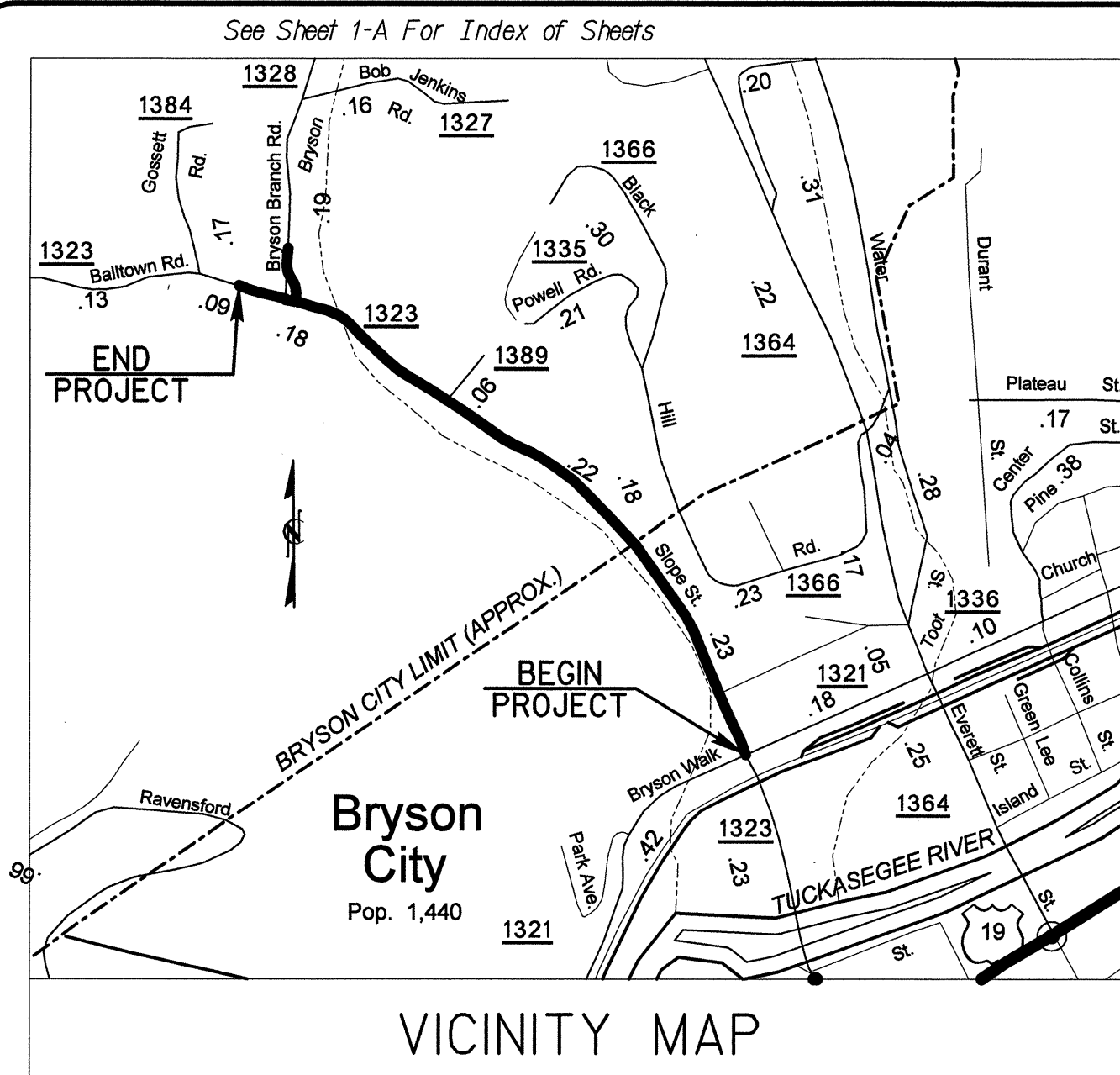
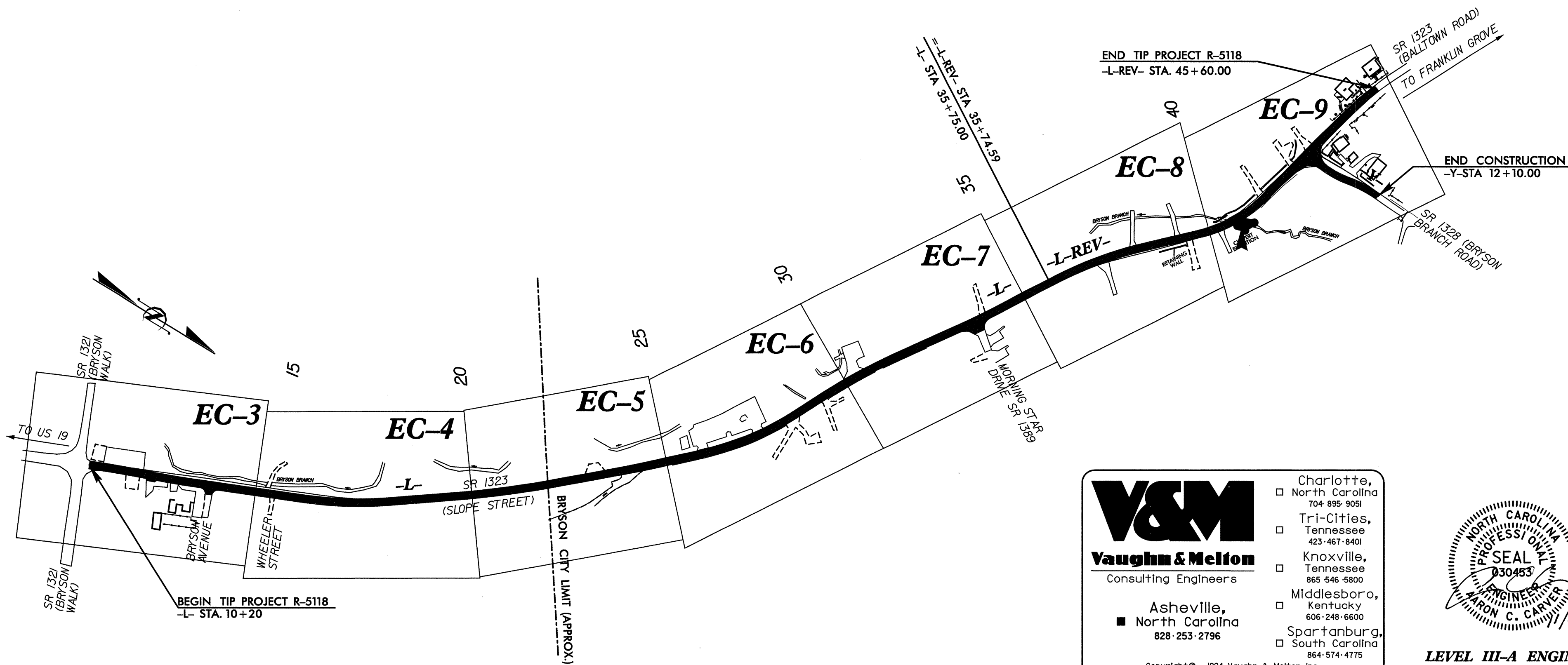


**TIP PROJECT: R-5118**



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

**LOCATION:** Slope Street (SR 1323) between Bryson Walk (SR 1321) and Bryson Branch Road (SR 1328) in Bryson City.  
**TYPE OF WORK:** Grading, Paving, Drainage, Utilities, and Structures.



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5118	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Sed. #	Description	Symbol
1650.05	Temporary Silt Ditch	TD
1650.05	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	—
	Silt Basin Type B	—
1633.01	Temporary Rock Silt Check Type-A	—
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	—
	Temporary Rock Silt Check Type-B	—
	Wattle	—
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 HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.**

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

**V&M**  
**Vaughn & Melton**  
Consulting Engineers

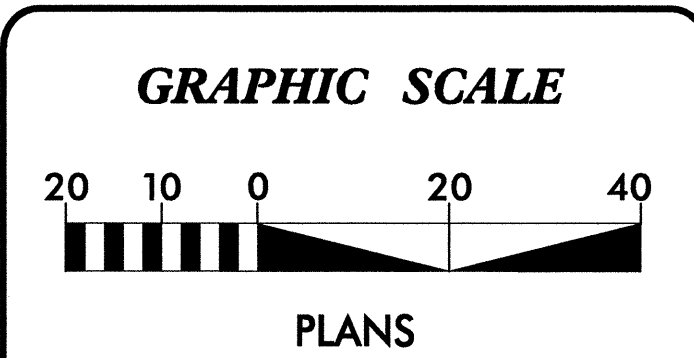
Charlotte, North Carolina 704-595-9025  
Tri-Cities, Tennessee 423-467-8401  
Knoxville, Tennessee 865-546-5800  
Middlesboro, Kentucky 606-248-6600  
Spartanburg, South Carolina 864-574-4775

Asheville, North Carolina 828-253-2796

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**LEVEL III-A ENGINEER**  
**CERTIFICATION NO: 302**



ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

Prepared In the Office of:  
**VAUGHN & MELTON**  
1318-F PATTON AVE.  
ASHEVILLE NC, 28806

**2006 STANDARD SPECIFICATIONS**

Roadway Standard Drawings

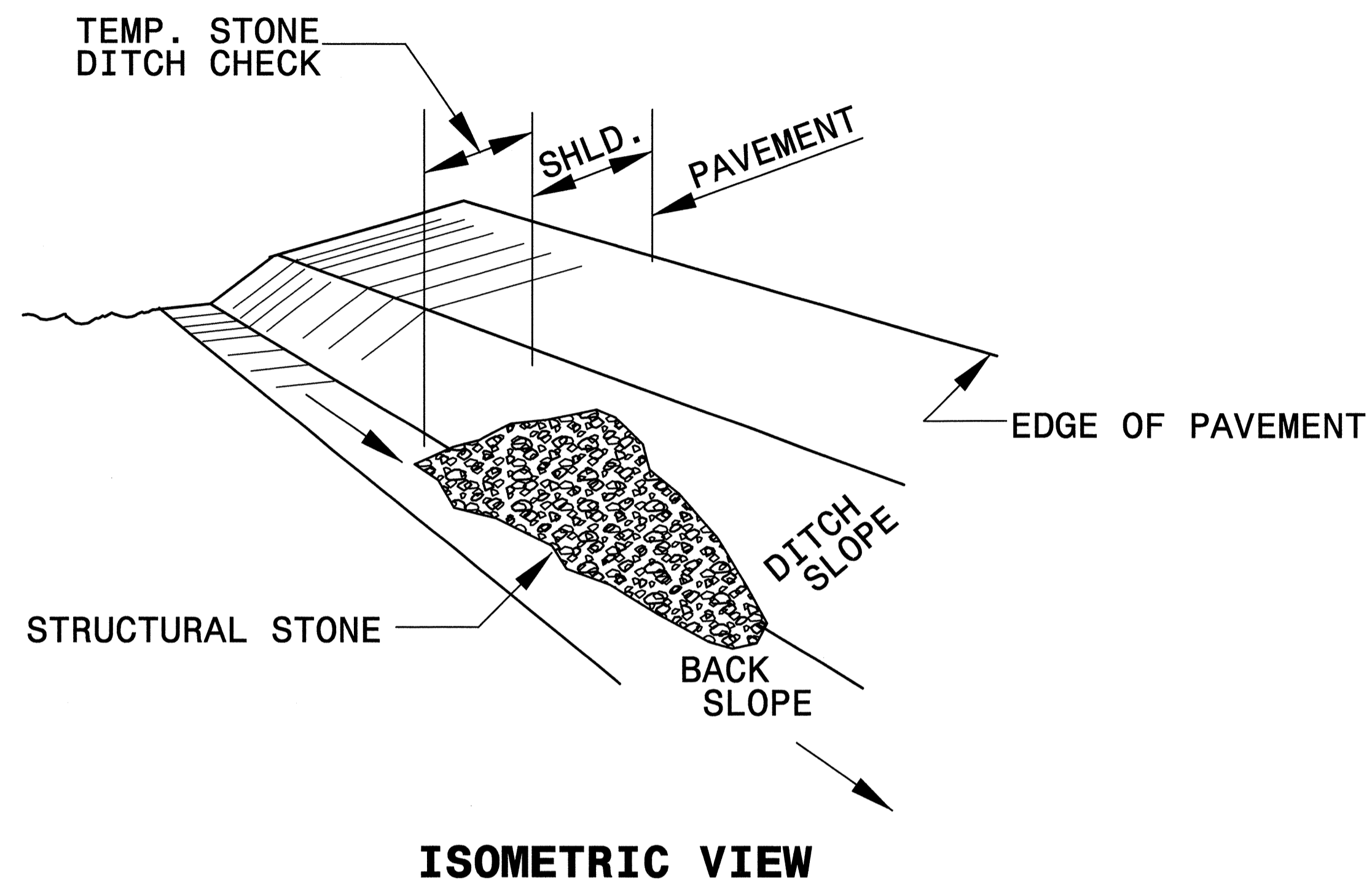
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1632.03 Rock Inlet Sediment Trap Type C
1606.01 Special Sediment Control Fence	1633.01 Temporary Rock Silt Check Type A
1607.01 Gravel Construction Entrance	1635.02 Rock Pipe Inlet Sediment Trap Type B
1622.01 Temporary Berms and Slope Drains	
1630.03 Temporary Silt Ditch	
1630.04 Stilling Basin	

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PROJECT REFERENCE NO. R-5118	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

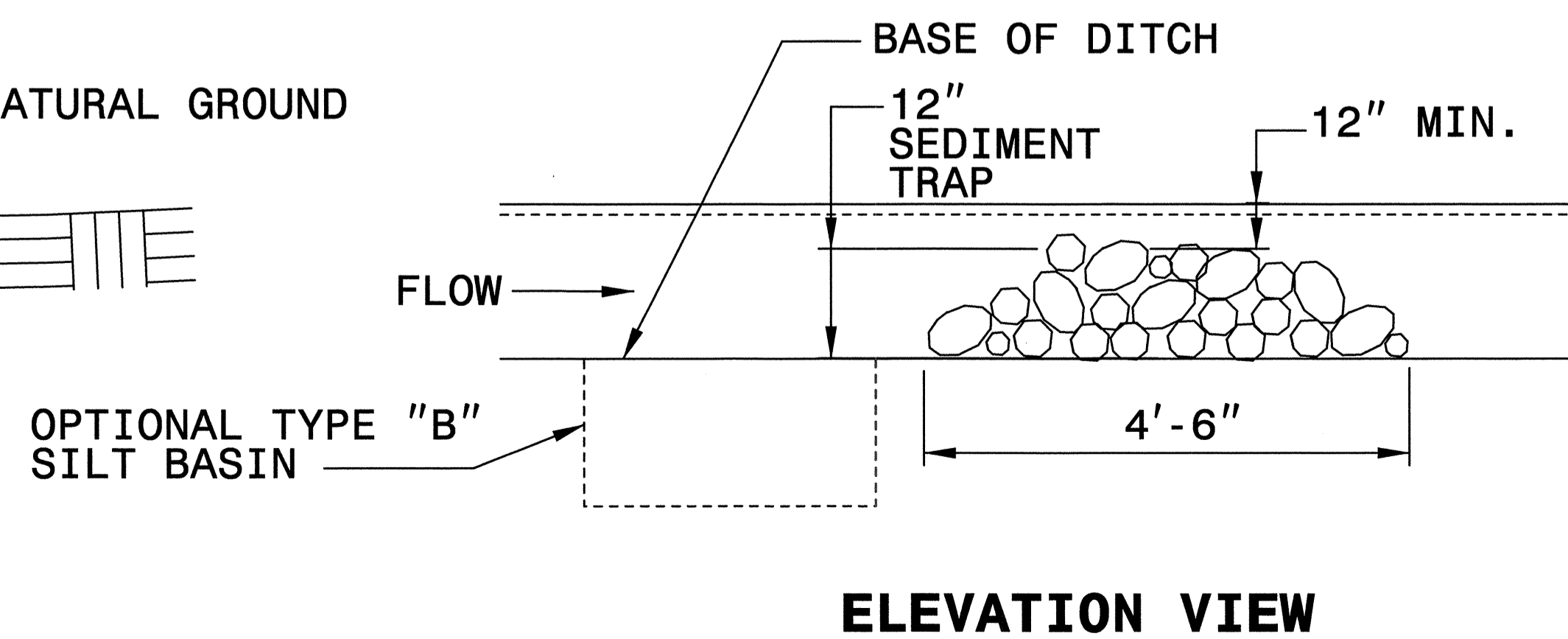
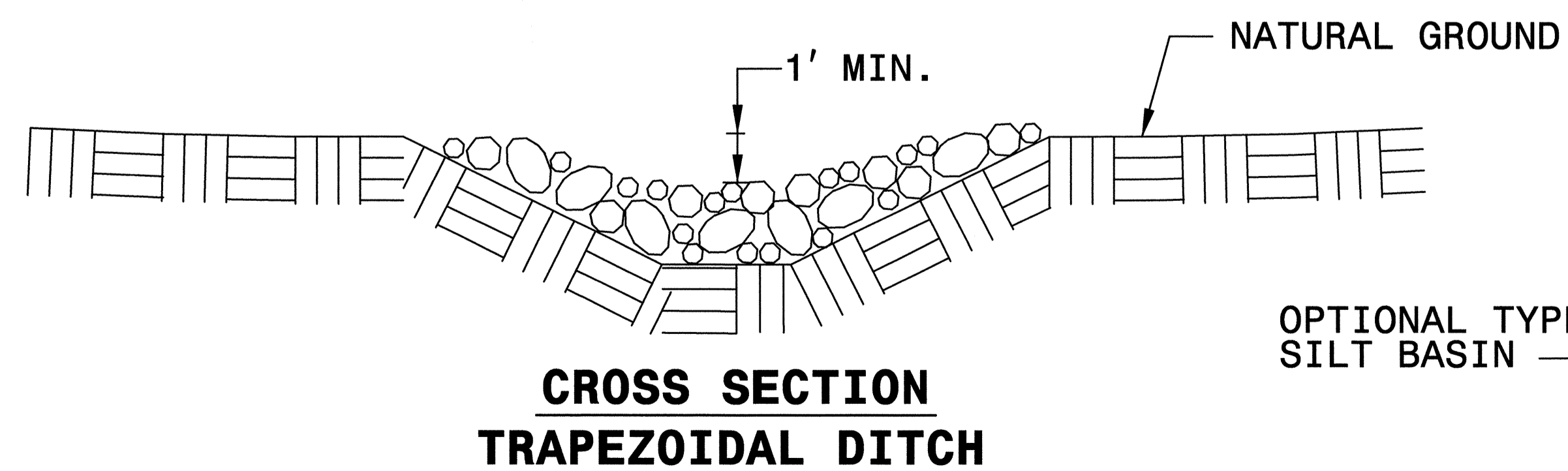
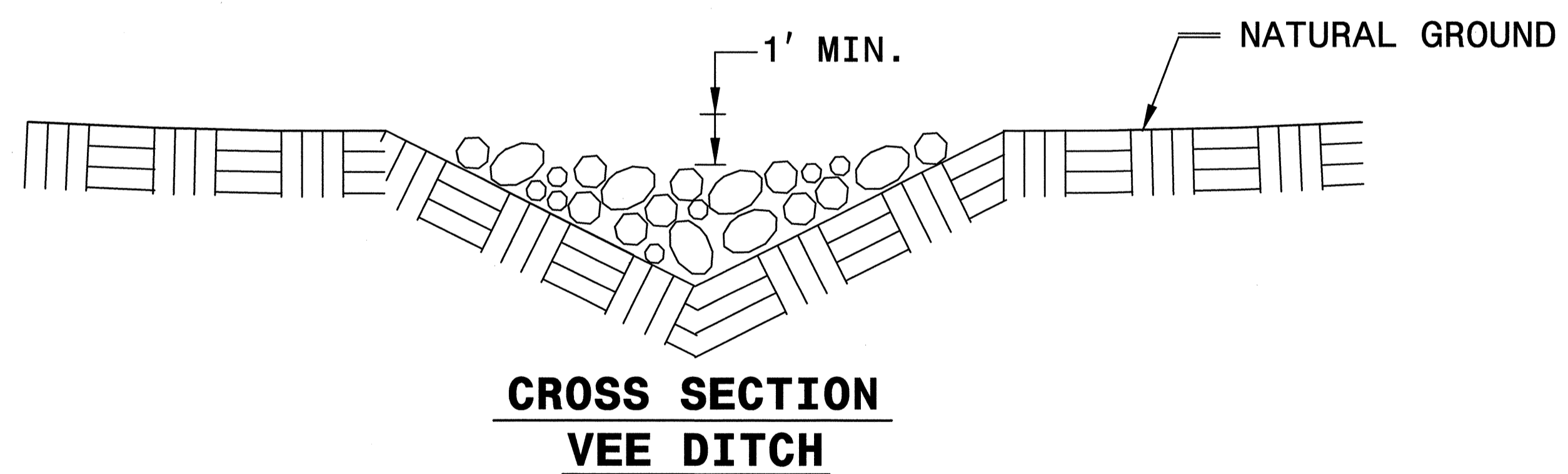
# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



**NOTES:**

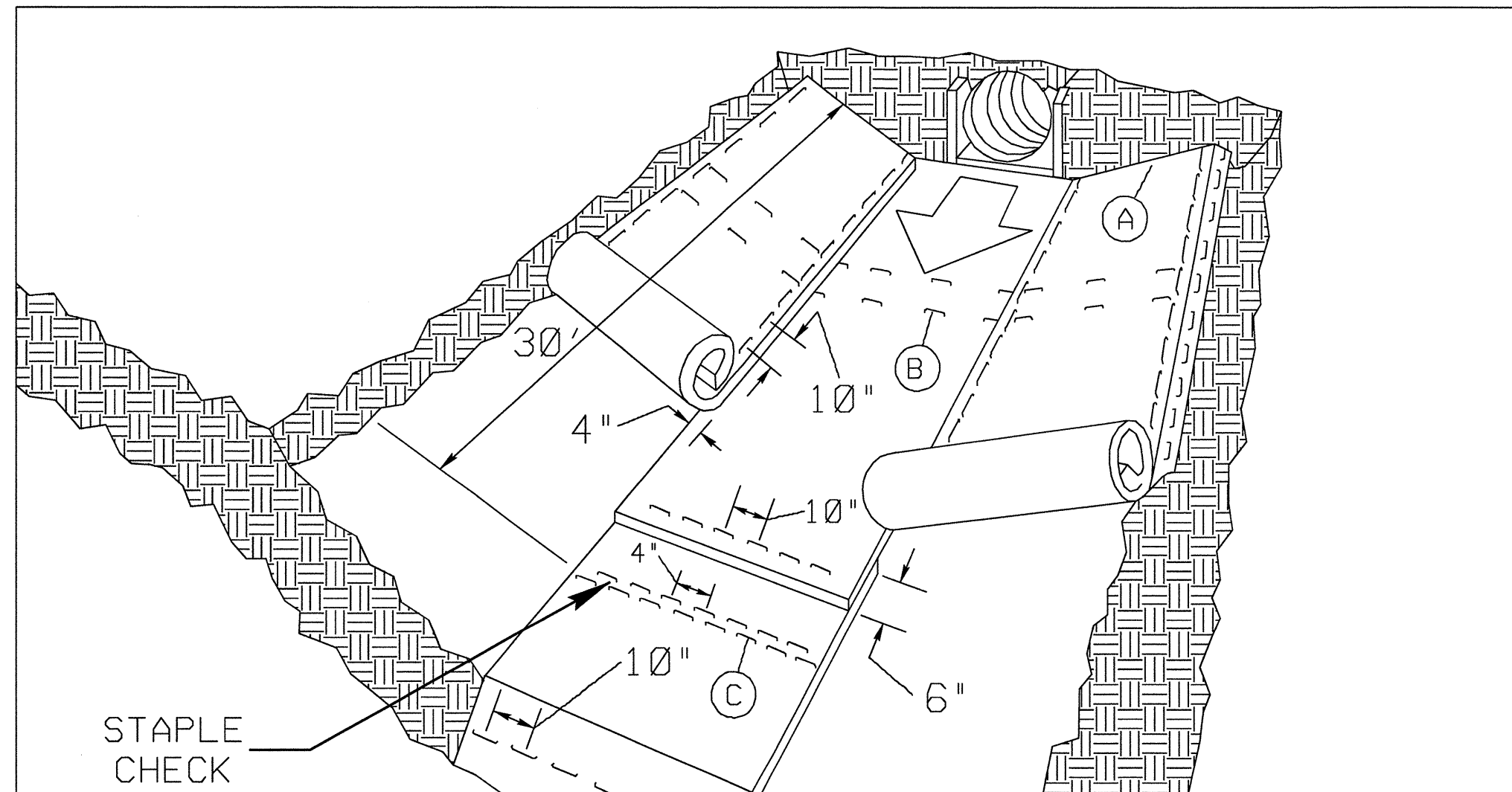
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



PROJECT REFERENCE NO. R-5118	SHEET NO. EC-2A
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 030453 W. ARON C. GARRETT 11/1/81

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

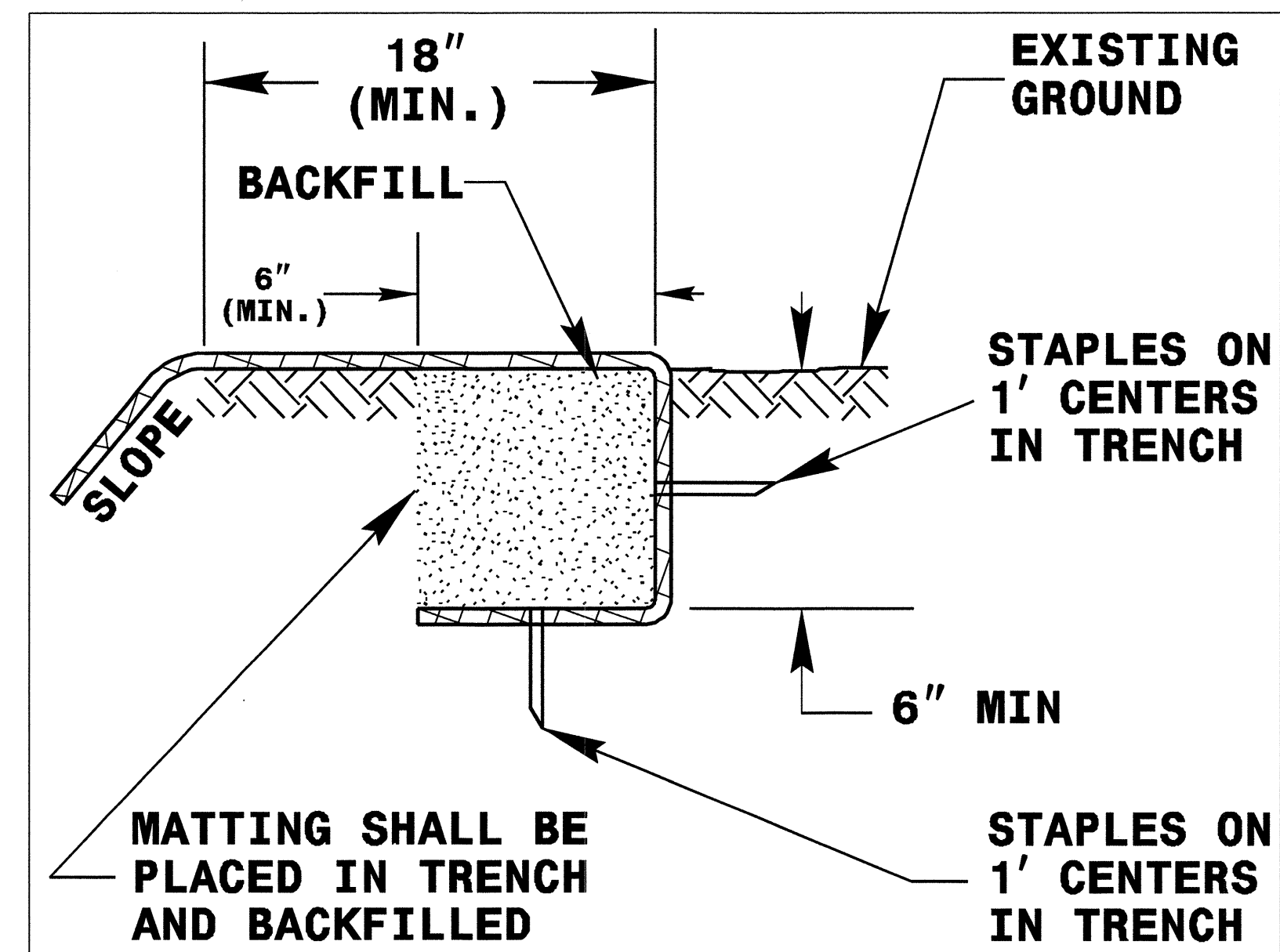
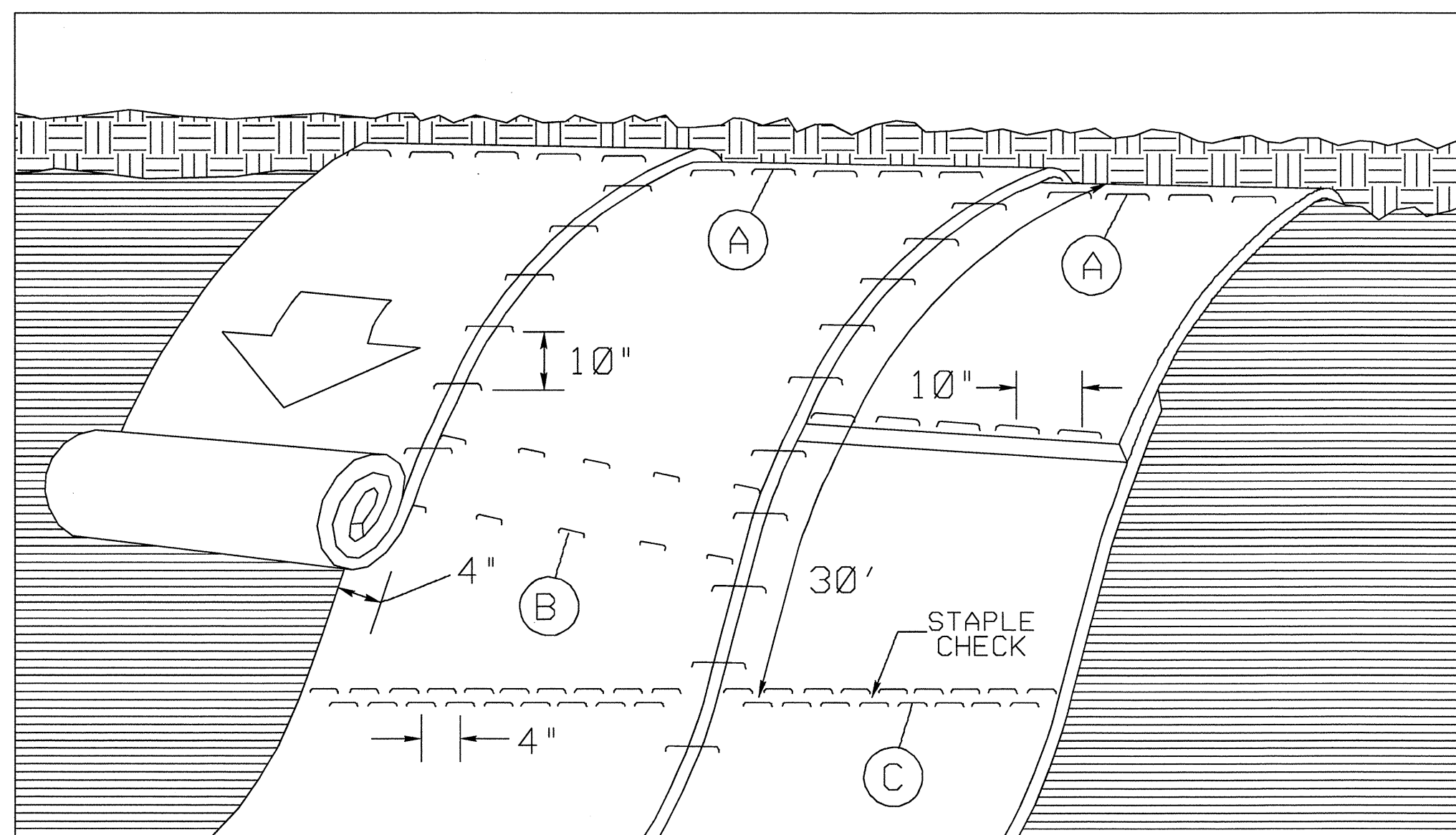


DIAGRAM (A)



**MATTING ON SLOPES**

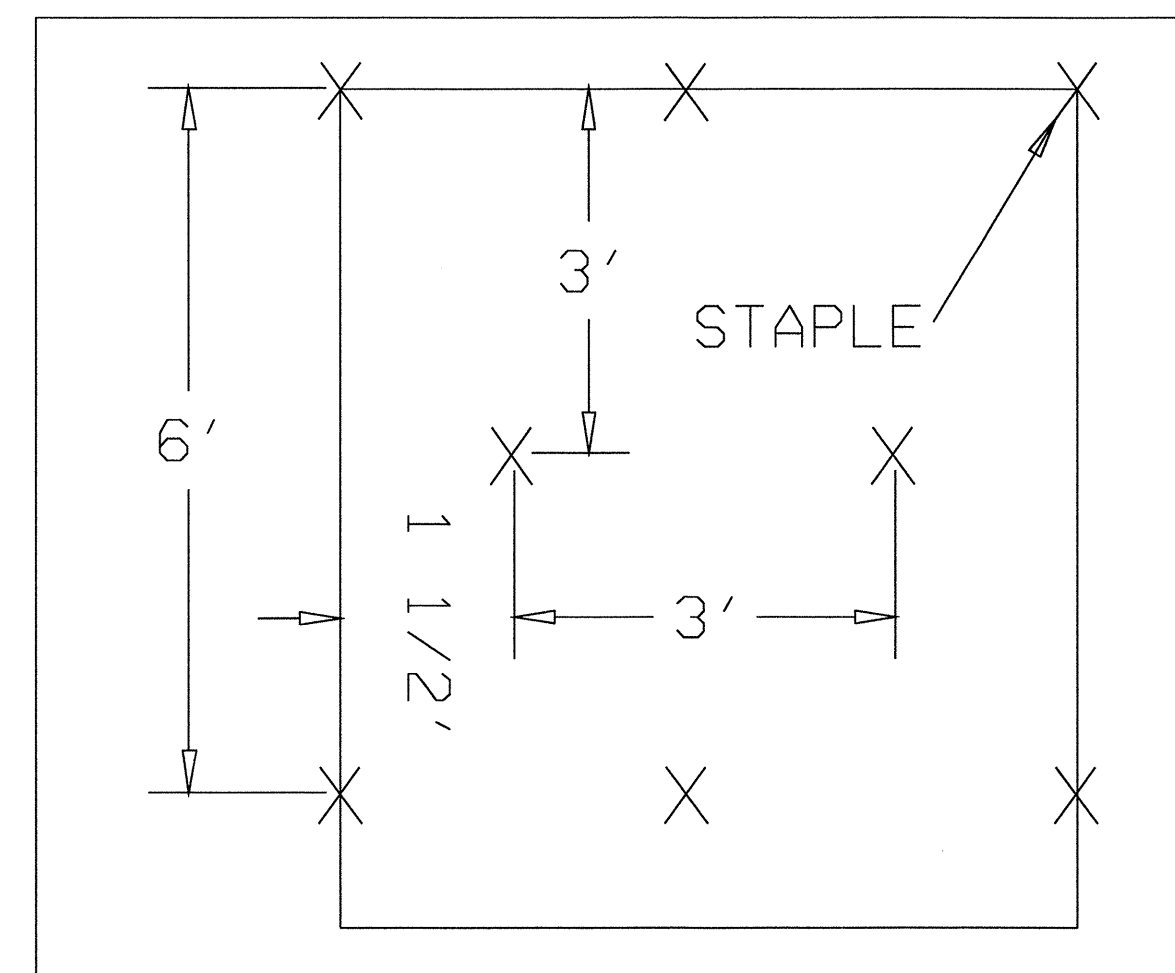


DIAGRAM (B)

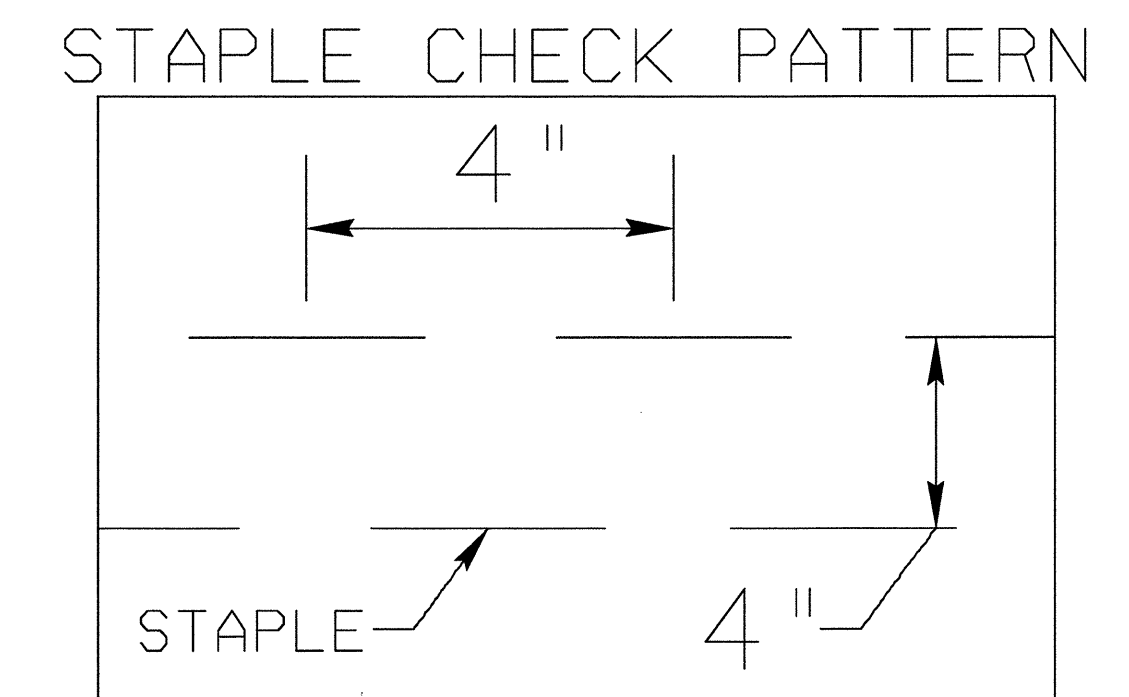
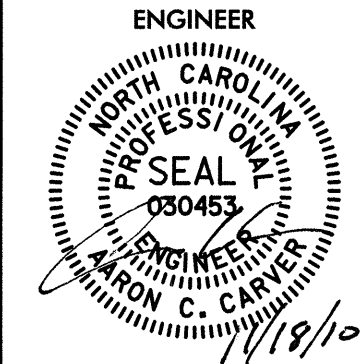


DIAGRAM (C)

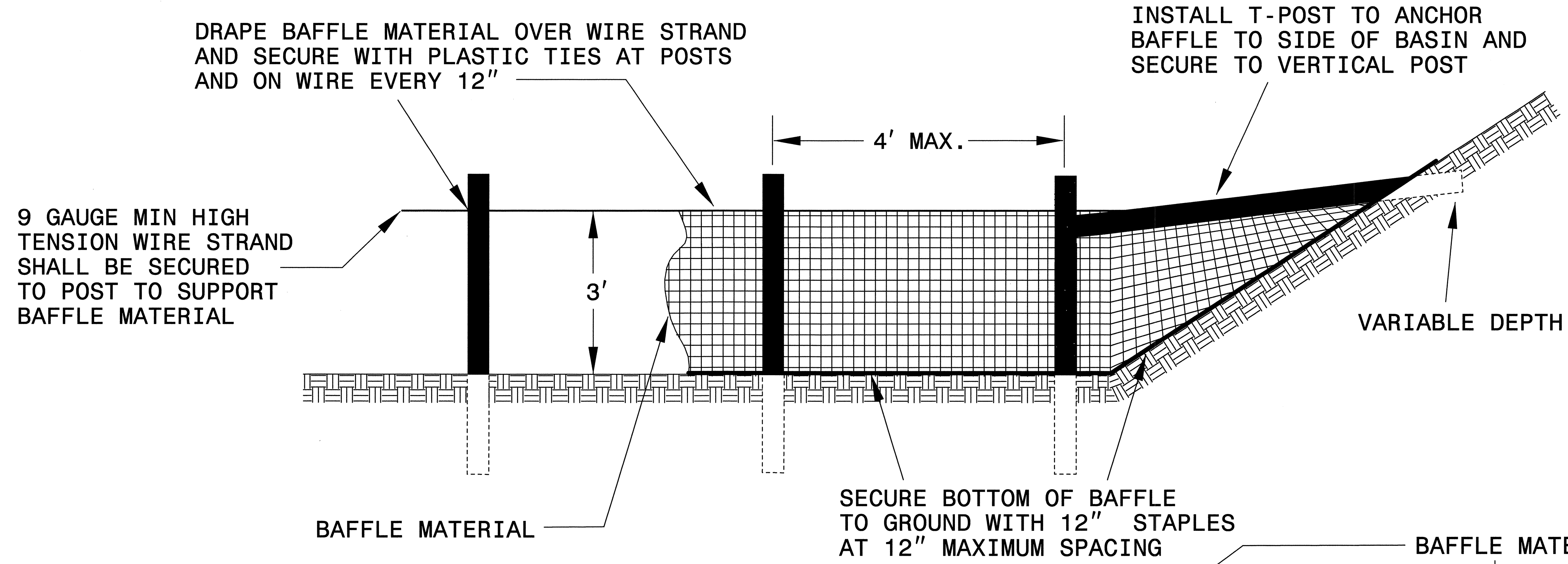
**NOTES:**

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.  
STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

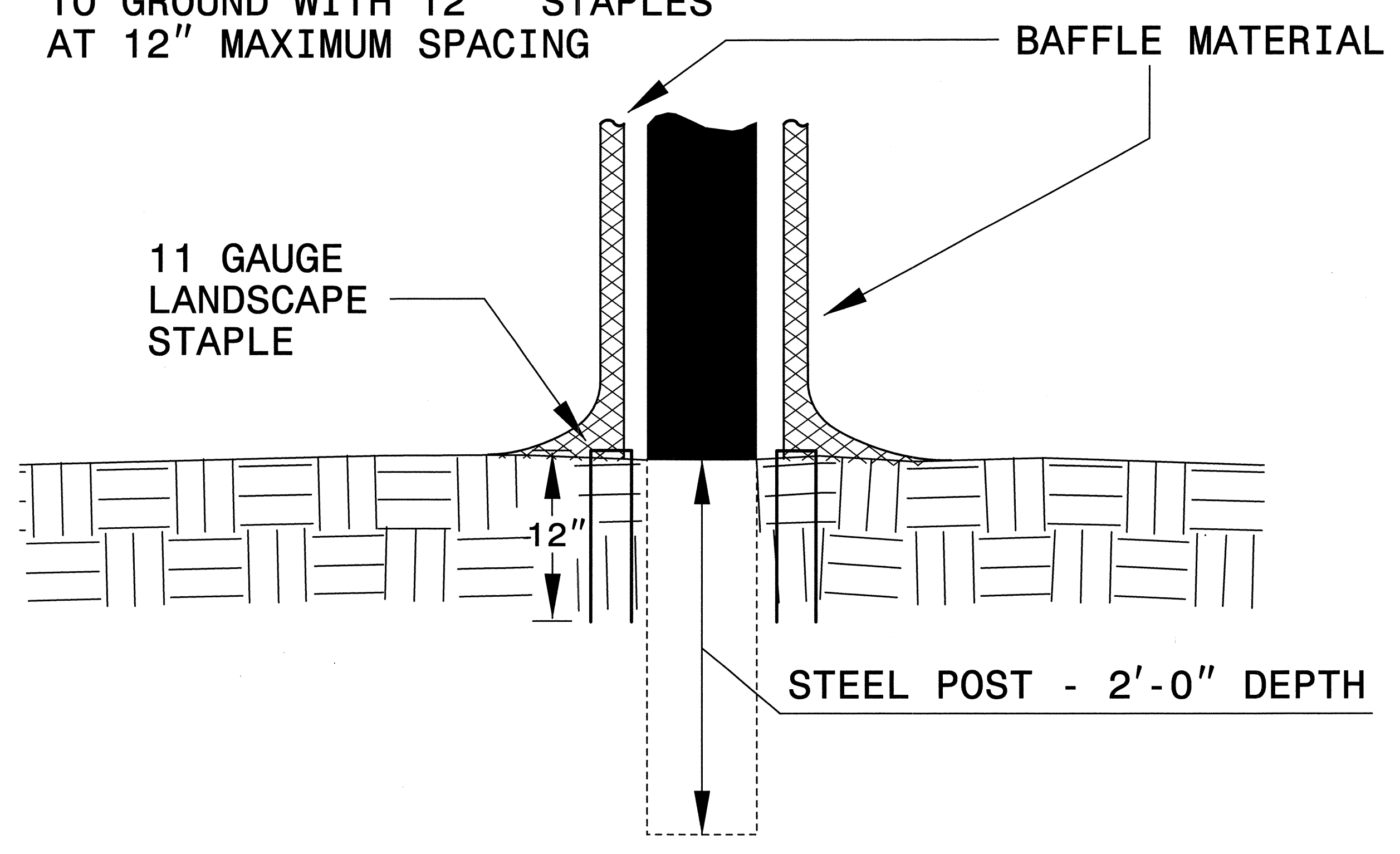
PROJECT REFERENCE NO. R-5118	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	

# COIR FIBER BAFFLE DETAIL



**NOTES:**

1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF  $\frac{1}{4}$  THE BASIN LENGTH.
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

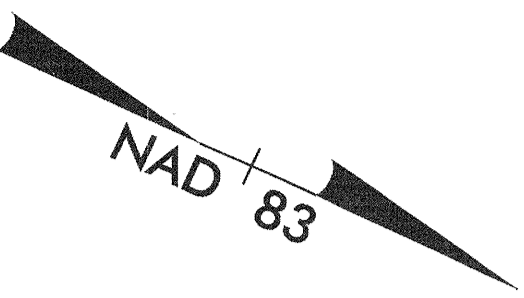


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

REVISIONS  
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**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "BRYSON CP2" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 6750602.44(1) EASTING: 6399895.17(1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99962875 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BRYSON CP2" TO L- STATION 10+00.00 IS N 18° 30' 37.5" W 1,089.31' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



1  
WARREN MICHAEL SMITH

3  
FREDERICK E. BRYSON

PROJECT REFERENCE NO. <b>R-5118</b>	SHEET NO. <b>EC-3/CONST. 4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REMOVE EXISTING PAVEMENT

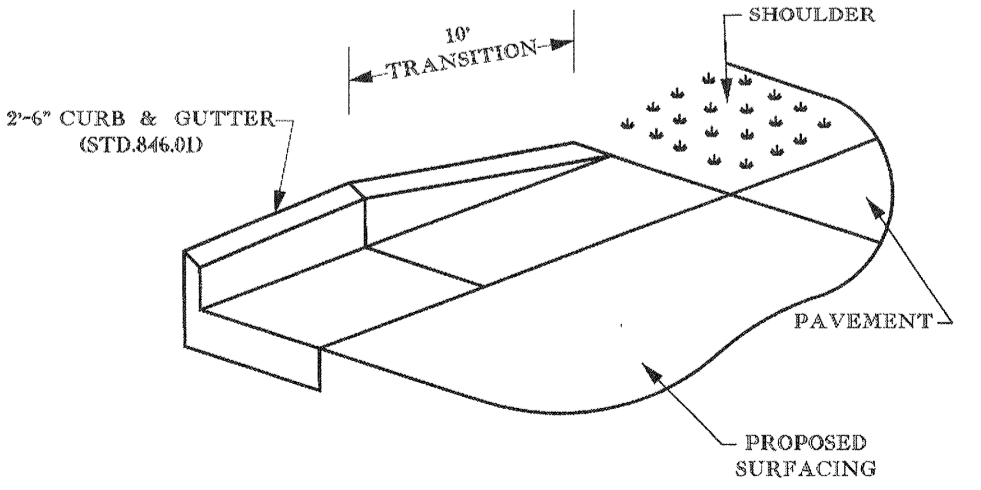
ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

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

TIE TO EXISTING PAVEMENT  
 BEGIN TIP PROJECT R-5118  
 -L- STA. 10+20

TIE TO EXISTING PAVEMENT  
 BEGIN CURB & GUTTER  
 -L- STA 10+25  
 SEE DETAIL 1

**DETAIL 1**



**DETAIL FOR TRANSITION AT END OF 2'-6" CONCRETE CURB & GUTTER**

*PI Sta 10+88.11*  
 $\Delta = 2' 35' 53.8" (RT)$   
 $D = 2' 36' 15.7"$   
 $L = 99.77'$   
 $T = 49.89'$   
 $R = 2,200.00'$   
 $SE = 0.03$   
 $RO = 63.00'$

*PI Sta 12+46.82*  
 $\Delta = 2' 31' 47.9" (LT)$   
 $D = 2' 36' 15.7"$   
 $L = 97.14'$   
 $T = 48.58'$   
 $R = 2,200.00'$   
 $SE = 0.03$   
 $RO = 63.00'$

**SEE SHEET 11 FOR PROFILE**

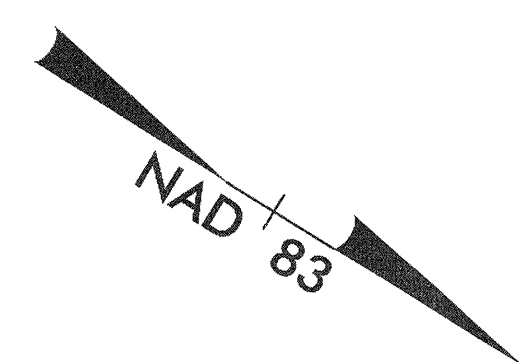
MATCHLINE -L- 14+50

6  
ROBERT L. LYDAY and wife,  
DOROTHY B. LYDAY

PROJECT REFERENCE NO.	SHEET NO.
R-5118	EC-4/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

REMOVE EXISTING PAVEMENT



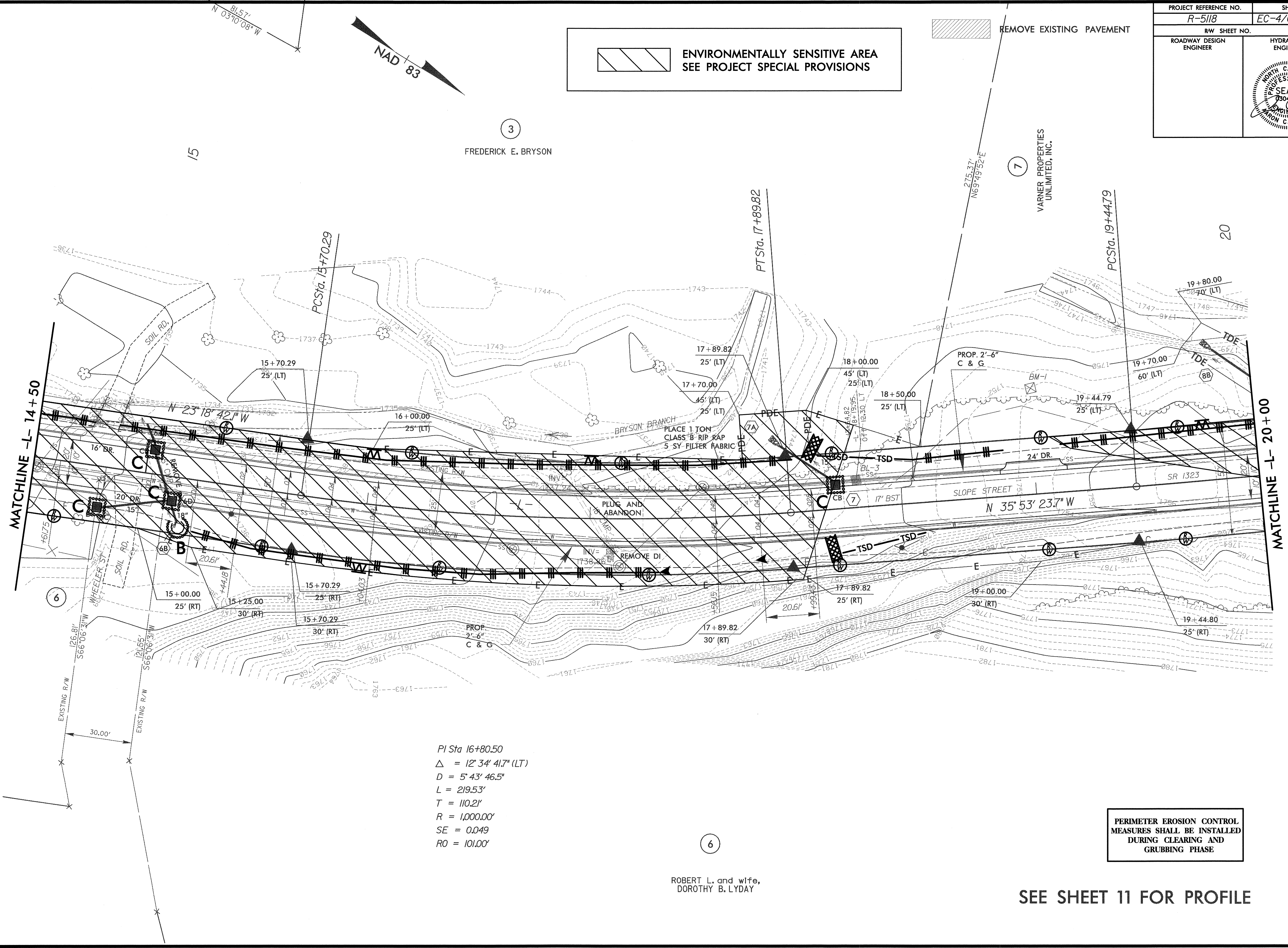
3

FREDERICK E. BRYSON

7

VARNER PROPERTIES  
UNLIMITED, INC.

20



REVISIONS

PI Sta 16+80.50  
 $\Delta = 12' 34' 41.7''$  (LT)  
 $D = 5' 43' 46.5''$   
 $L = 219.53'$   
 $T = 110.21'$   
 $R = 1,000.00'$   
 $SE = 0.049$   
 $RO = 101.00'$

6

ROBERT L. and wife,  
DOROTHY B. LYDAY

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

SEE SHEET 11 FOR PROFILE

B/17/99

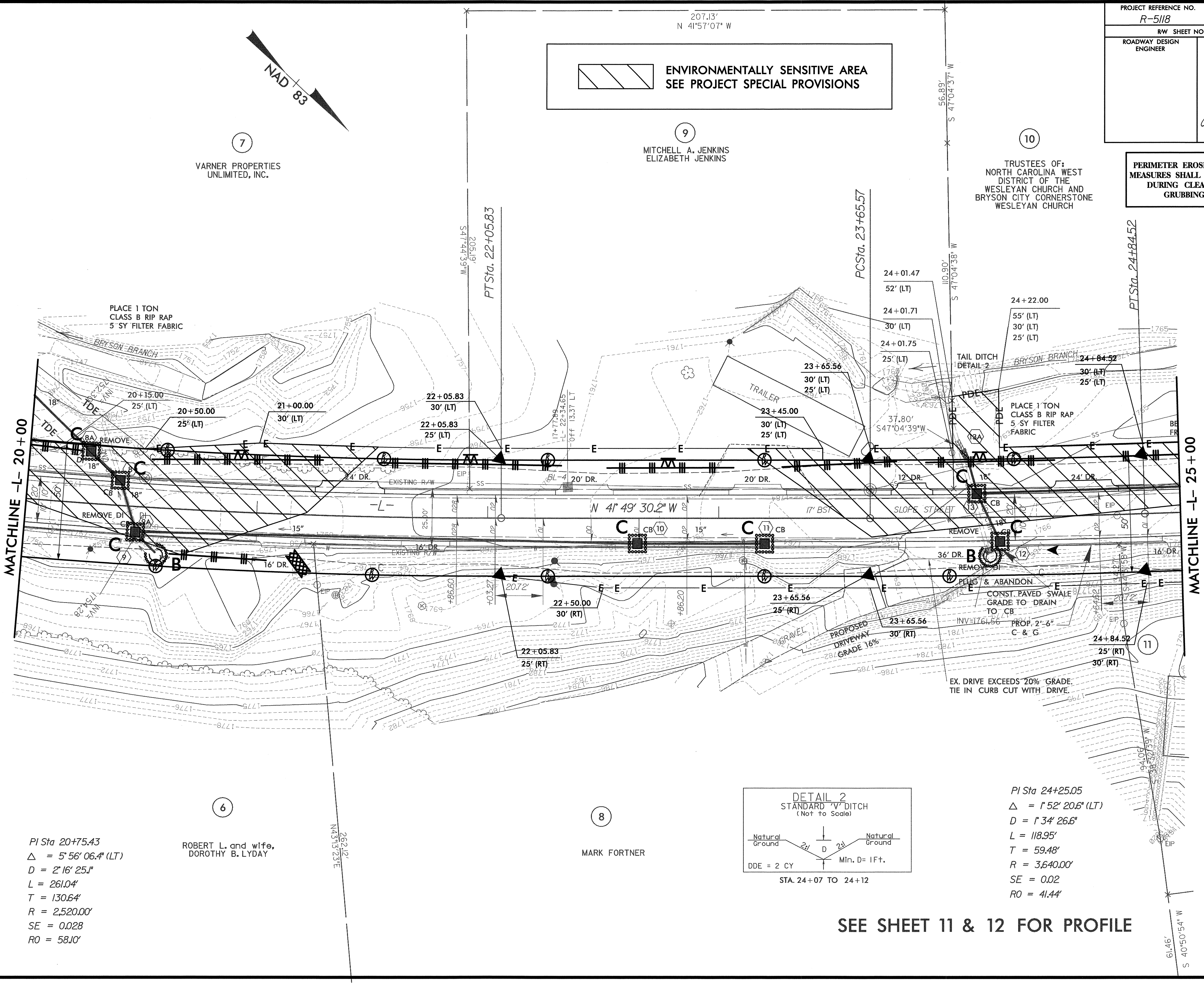
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 SYSTEMS  
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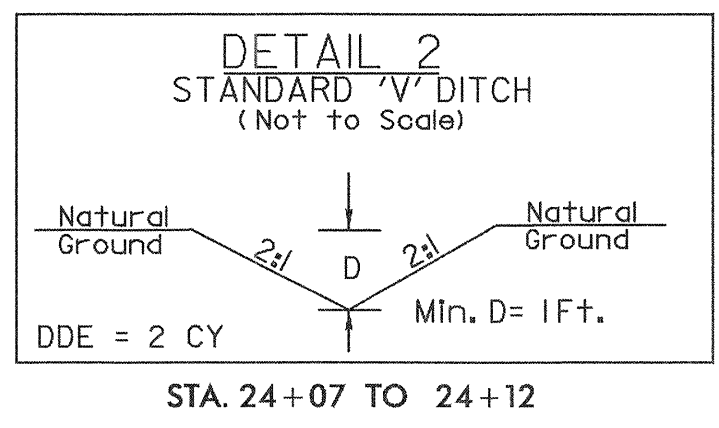
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE

REVISIONS



PI Sta 20+75.43  
 $\Delta = 5' 56'' 06.4''$  (LT)  
 $D = 2' 16'' 25.1''$   
 $L = 261.04'$   
 $T = 130.64'$   
 $R = 2,520.00'$   
 $SE = 0.028$   
 $RO = 58.10'$

ROBERT L. and wife,  
 DOROTHY B. LYDAY



PI Sta 24+25.05  
 $\Delta = 1' 52'' 20.6''$  (LT)  
 $D = 1' 34'' 26.6''$   
 $L = 118.95'$   
 $T = 59.48'$   
 $R = 3,640.00'$   
 $SE = 0.02$   
 $RO = 41.44'$

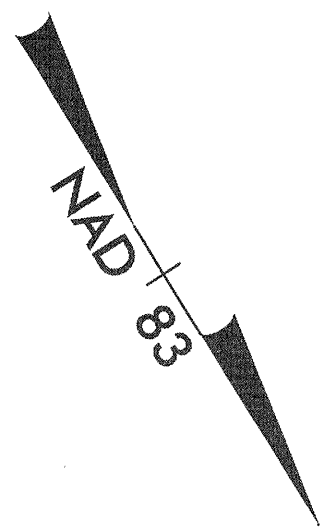
SEE SHEET 11 & 12 FOR PROFILE

PROJECT REFERENCE NO. R-5118	SHEET NO. EC-6/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



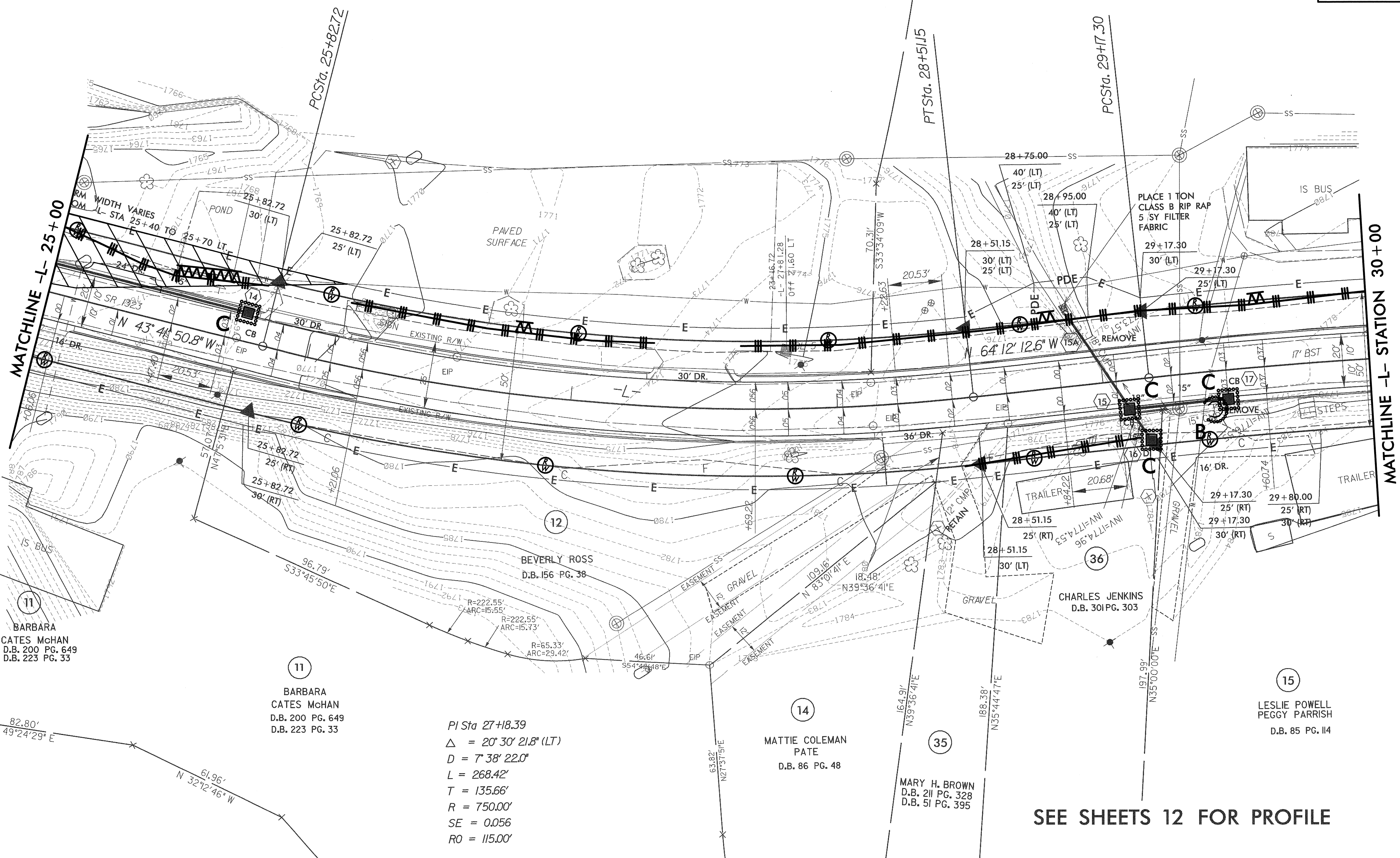
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS



10  
TRUSTEES OF:  
NORTH CAROLINA WEST  
DISTRICT OF THE  
WESLEYAN CHURCH AND  
BRYSON CITY CORNERSTONE  
WESLEYAN CHURCH  
D.B. 208 PG. 762

13  
MOUNTAIN MORTGAGE  
INVESTMENT COMPANY  
D.B. 120 PG. 683



11  
BARBARA  
CATES McHAN  
D.B. 200 PG. 649  
D.B. 223 PG. 33

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BARBARA  
CATES McHAN  
D.B. 200 PG. 649  
D.B. 223 PG. 33

12  
BEVERLY ROSS  
D.B. 156 PG. 38

14  
MATTIE COLEMAN  
PATE  
D.B. 86 PG. 48

35  
MARY H. BROWN  
D.B. 211 PG. 328  
D.B. 51 PG. 395

36  
CHARLES JENKINS  
D.B. 301 PG. 303

15  
LESLIE POWELL  
PEGGY PARRISH  
D.B. 85 PG. 114

SEE SHEETS 12 FOR PROFILE

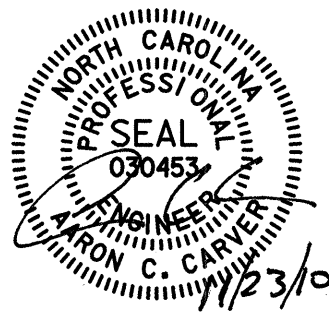
REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-5118	EC-7/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	

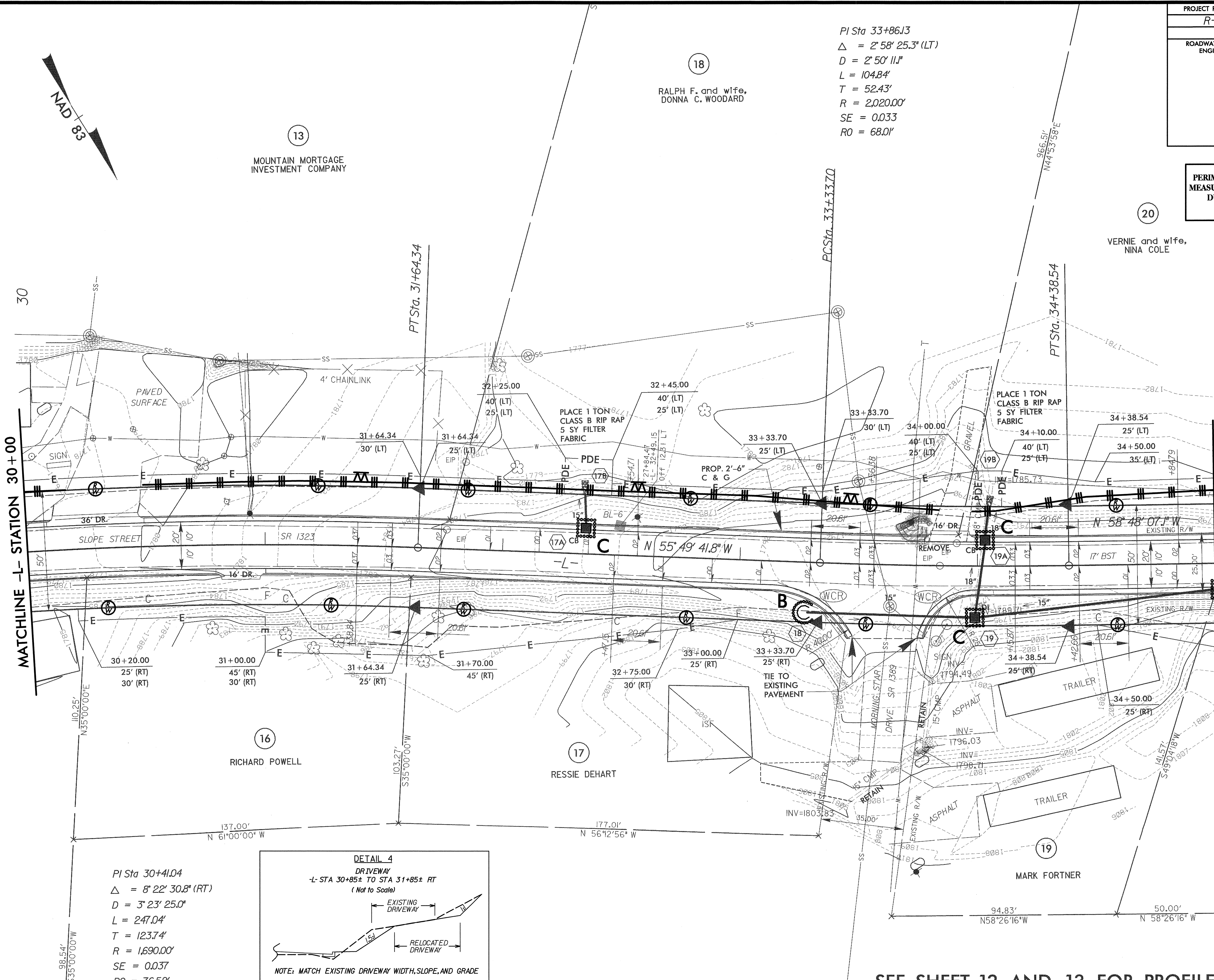
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE

PI Sta 33+86.13  
 $\Delta = 2' 58'' 25.3''$  (LT)  
 $D = 2' 50'' 11.1''$   
 $L = 104.84'$   
 $T = 52.43'$   
 $R = 2,020.00'$   
 $SE = 0.033$   
 $RO = 68.01'$

18  
 RALPH F. and wife,  
 DONNA C. WOODARD

13  
 MOUNTAIN MORTGAGE  
 INVESTMENT COMPANY

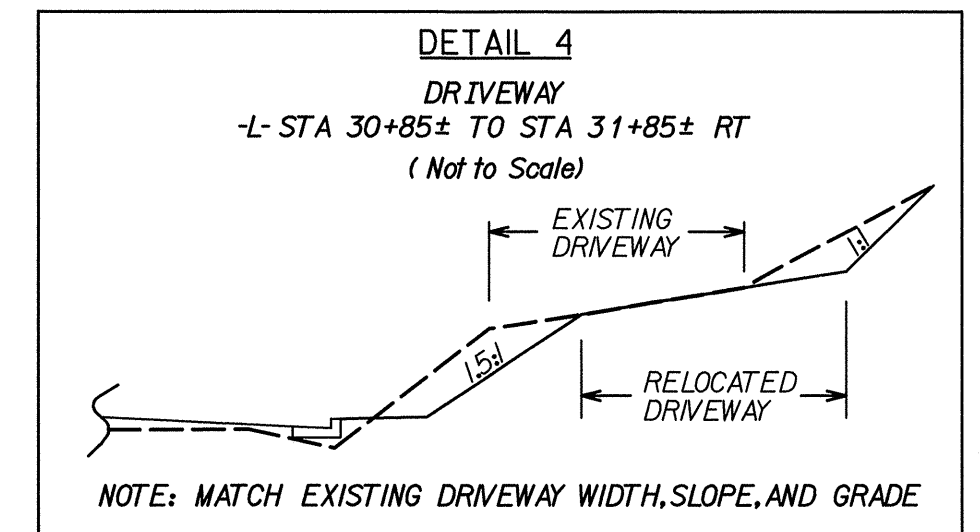
20  
 VERNIE and wife,  
 NINA COLE



MATCHLINE -L- STATION 30+00

MATCHLINE L- STATION 35+00

PI Sta 30+41.04  
 $\Delta = 8' 22'' 30.8''$  (RT)  
 $D = 3' 23'' 25.0''$   
 $L = 247.04'$   
 $T = 123.74'$   
 $R = 1,690.00'$   
 $SE = 0.037$   
 $RO = 76.52'$



SEE SHEET 12 AND 13 FOR PROFILE

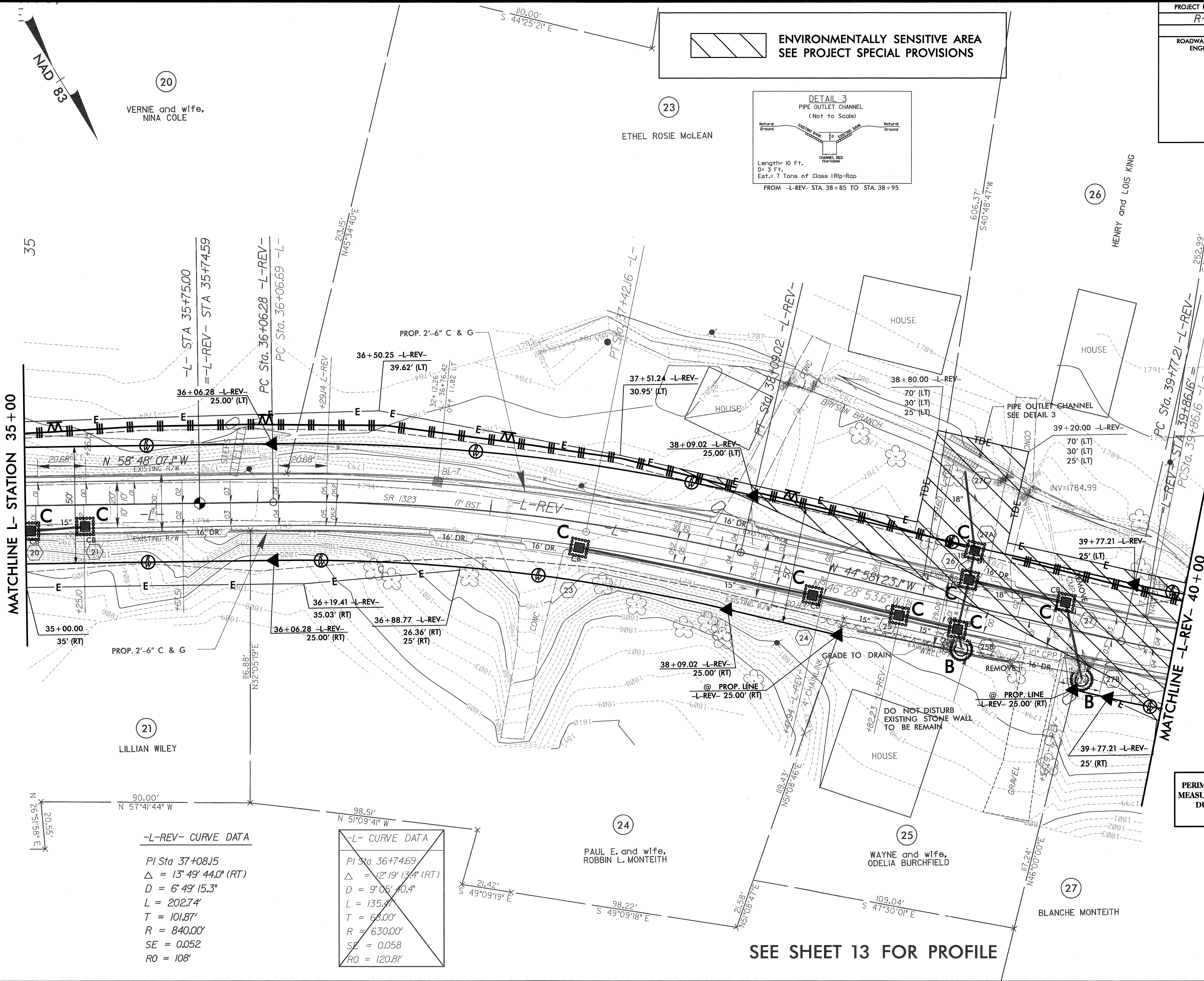
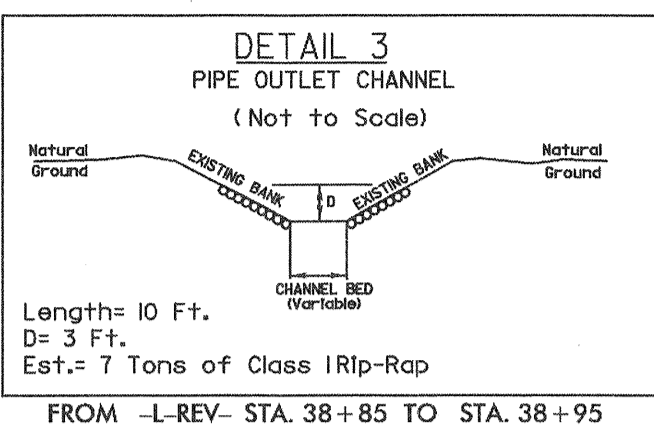
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**ENVIRONMENTALLY SENSITIVE AREA**  
SEE PROJECT SPECIAL PROVISIONS



**-L- CURVE DATA**

PI Sta 36+74.69
$\Delta = 12^\circ 19' 13.4''$ (RT)
$D = 9' 05' 40.4''$
$L = 135.47'$
$T = 68.00'$
$R = 630.00'$
$SE = 0.058$
$RO = 120.81'$

SEE SHEET 13 FOR PROFILE

REVISIONS

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PROJECT REFERENCE NO. R-5118	SHEET NO. EC-9/CONST.10
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	SEAL 030453 C. CARROLL 12/3/0

-L-REV- CURVE DATA

PI Sta 40+76.01 Δ = 32° 24' 24.7" (LT) D = 16' 51' 06.1" L = 192.31' T = 98.80' R = 340.00' SE = 0.059 RO = 107	PI Sta 43+10.73 Δ = 1° 40' 25.9" (RT) D = 7' 32' 20.1" L = 22.20' T = 11.0' R = 760.00' SE = 0.02 RO = 36'	PI Sta 45+23.51 Δ = 7° 57' 45.4" (RT) D = 8' 16' 27.7" L = 96.23' T = 48.19' R = 692.45' SE = 0.057 RO = 118'
--	---	--

-L- CURVE DATA

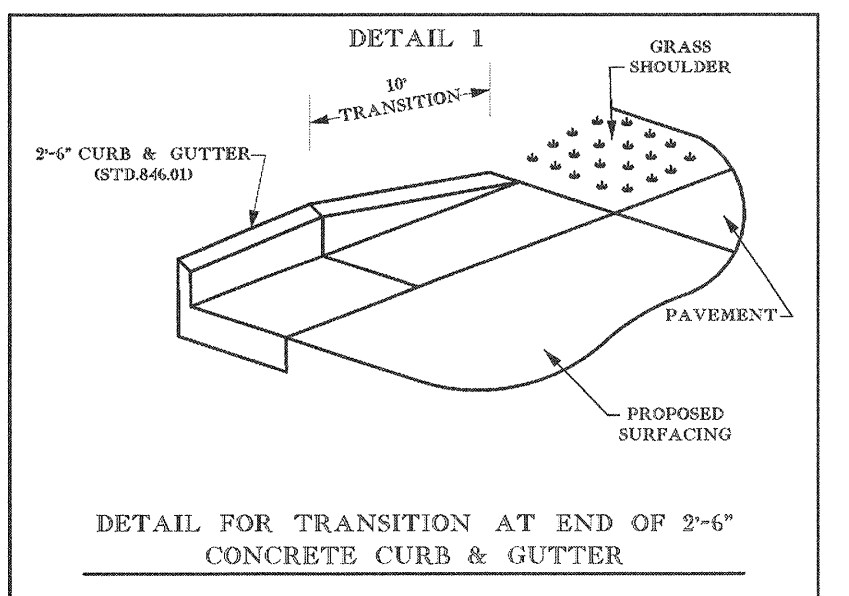
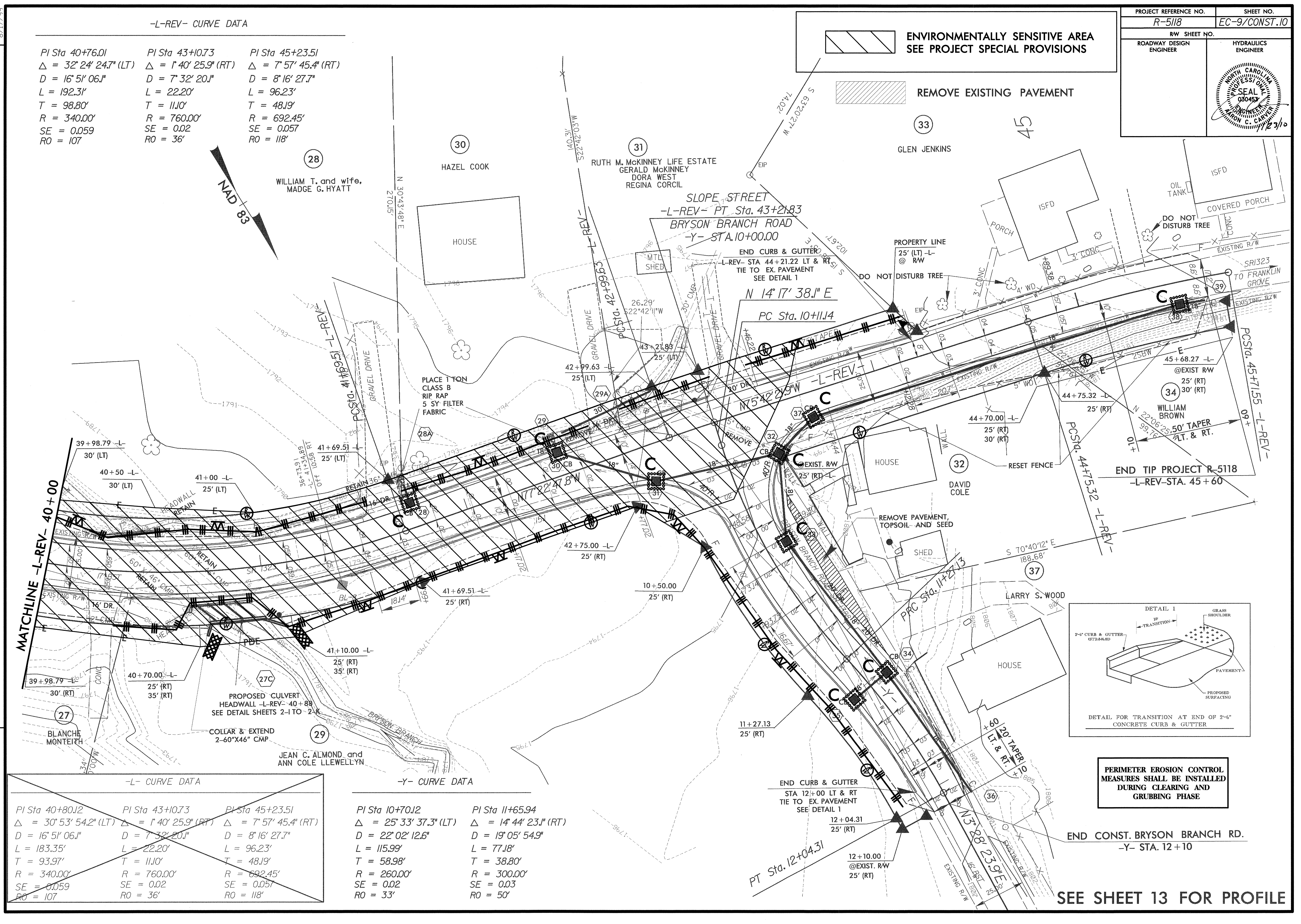
PI Sta 40+80.12 Δ = 30° 53' 54.2" (LT) D = 16' 51' 06.1" L = 183.35' T = 93.97' R = 340.00' SE = 0.059 RO = 107	PI Sta 43+10.73 Δ = 1° 40' 25.9" (RT) D = 7' 32' 20.1" L = 22.20' T = 11.0' R = 760.00' SE = 0.02 RO = 36'	PI Sta 45+23.51 Δ = 7° 57' 45.4" (RT) D = 8' 16' 27.7" L = 96.23' T = 48.19' R = 692.45' SE = 0.057 RO = 118'
--	---	--

-Y- CURVE DATA

PI Sta 10+70.12 Δ = 25° 33' 37.3" (LT) D = 22° 02' 12.6" L = 115.99' T = 58.98' R = 260.00' SE = 0.02 RO = 33'	PI Sta 11+65.94 Δ = 14° 44' 23.1" (RT) D = 19° 05' 54.9" L = 77.18' T = 38.80' R = 300.00' SE = 0.03 RO = 50'
---	--

ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

REMOVE EXISTING PAVEMENT



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

END CONST. BRYSON BRANCH RD. -Y- STA. 12+10

SEE SHEET 13 FOR PROFILE

REVISIONS

8/17/99

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PROJECT REFERENCE NO. <i>R-5118</i>	SHEET NO. <i>EC-10/CONST.10</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

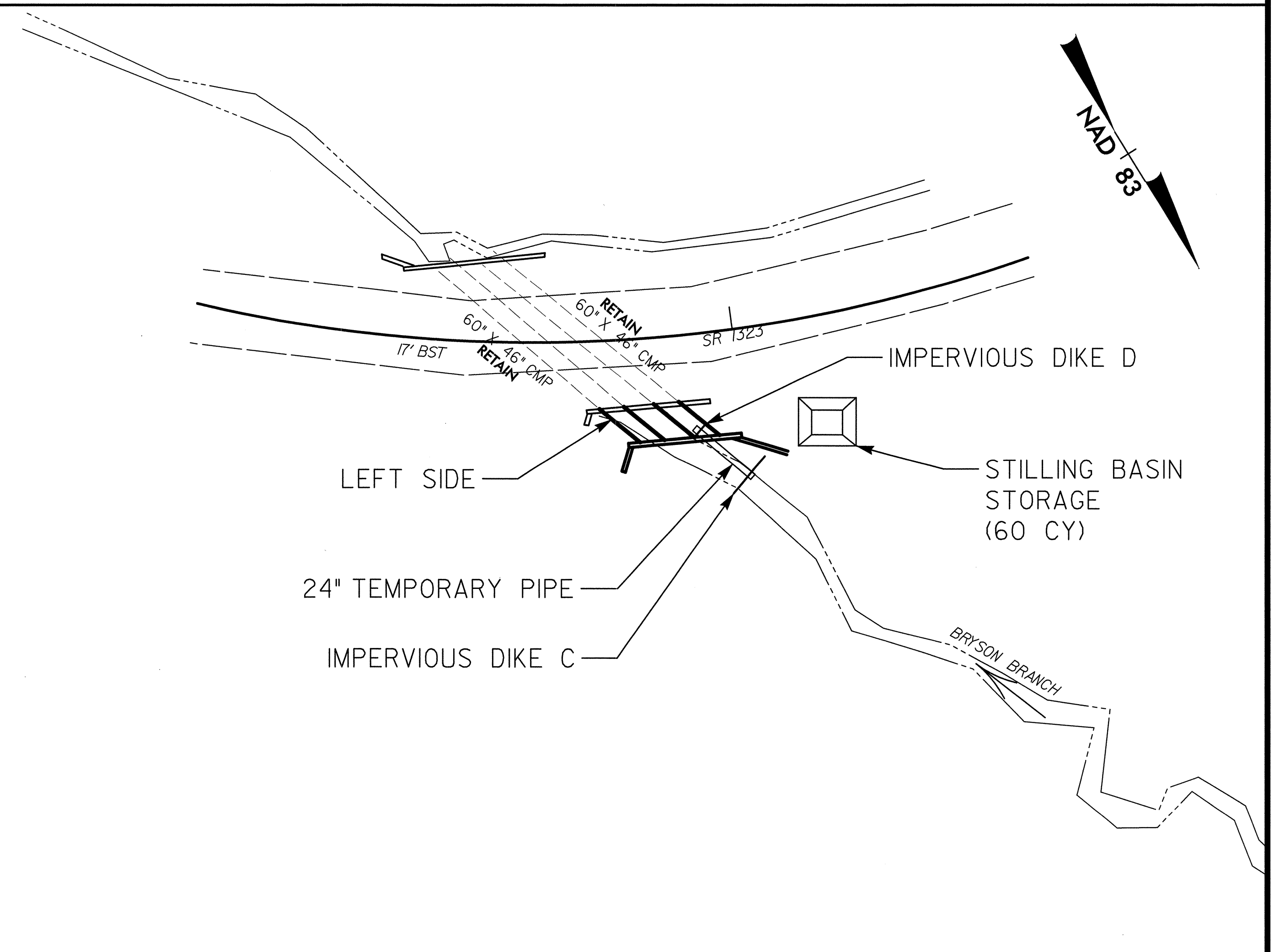
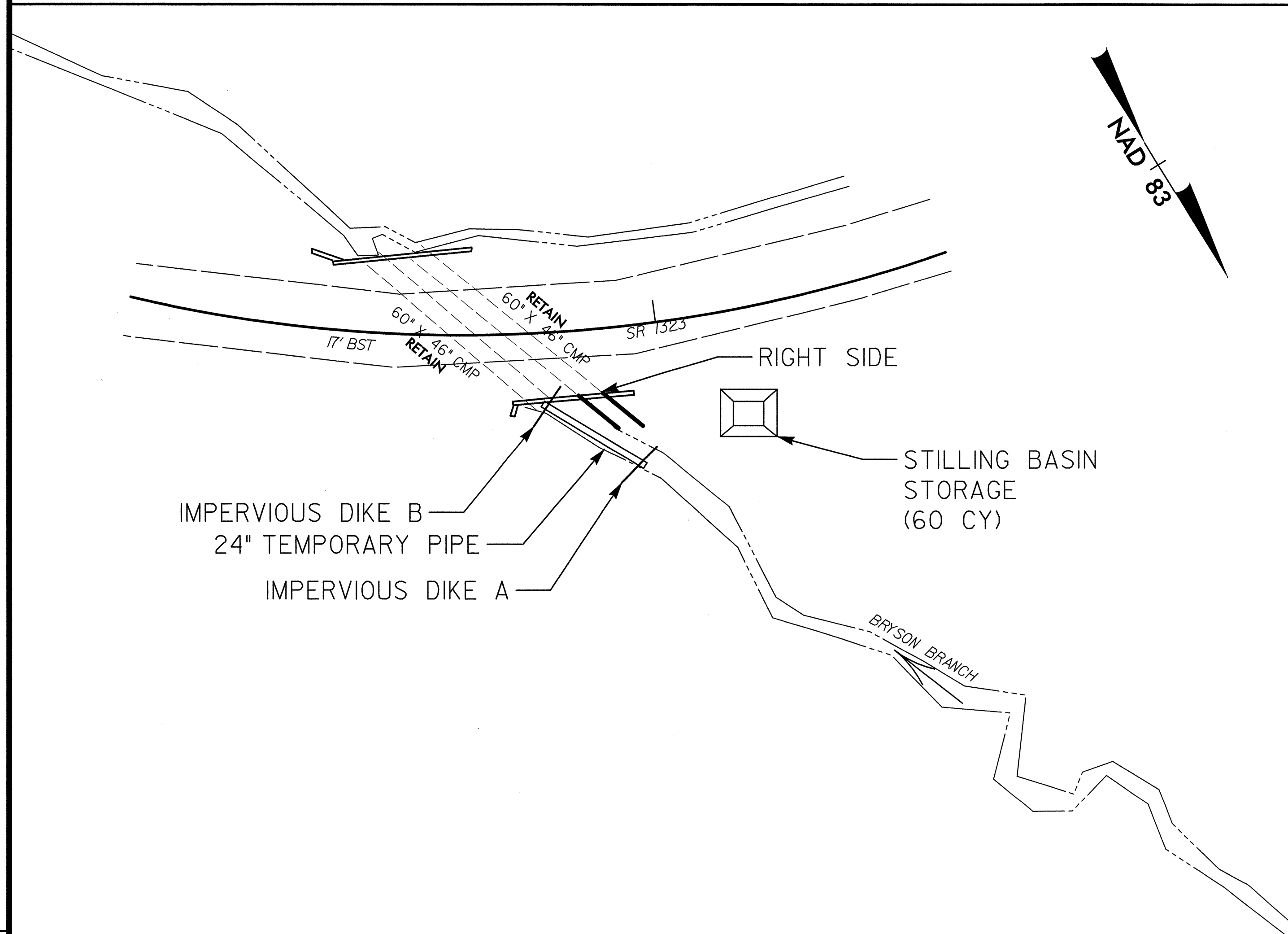
# CULVERT CONSTRUCTION SEQUENCE -LREV- STA. 40 + 88

## PHASE I

1. CONSTRUCT STILLING BASIN (60 CY).
2. CONSTRUCT IMPERVIOUS DIKES A AND B, AND 24 IN. TEMPORARY PIPE.
3. CONSTRUCT RIGHT SIDE CULVERT EXTENSION.
4. REMOVE IMPERVIOUS DIKES A & B AND TEMPORARY PIPE.

## PHASE II

5. CONSTRUCT IMPERVIOUS DIKES C & D, AND 24 IN. TEMPORARY PIPE.
6. CONSTRUCT LEFT SIDE CULVERT EXTENSION.
7. CONSTRUCT HEADWALL AND WINGWALLS.
8. REMOVE IMPERVIOUS DIKES C & D AND TEMPORARY PIPE.
9. DIVERT WATER THROUGH CULVERT.
10. COMPLETE ROADWAY.



REVISIONS

\$\$\$\$\$ CONSTRUCTION\$\$\$\$\$