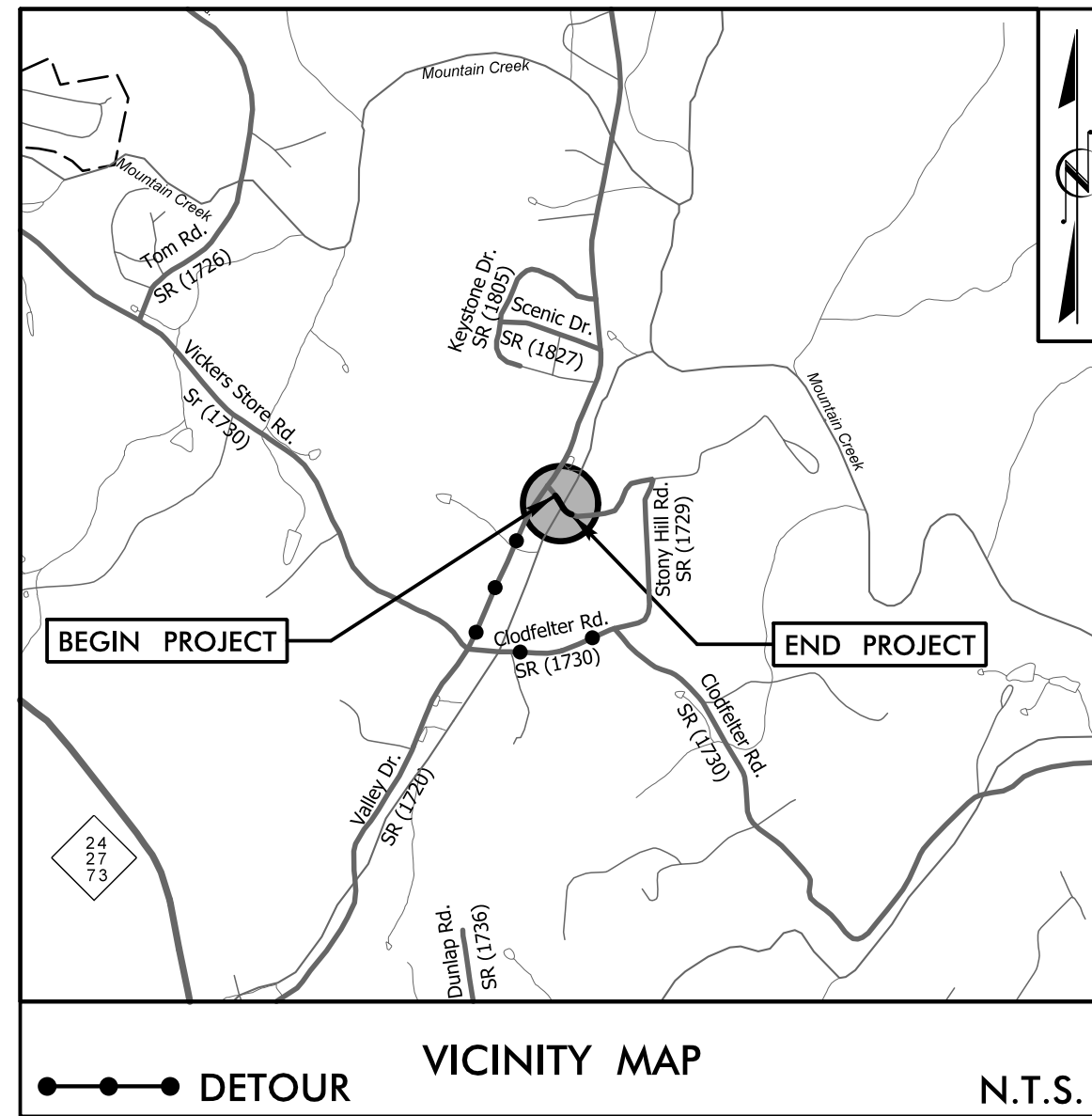


PROJECT WBS: 17BP.10.R.72

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



FINAL PLANS

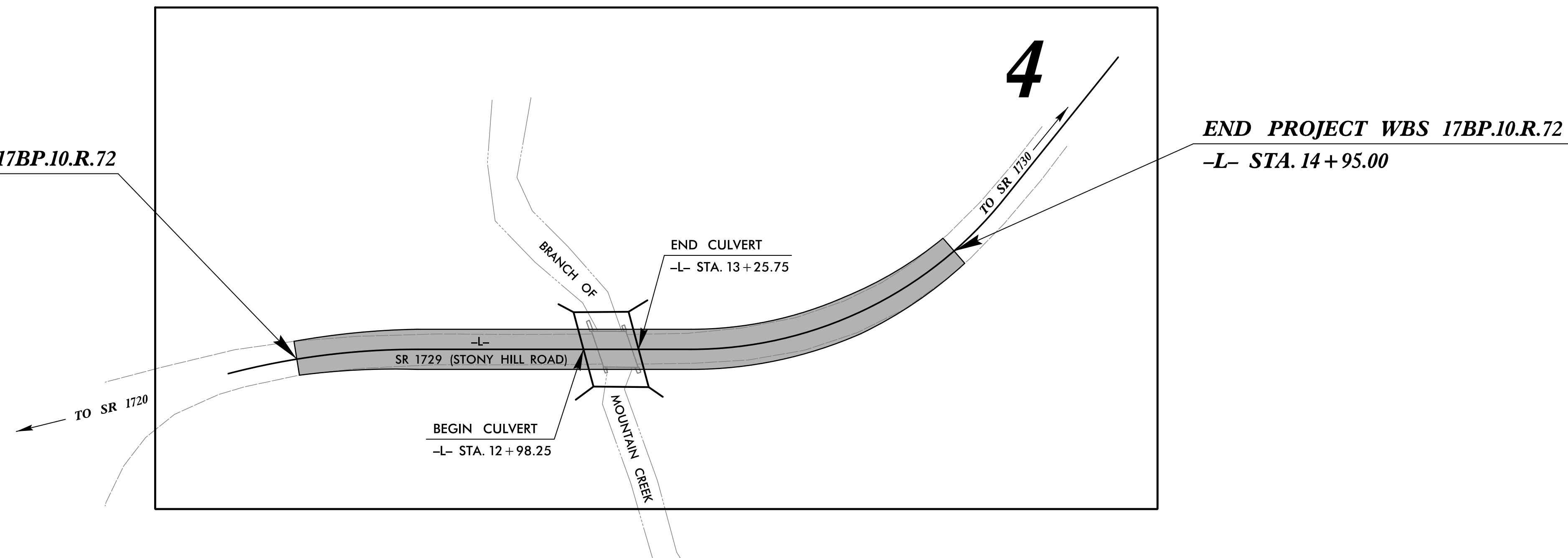
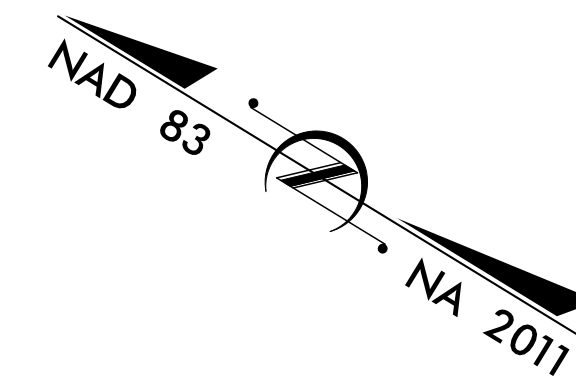
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STANLY COUNTY

**LOCATION: BRIDGE #019 OVER BRANCH OF MT. CREEK
ON SR 1729 (STONY HILL RD.)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.72	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.72		P.E.	
17BP.10.R.72		R/W & UTILITIES	
17BP.10.R.72		CONSTRUCTION	

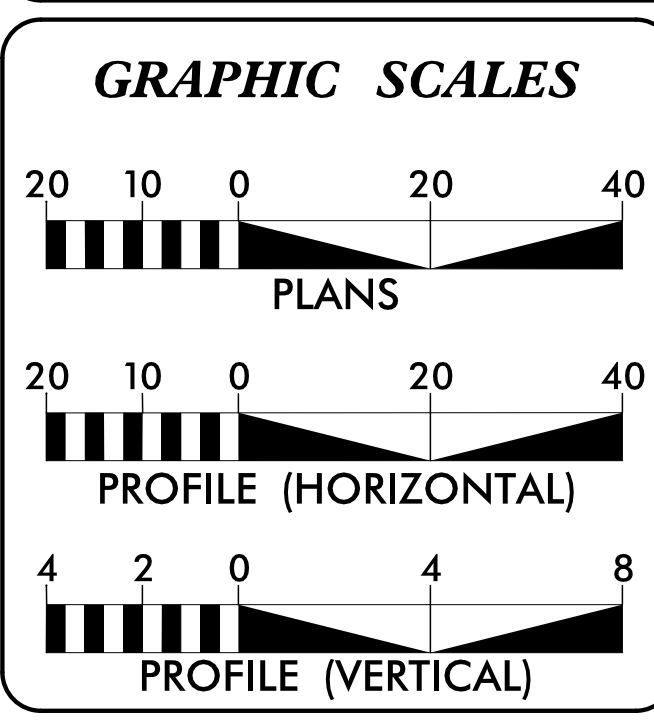


BEGIN PROJECT WBS 17BP.10.R.72
-L- STA. 11+55.00

END PROJECT WBS 17BP.10.R.72
-L- STA. 14+95.00

CONTRACT:

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



DESIGN DATA

ADT 2011 =	130
ADT 2025 =	240
DHV =	N/A
D =	N/A
T =	6%
V =	30 MPH
FUNC. CLASSIFICATION:	LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT WBS 17BP.10.R.72 =	0.059 MILES
LENGTH OF STRUCTURE PROJECT WBS 17BP.10.R.72 =	0.005 MILES
TOTAL LENGTH OF PROJECT WBS 17BP.10.R.72 =	0.064 MILES

NCDOT CONTACT: GARLAND HAYWOOD, PE
Division Bridge Manager

PLANS PREPARED FOR THE NCDOT BY:
STV / Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

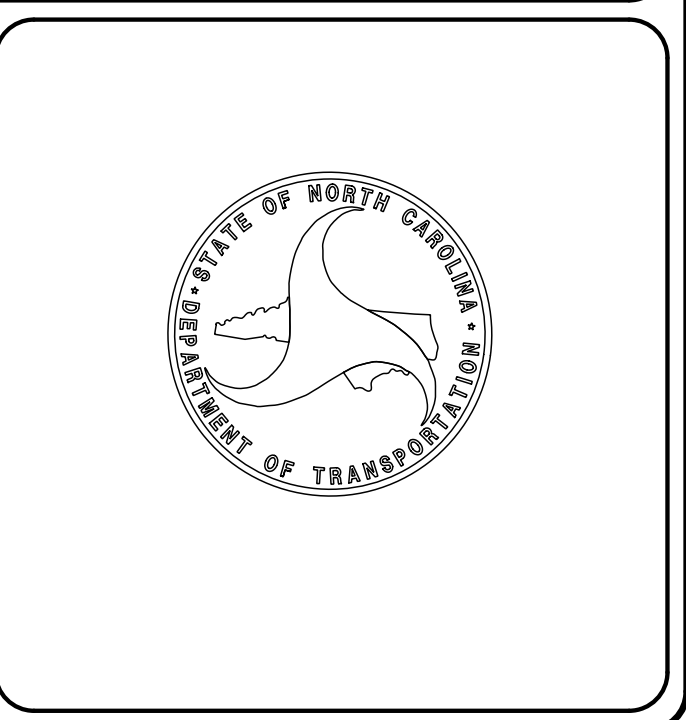
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	NIKKI T. HONEYCUTT, PE PROJECT ENGINEER
LETTING DATE:	MAAMOON K. ABDELAZIZ PROJECT DESIGNER

HYDRAULICS ENGINEER

DocuSigned by:
Edward J. Vance
SIGNATURE: EDWARD J. VANCE, P.E.
11/14/2014

ROADWAY DESIGN ENGINEER

DocuSigned by:
Nikki T. Honeycutt
SIGNATURE: NIKKI T. HONEYCUTT, P.E.
11/14/2014



11/13/2014
F:\roadway\proj\sh\17BP10R72_rdy_tsh.dgn
mabdelaziz

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
17BP10.R72	1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	⊙ EIP
Property Corner	-----x
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-
Known Soil Contamination: Boundary or Site	☠
Potential Soil Contamination: Boundary or Site	?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	⊙
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	⊙ CSX TRANSPORTATION MILEPOST 35
Switch	⊠ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	Ⓜ
Proposed Right of Way Line with Iron Pin and Cap Marker	Ⓜ ⊠
Proposed Right of Way Line with Concrete or Granite Marker	Ⓜ ⊠
Existing Control of Access	⊙
Proposed Control of Access	⊙
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-

ROADS AND RELATED FEATURES:

Proposed Permanent Easement with Iron Pin and Cap Marker	◆
Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	Ⓜ CR
Curb Cut Future Ramp	Ⓜ CCFR

Existing Metal Guardrail	⊠
Proposed Guardrail	⊠
Existing Cable Guiderail	⊠
Proposed Cable Guiderail	⊠
Equality Symbol	⊠
Pavement Removal	⊠

VEGETATION:

Single Tree	⊙
Single Shrub	⊙
Hedge	⊠
Woods Line	⊠

Orchard	⊙
Vineyard	⊠ Vineyard

EXISTING STRUCTURES:

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

UTILITIES:

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	⊙
Recorded U/G Power Line	-P-
Designated U/G Power Line (S.U.E.*)	-P-

TELEPHONE:

Existing Telephone Pole	⊙
Proposed Telephone Pole	⊙
Telephone Manhole	⊙
Telephone Booth	⊠
Telephone Pedestal	⊠
Telephone Cell Tower	⊙
U/G Telephone Cable Hand Hole	⊠
Recorded U/G Telephone Cable	-T-
Designated U/G Telephone Cable (S.U.E.*)	-T-
Recorded U/G Telephone Conduit	-TC-
Designated U/G Telephone Conduit (S.U.E.*)	-TC-
Recorded U/G Fiber Optics Cable	-T FO-
Designated U/G Fiber Optics Cable (S.U.E.*)	-T FO-

WATER:

Water Manhole	⊙
Water Meter	⊙
Water Valve	⊙
Water Hydrant	⊙
Recorded U/G Water Line	-W-
Designated U/G Water Line (S.U.E.*)	-W-
Above Ground Water Line	-A/G Water-

TV:

TV Satellite Dish	⊙
TV Pedestal	⊠
TV Tower	⊙
U/G TV Cable Hand Hole	⊠
Recorded U/G TV Cable	-TV-
Designated U/G TV Cable (S.U.E.*)	-TV-
Recorded U/G Fiber Optic Cable	-TV FO-
Designated U/G Fiber Optic Cable (S.U.E.*)	-TV FO-

GAS:

Gas Valve	⊙
Gas Meter	⊙
Recorded U/G Gas Line	-G-
Designated U/G Gas Line (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-
Recorded SS Forced Main Line	-FSS-
Designated SS Forced Main Line (S.U.E.*)	-FSS-

MISCELLANEOUS:

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

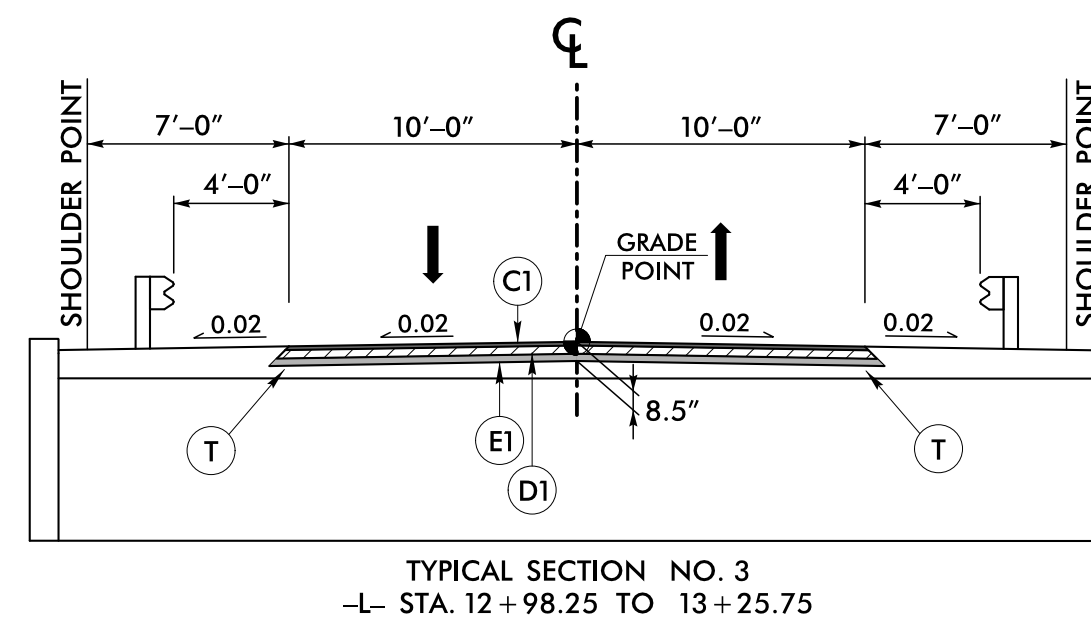
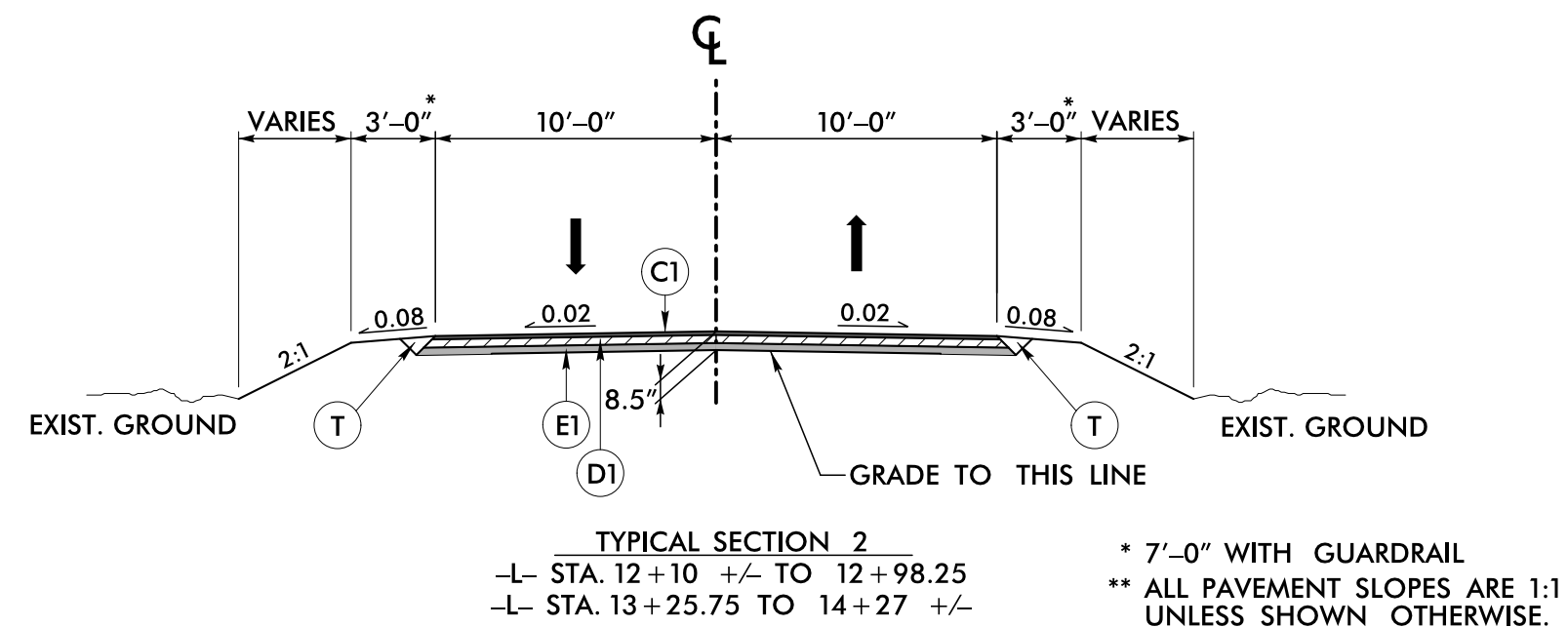
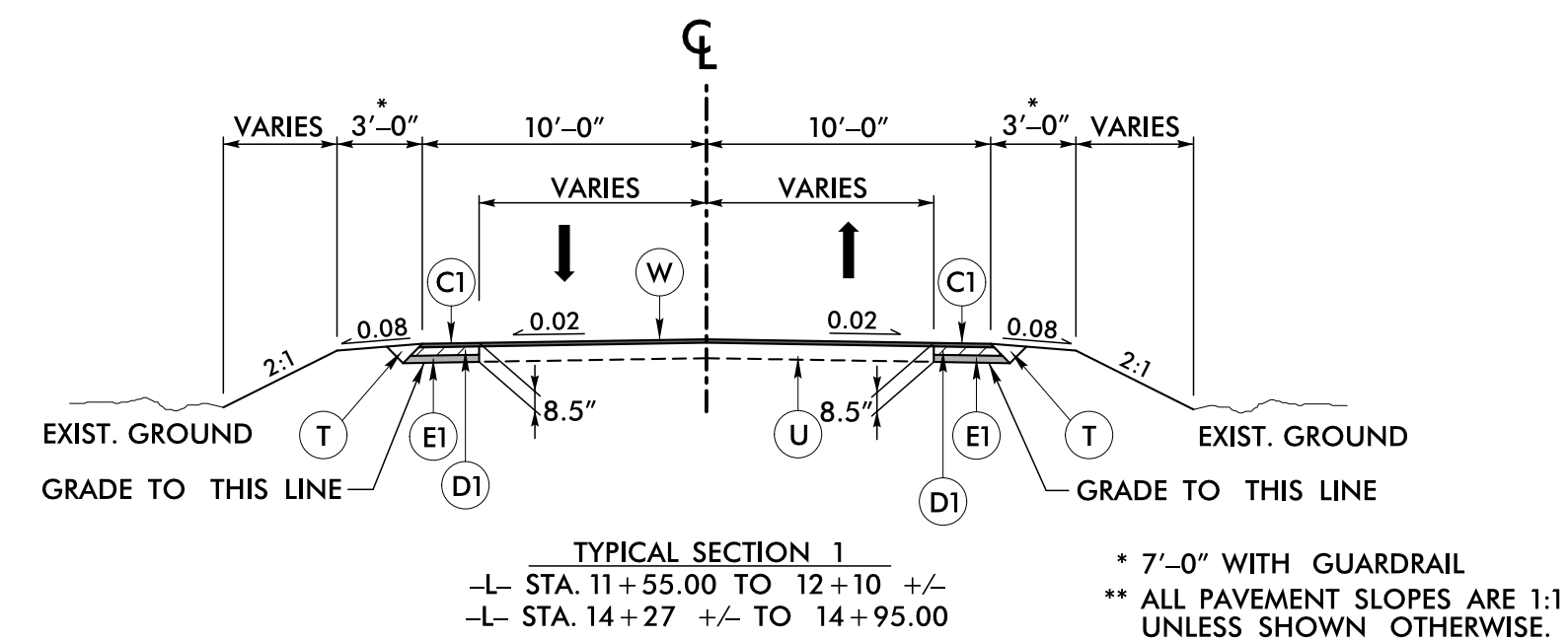
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

EARTHWORK SUMMARY (IN CUBIC YARDS)

CHAIN	FROM STATION	TO STATION	SIDE	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-	11+55.00	14+95.00	LT & RT	328		268		60
LOSS DUE TO CLEARING AND GRUBBING				-136				-136
WASTE IN LIEU OF BORROW								
PROJECT TOTAL				192		268	76	
ESTIMATE 5% FOR TOPSOIL ON BORROW PITS							4	
GRAND TOTAL				192		268	80	
SAY				195			85	

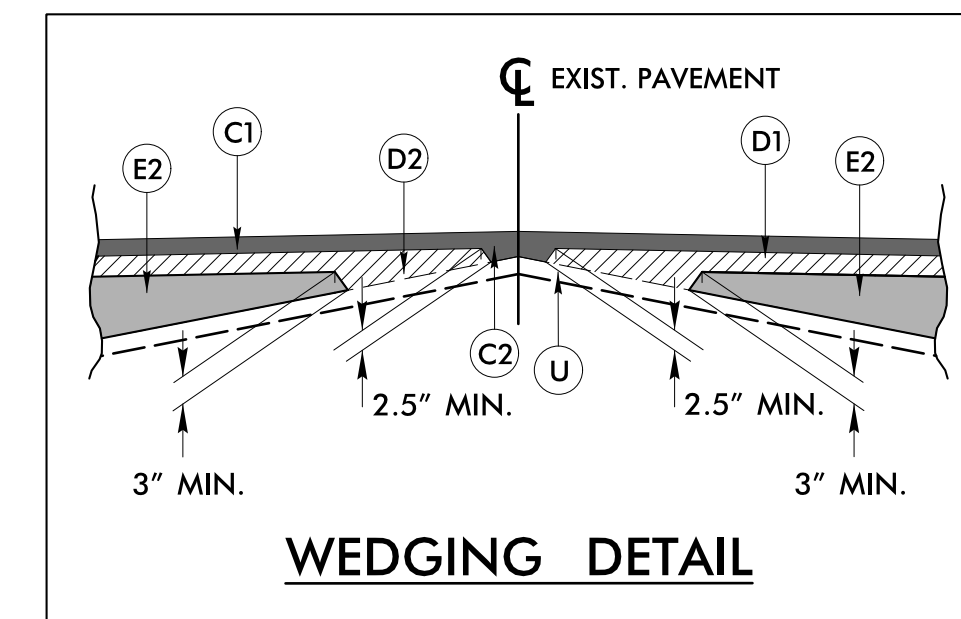
NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

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



PROJECT REFERENCE NO. 17BP10R.72	SHEET NO. 3
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PAVEMENT DESIGN PROVIDED BY NCDOT	

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 3.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	PAVEMENT WEDGING



* 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

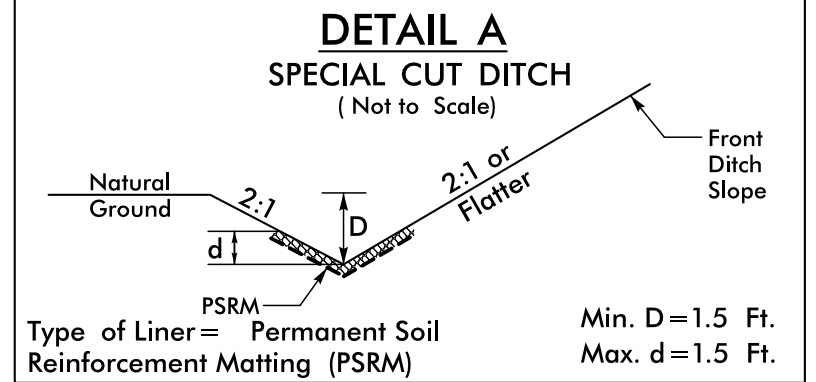
SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W*		ANCHORS							IMPACT ATTENUATOR TYPE 350	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH 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
-L-	12+26.95	13+92.30	LT	162.50			13+22.00	12+94.50	4.0 - 4.5	7.0	25.0'	25.0'	0.5'	0.5'			2									ANCHOR GUARDRAIL POSTS TO CULVERT. SEE STRUCTURE PLANS.	
-L-	12+26.95	13+87.05	RT	162.50			13+02.00	13+29.50	4.0 - 4.5	7.0	25.0'	25.0'	0.5'	0.5'			2									ANCHOR GUARDRAIL POSTS TO CULVERT. SEE STRUCTURE PLANS.	
TOTAL:				325.00													4										
TOTAL ANCHOR LENGTH:				100.00																							
TOTAL GUARDRAIL LENGTH:				225.00																							
SAY:				225.00																							

11/13/2014 1:41:00 PM \\psh03\dj_rdy_psh03.dgn

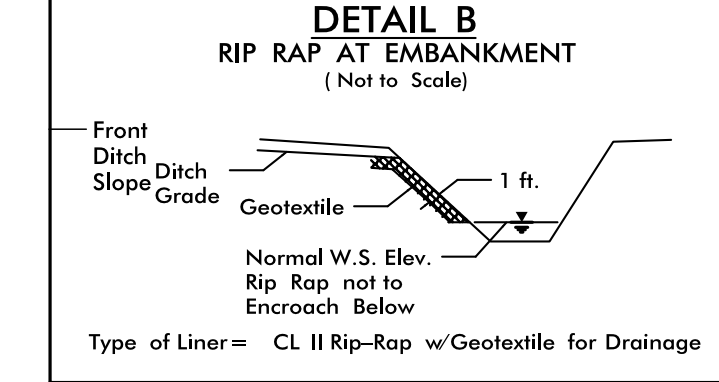
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "830019.BL-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 584427.449(++) EASTING: 1666583.453(++) ELEVATION: 402.73(++) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999855 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "830019.BL-2" TO -L- STATION 11+55.00 IS N 28° 10' 11.640" W 142.268(++) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

BL-1	N 584276.893	E 1666725.746	ELEV 412.26
BL-2	N 584427.449	E 1666583.453	ELEV 402.73
BL-3	N 584649.813	E 1666441.881	ELEV 415.19

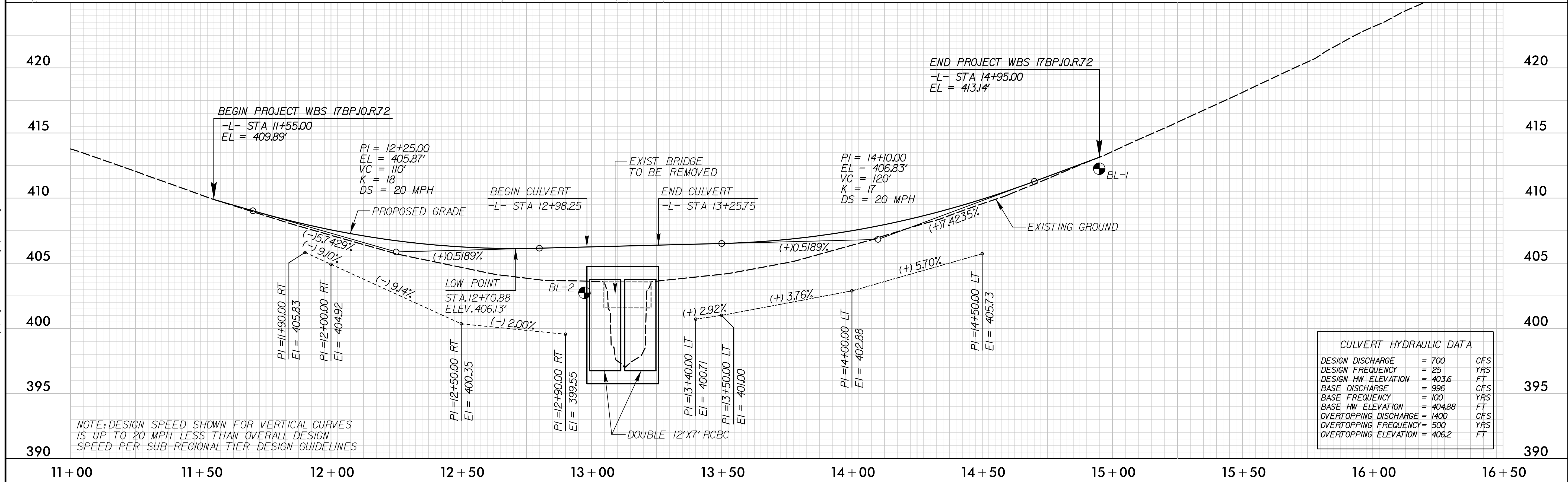
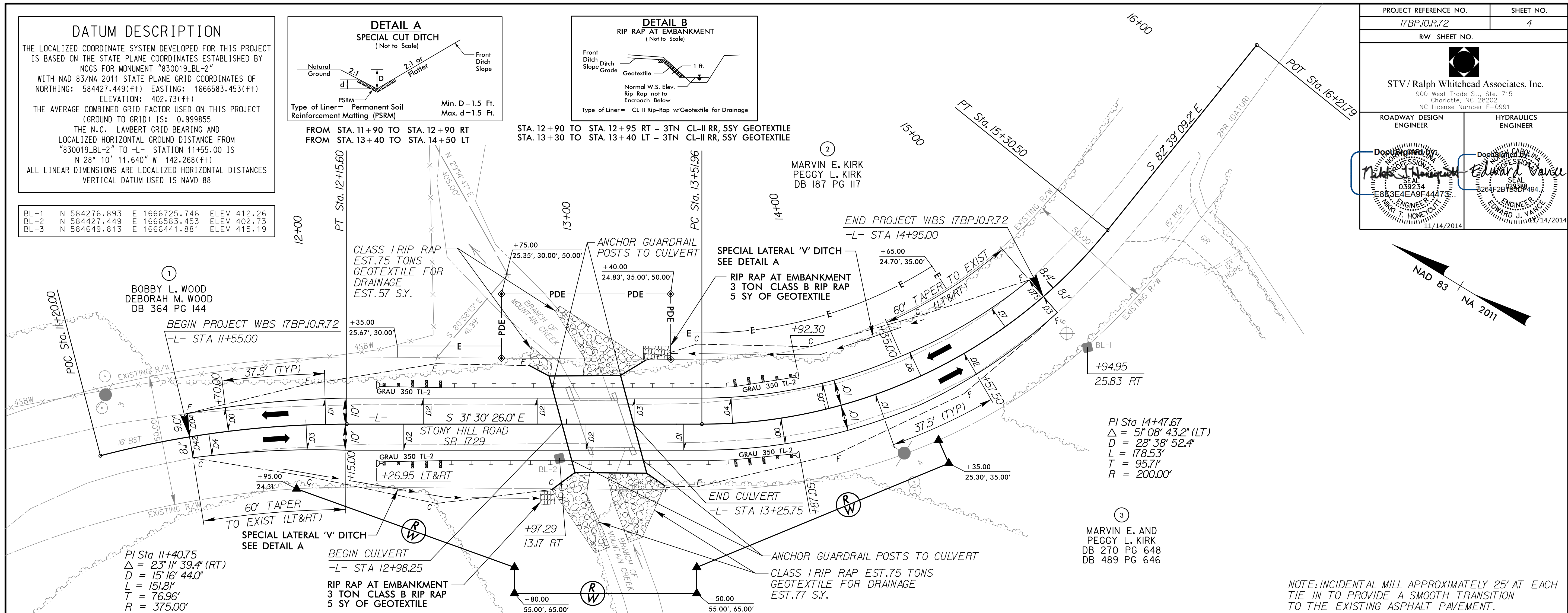


FROM STA. 11+90 TO STA. 12+90 RT
FROM STA. 13+40 TO STA. 14+50 LT



STA. 12+90 TO STA. 12+95 RT - 3TN CL-II RR, 5SY GEOTEXTILE
STA. 13+30 TO STA. 13+40 LT - 3TN CL-II RR, 5SY GEOTEXTILE


PROJECT REFERENCE NO. 17BPJ0.R.72	SHEET NO. 4
RW SHEET NO.	
STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

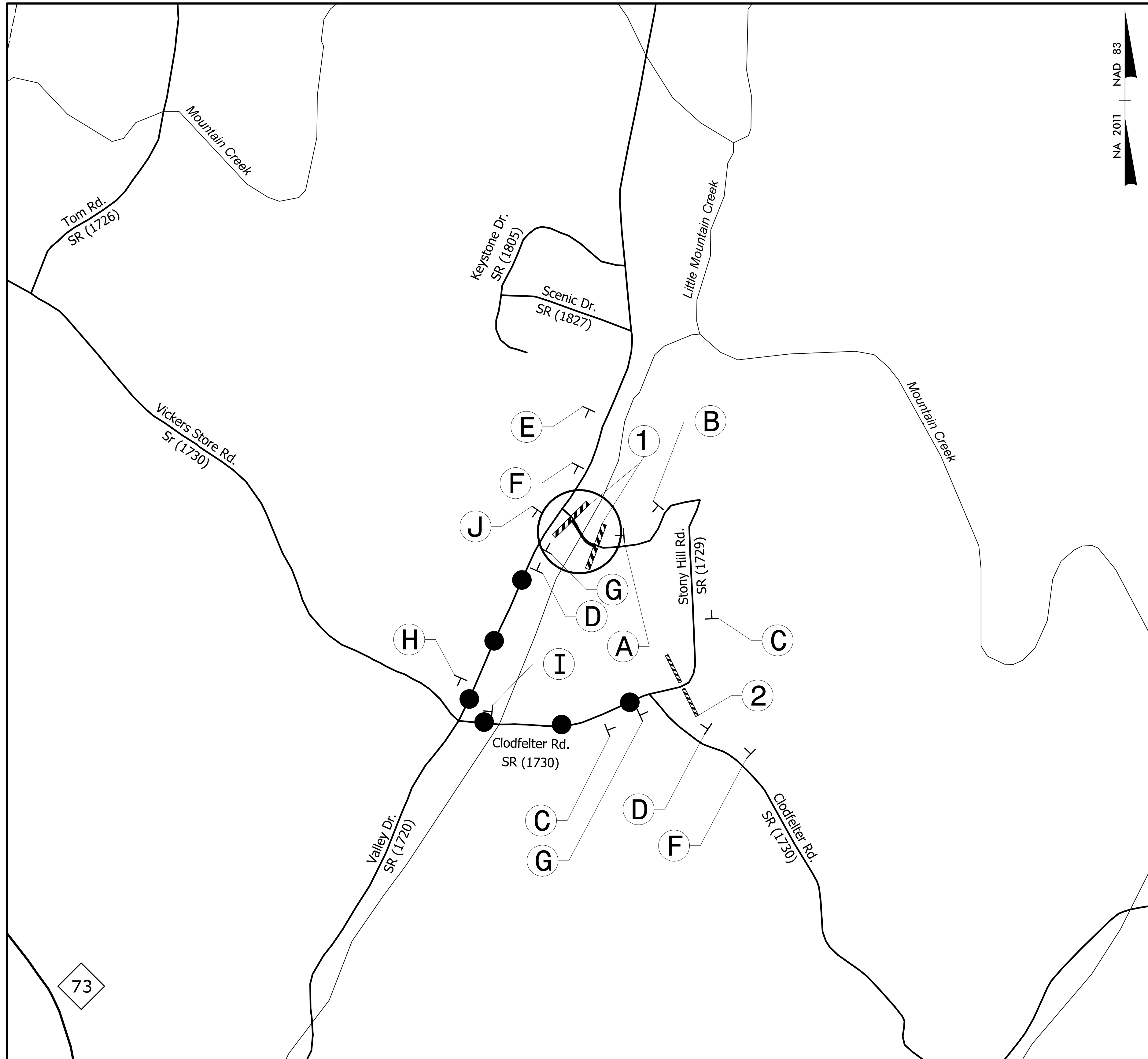
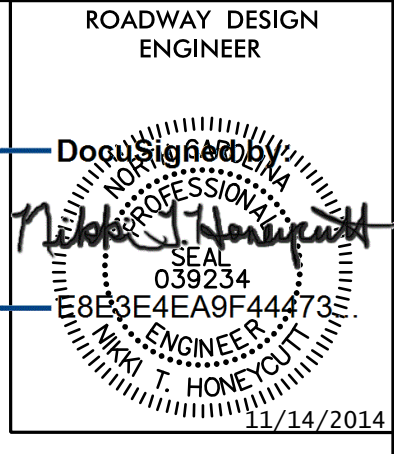


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 11/13/2014

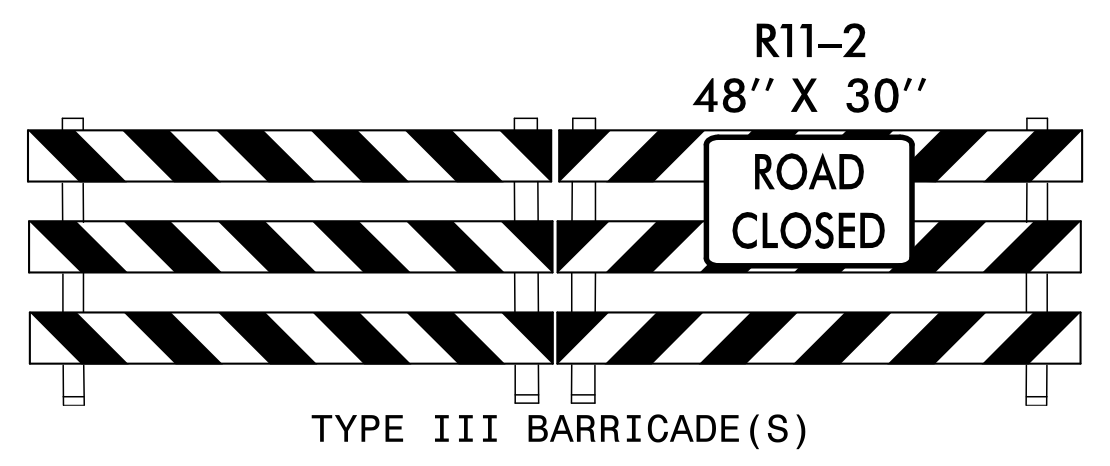
NOTE: INCIDENTAL MILL APPROXIMATELY 25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT.

OFF-SITE DETOUR SIGNING AND ROAD CLOSURE SIGNING

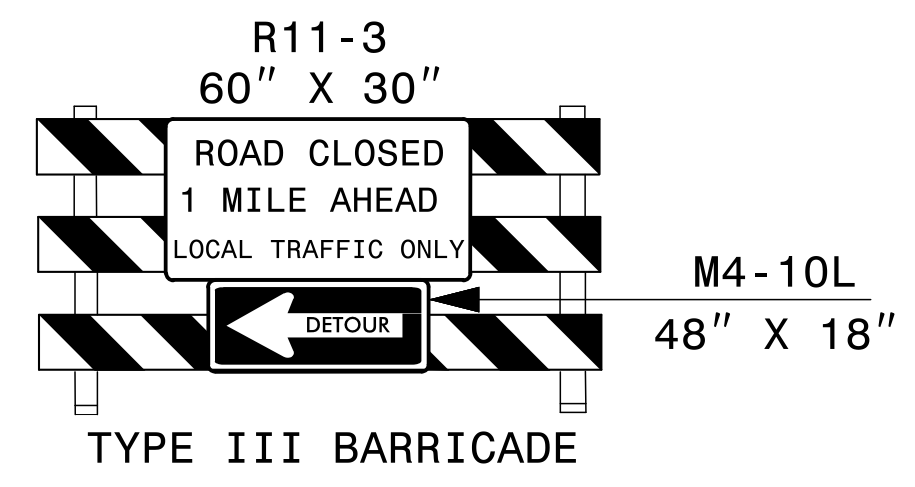
PROJECT REFERENCE NO. 17BPJ0R.72	SHEET NO. TMP-1
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	



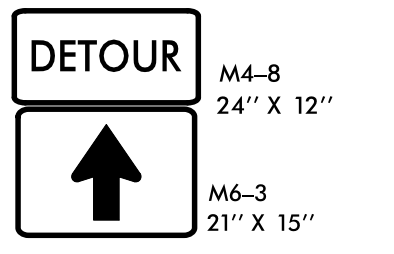
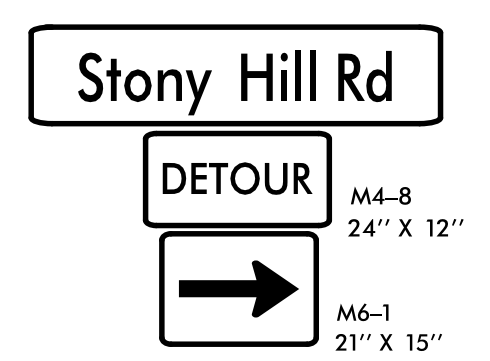
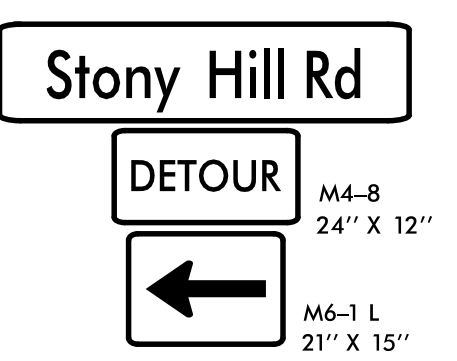
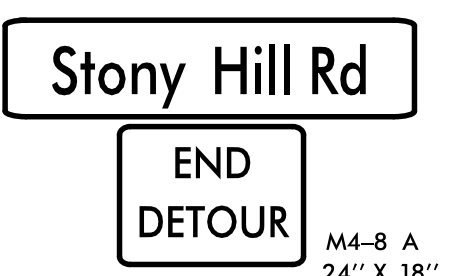
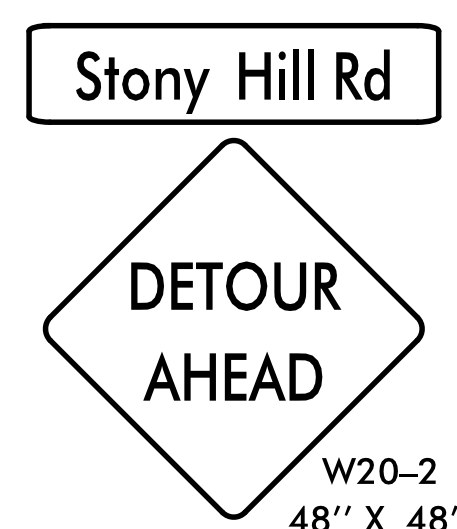
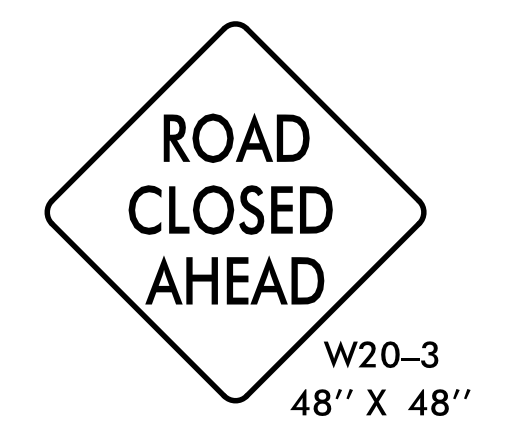
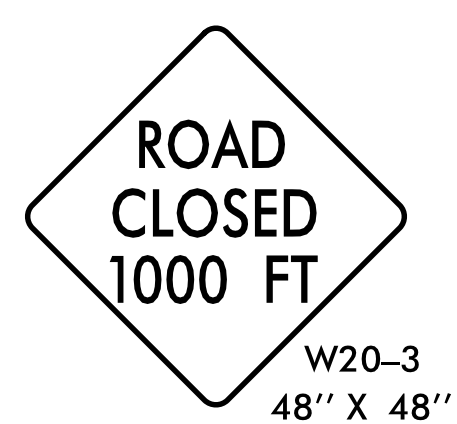
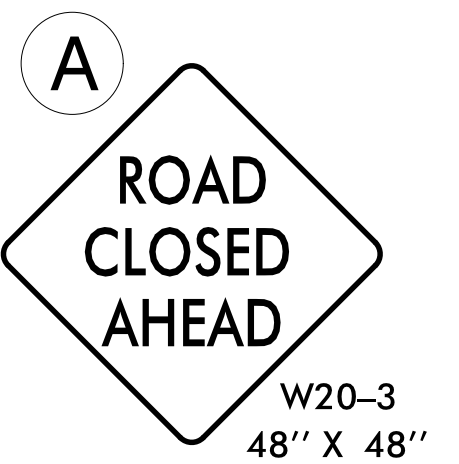
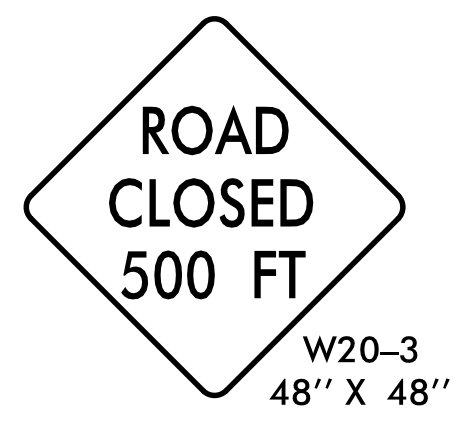
NA 2011 NAD 83



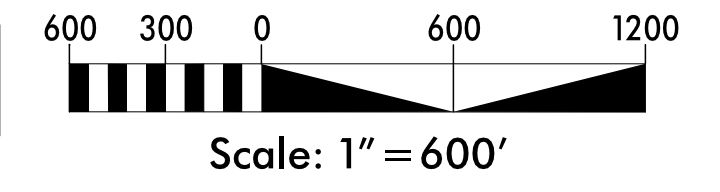
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2

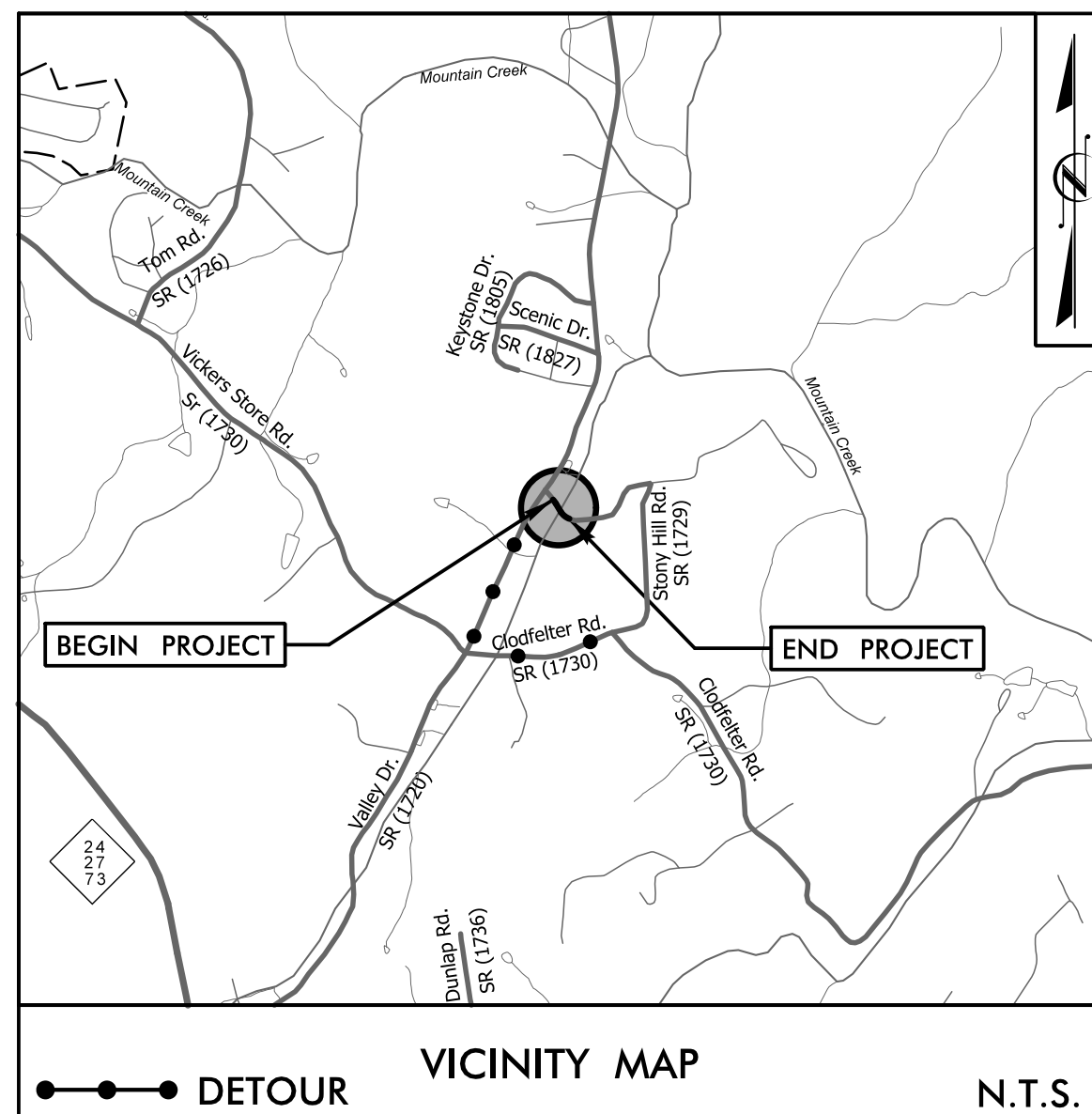


SEE ROADWAY STD DWG 1101.03, SHEET 1 OF 9 FOR ADVANCE WARNING AND BARRICADE PLACEMENT.



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PROJECT WBS: 17BP.10.R.72

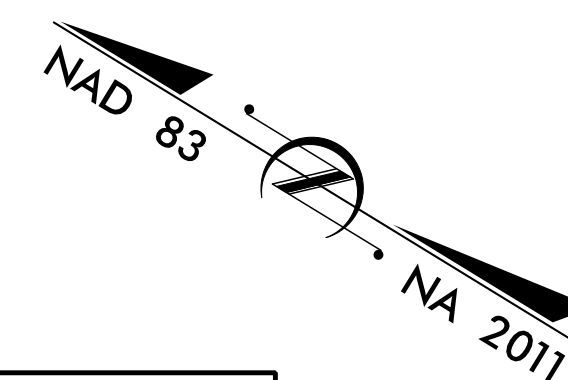


EROSION CONTROL PLANS

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

LOCATION: BRIDGE #830019 OVER BRANCH OF MT. CREEK

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE



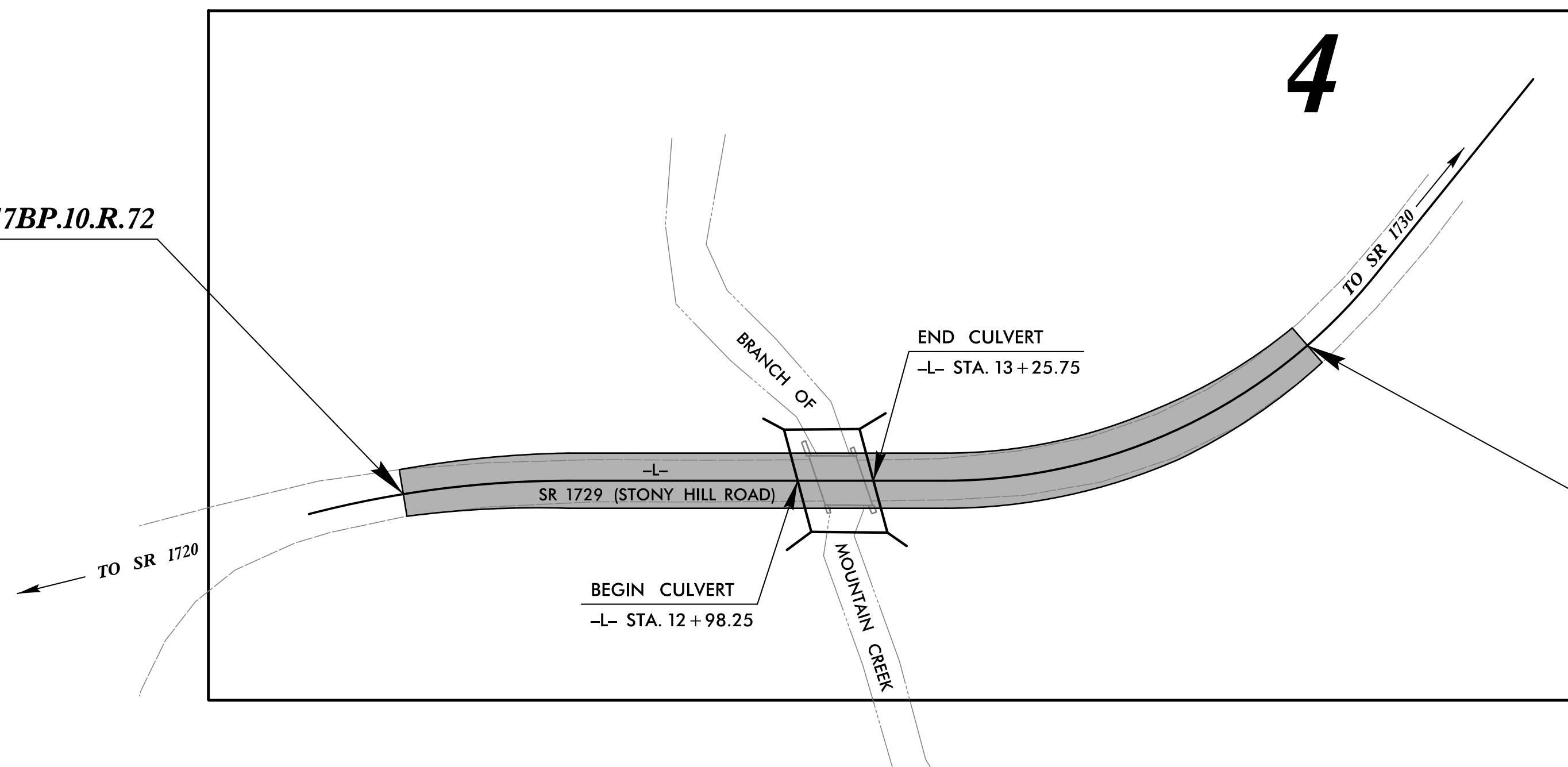
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.72	EC-1	7
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.72		P.E.	
17BP.10.R.72		R/W & UTILITIES	
17BP.10.R.72		CONSTRUCTION	

EROSION AND SEDIMENT CONTROL MEASURES

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

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

BEGIN PROJECT WBS 17BP.10.R.72
-L- STA. 11 + 55.00



END PROJECT WBS 17BP.10.R.72
-L- STA. 14 + 95.00

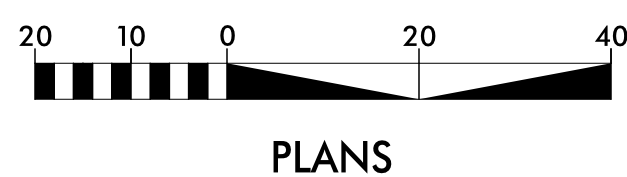
THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.

ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT

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

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

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Level III Designer
Ryan O'Mahony, PE #3645

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

PREPARED IN THE OFFICE OF:

STV / Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

2012 STANDARD SPECIFICATIONS

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 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

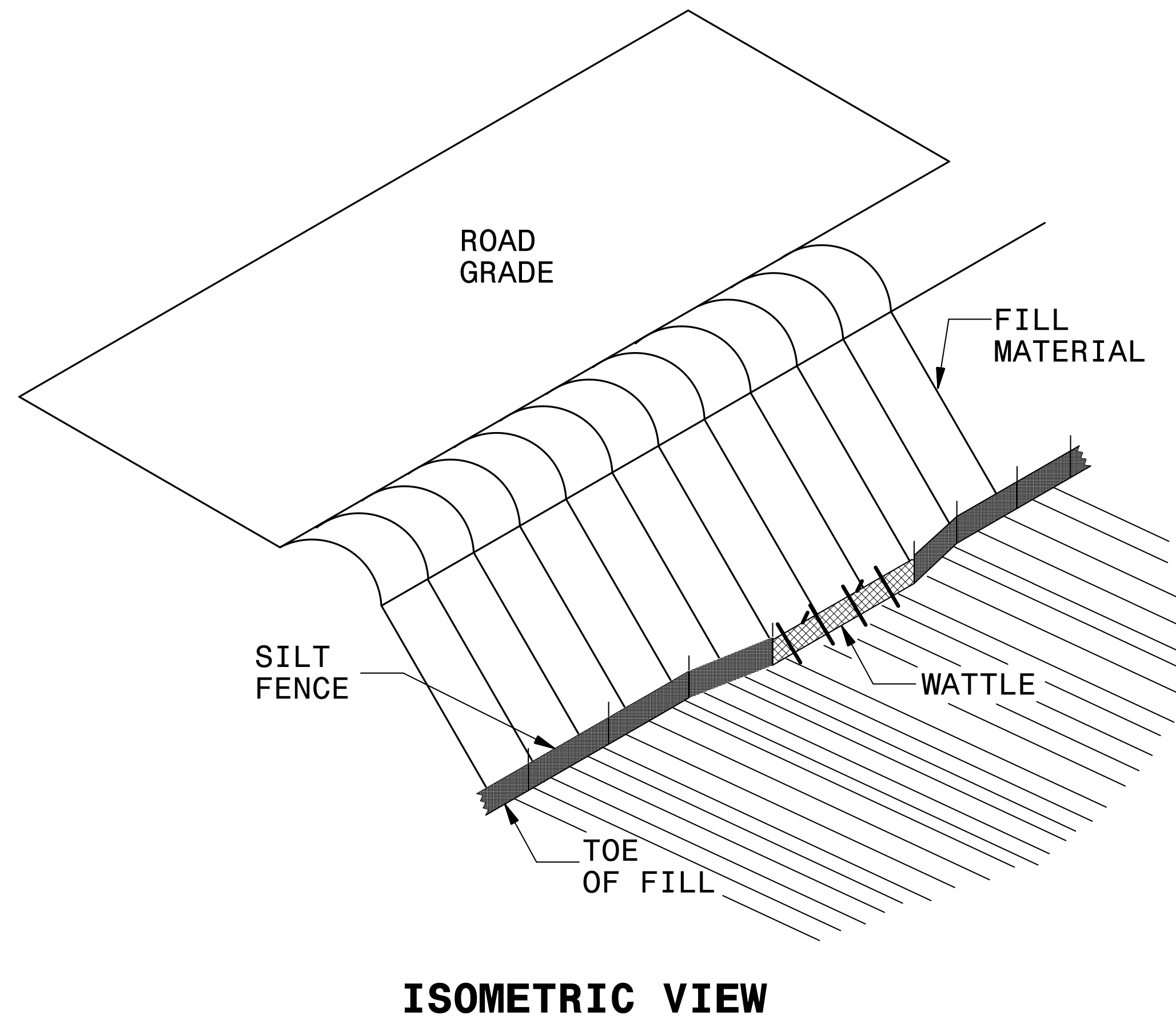
- 1605.01 Temporary Silt Fence
- 1607.01 Gravel Construction Entrance
- 1630.04 Stilling Basin
- 1630.06 Special Stilling Basin
- 1631.01 Matting Installation
- 1633.01 Temporary Rock Silt Check Type A
- 1645.01 Temporary Stream Crossing

EROSION CONTROL PLANS
11/13/2014

CONTRACT:

SILT FENCE WATTLE BREAK DETAIL

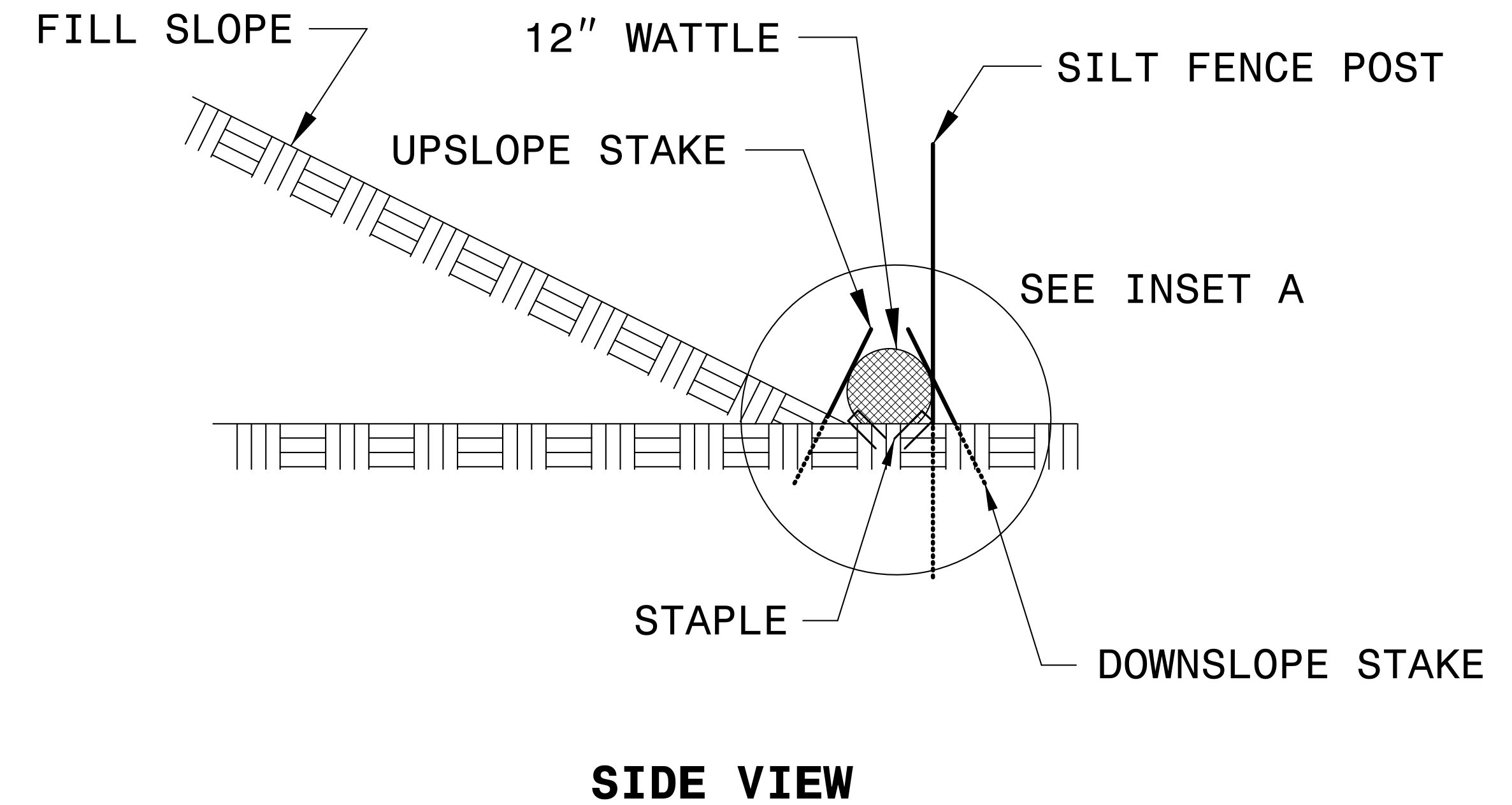
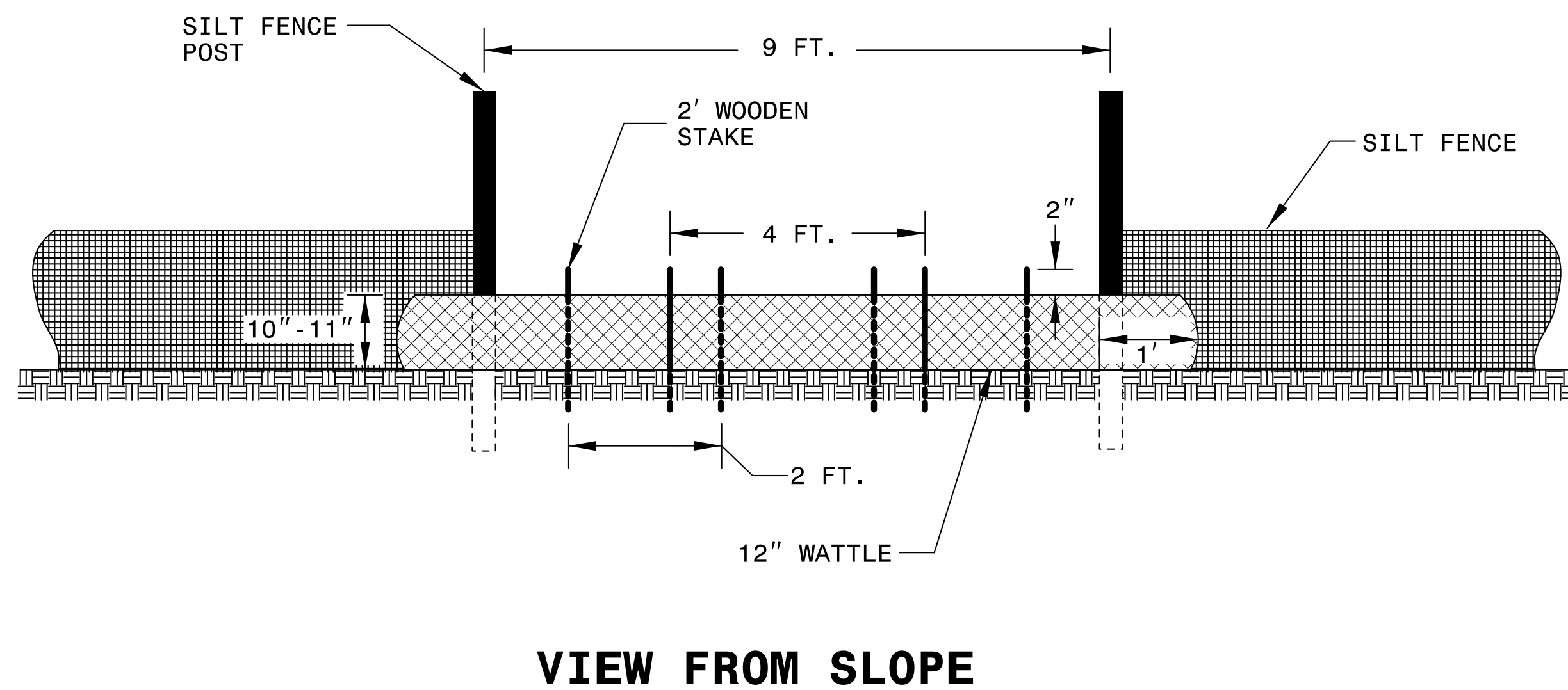
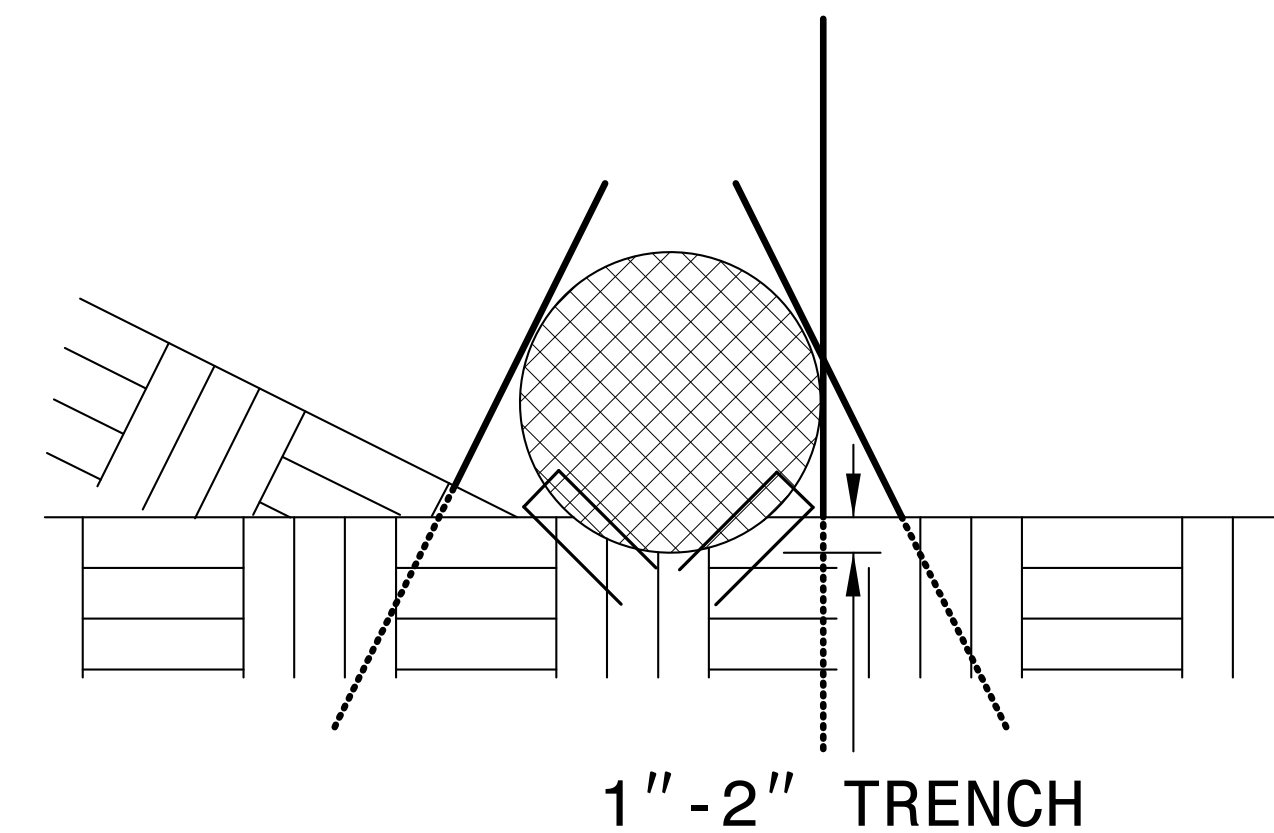
PROJECT REFERENCE NO. 17BPJ0.R.72	SHEET NO. EC-2
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	



NOTES:

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR 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

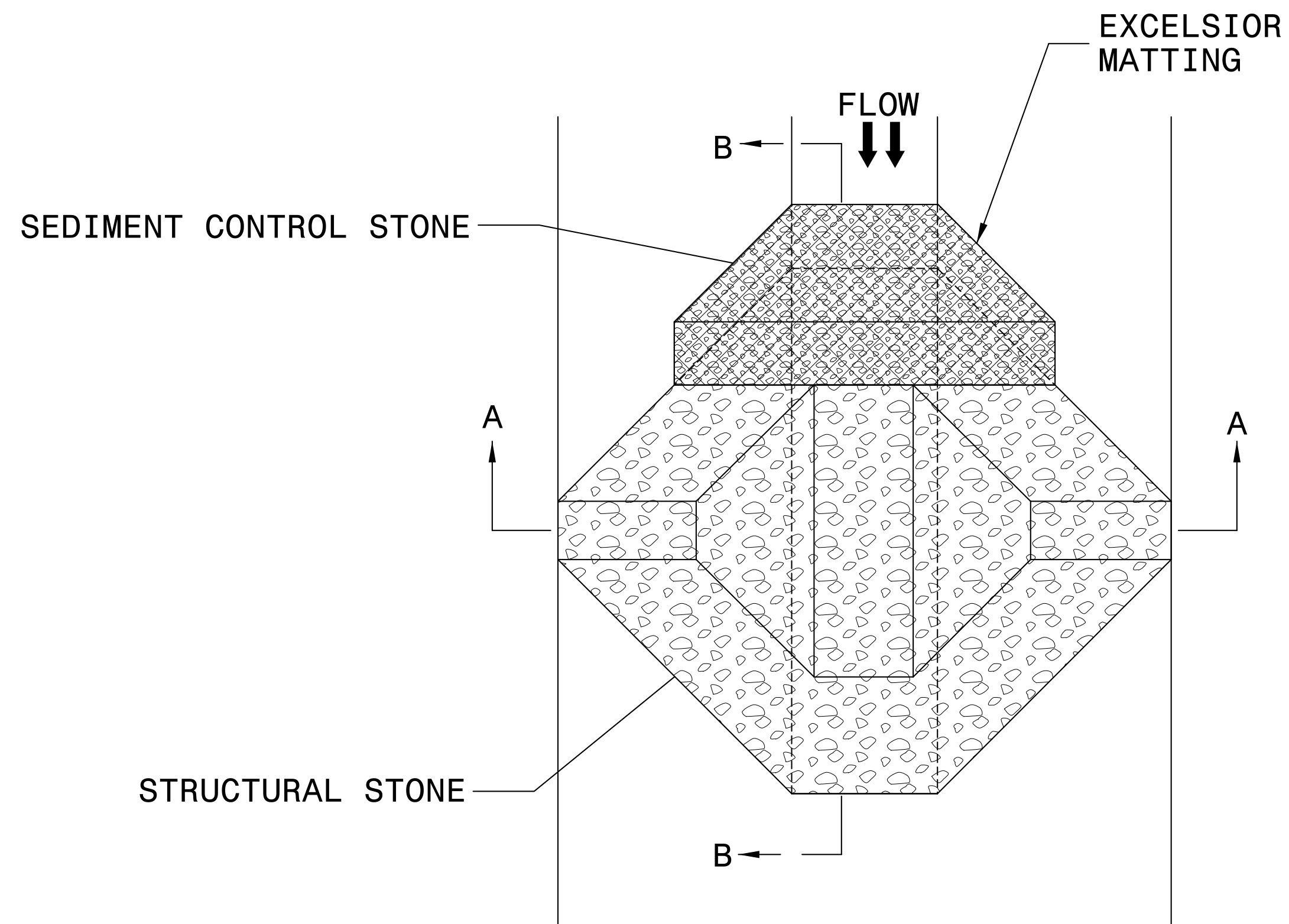


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11/13/2014

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

PROJECT REFERENCE NO. 17BPJ0R.72	SHEET NO. EC-2A
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	



PLAN

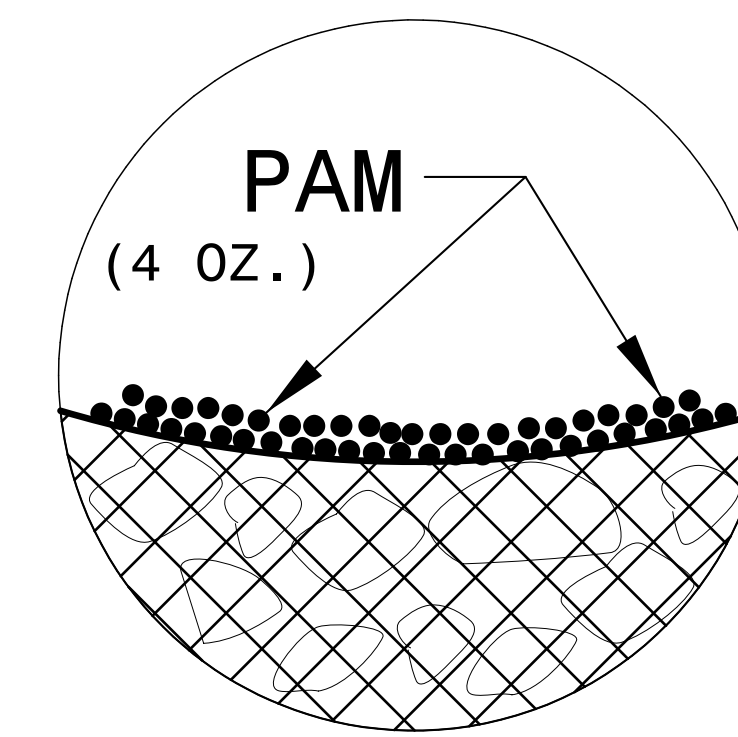
NOTES

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

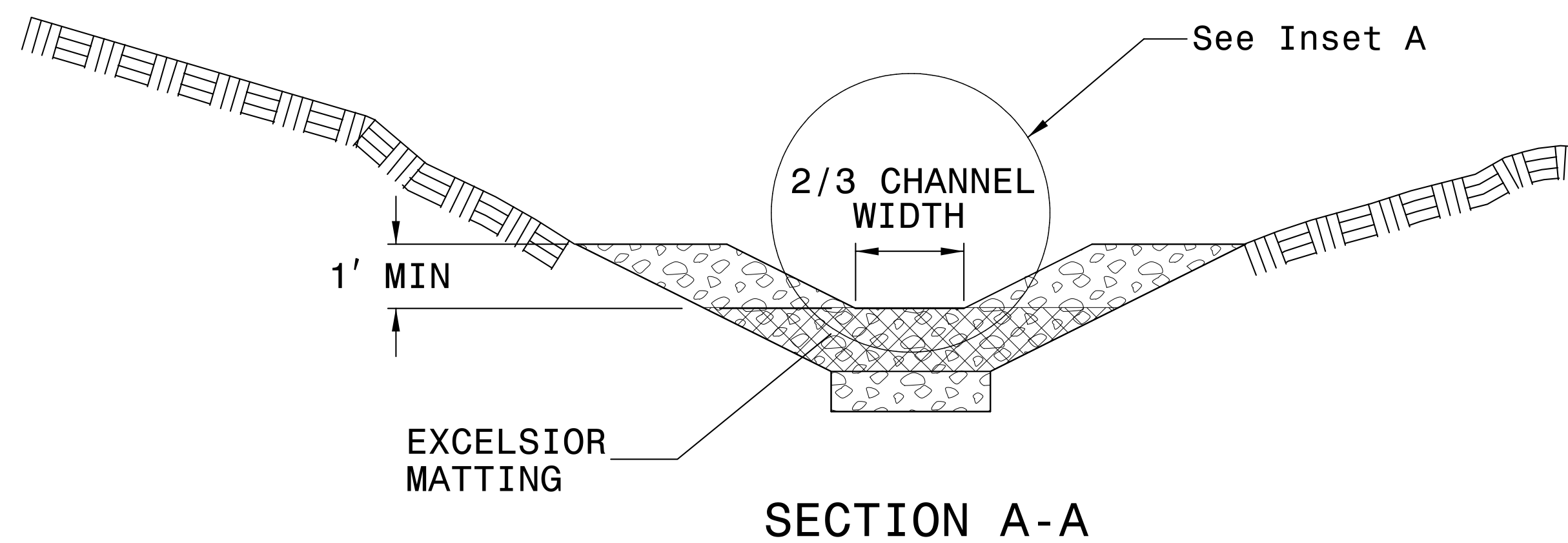
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

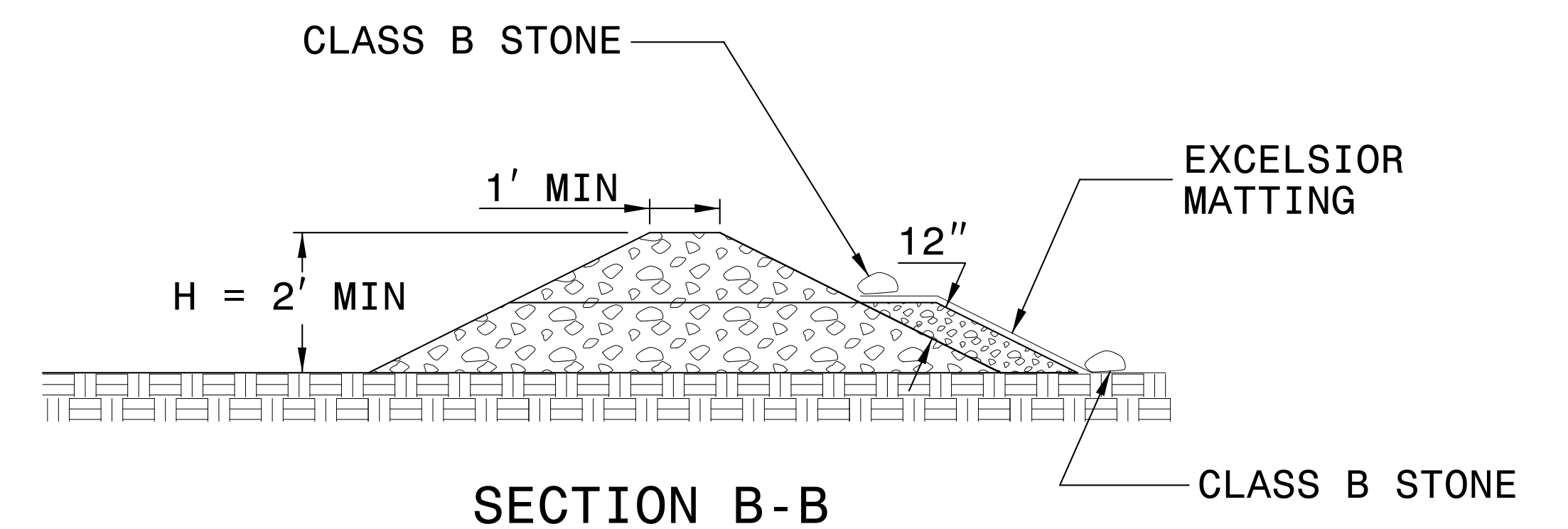
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A




SECTION B-B

NOT TO SCALE

r:\Roadway\Proj\EC\1072_rdy_psh_EC02A.dgn

11/13/2014

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
17BPJ0R.72	EC-3
RW SHEET NO.	
	
STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	

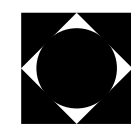
SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL (FOR SLOPE STABILIZATION)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
			SUBTOTAL		320
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				30
				TOTAL	350
				SAY	350

PERMANENT SOIL REINFORCEMENT MATTING (FOR DITCH STABILIZATION)


CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	GEO FOR DRAINAGE ESTIMATE (SY)
4	-L- V-DITCH	12+00	12+85	RT	65
4	-L- V-DITCH	13+40	14+50	LT	85
				SUBTOTAL	150
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				15
				TOTAL	165
				SAY	165

PROJECT REFERENCE NO.	SHEET NO.
17BPJ0R72	EC-3A
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. <small>900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991</small>	

SOIL STABILIZATION REQUIREMENTS

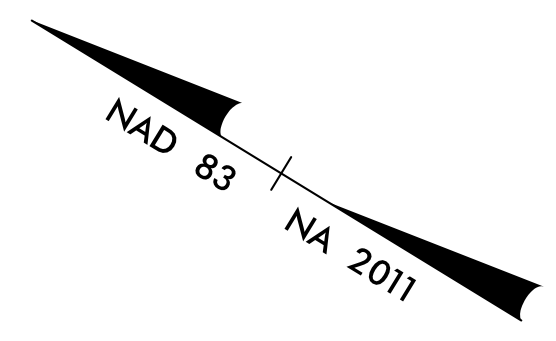
Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity. Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

<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.

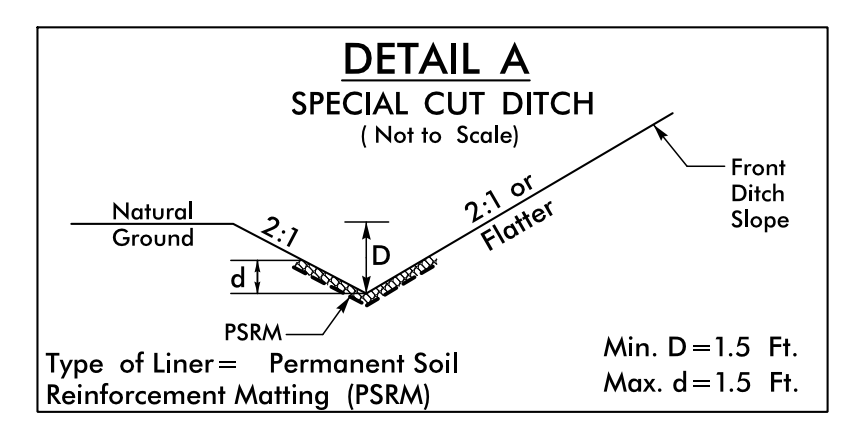
PROJECT REFERENCE NO.	SHEET NO.
17BP10.R72	EC-4/CONST.4
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830019
SCALE: 1"=20'

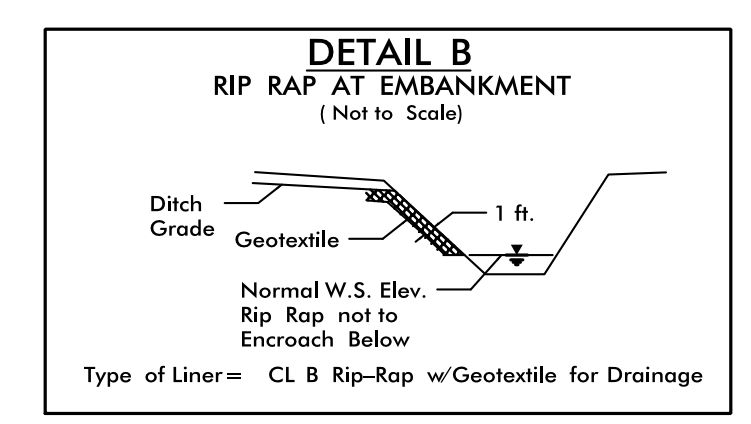
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



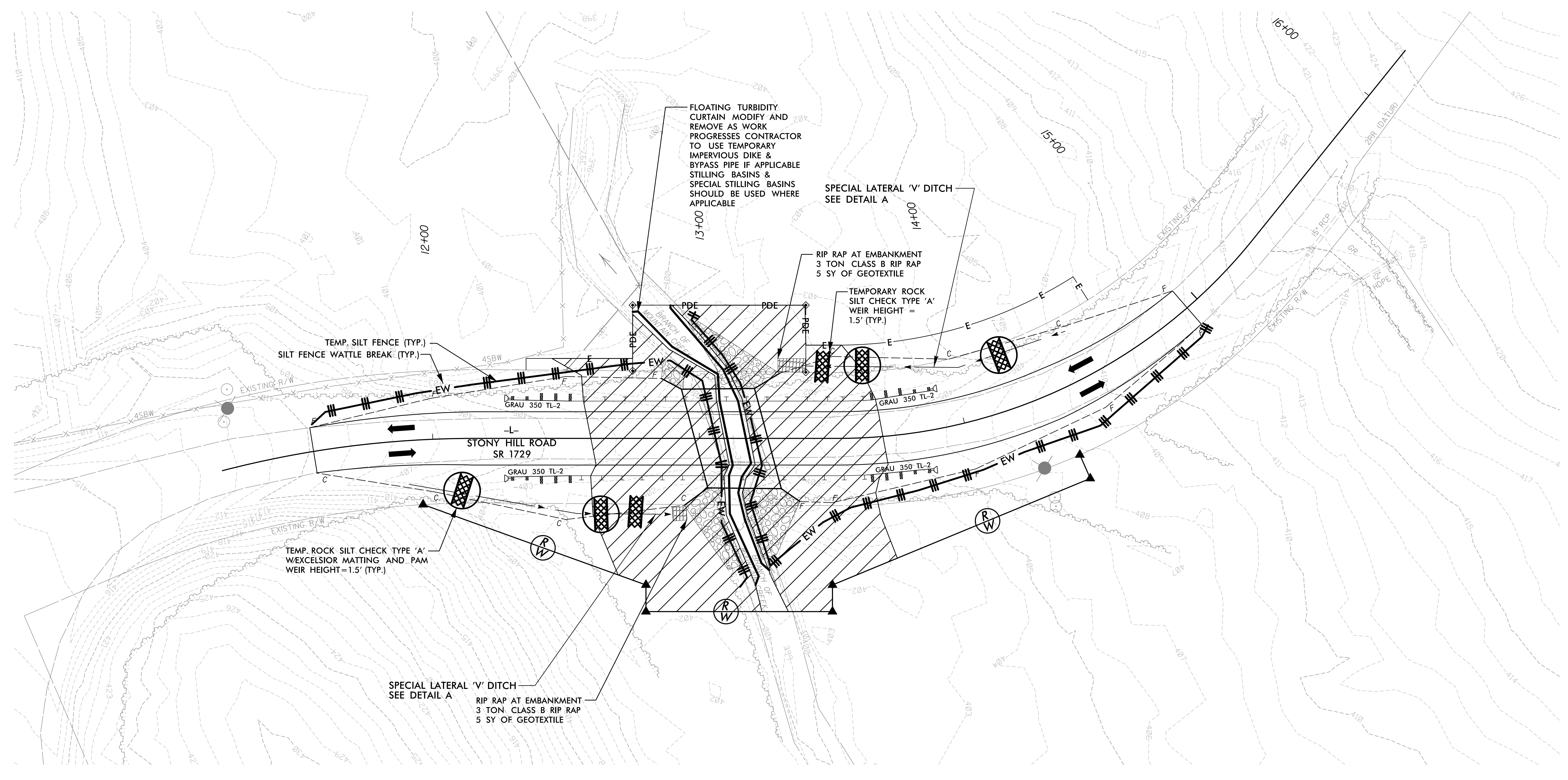
- CULVERT BYPASS PHASING**
1. CONSTRUCT STILLING BASIN(S) WHERE APPLICABLE.
 2. CONSTRUCT TEMPORARY CHANNEL CHANGE WITH LINER, BYPASS PUMPING APPARATUS WITH TEMPORARY FLEXIBLE HOSE AND/OR TEMPORARY SMOOTH LINE PIPE (24-INCH DIAMETER).
 3. CONSTRUCT IMPERVIOUS DIKES, DIVERTING FLOW THROUGH TEMPORARY CHANNEL/PIPE/PUMP CHANGE.
 4. CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVEMENTS.
 5. REMOVE IMPERVIOUS DIKES AND TEMPORARY CHANNEL/PIPE/PUMP CHANGE, DIVERTING FLOW THROUGH PROPOSED CULVERT.
 6. REMOVE STILLING BASIN(S), AND COMPLETE ROADWAY.



FROM STA. 11+90 TO STA. 12+90 RT
FROM STA. 13+40 TO STA. 14+50 LT



STA. 12+90 TO STA. 12+95 RT - 3TN CL-II RR, 5SY GEOTEXTILE
STA. 13+30 TO STA. 13+40 LT - 3TN CL-II RR, 5SY GEOTEXTILE

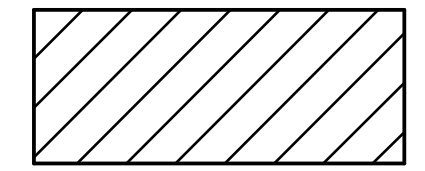


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11/13/2014

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.




ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE-B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS

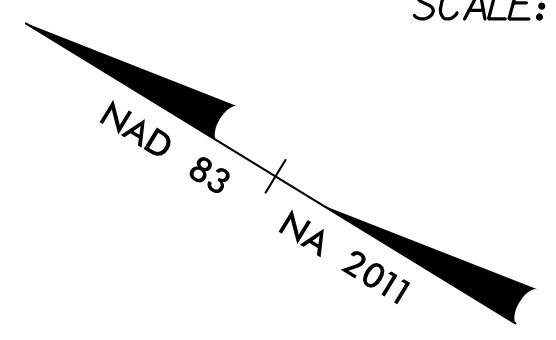
NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTE: INSTALL FLOATING TURBIDITY CURTAIN AS DIRECTED

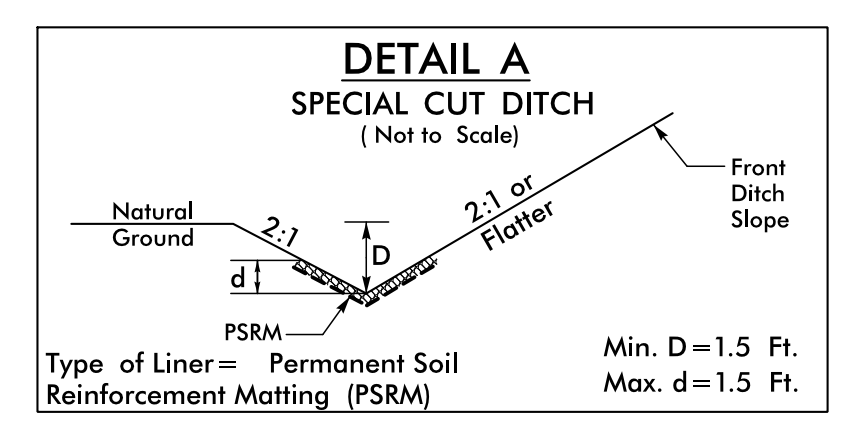
INSTALL PERMANENT DITCHES DURING C&G PHASE

PROJECT REFERENCE NO.	SHEET NO.
17BP10.R.72	EC-5/CONST.4
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 900 West Trade St., Ste. 715 Charlotte, NC 28202 NC License Number F-0991	

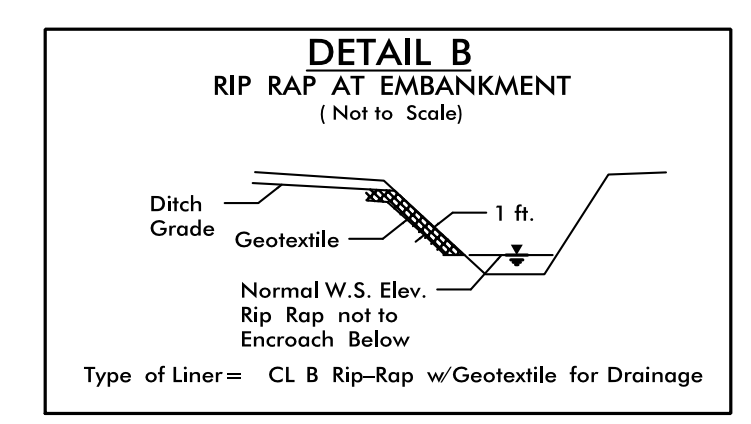
BRIDGE #830019
SCALE: 1"=20'



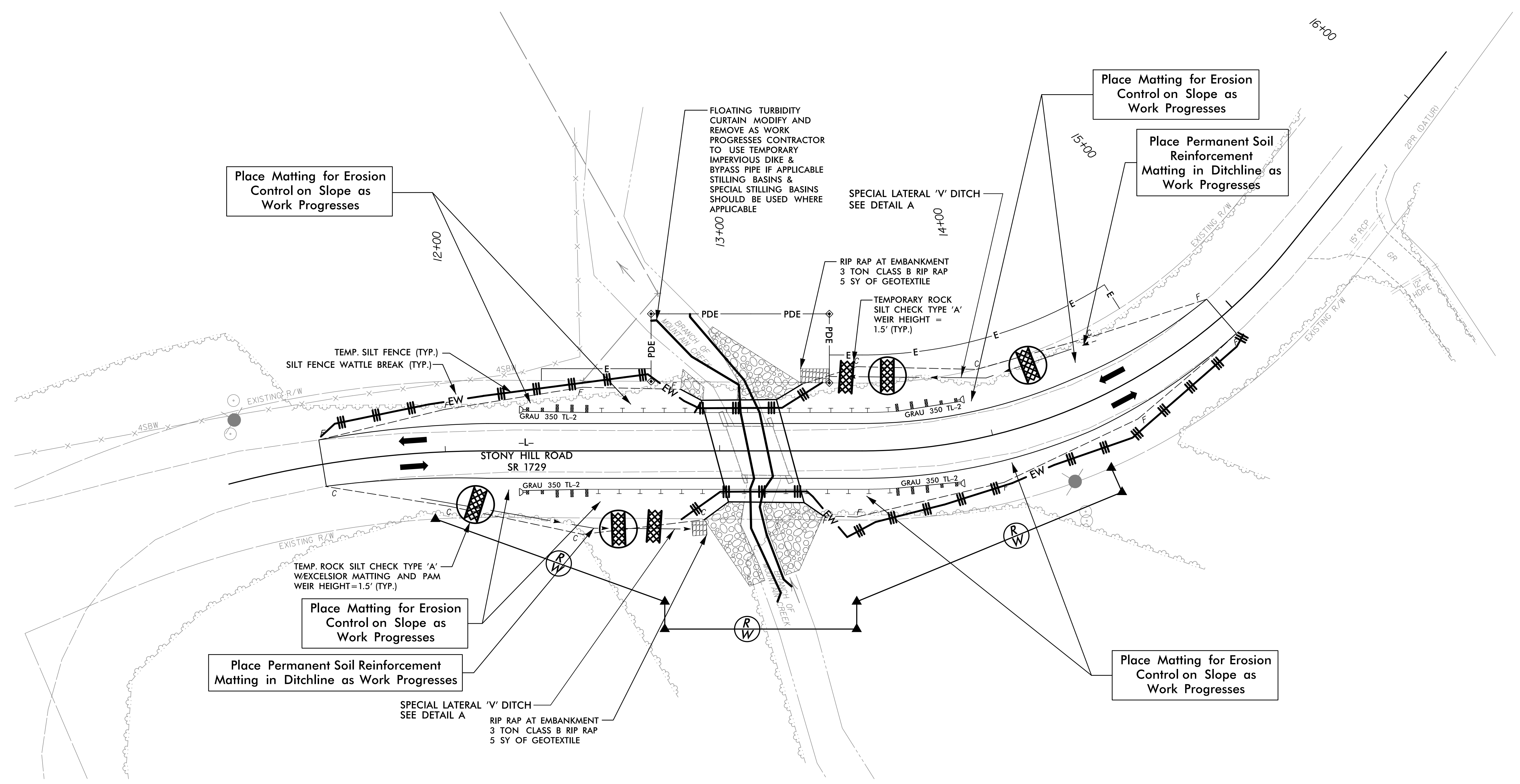
- CULVERT BYPASS PHASING**
1. CONSTRUCT STILLING BASIN(S) WHERE APPLICABLE.
 2. CONSTRUCT TEMPORARY CHANNEL CHANGE WITH LINER, BYPASS PUMPING APPARATUS WITH TEMPORARY FLEXIBLE HOSE AND/OR TEMPORARY SMOOTH LINE PIPE (24-INCH DIAMETER).
 3. CONSTRUCT IMPERVIOUS DIKES, DIVERTING FLOW THROUGH TEMPORARY CHANNEL/PIPE/PUMP CHANGE.
 4. CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVEMENTS.
 5. REMOVE IMPERVIOUS DIKES AND TEMPORARY CHANNEL/PIPE/PUMP CHANGE, DIVERTING FLOW THROUGH PROPOSED CULVERT.
 6. REMOVE STILLING BASIN(S), AND COMPLETE ROADWAY.



FROM STA. 11+90 TO STA. 12+90 RT
FROM STA. 13+40 TO STA. 14+50 LT



STA. 12+90 TO STA. 12+95 RT - 3TN CL-II RR, 5SY GEOTEXTILE
STA. 13+30 TO STA. 13+40 LT - 3TN CL-II RR, 5SY GEOTEXTILE



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 SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTE: INSTALL FLOATING TURBIDITY CURTAIN AS DIRECTED

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11/13/2014

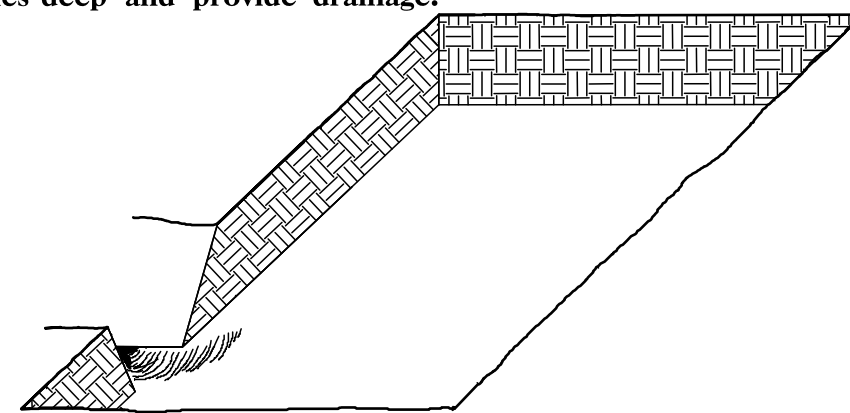
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.72	RF-1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.72		P.E.	
17BP.10.R.72		R/W & UTILITIES	
17BP.10.R.72		CONSTRUCTION	

PLANTING DETAILS

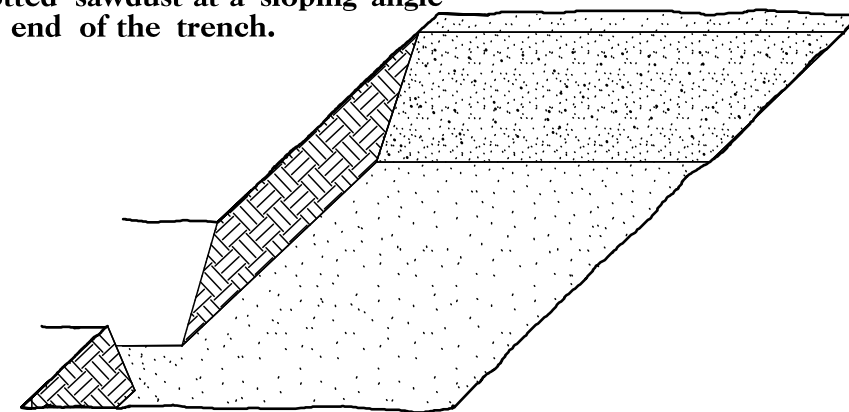
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

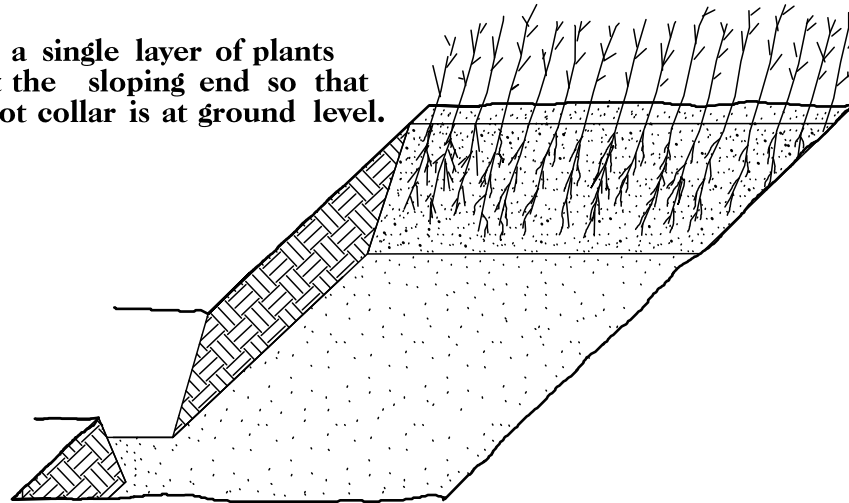
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



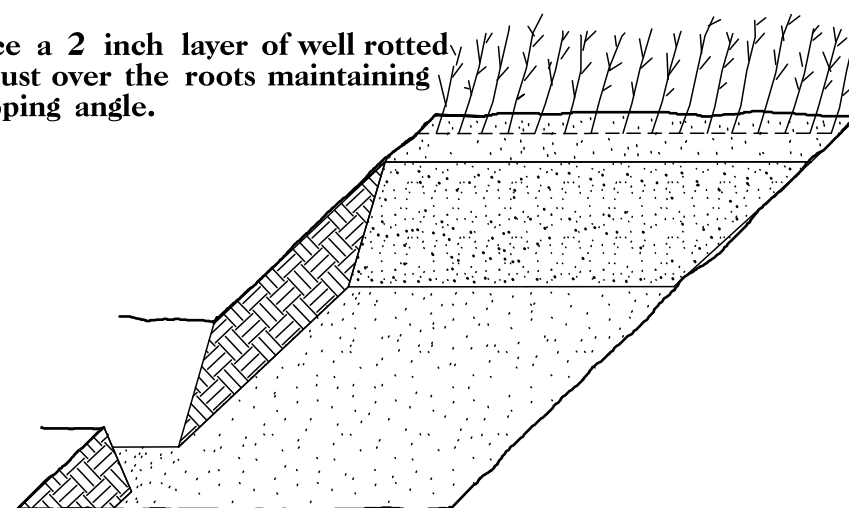
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

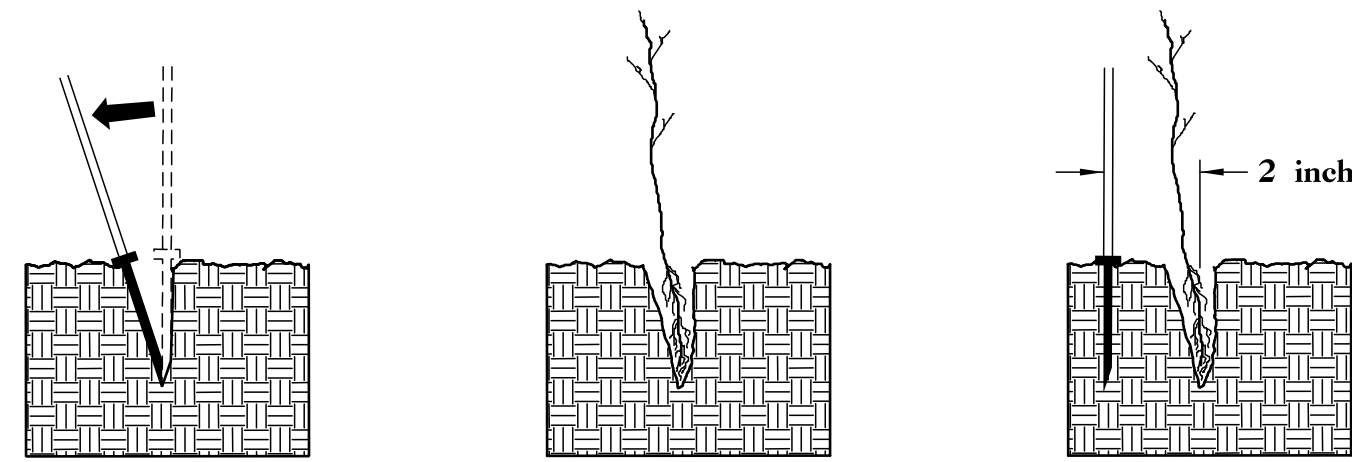


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

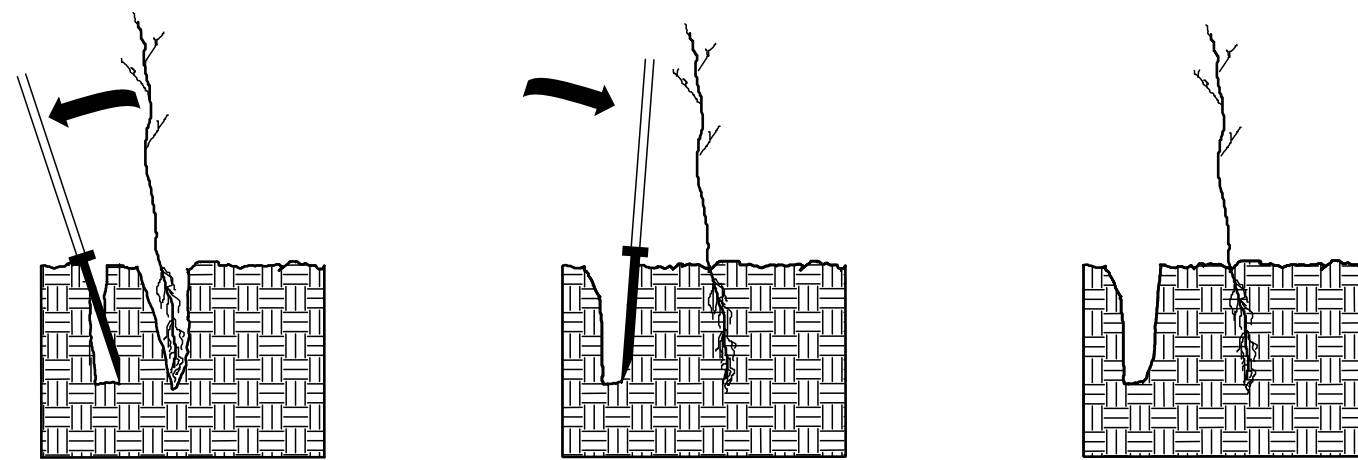


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

DIBBLE PLANTING METHOD USING THE KBC 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.



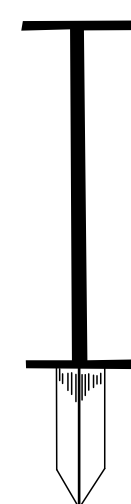
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

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.



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



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

REFORESTATION

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

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25% LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25% PLATANUS OCCIDENTALIS	SYCAMORE	12 in - 18 in BR
25% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25% BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

REFORESTATION DETAIL SHEET

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

PROJECT WBS: 17BP.10.R.72

CONTRACT:

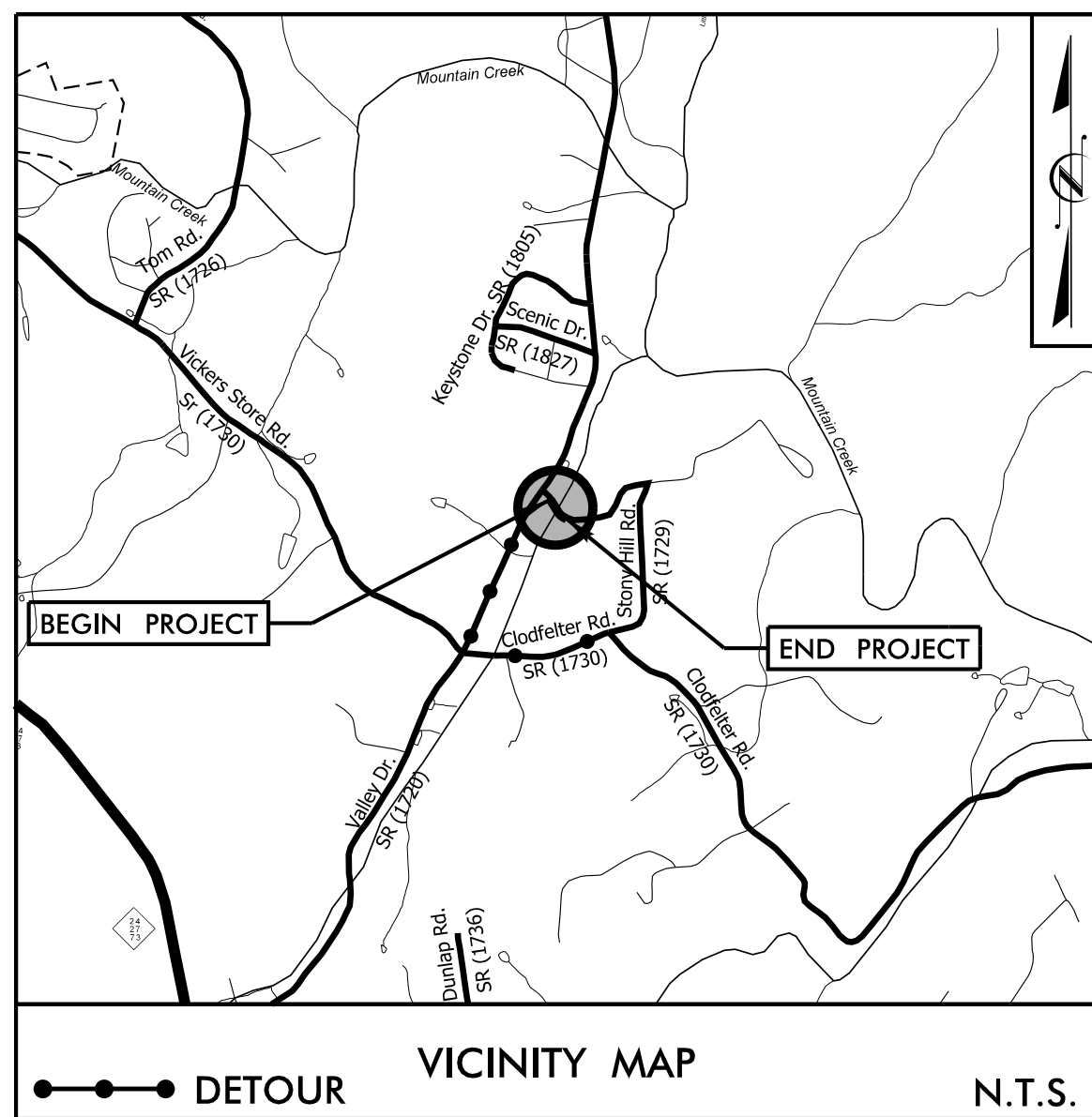
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
17BP.10.R.72	UO-1

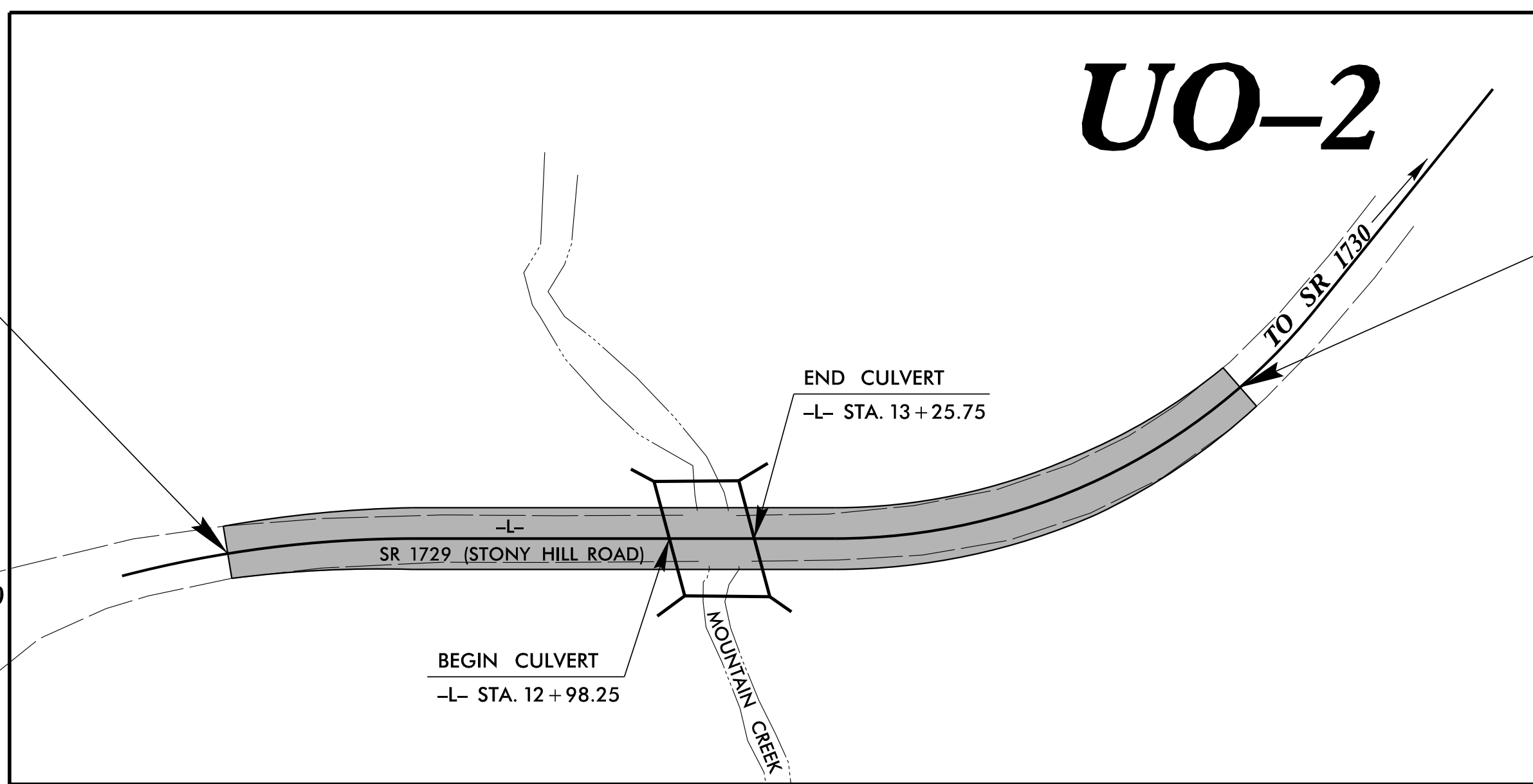
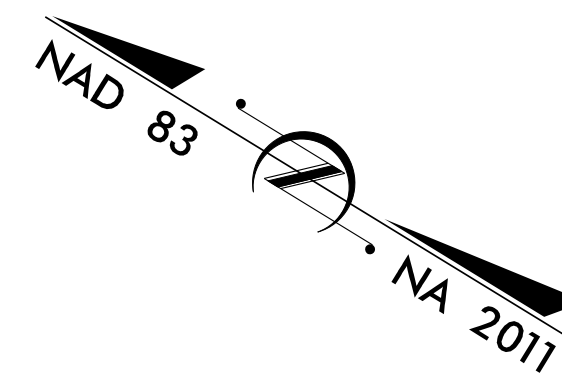
UTILITIES BY OTHERS PLANS STANLY COUNTY

**LOCATION: BRIDGE #019 OVER BRANCH OF MT. CREEK
ON SR 1729 (STONY HILL RD.)**

TYPE OF WORK: AERIAL POWER AND TELEPHONE

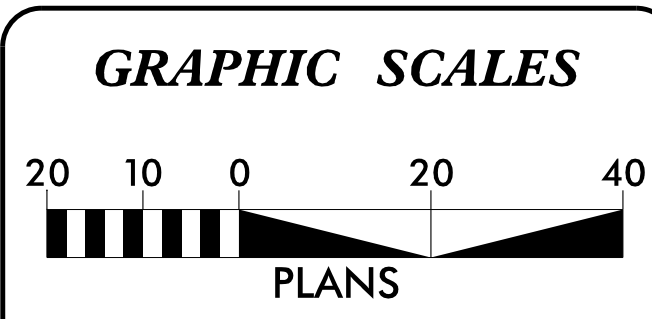


UTILITY BY OTHERS PLANS



BEGIN PROJECT WBS 17BP.10.R.72
-L- STA. 11 + 55.00

END PROJECT WBS 17BP.10.R.72
-L- STA. 14 + 95.00



INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLANS

UTILITY OWNERS ON PROJECT

(1) POWER - CITY OF ALBEMARLE
(2) TELEPHONE - WINDSTREAM

SEAL

PREPARED FOR THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES ENGINEERING
SECTION**

1591 MAIL SERVICES CENTER
RALEIGH, NC 27699-1591
PHONE (919) 250-4128
FAX (919) 250-4119

<u>Roger Worthington, P.E.</u>	UTILITIES SECTION ENGINEER
<u>Xxxx Xxxx, P.E.</u>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<u>Reece Schuler, PE</u>	UTILITIES PROJECT DESIGNER

UTILITIES BY OTHERS

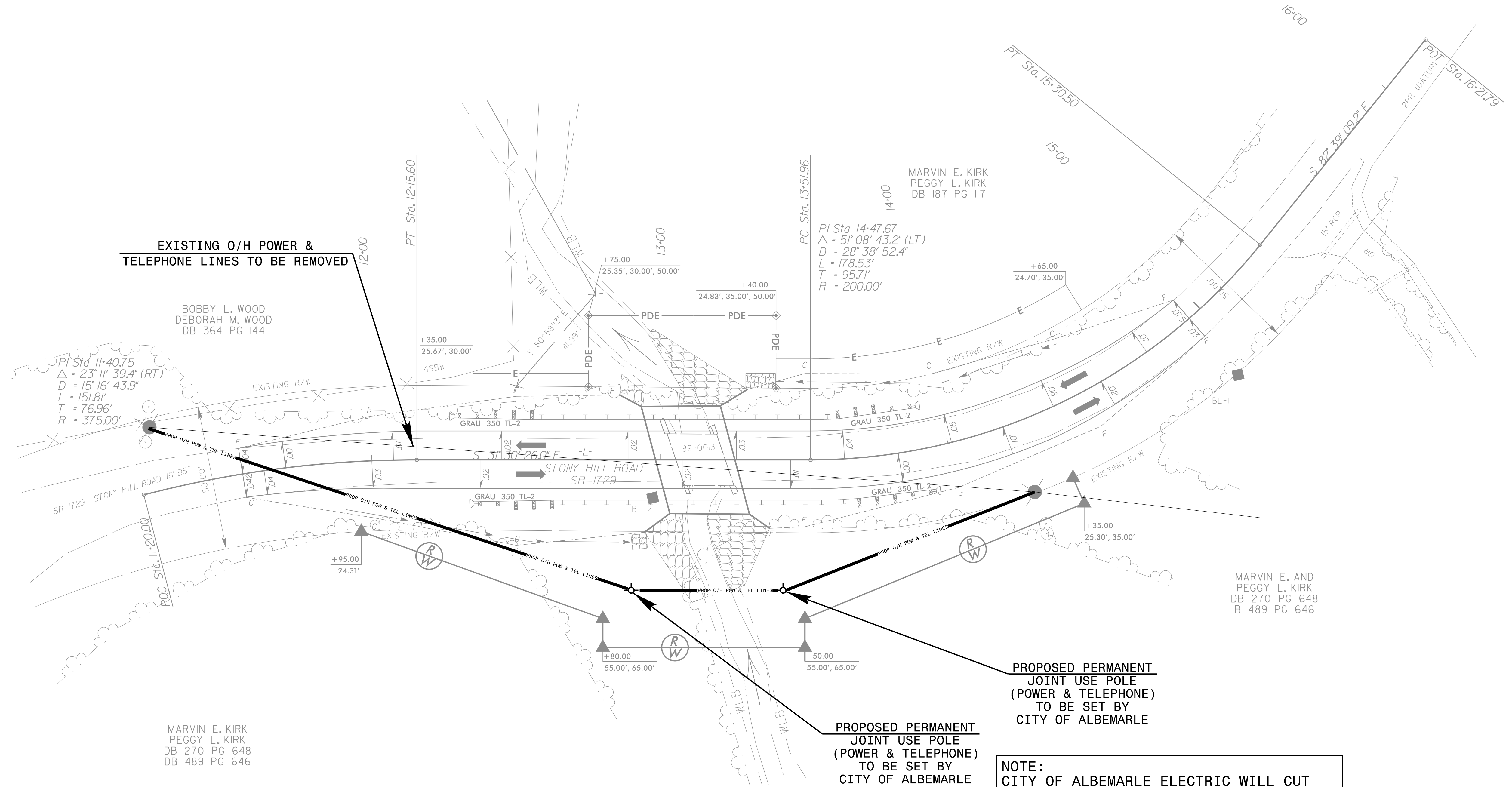
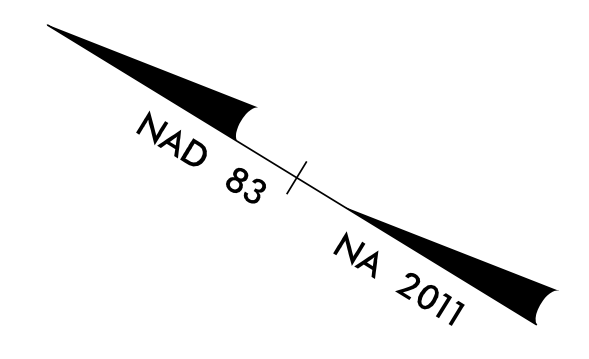
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

V&M
Vaughn & Melton
Consulting Engineers

Charlotte,
North Carolina
704-357-0488

Asheville, North Carolina 828-253-2796
Tri-Cities, Tennessee 423-467-8401
Knoxville, Tennessee 865-546-5900
Middlesboro, Kentucky 606-248-6600
Spartanburg, South Carolina 864-574-4715

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EXISTING O/H POWER & TELEPHONE LINES TO BE REMOVED

BOBBY L. WOOD
DEBORAH M. WOOD
DB 364 PG 144

MARVIN E. KIRK
PEGGY L. KIRK
DB 187 PG 117

MARVIN E. AND
PEGGY L. KIRK
DB 270 PG 648
B 489 PG 646

MARVIN E. KIRK
PEGGY L. KIRK
DB 270 PG 648
DB 489 PG 646

**PROPOSED PERMANENT
JOINT USE POLE
(POWER & TELEPHONE)
TO BE SET BY
CITY OF ALBEMARLE**

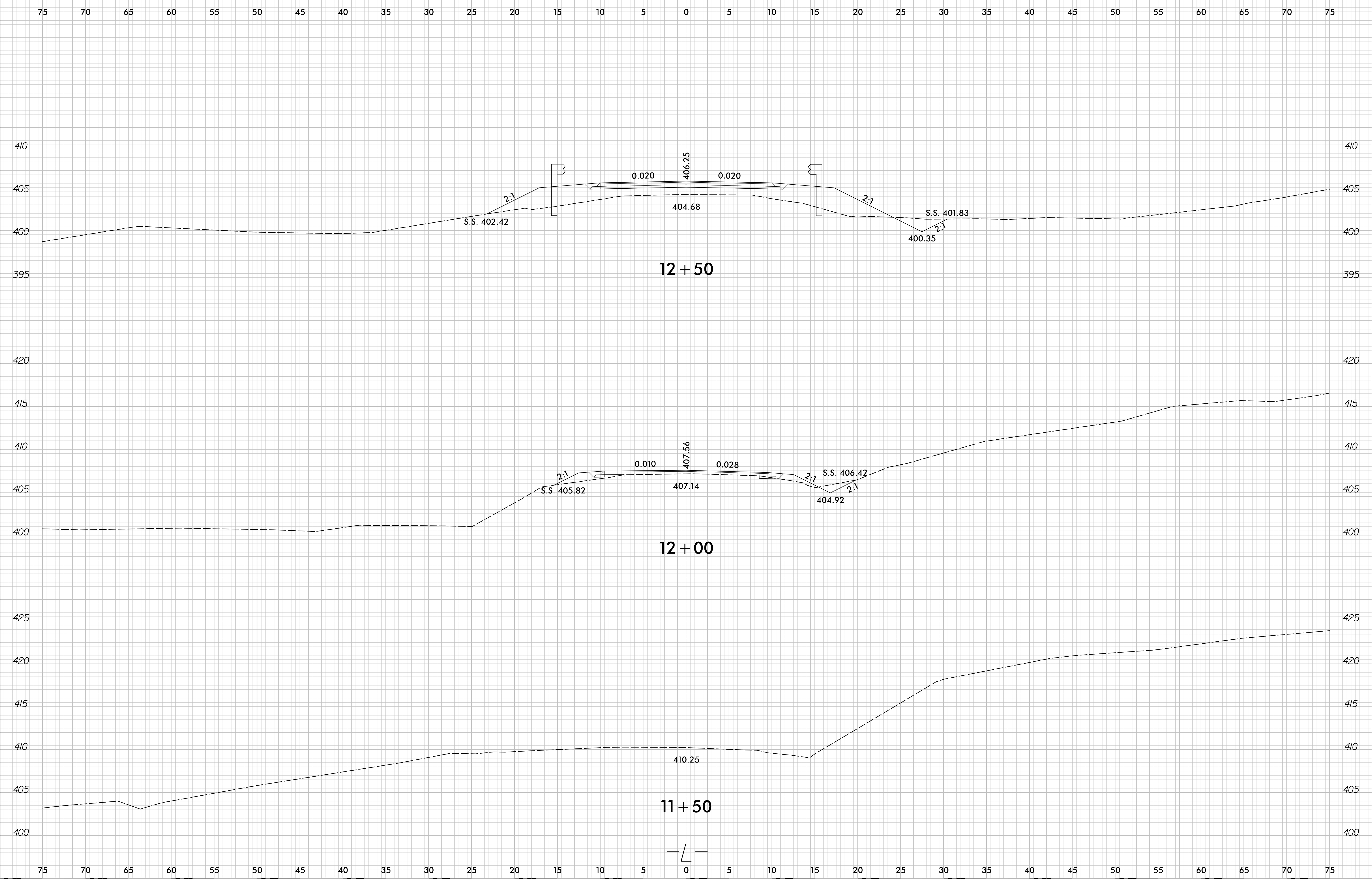
**PROPOSED PERMANENT
JOINT USE POLE
(POWER & TELEPHONE)
TO BE SET BY
CITY OF ALBEMARLE**

NOTE:
CITY OF ALBEMARLE ELECTRIC WILL CUT
VEGETATIVE DEBRIS REQUIRED FOR UTILITY
RELOCATION.

CONTRACATOR WILL BE RESPONSIBLE FOR
REMOVAL OF VEGETATION. SEE PROJECT
SPECIAL PROVISIONS.

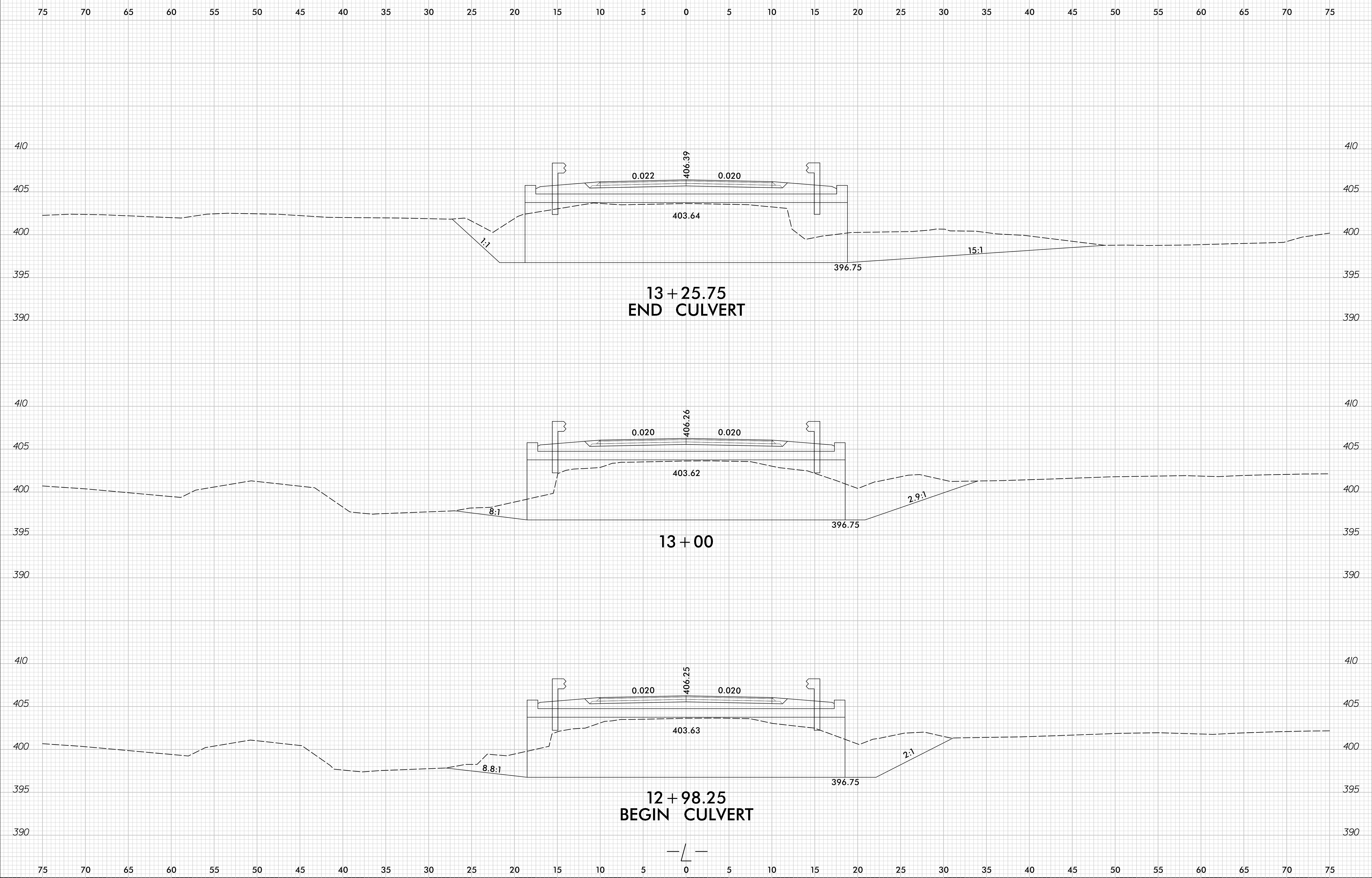
8/23/99
1/13/2014
rt:\roadway\Xsc\10R72_rdy_xp1.L.dgn
p0061212

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	17BP.10.R.72	X-1



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	17BP.10.R.72	X-2



1/13/2014
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