

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5721	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45677.1.1	BRZ-2177 (001)	PE	

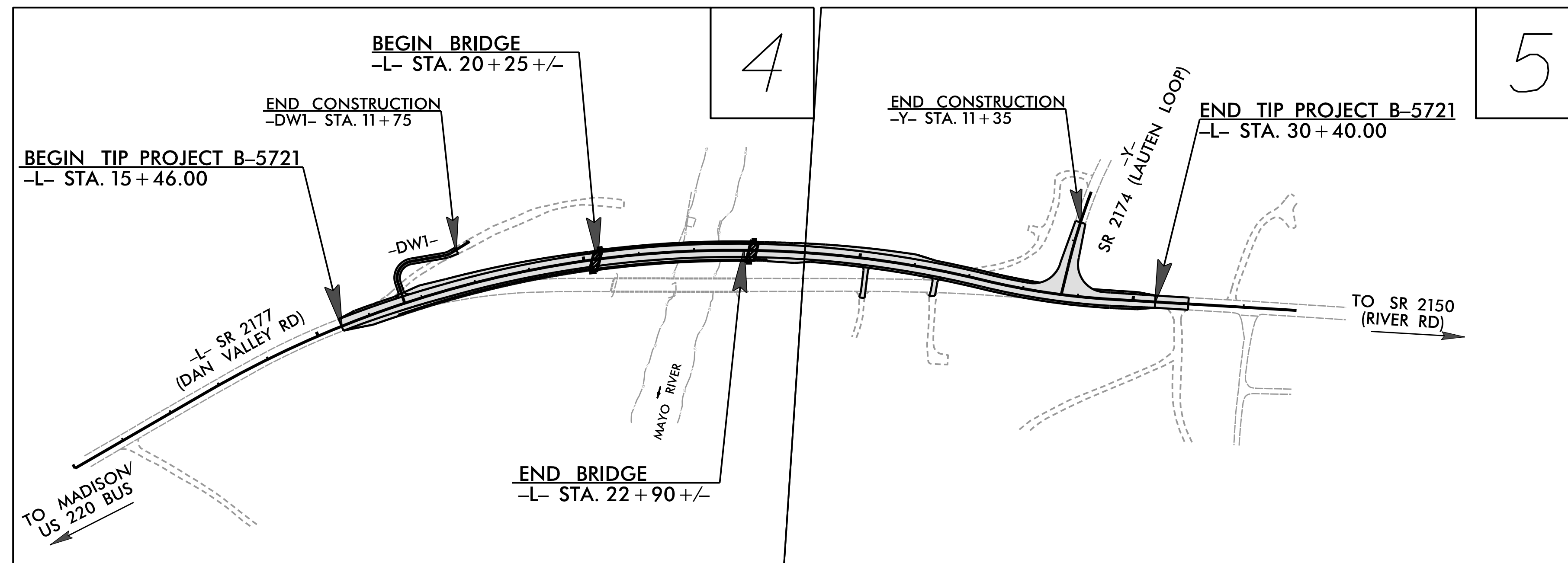
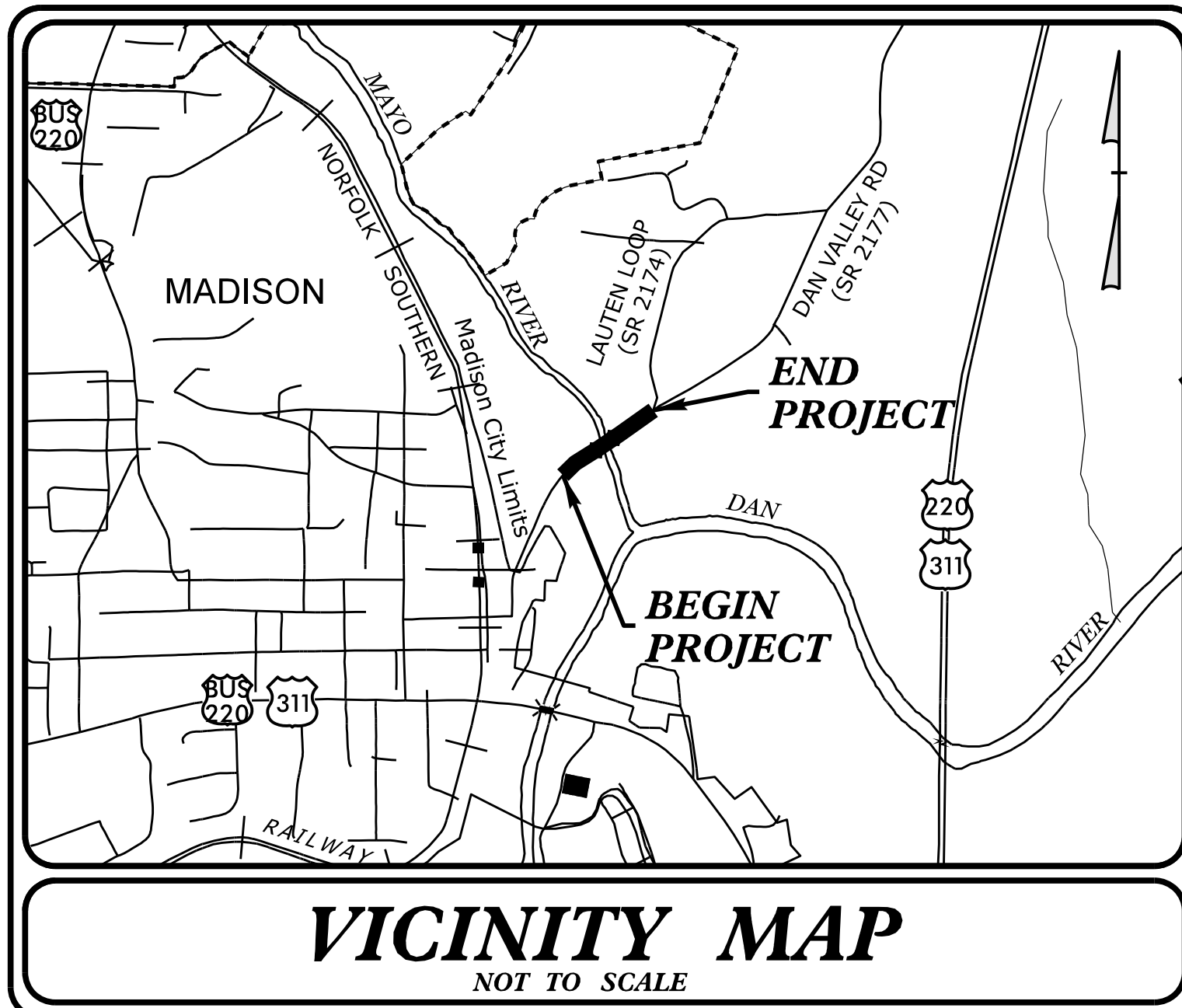
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROCKINGHAM COUNTY

LOCATION: BRIDGE 780124 ON SR 2177 (DAN VALLEY RD) OVER THE MAYO RIVER

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



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	— T —
1630.05	Temporary Diversion	— D —
1605.01	Temporary Silt Fence	— S —
1606.01	Special Sediment Control Fence	— SF —
1622.01	Temporary Berms and Slope Drains	— B —
1630.02	Silt Basin Type B	— SB —
1633.01	Temporary Rock Silt Check Type-A	— RSC —
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	— RSC-PAM —
1633.02	Temporary Rock Silt Check Type-B	— RSC-B —
	Wattle / Coir Fiber Wattle	— W —
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	— W-PAM —
1634.01	Temporary Rock Sediment Dam Type-A	— RSD-A —
1634.02	Temporary Rock Sediment Dam Type-B	— RSD-B —
1635.01	Rock Pipe Inlet Sediment Trap Type-A	— RPI —
1635.02	Rock Pipe Inlet Sediment Trap Type-B	— RPI-B —
1630.04	Stilling Basin	— SB —
1630.06	Special Stilling Basin	— SSB —
	Rock Inlet Sediment Trap:	
1632.01	Type A	— RA —
1632.02	Type B	— RB —
1632.03	Type C	— RC —
	Skimmer Basin	— SB —
	Tiered Skimmer Basin	— TSB —
	Infiltration Basin	— IB —

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

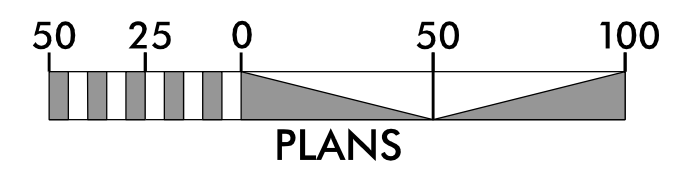
THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

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

TIP PROJECT: B-5721

CONTRACT:

GRAPHIC SCALES



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:
AECOM
Firm License No. F-0342
5438 Wade Park Boulevard, Suite 200
Raleigh NC 27607
+1-919-461-1100

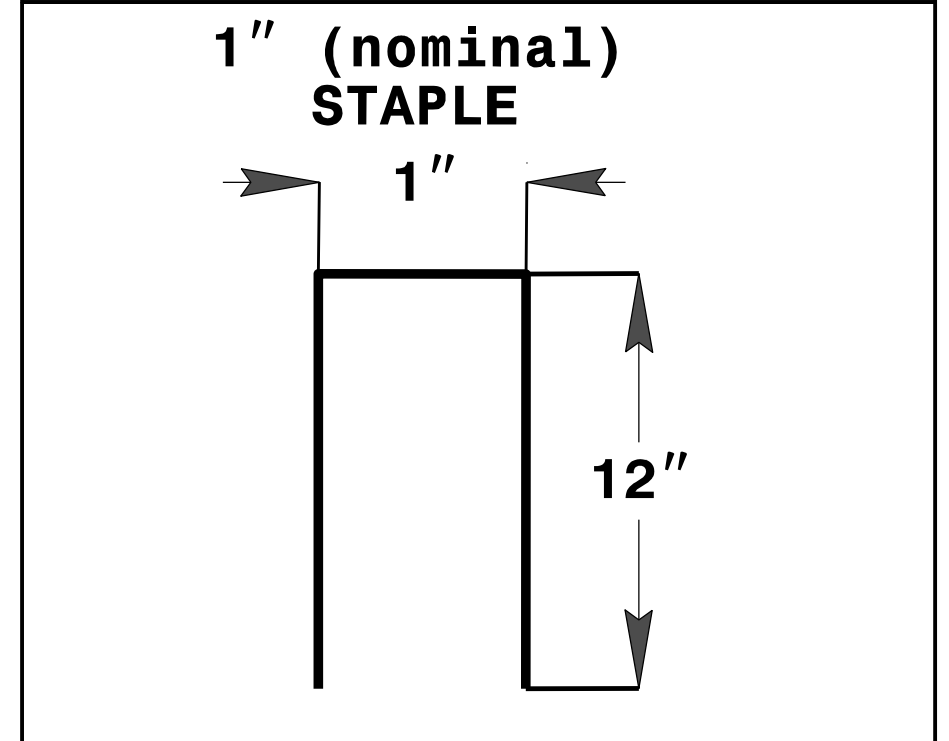
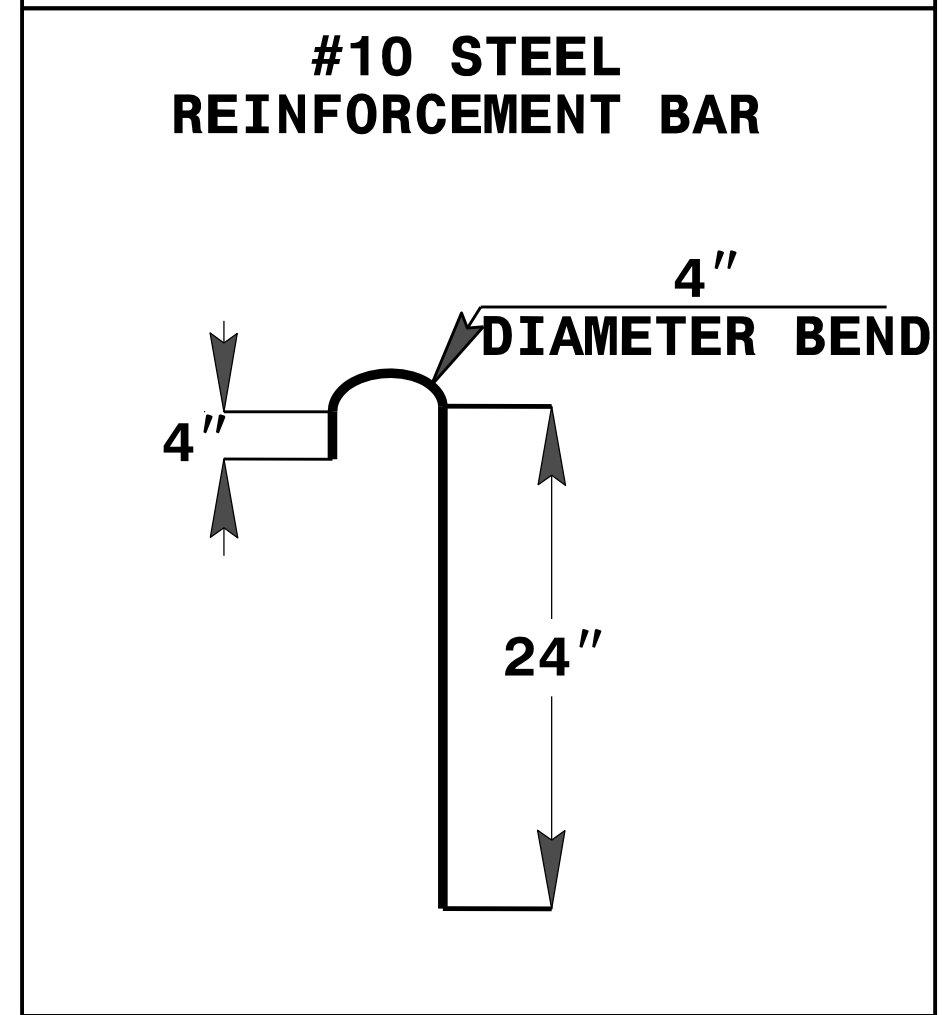
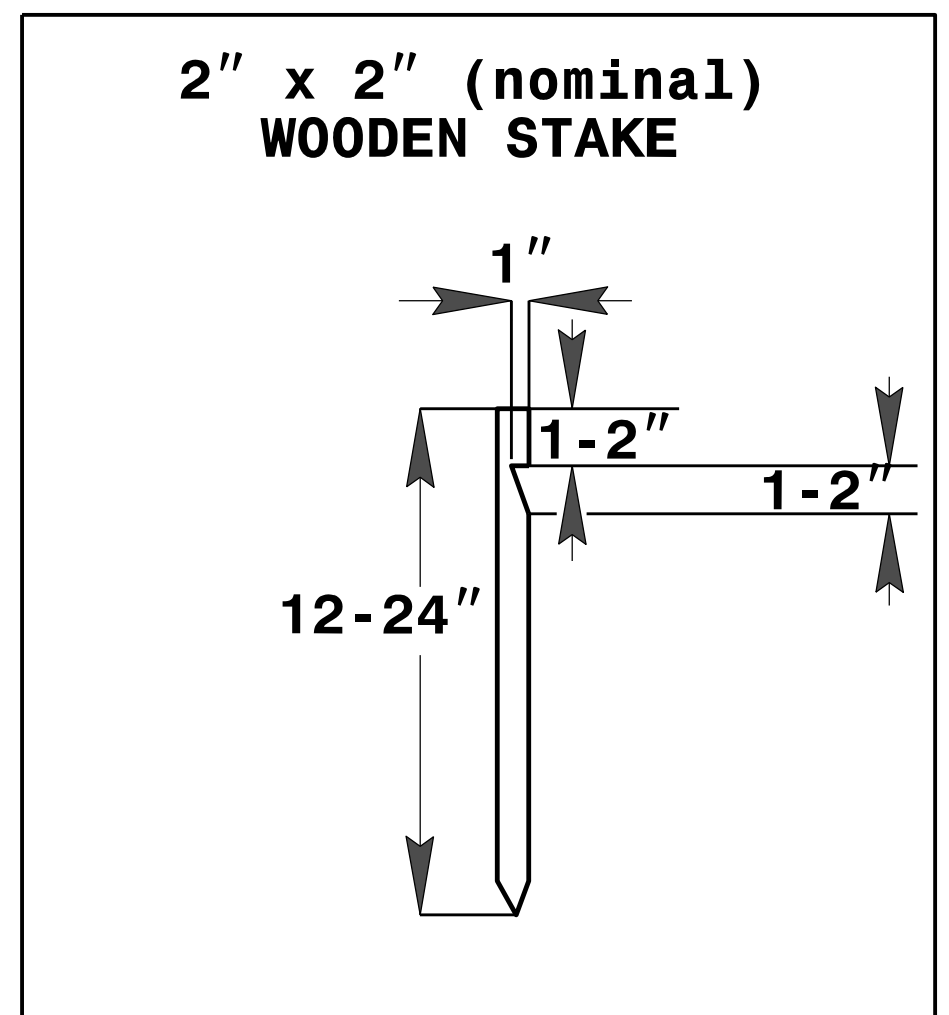
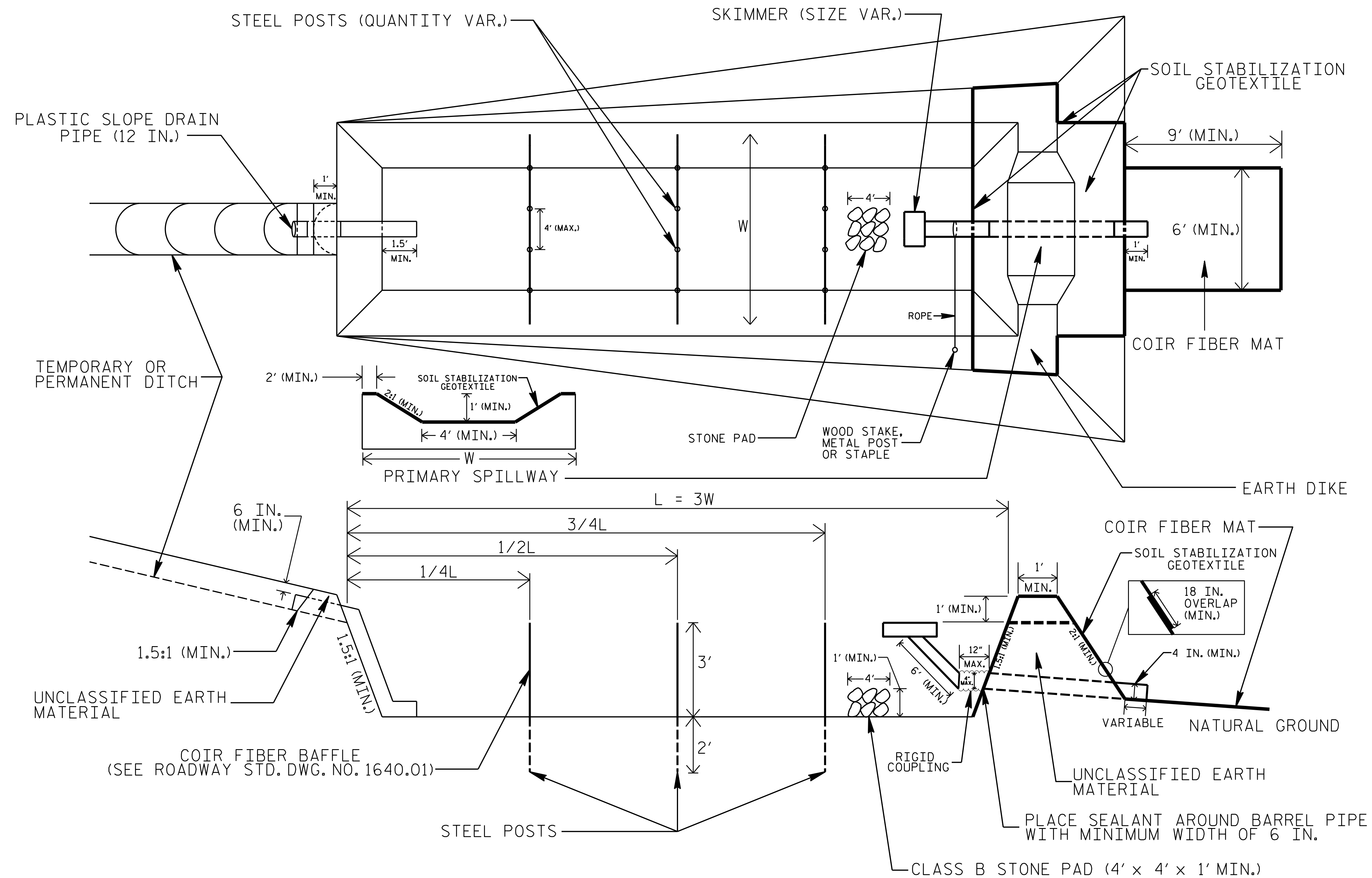
Designed by:
RENE REMY, CPESC, CPSWQ 3125
NAME LEVEL III CERTIFICATION NO.

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 2018 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	

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

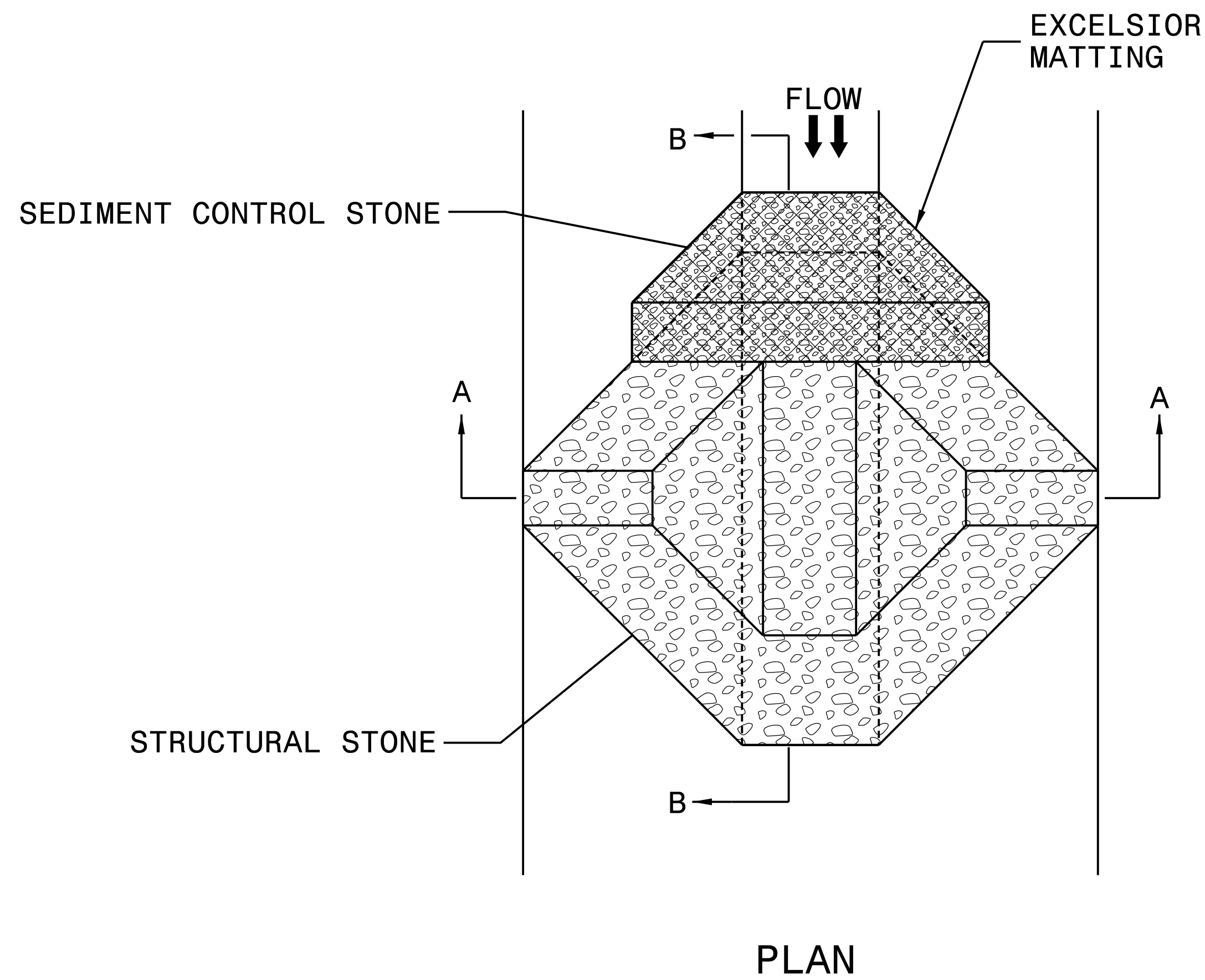
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

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NCDOT_TIP\Erosion Control\Design\230-B5721-EC-02-Skimmer Basin_Detail.dgn

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



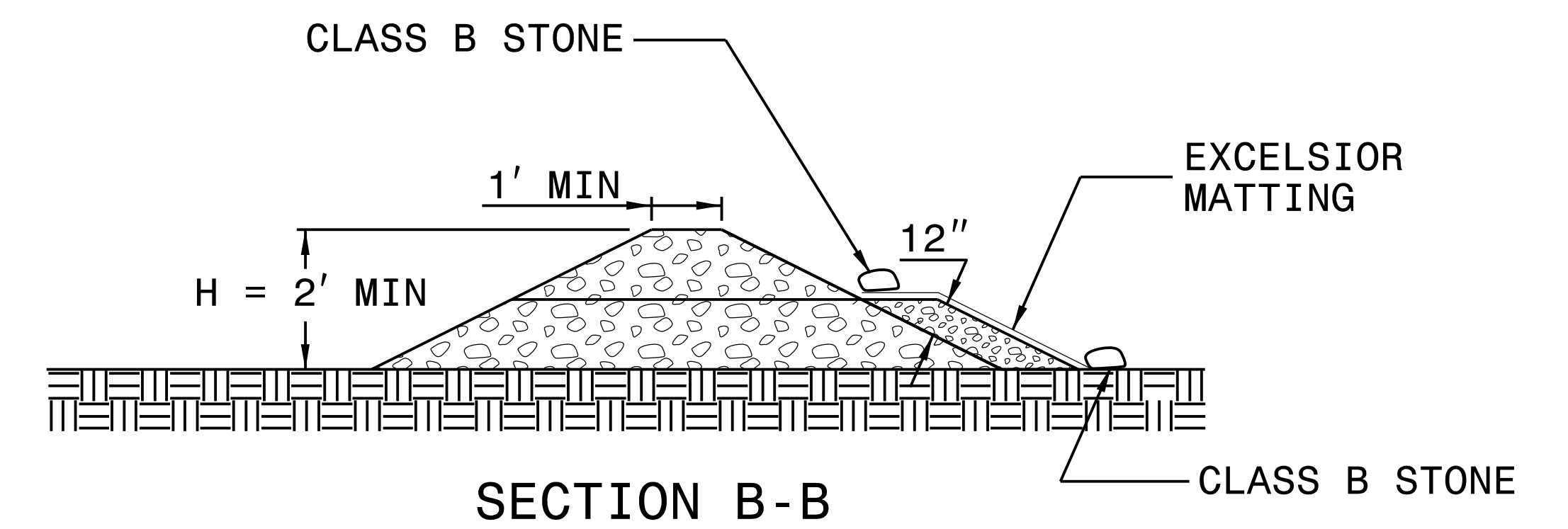
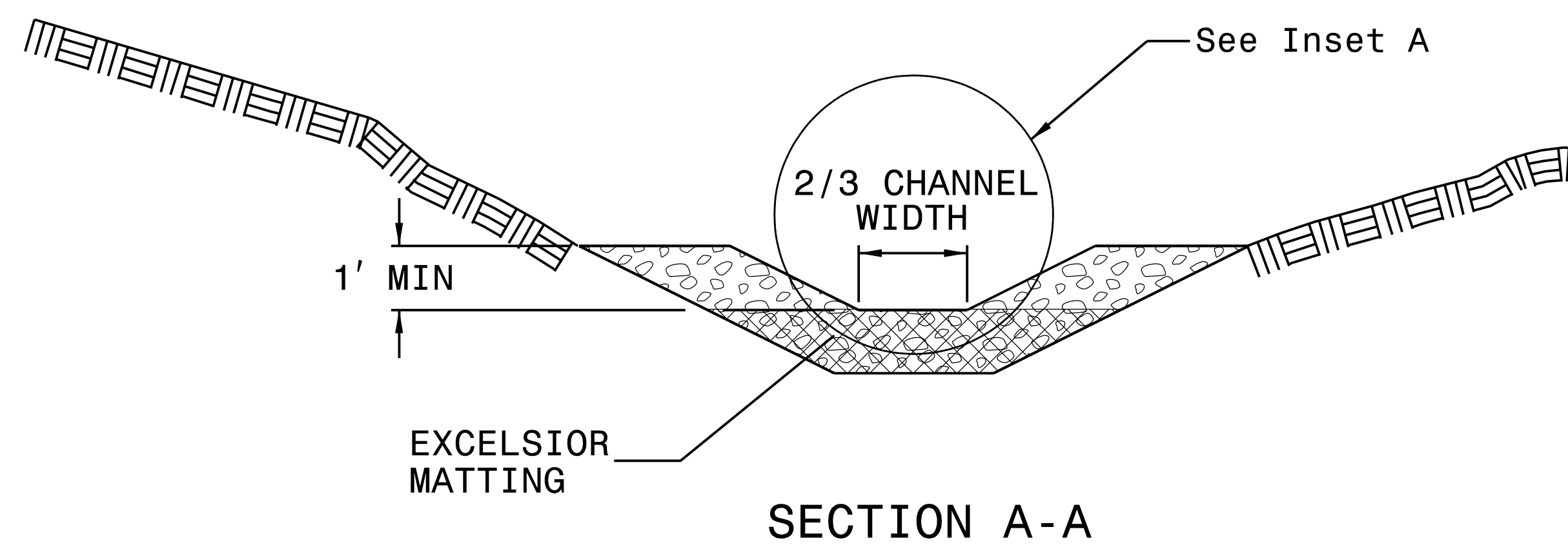
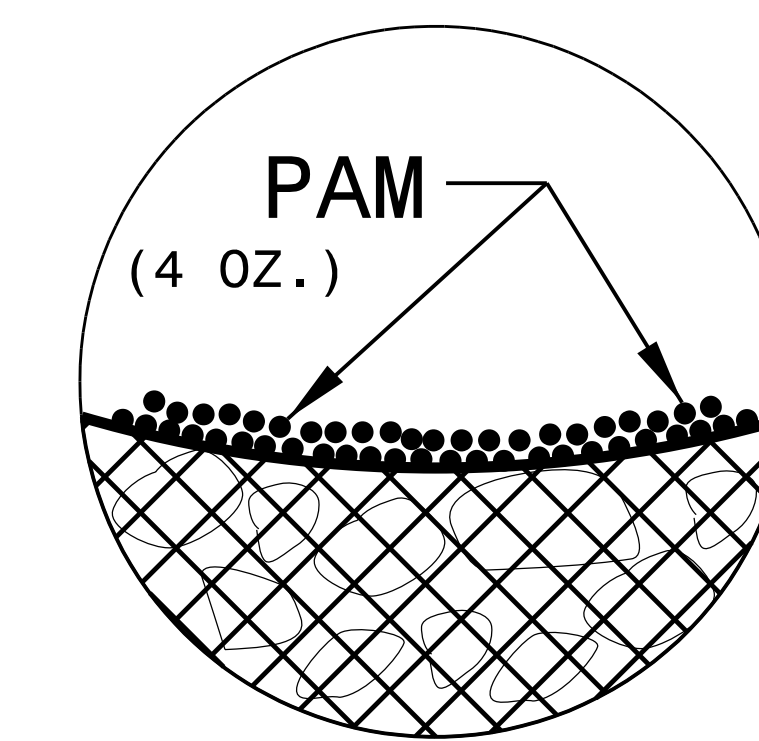
NOTES:

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.

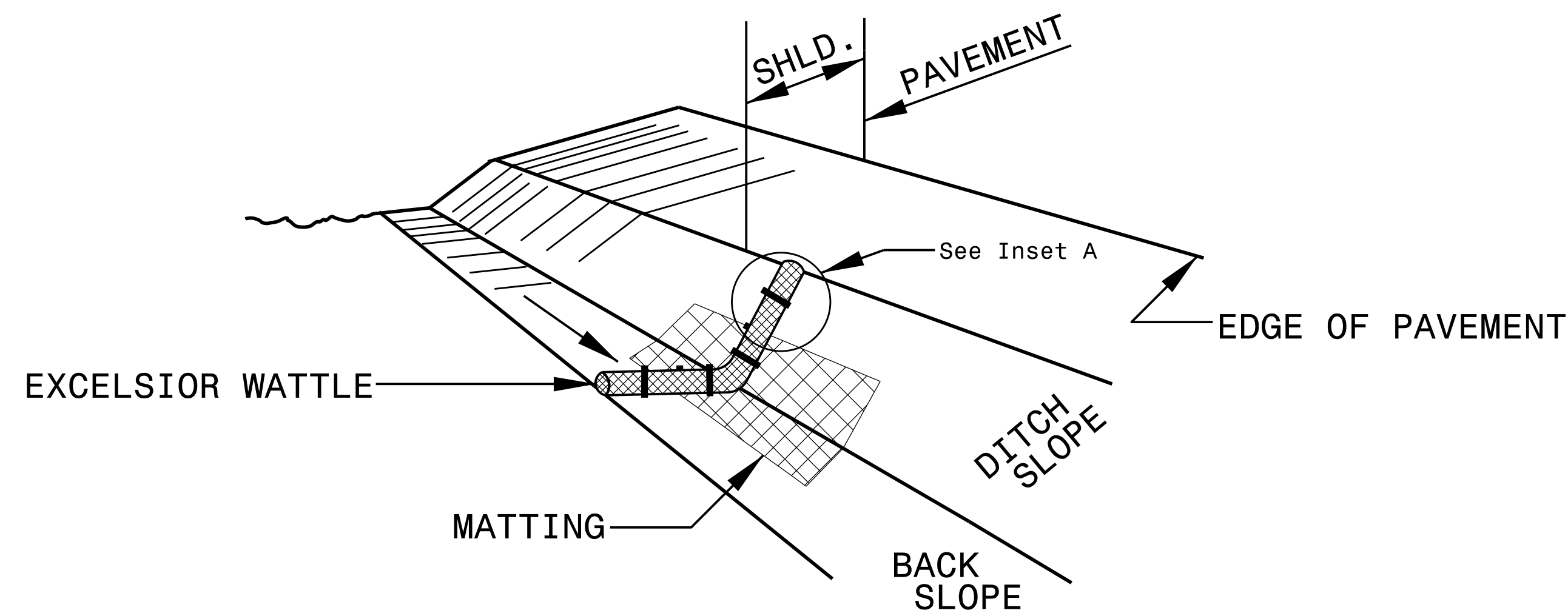
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



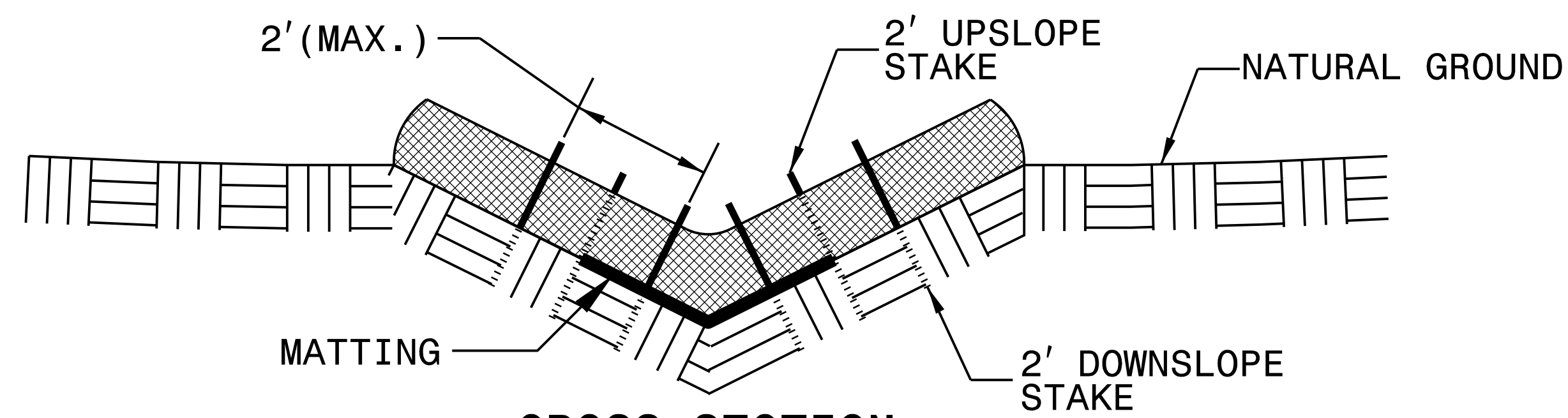
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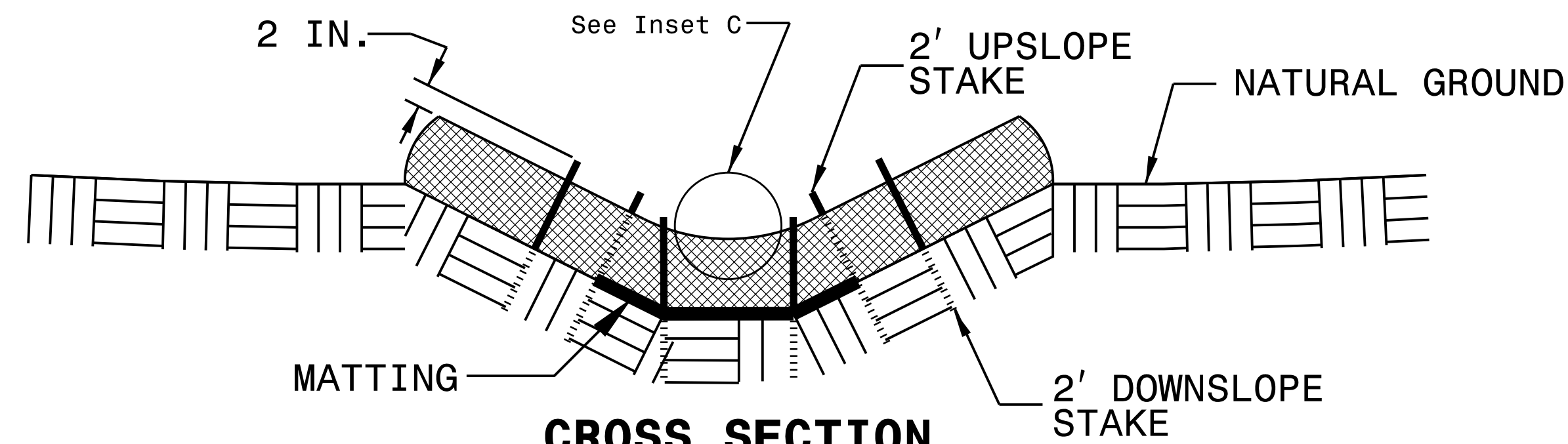
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW

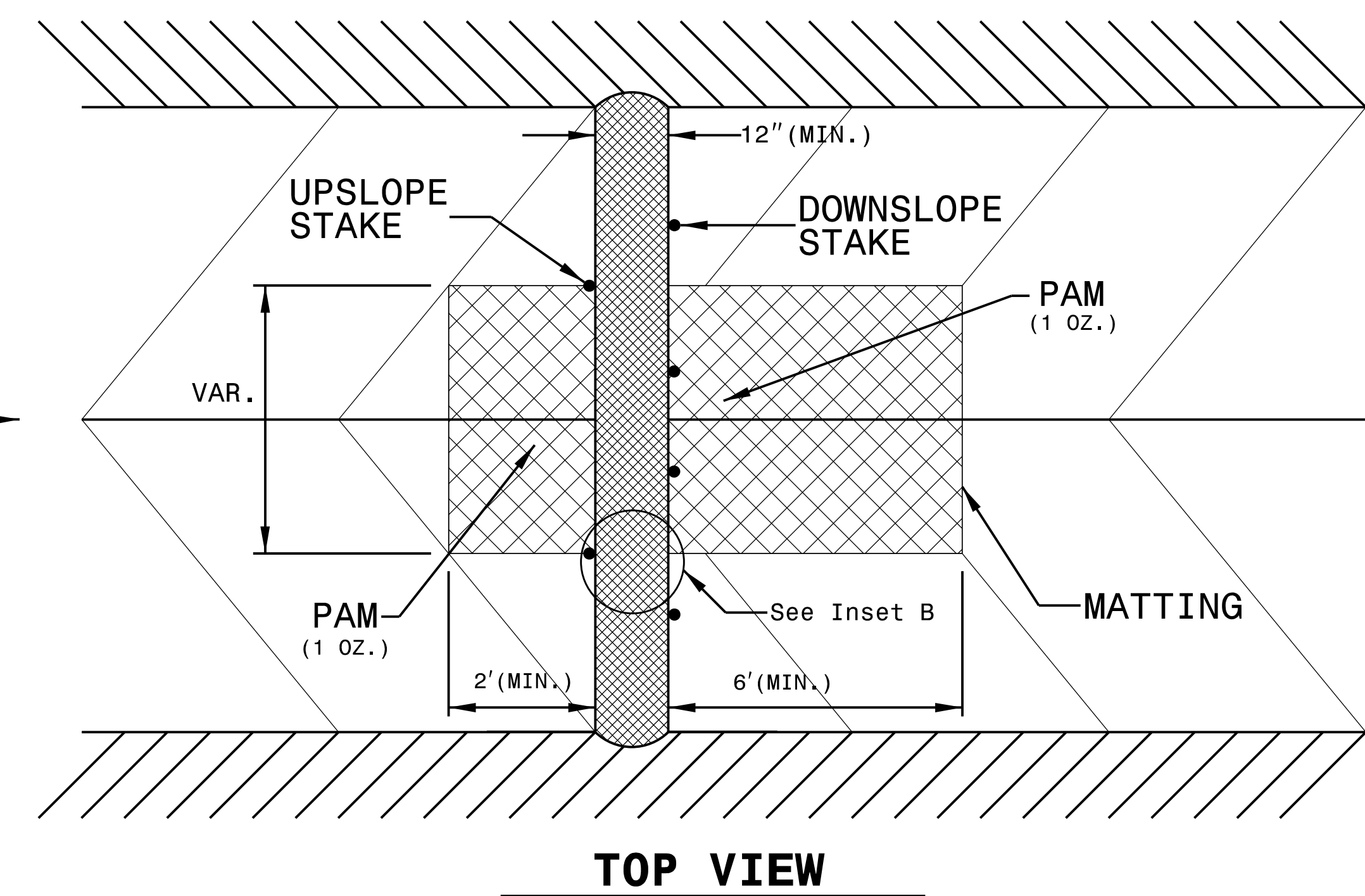
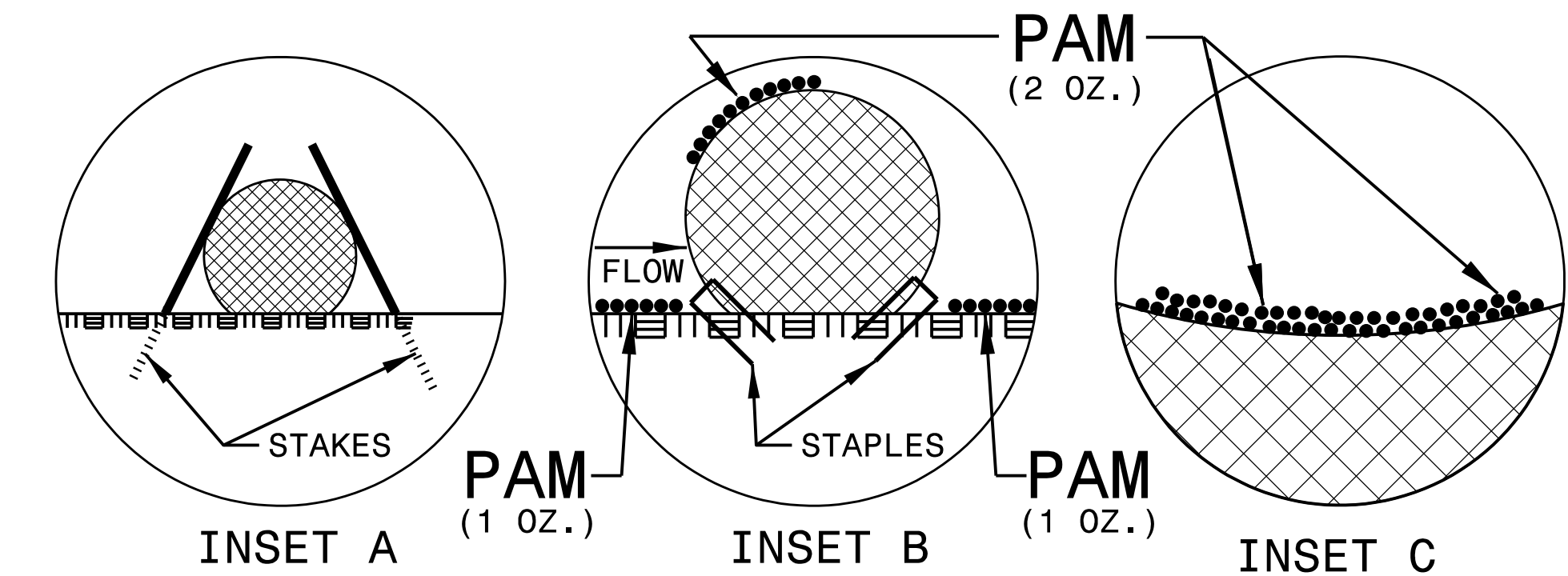


CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

- 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.



TOP VIEW

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

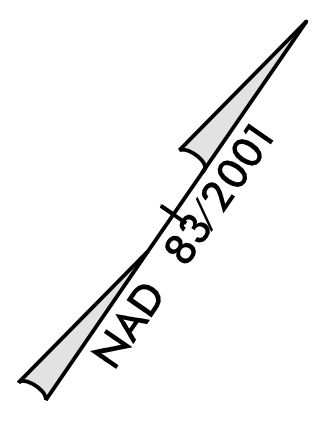
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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.

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 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.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



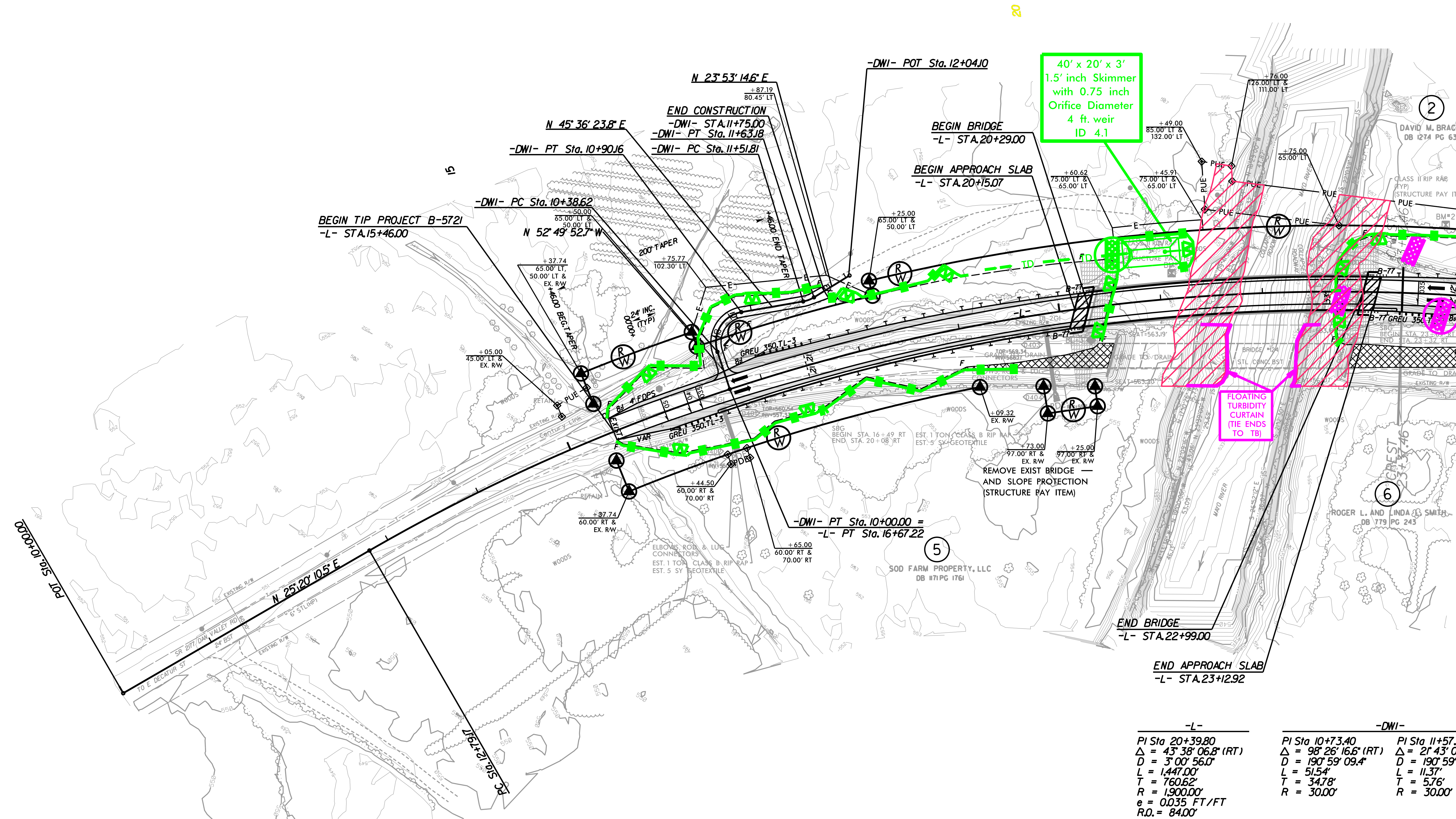
①
SOD FARM PROPERTY, LLC
DB 171PG 1761

②
DAVID M. BRACEY
DB 1274 PG 634


⑥
ROGER L. AND LINDA S. SMITH
DB 779 PG 245

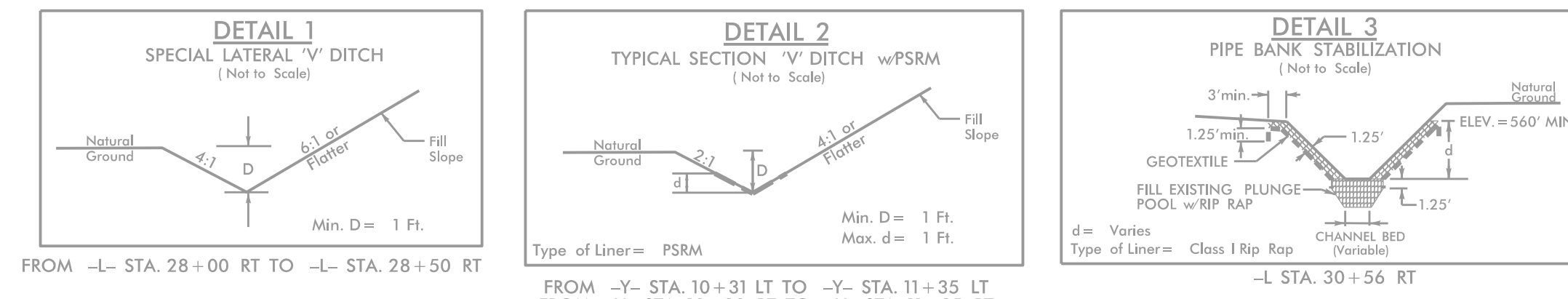
MATCHLINE -L- STA. 24 + 00.00 SEE SHEET EC-05

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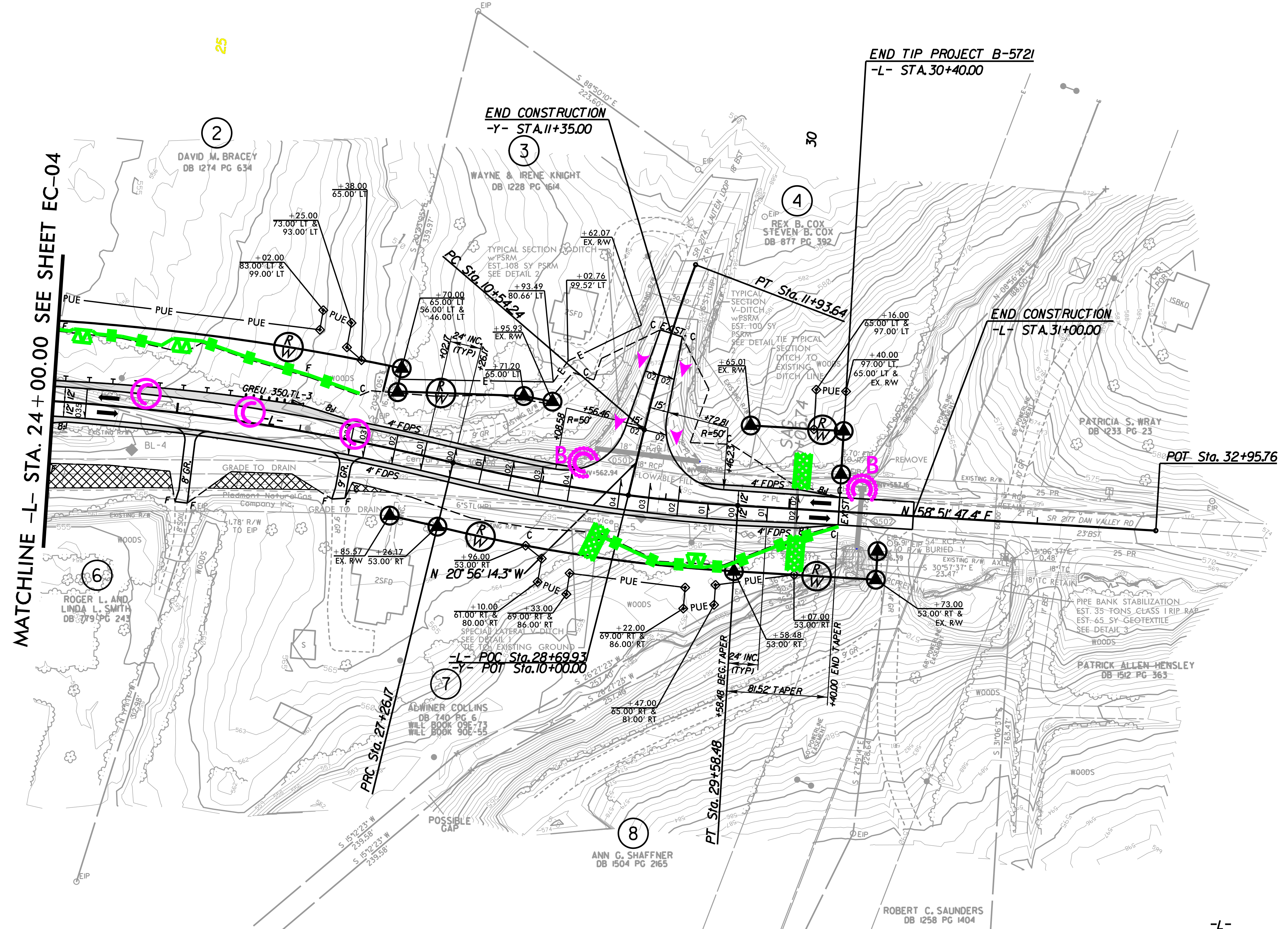
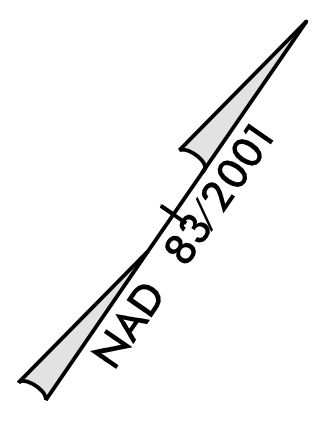
-L-	-DWI-
PI Sta 20+39.80	PI Sta 10+73.40
$\Delta = 43^{\circ} 38' 06.8''$ (RT)	$\Delta = 98^{\circ} 26' 16.6''$ (RT)
D = 3' 00' 56.0"	$\Delta = 21^{\circ} 43' 09.2''$ (LT)
L = 1,447.00'	D = 190' 59' 09.4"
T = 760.62'	L = 11.37'
R = 1,900.00'	T = 34.78'
e = 0.035 FT/FT	R = 30.00'
R.O. = 84.00'	

 PAYEMENT REMOVAL
FOR -L- PROFILE SEE SHEET 6
FOR -DWI- PROFILE SEE SHEET 7



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 5



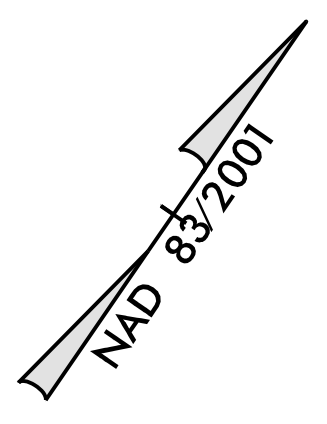
-L-	-Y-	-Y-
PI Sta 20+39.80	PI Sta 28+42.64	PI Sta 11+24.03
$\Delta = 43^{\circ} 38' 06.8''$ (RT)	$\Delta = 10^{\circ} 14' 19.6''$ (LT)	$\Delta = 7^{\circ} 17' 14.9''$ (RT)
D = 3' 00" 56.0'	D = 4' 24" 26.5'	D = 5' 13" 40.9'
L = 1,447.00'	L = 232.31'	L = 139.39'
T = 760.62'	T = 116.47'	T = 69.79'
R = 1,900.00'	R = 1,300.00'	R = 1,095.93'
e = 0.035 FT/FT	e = 0.04 FT/FT	e = RC
R.O. = 84.00'	R.O. = 96.00'	R.O. = See Plans

PAVEMENT REMOVAL
 FOR -L- PROFILE SEE SHEET 6
 FOR -Y- PROFILE SEE SHEET 6

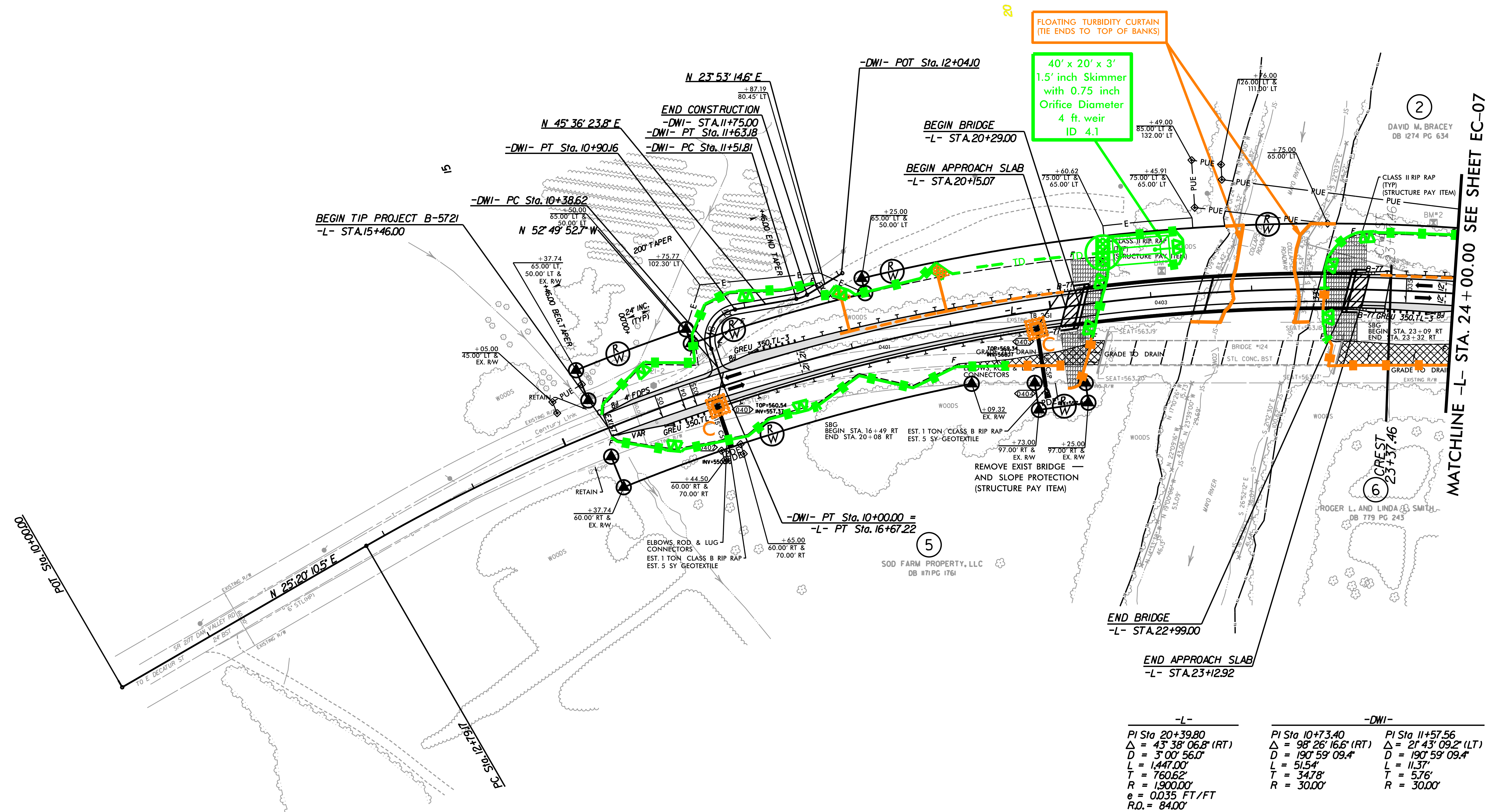
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Place Matting for Erosion Control on Slope as Work Allows.
Sta. 15+50 to Sta. 20+00 LT
Sta. 15+50 to Sta. 20+00 RT
Sta. 23+00 to Sta. 24+00 LT

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS TYPE C IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.



SOD FARM PROPERTY, LLC
DB 171PG 1761

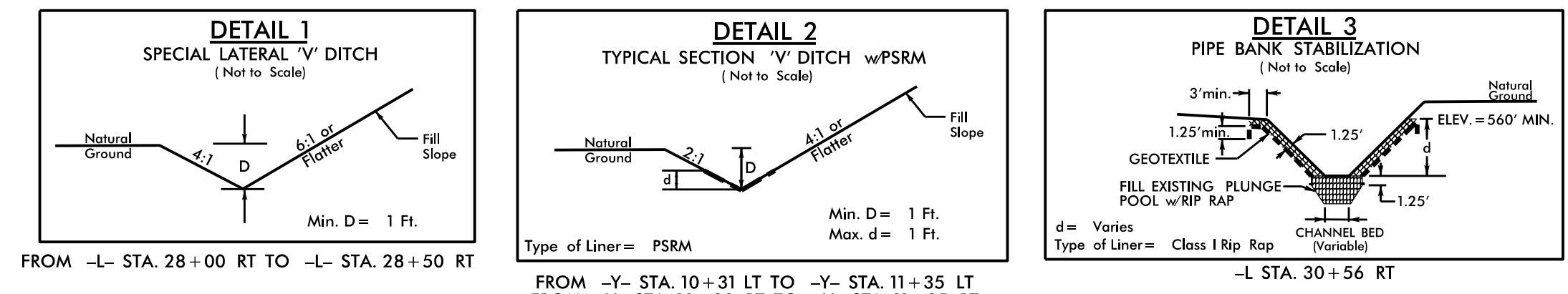


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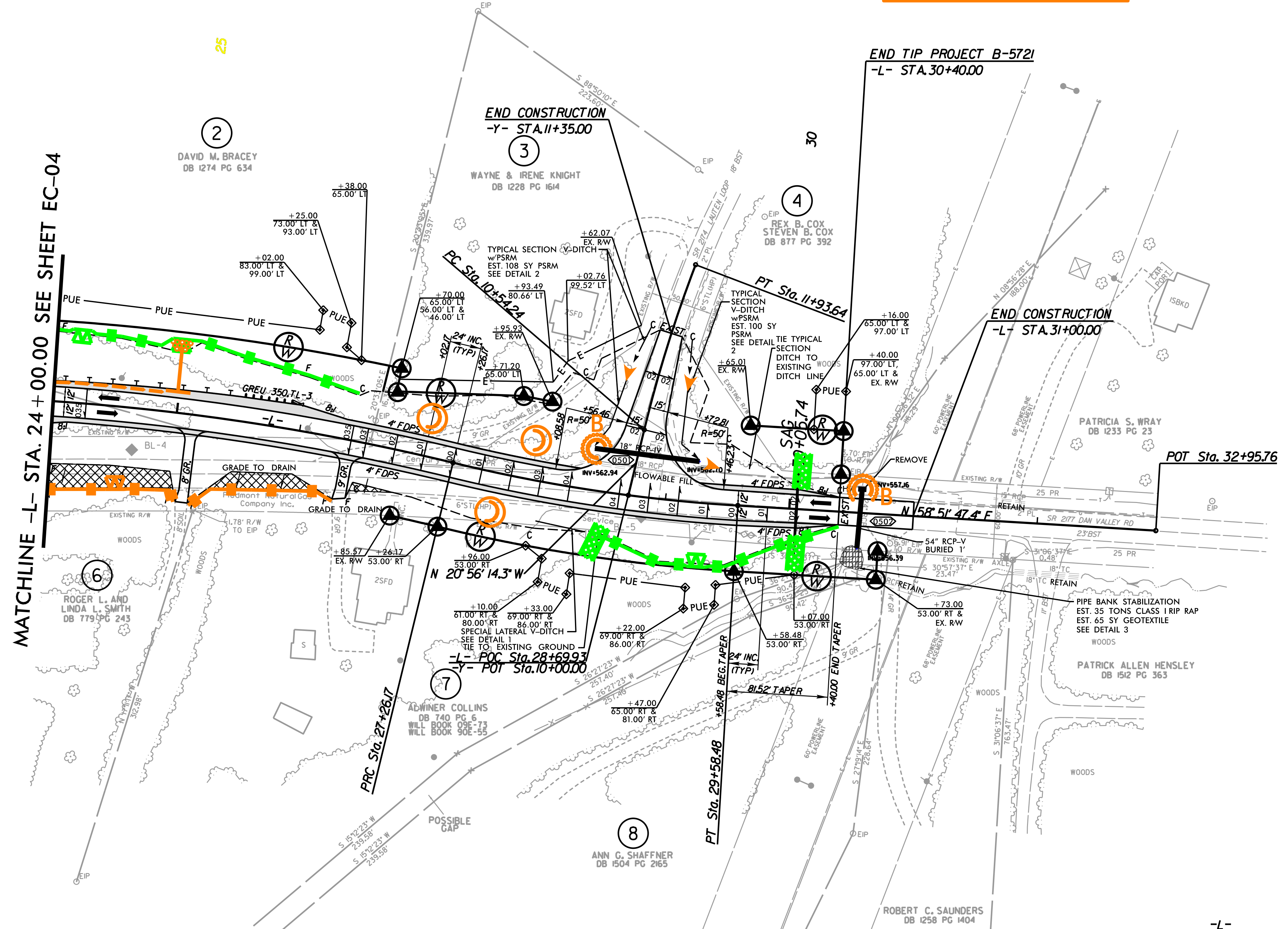
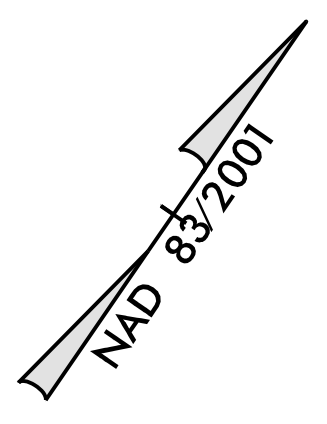
-L-		-DWI-	
PI Sta	20+39.80	PI Sta	10+73.40
Δ	43° 38' 06.8" (RT)	Δ	98° 26' 16.6" (RT)
D	3° 00' 56.0"	D	190° 59' 09.4"
L	1,447.00'	L	11.54'
T	760.62'	T	34.78'
R	1,900.00'	R	30.00'
e	0.035 FT/FT		
R.O.	84.00'		

PAVEMENT REMOVAL
FOR -L- PROFILE SEE SHEET 6
FOR -DWI- PROFILE SEE SHEET 7

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Place Matting for Erosion Control on Slope as Work Allows. Sta. 24+00 to Sta. 26+00 LT Sta. 15+00 to Sta. 17+50 RT



-L-	-Y-	-Y-
PI Sta 20+39.80	PI Sta 28+42.64	PI Sta 11+24.03
$\Delta = 43^{\circ} 38' 06.8''$ (RT)	$\Delta = 10^{\circ} 14' 19.6''$ (LT)	$\Delta = 7^{\circ} 17' 14.9''$ (RT)
D = 3' 00' 56.0"	D = 4' 24' 26.5"	D = 5' 13' 40.9"
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R = 1,900.00'	R = 1,300.00'	R = 1,095.93'
e = 0.035 FT/FT	e = 0.04 FT/FT	e = RC
R.O. = 84.00'	R.O. = 96.00'	R.O. = See Plans

PAVEMENT REMOVAL
FOR -L- PROFILE SEE SHEET 6
FOR -Y- PROFILE SEE SHEET 6

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