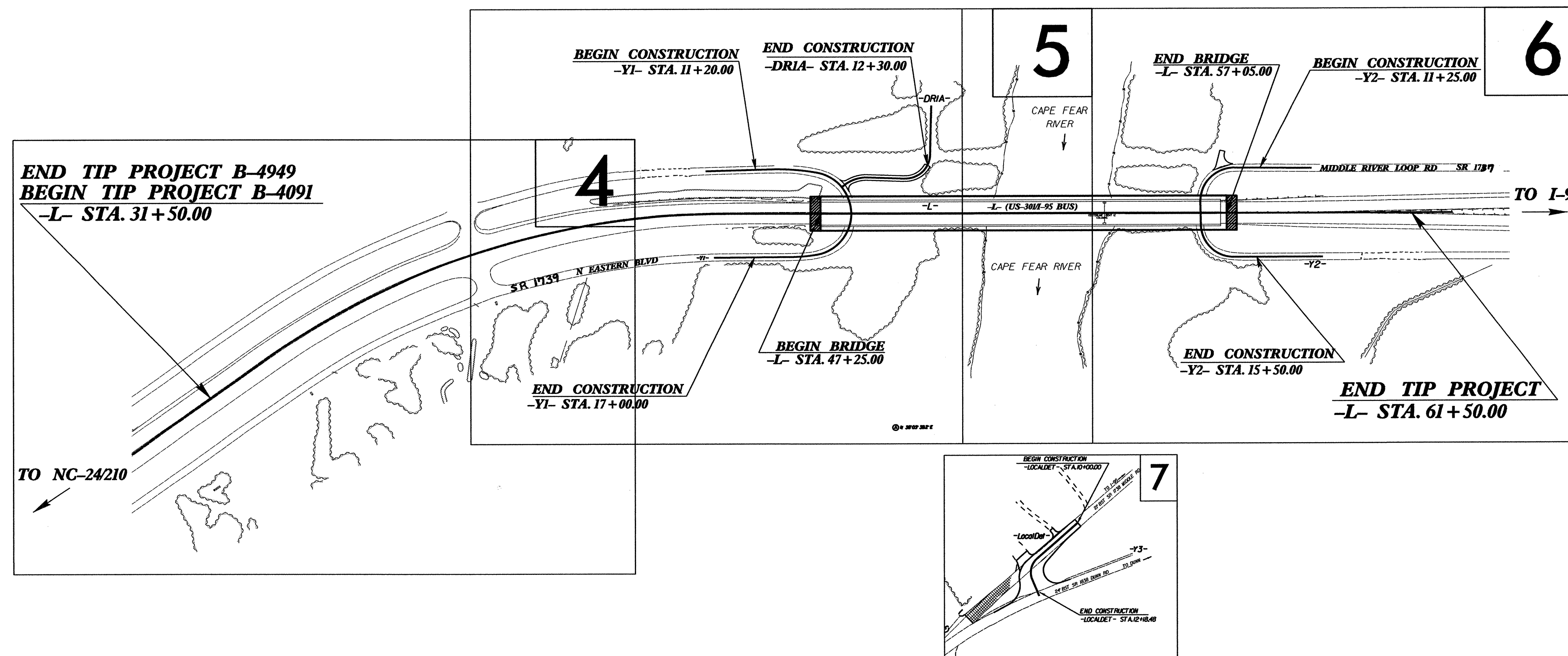
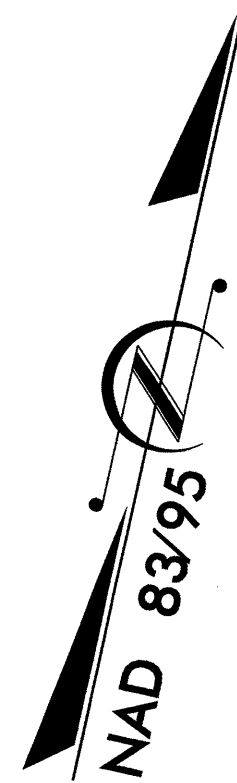


**TIP PROJECT: B-4091**

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

**CUMBERLAND COUNTY**

**LOCATION: I-95 BUS LOOP & US 301 - REPLACE BRIDGE 85 OVER  
CAPE FEAR RIVER, SR 1737 & SR 1739 IN FAYETTEVILLE**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE,  
AND RETAINING WALLS**

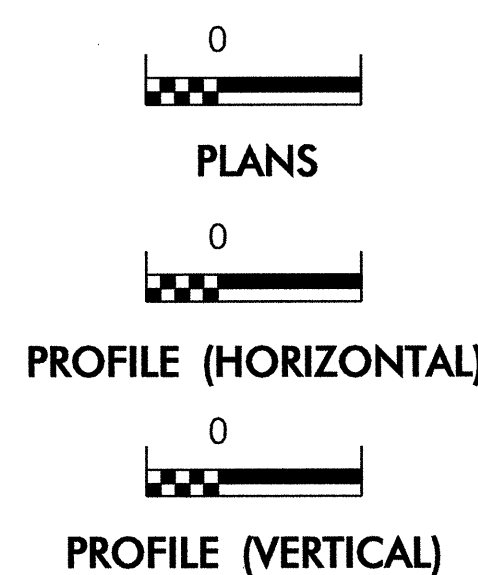


**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.05	Temporary Silt Ditch	tsd
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	□
1635.01	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.**

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

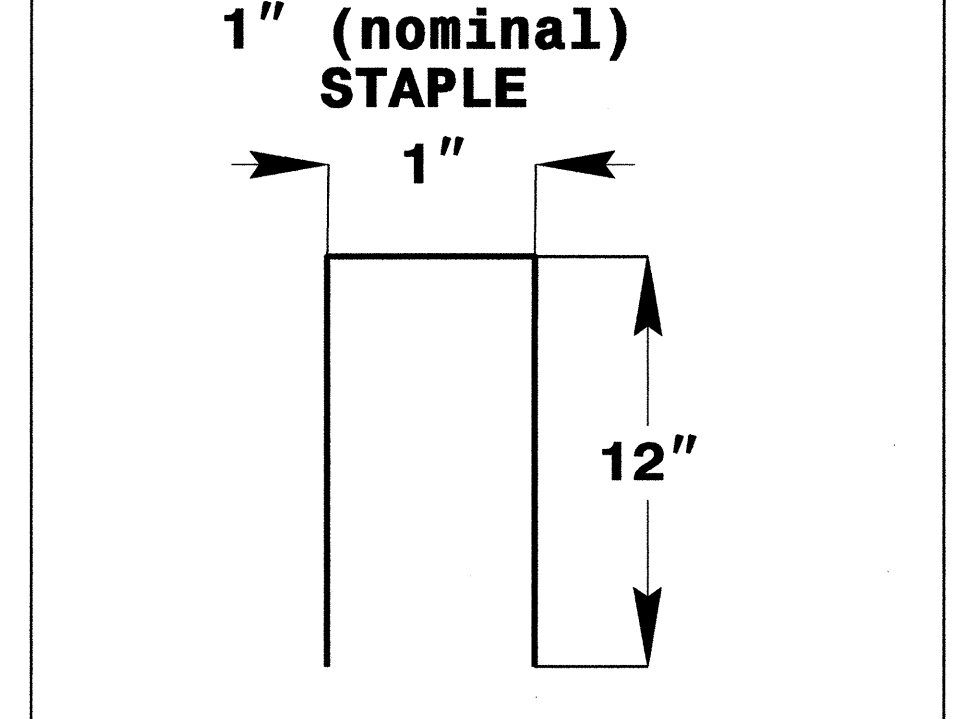
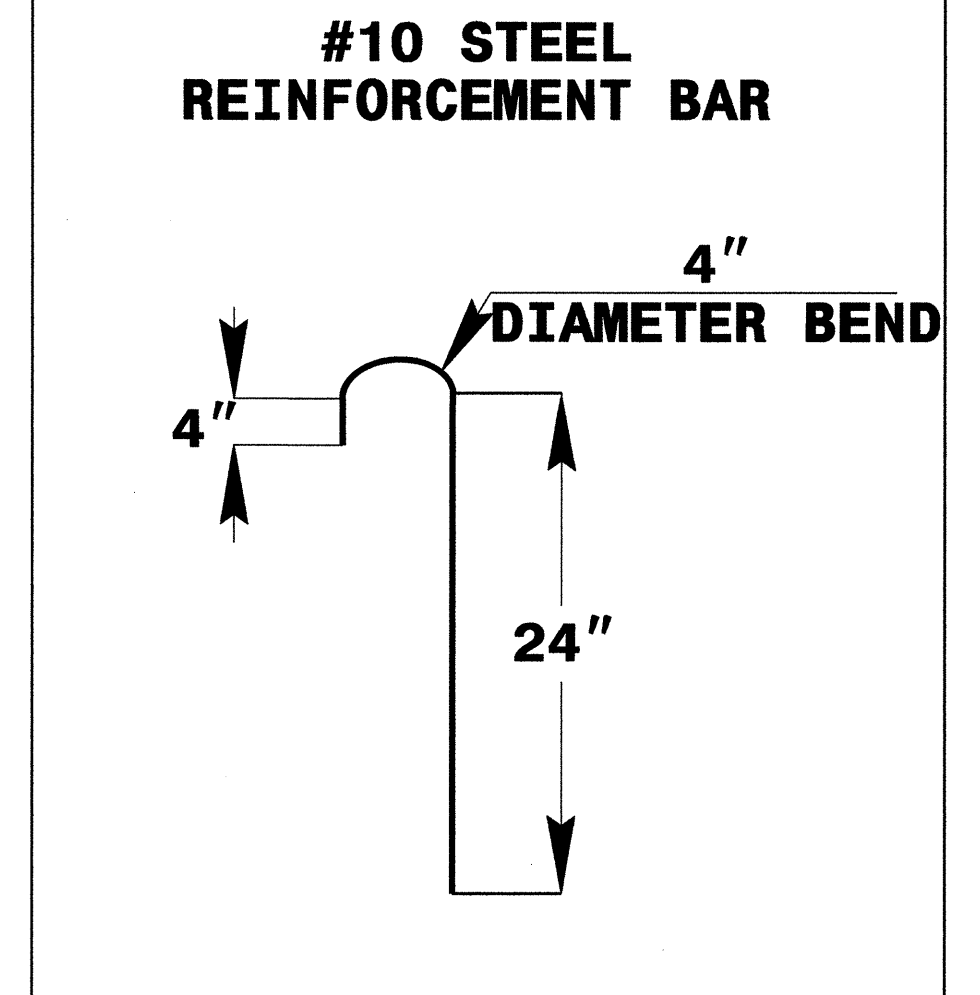
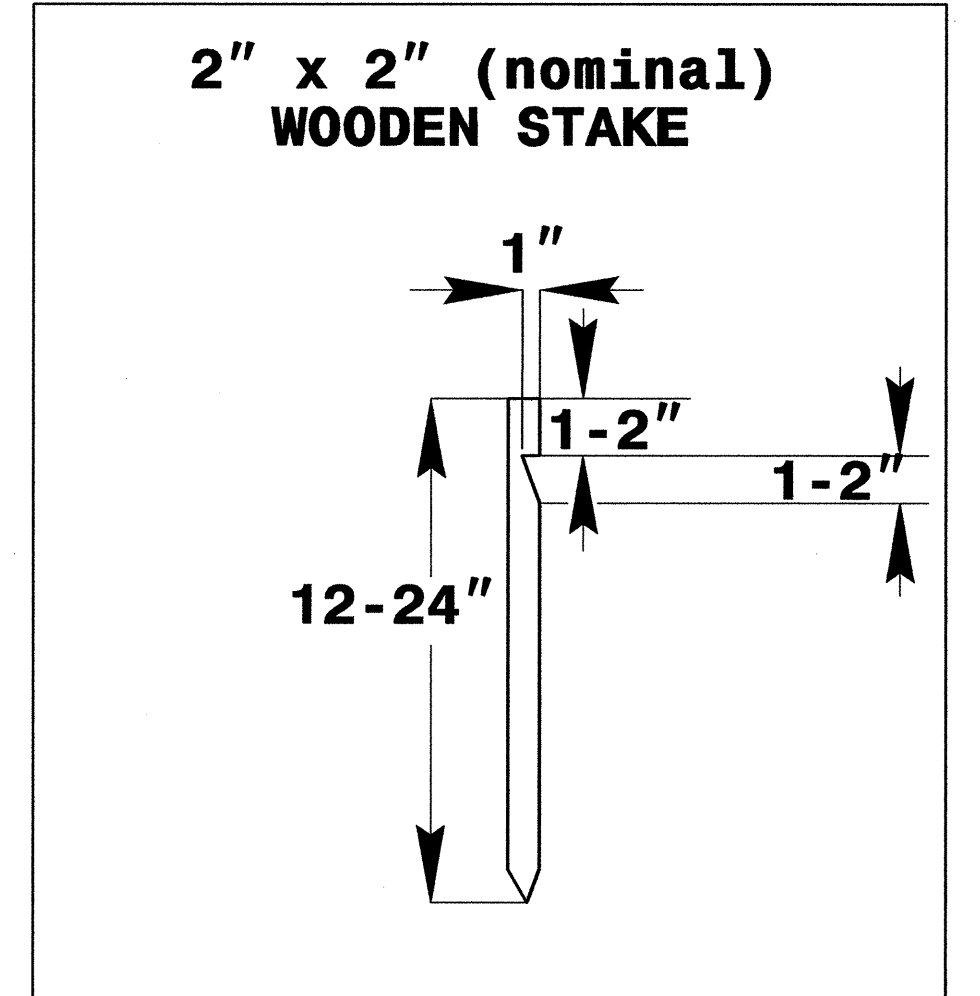
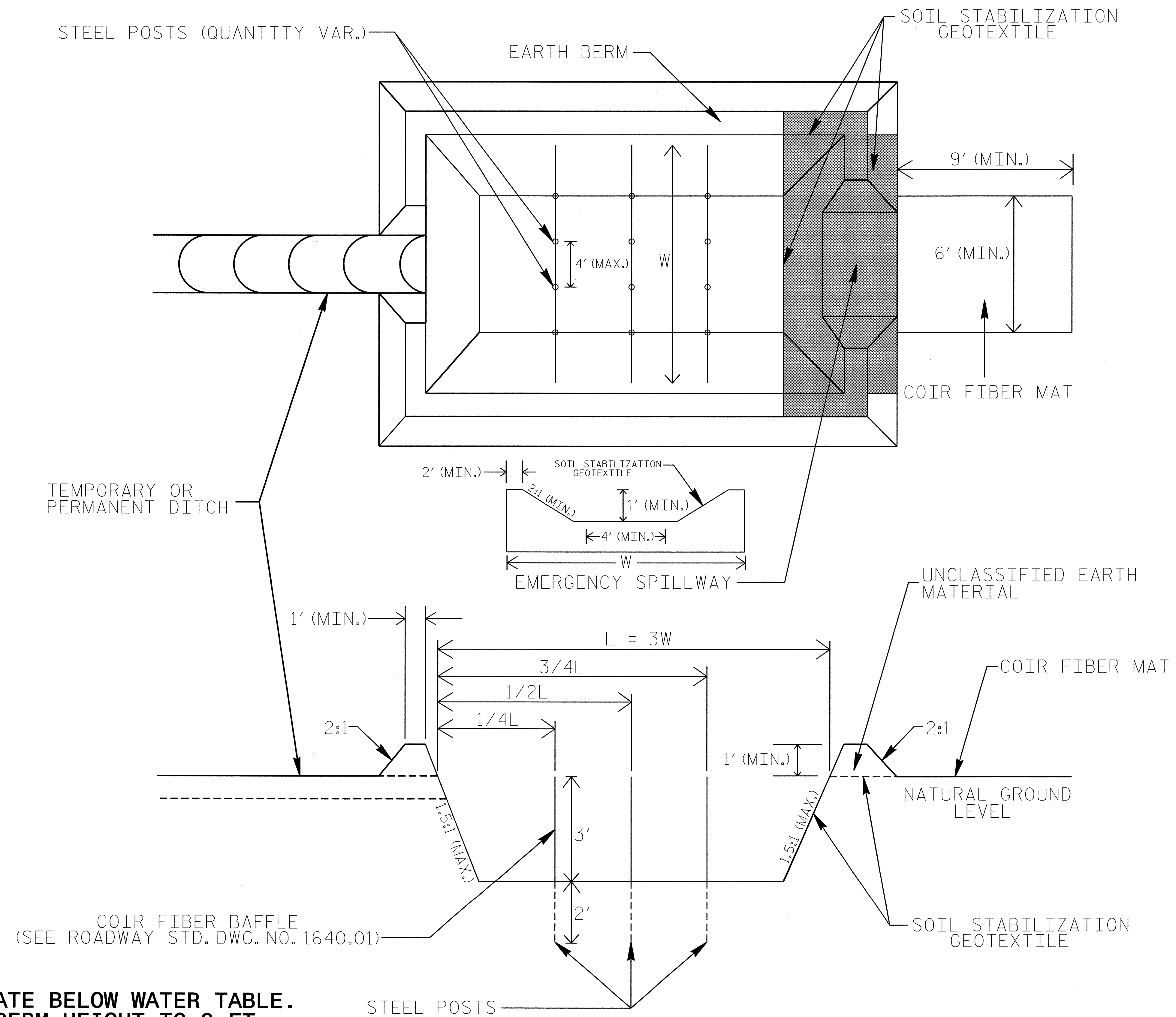
**Roadway Standard Drawings**

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		

# INFILTRATION BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. B-4091	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**COIR FIBER MAT ANCHOR OPTIONS**

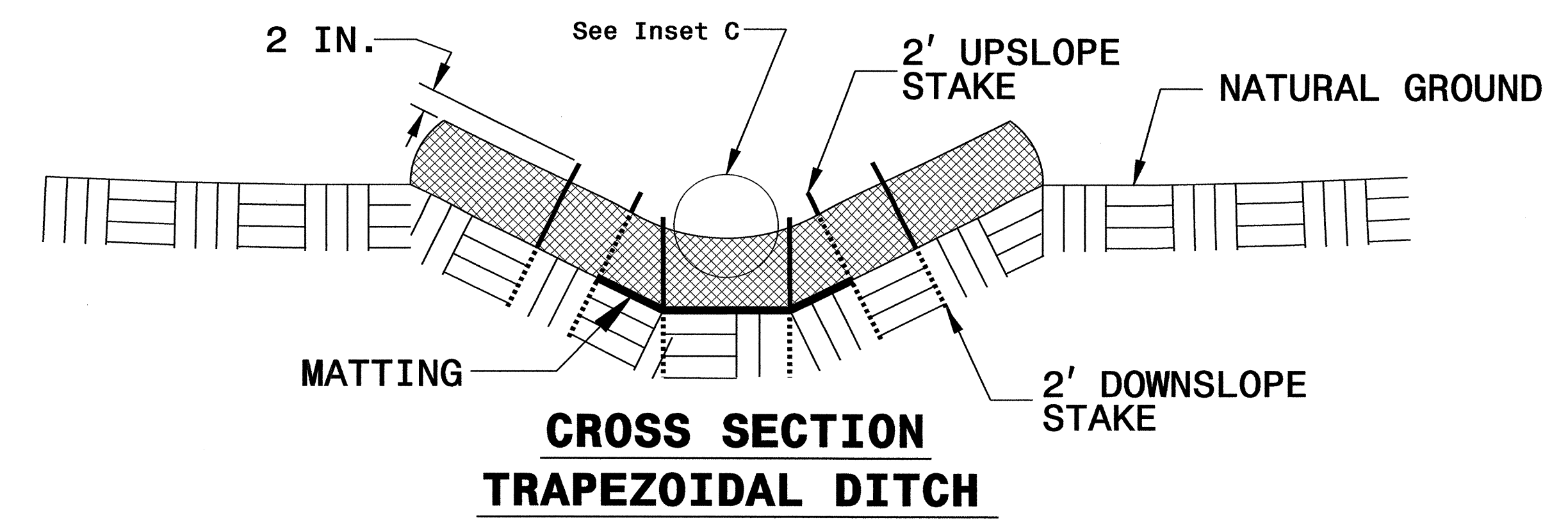
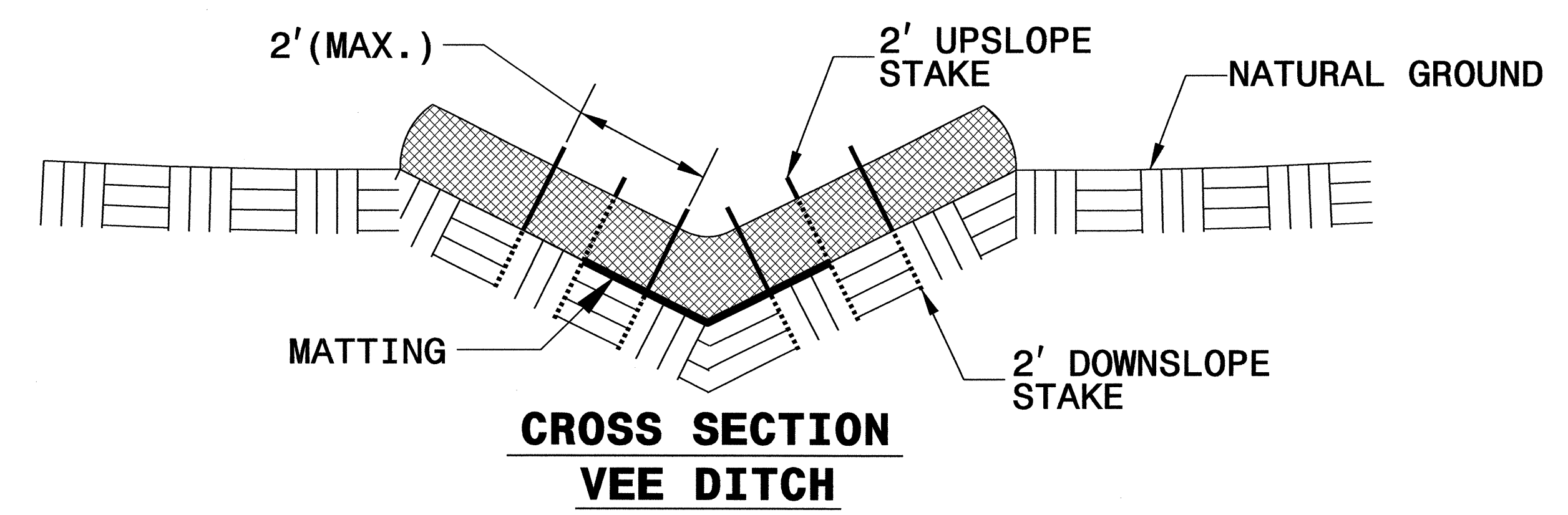
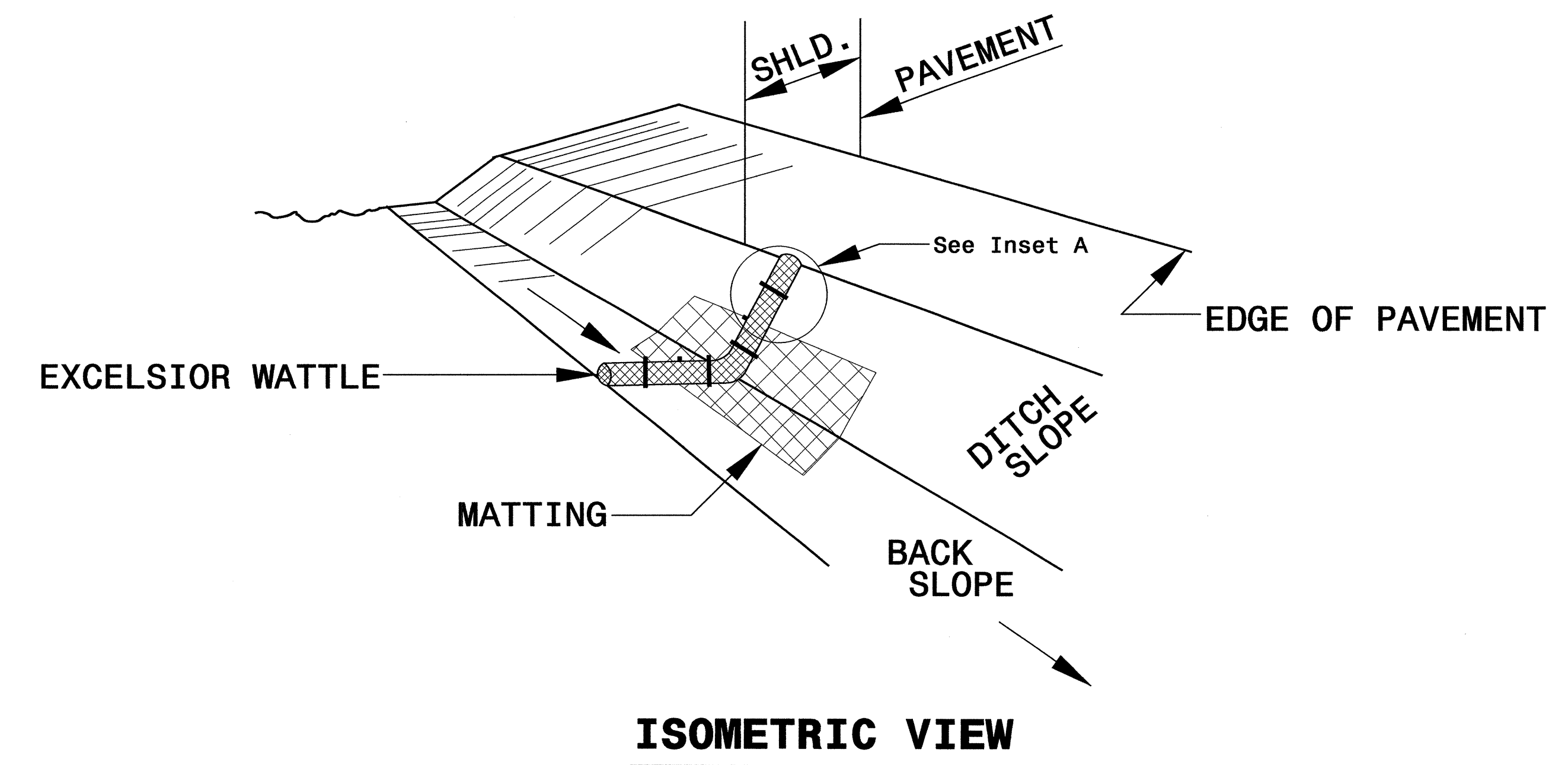
**NOTES**

1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.

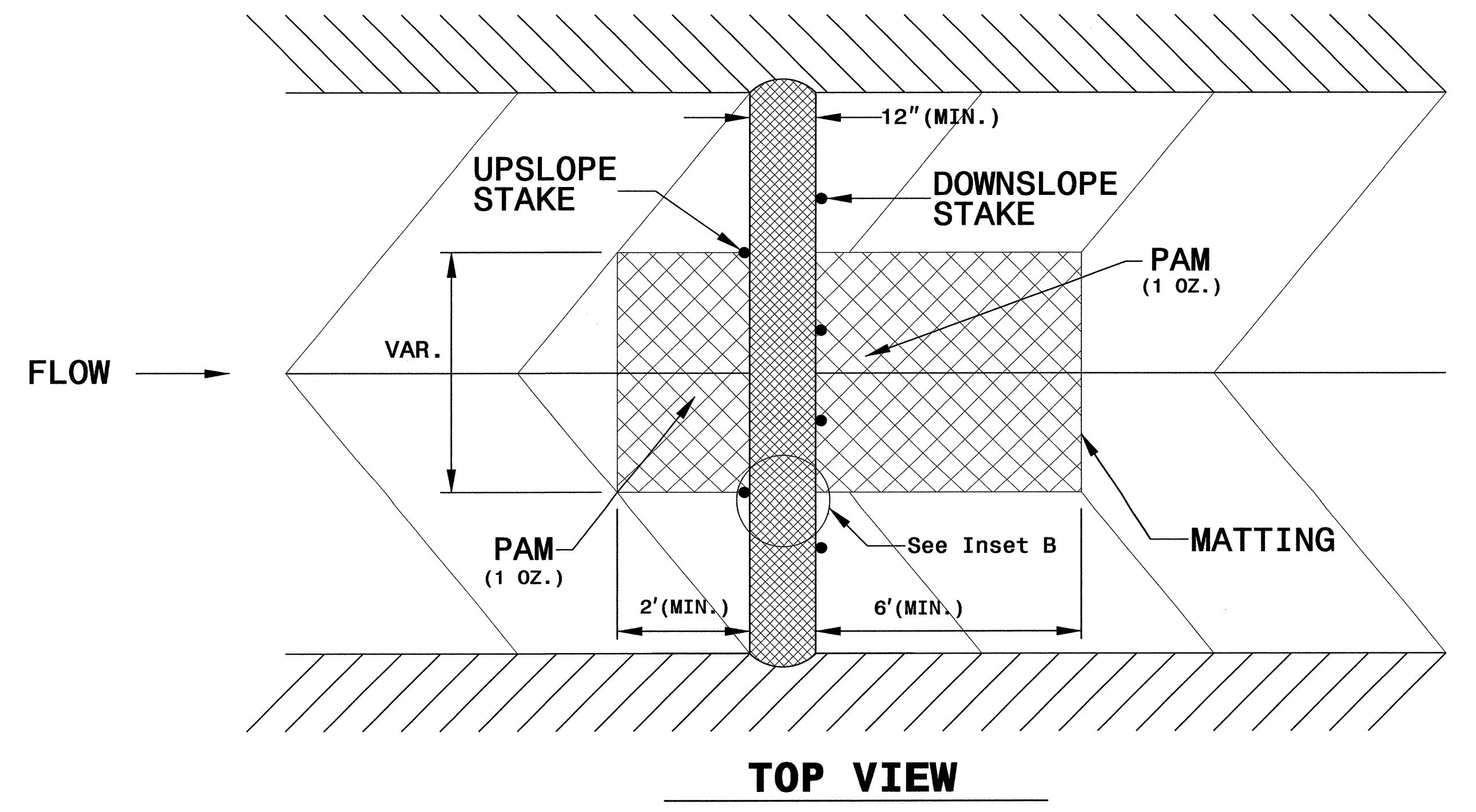
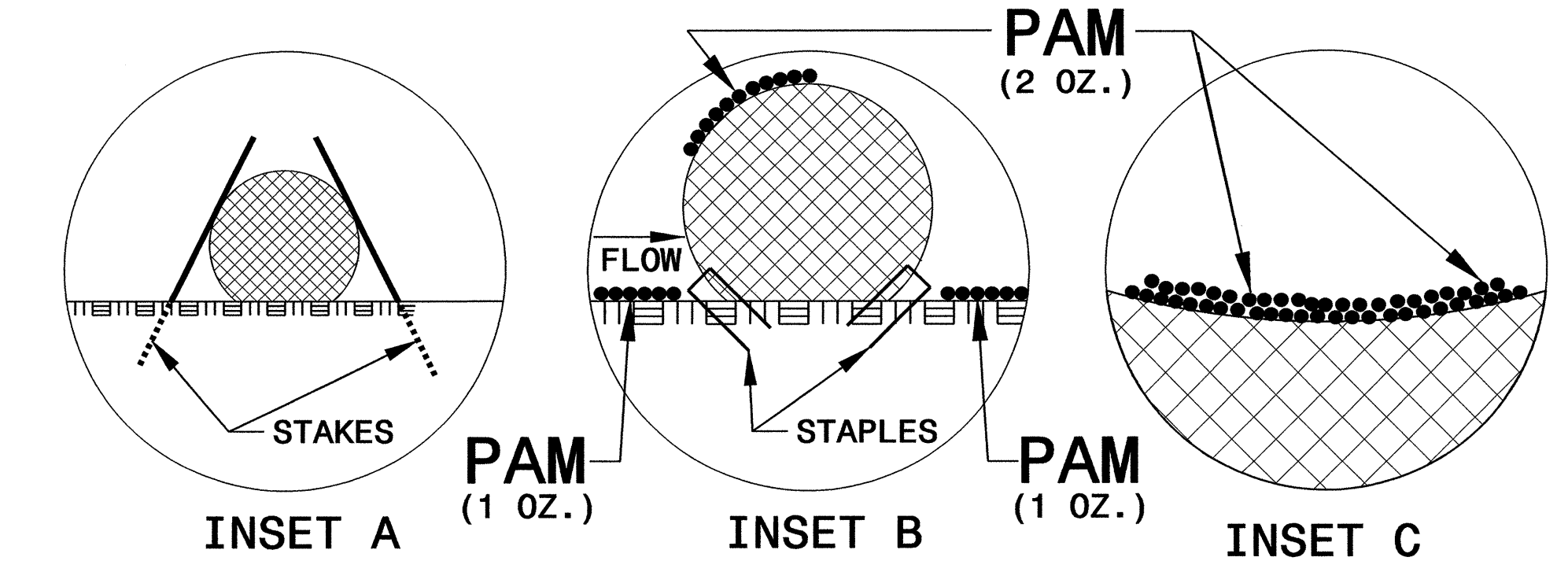
NOT TO SCALE

PROJECT REFERENCE NO. B-4091	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

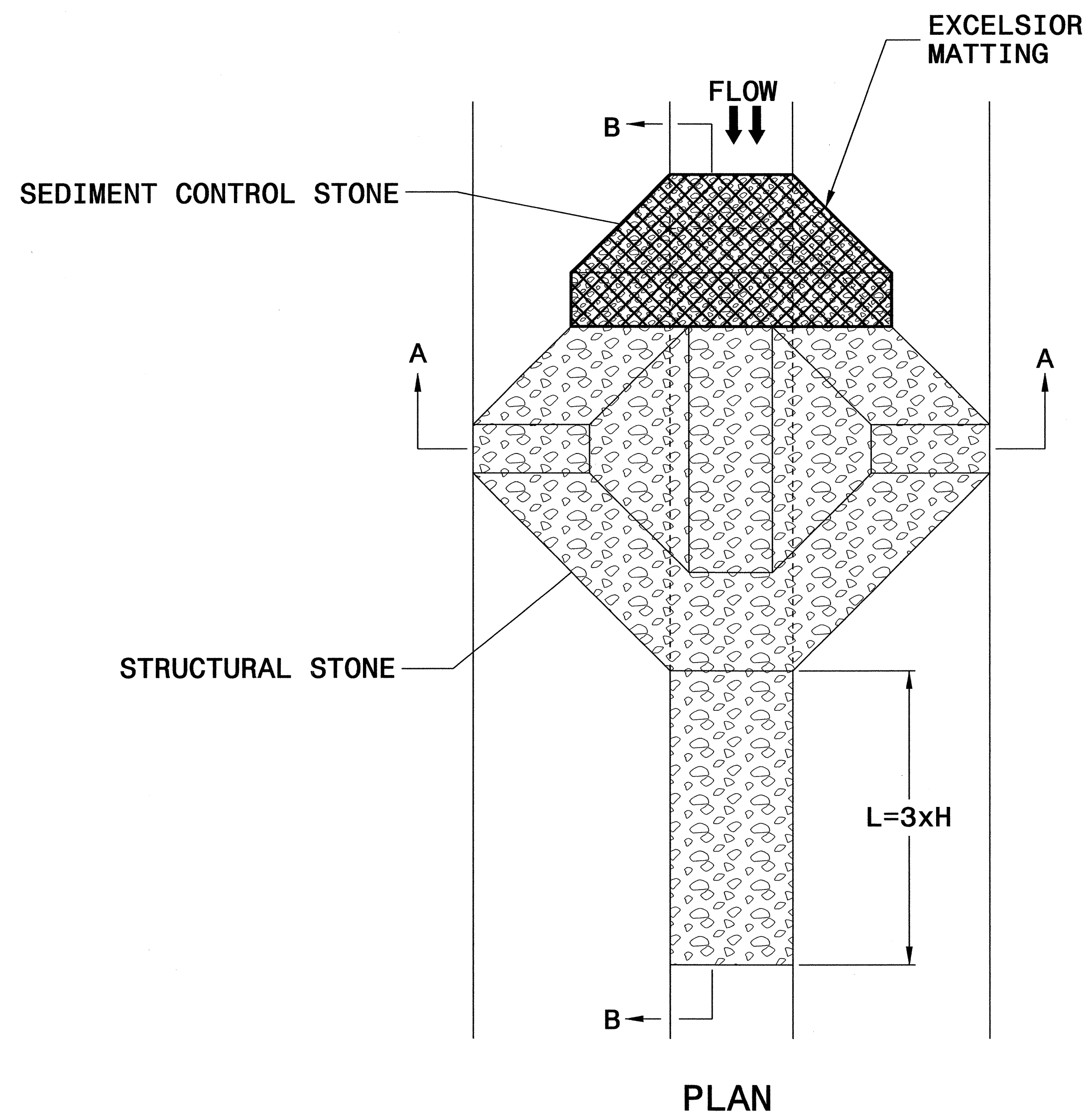


- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 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.



PROJECT REFERENCE NO. B-4091	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

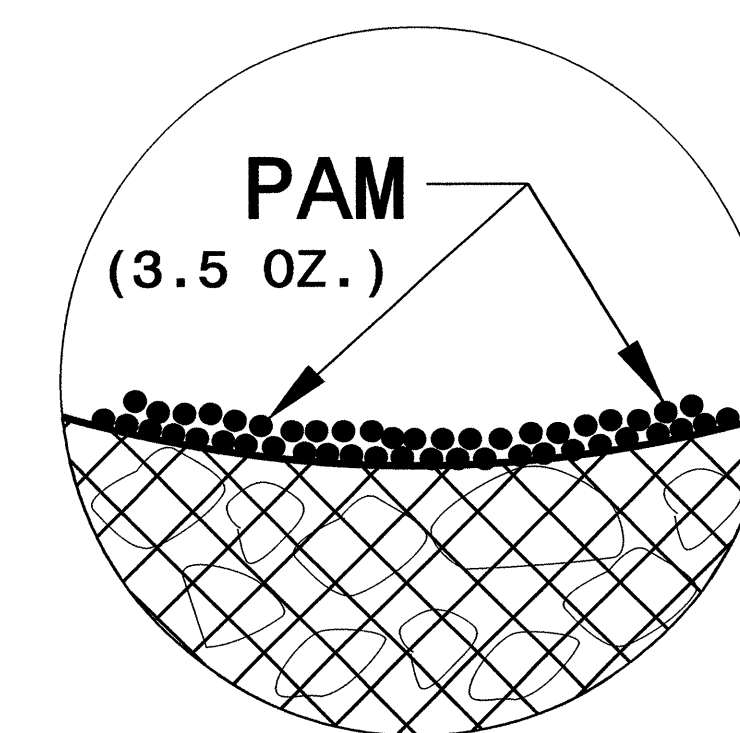


## NOTES

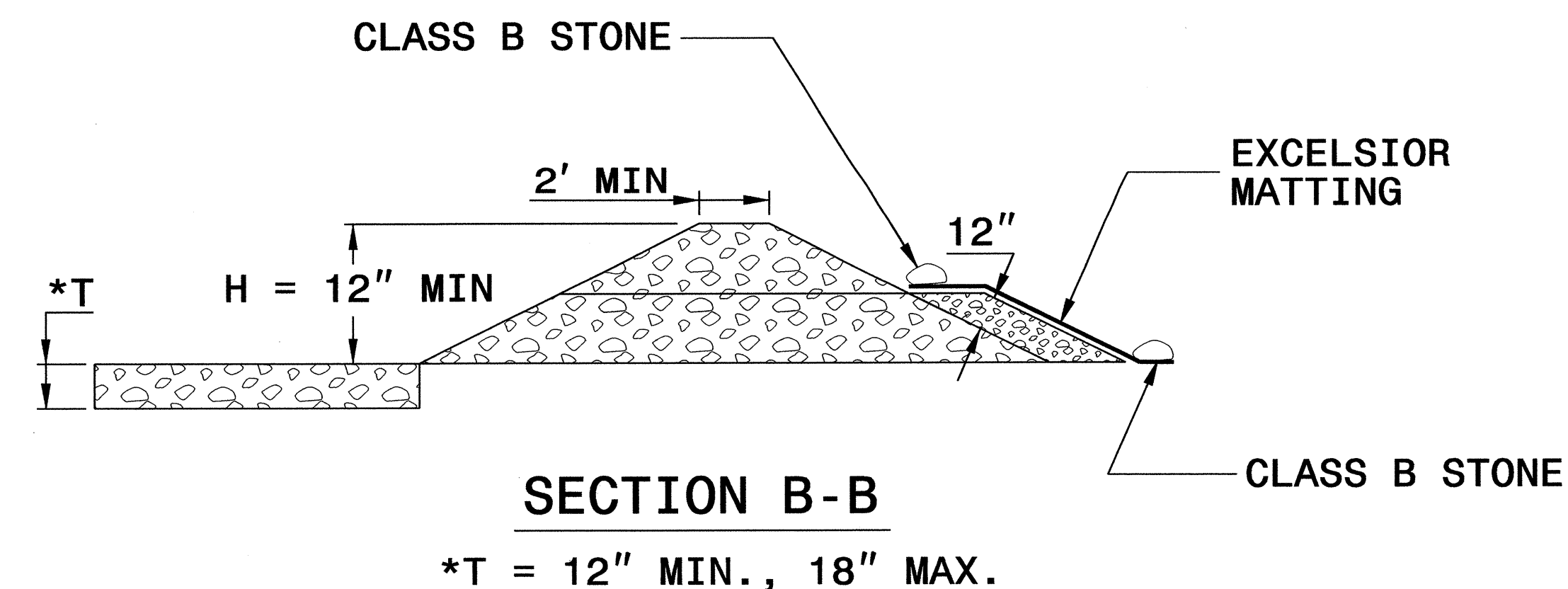
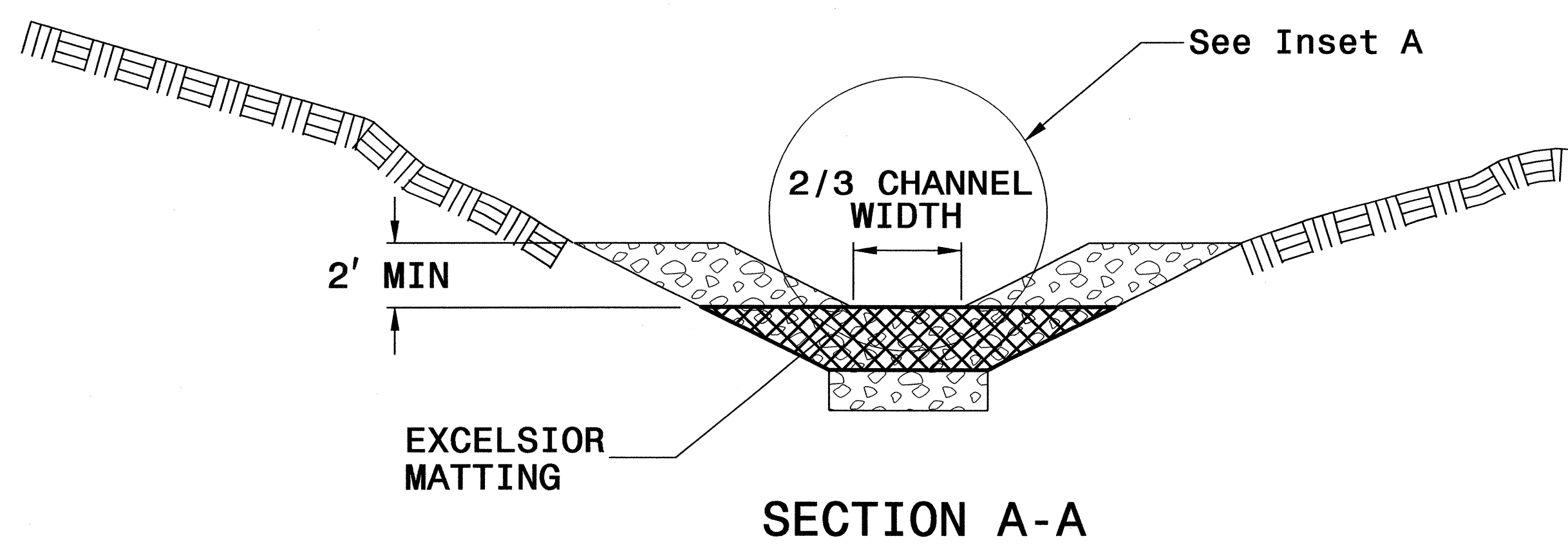
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



INSET A



NOT TO SCALE



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>B-409I</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

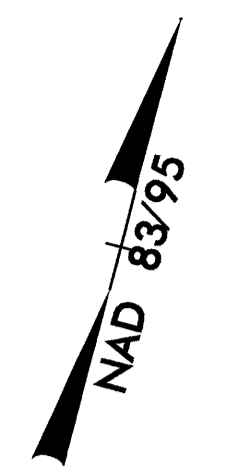
# SOIL STABILIZATION TIMEFRAMES

<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.

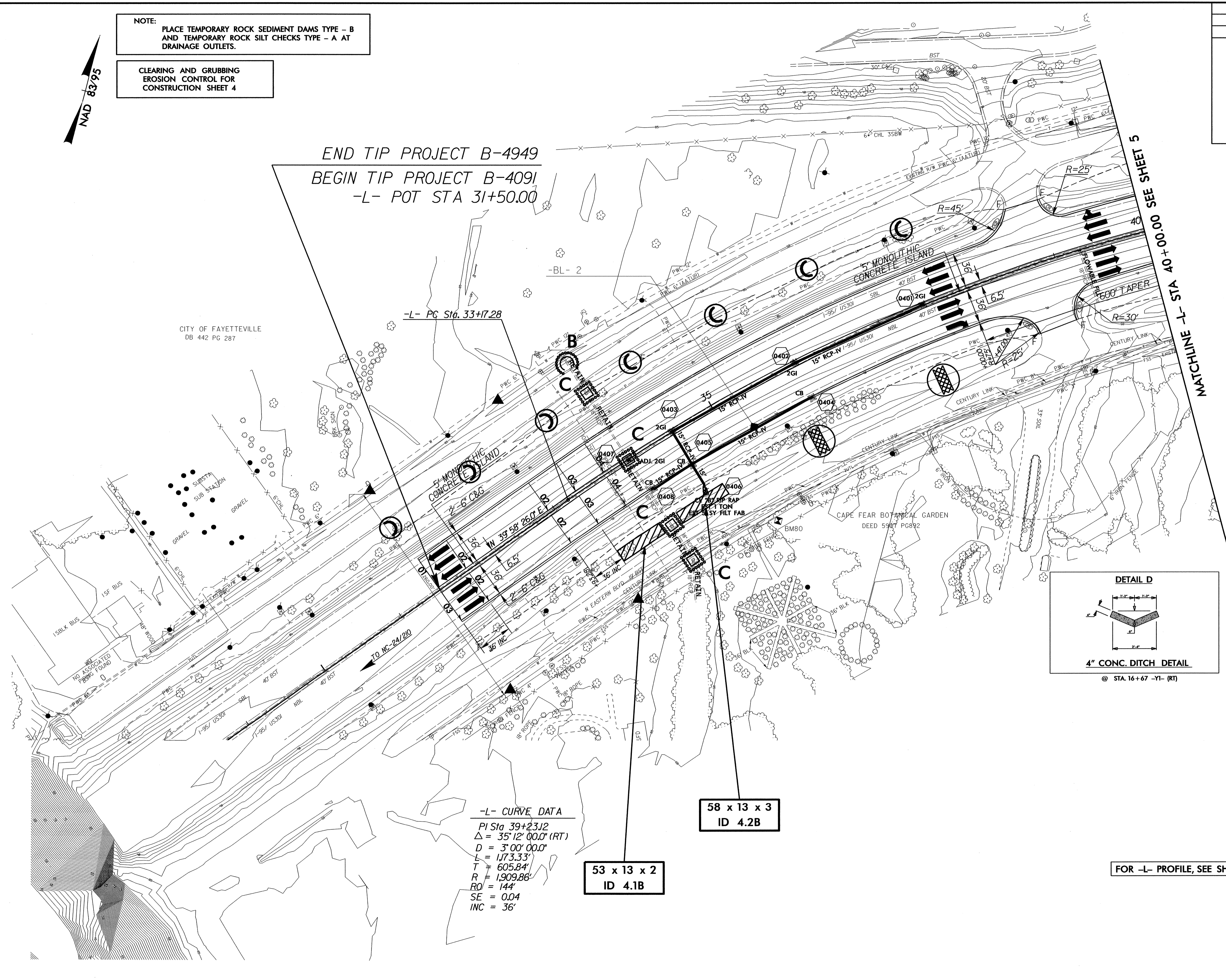
PROJECT REFERENCE NO. B-409I	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4



END TIP PROJECT B-4949  
BEGIN TIP PROJECT B-409I  
-L- POT STA 31+50.00



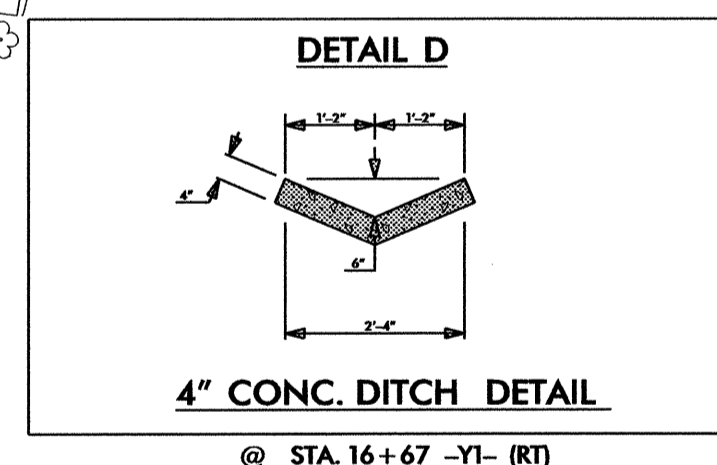
CITY OF FAYETTEVILLE  
DB 442 PG 287

-L- PC Sta. 33+17.28

-L- CURVE DATA  
PI Sta 39+23J2  
 $\Delta = 35^{\circ} 12' 00.0''$  (RT)  
D = 3' 00' 00.0"  
L = 1173.33'  
T = 605.84'  
R = 1909.86'  
RO = 144'  
SE = 0.04  
INC = 36'

58 x 13 x 3  
ID 4.2B

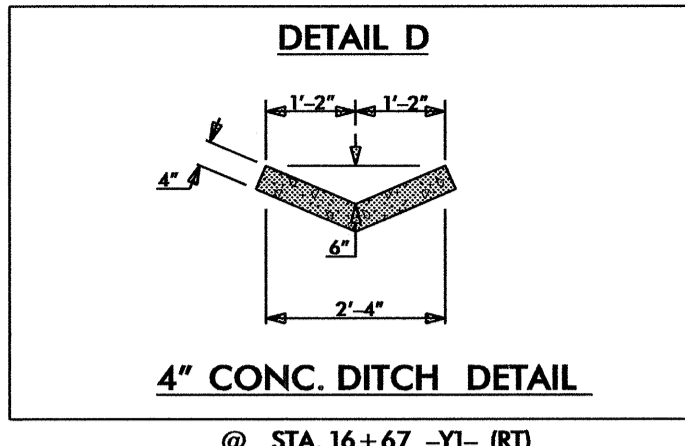
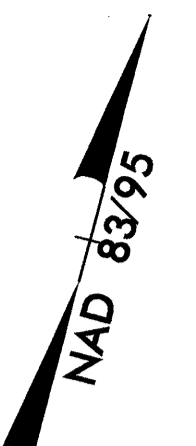
53 x 13 x 2  
ID 4.1B



FOR -L- PROFILE, SEE SHEET NO. 8

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PROJECT REFERENCE NO.	SHEET NO.
B-4091	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**NOTE:** UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.

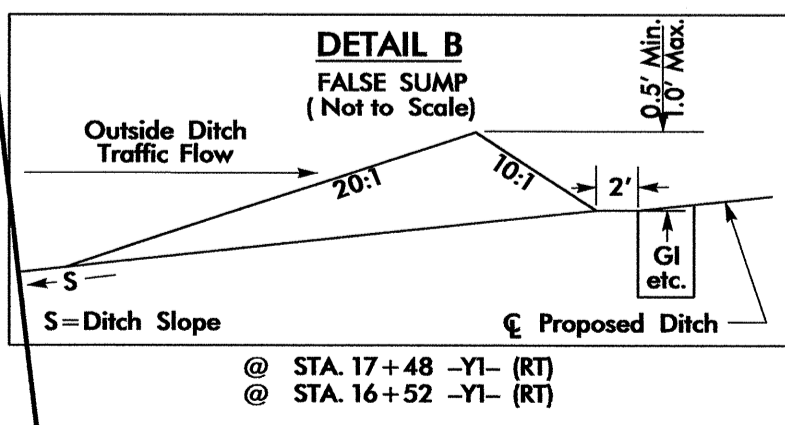
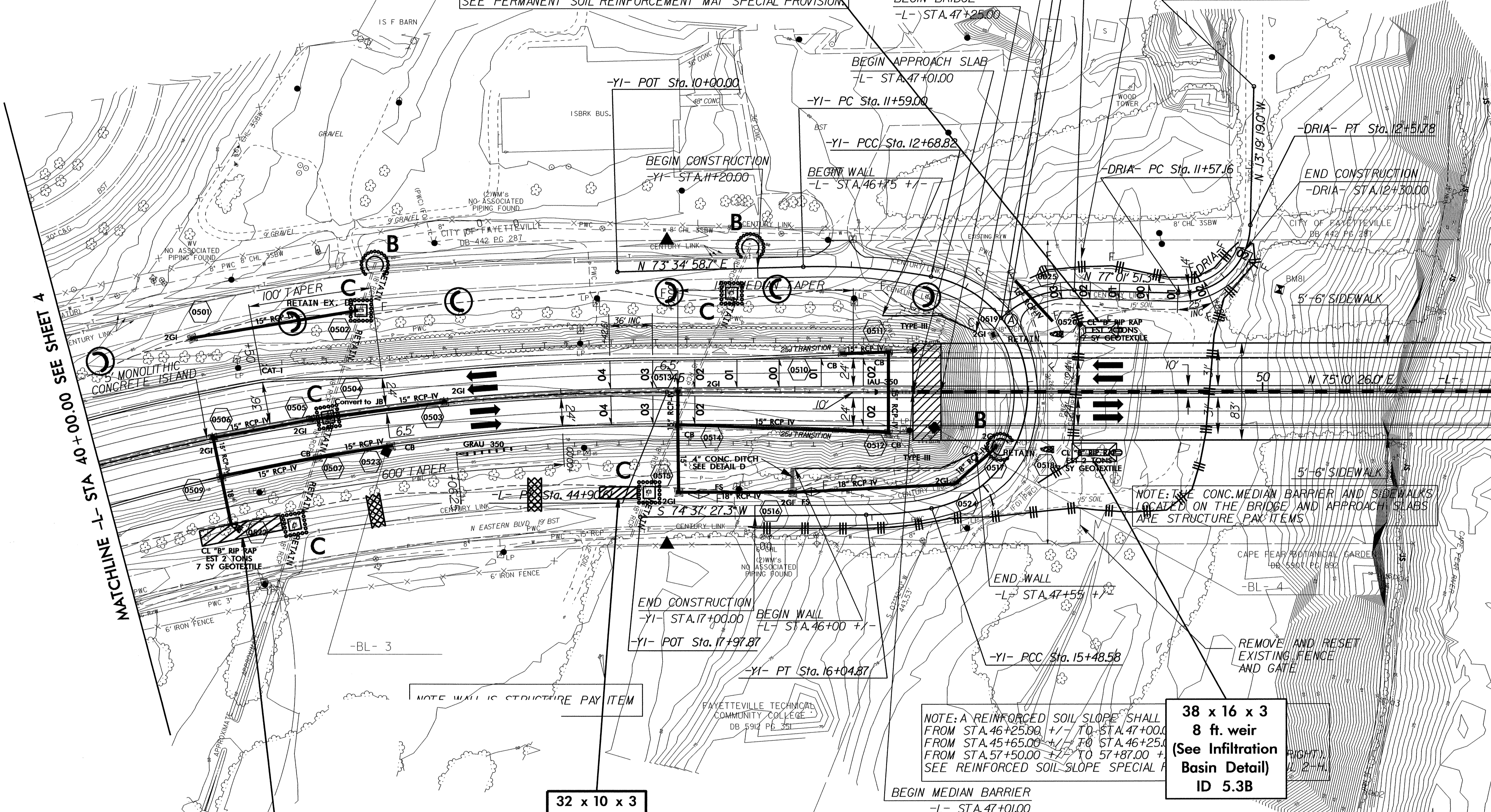
**NOTE:** PERMANENT SOIL REINFORCEMENT MAT (PSRM) 10:1 SLOPES  
 STA. 46+25.00 +/- TO 47+13.00 +/- -L- (RIGHT),  
 STA. 46+25.00 +/- TO 47+13.00 +/- -L- (LEFT),  
 STA. 57+21.00 +/- TO 57+50.00 +/- -L- (RIGHT),  
 STA. 57+21.00 +/- TO 57+50.00 +/- -L- (LEFT),  
 STA. 57+87.00 +/- TO 58+50.00 +/- -L- (RIGHT),  
 STA. 57+87.00 +/- TO 58+50.00 +/- -L- (LEFT).  
 SEE PERMANENT SOIL REINFORCEMENT MAT SPECIAL PROVISION.

**33 x 14 x 3**  
**6 ft. weir**  
**(See Infiltration Basin Detail)**  
**ID 5.4B**

**CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5**

MATCHLINE -L- STA 40+00.00 SEE SHEET 4

MATCHLINE -L- STA 52+00.00 SEE SHEET 6



**70 x 13 x 3**  
**ID 5.1B**

**32 x 10 x 3**  
**ID 5.2B**

**38 x 16 x 3**  
**8 ft. weir**  
**(See Infiltration Basin Detail)**  
**ID 5.3B**

**-L- CURVE DATA**

PI Sta 39+23.12	$\Delta = 35^\circ 12' 00.0''$ (RT)
D = 3' 00' 00.0"	L = 173.33'
T = 605.84'	R = 1,909.86'
RO = 144'	SE = 0.04
INC = 36'	

**-YI- CURVE DATA**

PI Sta 12+14.12	$\Delta = 12^\circ 06' 03.1''$ (RT)
D = 11' 01' 06.3"	L = 109.82'
T = 55.12'	R = 520.00'
RO = 72'	SE = 0.04
INC = 18'	

**-YI- CURVE DATA**

PI Sta 15+76.80	$\Delta = 10^\circ 14' 22.4''$ (RT)
D = 18' 11' 20.9"	L = 56.29'
T = 28.22'	R = 315.00'
SE = 0.04	

**-DRIA- CURVE DATA**

PI Sta 18+05.94	$\Delta = 158^\circ 42' 03.0''$ (RT)
D = 56' 43' 42.6"	L = 279.76'
T = 537.12'	R = 101.00'
RO = 72'	SE = 0.04
INC = 18'	

**-DRIA- CURVE DATA**

PI Sta 10+39.19	$\Delta = 40^\circ 58' 12.0''$ (RT)
D = 66' 37' 22.8"	L = 61.50'
T = 32.13'	R = 86.00'
SE = 0.03	

**-DRIA- CURVE DATA**

PI Sta 12+17.53	$\Delta = 90^\circ 21' 10.3''$ (LT)
D = 95' 29' 34.7"	L = 94.62'
T = 60.37'	R = 60.00'
SE = 0.02	

- BRIDGE APPROACH SLAB
- CONC MEDIAN BARRIER
- DRIVEWAY RADII ARE 15', UNLESS NOTED
- FOR -L- PROFILE, SEE SHEET NO. 9
- FOR -YI- PROFILE, SEE SHEET NO. 11
- FOR -DRIA- PROFILE, SEE SHEET NO. 11
- SEE SHEET 2-B FOR BRIDGE SKETCH
- FOR STRUCTURE PLANS, SEE SHEET S-? AND S-?
- FOR WALL PLANS, SEE SHEET W-? AND W-?



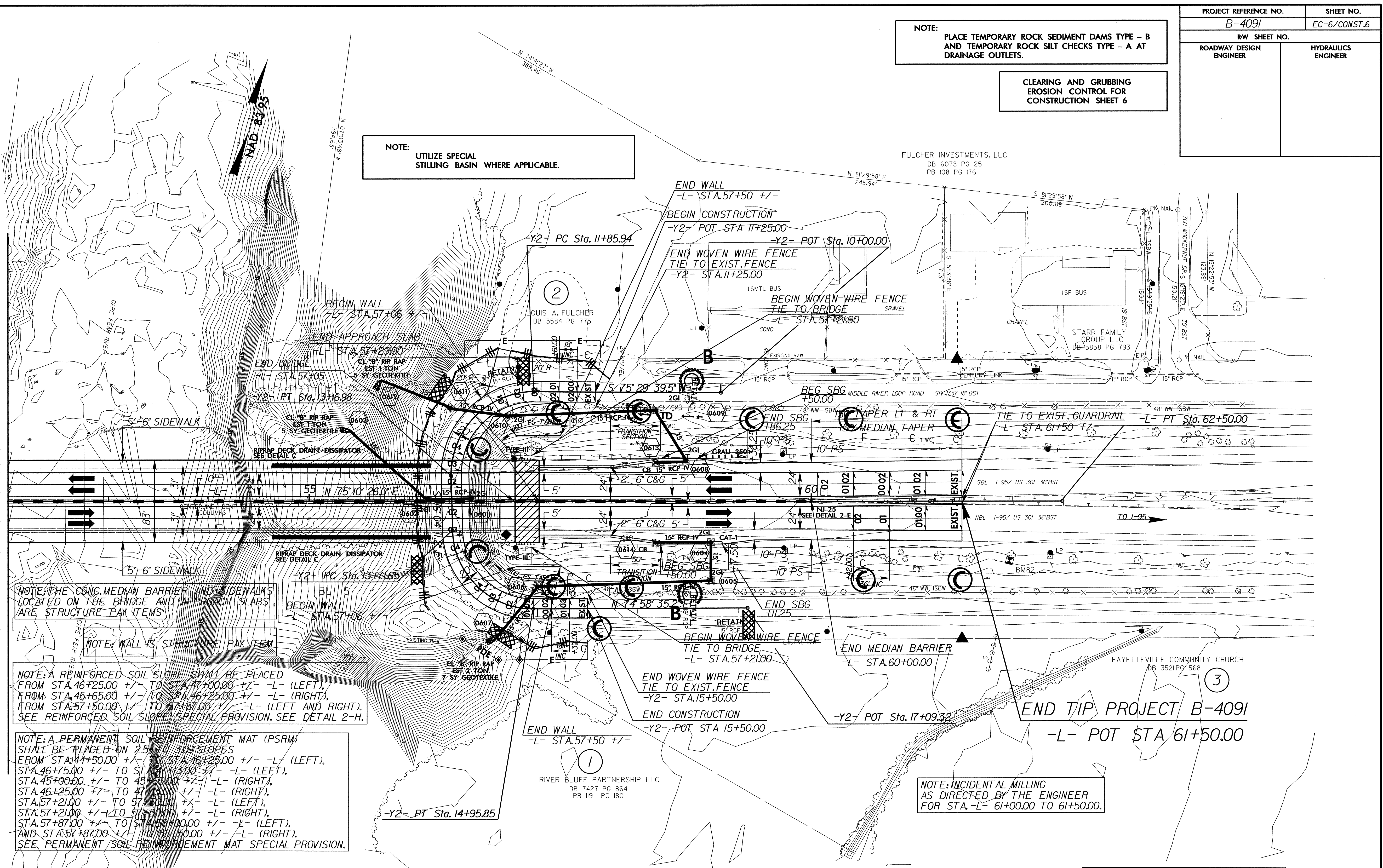
PROJECT REFERENCE NO.	SHEET NO.
B-4091	EC-6/CONST.6
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

NOTE: UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.

MATCHLINE -L- STA 52 + 00.00 SEE SHEET 5

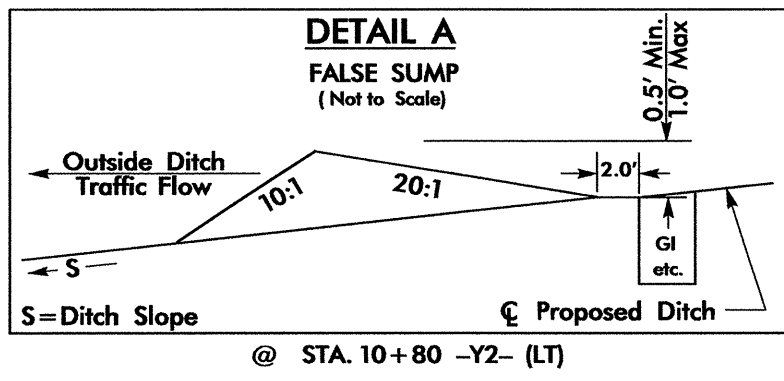
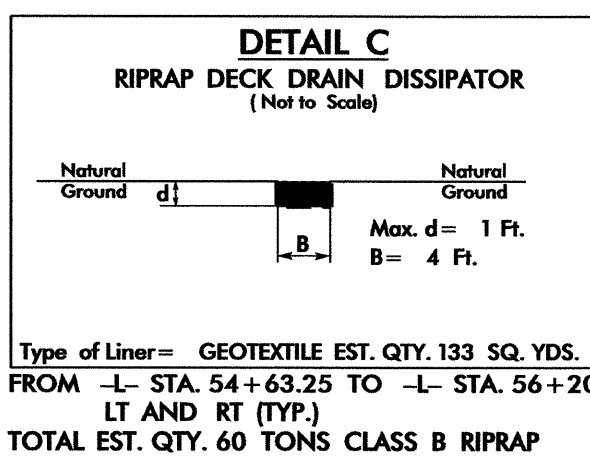


NOTE: THE CONC. MEDIAN BARRIER AND SIDEWALKS LOCATED ON THE BRIDGE AND APPROACH SLABS ARE STRUCTURE PAY ITEMS

NOTE: WALL IS STRUCTURE PAY ITEM

NOTE: A REINFORCED SOIL SLOPE SHALL BE PLACED FROM STA. 46+25.00 +/- TO STA. 47+00.00 +/- -L- (LEFT), FROM STA. 45+65.00 +/- TO STA. 46+25.00 +/- -L- (RIGHT), FROM STA. 57+50.00 +/- TO STA. 57+87.00 +/- -L- (LEFT AND RIGHT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION. SEE DETAIL 2-H.

NOTE: A PERMANENT SOIL REINFORCEMENT MAT (PSRM) SHALL BE PLACED ON 2.5% TO 3.0% SLOPES FROM STA. 44+50.00 +/- TO STA. 46+25.00 +/- -L- (LEFT), STA. 46+75.00 +/- TO STA. 47+00.00 +/- -L- (LEFT), STA. 45+00.00 +/- TO STA. 45+65.00 +/- -L- (RIGHT), STA. 46+25.00 +/- TO STA. 47+00.00 +/- -L- (RIGHT), STA. 57+21.00 +/- TO STA. 57+50.00 +/- -L- (LEFT), STA. 57+21.00 +/- TO STA. 57+50.00 +/- -L- (RIGHT), STA. 57+87.00 +/- TO STA. 58+00.00 +/- -L- (LEFT), AND STA. 57+87.00 +/- TO STA. 58+50.00 +/- -L- (RIGHT). SEE PERMANENT SOIL REINFORCEMENT MAT SPECIAL PROVISION.



-Y2- CURVE DATA

PI Sta 12+70.21	PI Sta 14+50.20
$\Delta = 91^{\circ} 33' 50.6''$ (LT)	$\Delta = 88^{\circ} 57' 13.6''$ (LT)
$D = 69^{\circ} 52' 22.4''$	$D = 71^{\circ} 37' 11.0''$
$L = 131.04'$	$L = 124.20'$
$T = 84.27'$	$T = 78.55'$
$R = 82.00'$	$R = 80.00'$
$RO = 72'$	$RO = 72'$
$SE = 0.04$	$SE = 0.04$
$INC = 18'$	$INC = 18'$

- BRIDGE APPROACH SLAB
- CONC. MEDIAN BARRIER
- DRIVEWAY RADII ARE 15', UNLESS NOTED
- FOR -L- PROFILE, SEE SHEET NO. 10
- FOR -Y1- PROFILE, SEE SHEET NO. 11
- FOR -DRIA- PROFILE, SEE SHEET NO. 11
- SEE SHEET 2-B FOR BRIDGE SKETCH
- FOR STRUCTURE PLANS, SEE SHEET S-? AND S-?
- FOR WALL PLANS, SEE SHEET W-? AND W-?
- SEE PMP FOR CURB RAMP LOCATIONS AND STATIONING

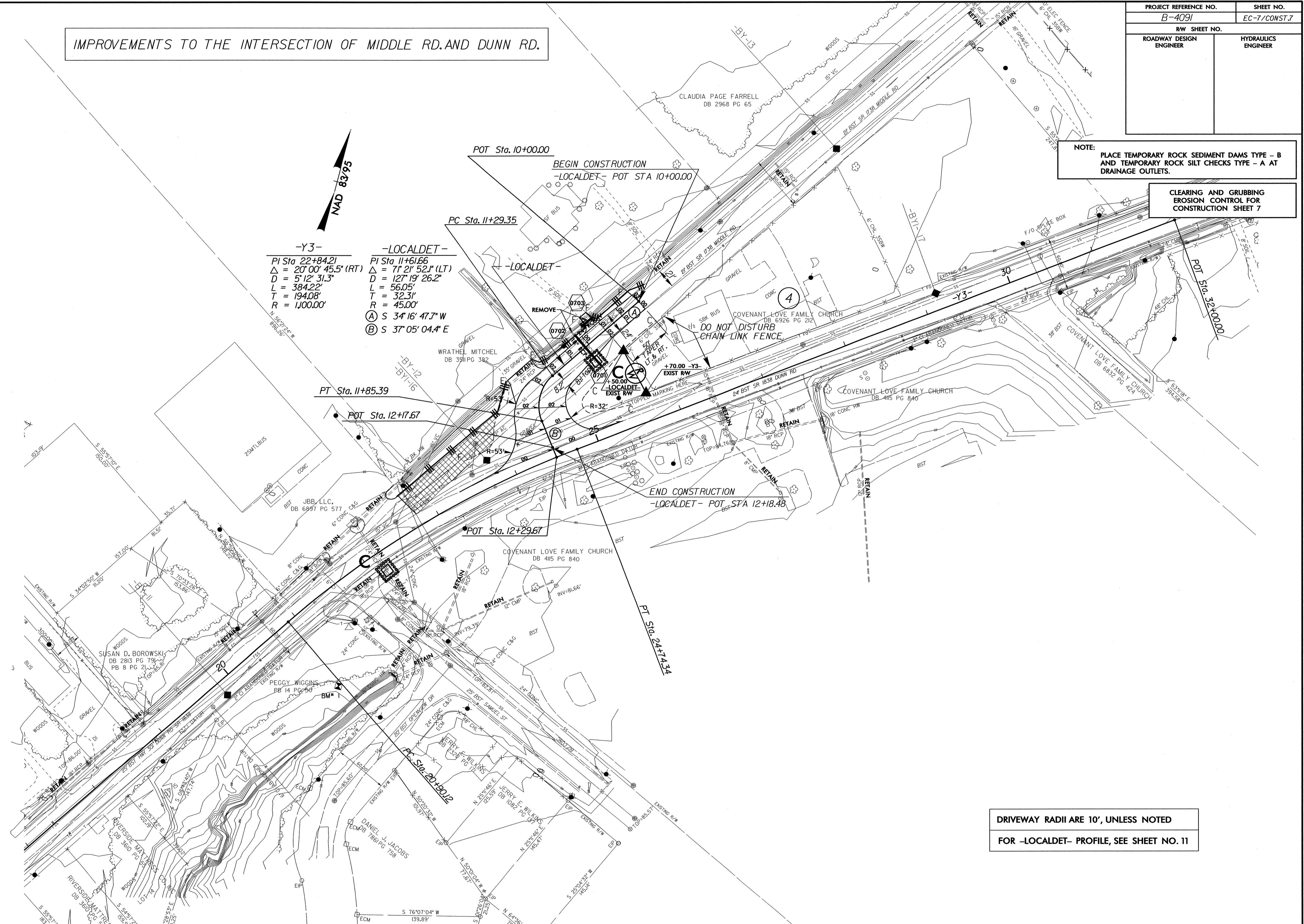
8/17/99  
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Checked AT: RENN265348

# IMPROVEMENTS TO THE INTERSECTION OF MIDDLE RD. AND DUNN RD.

PROJECT REFERENCE NO. B-4091		SHEET NO. EC-7/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

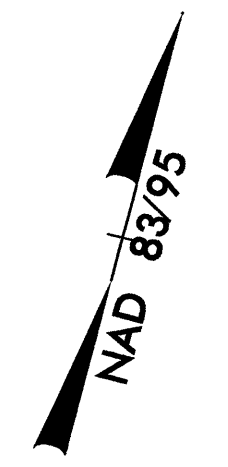


**-Y3-**  
 PI Sta 22+84.21  
 $\Delta = 20^{\circ}00'45.5''$  (RT)  
 $D = 5^{\circ}12'31.3''$   
 $L = 384.22'$   
 $T = 194.08'$   
 $R = 1,100.00'$

**-LOCALDET-**  
 PI Sta 11+61.66  
 $\Delta = 71^{\circ}21'52.1''$  (LT)  
 $D = 127^{\circ}19'26.2''$   
 $L = 56.05'$   
 $T = 32.31'$   
 $R = 45.00'$   
 (A) S 34°16'47.7" W  
 (B) S 37°05'04.4" E

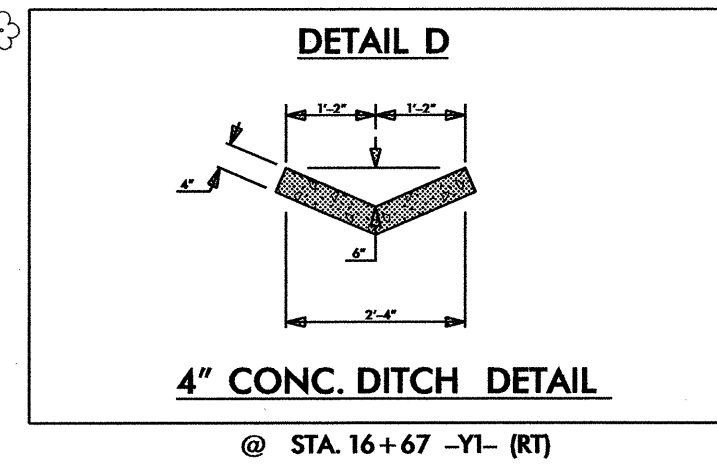
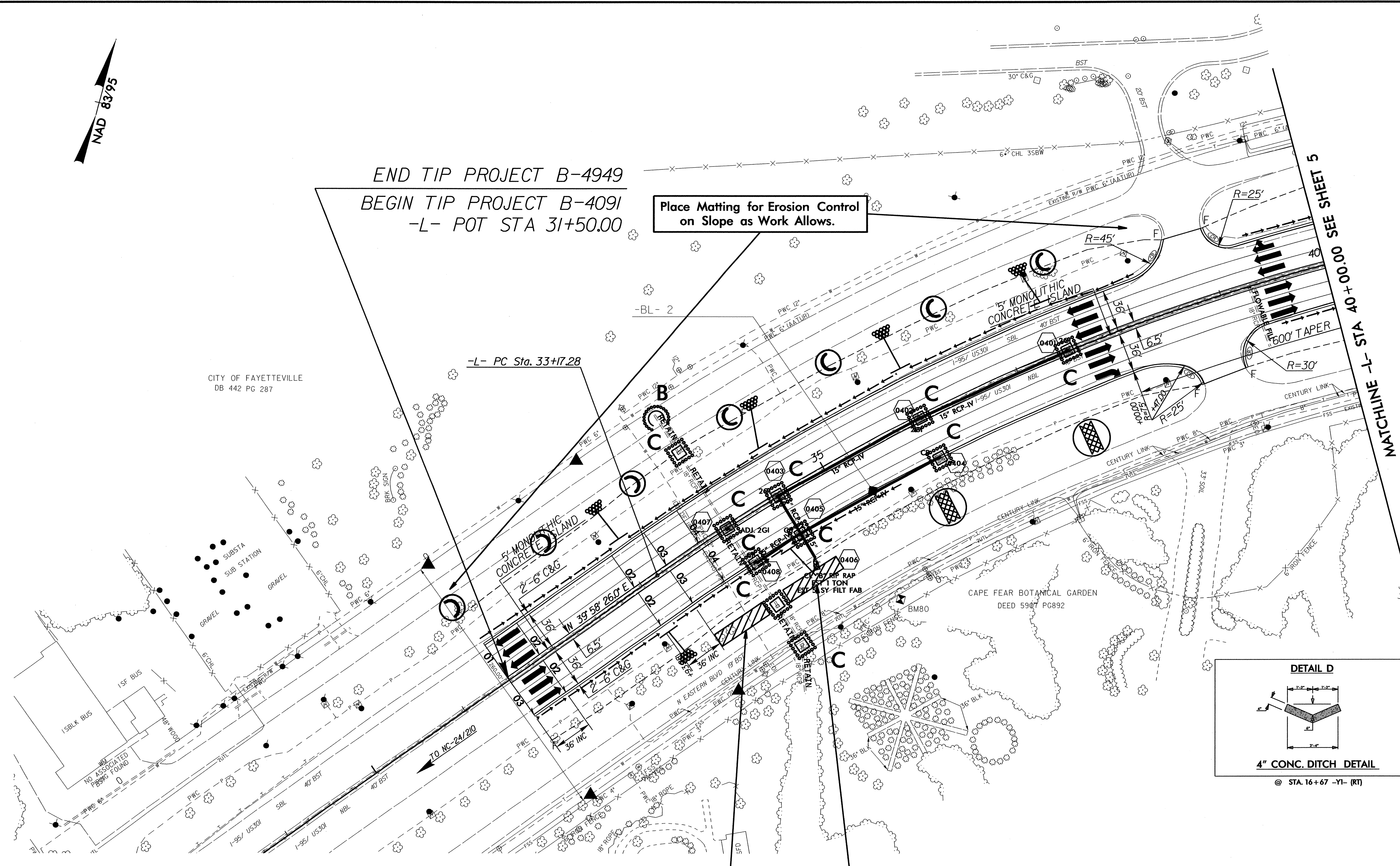
DRIVEWAY RADII ARE 10', UNLESS NOTED  
 FOR -LOCALDET- PROFILE, SEE SHEET NO. 11

PROJECT REFERENCE NO. B-4091	SHEET NO. EC-8/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



END TIP PROJECT B-4949  
 BEGIN TIP PROJECT B-4091  
 -L- POT STA 31+50.00

Place Matting for Erosion Control  
 on Slope as Work Allows.



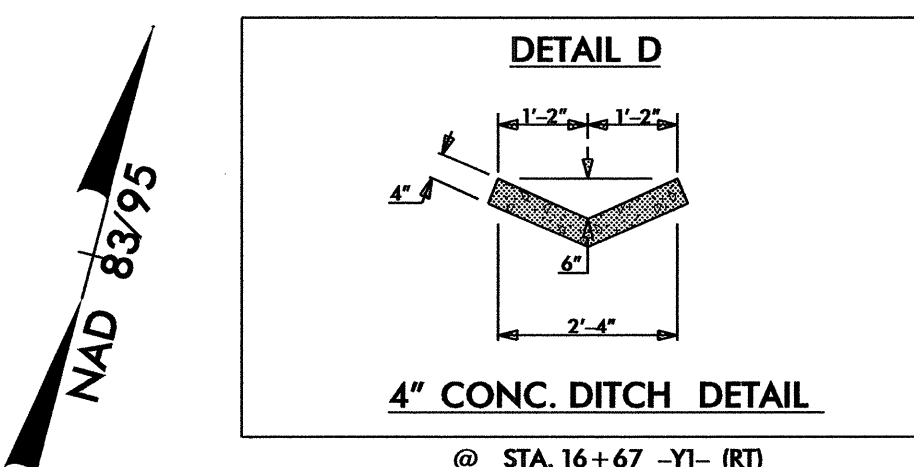
53 x 13 x 2  
 ID 4.1B

58 x 13 x 3  
 ID 4.2B

-L- CURVE DATA  
 PI Sta 39+23J2  
 $\Delta = 35^{\circ}12'00.0''$  (RT)  
 $D = 3^{\circ}00'00.0''$   
 $L = 1173.33'$   
 $T = 605.84'$   
 $R = 1909.86'$   
 $RO = 144$   
 $SE = 0.04$   
 $INC = 36'$

FOR -L- PROFILE, SEE SHEET NO. 8

8/17/99  
 03-MAY-2012 14:19  
 R:\Environmental\Design\B4091\_EC\_psh4.dgn  
 psh4  
 AT: RENV256346

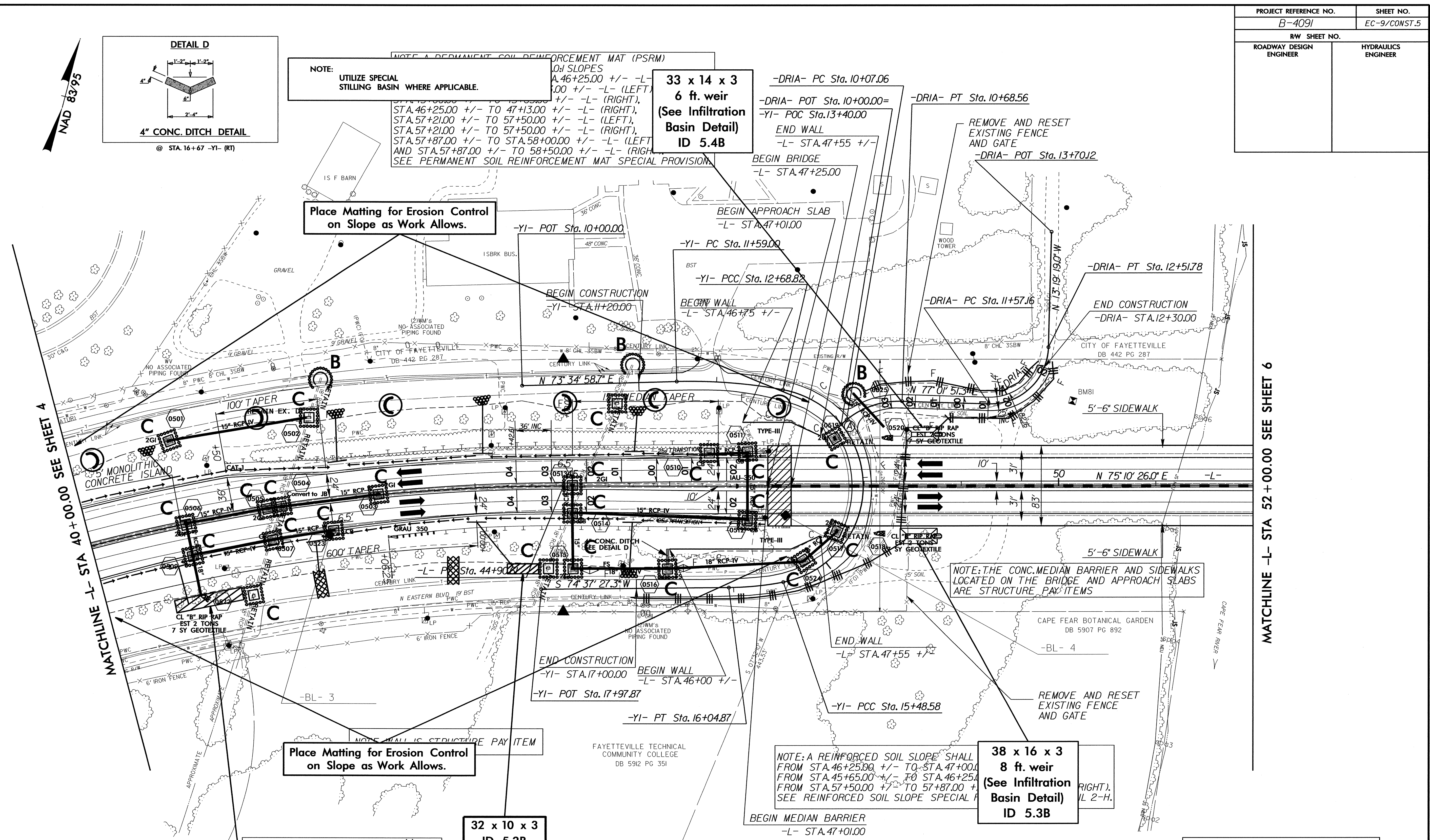


NOTE: UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.

NOTE: A PERMANENT SOIL REINFORCEMENT MAT (PSRM) SHALL BE USED ON SLOPES FROM STA. 46+25.00 +/- TO STA. 47+13.00 +/- -L- (RIGHT), STA. 46+25.00 +/- TO 47+13.00 +/- -L- (LEFT), STA. 47+13.00 +/- TO 47+50.00 +/- -L- (RIGHT), STA. 47+13.00 +/- TO 47+50.00 +/- -L- (LEFT), STA. 47+50.00 +/- TO 47+87.00 +/- -L- (RIGHT), STA. 47+50.00 +/- TO 47+87.00 +/- -L- (LEFT) AND STA. 47+87.00 +/- TO 48+50.00 +/- -L- (RIGHT). SEE PERMANENT SOIL REINFORCEMENT MAT SPECIAL PROVISION.

33 x 14 x 3  
6 ft. weir  
(See Infiltration Basin Detail)  
ID 5.4B

Place Matting for Erosion Control on Slope as Work Allows.



MATCHLINE -L- STA 40+00.00 SEE SHEET 4

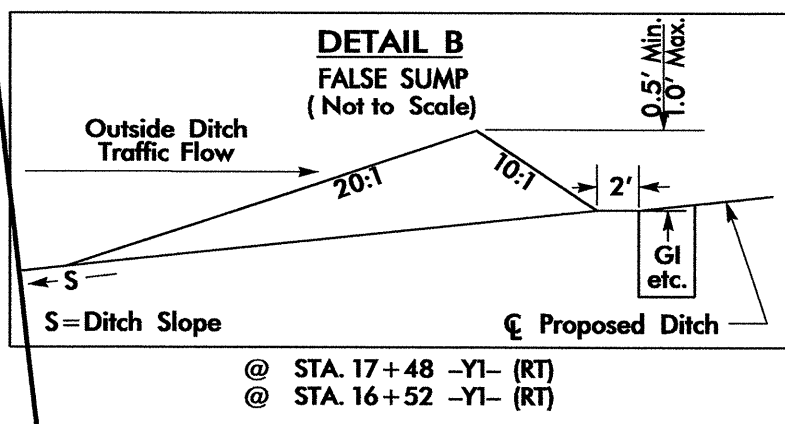
MATCHLINE -L- STA 52+00.00 SEE SHEET 6

Place Matting for Erosion Control on Slope as Work Allows.

32 x 10 x 3  
ID 5.2B

NOTE: A REINFORCED SOIL SLOPE SHALL BE USED FROM STA. 46+25.00 +/- TO STA. 47+00.00 +/- -L- (RIGHT), STA. 45+65.00 +/- TO STA. 46+25.00 +/- -L- (LEFT), STA. 47+50.00 +/- TO 47+87.00 +/- -L- (RIGHT), STA. 47+50.00 +/- TO 47+87.00 +/- -L- (LEFT) AND STA. 47+87.00 +/- TO 48+50.00 +/- -L- (RIGHT). SEE PERMANENT SOIL REINFORCEMENT MAT SPECIAL PROVISION.

38 x 16 x 3  
8 ft. weir  
(See Infiltration Basin Detail)  
ID 5.3B



70 x 13 x 3  
ID 5.1B

-L- CURVE DATA

PI Sta 39+23.12	$\Delta = 35^\circ 12' 00.0''$ (RT)
$D = 3' 00' 00.0''$	
$L = 1,173.33'$	
$T = 605.84'$	
$R = 1,909.86'$	
$RO = 144'$	
$SE = 0.04$	
$INC = 36'$	

-YI- CURVE DATA

PI Sta 12+14.12	$\Delta = 12^\circ 06' 03.1''$ (RT)
$D = 12' 06' 03.1''$	
$L = 109.82'$	
$T = 55.12'$	
$R = 520.00'$	
$RO = 72'$	
$SE = 0.04$	
$INC = 18'$	

-YI- CURVE DATA

PI Sta 15+76.80	$\Delta = 10^\circ 14' 22.4''$ (RT)
$D = 18' 11' 20.9''$	
$L = 56.29'$	
$T = 28.22'$	
$R = 315.00'$	
$RO = 72'$	
$SE = 0.04$	
$INC = 18'$	

-DRIA- CURVE DATA

PI Sta 18+05.94	$\Delta = 158^\circ 42' 03.0''$ (RT)
$D = 56' 43' 42.6''$	
$L = 279.76'$	
$T = 537.12'$	
$R = 101.00'$	
$RO = 72'$	
$SE = 0.04$	
$INC = 18'$	

-DRIA- CURVE DATA

PI Sta 10+39.19	$\Delta = 40^\circ 58' 12.0''$ (RT)
$D = 66' 37' 22.8''$	
$L = 61.50'$	
$T = 32.13'$	
$R = 86.00'$	
$RO = 72'$	
$SE = 0.03$	

-DRIA- CURVE DATA

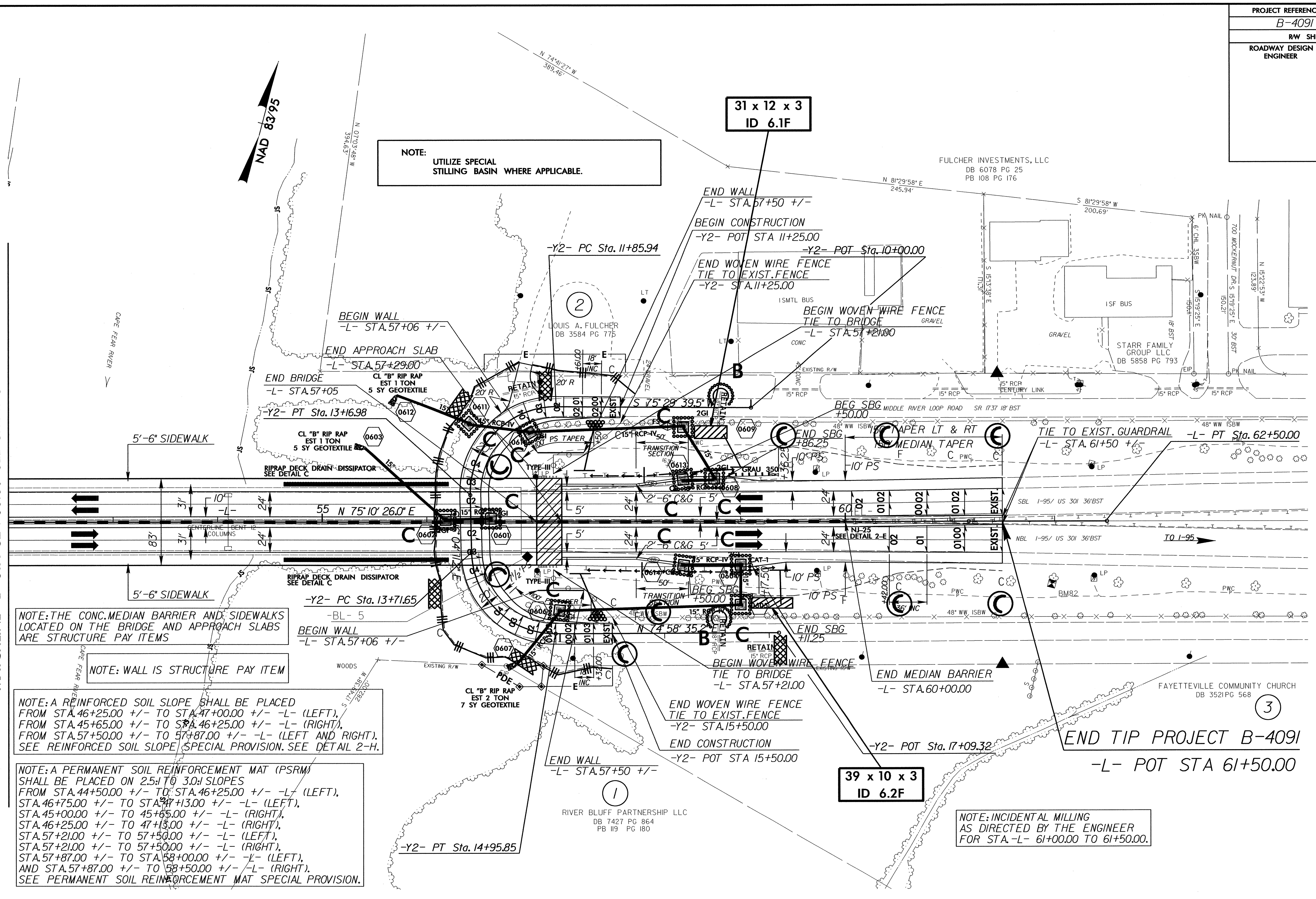
PI Sta 12+17.53	$\Delta = 90^\circ 21' 10.3''$ (LT)
$D = 95' 29' 34.7''$	
$L = 94.62'$	
$T = 60.37'$	
$R = 60.00'$	
$SE = 0.02$	

- BRIDGE APPROACH SLAB
- CONC MEDIAN BARRIER
- DRIVEWAY RADII ARE 15', UNLESS NOTED
- FOR -L- PROFILE, SEE SHEET NO. 9
- FOR -YI- PROFILE, SEE SHEET NO. 11
- FOR -DRIA- PROFILE, SEE SHEET NO. 11
- SEE SHEET 2-B FOR BRIDGE SKETCH
- FOR STRUCTURE PLANS, SEE SHEET S-? AND S-?
- FOR WALL PLANS, SEE SHEET W-? AND W-?

PROJECT REFERENCE NO.	SHEET NO.
B-4091	EC-10/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
31-MAY-2012 08:25  
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checked AT RBN 265355

MATCHLINE -L- STA 52 + 00.00 SEE SHEET 5



**NOTE:**  
UTILIZE SPECIAL  
STILLING BASIN WHERE APPLICABLE.

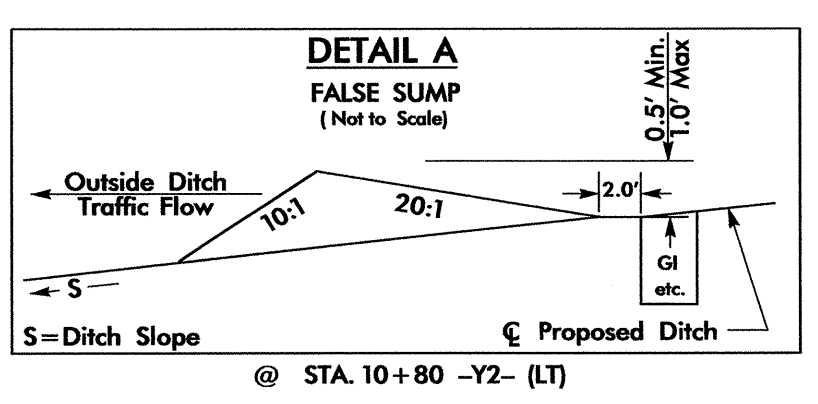
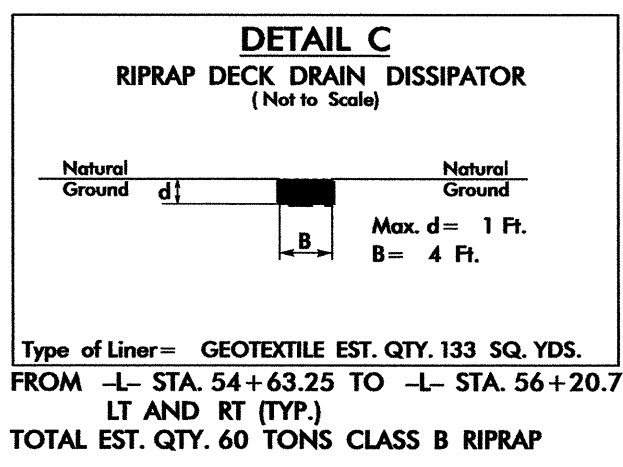
**NOTE:** THE CONC. MEDIAN BARRIER AND SIDEWALKS LOCATED ON THE BRIDGE AND APPROACH SLABS ARE STRUCTURE PAY ITEMS

**NOTE:** WALL IS STRUCTURE PAY ITEM

**NOTE:** A REINFORCED SOIL SLOPE SHALL BE PLACED FROM STA. 46+25.00 +/- TO STA. 47+00.00 +/- -L- (LEFT), FROM STA. 45+65.00 +/- TO STA. 46+25.00 +/- -L- (RIGHT), FROM STA. 57+50.00 +/- TO STA. 57+87.00 +/- -L- (LEFT AND RIGHT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION. SEE DETAIL 2-H.

**NOTE:** A PERMANENT SOIL REINFORCEMENT MAT (PSRM) SHALL BE PLACED ON 2.5:1 TO 3.0:1 SLOPES FROM STA. 44+50.00 +/- TO STA. 46+25.00 +/- -L- (LEFT), STA. 46+75.00 +/- TO STA. 47+13.00 +/- -L- (LEFT), STA. 45+00.00 +/- TO STA. 45+65.00 +/- -L- (RIGHT), STA. 46+25.00 +/- TO STA. 47+13.00 +/- -L- (RIGHT), STA. 57+21.00 +/- TO STA. 57+50.00 +/- -L- (LEFT), STA. 57+21.00 +/- TO STA. 57+50.00 +/- -L- (RIGHT), STA. 57+87.00 +/- TO STA. 58+00.00 +/- -L- (LEFT), AND STA. 57+87.00 +/- TO STA. 58+50.00 +/- -L- (RIGHT). SEE PERMANENT SOIL REINFORCEMENT MAT SPECIAL PROVISION.

**NOTE:** INCIDENTAL MILLING AS DIRECTED BY THE ENGINEER FOR STA. -L- 61+00.00 TO 61+50.00.



-Y2- CURVE DATA

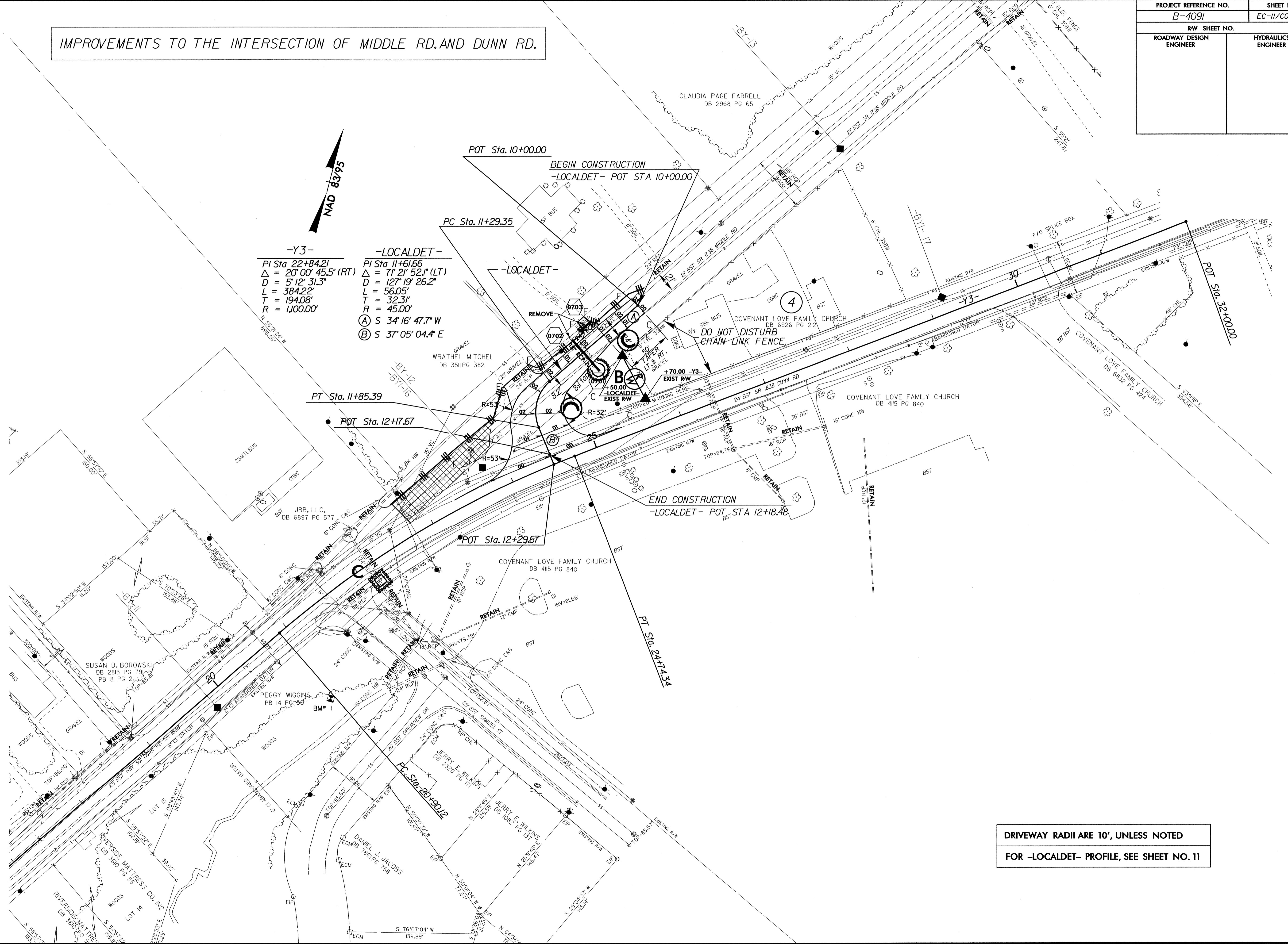
PI Sta 12+70.21	PI Sta 14+50.20
$\Delta = 91^\circ 33' 50.6''$ (LT)	$\Delta = 88^\circ 57' 13.6''$ (LT)
$D = 69^\circ 52' 22.4''$	$D = 71^\circ 37' 11.0''$
$L = 131.04'$	$L = 124.20'$
$T = 84.27'$	$T = 78.55'$
$R = 82.00'$	$R = 80.00'$
$RO = 72'$	$RO = 72'$
$SE = 0.04$	$SE = 0.04$
$INC = 18'$	$INC = 18'$

- BRIDGE APPROACH SLAB
- CONC. MEDIAN BARRIER
- DRIVEWAY RADII ARE 15', UNLESS NOTED
- FOR -L- PROFILE, SEE SHEET NO. 10
- FOR -Y1- PROFILE, SEE SHEET NO. 11
- FOR -DRIA- PROFILE, SEE SHEET NO. 11
- SEE SHEET 2-B FOR BRIDGE SKETCH
- FOR STRUCTURE PLANS, SEE SHEET S-? AND S-?
- FOR WALL PLANS, SEE SHEET W-? AND W-?
- SEE PMP FOR CURB RAMP LOCATIONS AND STATIONING

8/17/99

# IMPROVEMENTS TO THE INTERSECTION OF MIDDLE RD. AND DUNN RD.

PROJECT REFERENCE NO.		SHEET NO.	
B-4091		EC-11/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



**-Y3-**  
 PI Sta 22+84.21  
 $\Delta = 20^{\circ}00'45.5''$  (RT)  
 D = 5' 12' 31.3"  
 L = 384.22'  
 T = 194.08'  
 R = 1,100.00'

**-LOCALDET-**  
 PI Sta 11+61.66  
 $\Delta = 71^{\circ}21'52.1''$  (LT)  
 D = 127' 19' 26.2"  
 L = 56.05'  
 T = 32.31'  
 R = 45.00'

Ⓐ S 34° 16' 47.7" W  
 Ⓑ S 37° 05' 04.4" E

DRIVEWAY RADII ARE 10', UNLESS NOTED  
 FOR -LOCALDET- PROFILE, SEE SHEET NO. 11

03-MAY-2012 15:06  
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 Author: AL BENVENISTE