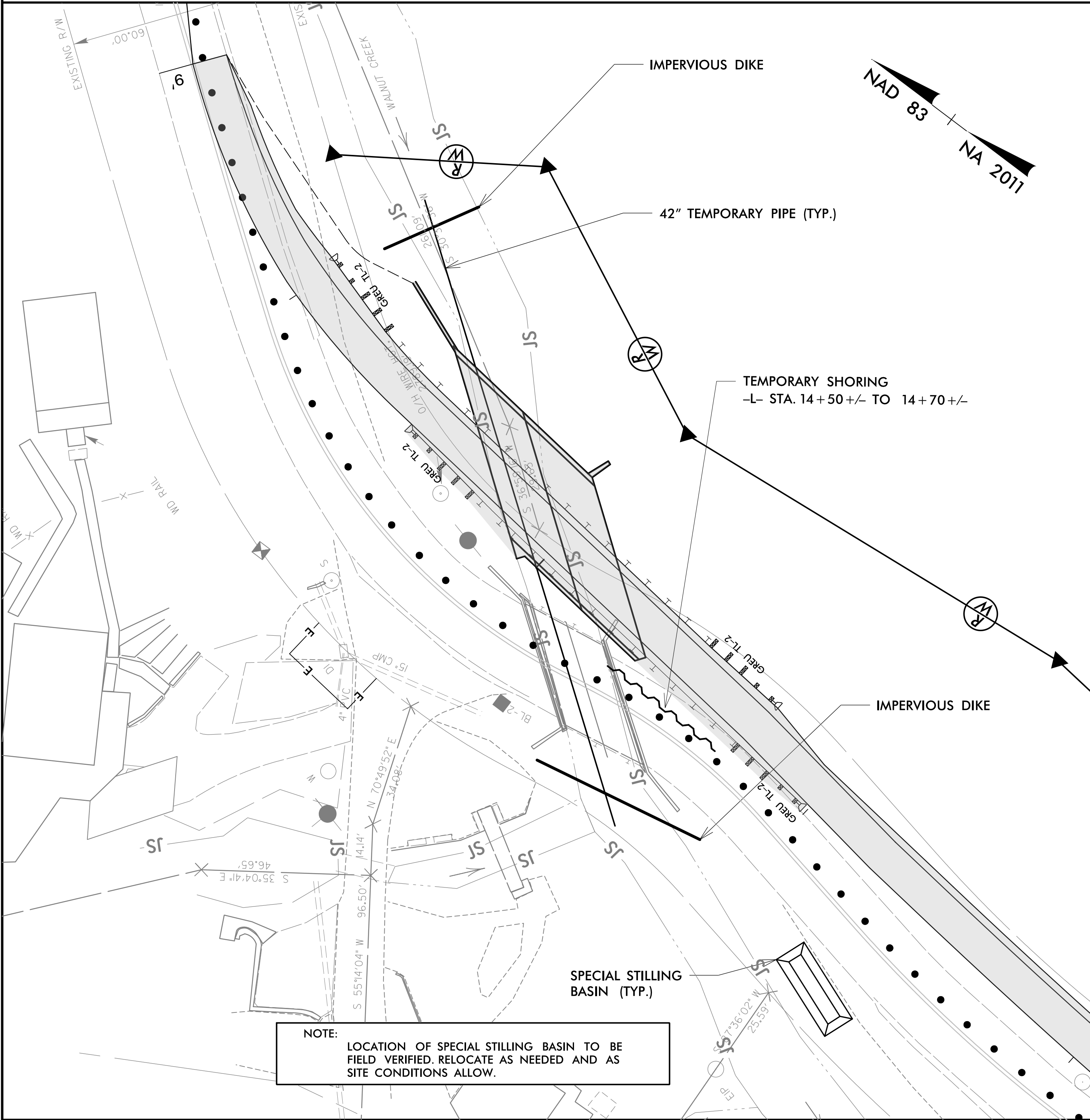
FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



CULVERT CONSTRUCTION SEQUENCE STA. 14+88 –L–

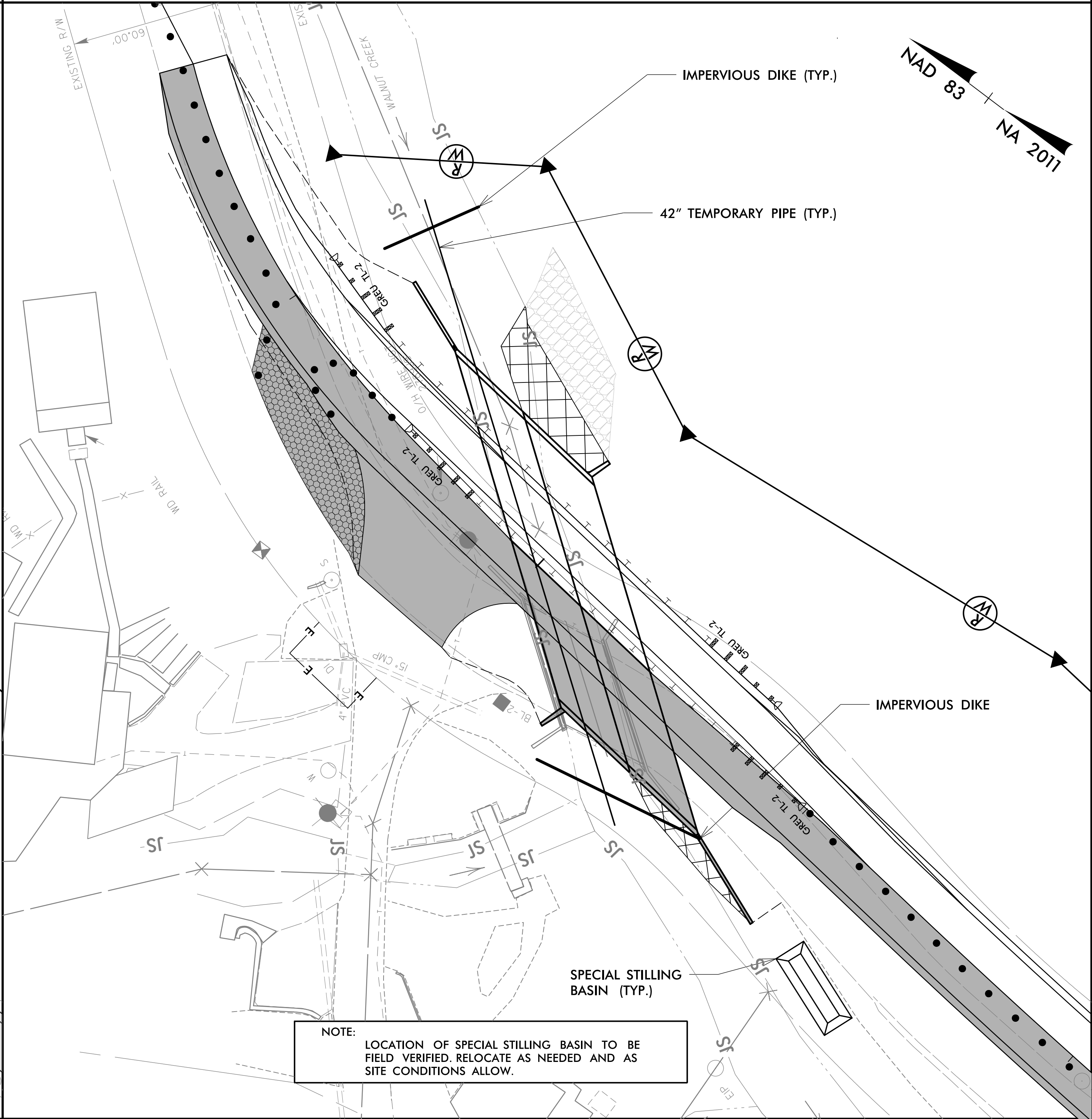
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 42 INCH TEMPORARY PIPE.
3. CONSTRUCT PROPOSED CULVERT BARRELS AS SHOWN WHILE THE EXISTING BRIDGE IS USED TO MAINTAIN TRAFFIC.



PHASE II

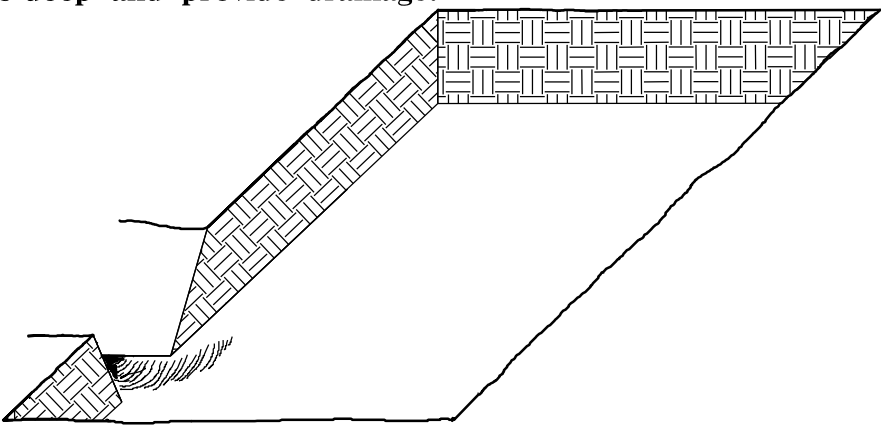
4. UPON FINISHING PHASE 1 OF CULVERT CONSTRUCTION, SWITCH TRAFFIC PATTERN ONTO THE NEW CULVERT.
5. REMOVE EXISTING BRIDGE AND BEGIN PHASE 2 OF CULVERT CONSTRUCTION.
6. CONSTRUCT FLOODPLAIN BENCHES AND ANY NECESSARY UP AND DOWNSTREAM CHANNEL IMPROVEMENTS.
8. REMOVE IMPERVIOUS DIKES AND TEMPORARY PIPE, ALLOWING NORMAL FLOW THROUGH CULVERT.
9. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S), AND COMPLETE ROADWAY.



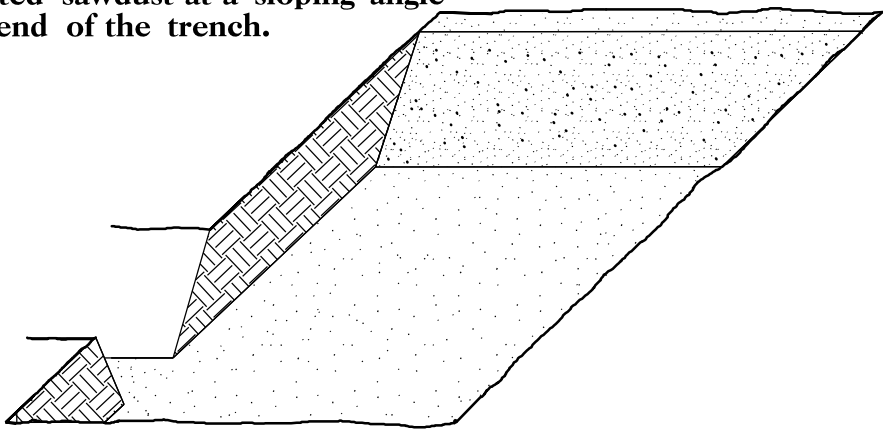
PLANTING DETAILS
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

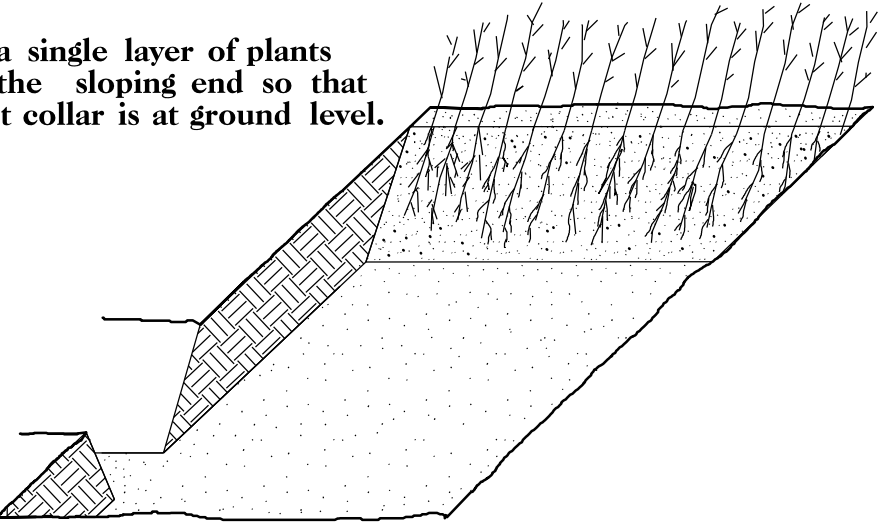
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



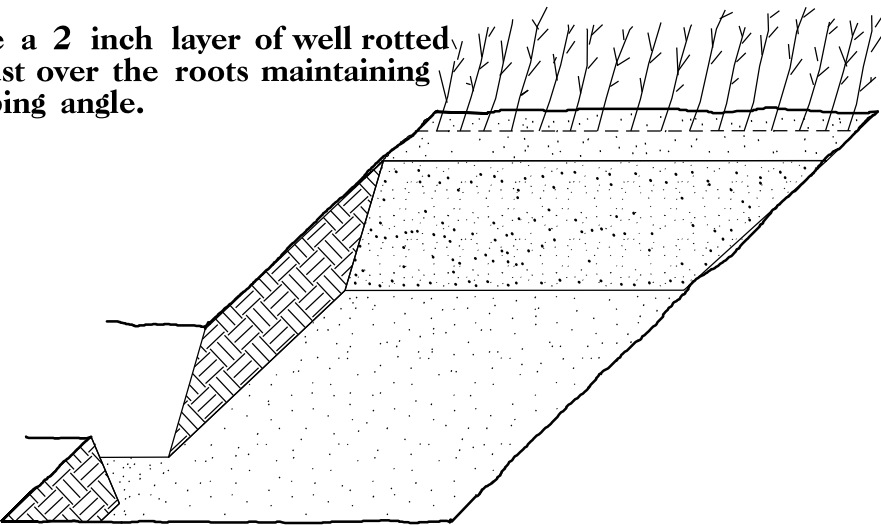
3. Jackfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

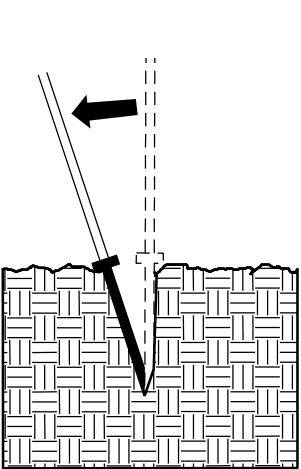


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

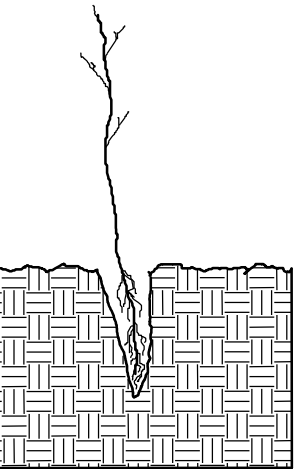


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

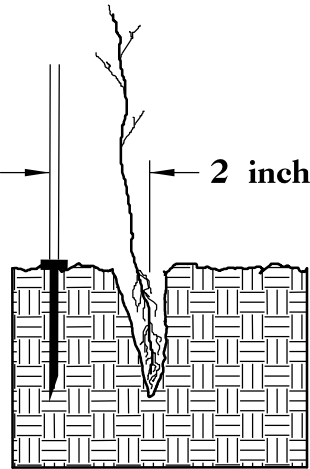
DOUBLE PLANTING METHOD
USING THE KJC PLANTING BAR



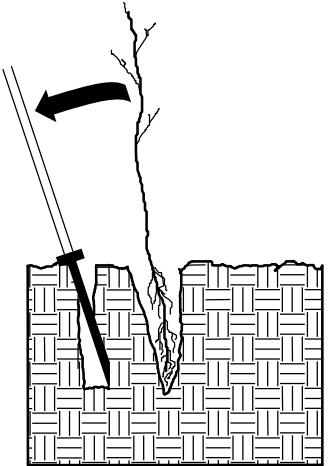
1. Insert planting bar as shown and pull handle toward planter.



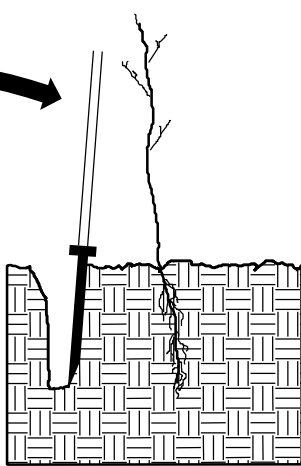
2. Remove planting bar and place seedling at correct depth.



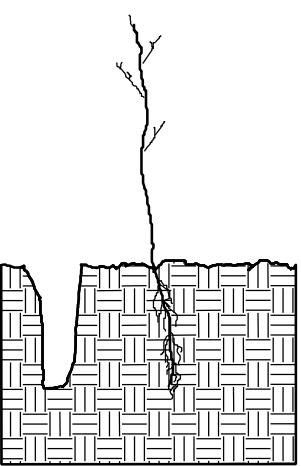
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



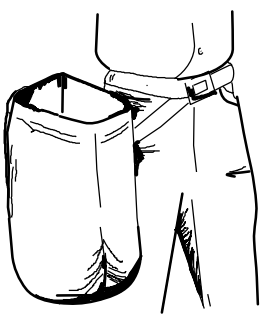
5. Push handle forward firming soil at top.



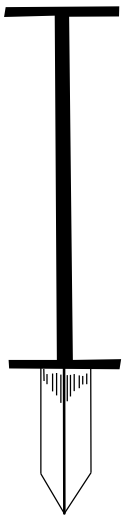
6. Leave compaction hole open. Water thoroughly.

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.



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NC License Number F-0991

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	173P.14.R.159	RF-1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

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 3R
25% PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	12 in - 18 in 3R
25% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in 3R
25% BETULA NIGRA	RIVER BIRCH	12 in - 18 in 3R

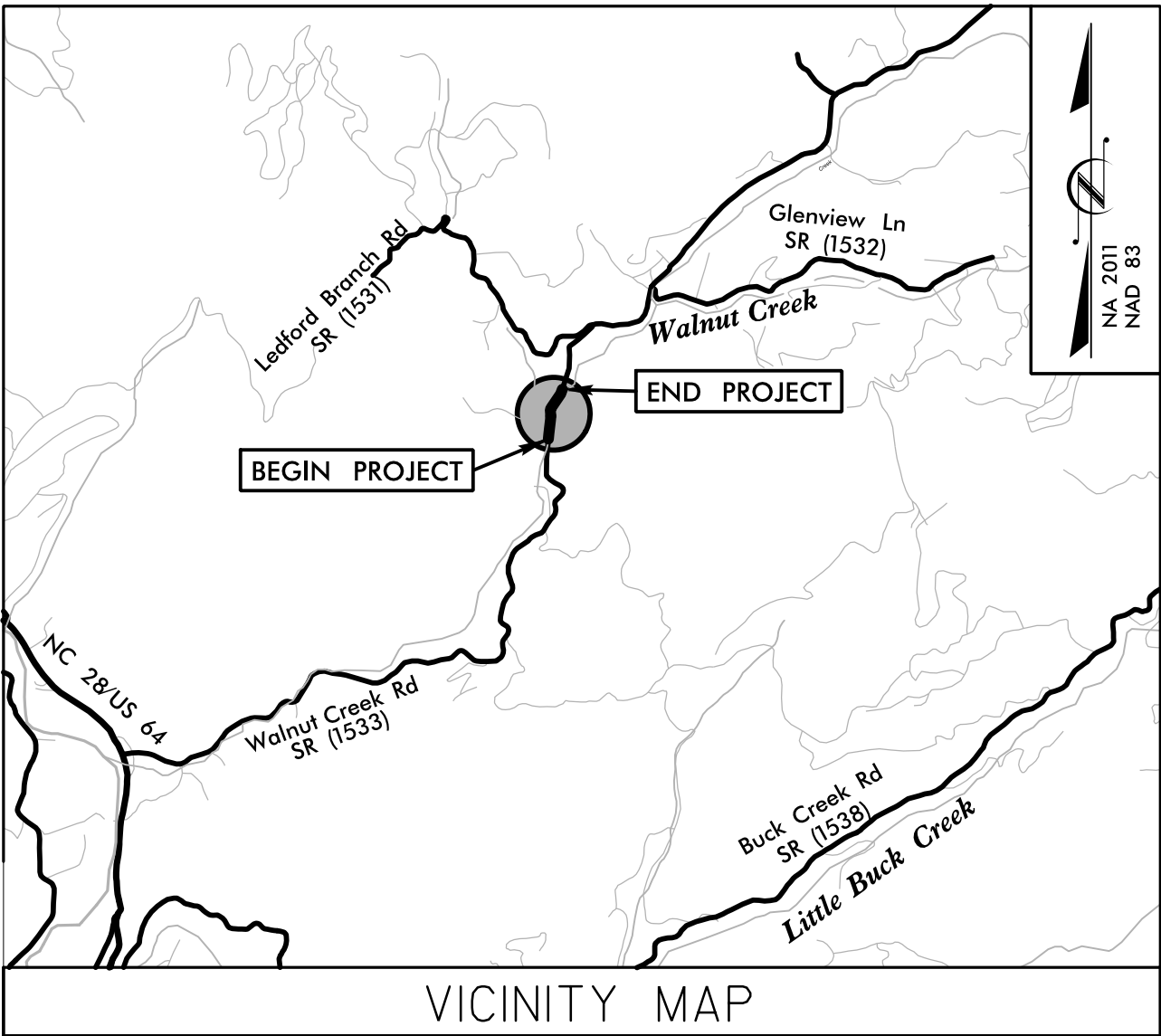
REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

3/31/17

PROJECT WBS: 17BP.14.R.159

CONTRACT:



VICINITY MAP

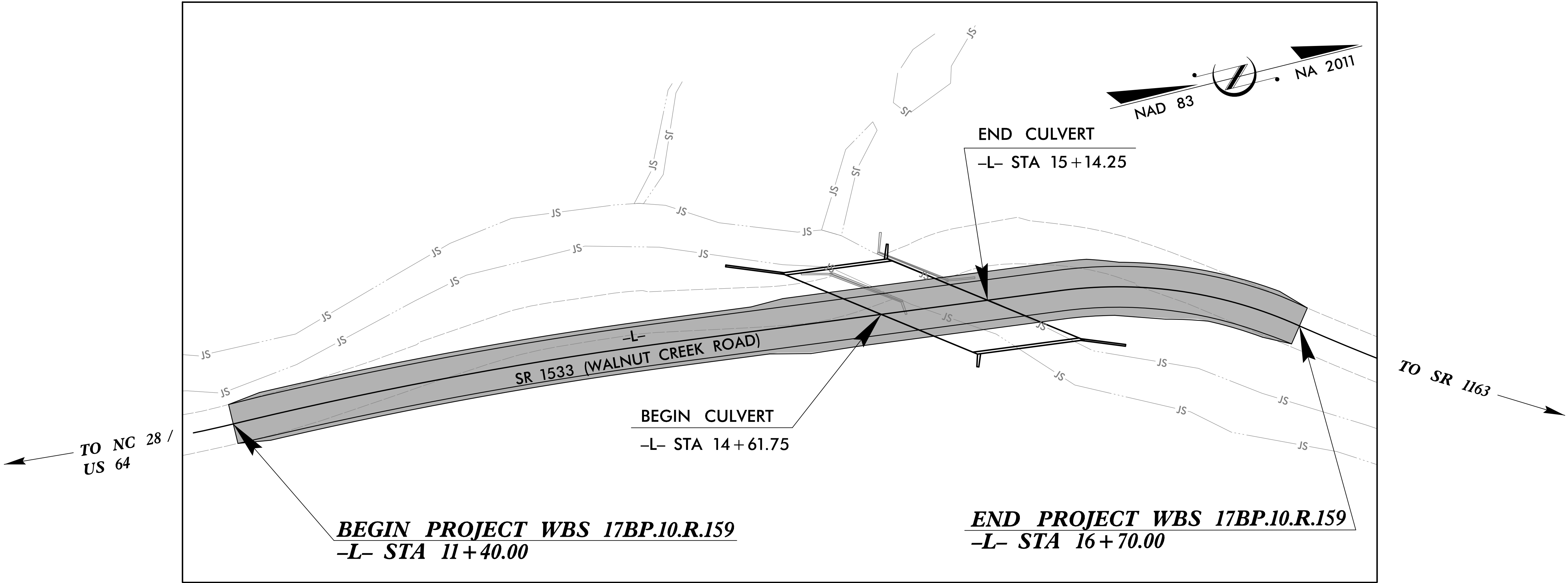
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS
MACON COUNTY

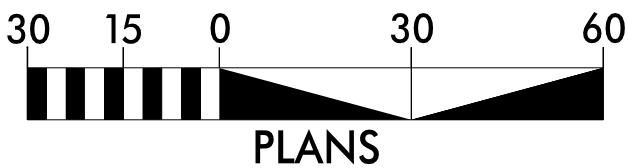
LOCATION: BRIDGE NO. 550204 OVER WALNUT CREEK
ON SR 1533 (WALNUT CREEK ROAD)

TYPE OF WORK: AERIAL & BURIED TELEPHONE

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.159	UO-1



GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

- (1) TELEPHONE - FRONTIER COMMUNICATIONS
- (2) POWER - DUKE ENERGY

PLANS
PREPARED
BY:

V&M
Vaughn & Melton
Consulting Engineers
1318-F Patton Ave.
Asheville, NC 28806
828-253-2796
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PREPARED FOR THE OFFICE OF:
DIVISION OF HIGHWAYS
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<u>Lynn Mann, P.G.</u>	UTILITIES PROJECT COORDINATOR

3/31/17

TRANSPORTATION\31614-01\MACON-204\UTILITIES\UO-2.DGN

PROJECT WBS: 17BP.14.R.159

CONTRACT:

