

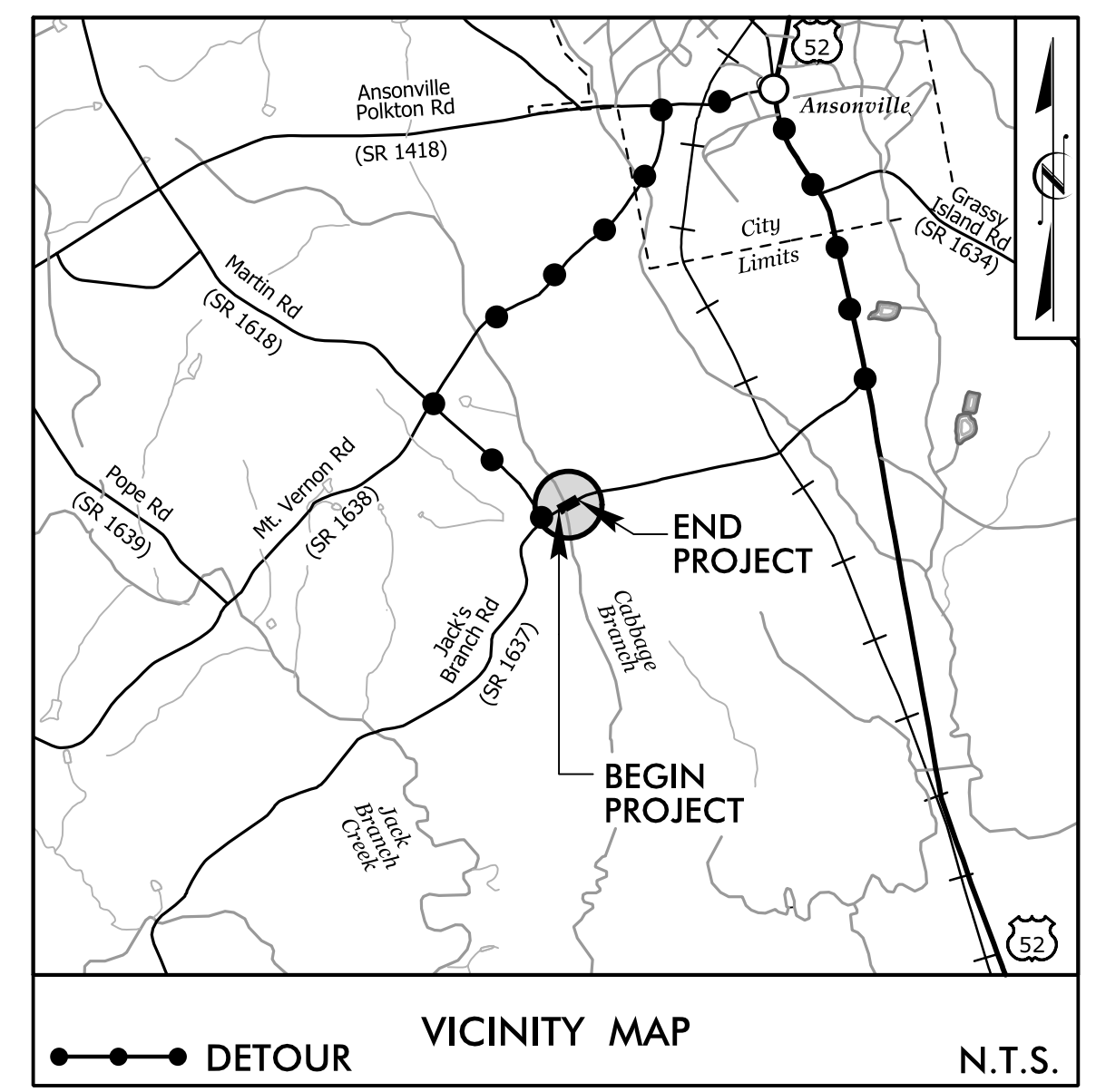
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**PROJECT WBS: 17BP.10.R.128**  
**CONTRACT: DJ00373**

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

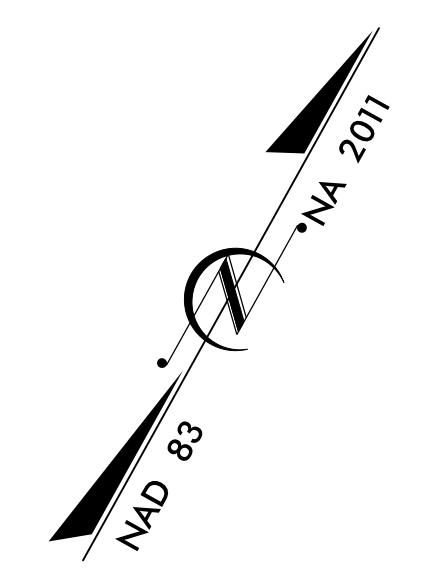
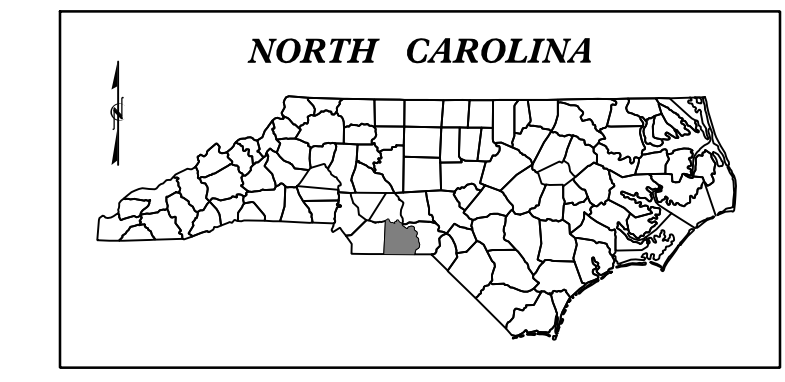


**FINAL PLANS**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**ANSON COUNTY**

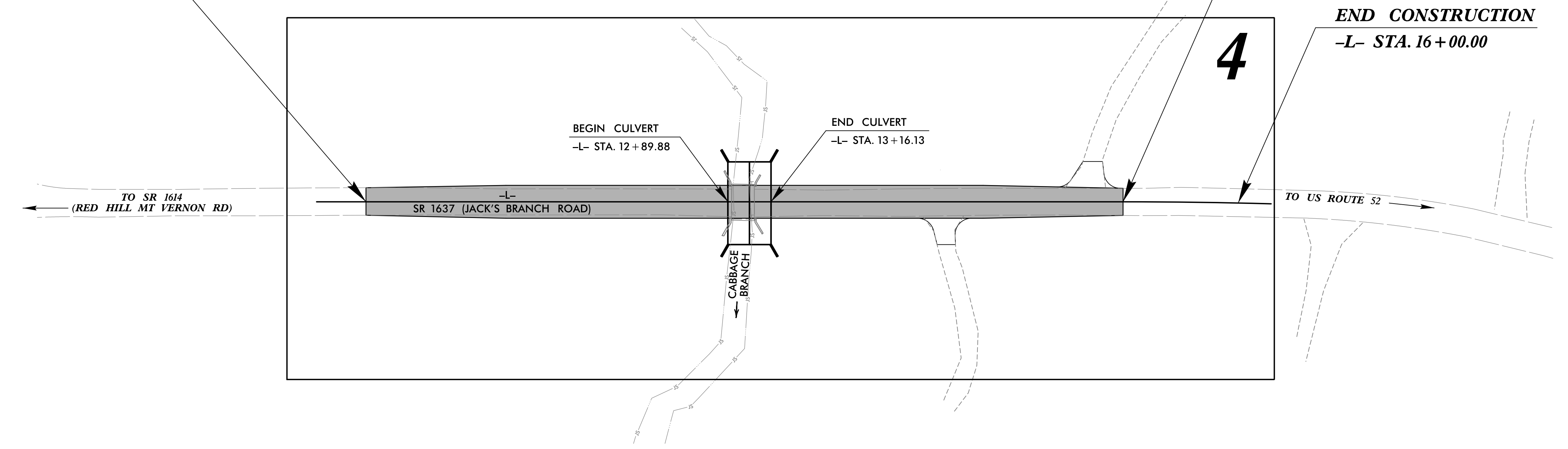
**LOCATION: BRIDGE #234 OVER CABBAGE BRANCH ON SR 1637 (JACK'S BRANCH ROAD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.128	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.PE.128		P.E.	
17BP.10.PE.128		R/W & UTIL	
17BP.10.PE.128		CONSTRUCTION	

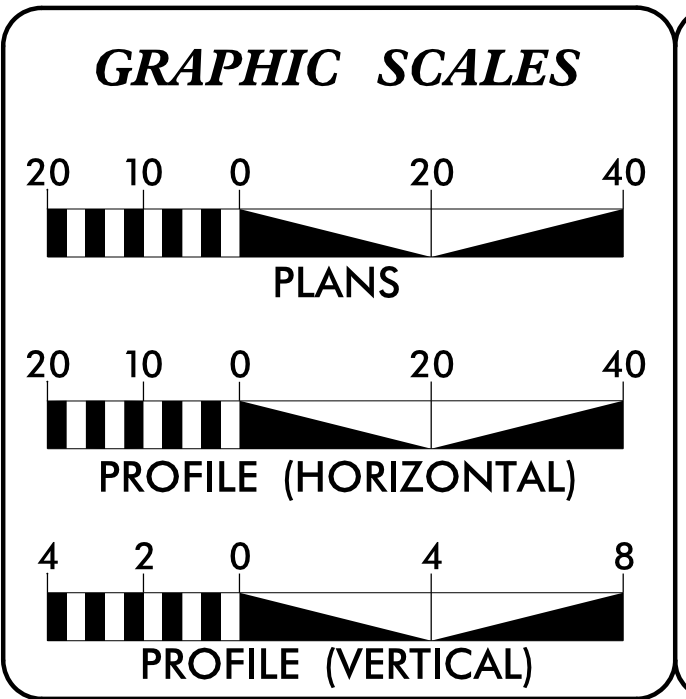


**BEGIN PROJECT WBS 17BP.10.R.128**  
-L- STA. 10 + 70.00

**END PROJECT WBS 17BP.10.R.128**  
-L- STA. 15 + 30.00



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



**DESIGN DATA**

ADT 2014 =	150
ADT 2025 =	300
DHV =	N/A
D =	N/A
T =	6%
V =	45 MPH

**FUNC. CLASSIFICATION:**  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH OF ROADWAY PROJECT WBS 17BP.10.R.128 = .095 MILES  
LENGTH OF STRUCTURE PROJECT WBS 17BP.10.R.128 = .005 MILES  
TOTAL LENGTH OF PROJECT WBS 17BP.10.R.128 = .100 MILES

NCDOT CONTACT: GARLAND HAYWOOD, PE  
Division Bridge Manager

**PLANS PREPARED FOR THE NCDOT BY:**

**STV** 100 Years  
STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
NOVEMBER 1, 2018

**LETTING DATE:**  
FEBRUARY 17, 2021

**NIKKI T. HONEYCUTT, PE**  
PROJECT ENGINEER

**CLARK E. GROVES**  
PROJECT DESIGNER

**HYDRAULICS ENGINEER**

DocuSigned by:  
**Edward J. Vance**  
8264F2B193DF484...


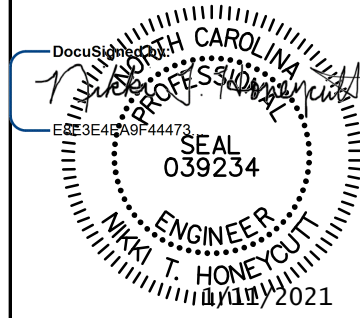
SIGNATURE: 1/11/2021

**ROADWAY DESIGN ENGINEER**

DocuSigned by:  
**Nikki T. Honeycutt**  
EB3E34EAF44473...

SIGNATURE: 1/11/2021



 <b>STV Engineers, Inc.</b> 800 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	PROJECT REFERENCE NO.	SHEET NO.
	17BP-10.R.128	1A
RW SHEET NO.		
ROADWAY DESIGN ENGINEER 		
<b>DOCUMENT NOT CONSIDERED FINAL                  UNLESS ALL SIGNATURES COMPLETED</b>		

**INDEX OF SHEETS**

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
3	SUMMARIES AND TYPICAL SECTIONS SHEET
4	PLAN AND PROFILE SHEETS
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-6	EROSION CONTROL PLANS
UC-1 THRU UC-4	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS
X-1 THRU X-4	CROSS-SECTIONS
C-1 THRU C-5	CULVERT PLANS
CN	CULVERT NOTES

**GENERAL NOTES**

GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-01-2018

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.

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

**STANDARD DRAWINGS**

2018 ROADWAY ENGLISH STANDARD DRAWINGS EFF. January, 2018

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
<b>DIVISION 2 - EARTHWORK</b>	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
<b>DIVISION 5 - SUBGRADE, BASES AND SHOULDERS</b>	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
<b>DIVISION 8 - INCIDENTALS</b>	
876.02	Guide for Rip Rap at Pipe Outlets
<b>DIVISION 11 - WORK ZONE TRAFFIC CONTROL</b>	
1101.03	Temporary Road Closures
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1145.01	Barricades - Type III

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

## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB
Existing Historic Property Boundary	----- HPB
Known Contamination Area: Soil	---s---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	○ S
Well	○ W
Small Mine	⋈
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

## HYDROLOGY:

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

## RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

## RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easment Pin and Cap	◇
New Permanent Easment Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	----- (RW)
New Right of Way Line with Pin and Cap	----- (RW) ◆
New Right of Way Line with Concrete or Granite RW Marker	----- (RW) ●
New Control of Access Line with Concrete C/A Marker	----- (CA) ●
Existing Control of Access	----- (CA) ○
New Control of Access	----- (CA) ●
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New 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	○

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

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	○ S
Storm Sewer	----- S

## UTILITIES:

POWER: Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	-----
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

## TELEPHONE:

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

## WATER:

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

## TV:

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

## GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	----- G
U/G Gas Line LOS C (S.U.E.*)	----- G
U/G Gas Line LOS D (S.U.E.*)	----- 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 Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

## MISCELLANEOUS:

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

12/2/2016



8/17/19

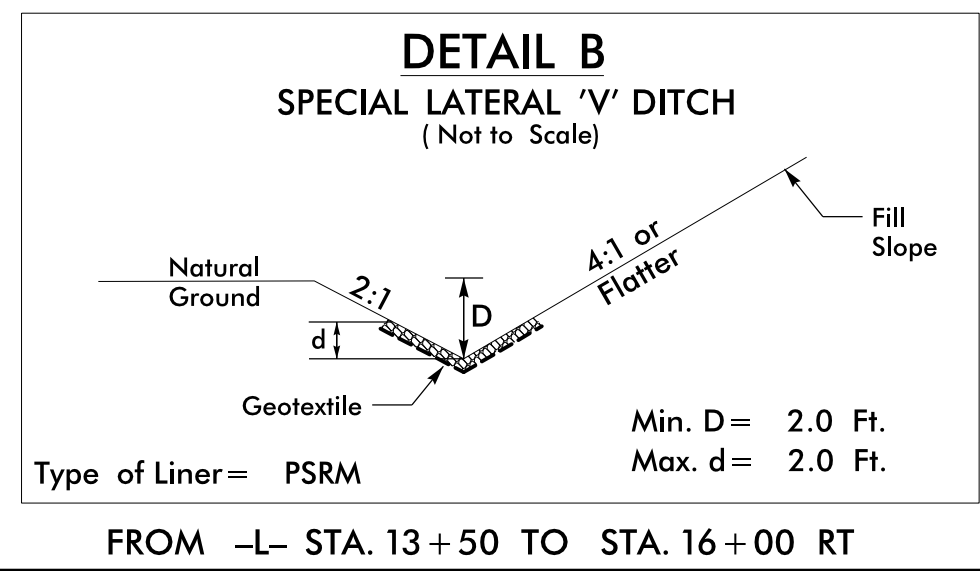
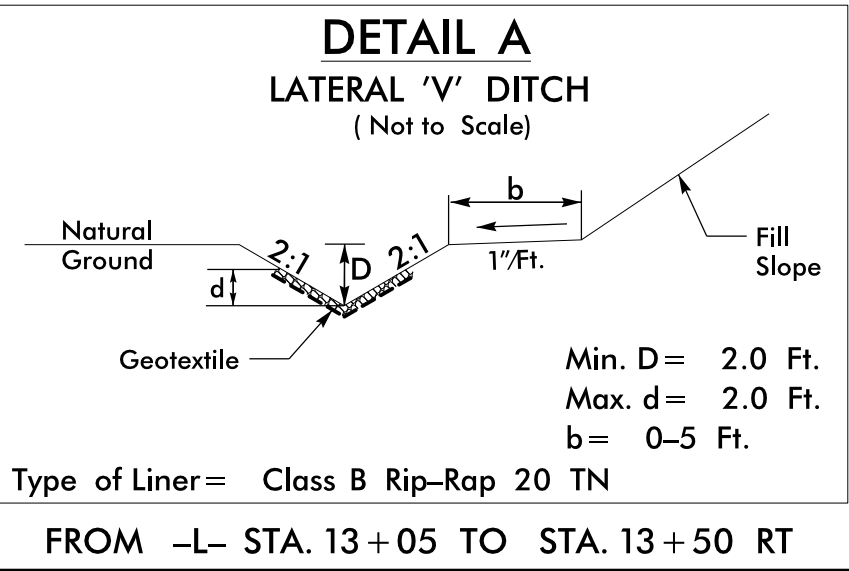
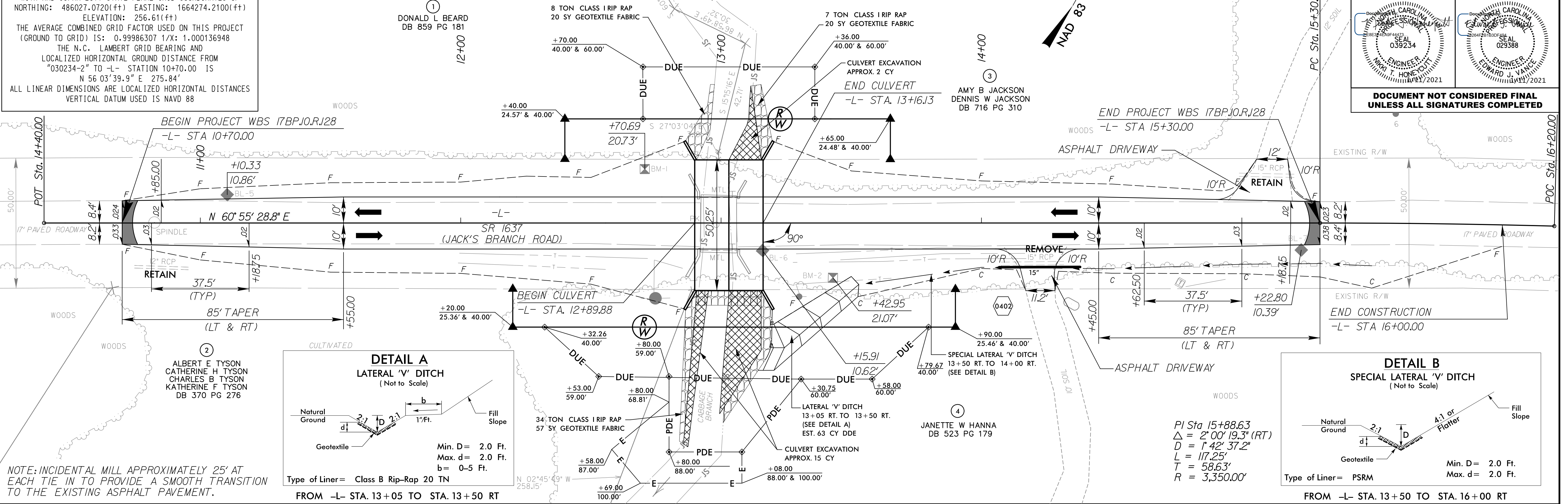
### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "030234-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 486027.0720(ft) EASTING: 1664274.2100(ft) ELEVATION: 256.61(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99986307 1/X: 1.000136948 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "030234-2" TO -L- STATION 10+70.00 IS N 56 03'39.9" E 275.84' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

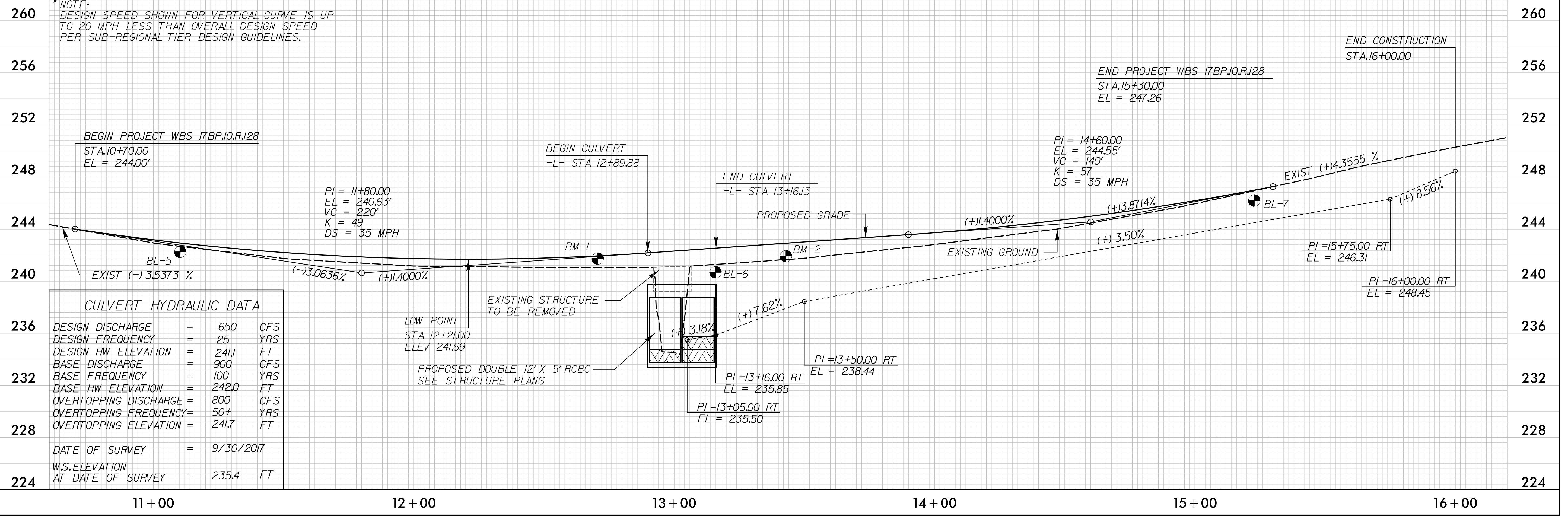
BM-1	N 486297	E 1664669	ELEV 241.73'
BM-2	N 486295	E 1664752	ELEV 241.92'
BL-5	N 486210.043	E 1664533.107	ELEV 242.25'
BL-6	N 486291.357	E 1664723.026	ELEV 240.68'
BL-7	N 486391.972	E 1664903.818	ELEV 246.19'



PROJECT REFERENCE NO. <b>17BP.10.R.128</b>	SHEET NO. <b>4</b>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



NOTE: INCIDENTAL MILL APPROXIMATELY 25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT.



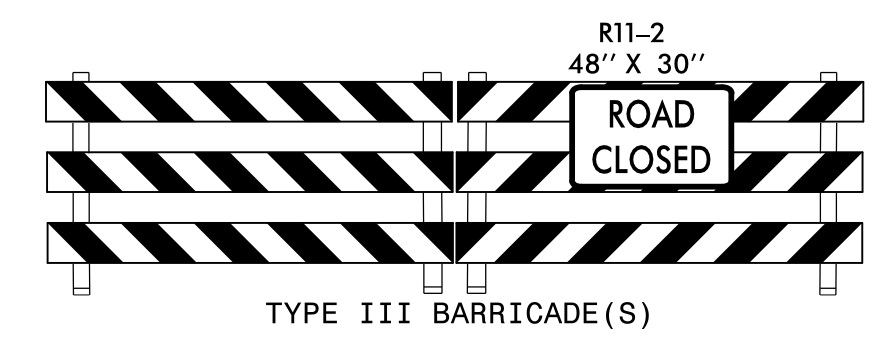
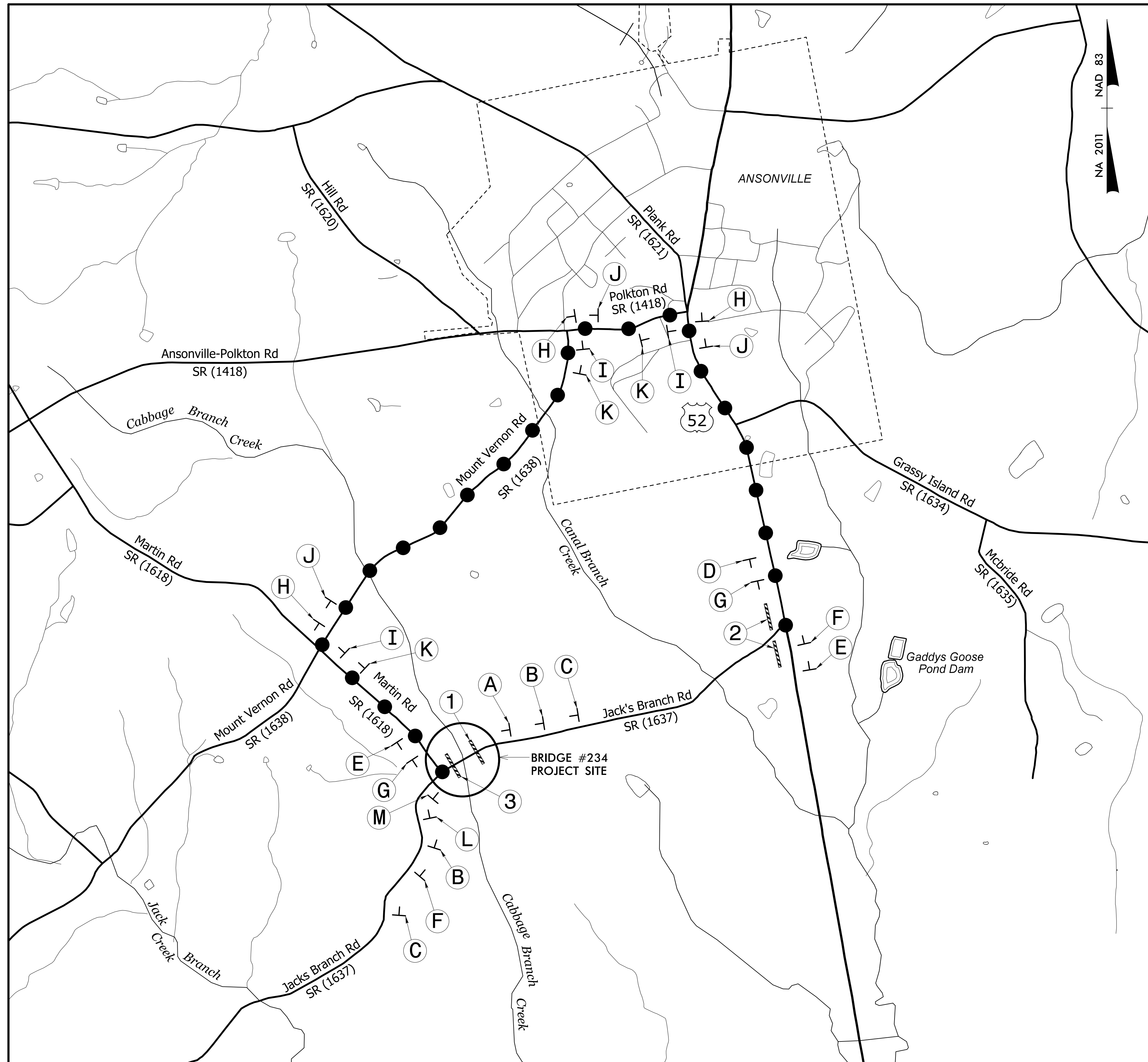
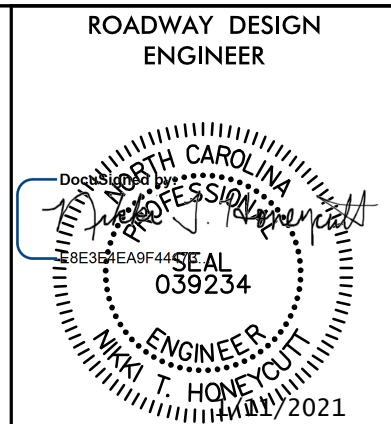
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# OFF-SITE DETOUR SIGNING AND ROAD CLOSURE SIGNING

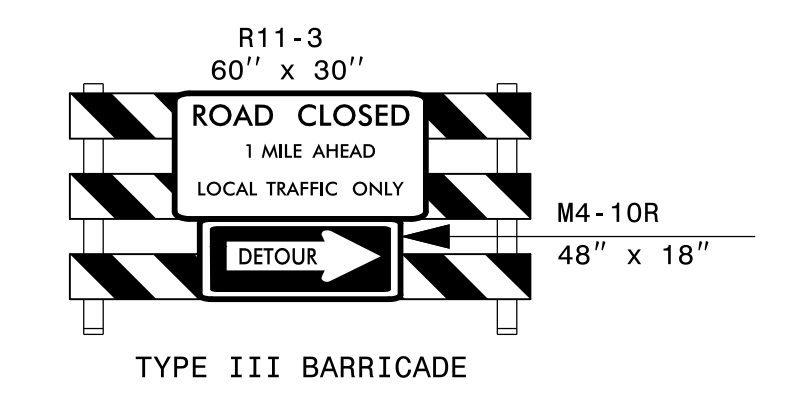
PROJECT REFERENCE NO. 17BP.10.R128	SHEET NO. TMP-1
RW SHEET NO.	

**STV** 100 Years  
 STV Engineers, Inc.  
 900 West Trade St., Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

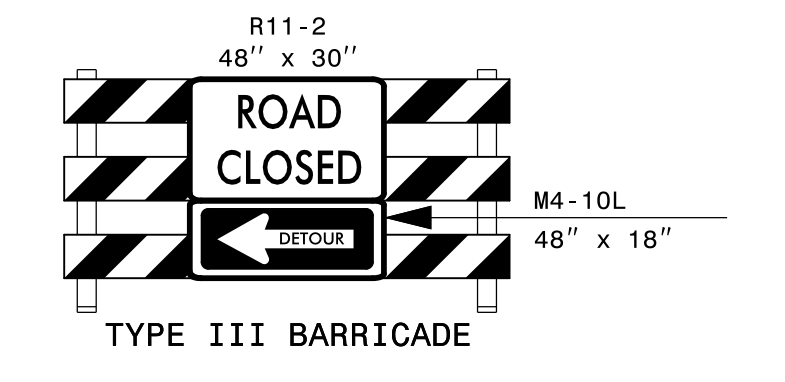
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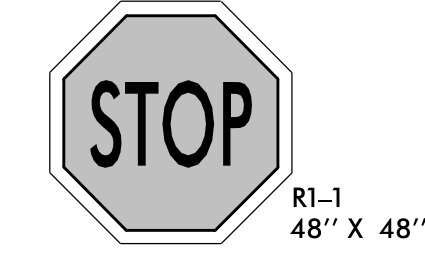
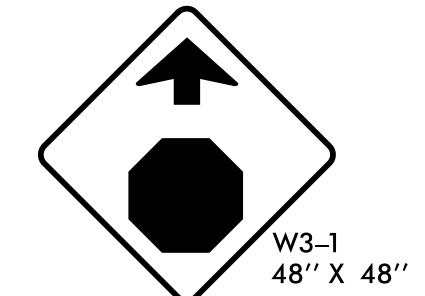
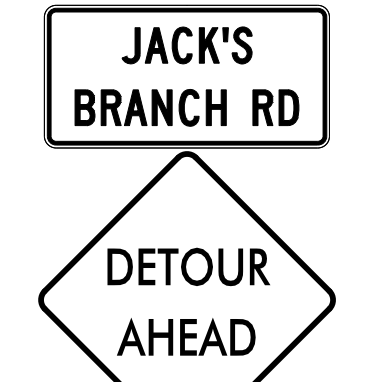
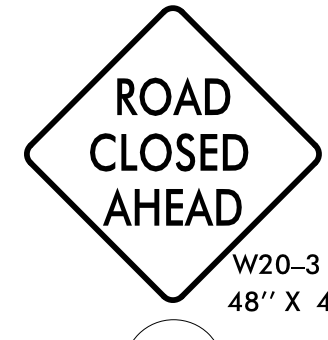
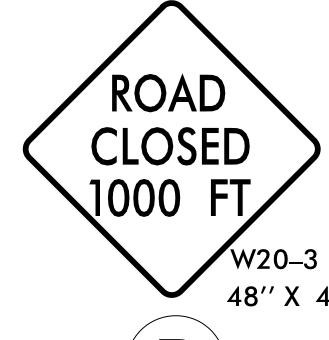
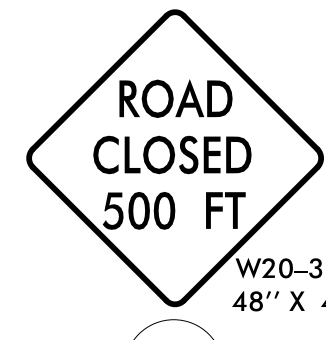
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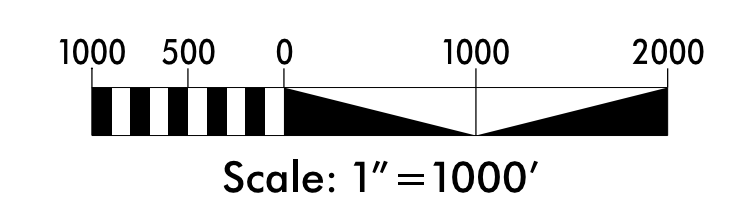
2



3



SEE ROADWAY STD DWG 1101.03, SHEET 1 & 2 OF 9 FOR  
 ADVANCE WARNING AND BARRICADE PLACEMENT.



L:\112021  
 R:\TrafficControl\TCP\17BP.10.R128\_IRDY\_TMP01.dgn  
 SaucieSL

BRIDGE #030234

**SIGN NUMBER:** I-1      **BACKG COLOR:** Orange  
**TYPE:** D      **COPY COLOR:** Black  
**QUANTITY:** See Plans

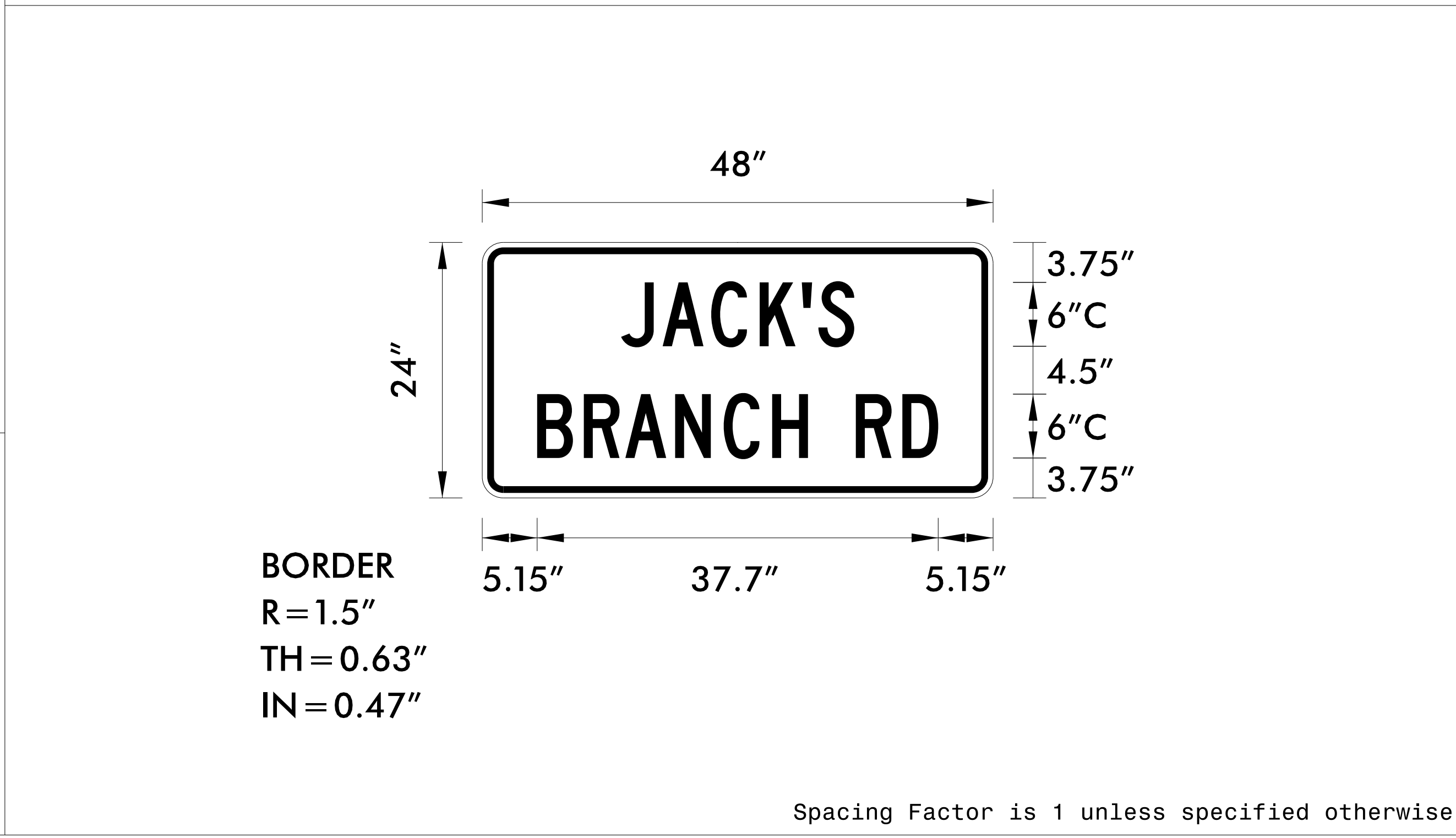
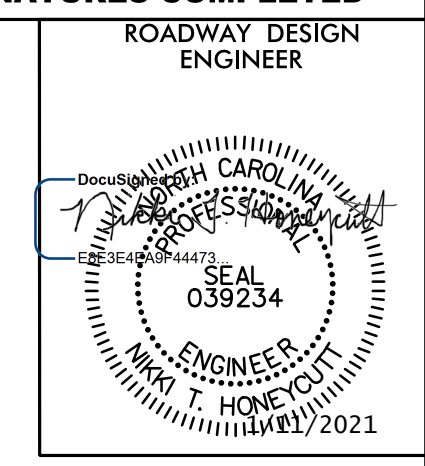
SYMBOL	X	Y	WID	HT

**SIGN WIDTH:** 48"  
**HEIGHT:** 24"  
**TOTAL AREA:** 8.0 Sq.Ft.

**BORDER TYPE:** FLUSH  
**RECESS:** 0.47"  
**WIDTH:** 0.63"  
**RADII:** 1.5"

**NO. Z BARS:**      **MAT'L:** 0.080" (2.0 mm) ALUMINUM  
**LENGTH:**

**DESIGN BY:** JCT      **CHECKED BY:** GMM  
**PROJECT ID:** 17BP.10.R.128      **DIV:** 10      **DATE:** Oct 24, 2018



**USE NOTES:** 1,2

1. Legend and border shall be direct applied encapsulated lens reflective sheeting.
2. Background shall be NC Grade B fluorescent.

**LETTER POSITIONS**

Letter positions are to the lower left corners														Series/Size	
	J	A	C	K	'	S									Text Length
	13	16.9	21.5	26.1	30	31.6									C 2000 / 6 21.9
	B	R	A	N	C	H		R	D						C 2000 / 6 37.7
	5.2	9.5	13.4	18.1	22.7	27.2	30.6	35.1	39.5						



# PAVEMENT MARKING PLAN

## 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 JANUARY 2018 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

## 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	MARKING
SR 1637 (JACK'S BRANCH RD)	THERMOPLASTIC HIGHLY REFLECTIVE MEDIA

- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- E) REPLACE ANY PAVEMENT MARKINGS BEYOND THE PROJECT LIMITS DAMAGED BY THE CONTRACTORS' OPERATIONS DURING CONSTRUCTION.

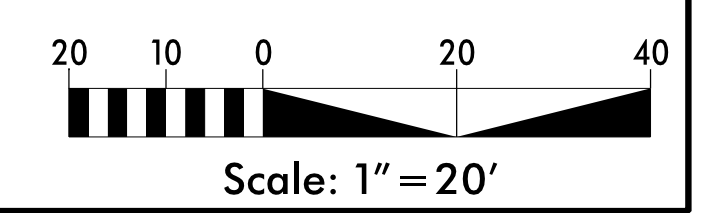
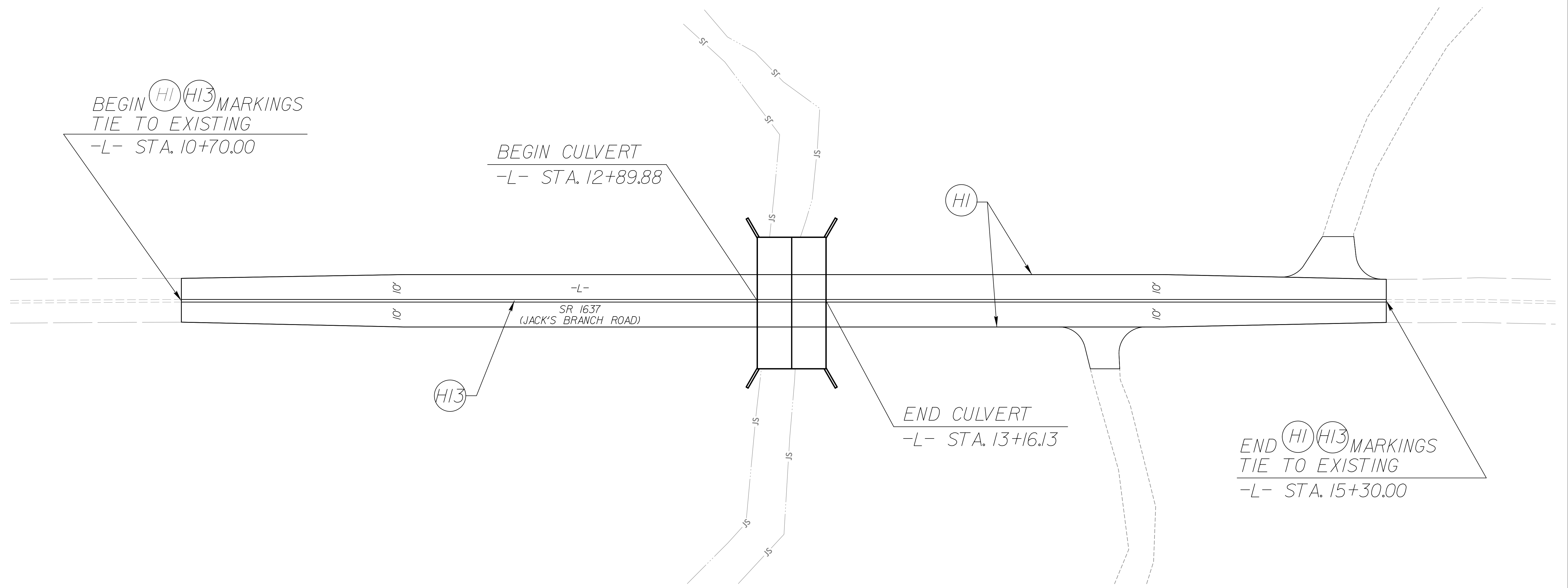
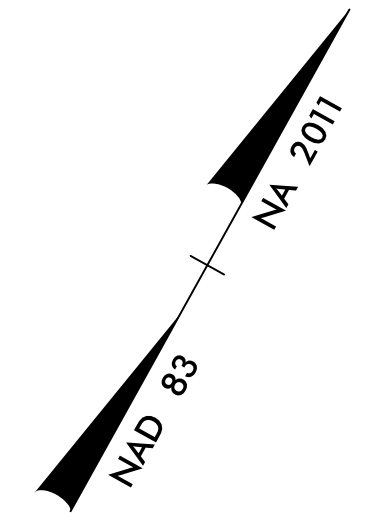
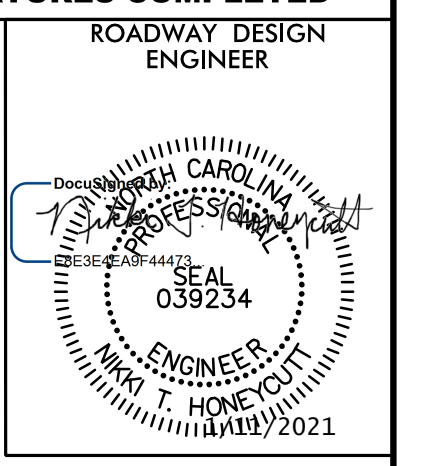
## PAVEMENT MARKING SCHEDULE

- H1 - THERMO HIGHLY REFLECTIVE MEDIA  
WHITE EDGELINE (4", 90MIL)
- H13 - THERMO HIGHLY REFLECTIVE MEDIA  
YELLOW DOUBLE CENTER LINE (4", 90MIL)

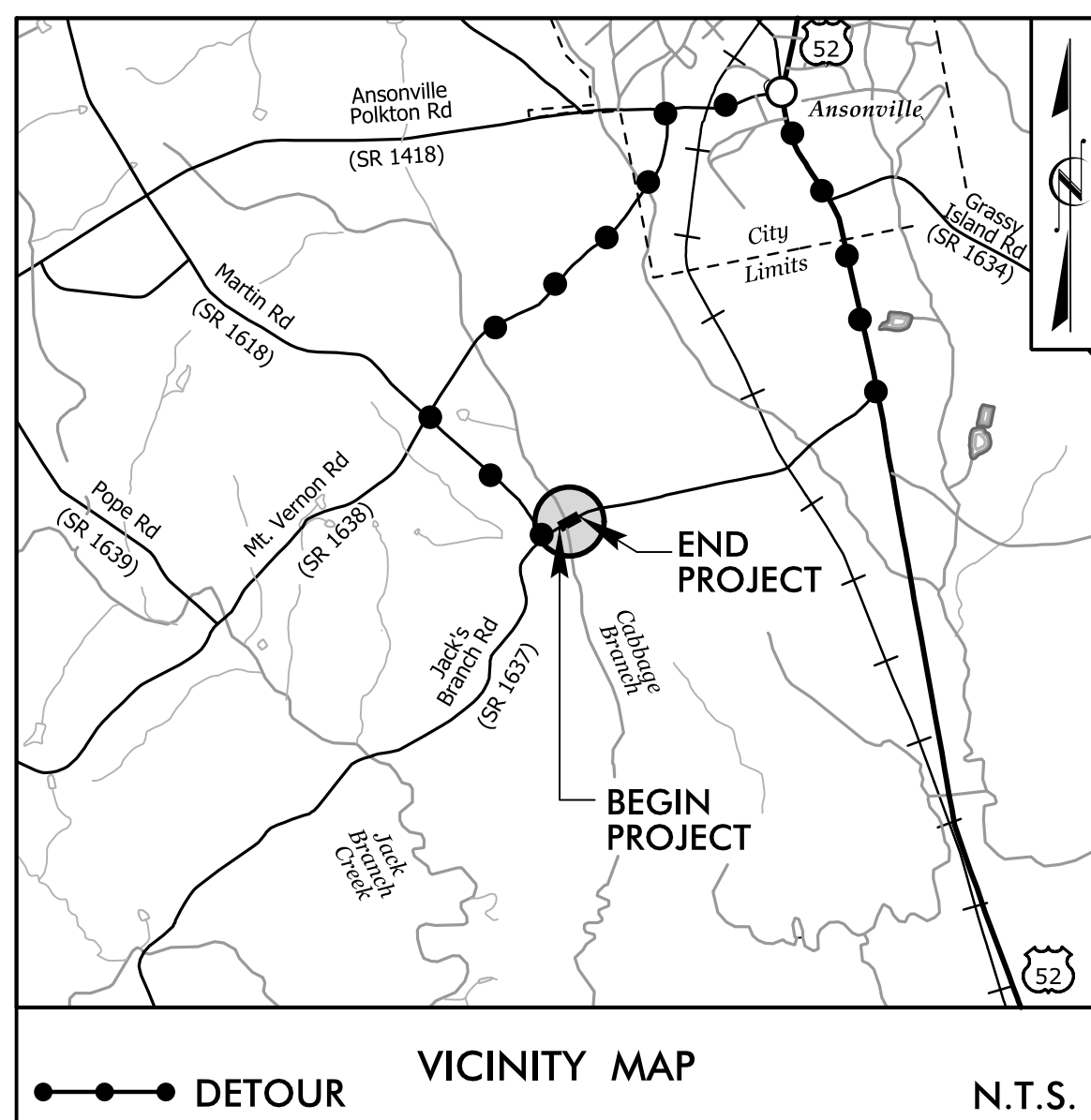
PROJECT REFERENCE NO. 17BP.10.R.128	SHEET NO. PMP-1
R/W SHEET NO.	

**STV** 100 Years  
 STV Engineers, Inc.  
 900 West Trade St., Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

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

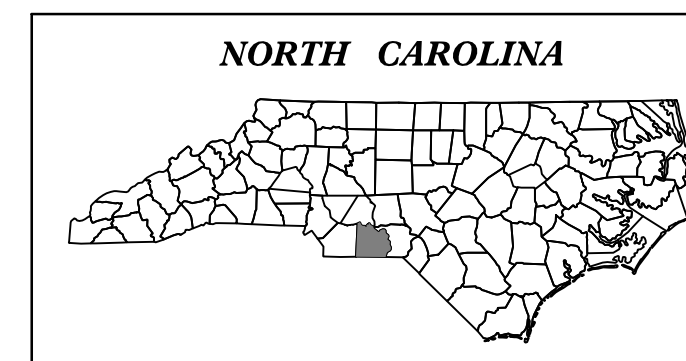


**PROJECT WBS: 17BP.10.PE.128**



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

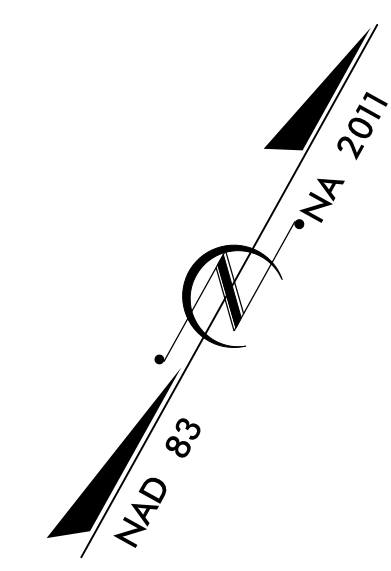
**LOCATION: BRIDGE #234 OVER CABBAGE BRANCH  
ON SR 1637 (JACK'S BRANCH ROAD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.PE.128	EC-1	8
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.PE.128		P.E.	
17BP.10.PE.128		R / W & UTIL	
17BP.10.PE.128		CONSTRUCTION	

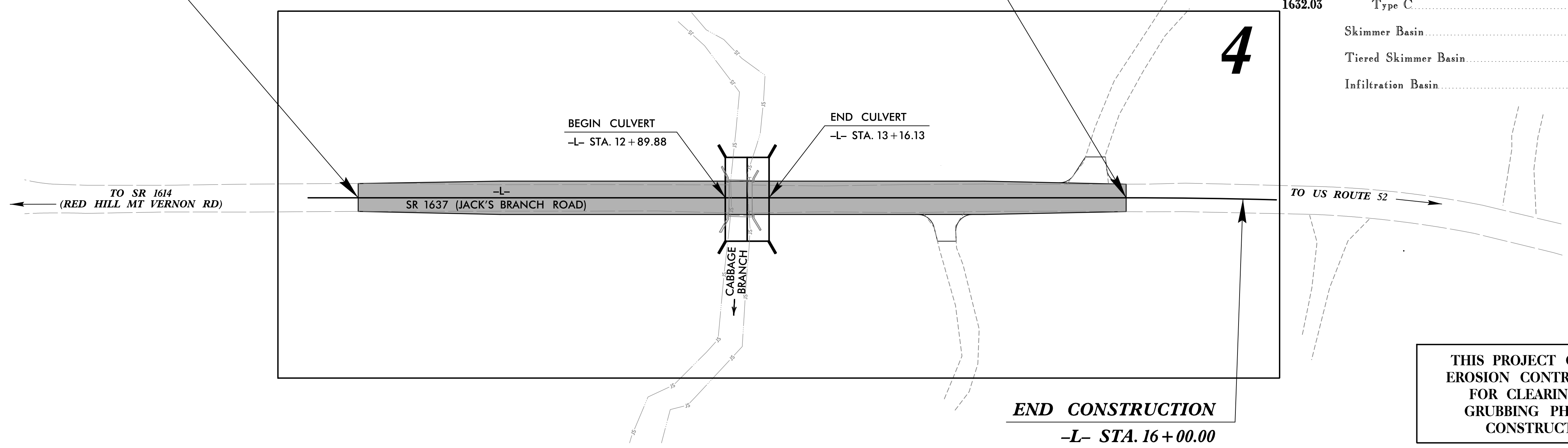
**EROSION AND SEDIMENT CONTROL MEASURES**

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

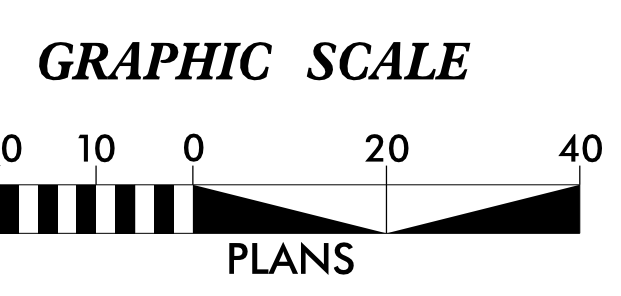


**BEGIN PROJECT WBS 17BP.10.PE.128**  
**-L- STA. 10 + 70.00**

**END PROJECT WBS 17BP.10.PE.128**  
**-L- STA. 15 + 30.00**



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



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

Designed by:  
**PETER WALDRON** 4352  
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

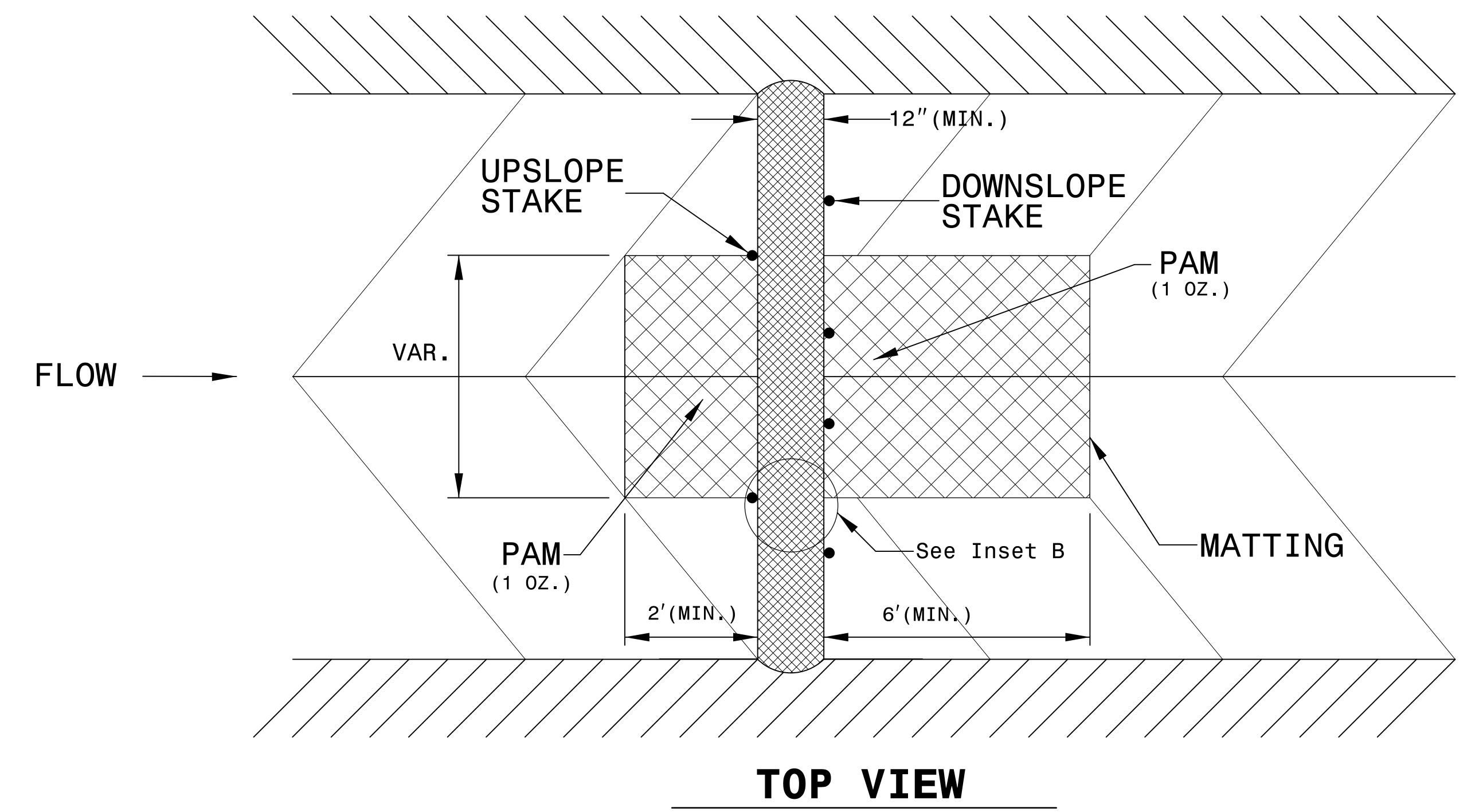
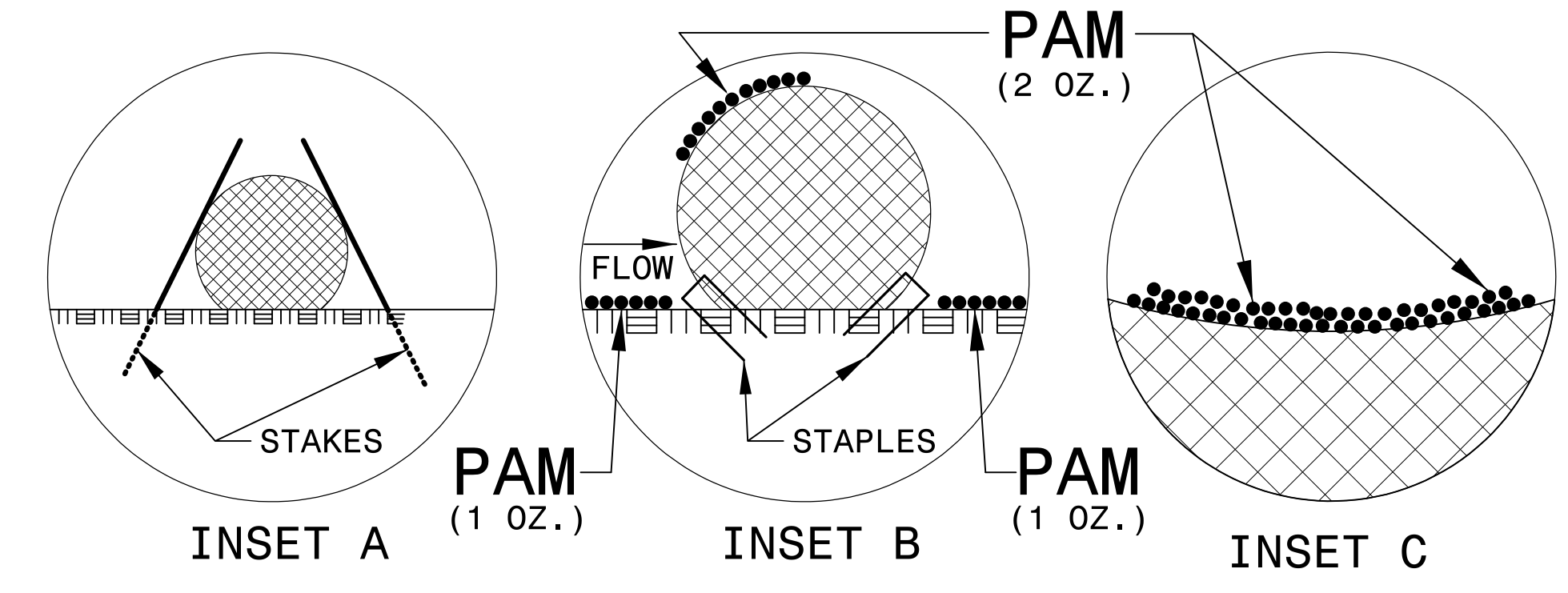
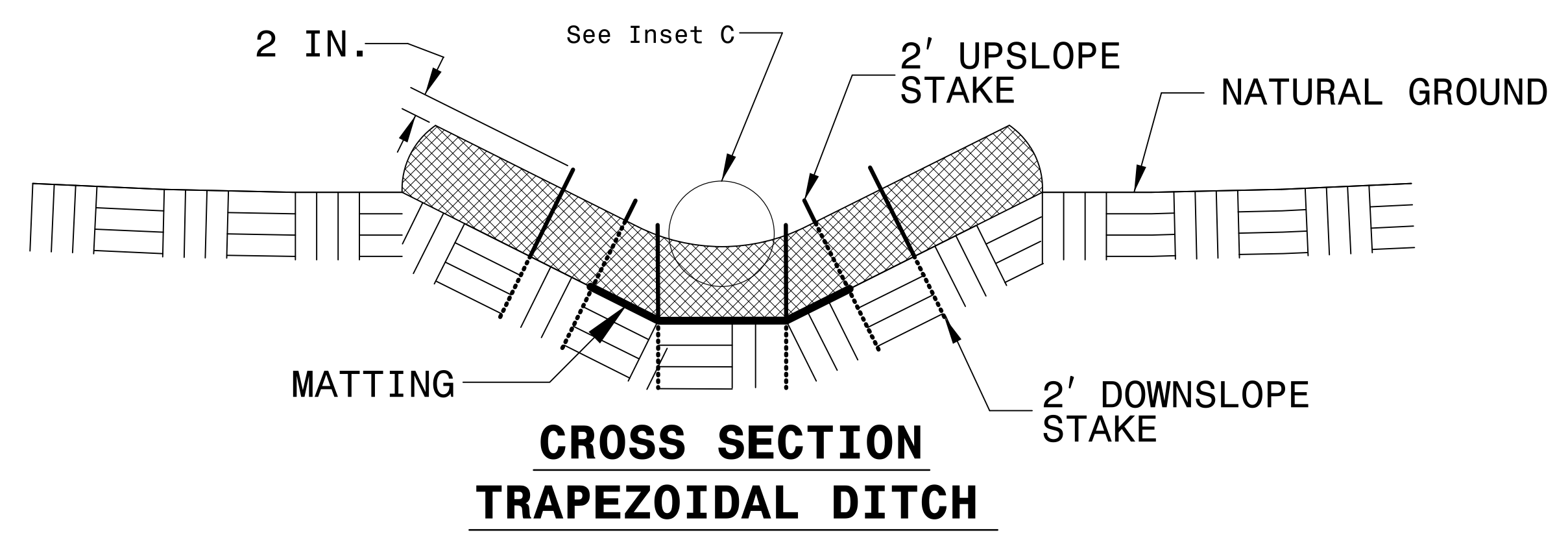
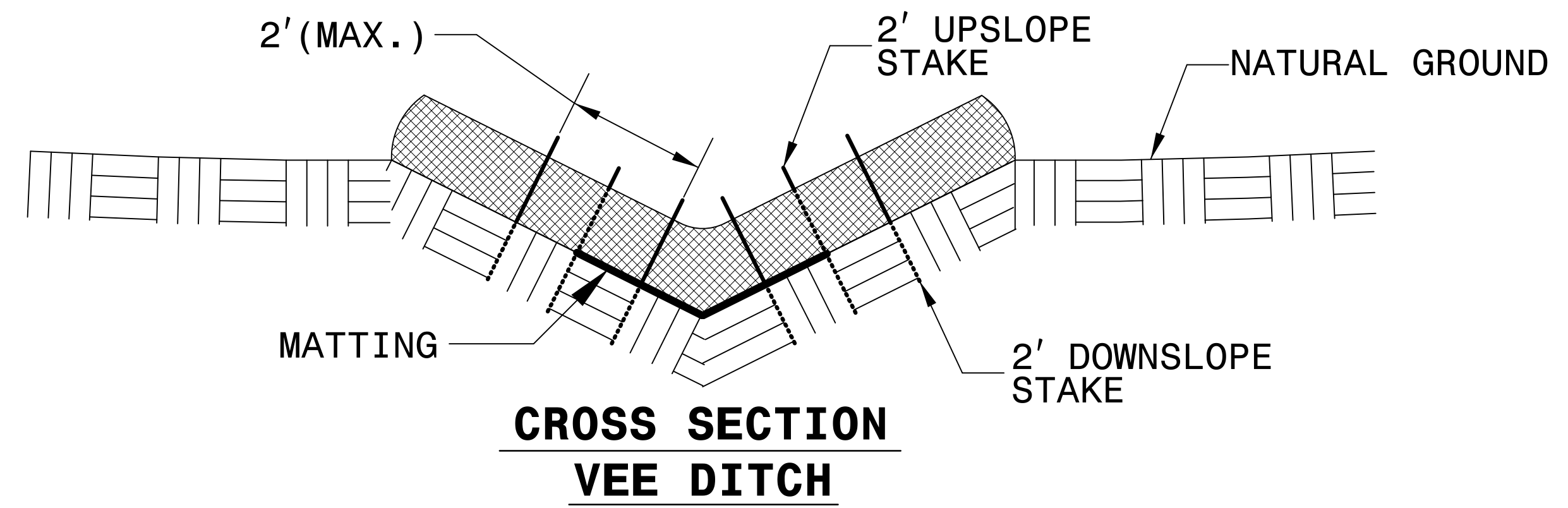
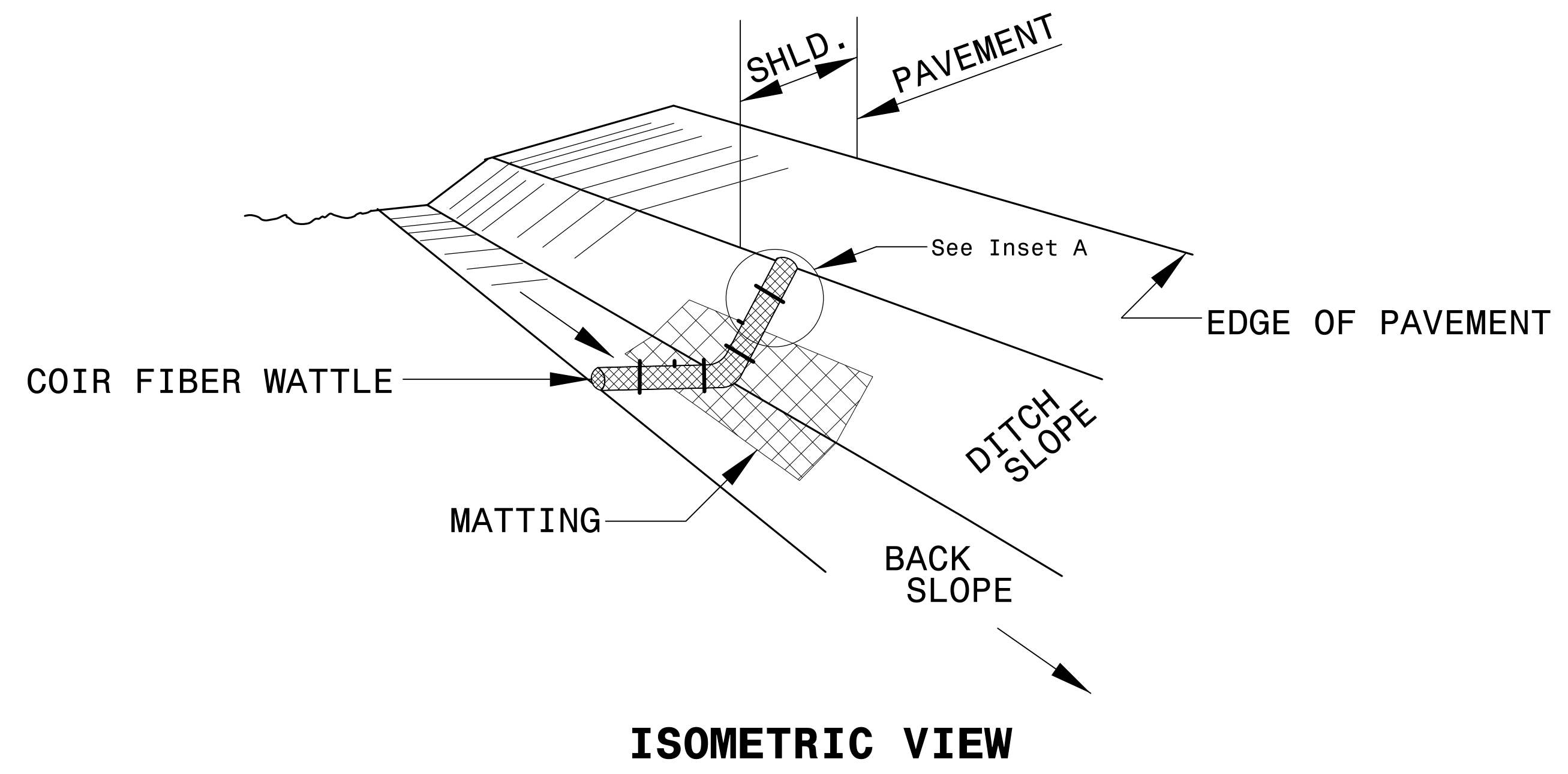
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

# COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

**NOTES:**

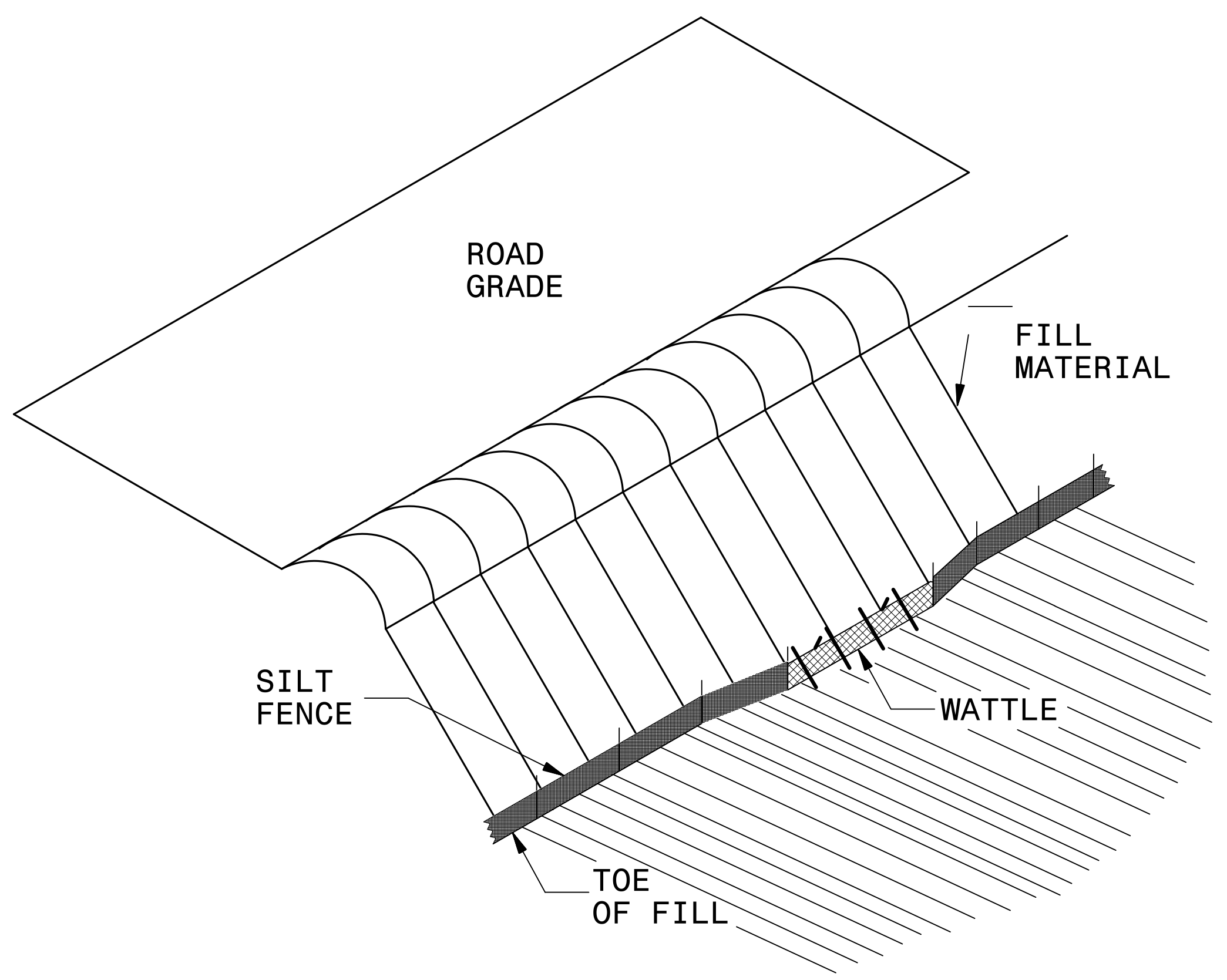
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- 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 WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



8/17/99

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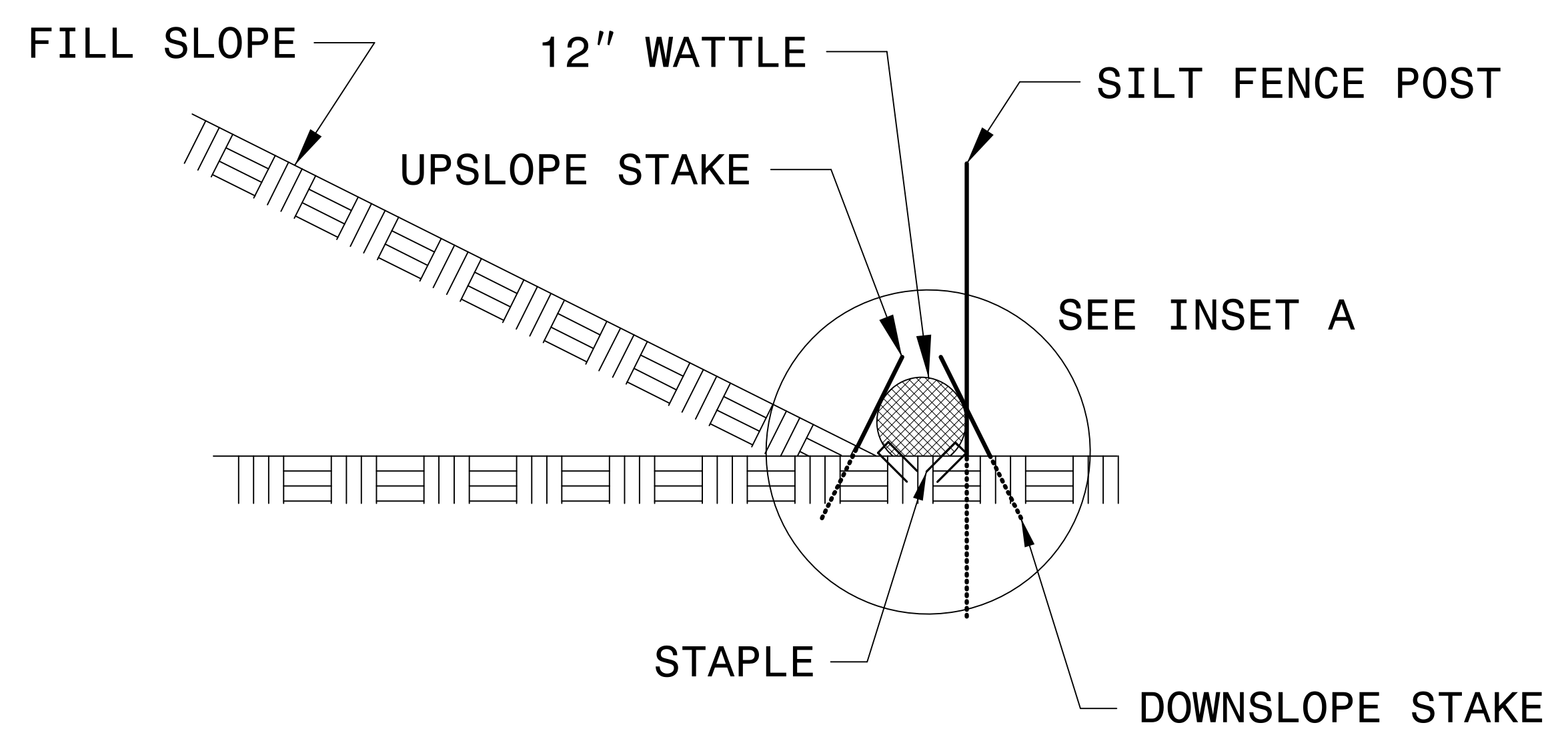
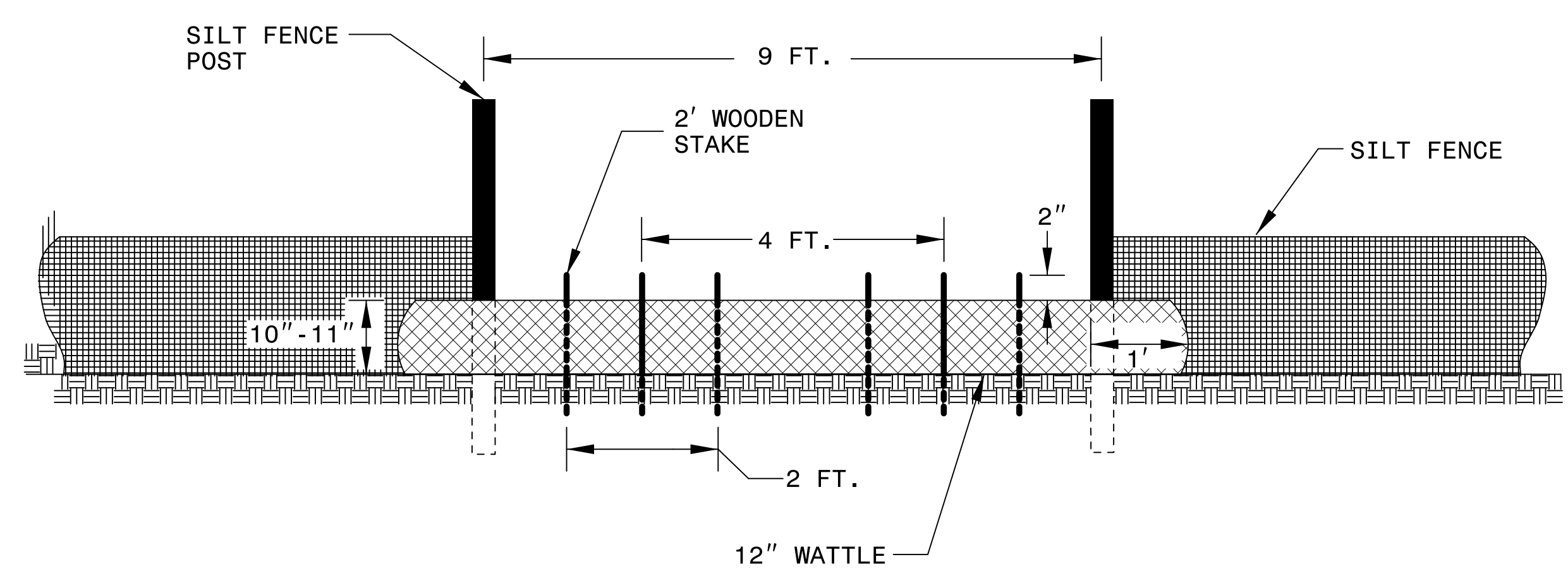
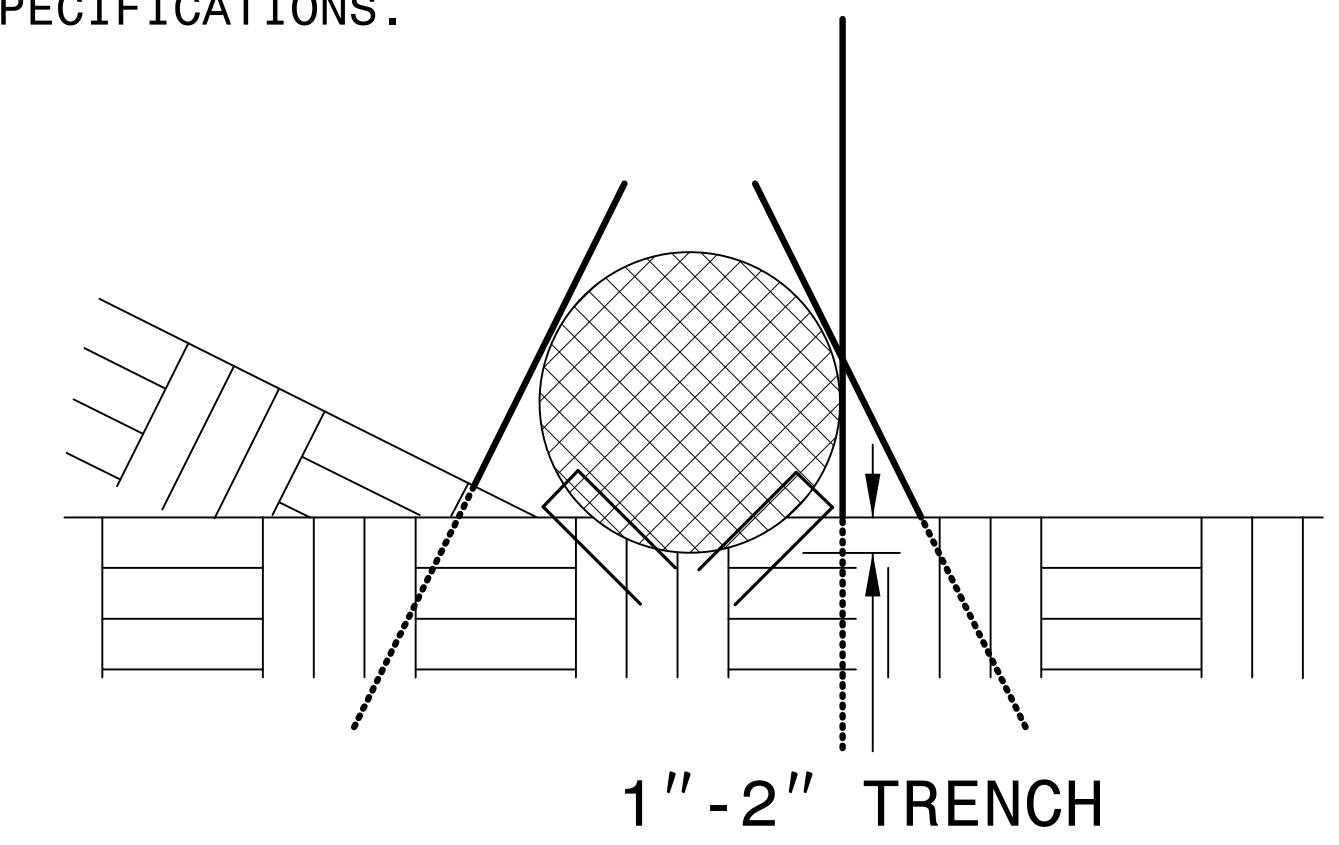
# SILT FENCE COIR FIBER WATTLE BREAK DETAIL



**NOTES:**

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



K:\2021 Environmental\Design\SH1\128.EC.PSH02A.dgn  
 11/1/2021  
 Sources

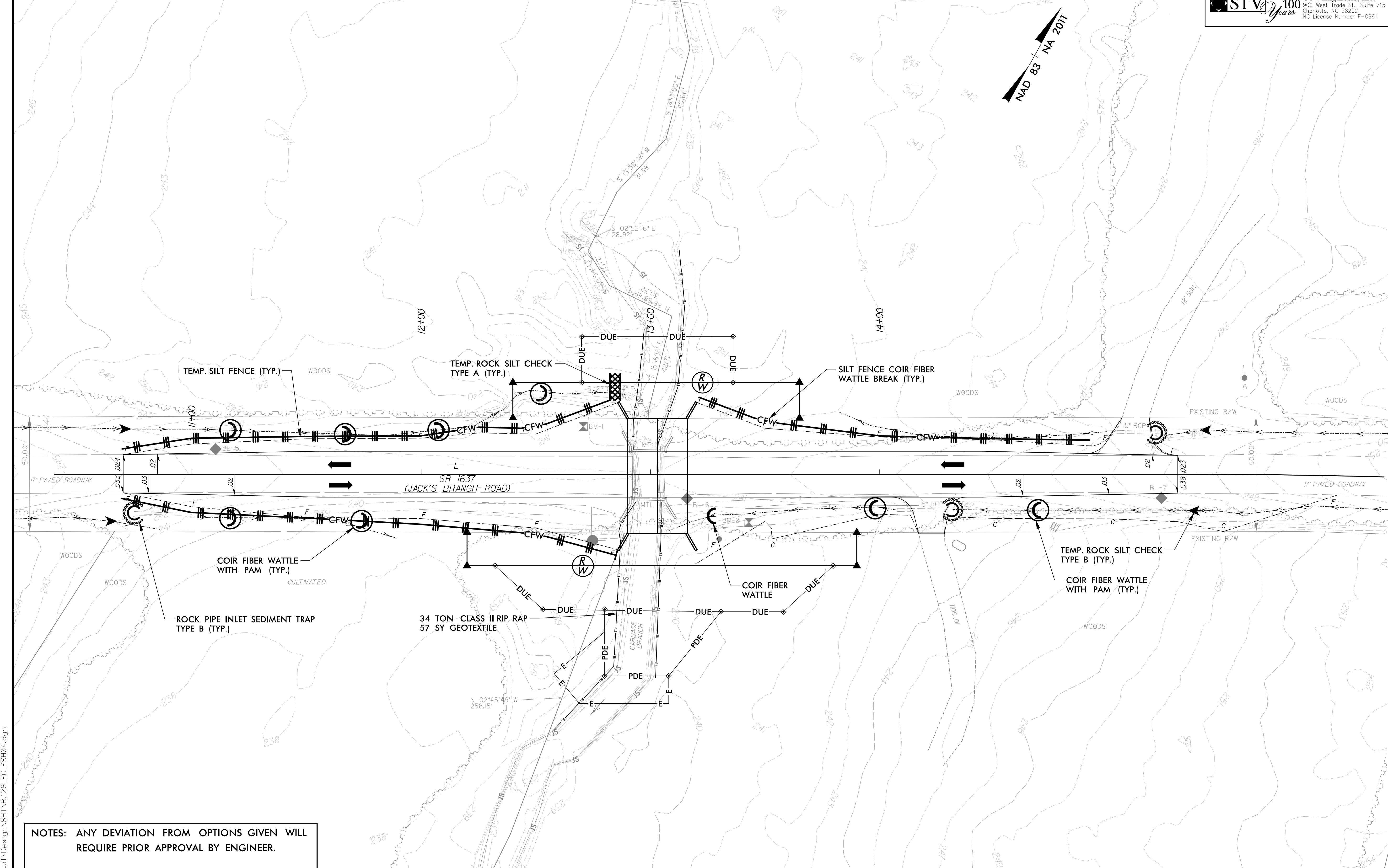


DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

***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.

8/17/19



**NOTES:** ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

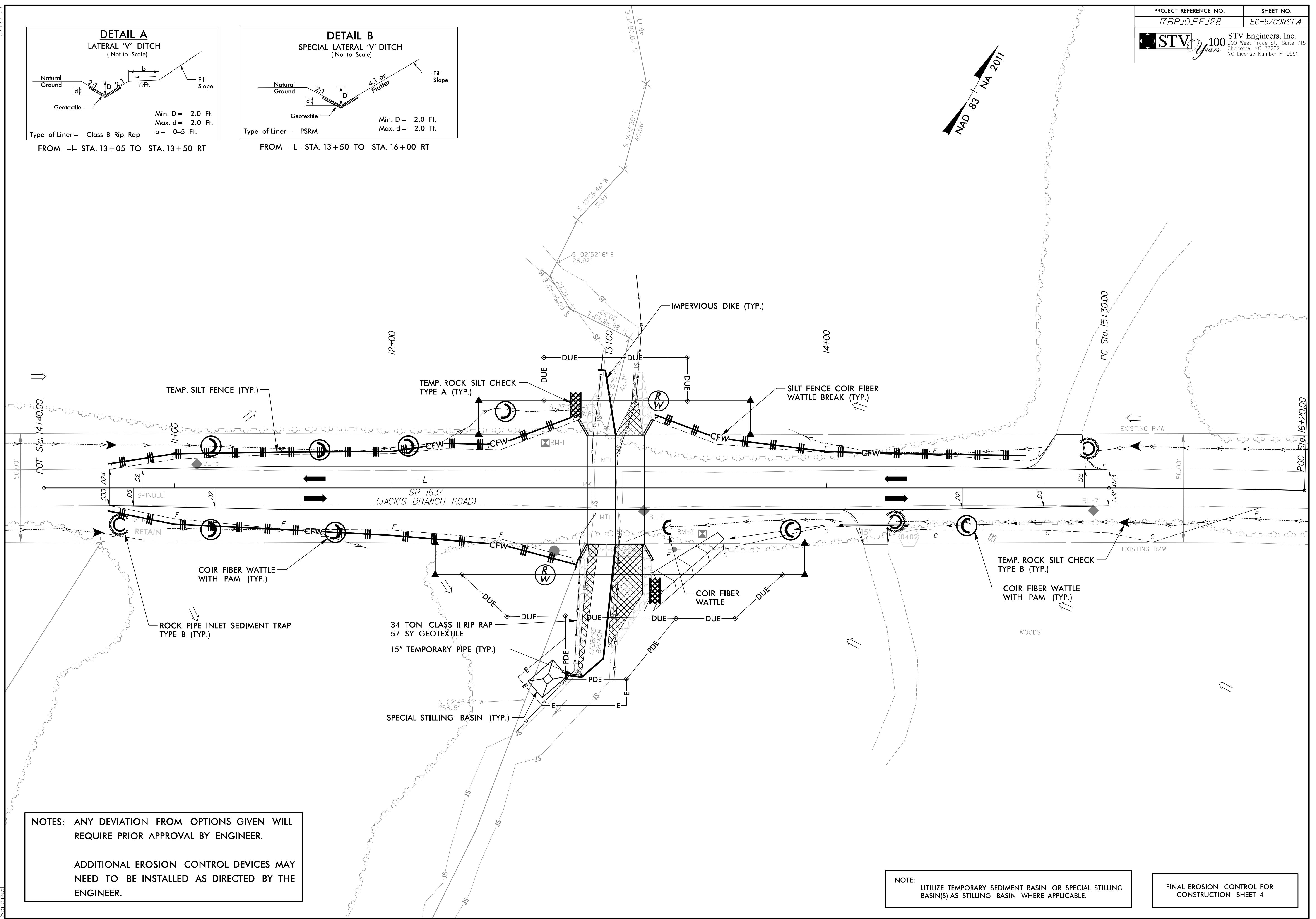
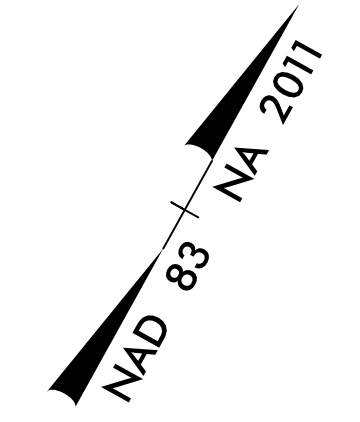
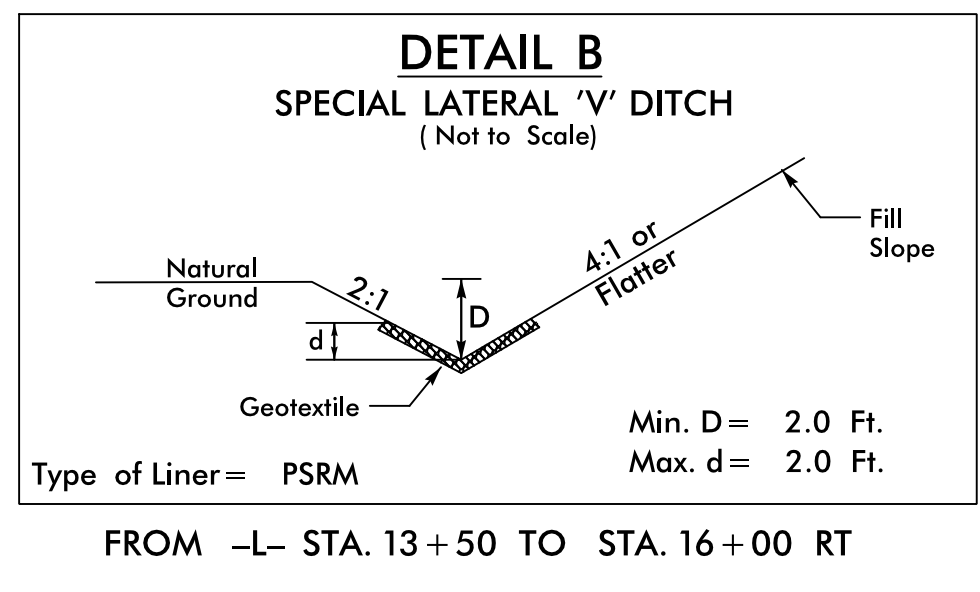
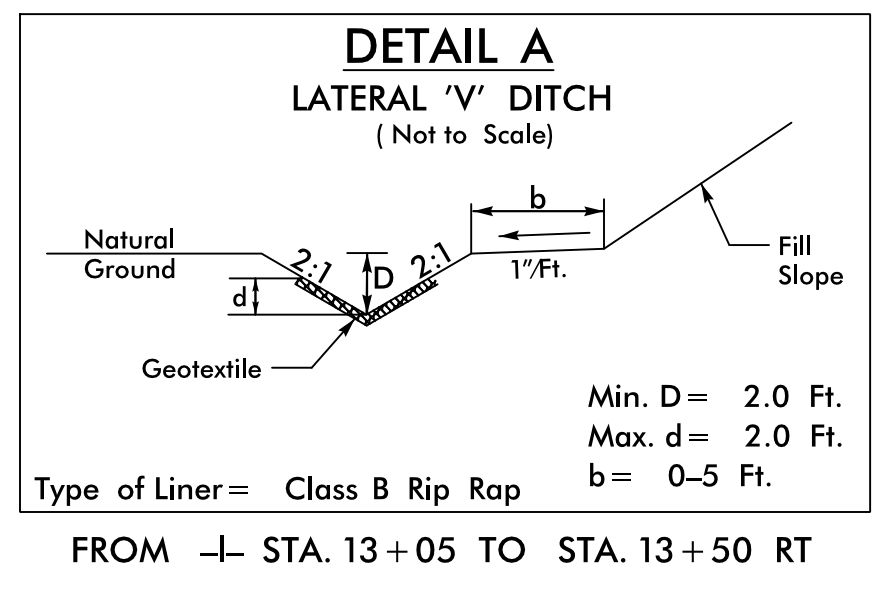
**NOTE:** UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

**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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

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**NOTES:** ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

**NOTE:** UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

**FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4**

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 R:\V\2021\Environmental\Design\SH1\128.EC.PSH05.dgn  
 Sources



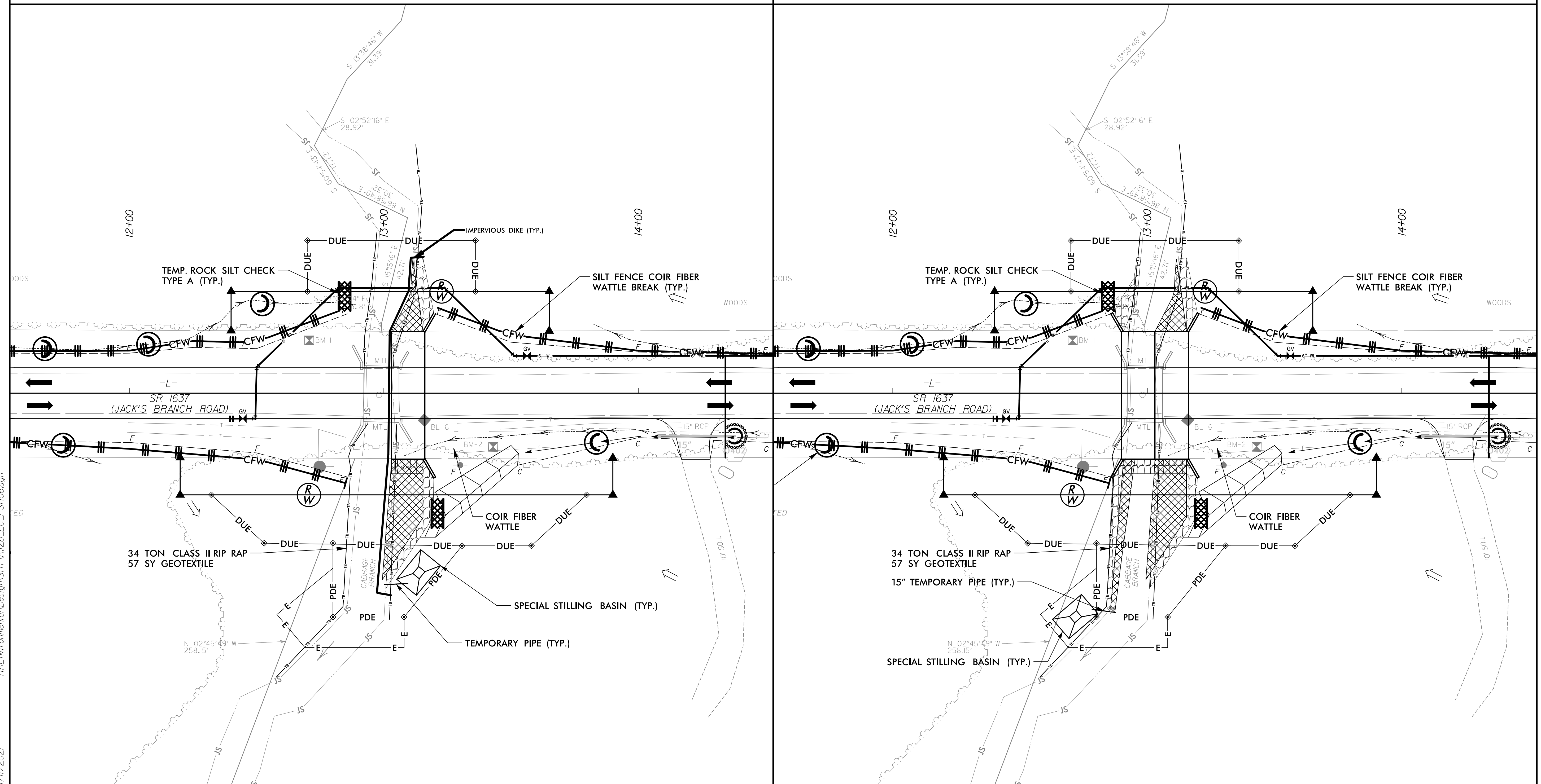
# CULVERT CONSTRUCTION SEQUENCE STA. 13+03 -L-

## PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES, DIVERTING FLOW TO EXISTING BARREL.
3. CONSTRUCT SPECIAL STILLING BASINS, DEWATER AREA BEHIND IMPERVIOUS DIKES.
4. CONSTRUCT BARREL 2 OF THE PROPOSED BOX CULVERT.
5. CONSTRUCT THE WING WALLS FOR BARREL 2 OF THE PROPOSED CULVERT, AND ANY NECESSARY EMBANKMENT IMPROVEMENTS.

## PHASE II

6. SHIFT IMPERVIOUS DIKES TO DIVERT FLOW THROUGH COMPLETED BARREL.
7. DEWATER AND REMOVE SILT FROM EXISTING BARREL, CONSTRUCT BARREL 1.
5. CONSTRUCT THE WING WALLS FOR BARREL 1 OF THE PROPOSED CULVERT AND ANY NECESSARY EMBANKMENT IMPROVEMENTS.
8. REMOVE DIKES & STILLING BASINS, COMPLETE DRAINAGE, INCLUDING INLET/OUTLET IMPROVEMENTS.
9. COMPLETE ROADWAY.



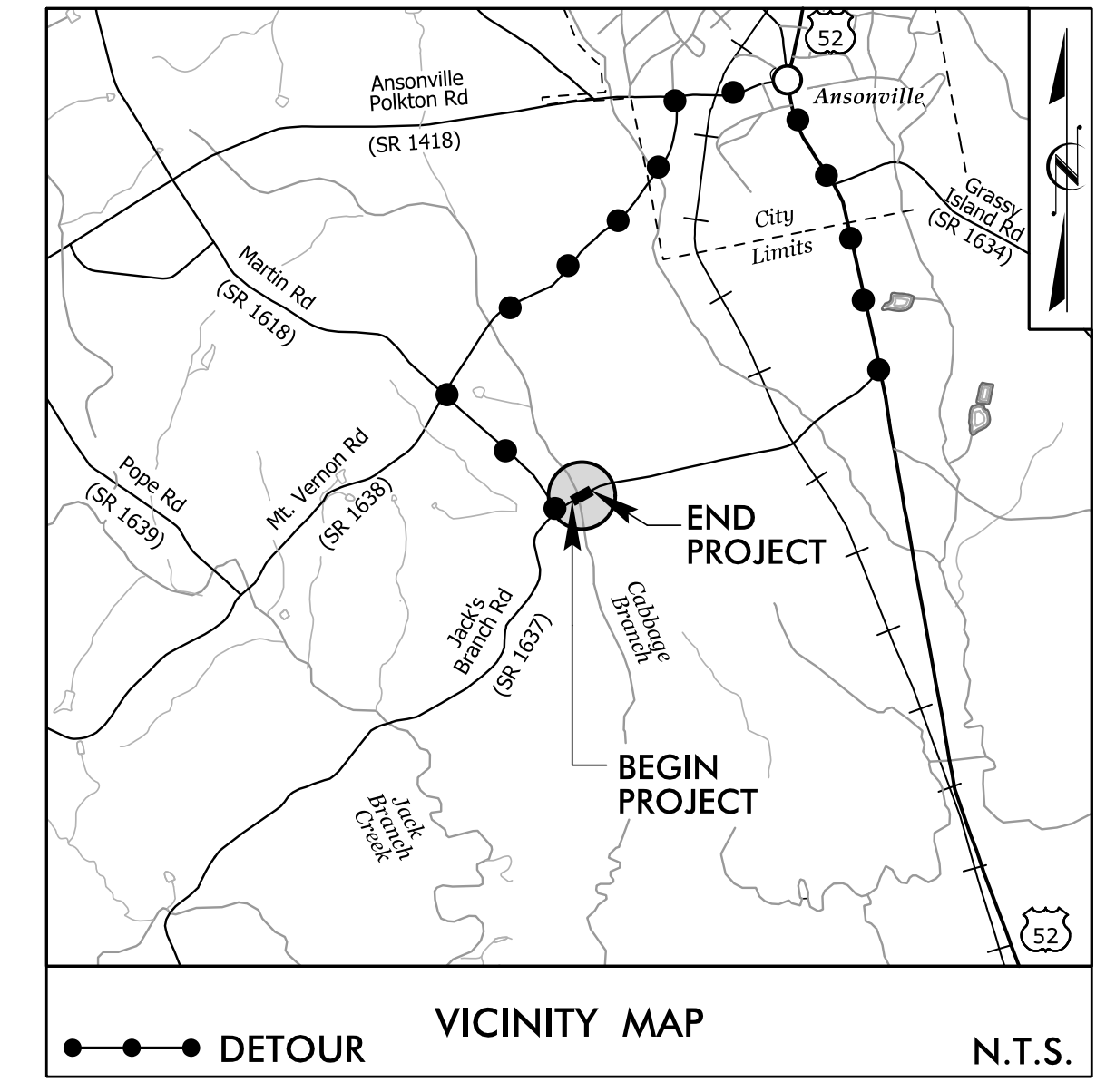
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1/11/2021

09\_02B/099

T.I.P. NO.	SHEET NO.
17BP.10.R.128	UC-1

**PROJECT WBS: 17BP.10.R.128**

See Sheet UC-1 For Index of Sheets  
See Sheet UC-2 For Standard Symbology Sheet

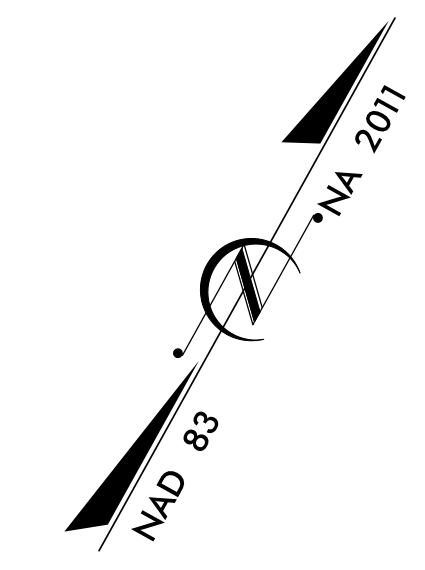
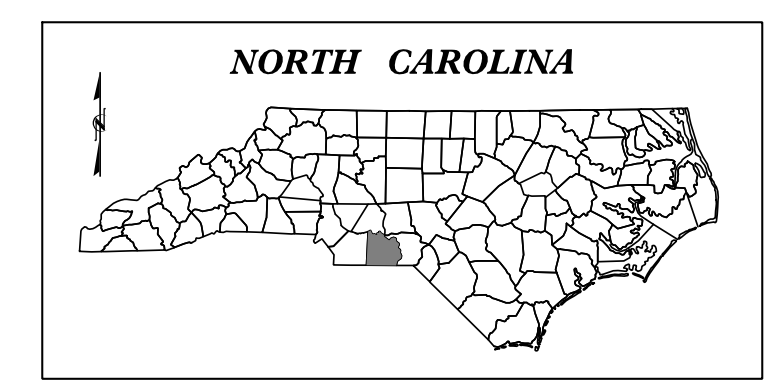


# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITY CONSTRUCTION PLANS ANSON COUNTY

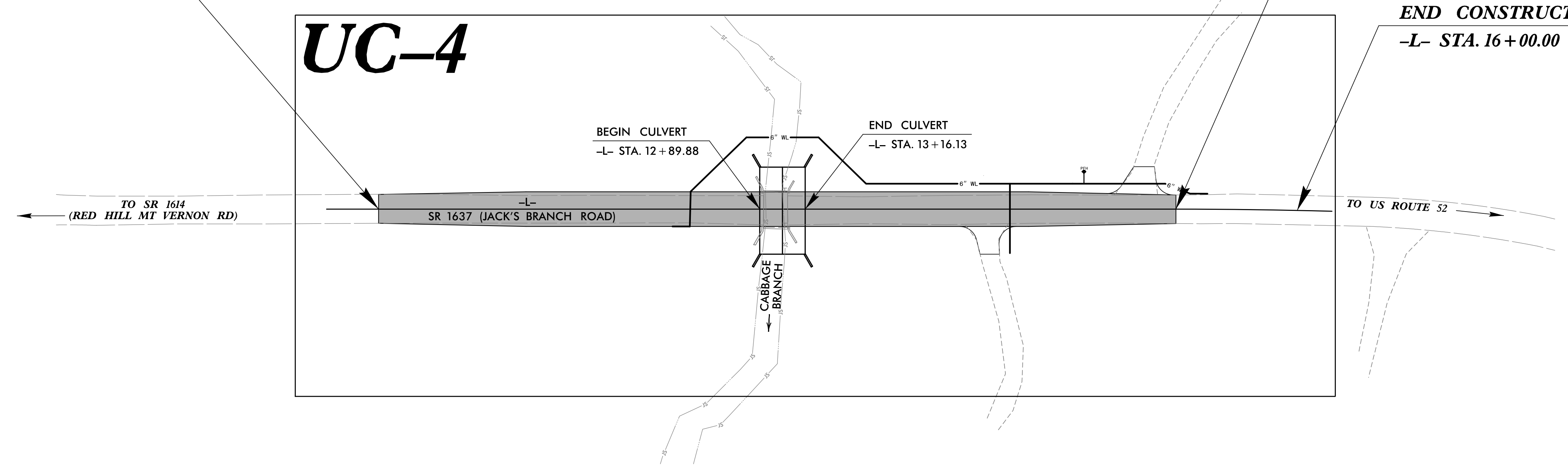
**LOCATION: BRIDGE #234 OVER CABBAGE BRANCH  
ON SR 1637 (JACK'S BRANCH ROAD)**

**TYPE OF WORK: WATER LINE RELOCATION**



**BEGIN PROJECT WBS 17BP.10.R.128**  
-L- STA. 10 + 70.00

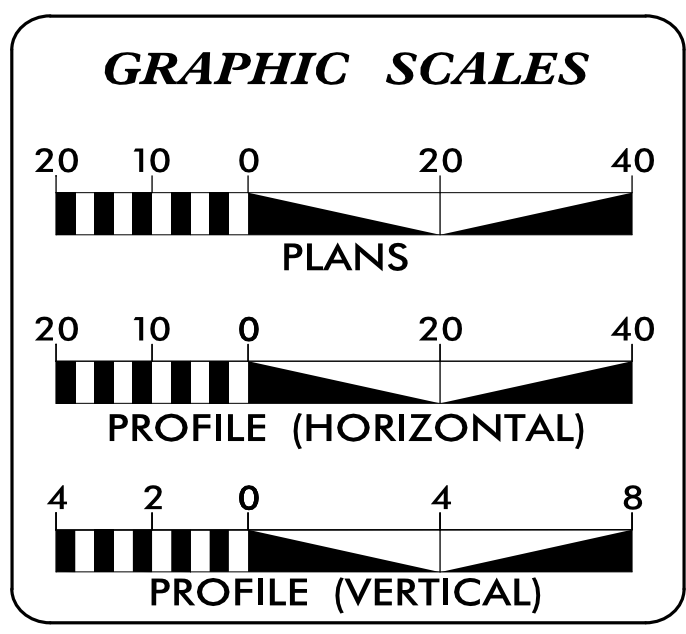
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-L- STA. 15 + 30.00



**END CONSTRUCTION**  
-L- STA. 16 + 00.00

DOCUMENT NOT CONSIDERED FINAL  
UNTIL ALL SIGNATURES ARE COMPLETED

**CONTRACT:**



SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3B	DETAILS
UC-4	UTILITY CONSTRUCTION SHEET

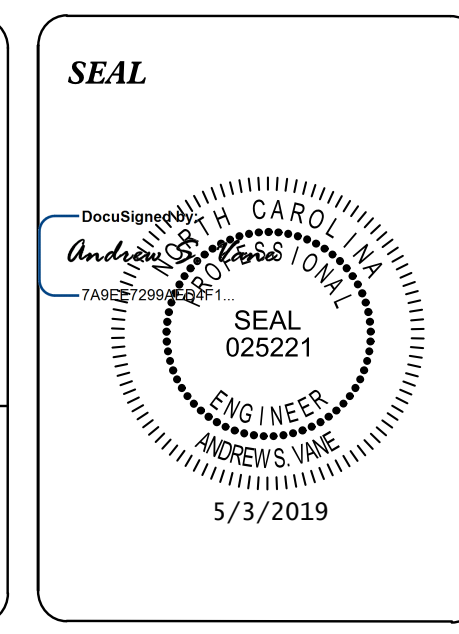
**WATER AND SEWER OWNERS ON PROJECT**

(A) WATER - TOWN OF ANSONVILLE

PREPARED IN THE OFFICE OF

**STV** 100 Years  
STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991  
(704) 372-1885 FAX: (704) 372-3393

NIKKI T. HONEYCUTT, PE CONSULTANT CONTACT #1  
ANDREW VANE, PE CONSULTANT CONTACT #2  
CLARK E. GROVES CONSULTANT CONTACT #3



**DIVISION OF HIGHWAYS UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

MICHAEL BRIGHT, P.E. UTILITIES REGIONAL ENGINEER  
 \_\_\_\_\_ UTILITIES ENGINEER  
AMY DUPREE UTILITIES AREA COORDINATOR  
MARK CRUMP UTILITIES COORDINATOR

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS



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

PROJECT REFERENCE NO. <b>17BP.10.R.128</b>	SHEET NO. <b>UC-2</b>
---	--------------------------

## UTILITIES PLAN SHEET SYMBOLS

### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) .....	
11¼ Degree Bend .....	
22½ Degree Bend .....	
45 Degree Bend .....	
90 Degree Bend .....	
Plug .....	
Tee .....	
Cross .....	
Reducer .....	
Gate Valve .....	
Butterfly Valve .....	
Tapping Valve .....	
Line Stop .....	
Line Stop with Bypass .....	
Blow Off .....	
Fire Hydrant .....	
Relocate Fire Hydrant .....	
Remove Fire Hydrant .....	REM FH
Water Meter .....	
Relocate Water Meter .....	
Remove Water Meter .....	REM WM
Water Pump Station .....	
RPZ Backflow Preventer .....	
DCV Backflow Preventer .....	
Relocate RPZ Backflow Preventer .....	
Relocate DCV Backflow Preventer .....	

### PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown) .....	
Force Main Sewer Line (Sized as Shown) .....	
Manhole (Sized per Note) .....	
Sewer Pump Station .....	

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole .....	
Telephone Pole .....	
Joint Use Pole .....	
Telephone Pedestal .....	
Utility Line by Others (Type as Shown) .....	
Trenchless Installation .....	
Encasement by Open Cut .....	
Encasement .....	

Thrust Block .....	
Air Release Valve .....	
Utility Vault .....	
Concrete Pier .....	
Steel Pier .....	
Plan Note .....	
Pay Item Note .....	

NOTE  
PAY ITEM

### EXISTING UTILITIES SYMBOLS

Power Pole .....		*Underground Power Line .....	
Telephone Pole .....		*Underground Telephone Cable .....	
Joint Use Pole .....		*Underground Telephone Conduit .....	
Utility Pole .....		*Underground Fiber Optics Telephone Cable .....	
Utility Pole with Base .....		*Underground TV Cable .....	
H-Frame Pole .....		*Underground Fiber Optics TV Cable .....	
Power Transmission Line Tower .....		*Underground Gas Pipeline .....	
Water Manhole .....		Aboveground Gas Pipeline .....	
Power Manhole .....		*Underground Water Line .....	
Telephone Manhole .....		Aboveground Water Line .....	
Sanitary Sewer Manhole .....		*Underground Gravity Sanitary Sewer Line .....	
Hand Hole for Cable .....		Aboveground Gravity Sanitary Sewer Line .....	
Power Transformer .....		*Underground SS Forced Main Line .....	
Telephone Pedestal .....		Underground Unknown Utility Line .....	
CATV Pedestal .....		SUE Test Hole .....	
Gas Valve .....		Water Meter .....	
Gas Meter .....		Water Valve .....	
Located Miscellaneous Utility Object .....		Fire Hydrant .....	
Abandoned According to Utility Records .....	AATUR	Sanitary Sewer Cleanout .....	
End of Information .....	E.O.I.		

\*For Existing Utilities  
Utility Line Drawn from Record .....

(Type as Shown)

Designated Utility Line .....

(Type as Shown)

PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.128	UC-3
DESIGNED BY: CTH	
DRAWN BY: EDW	
CHECKED BY: ASV	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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

# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. THE EXISTING UTILITIES BELONG TO THE TOWN OF ANSONVILLE.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES:

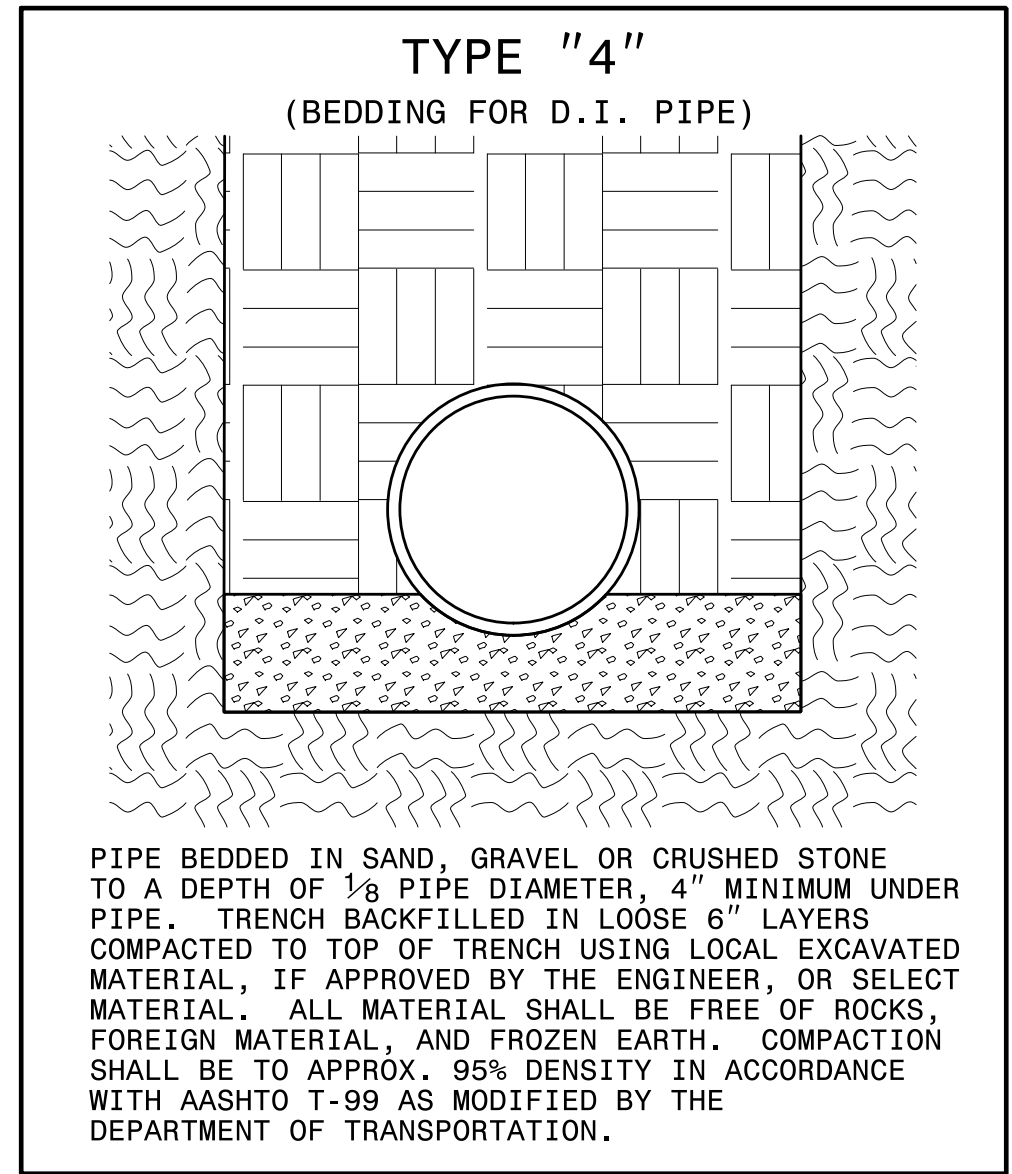
1. PROPOSED 6" WATER LINE FROM -WL1- LINE STATION 10+00.00 TO -WL1- LINE STATION 13+52.94 SHALL BE RESTRAINED JOINT PRESSURE CLASS 350 DUCTILE IRON PIPE.
2. CONTRACTOR TO NOTE THAT TIE-IN LOCATION OF 6" WATER LINE CAP WITH 2" TAP AT STATION 10+00.00 IS APPROXIMATE AS EXACT LOCATION OF 2" WATER LINE IS NOT KNOWN. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO PERFORM PRELIMINARY SOFT DIGS AND INVESTIGATIONS TO VERIFY TIE-IN LOCATIONS.
3. LAY PIPE STRAIGHT IN ALIGNMENT AND GRADIENT OR FOLLOW TRUE CURVES AS NEARLY AS POSSIBLE. DO NOT DEFLECT ANY JOINT MORE THAN THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
4. CONTRACTOR SHALL ADHERE TO SECTION 1530 "ABANDON OR REMOVE UTILITIES" FOR ABANDONMENT OF EXISTING WATER LINES.
5. MR. JASON MULLIS, TOWN DIRECTOR OF ANSONVILLE, WILL SERVE AS THE UTILITY OWNER CONTACT ON THIS PROJECT. CONTRACTOR, AS REQUIRED BY STANDARD SPECIFICATION SECTION 1500-2, SHALL CONTACT HIM AT (704) 826-8404.
6. NO INTERRUPTION OF EXISTING WATER SERVICE SHALL BE MADE DURING CONSTRUCTION UNTIL AUTHORIZED BY THE ANSONVILLE TOWN DIRECTOR. THE ANSONVILLE TOWN DIRECTOR WILL BE COPIED ON BOTH WATER MAIN PRESSURE TEST REPORT AND THE WATER MAIN CHLORINATION TEST REPORT.
7. NO INTERRUPTION TO EXISTING SERVICE SHALL TAKE PLACE UNTIL ALL CUSTOMERS HAVE BEEN NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE. NOTICE OF INTERRUPTION SHALL BE PREPARED BY THE TOWN OF ANSONVILLE ON OFFICIAL LETTERHEAD. DISTRIBUTION TO EACH CUSTOMER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNDER THE DIRECTION OF THE TOWN OF ANSONVILLE.
8. CONTRACTOR TO HANDLE, CUT AND DISPOSE OF ANY EXISTING 6" AC PIPE IN COMPLIANCE WITH RECOMMENDED PRACTICES AND ALL APPLICABLE STATE AND FEDERAL REGULATION INCLUDING OSHA STANDARD 1926.1101.

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

DESIGNED BY: **CTH**  
 DRAWN BY: **EDW**  
 CHECKED BY: **ASV**  
 APPROVED BY:  
 REVISED:  
 NORTH CAROLINA  
 DEPARTMENT OF  
 TRANSPORTATION  
 UTILITIES ENGINEERING SEC.  
 PHONE: (919) 707-6690  
 FAX: (919) 250-4151

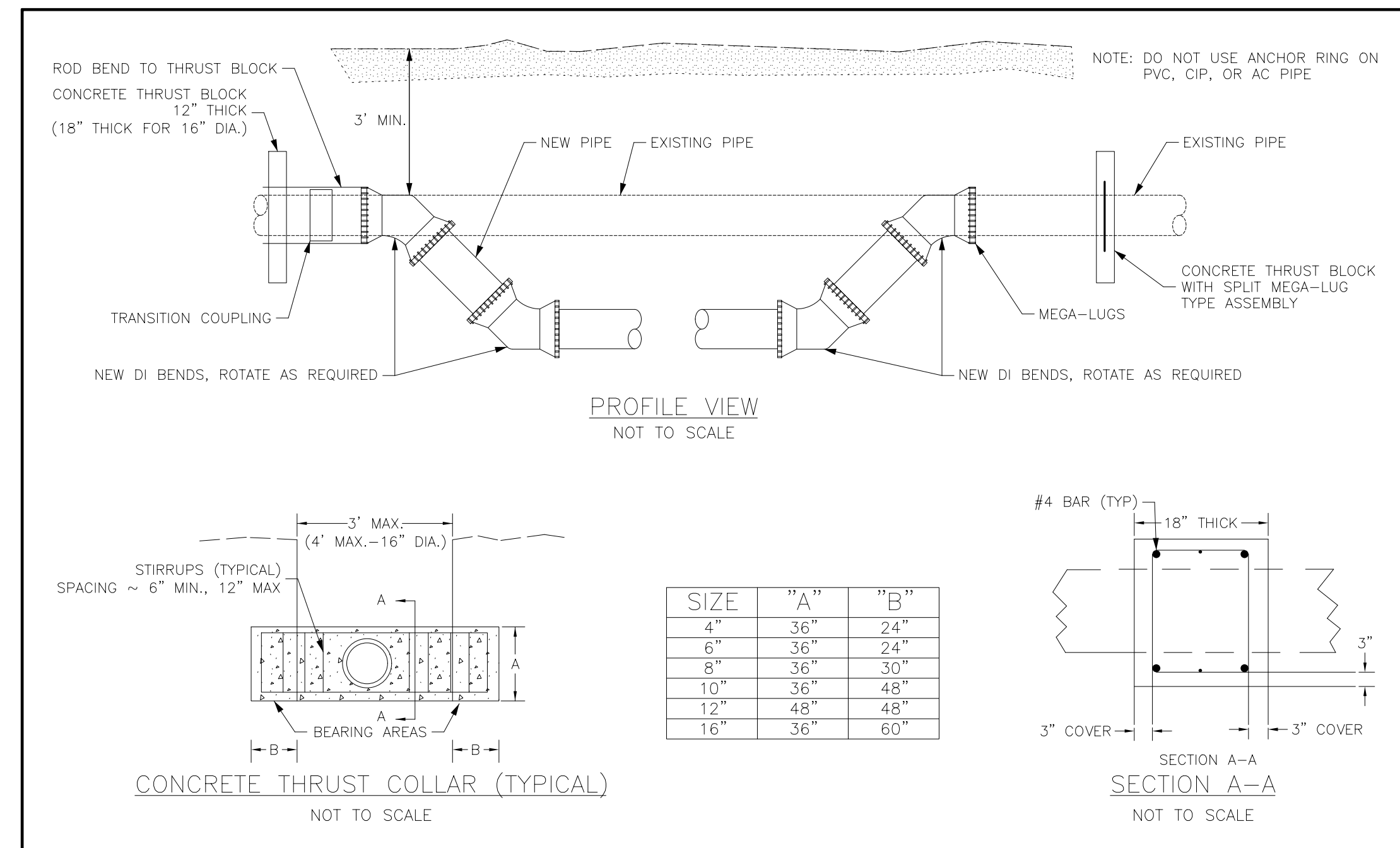
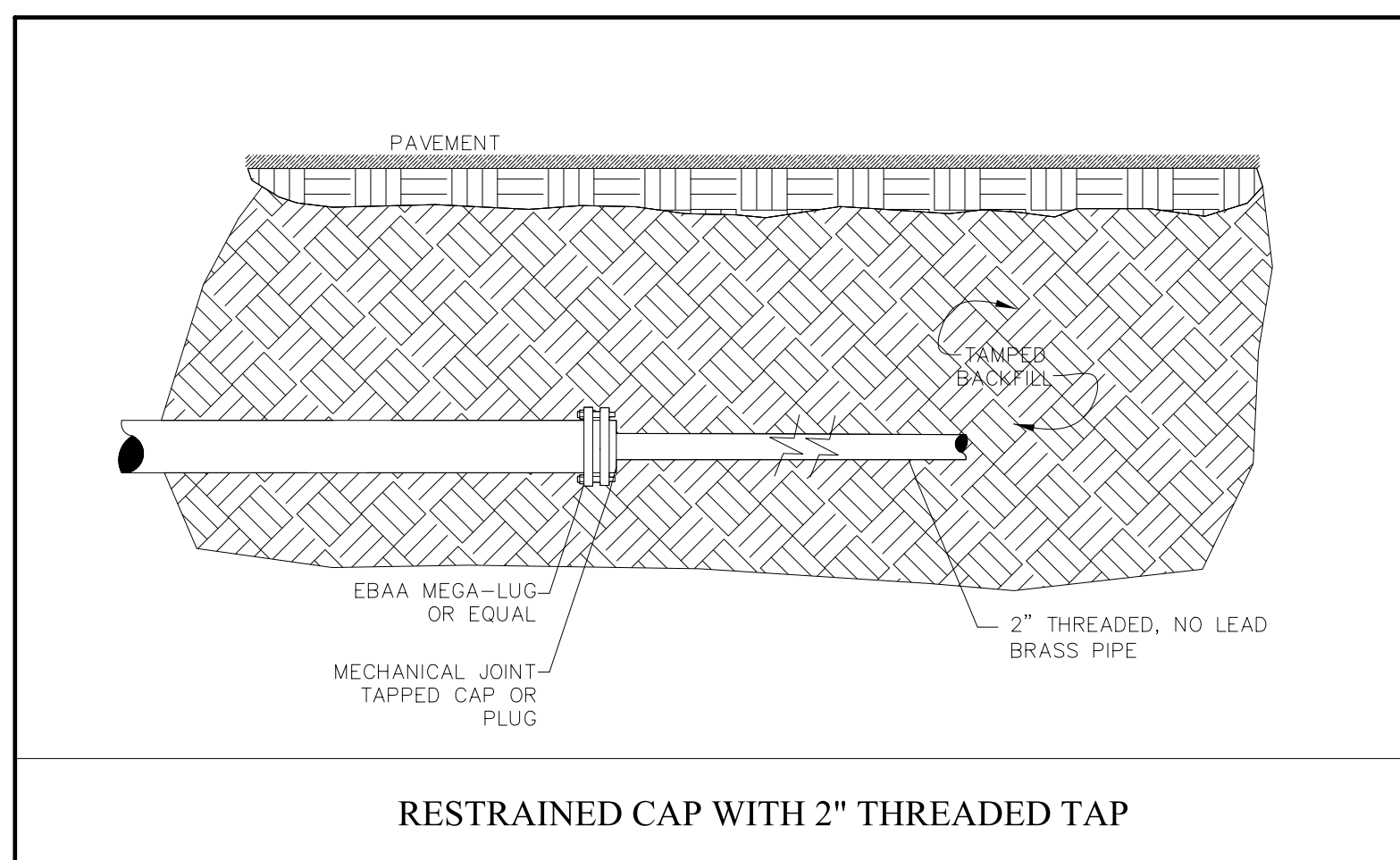
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 CAROLINA  
 ENGINEER  
 ANDREWS VANE  
 SEAL  
 025221  
 5/3/2019  
 UTILITY CONSTRUCTION  
 PLANS ONLY

# PROJECT TYPICAL DETAILS



MAXIMUM TRENCH WIDTH AT TOP OF PIPE

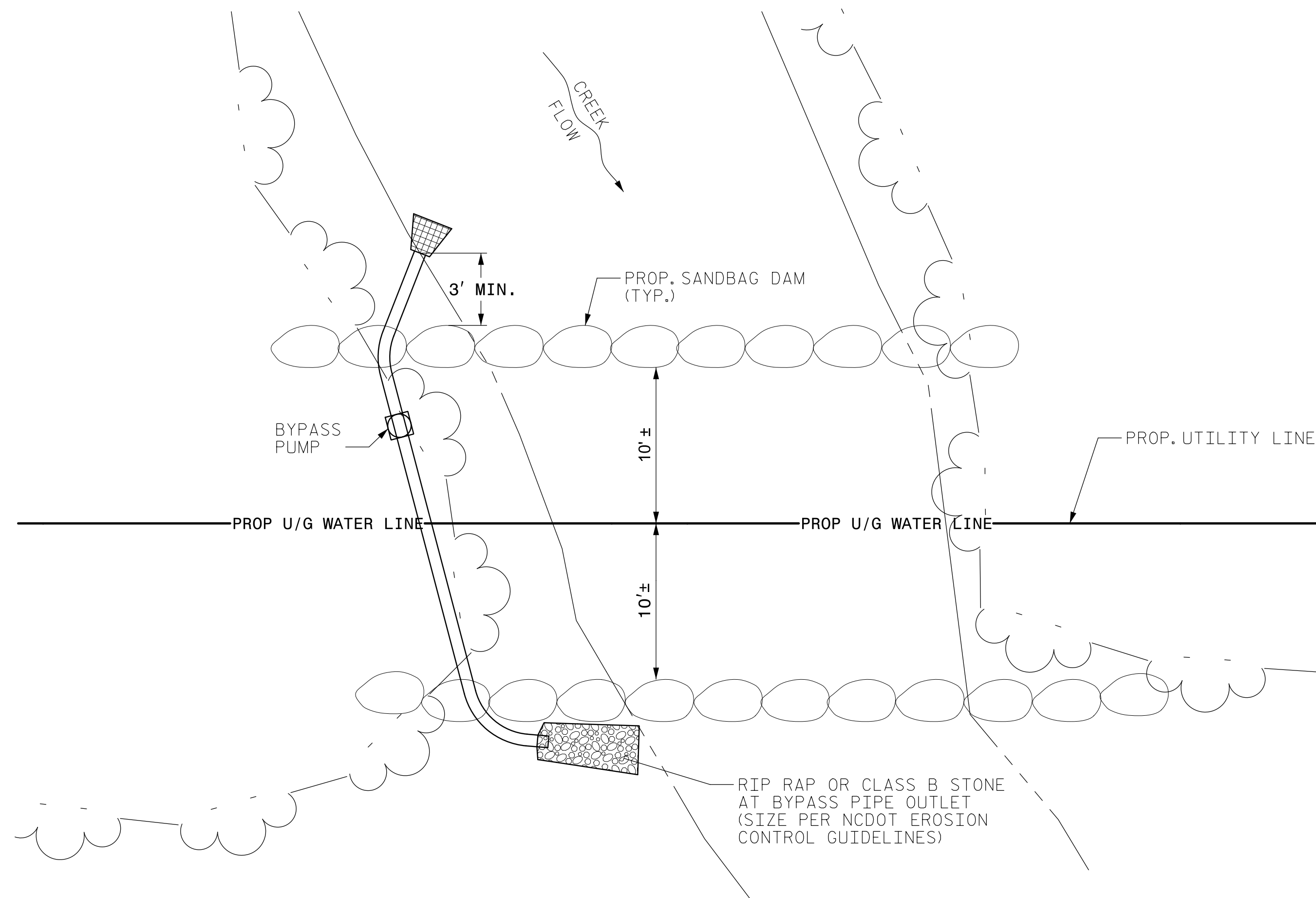
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



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

DESIGNED BY: <b>CTH</b>	
DRAWN BY: <b>EDW</b>	
CHECKED BY: <b>ASV</b>	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

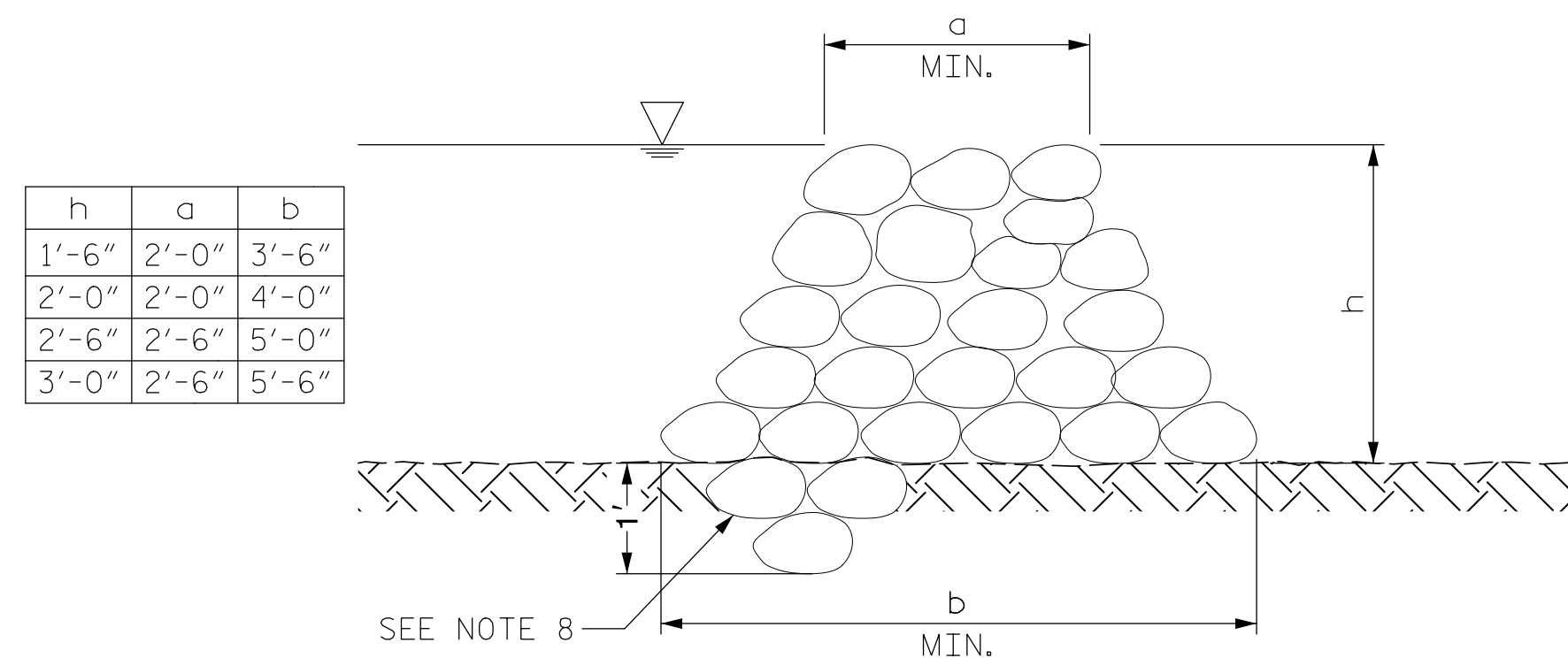
# PROJECT TYPICAL DETAILS



**OPEN CUT CONSTRUCTION**  
 NOT TO SCALE

**NOTES:**

1. BASE FLOW OF STREAM WILL BE PUMPED AROUND WORK AREA AND RELEASED BACK INTO EXISTING STREAM BELOW THE WORK AREA ONTO RIP RAP OR CLASS B STONE PAD. BYPASS PUMP SHALL UTILIZE A FLOATING INTAKE.
2. PUMP AROUND SYSTEM SHALL BE SUFFICIENT SIZE TO CARRY BASE STREAM FLOW.
3. SANDBAG MATERIAL: SANDBAG SHALL BE WOVEN POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE FABRIC, MINIMUM UNIT WEIGHT FOUR OUNCES PER SQUARE YARD, MULLEN BURST STRENGTH EXCEEDING 300 PSI IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM DESIGNATION D3786, AND ULTRAVIOLET STABILITY EXCEEDING 70% IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM DESIGNATION D4355. USE OF BURLAP IS NOT ACCEPTABLE.
4. SAND FOR SANDBAGS SHALL BE A MINIMUM 110LB/CU. FT MATERIAL.
5. THE CONTRACTOR SHALL TAKE WHATEVER PRECAUTIONS NECESSARY TO PROTECT THE EXISTING WATERLINE FROM LEAKS OR DAMAGE DURING THE EXCAVATION AND CONSTRUCTION OF THE PROPOSED WATERLINE.
6. IT IS THE CONTRACTORS RESPONSIBILITY TO FOLLOW ALL OSHA AND STATE SAFETY REQUIREMENTS PERTAINING TO THIS EXCAVATION.
7. ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE DEPARTMENT.
8. FOR NON-ROCK CREEK BOTTOMS, KEY SANDBAGS ON UPSTREAM SIDE 1' INTO SOIL.
9. PERFORM CROSSING DURING ANTICIPATED DRY WEATHER ONLY. INSTALL PROPOSED UTILITY IN A DRY TRENCH.

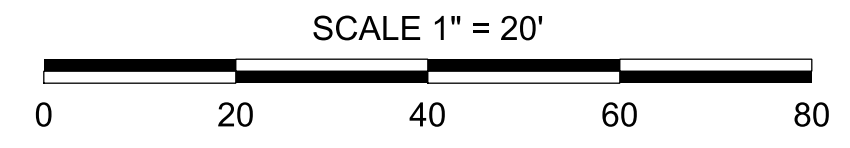


**SANDBAG DAM SECTION**

NOTE: SANDBAG DAM HEIGHT SHALL BE A MINIMUM OF 2'-6" UPSTREAM AND 1'-6" DOWNSTREAM. ADJUST FOR SITE CONDITIONS PRESENT DURING CONSTRUCTION.

8/17/99

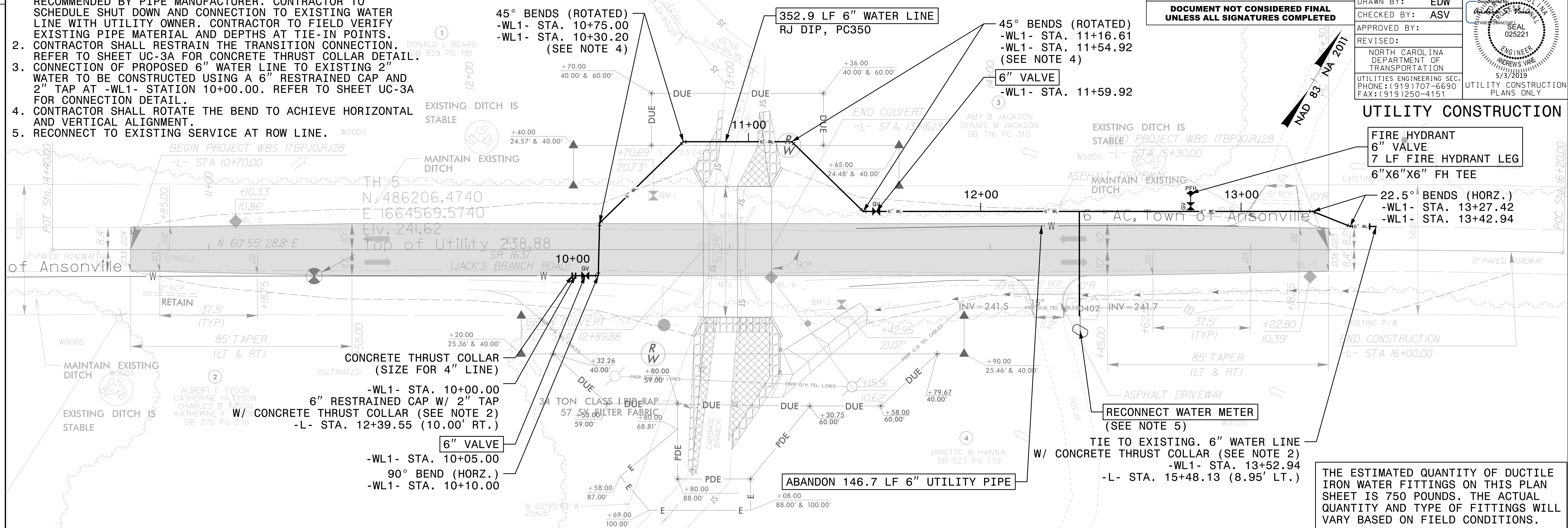
- NOTES:**
- CONNECT PROPOSED DIP WATER LINE TO EXISTING WATER LINE USING NECESSARY FITTINGS AND TRANSITION COUPLINGS RECOMMENDED BY PIPE MANUFACTURER. CONTRACTOR TO SCHEDULE SHUT DOWN AND CONNECTION TO EXISTING WATER LINE WITH UTILITY OWNER. CONTRACTOR TO FIELD VERIFY EXISTING PIPE MATERIAL AND DEPTHS AT TIE-IN POINTS.
  - CONTRACTOR SHALL RESTRAIN THE TRANSITION CONNECTION. REFER TO SHEET UC-3A FOR CONCRETE THRUST COLLAR DETAIL.
  - CONNECTION OF PROPOSED 6" WATER LINE TO EXISTING 2" WATER TO BE CONSTRUCTED USING A 6" RESTRAINED CAP AND 2" TAP AT -WL1- STATION 10+00.00. REFER TO SHEET UC-3A FOR CONNECTION DETAIL.
  - CONTRACTOR SHALL ROTATE THE BEND TO ACHIEVE HORIZONTAL AND VERTICAL ALIGNMENT.
  - RECONNECT TO EXISTING SERVICE AT ROW LINE.



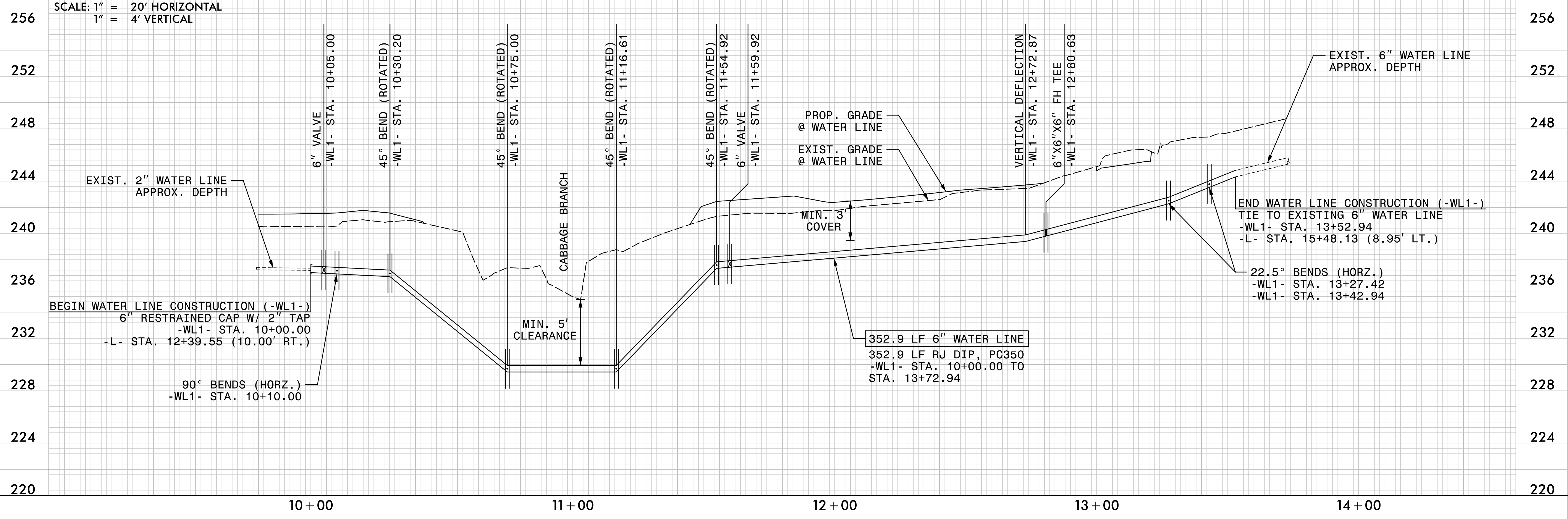
**STV** 100 Years  
 STV Engineers, Inc.  
 900 West Trade St., Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

PROJECT REFERENCE NO. <b>17BP.10.R.128</b>	SHEET NO. <b>UC-4</b>
DESIGNED BY: <b>CTH</b>	
DRAWN BY: <b>EDW</b>	
CHECKED BY: <b>ASV</b>	
APPROVED BY:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
REVISED:	UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**



THE ESTIMATED QUANTITY OF DUCTILE IRON WATER FITTINGS ON THIS PLAN SHEET IS 750 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



REVISIONS

5/3/2019  
 F:\Utilities\Engineering\UC\Proj\Sheet\R128.uc04\_psh.dgn  
 wallace

**PROJECT WBS: 17BP.10.R.128**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

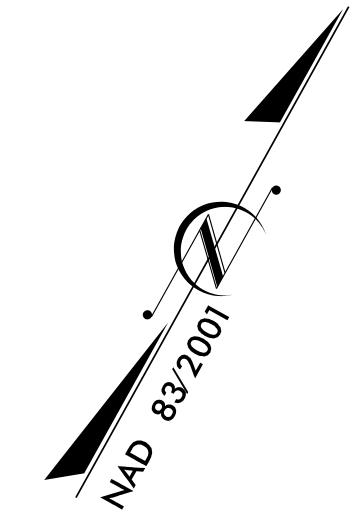
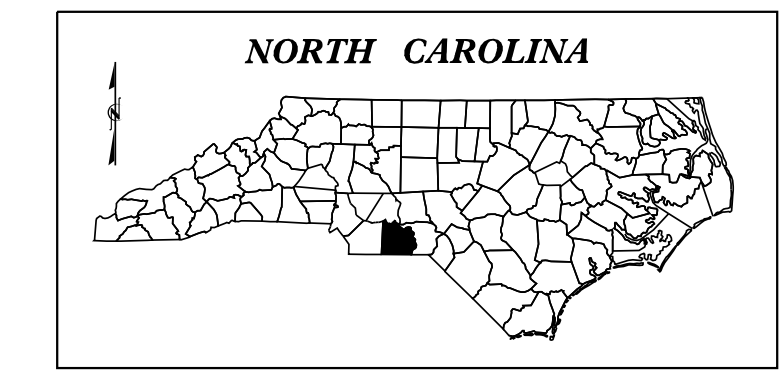
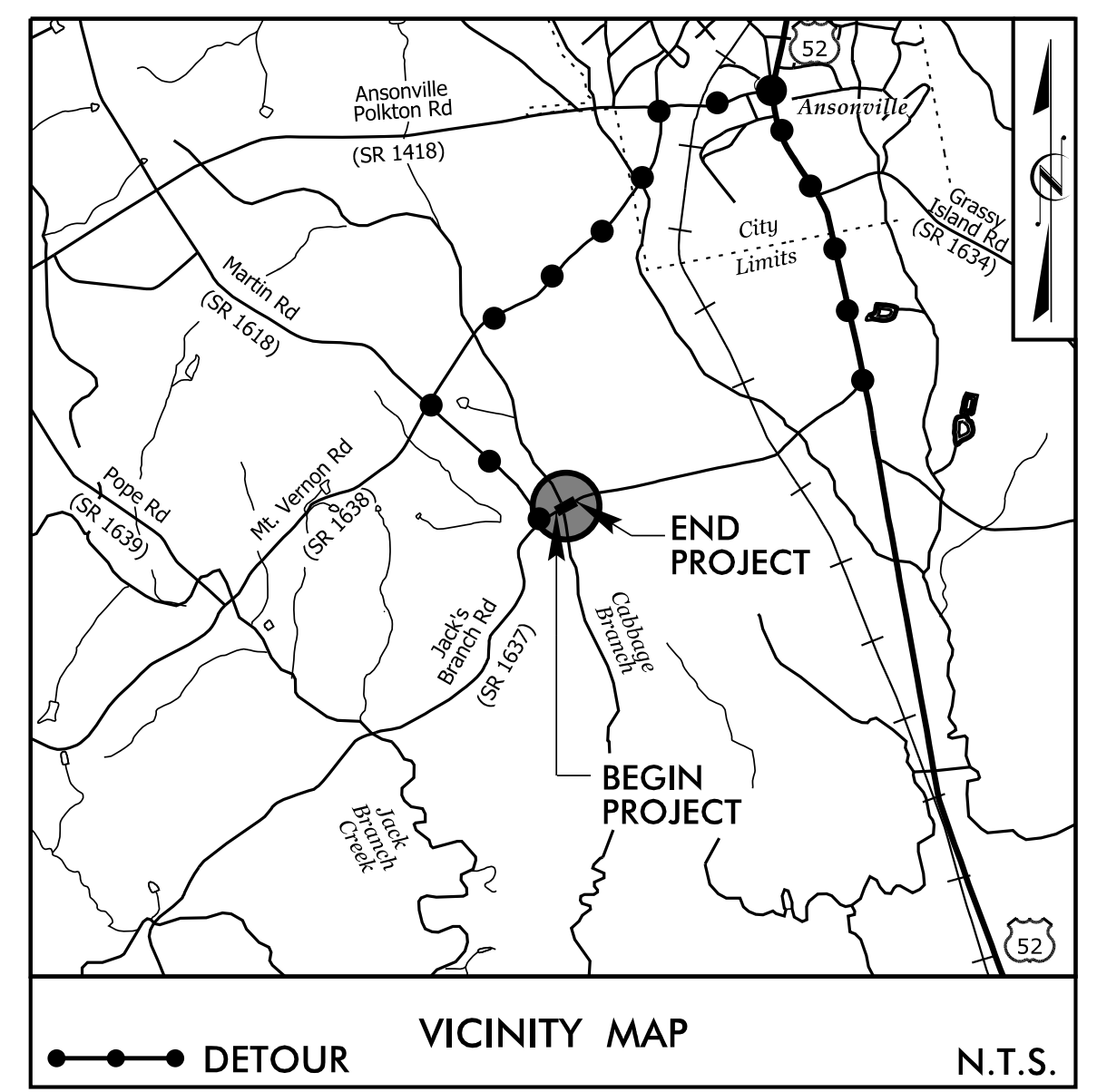
**UTILITIES BY OTHERS PLANS  
ANSON COUNTY**

**LOCATION: BRIDGE #234 OVER CABBAGE BRANCH  
ON SR 1637 (JACK'S BRANCH ROAD)**

**TYPE OF WORK: RELOCATION OF TELEPHONE AND FIBER**

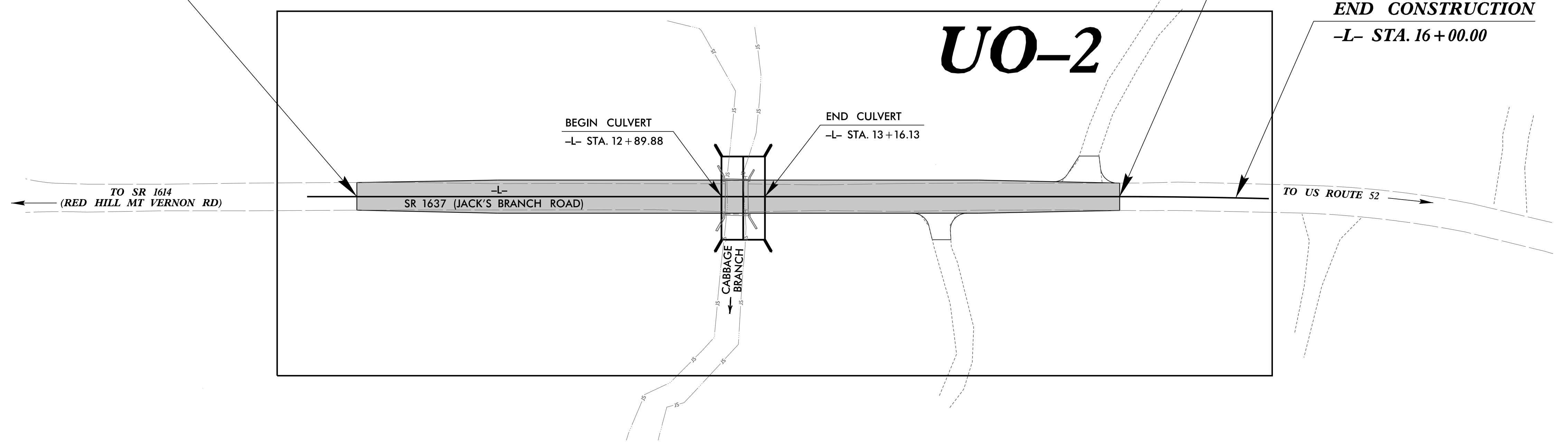
T.I.P. NO.	SHEET NO.
17BP.10.R.128	UO-1

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

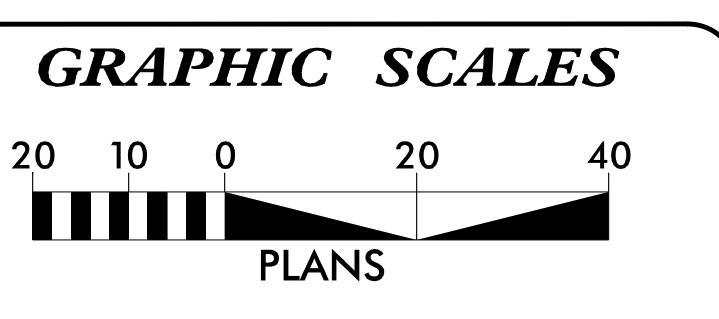


**BEGIN PROJECT WBS 17BP.10.R.128**  
-L- STA. 11 + 00.00

**END PROJECT WBS 17BP.10.R.128**  
-L- STA. 15 + 30.00



**END CONSTRUCTION**  
-L- STA. 16 + 00.00



**INDEX OF SHEETS**

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

**UTILITY OWNERS WITH CONFLICTS**  
(A) TELEPHONE & FIBER - WINDSTREAM

PREPARED IN THE OFFICE OF:

**Vaughn & Melton**  
Consulting Engineers  
Charlotte, North Carolina  
704 357 0488  
FIRM LIC #F-1088

**REECE M. SCHULER, P.E.** UTILITY PROJECT MANAGER  
**NICHOLAS V. ASARO, PLS** PROJECT UTILITY COORDINATOR

**DIVISION OF HIGHWAYS**  
**DIVISION 10**  
716 West Main Street  
Albemarle, NC 28001

**MARK CRUMP** DIVISION CONTACT #1



5/14/2017  
7/18/2016 8:55:00 AM  
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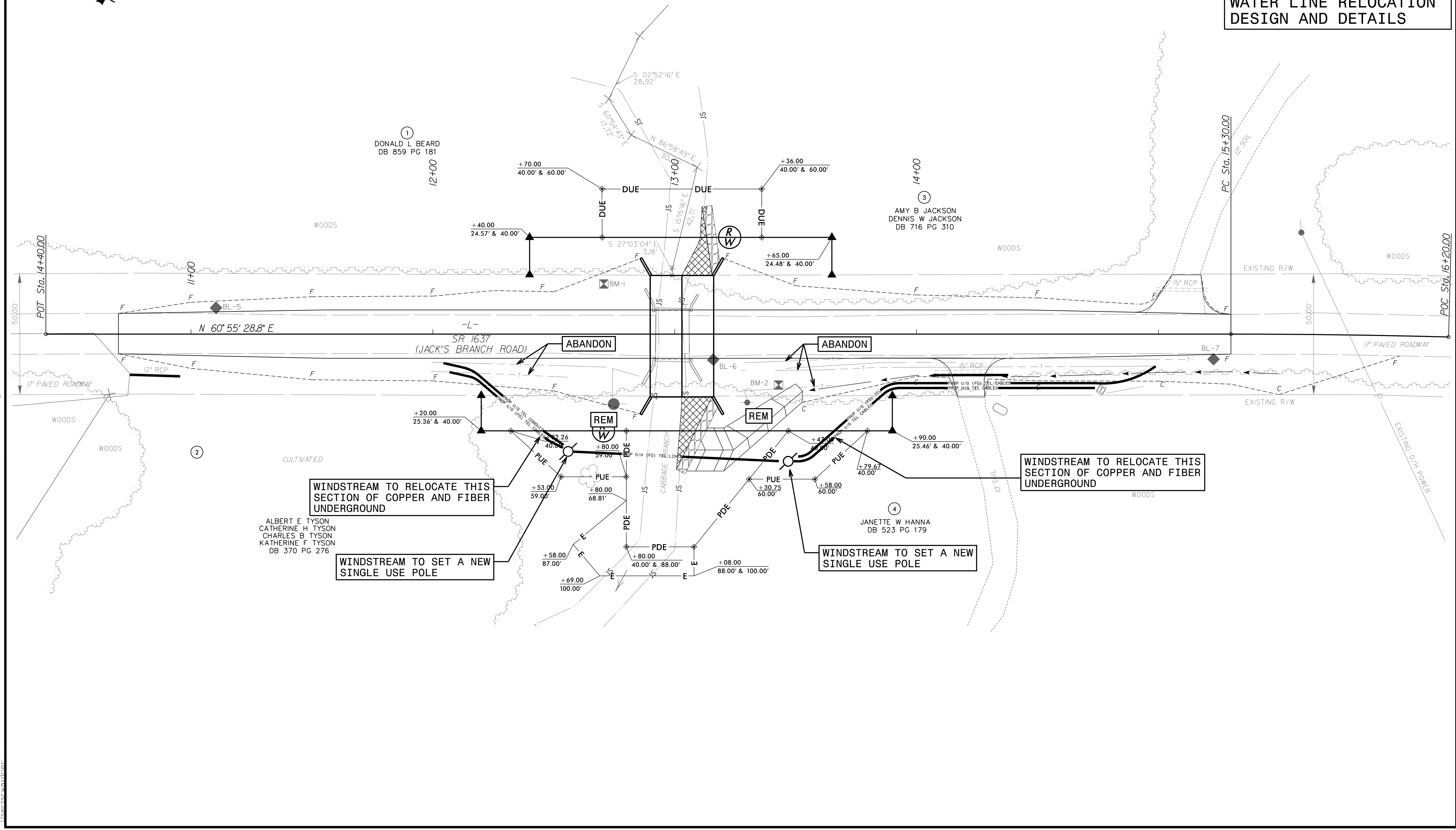
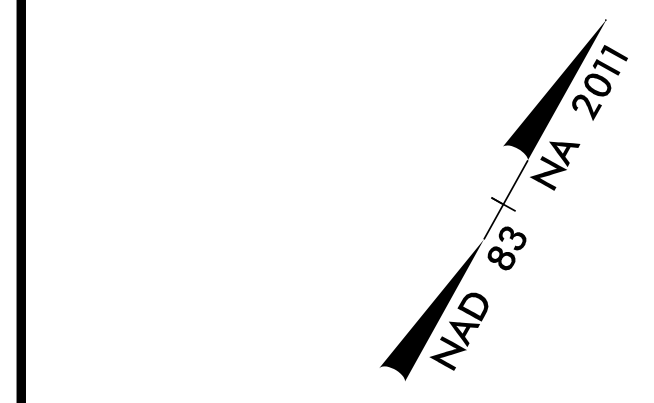
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17BP.10.R128	UO-2
THIS SHEET CORRESPONDS TO RDY-04	



### UTILITIES BY OTHERS

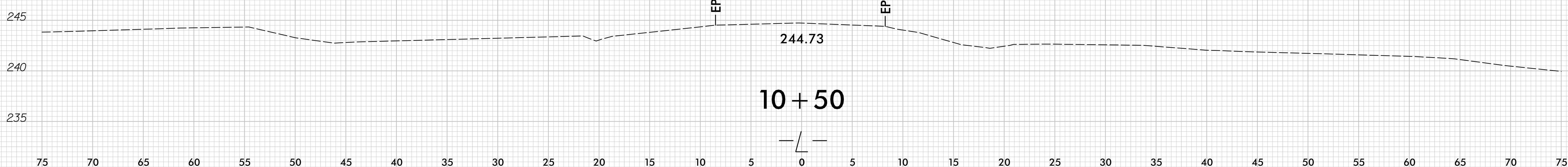
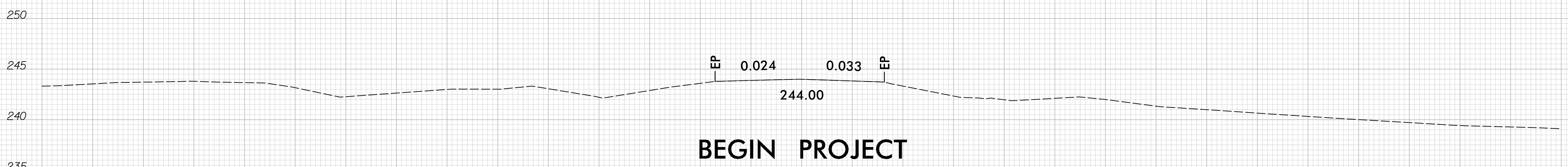
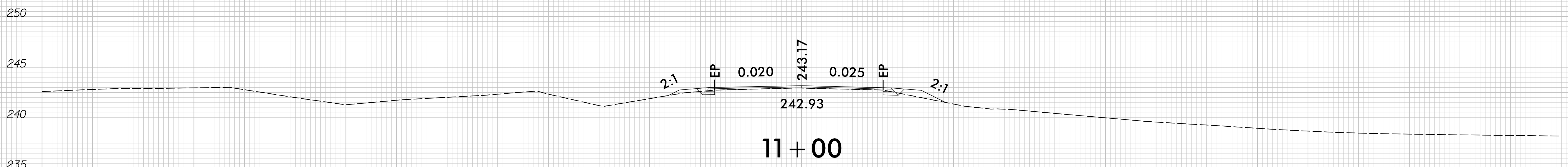
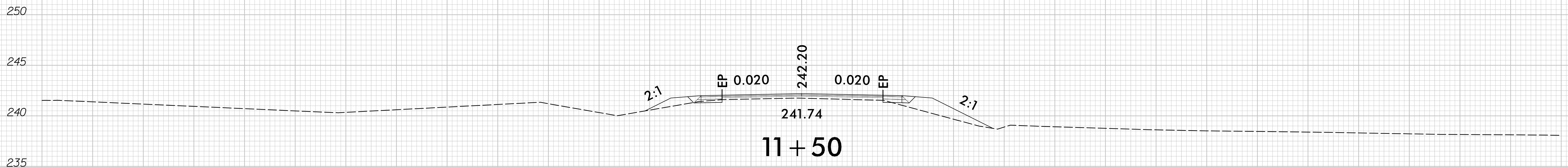
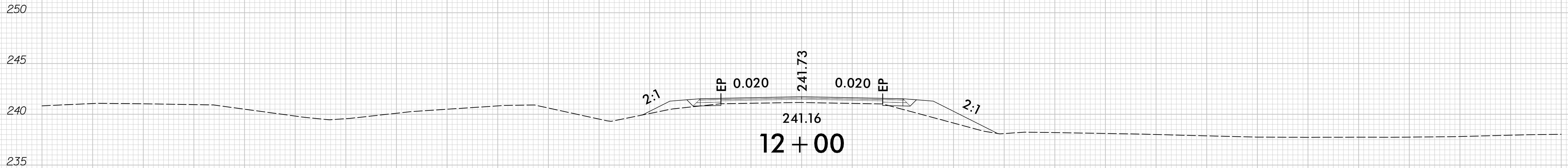
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

REFER TO UCO PLANS FOR WATER LINE RELOCATION DESIGN AND DETAILS



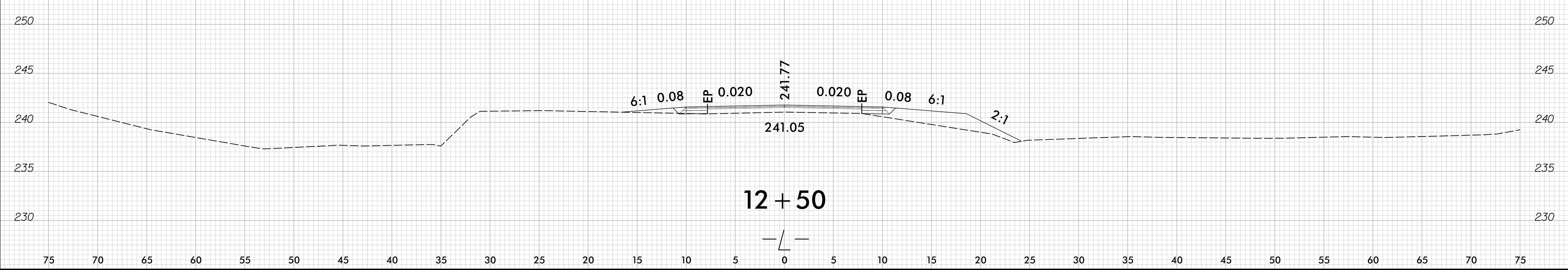
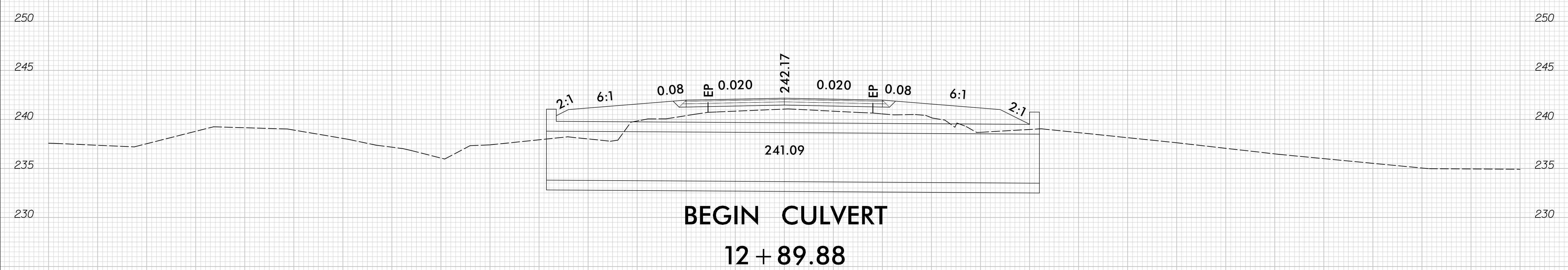
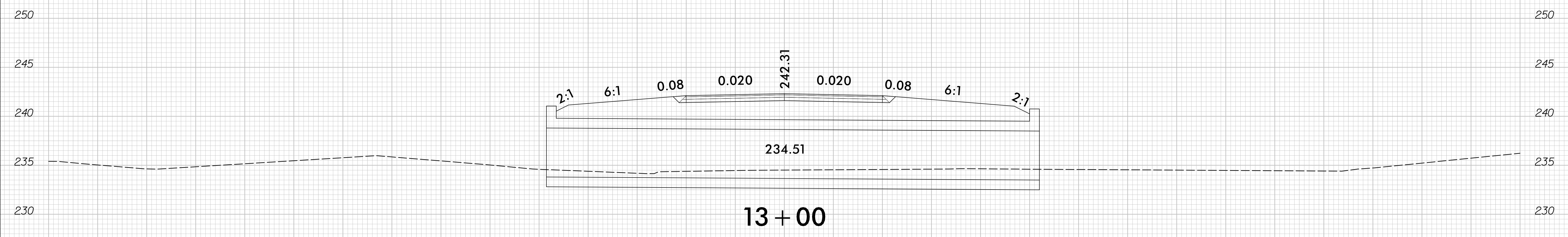
ALBERT E TYSON  
CATHERINE H TYSON  
CHARLES B TYSON  
KATHERINE F TYSON  
DB 370 PG 276

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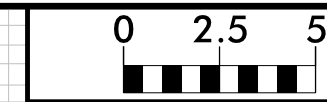


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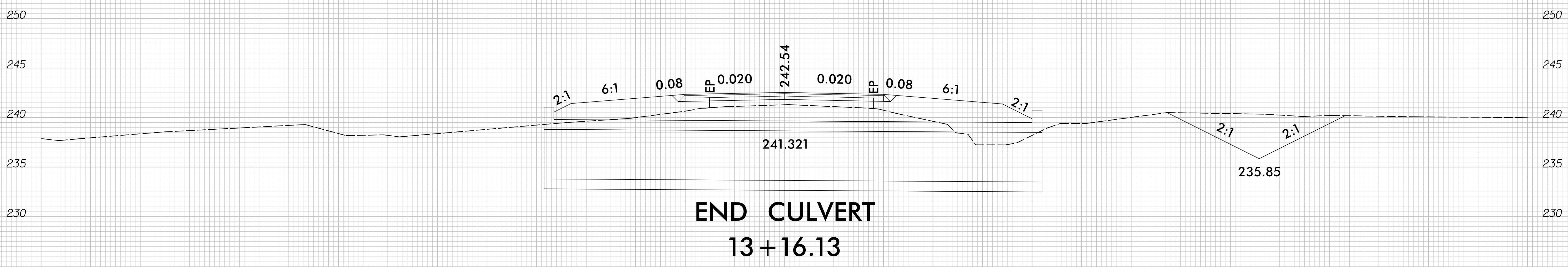
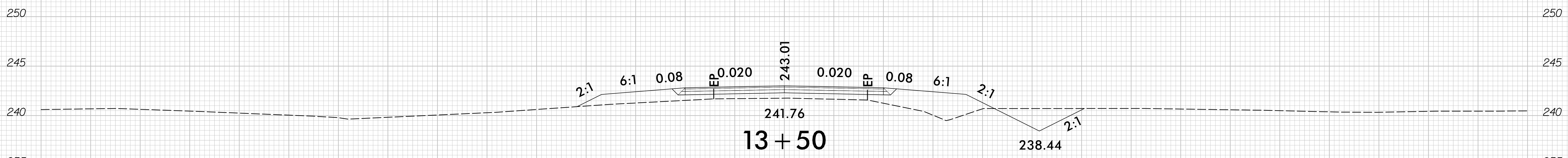
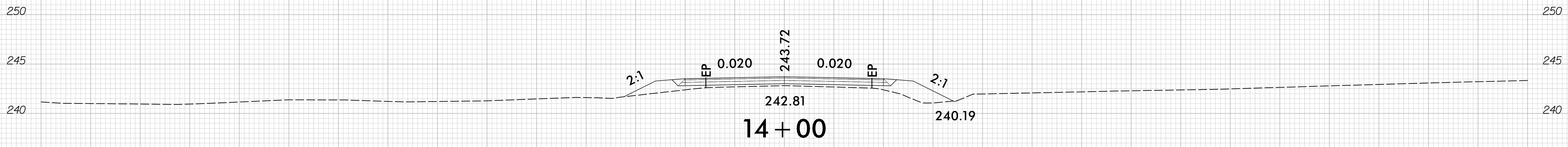
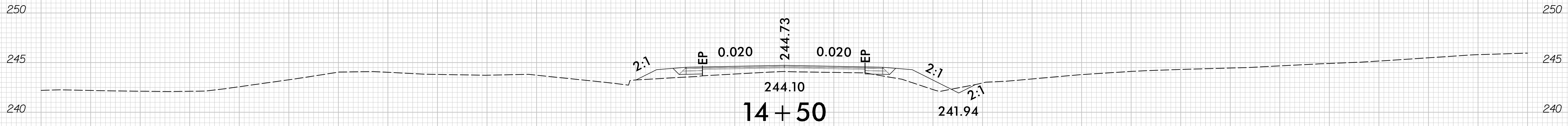
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