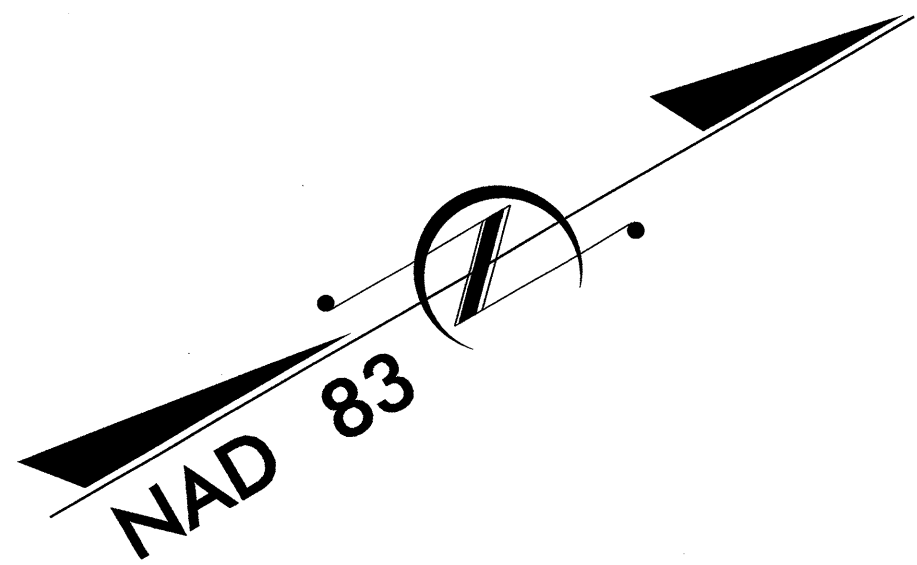


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4182	EC-1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

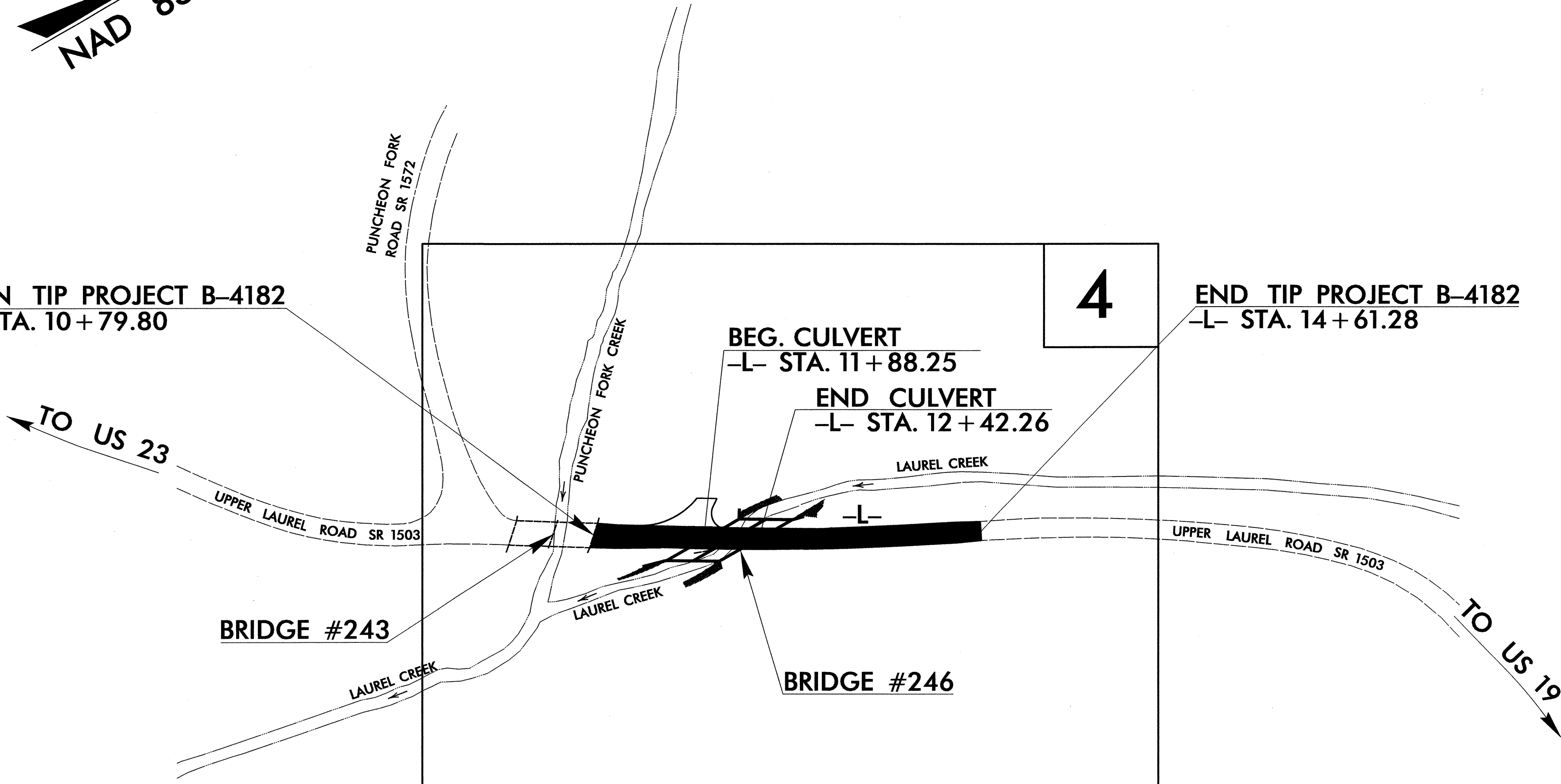
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
MADISON COUNTY

LOCATION: BRIDGE 246 OVER LAUREL CREEK ON SR 1503
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND CULVERT



BEGIN TIP PROJECT B-4182
-L- STA. 10+79.80

END TIP PROJECT B-4182
-L- STA. 14+61.28



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
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	⤵
	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	⊞

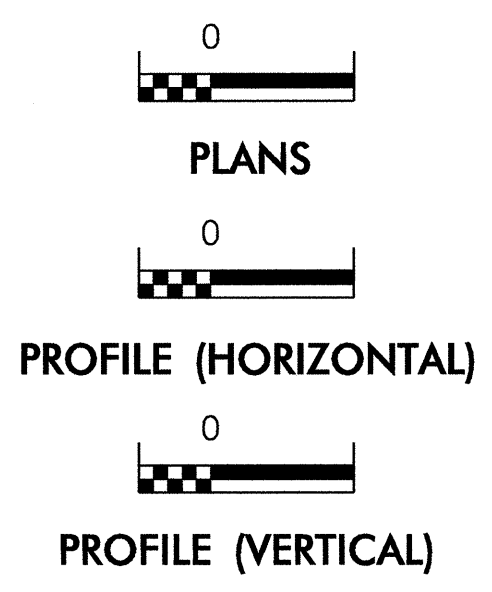
THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT
High Quality Water Zone(s) Exist From Sta. Beginning to Sta. End Refer To E. C. Special Provisions for Special Considerations.

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

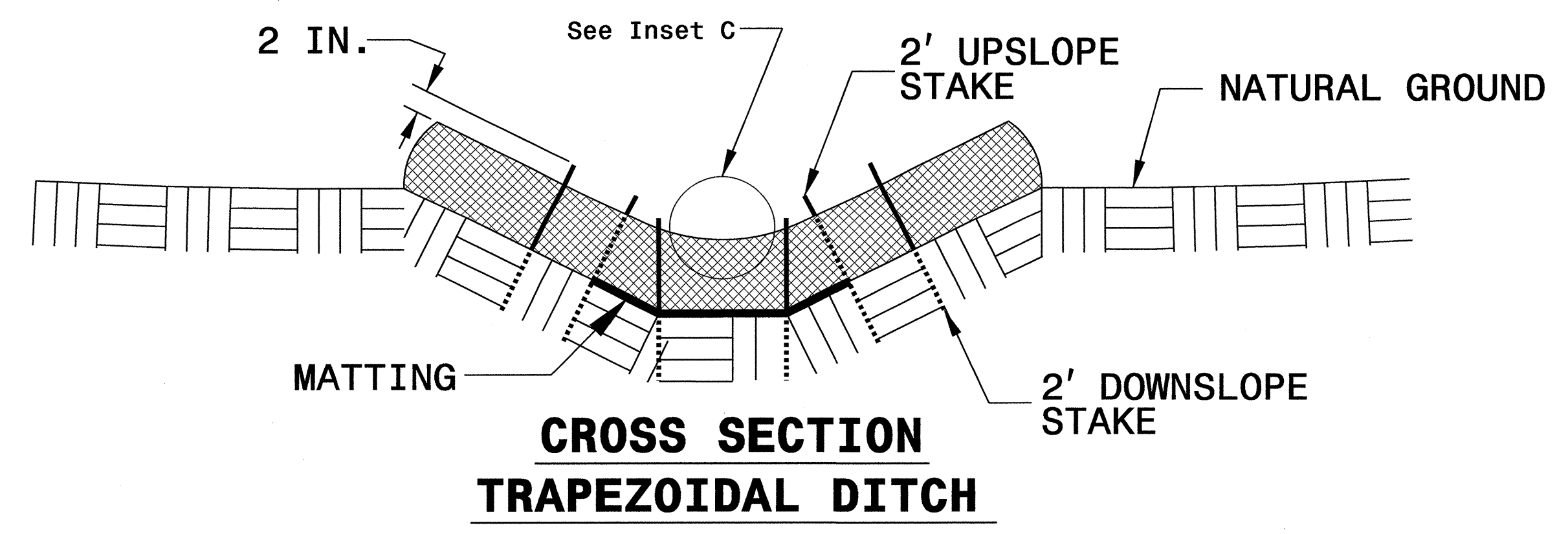
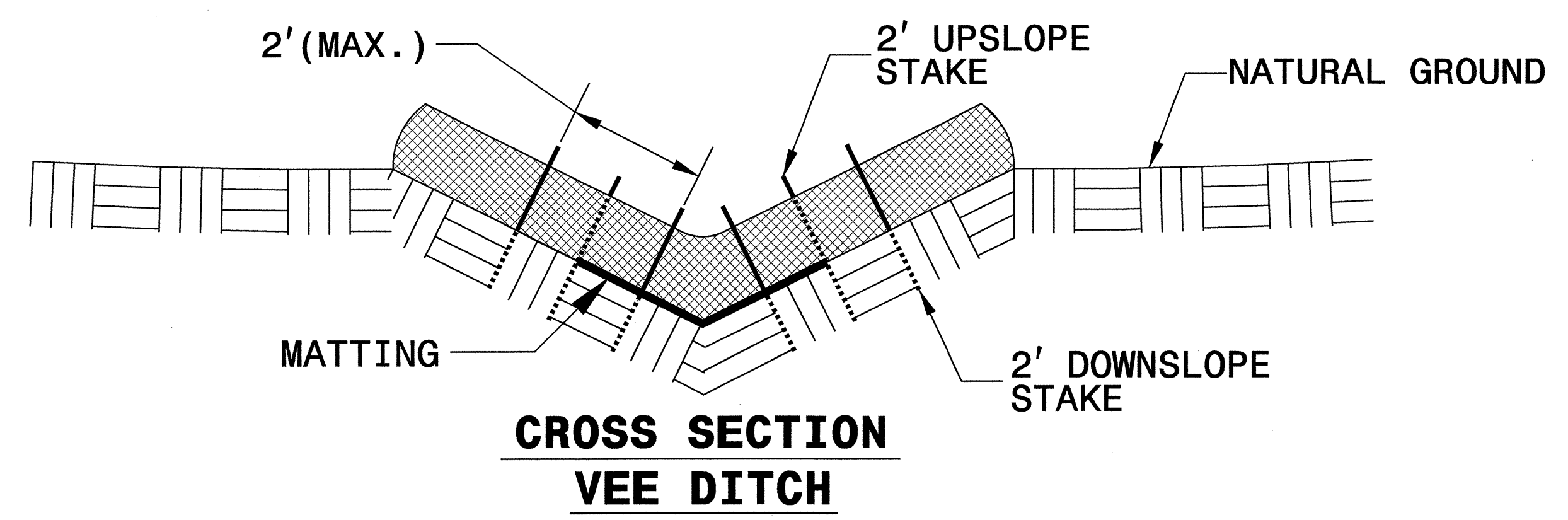
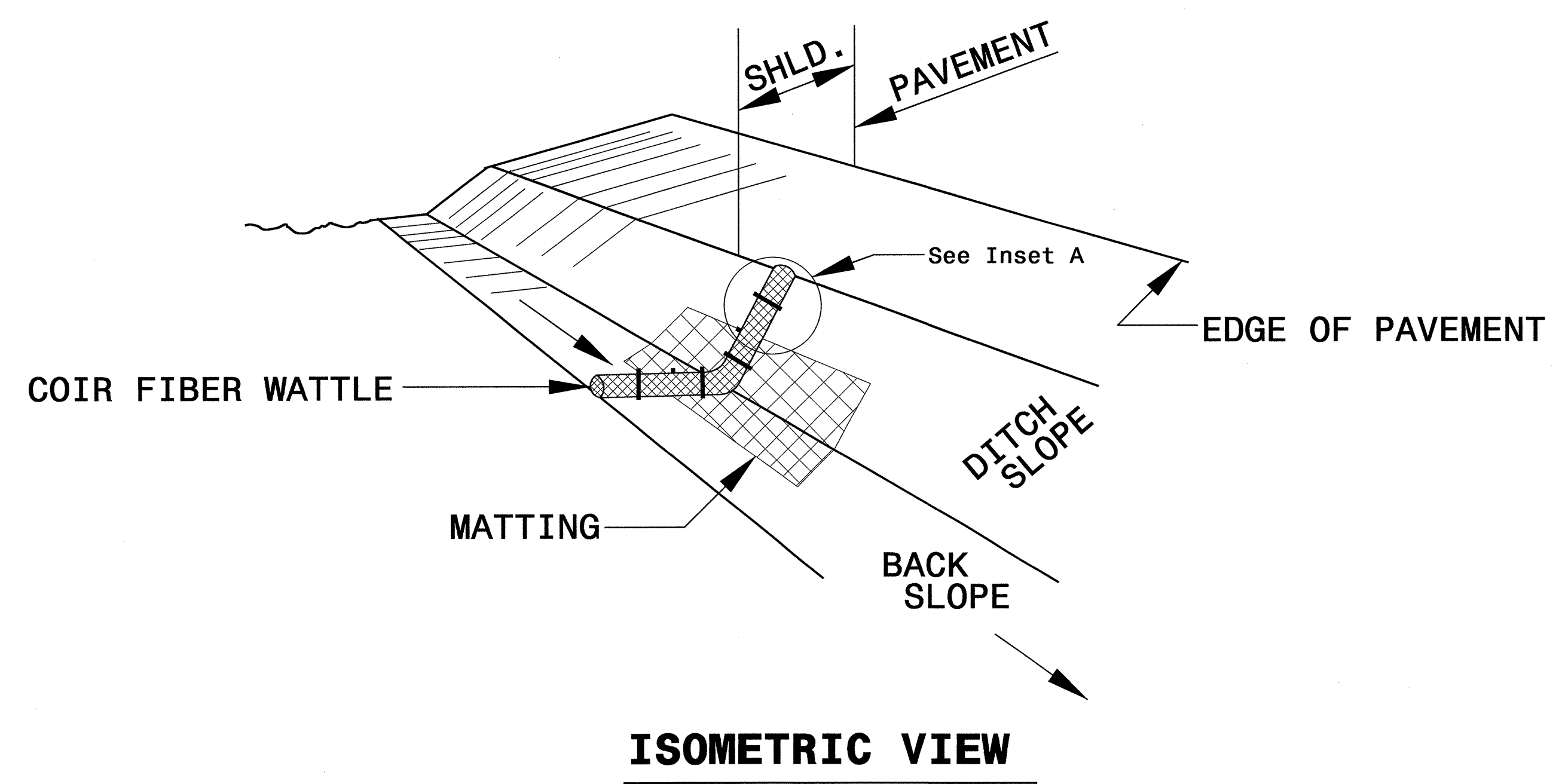
Roadway Standard Drawings

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	1633.02 Temporary Rock Silt Check Type B
1630.02 Silt Basin Type B	1634.01 Temporary Rock Sediment Dam Type A
1630.03 Temporary Silt Ditch	1634.02 Temporary Rock Sediment Dam Type B
1630.04 Stilling Basin	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.05 Temporary Diversion	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.06 Special Stilling Basin	1640.01 Coir Fiber Baffle
1631.01 Matting Installation	1645.01 Temporary Stream Crossing

PROJECT REFERENCE NO. B-4182	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

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

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

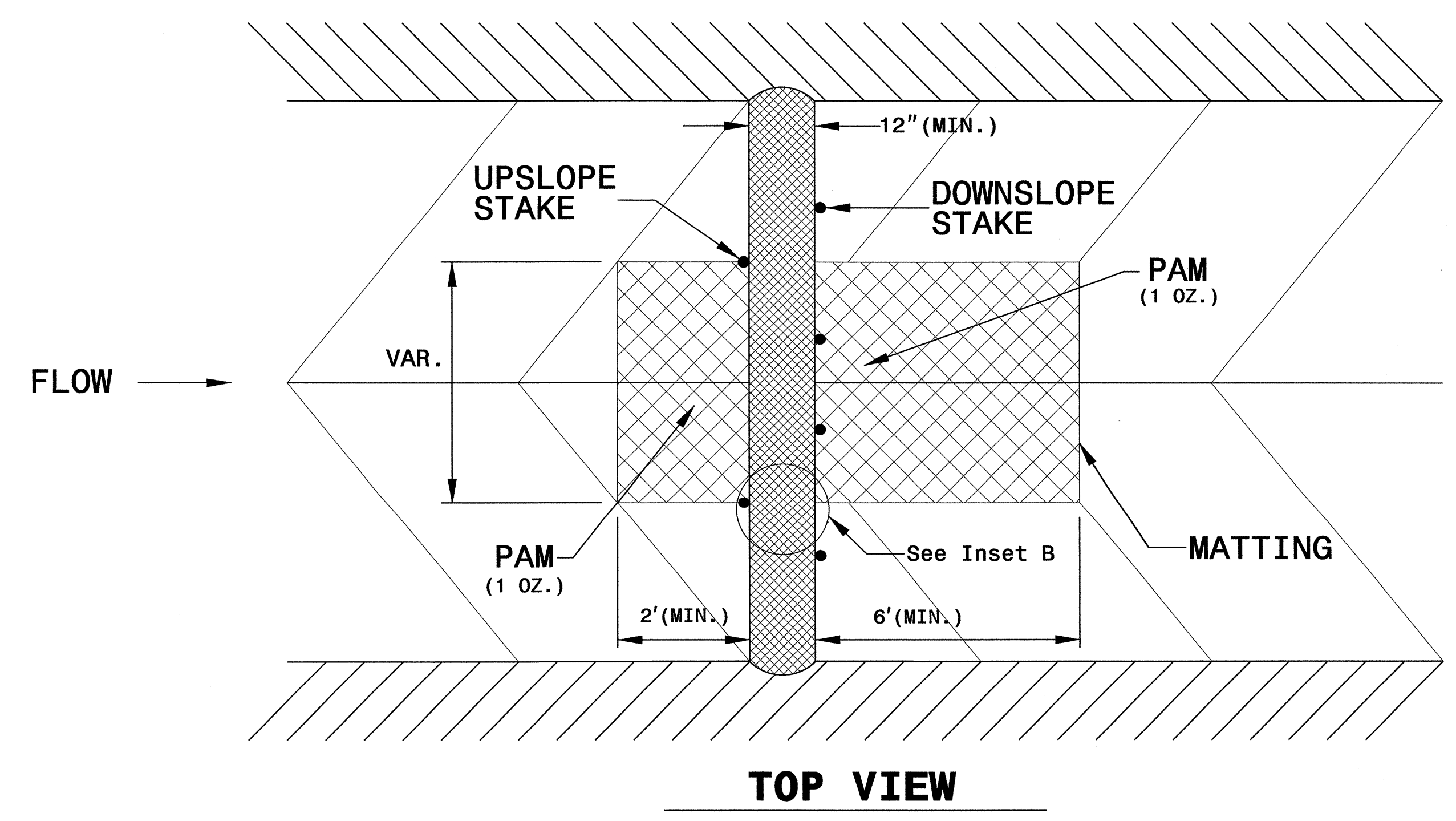
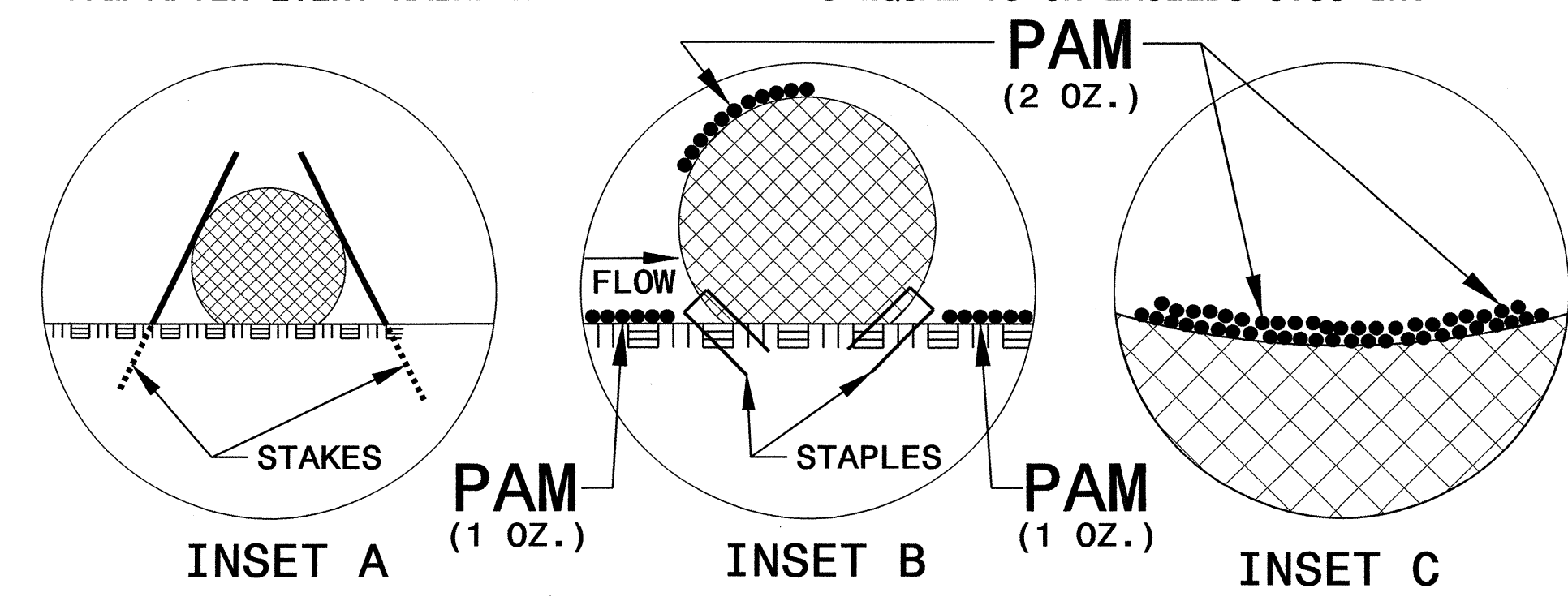
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-4182</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.

11+46.62

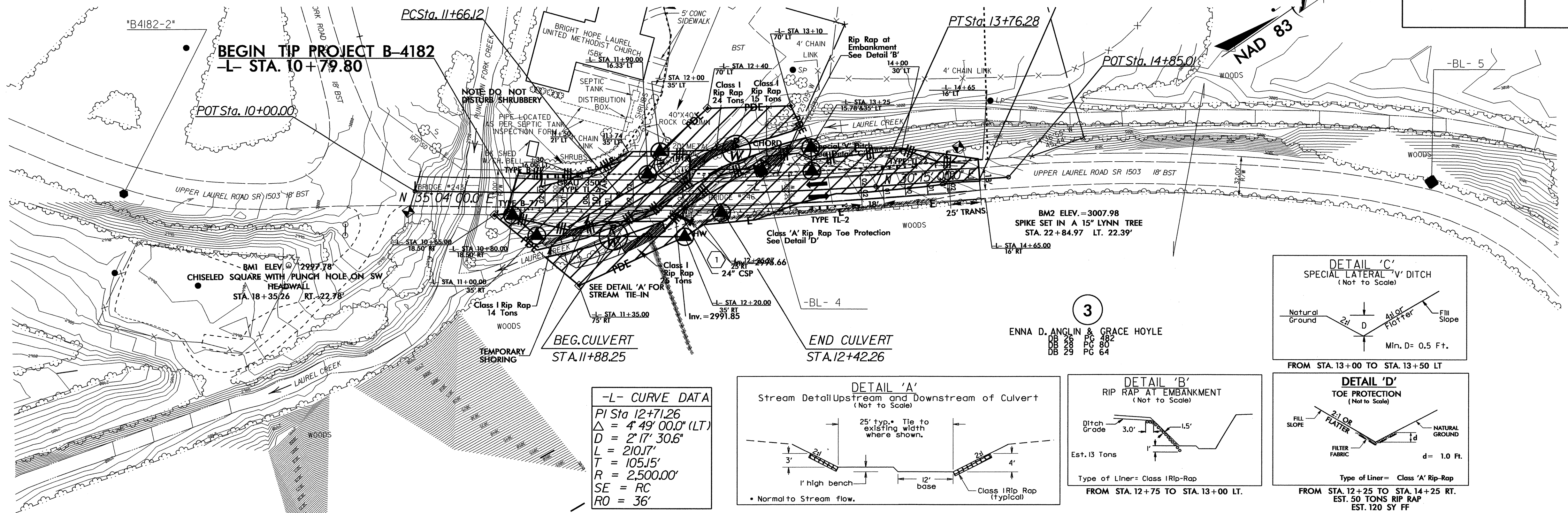
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PROJECT REFERENCE NO.	SHEET NO.
B-4182	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

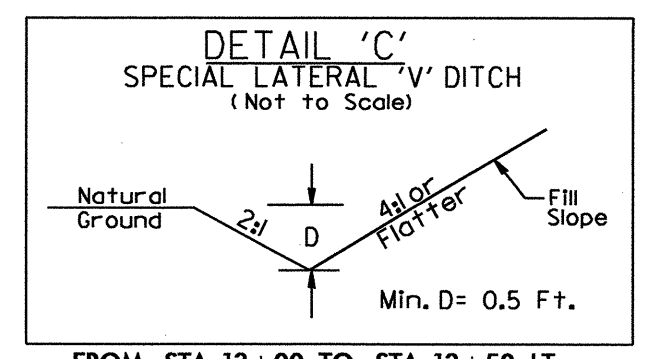
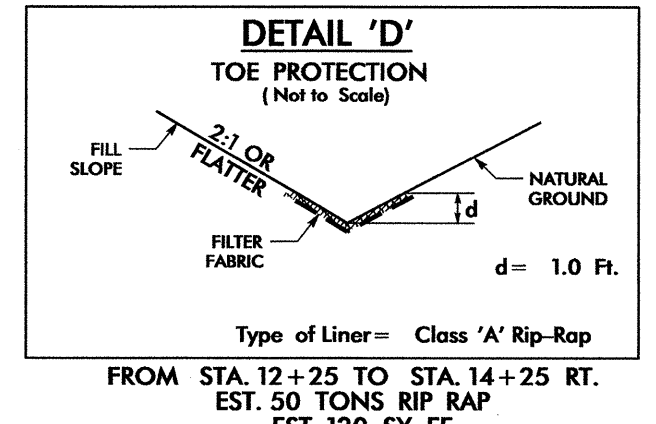
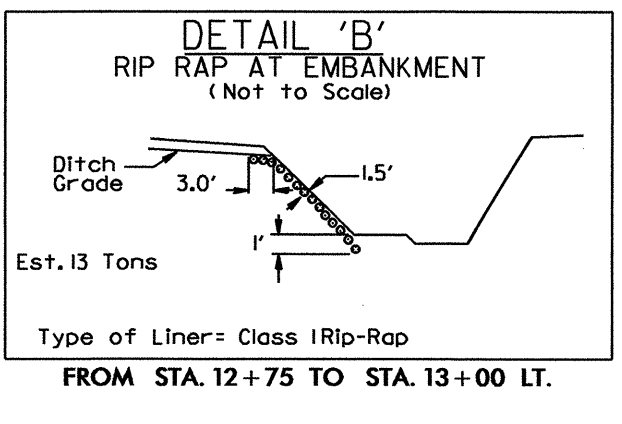
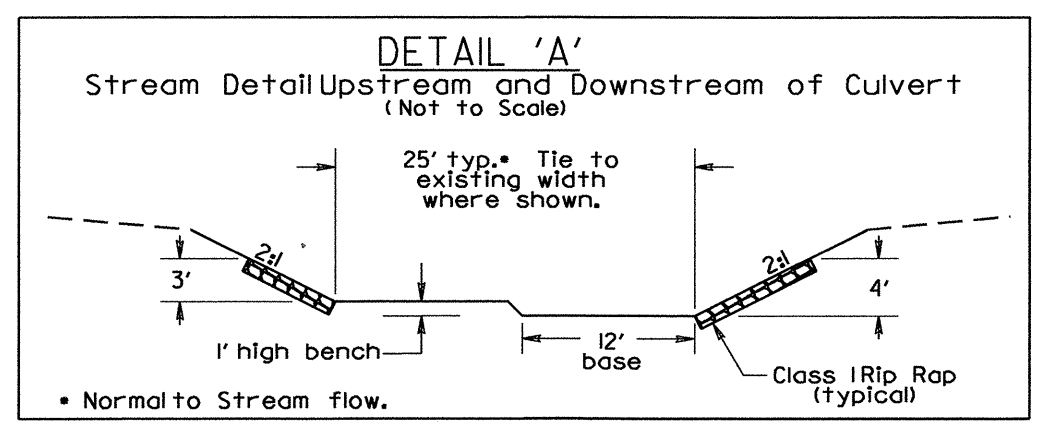
 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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.

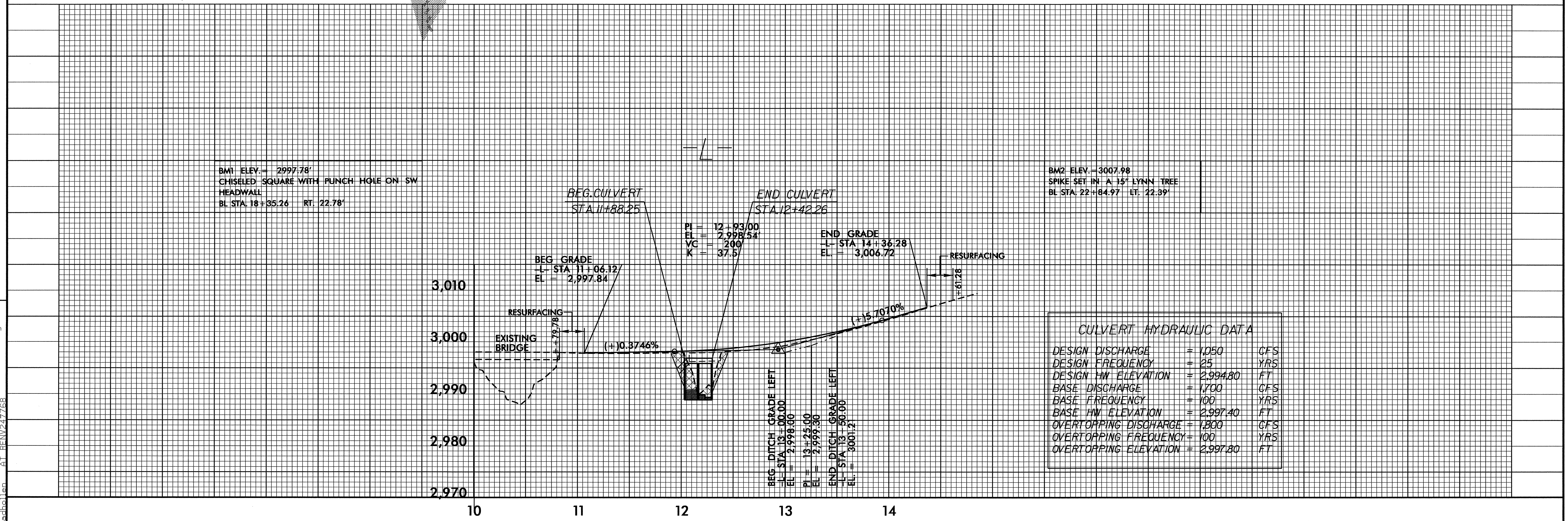


-L- CURVE DATA
 PI Sta 12+71.26
 $\Delta = 4' 49'' 00.0''$ (LT)
 $D = 2' 17'' 30.6''$
 $L = 210.17'$
 $T = 105.15'$
 $R = 2,500.00'$
 SE = RC
 RO = 36'



3
ENNA D. ANGLIN & GRACE HOYLE
DB 28 PG 882
DB 29 PG 64

REVISIONS



BM1 ELEV. = 2997.78'
CHISELED SQUARE WITH PUNCH HOLE ON SW
HEADWALL
BL STA 18+35.26 RT. 22.78'

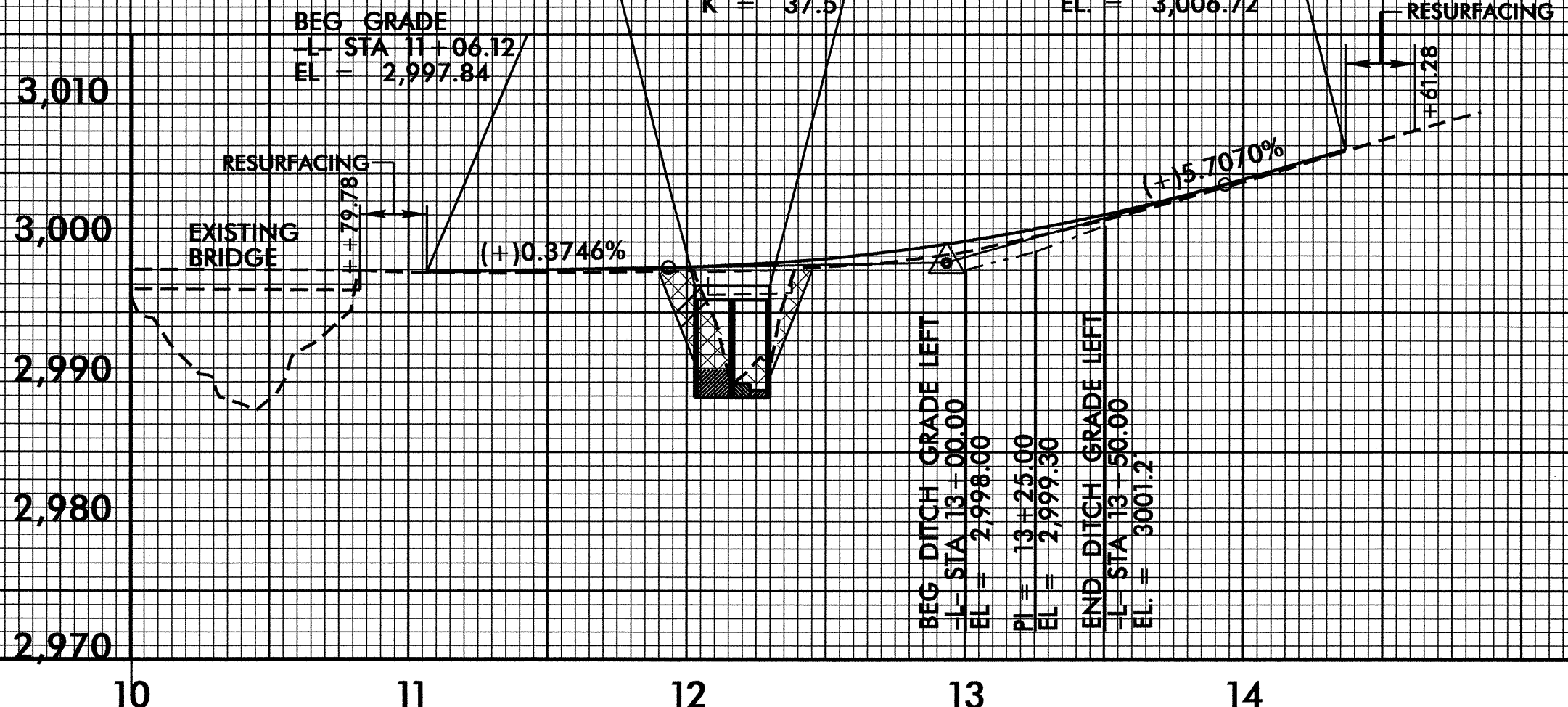
BEG. CULVERT
STA 11+88.25

END CULVERT
STA 12+42.26

BM2 ELEV. = 3007.98
SPIKE SET IN A 15' LYNN TREE
BL STA 22+84.97 LT. 22.39'

PI = 12+93.00
EL = 2,998.54'
VC = 200'
K = 37.5'

END GRADE
L- STA 14+36.28
EL = 3,006.72'



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 1,050	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 2,994.80	FT
BASE DISCHARGE	= 1,700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 2,997.40	FT
OVERTOPPING DISCHARGE	= 1,800	CFS
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING ELEVATION	= 2,997.80	FT

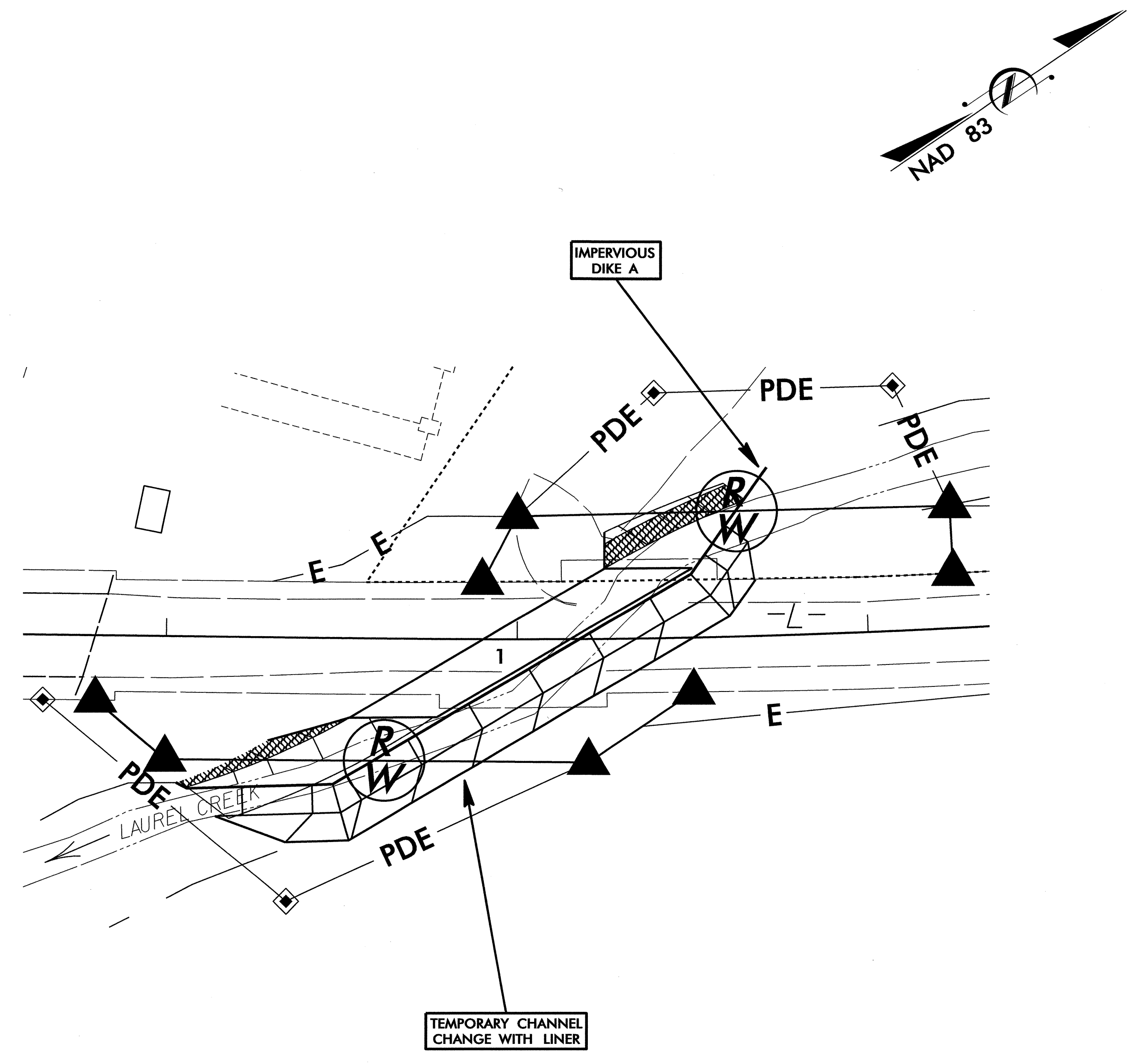
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ec

PROJECT REFERENCE NO. B-4182	SHEET NO. EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 12+15 -L-

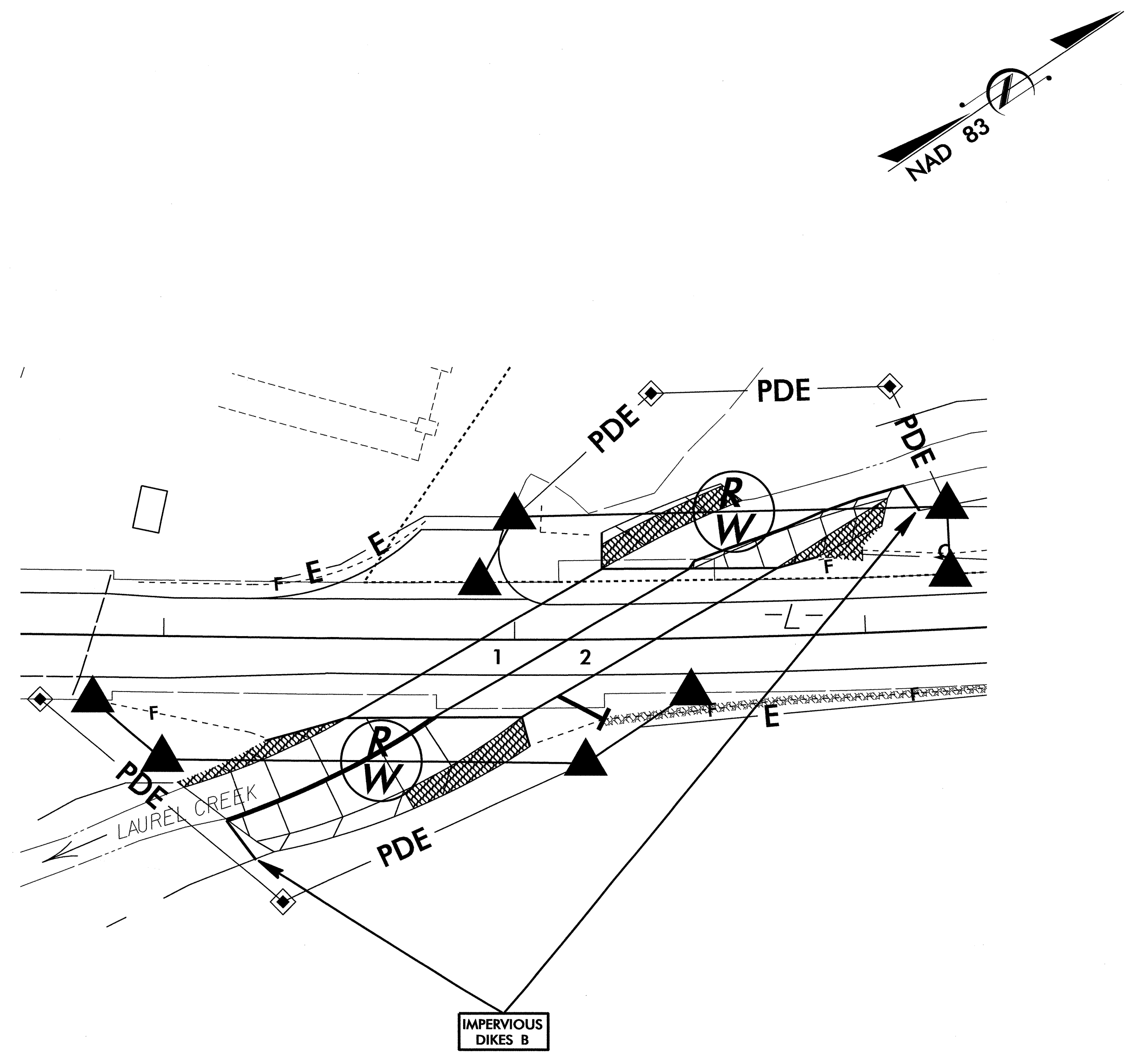
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. REMOVE EXISTING BRIDGE.
3. CONSTRUCT IMPERVIOUS DIKE A AND TEMPORARY CHANNEL CHANGE WITH LINER (8 FT. BASE, 4 FT. DEEP, 2:1 SIDE SLOPE), DIVERTING FLOW.
4. CONSTRUCT BARREL 1 OF PROPOSED CULVERT, INCLUDING A PORTION OF UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.

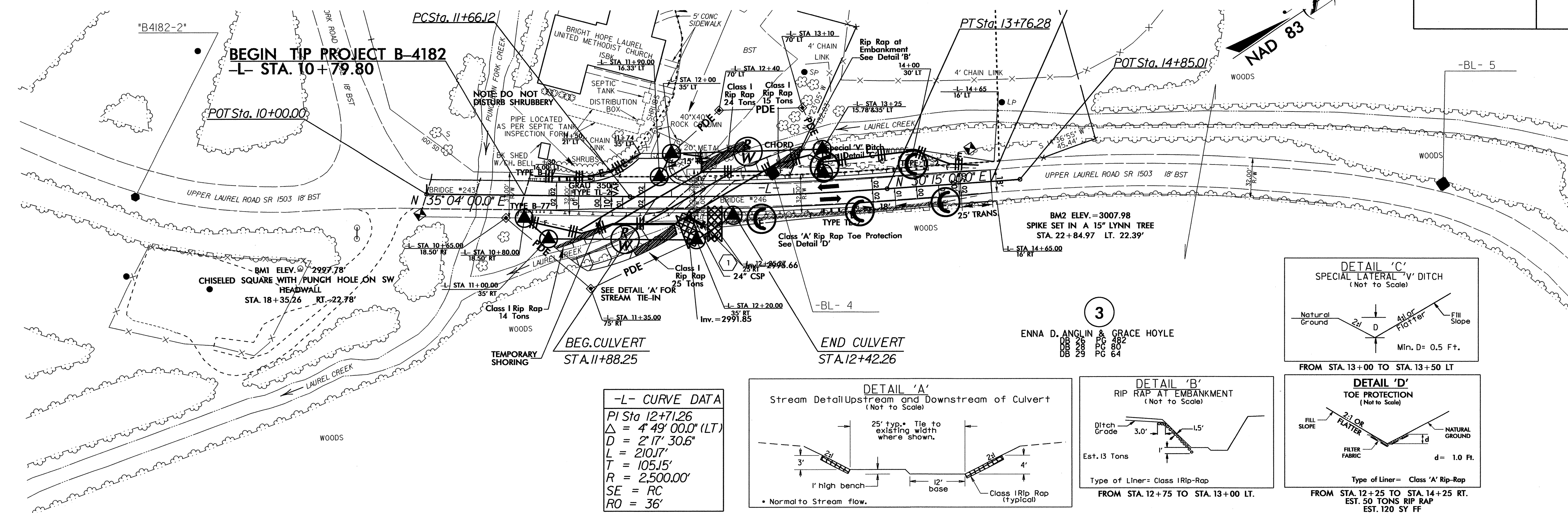


PHASE II

5. REMOVE IMPERVIOUS DIKE A AND TEMPORARY CHANNEL CHANGE.
6. CONSTRUCT IMPERVIOUS DIKES B, DIVERTING FLOW THROUGH BARREL 1 OF PROPOSED CULVERT.
7. CONSTRUCT BARREL 2 OF PROPOSED CULVERT AND REMAINDER OF UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
8. REMOVE IMPERVIOUS DIKES B, ALLOWING NORMAL FLOW THROUGH PROPOSED CULVERT.
9. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
10. COMPLETE ROADWAY.



PROJECT REFERENCE NO. B-4182	SHEET NO. EC-6/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS

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 11/27/12

