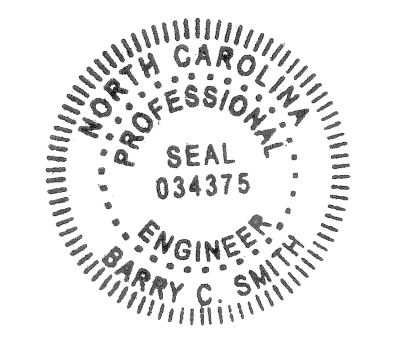



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PAVEMENT MARKING PLAN

YANCEY COUNTY

**LOCATION: BRIDGE NO. 150 OVER ROARING FORK CREEK
ON SR 1403 (ROARING FORK RD)**

TIP NO. 17BP.13.R.82	SHEET NO. PMP-1
APPROVED: <i>Barry C. Smith</i>	
DATE: 10-15-14	
SEAL	
	
 <small>Engineers • Planners • Scientists • Construction Managers 4601 Six Forks Road, Landmark Center II, Suite 220 Raleigh, NC 27609-5210 Phone (919) 783-9214 • Fax (919) 783-9266</small>	

**PAVEMENT MARKING
SCHEDULE**

<u>SYMBOL DESCRIPTION</u>	<u>FINAL PAVEMENT MARKINGS</u>
PA WHITE EDGELINE	PAINT (4")
PI YELLOW DOUBLE CENTER	PAINT (4")

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

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

GENERAL NOTES

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

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

ROAD NAME	MARKING	MARKER
-L- SR 1403 (ROARING FORK RD)	PAINT	NONE

B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.

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

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

E) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

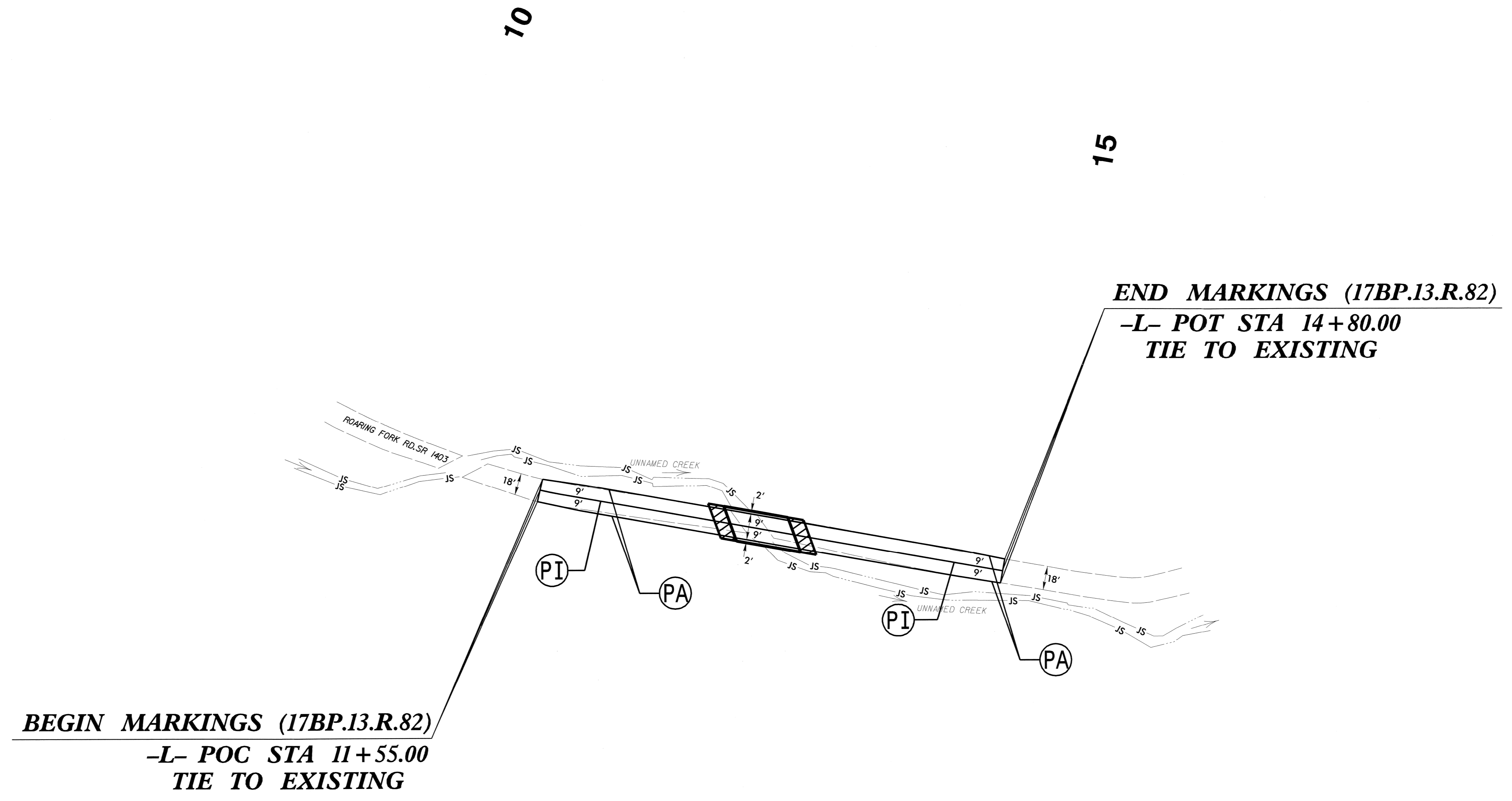
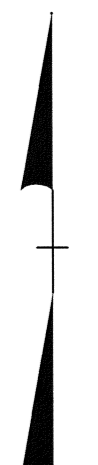
F) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON THE BRIDGE DECK(S) PRIOR TO PLACING PAINT PAVEMENT MARKINGS.

INDEX

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

440267 PMP_PMP-1.dgn

TIP NO. 17BP.13.R.82	SHEET NO. PMP-2
APPROVED: <i>Barry C. Smith</i>	
DATE: 10-15-14	
SEAL	
<small>Engineers • Planners • Scientists • Construction Managers 4601 Six Forks Road, Landmark Center II, Suite 220 Raleigh, NC 27609-5210 Phone (919) 783-9214 • Fax (919) 783-9266</small>	



PAVEMENT MARKING LEGEND	
(PA)	WHITE EDGELINE (4")
(PI)	YELLOW DOUBLE CENTER (4")

PAVEMENT MARKING DETAIL

4/20/28 PM
 15015on_BPM_PMP-2.dgn
 Division:

TIP PROJECT: 17BP.13.R.82

STATE OF NORTH CAROLINA

BRIDGE 990150

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.13.R.82	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

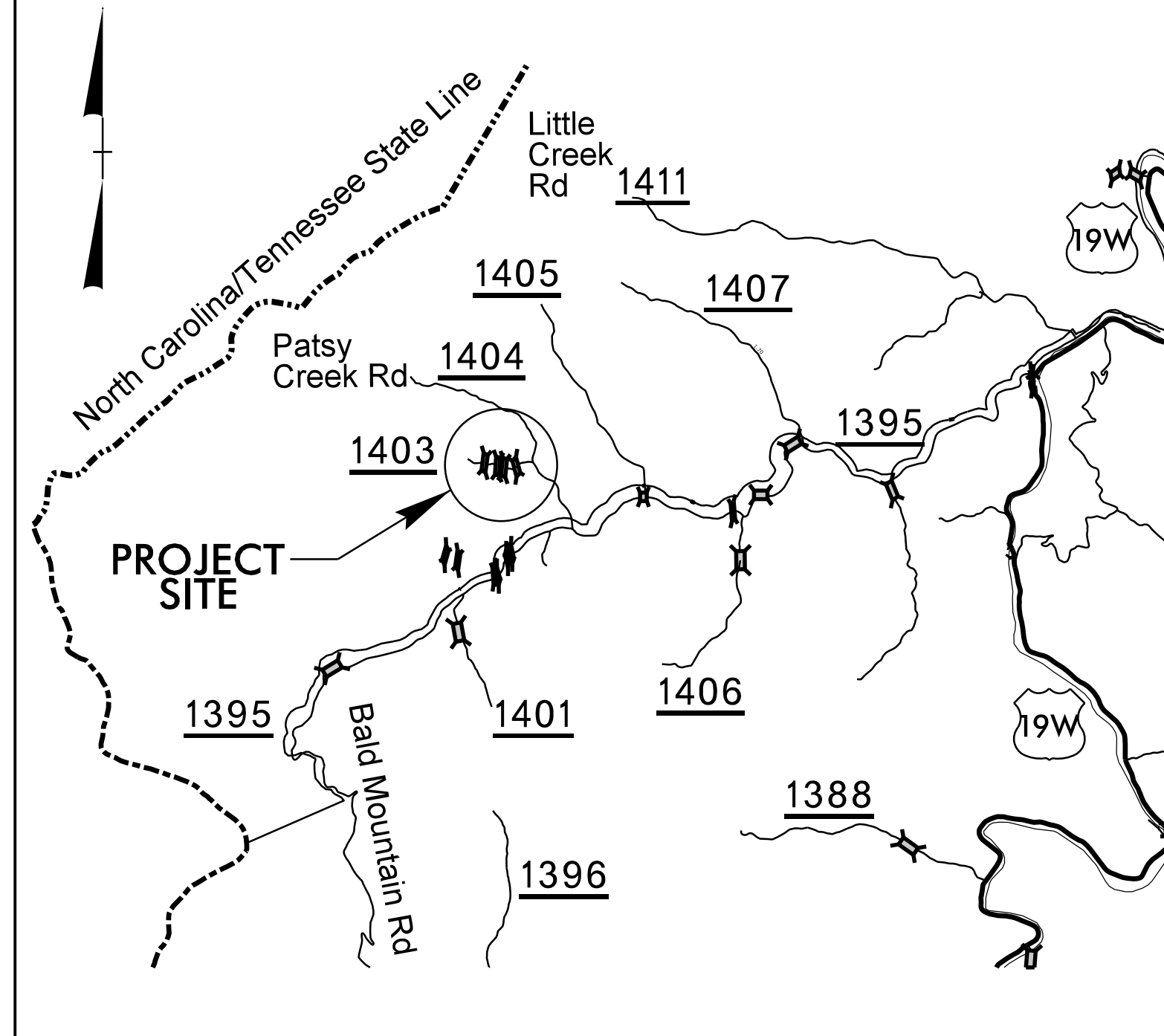
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

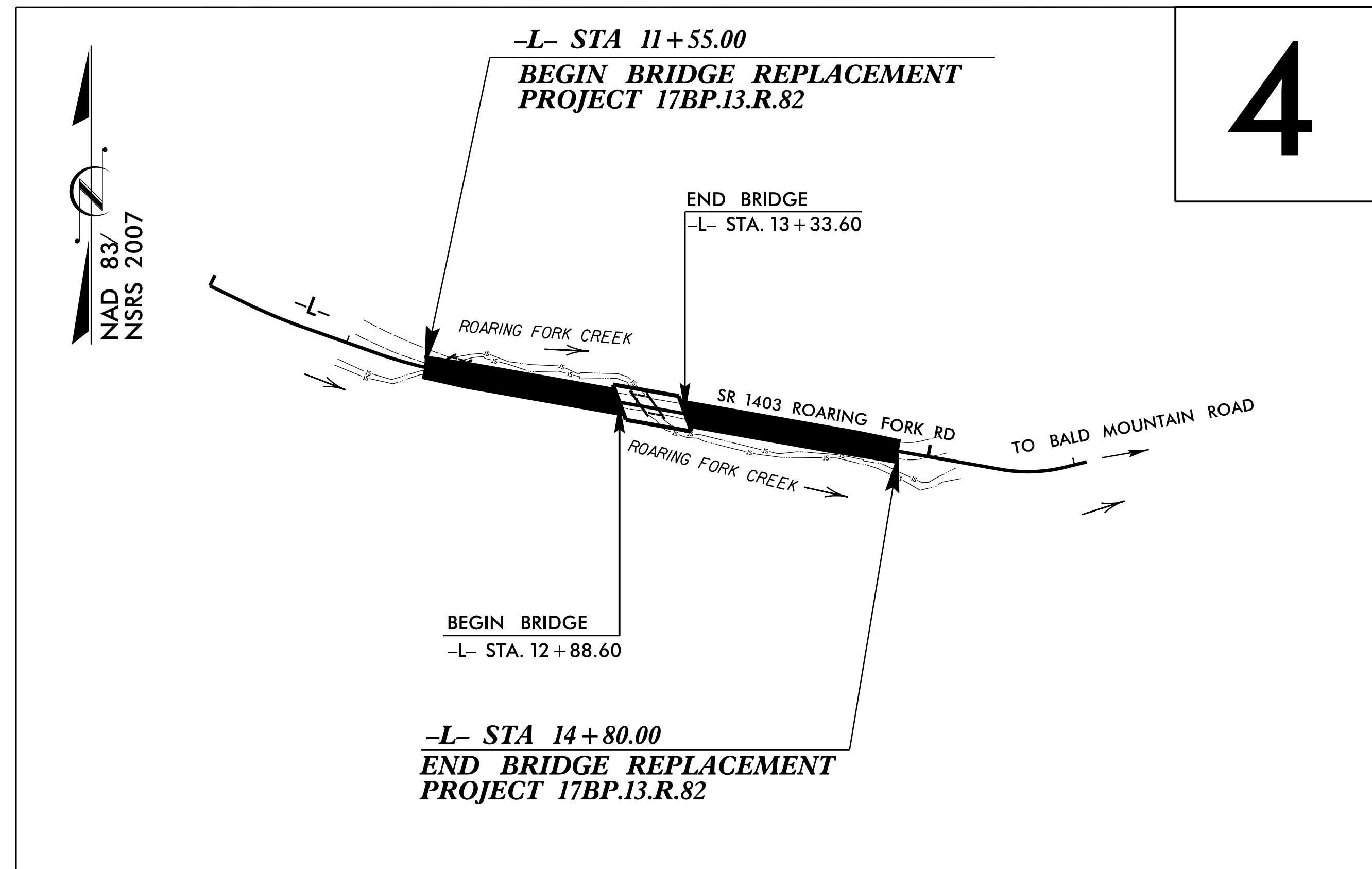
YANCEY COUNTY

LOCATION: BRIDGE NO. 150 OVER ROARING FORK CREEK
ON SR 1403 (ROARING FORK RD)

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



VICINITY MAP



EROSION AND SEDIMENT CONTROL MEASURES

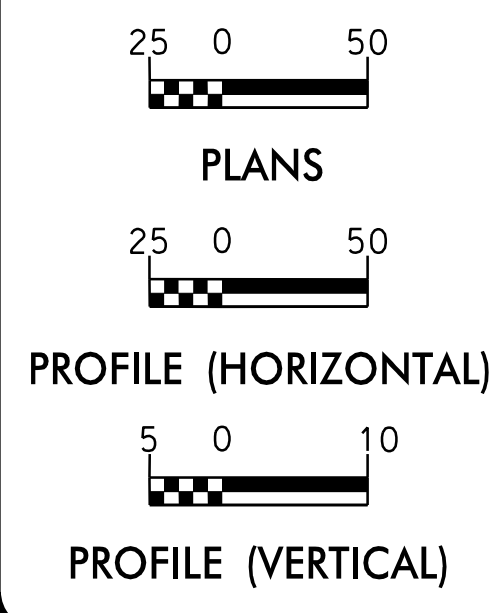
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	△△△△△
1622.01	Temporary Berms and Slope Drains	— T —
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary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

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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 BY: moffatt & nichol
1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX

DESIGN BY: LEAH M. YOUNG, PE
NCDOT LEVEL III: DESIGNER OF EROSION AND SEDIMENT CONTROL PLANS CERT #3157

REVIEWED BY: JEFFREY L. RECK, PE
NCDOT LEVEL III-A: DESIGNER OF EROSION AND SEDIMENT CONTROL PLANS CERT #132

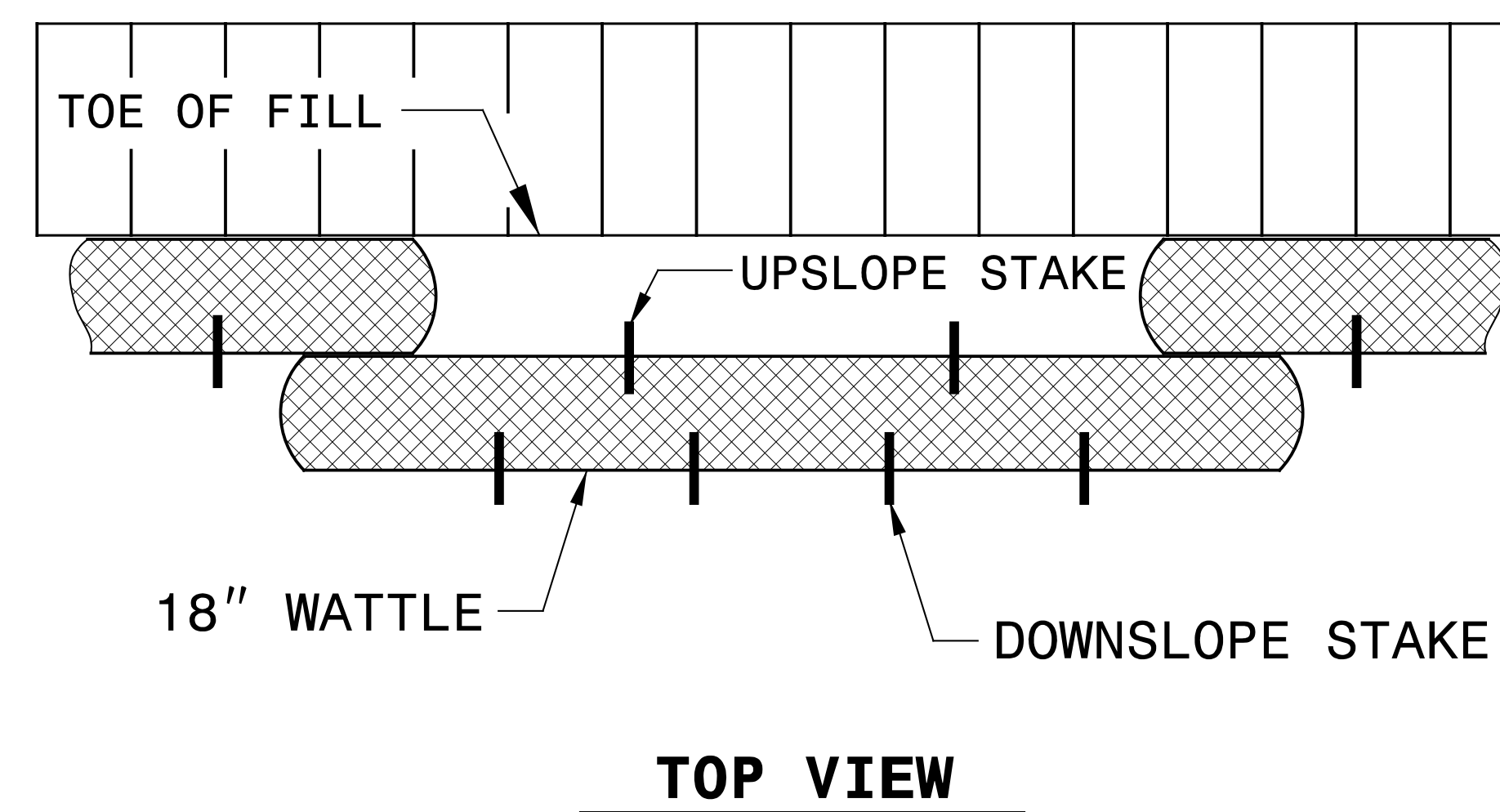
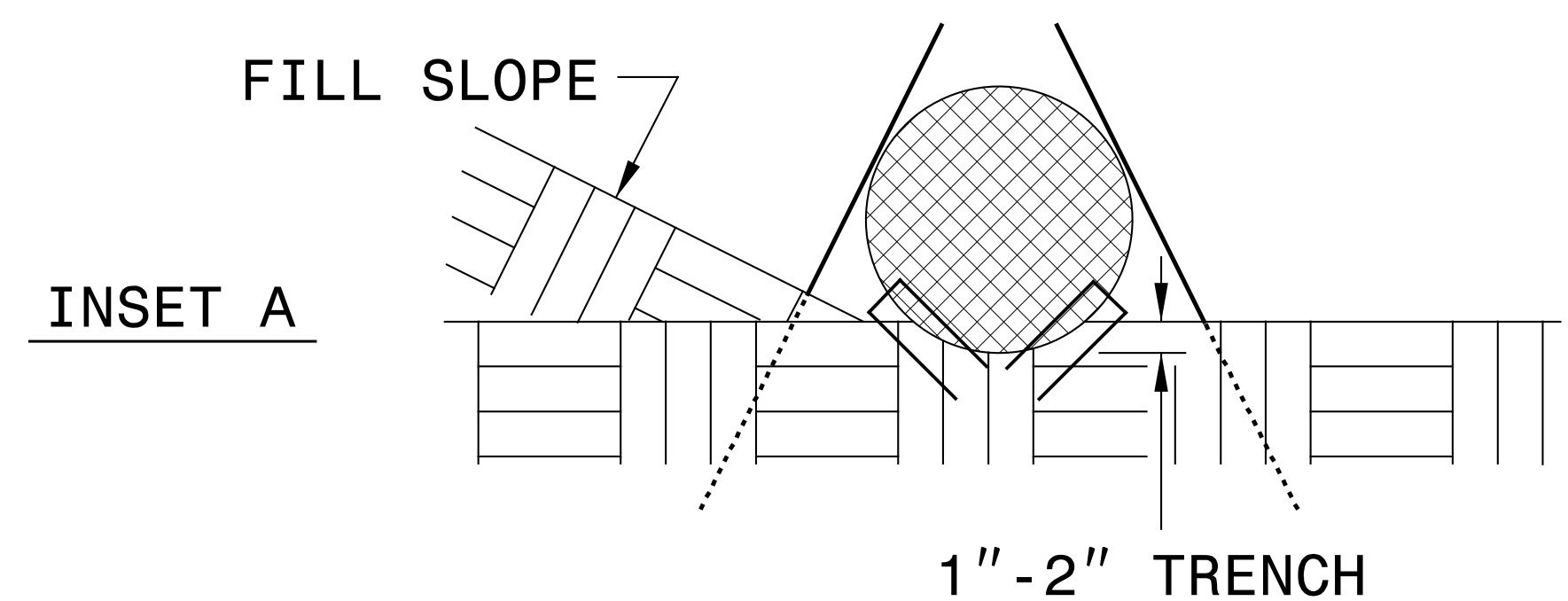
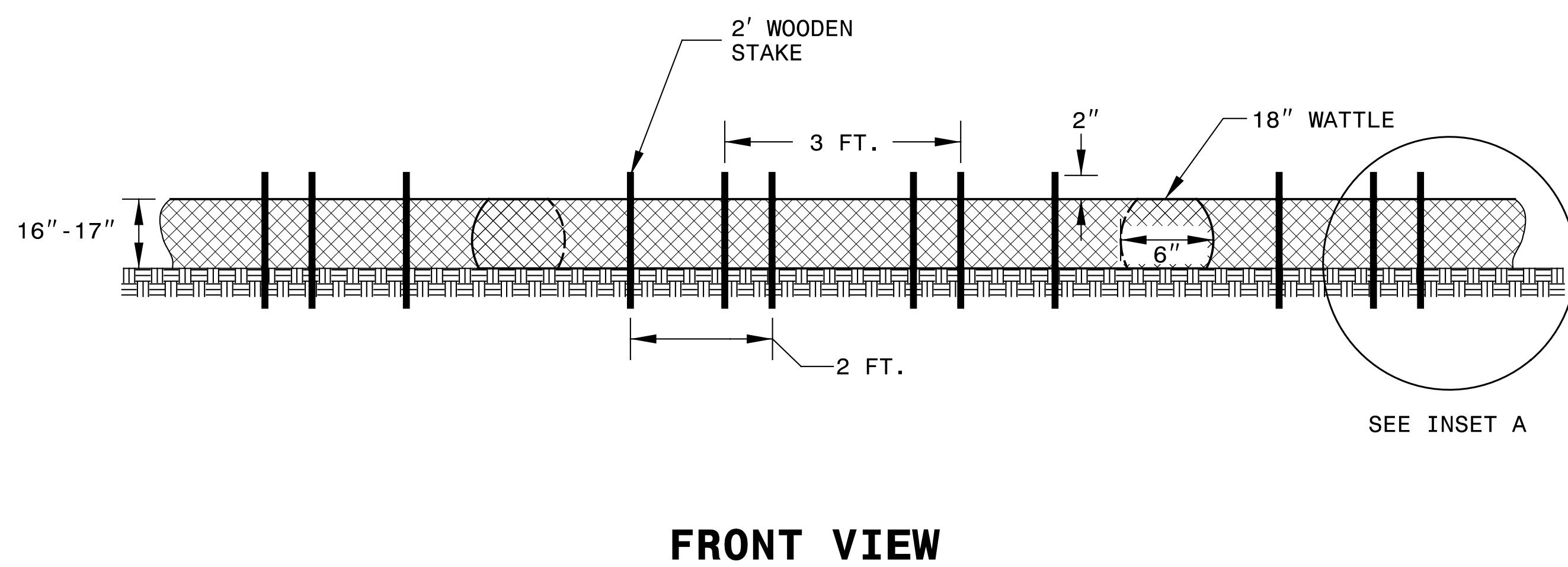
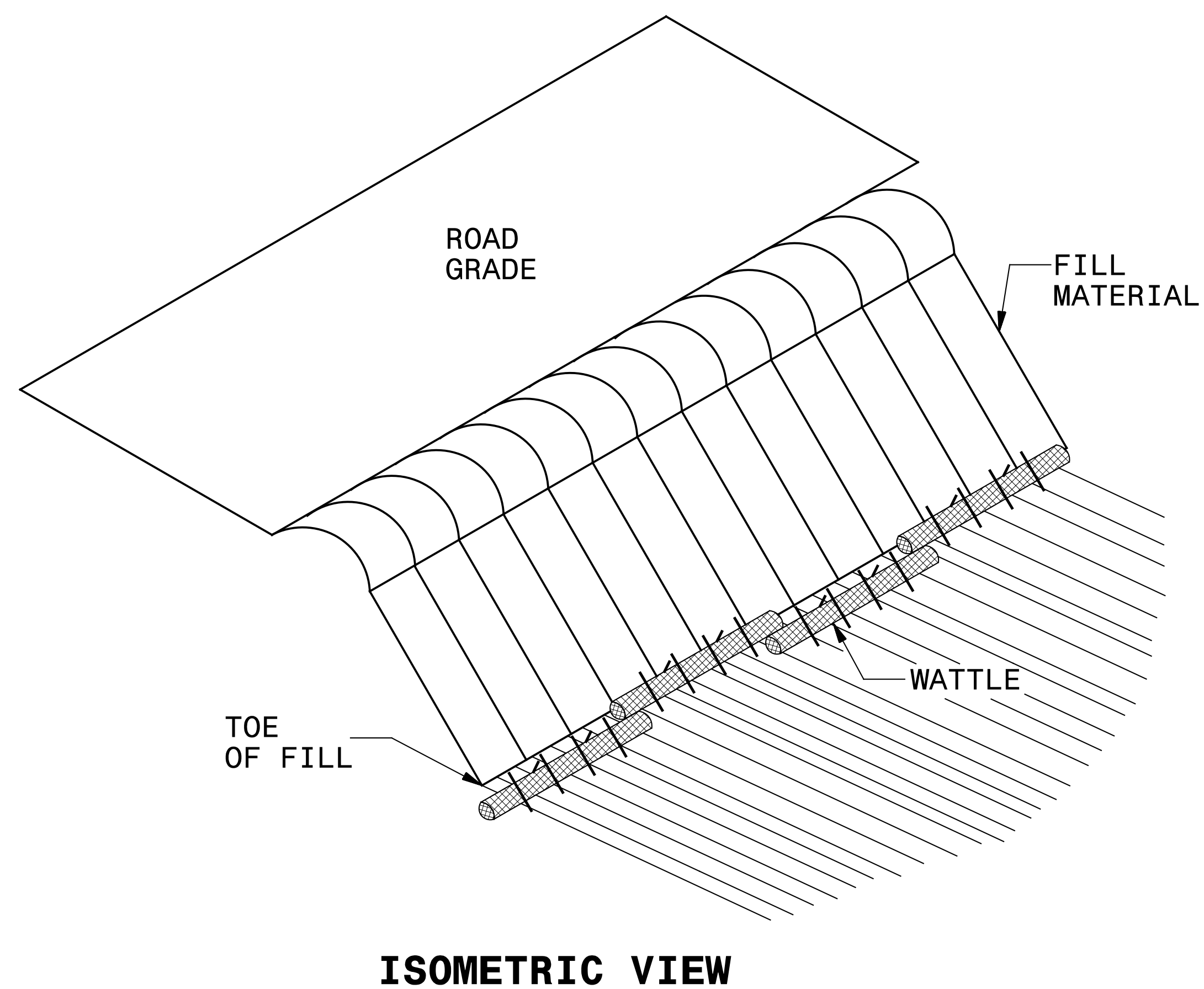
Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

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.

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 BARRIER DETAIL



NOTES:

USE MINIMUM 18 IN. DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

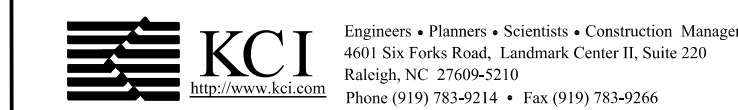
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

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.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

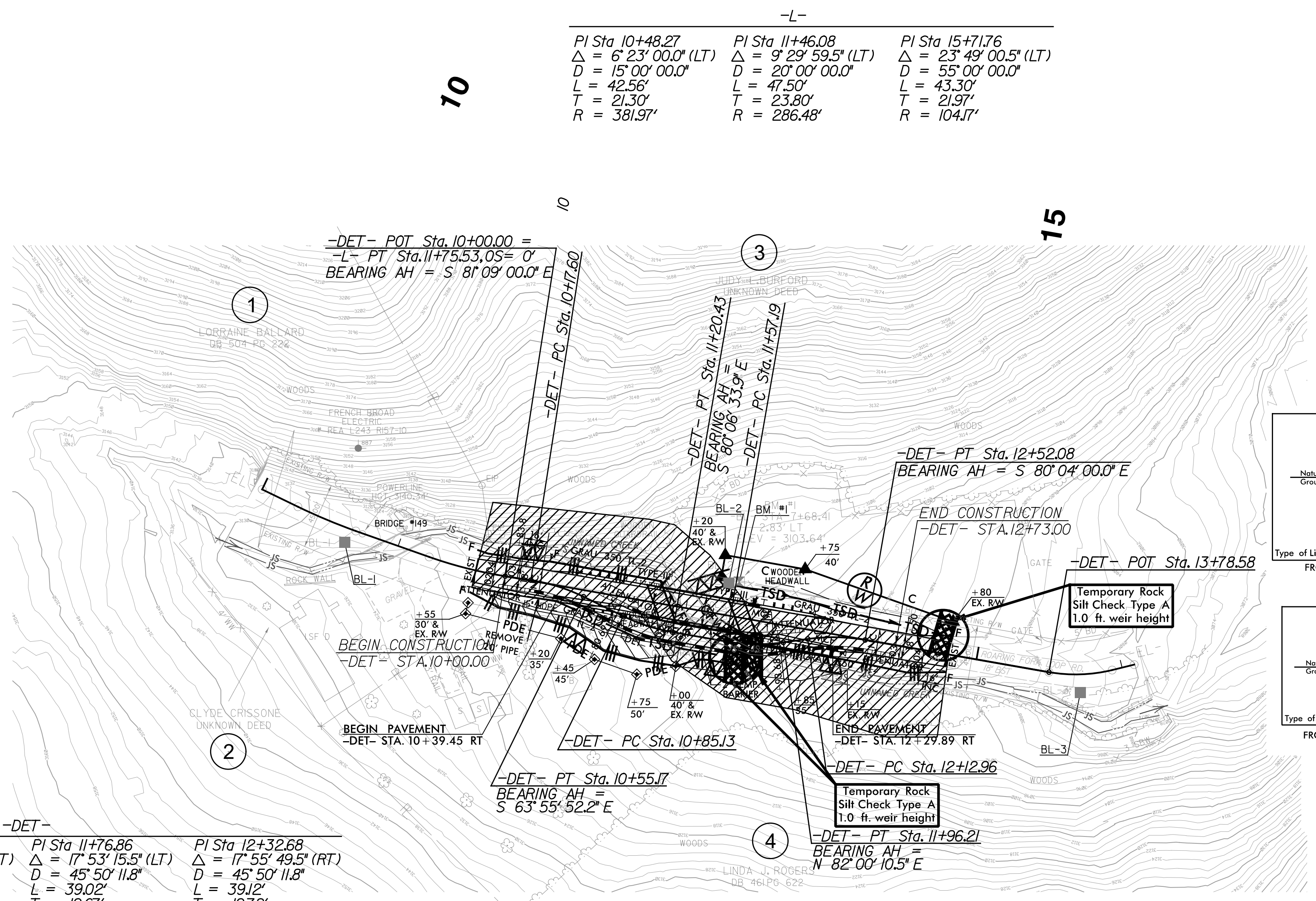
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABLIZATION 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 W/ SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

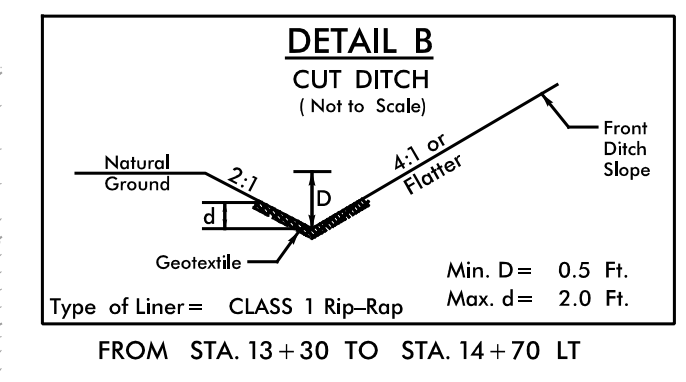
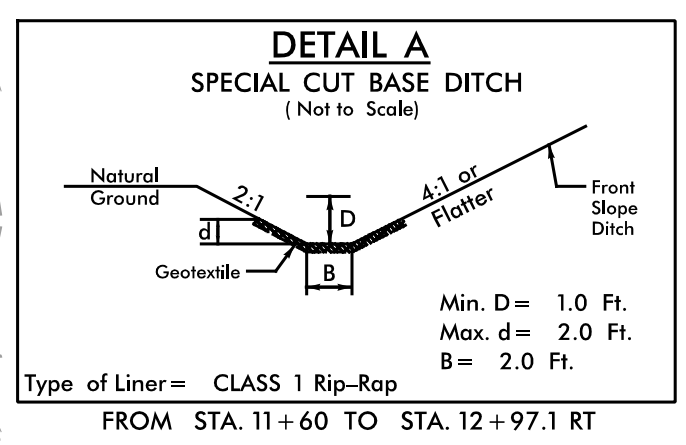
FOR -L- PROFILE, SEE SHEET 5

-L-		
PI Sta 10+48.27	PI Sta 11+46.08	PI Sta 15+71.76
$\Delta = 6^{\circ} 23' 00.0''$ (LT)	$\Delta = 9^{\circ} 29' 59.5''$ (LT)	$\Delta = 23^{\circ} 49' 00.5''$ (LT)
D = 15' 00' 00.0"	D = 20' 00' 00.0"	D = 55' 00' 00.0"
L = 42.56'	L = 47.50'	L = 43.30'
T = 21.30'	T = 23.80'	T = 21.97'
R = 381.97'	R = 286.48'	R = 104.17'

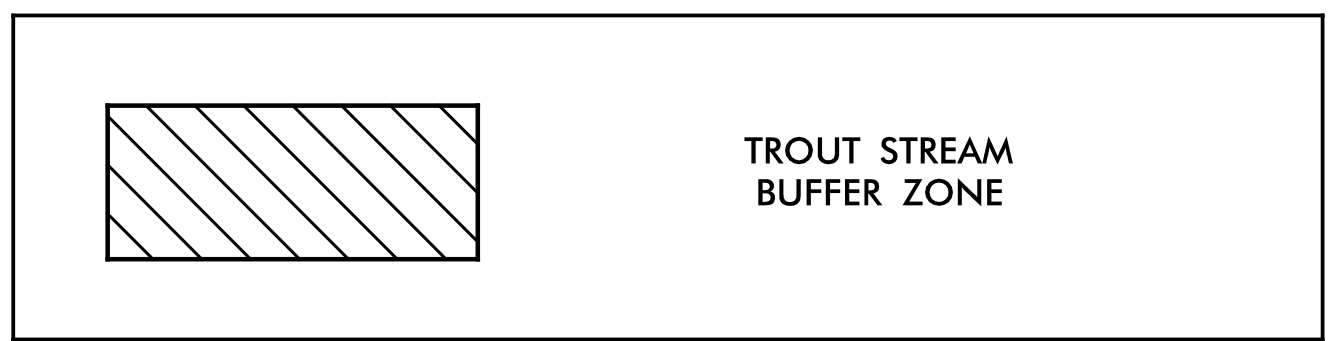
NAD 83/NSRS 2007



-DET-			
PI Sta 10+79.46	PI Sta 11+02.90	PI Sta 11+76.86	PI Sta 12+32.68
$\Delta = 10^{\circ} 39' 00.0''$ (LT)	$\Delta = 16^{\circ} 10' 41.8''$ (LT)	$\Delta = 17^{\circ} 53' 15.5''$ (LT)	$\Delta = 17^{\circ} 55' 49.5''$ (RT)
D = 20' 00' 00.0"	D = 45' 50' 11.8"	D = 45' 50' 11.8"	D = 45' 50' 11.8"
L = 53.25'	L = 35.30'	L = 39.02'	L = 39.12'
T = 26.70'	T = 17.77'	T = 19.67'	T = 19.72'
R = 286.48'	R = 125.00'	R = 125.00'	R = 125.00'



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

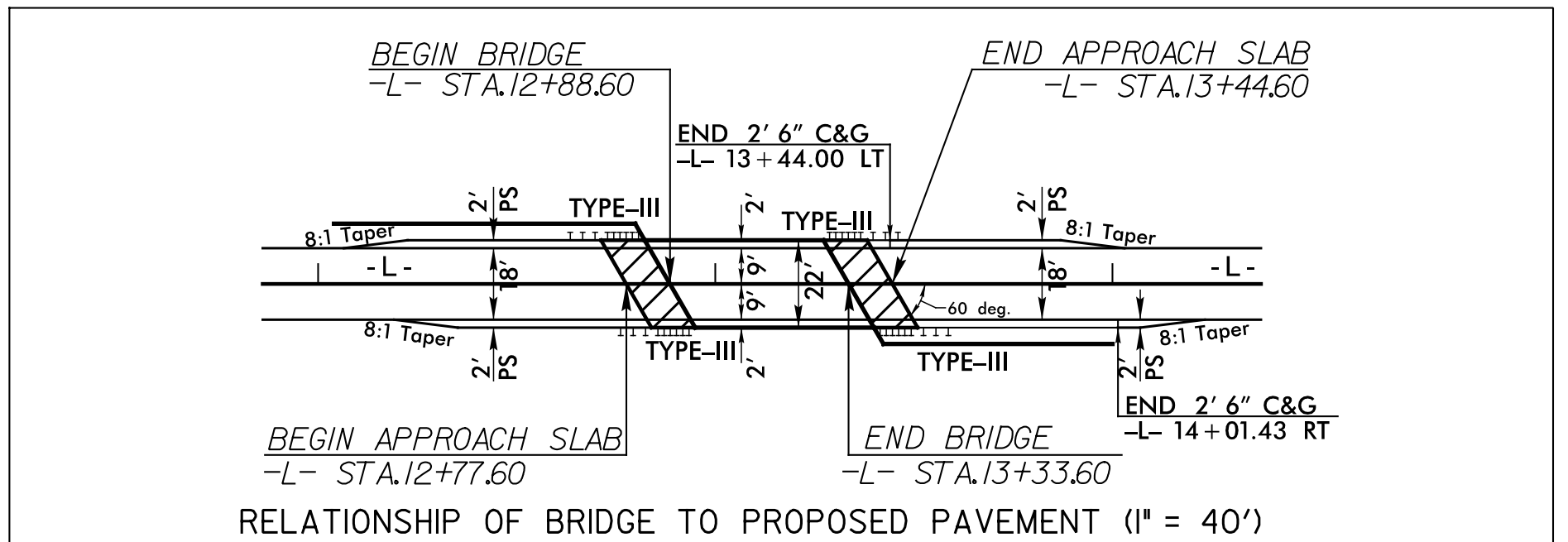


NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

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

UTILITY OWNERS
 FRENCH BROAD ELECTRIC
 381 CRIMSON LAUREL WAY
 PO BOX 43
 BAKERSVILLE, NC 28705
 FRONTIER COMMUNICATIONS
 15 SOUTH MAIN STREET
 WEAVERVILLE, NC 28787

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "990150 BL-2"
 WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 830908.3900(FT) EASTING: 978805.3930(FT) ELEVATION: 3103.52(FT)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999809971
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "990150 BL-2" TO -L- STATION 11+55.00 IS N 87° 8' 51.4" W 171.84 FT
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



STRUCTURE: 990150
 COUNTY: YANCEY

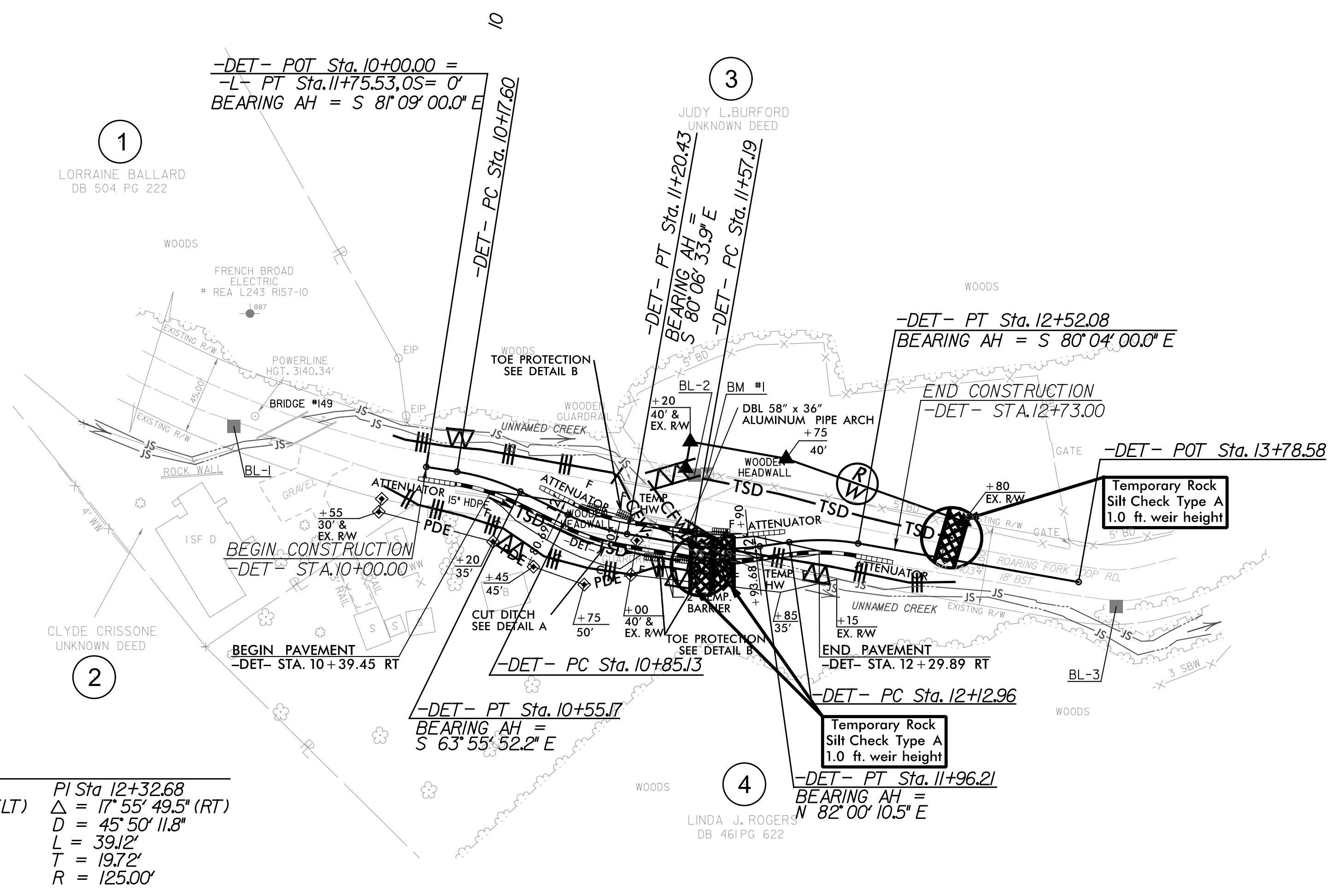
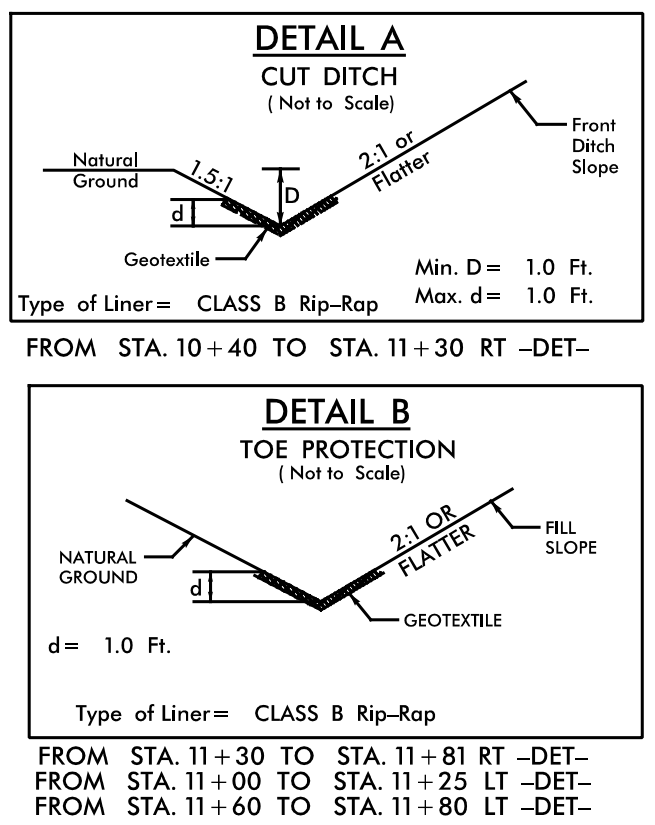


REVISIONS

8/17/99

10/1/2013
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 Moffatt, Nichol

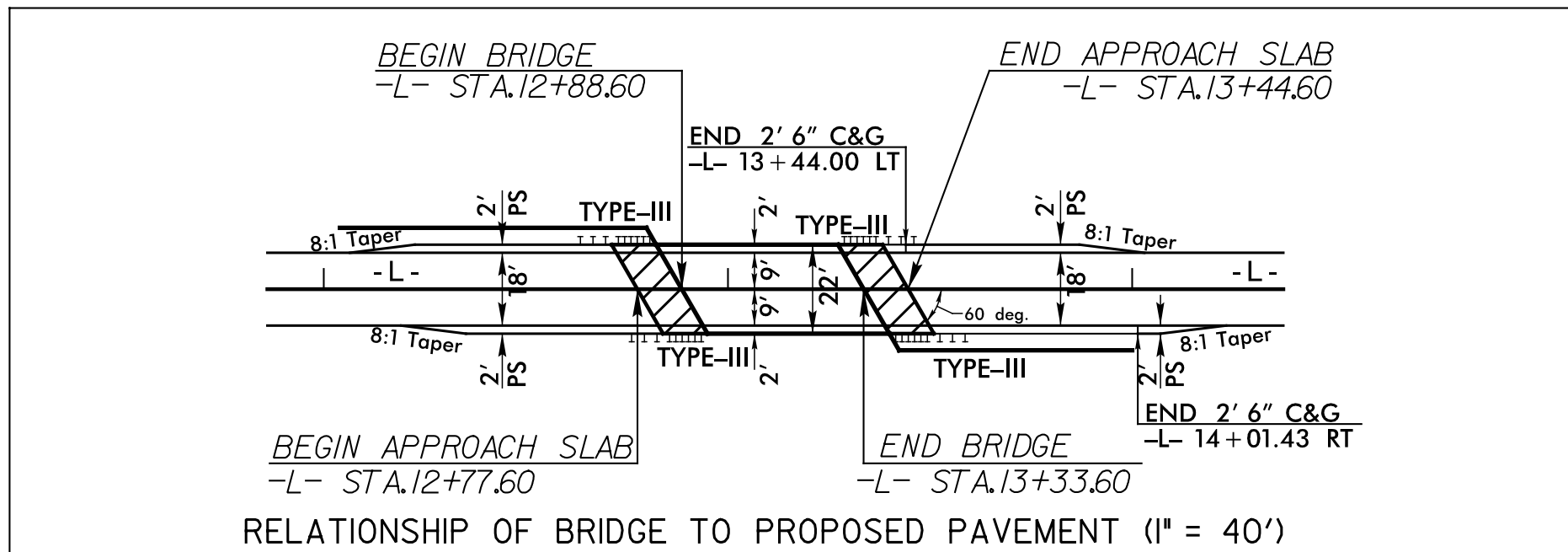
NAD 83/NSRS 2007



-DET-			
PI Sta 10+79.46	PI Sta 11+02.90	PI Sta 11+76.86	PI Sta 12+32.68
$\Delta = 10^{\circ} 39' 00.0" (LT)$	$\Delta = 16^{\circ} 10' 41.8" (LT)$	$\Delta = 17^{\circ} 53' 15.5" (LT)$	$\Delta = 17^{\circ} 55' 49.5" (RT)$
$D = 20^{\circ} 00' 00.0"$	$D = 45^{\circ} 50' 11.8"$	$D = 45^{\circ} 50' 11.8"$	$D = 45^{\circ} 50' 11.8"$
$L = 53.25'$	$L = 35.30'$	$L = 39.02'$	$L = 39.12'$
$T = 26.70'$	$T = 17.77'$	$T = 19.67'$	$T = 19.72'$
$R = 286.48'$	$R = 125.00'$	$R = 125.00'$	$R = 125.00'$

UTILITY OWNERS
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 BAKERSVILLE, NC 28705
 FRONTIER COMMUNICATIONS
 15 SOUTH MAIN STREET
 WEAVERVILLE, NC 28787

DETOUR



 BRIDGE APPROACH SLABS


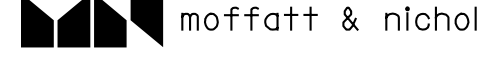
REVISIONS

8/17/99

10/1/2013
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 Mof, Mof, Nichol

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
17BP.13.R.82	EC-6.CONST-4
RW SHEET NO.	
 KCI <small>Engineers • Planners • Scientists • Construction Managers</small> <small>4601 Six Forks Road, Landmark Center II, Suite 220</small> <small>Raleigh, NC 27609-5210</small> <small>Phone (919) 783-9214 • Fax (919) 783-9266</small>	
 moffatt & nichol <small>1616 EAST MILLBROOK ROAD, SUITE 160</small> <small>RALEIGH, NORTH CAROLINA 27609</small> <small>1919) 781-4626 VOICE 1919) 781-4869 FAX</small>	

FOR -L- PROFILE, SEE SHEET 5

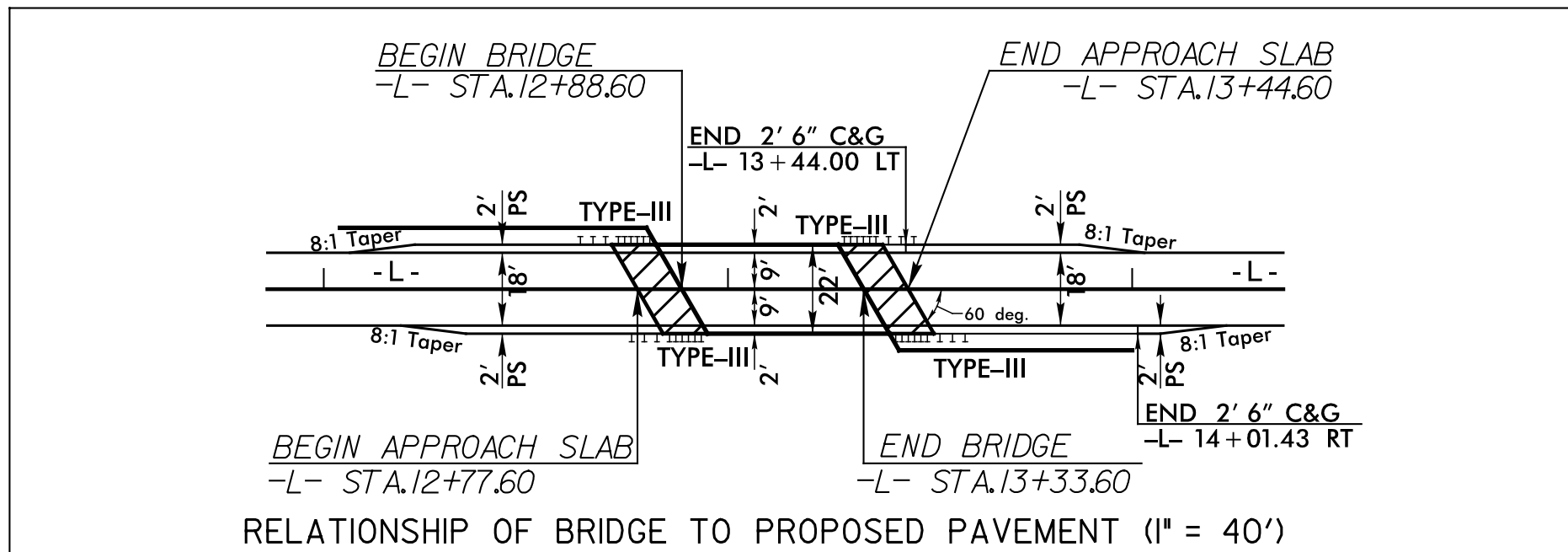
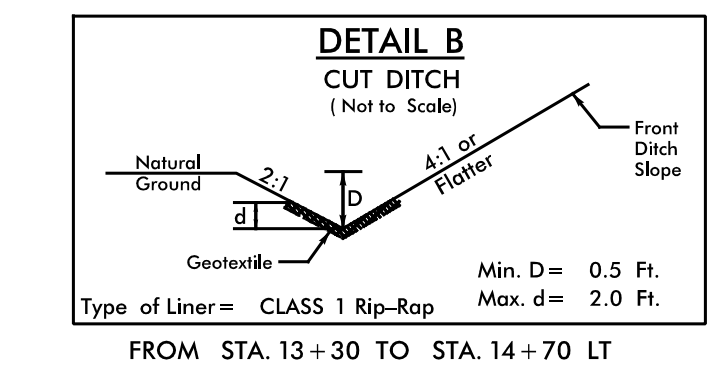
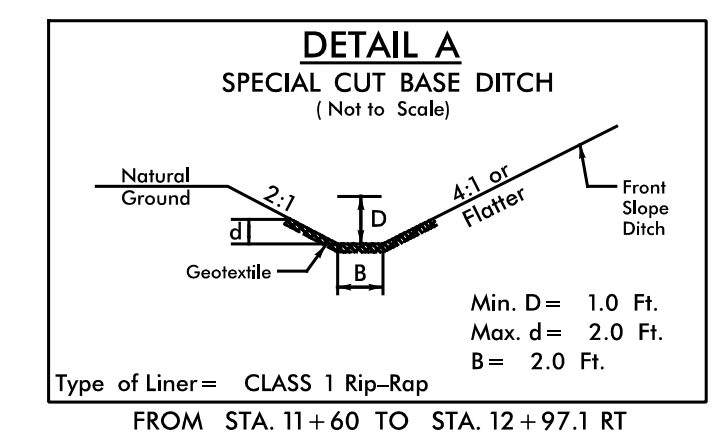
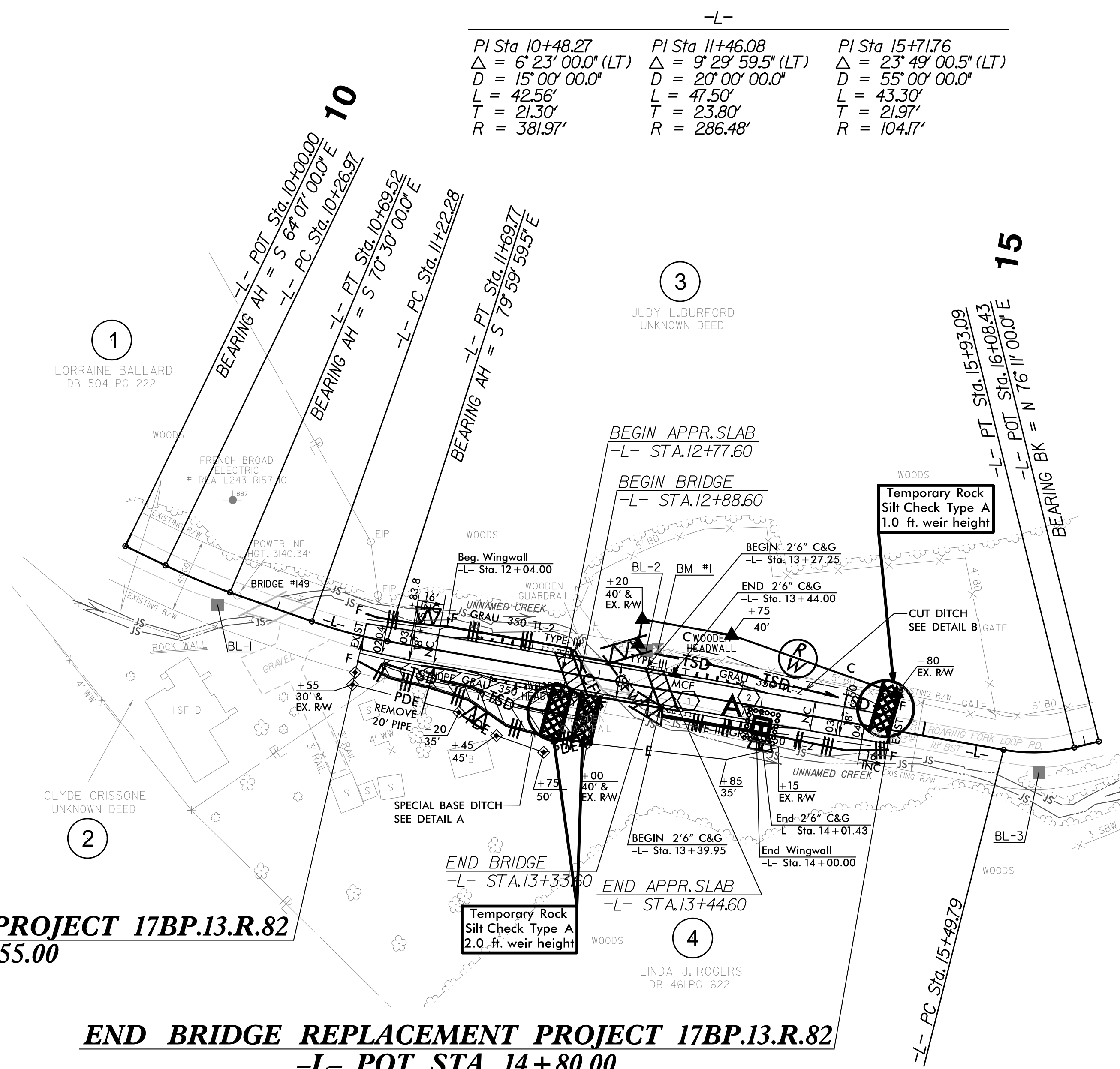
-L-		
PI Sta 10+48.27	PI Sta 11+46.08	PI Sta 15+71.76
$\Delta = 6^{\circ} 23' 00.0''$ (LT)	$\Delta = 9^{\circ} 29' 59.5''$ (LT)	$\Delta = 23^{\circ} 49' 00.5''$ (LT)
D = 15' 00' 00.0"	D = 20' 00' 00.0"	D = 55' 00' 00.0"
L = 42.56'	L = 47.50'	L = 43.30'
T = 21.30'	T = 23.80'	T = 21.97'
R = 381.97'	R = 286.48'	R = 104.17'



BEGIN BRIDGE REPLACEMENT PROJECT 17BP.13.R.82
 -L- POC STA 11+55.00

END BRIDGE REPLACEMENT PROJECT 17BP.13.R.82
 -L- POT STA 14+80.00

UTILITY OWNERS
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 381 CRIMSON LAUREL WAY
 PO BOX 43
 BAKERSVILLE, NC 28705
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 15 SOUTH MAIN STREET
 WEAVERVILLE, NC 28787



10/1/2013
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 M. Moffatt, Nichol

REFORESTATION DETAIL SHEET

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

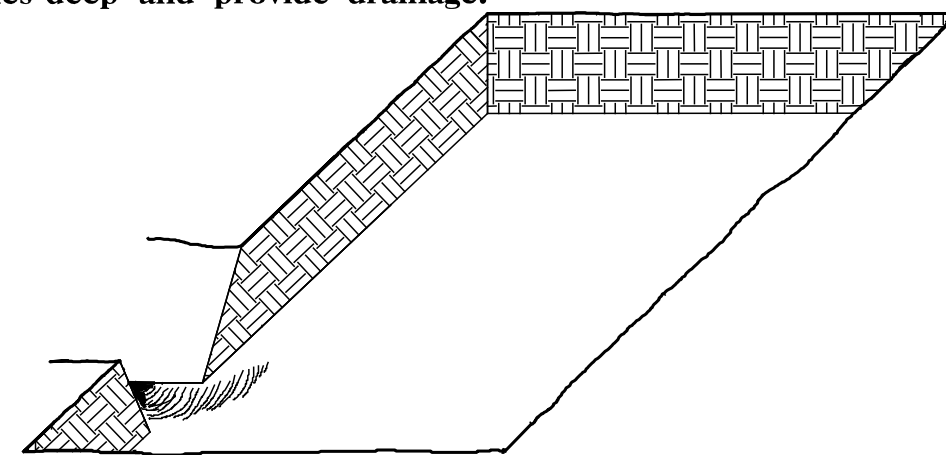
PLANTING DETAILS SEEDLING / LINER BAREROOT PLANTING DETAIL

KCI Engineers • Planners • Scientists • Construction Managers
4601 Six Forks Road, Landmark Center II, Suite 220
Raleigh, NC 27609-5210
Phone (919) 783-9214 • Fax (919) 783-9266
<http://www.kci.com>

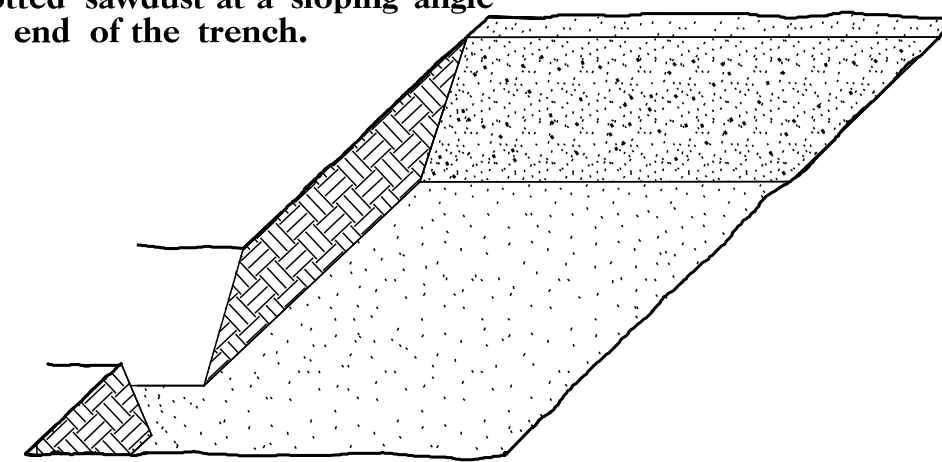
moffatt & nichol
16 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX

HEALING IN

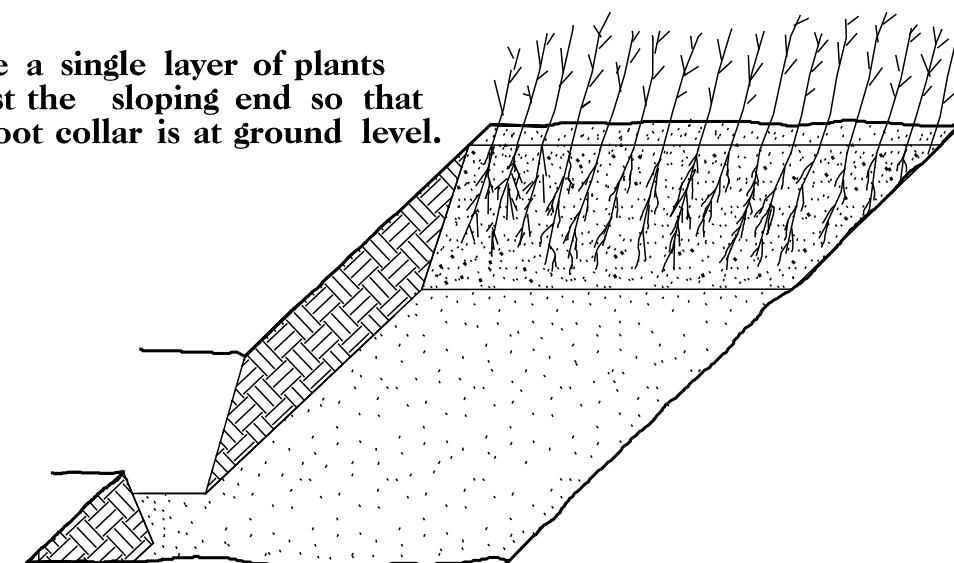
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



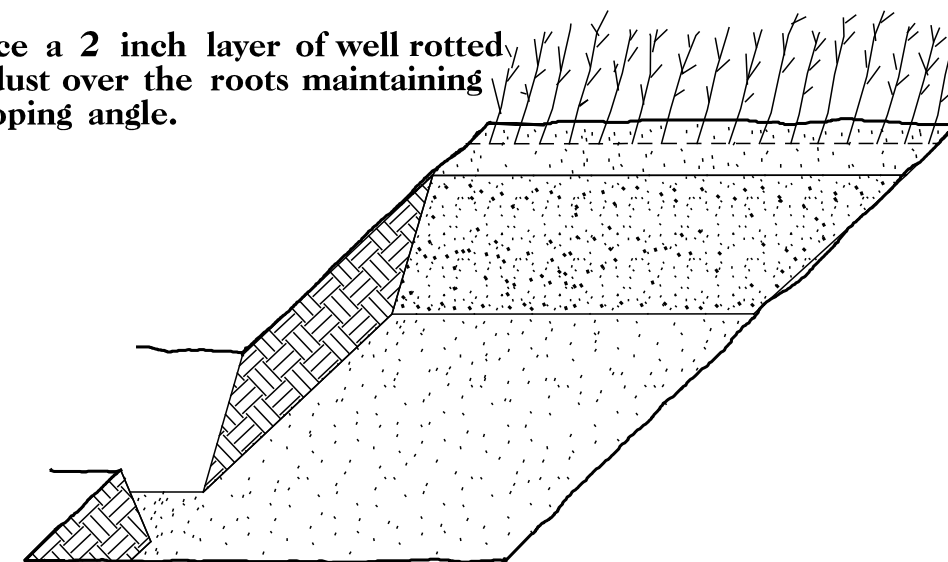
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

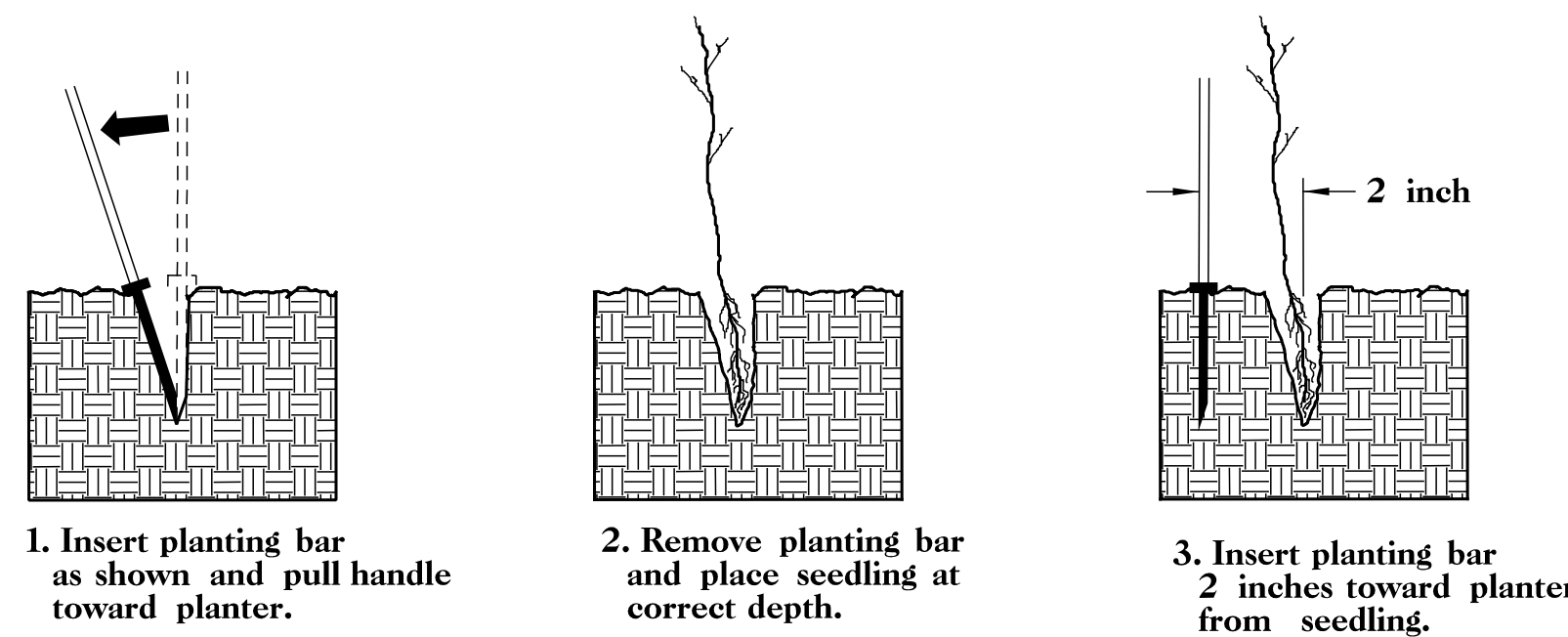


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

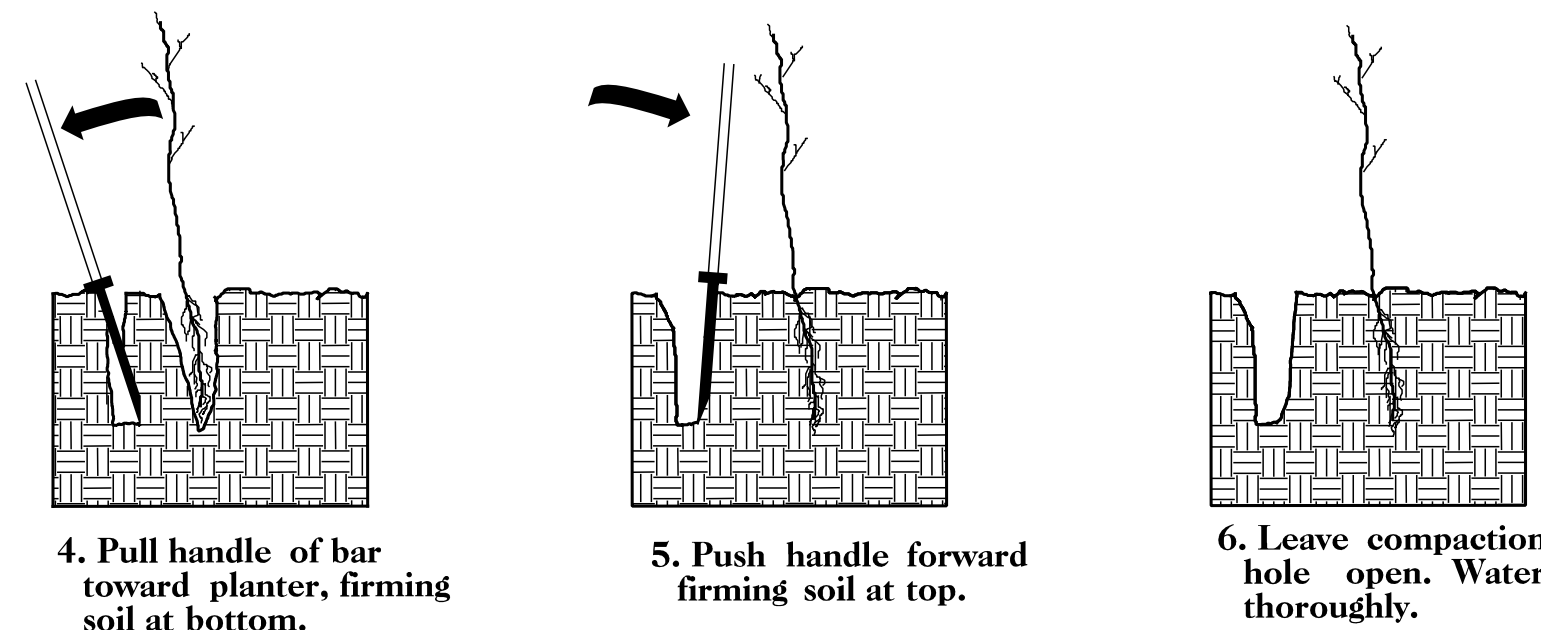


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

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.

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:

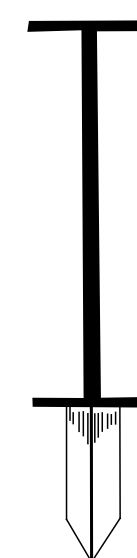
25% LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25% PLATANUS OCCIDENTALIS	SYCAMORE	12 in - 18 in BR
25% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25% BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

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.

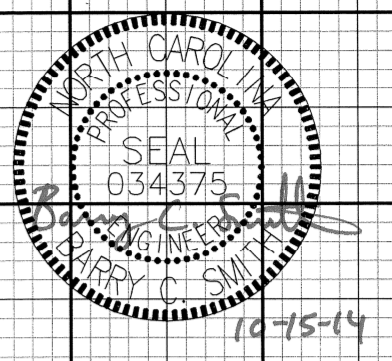
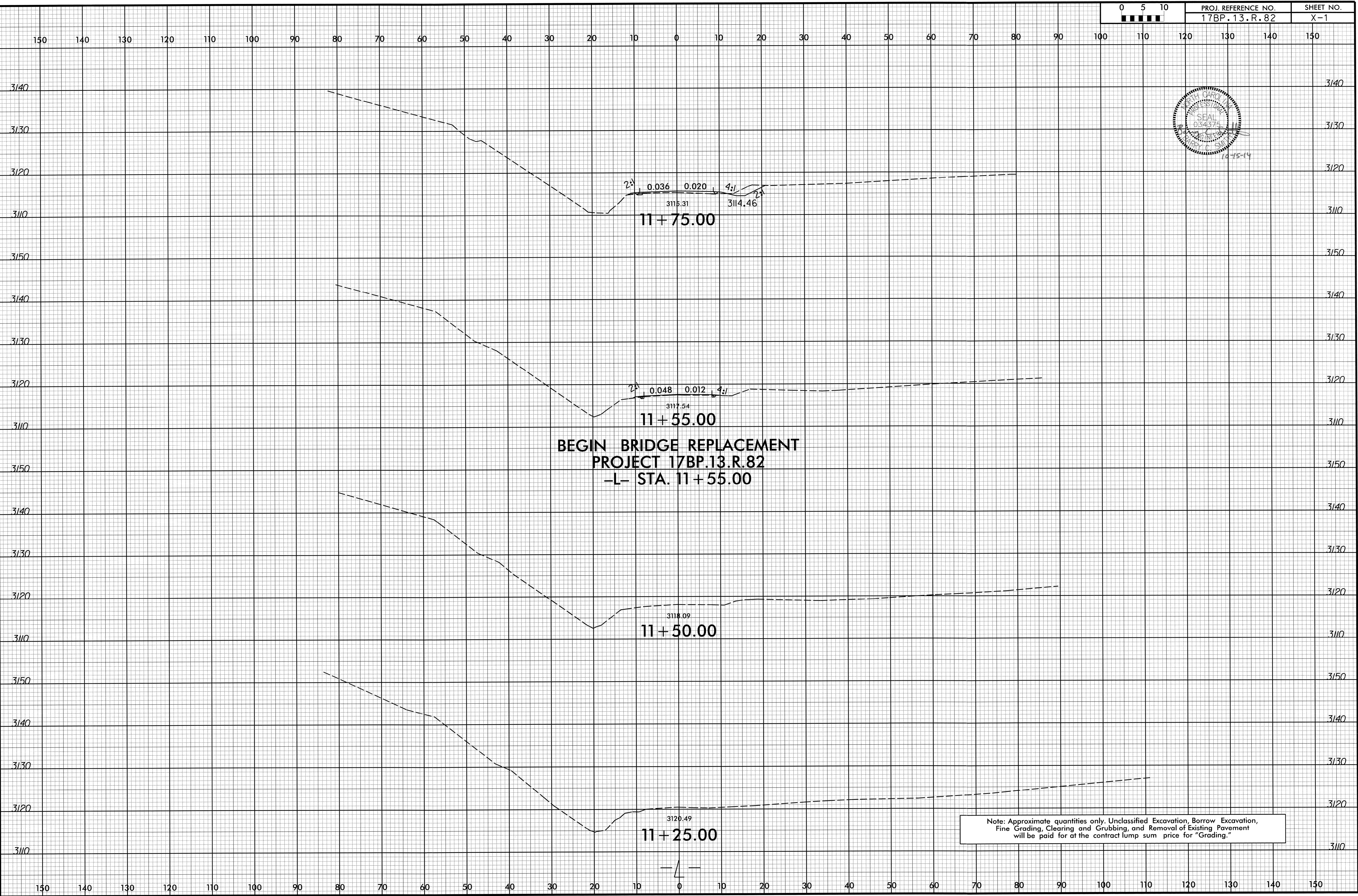
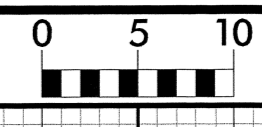


KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



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

8/23/99

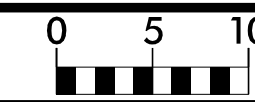


**BEGIN BRIDGE REPLACEMENT
PROJECT 17BP.13.R.82
-L- STA. 11+55.00**

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

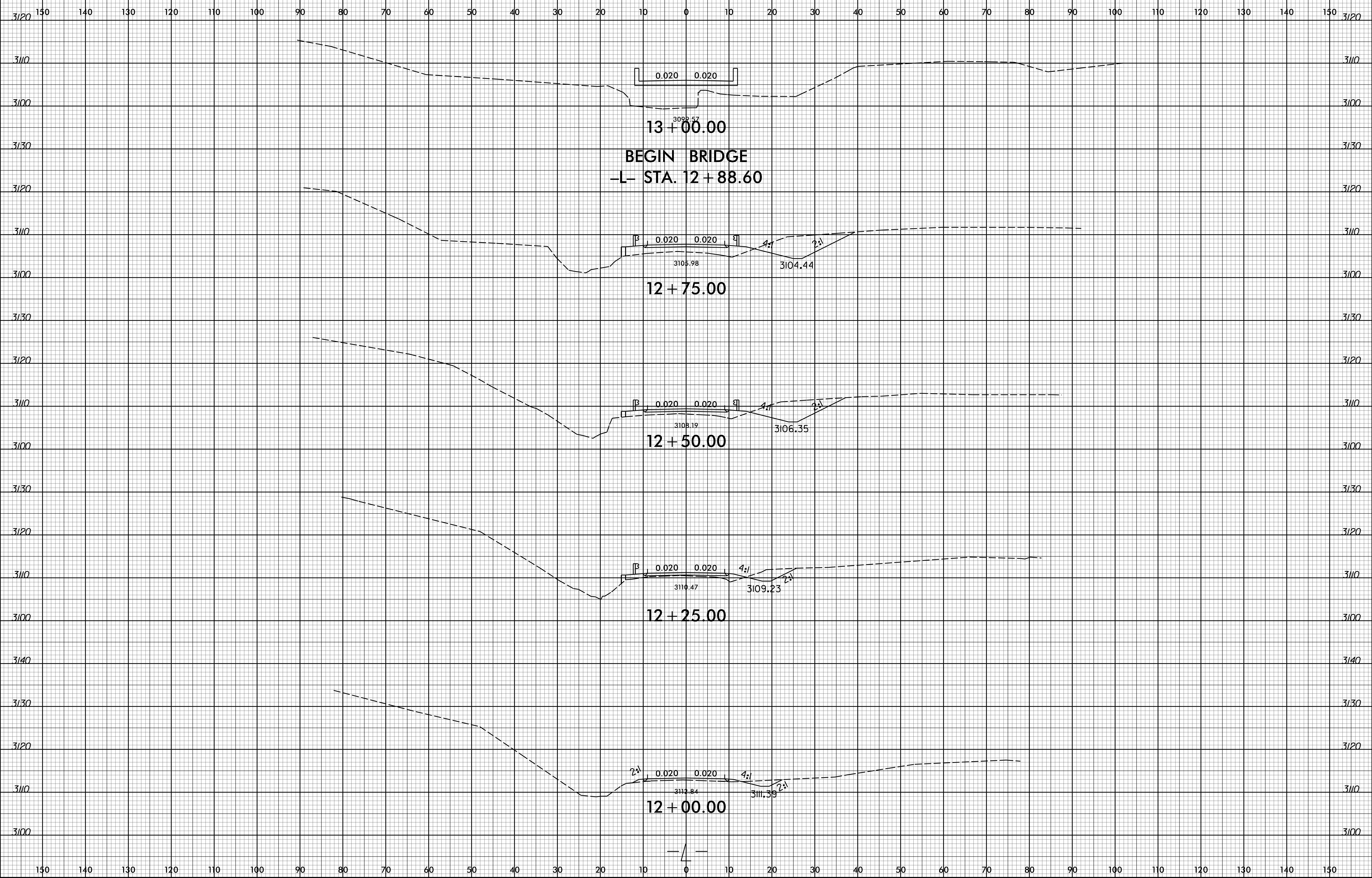
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8/23/99



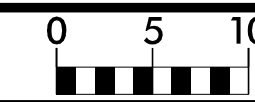
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X-2



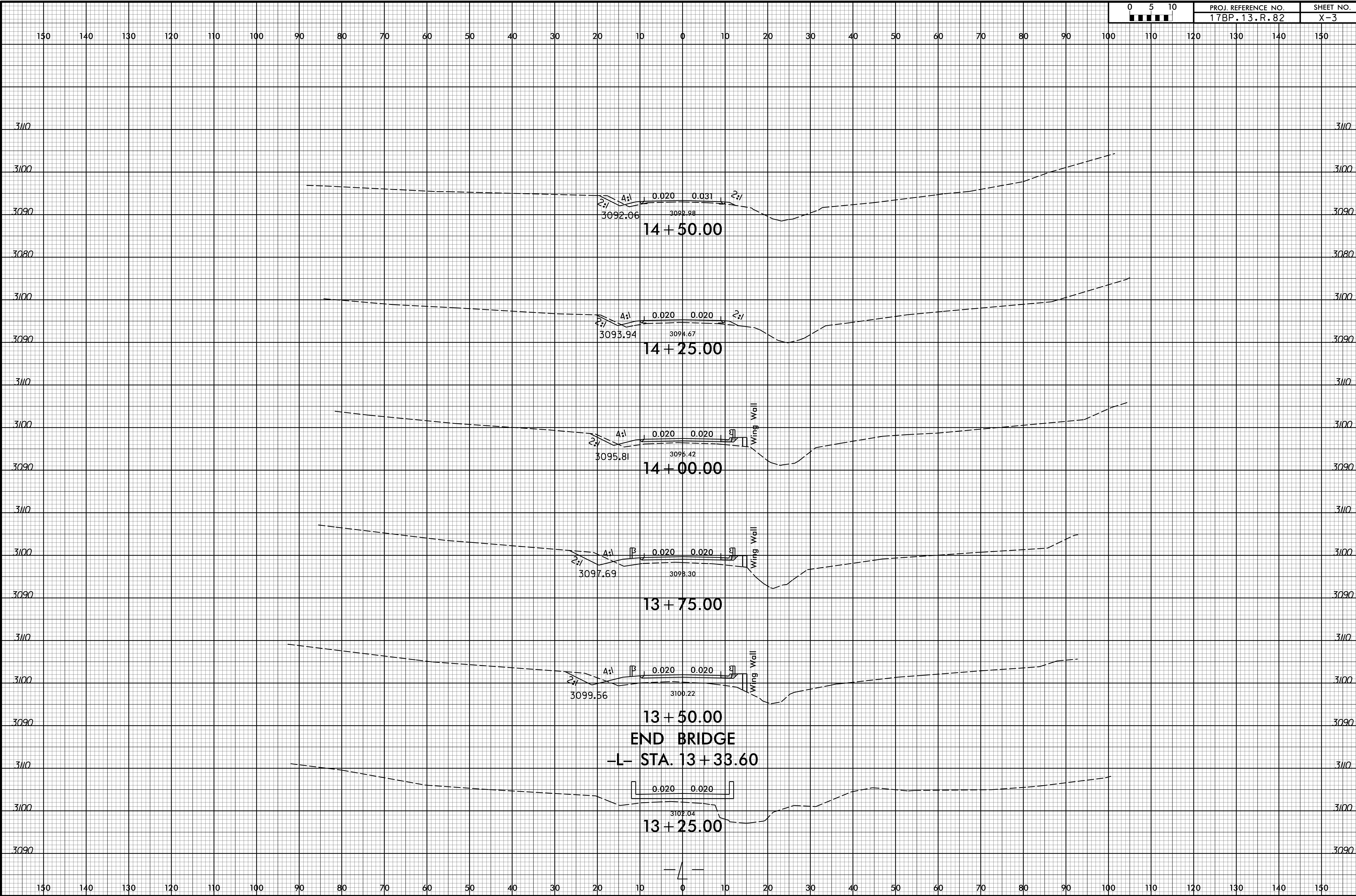
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8/23/99



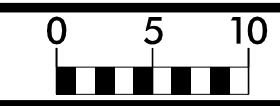
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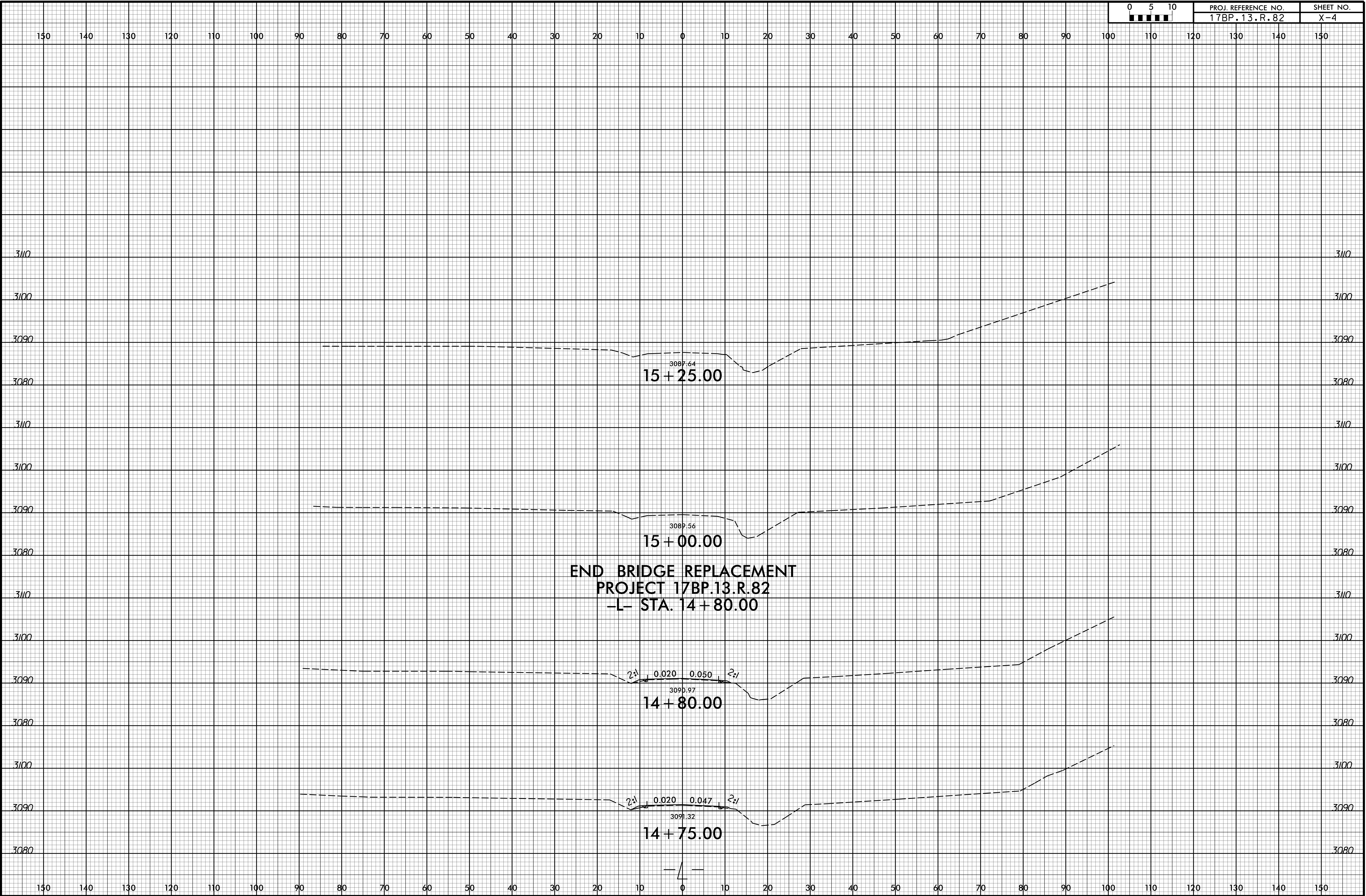
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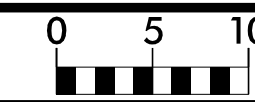
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**END BRIDGE REPLACEMENT
PROJECT 17BP.13.R.82
-L- STA. 14 + 80.00**

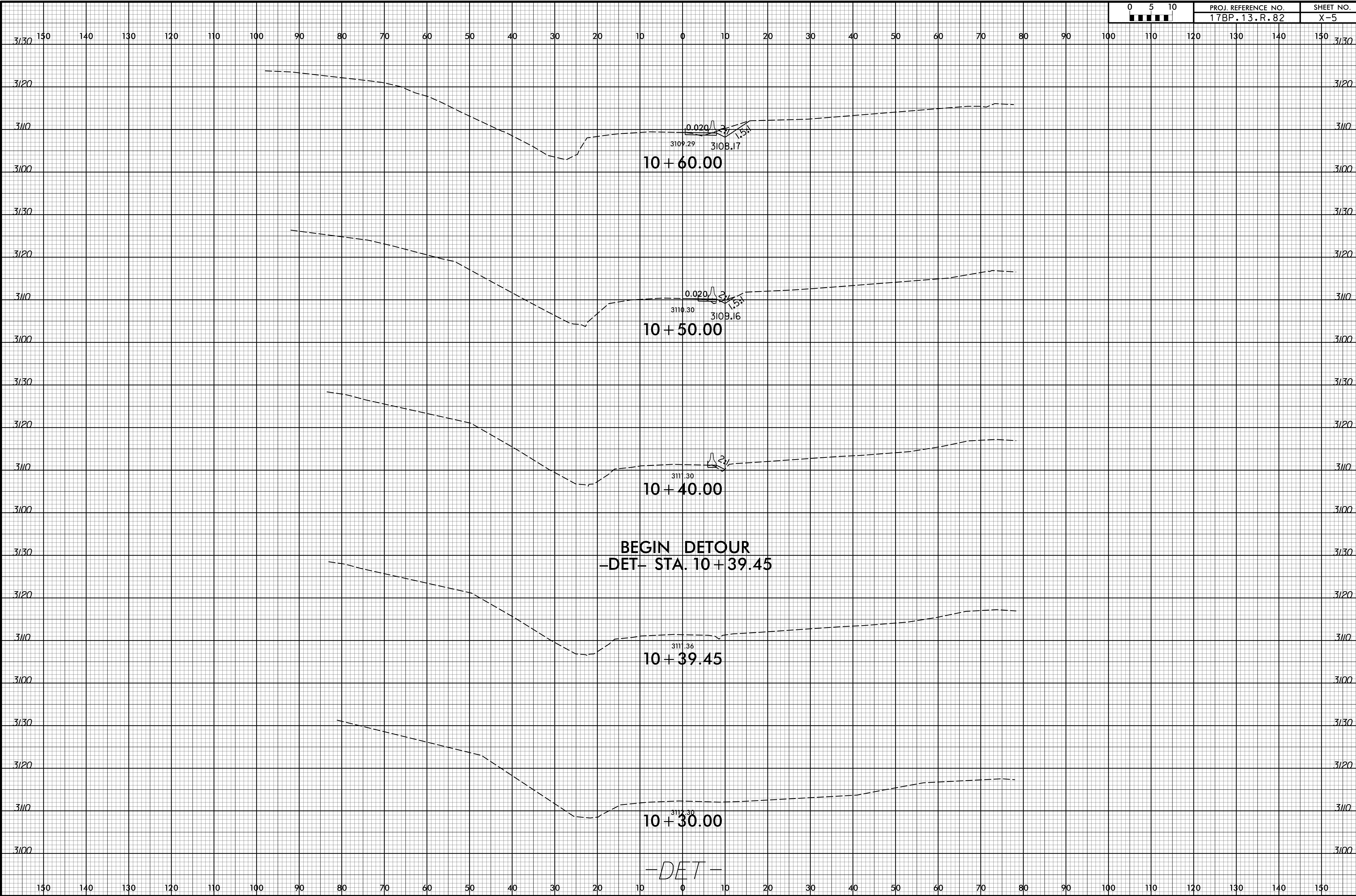
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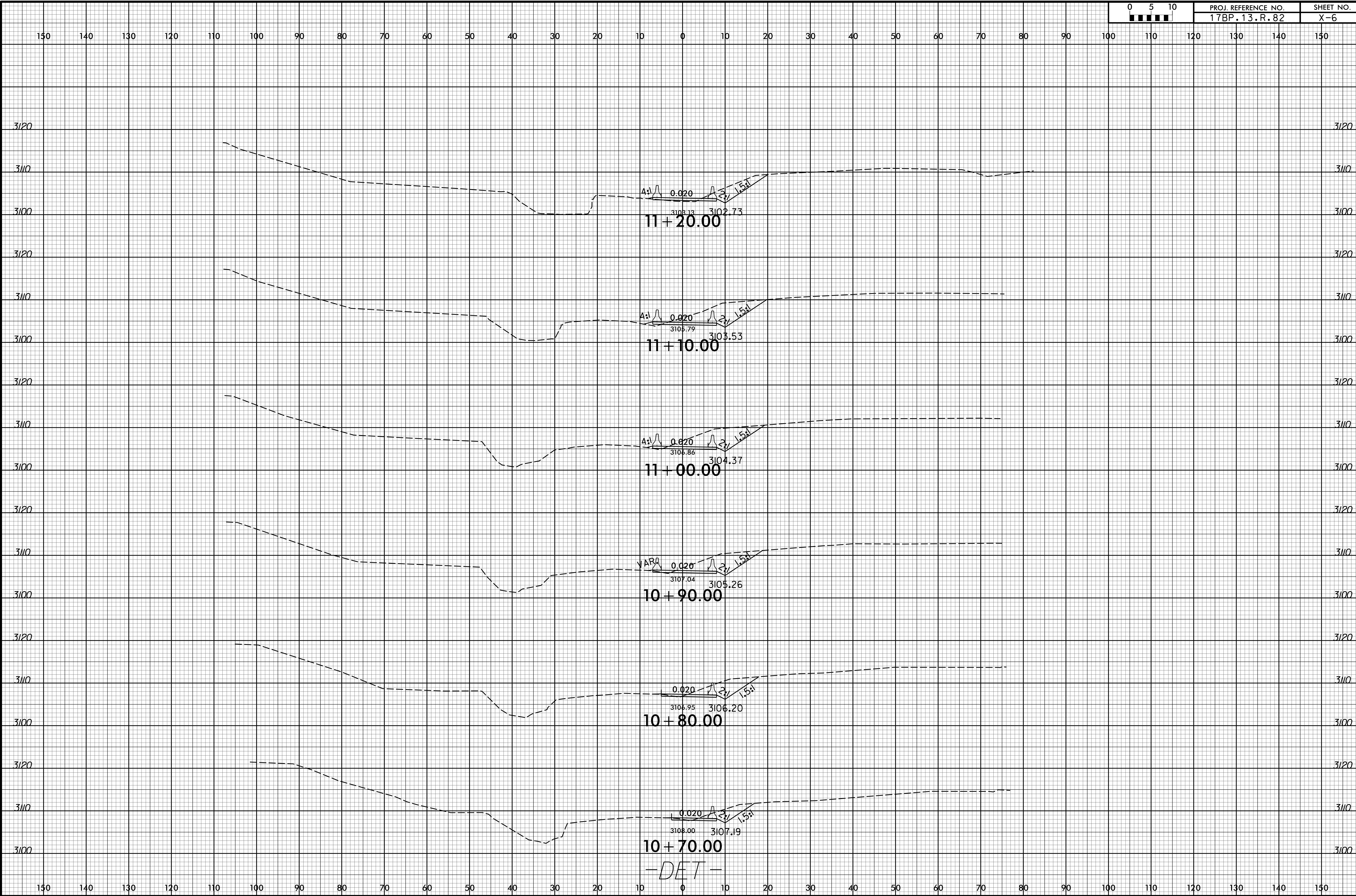
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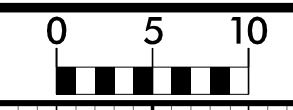
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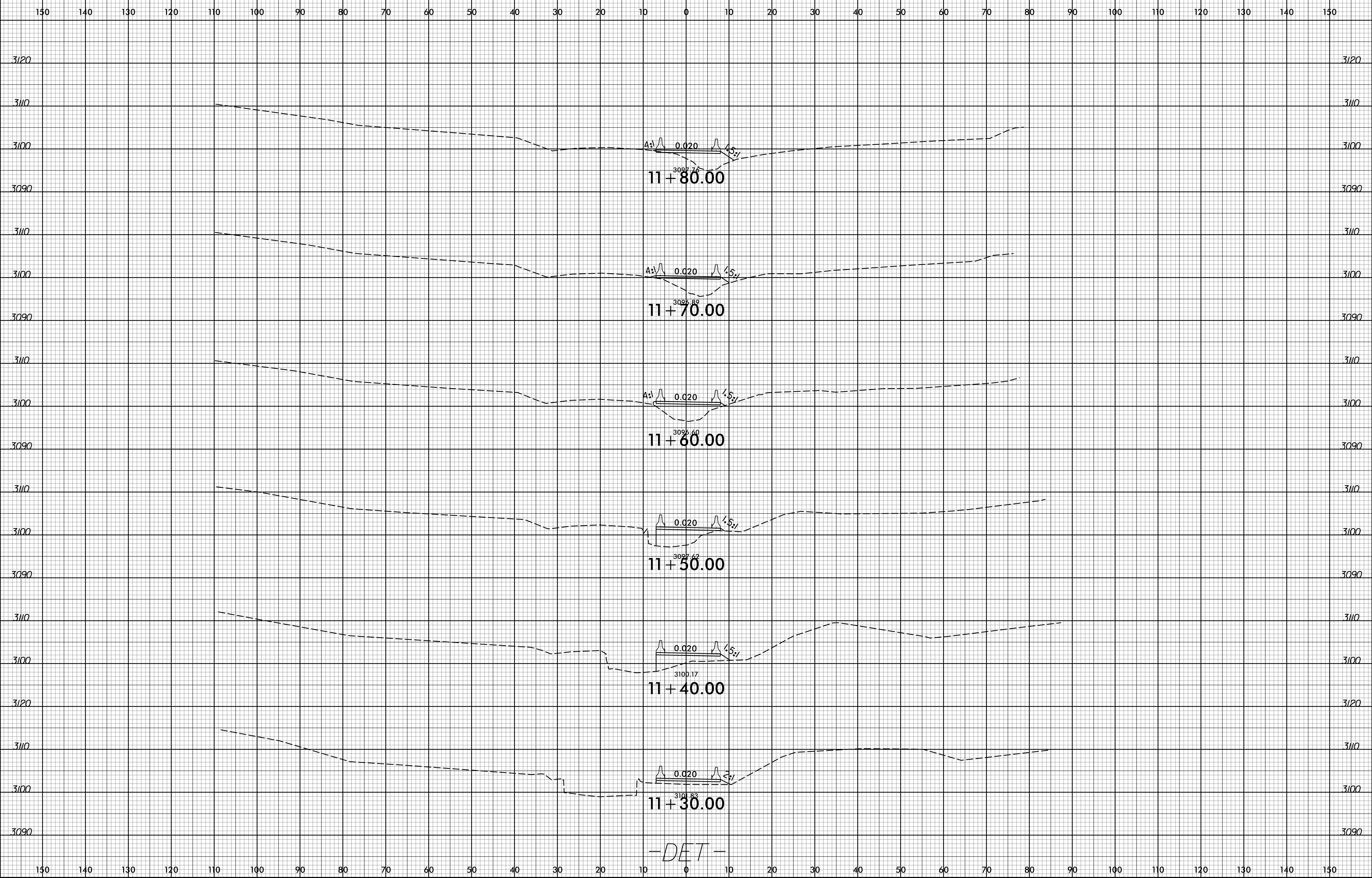
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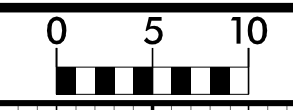
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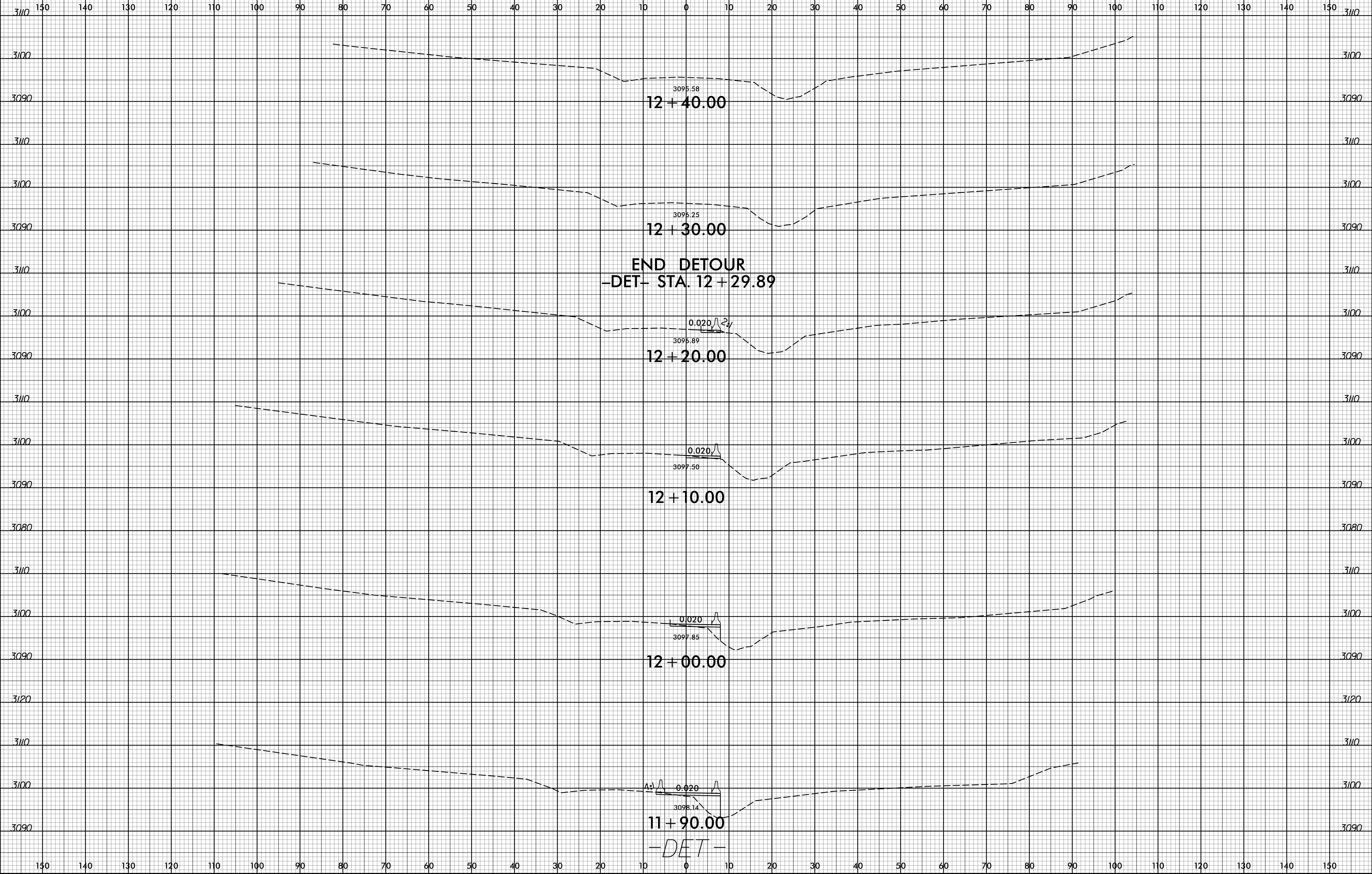
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