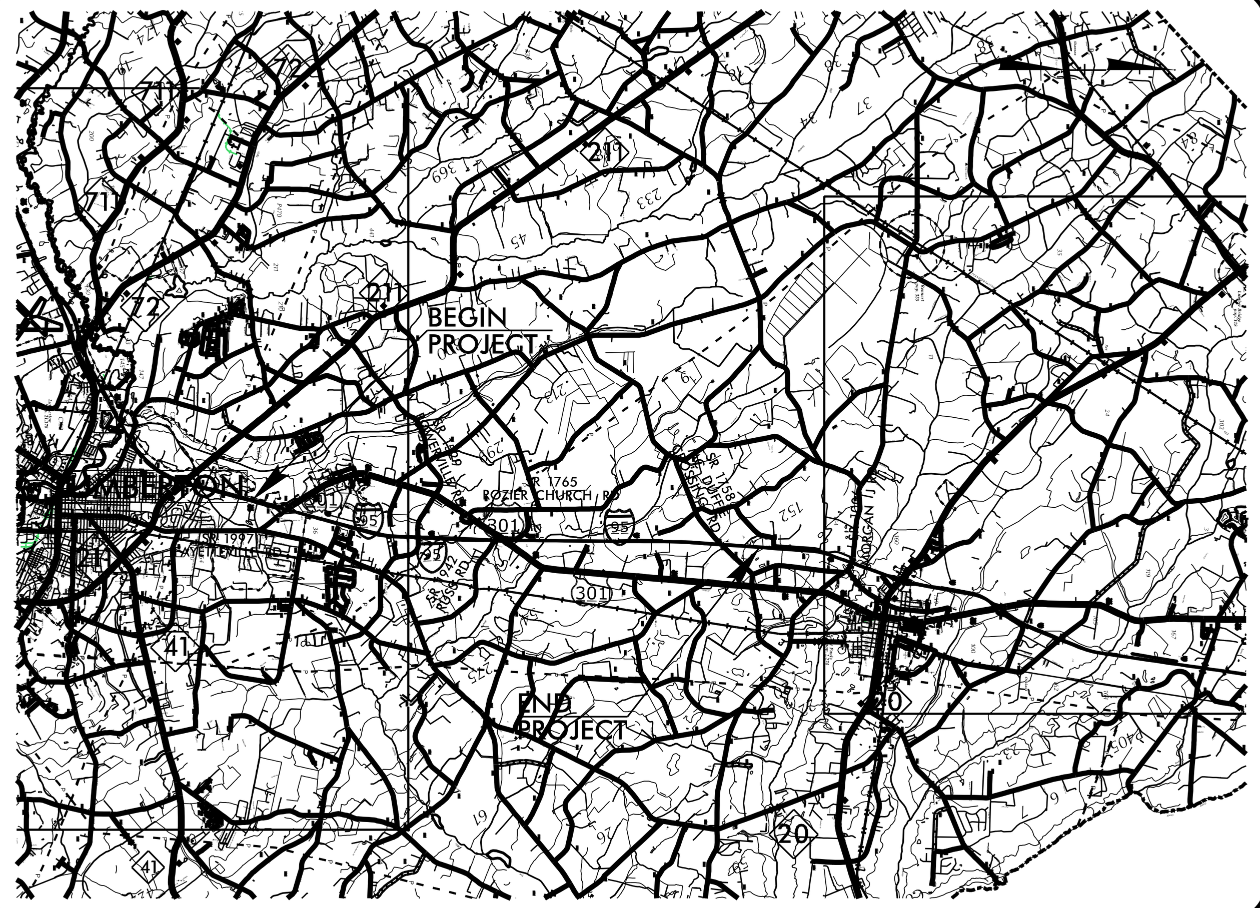
TIP PROJECT: I-5987A

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987A	EC-1	EC-75

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION



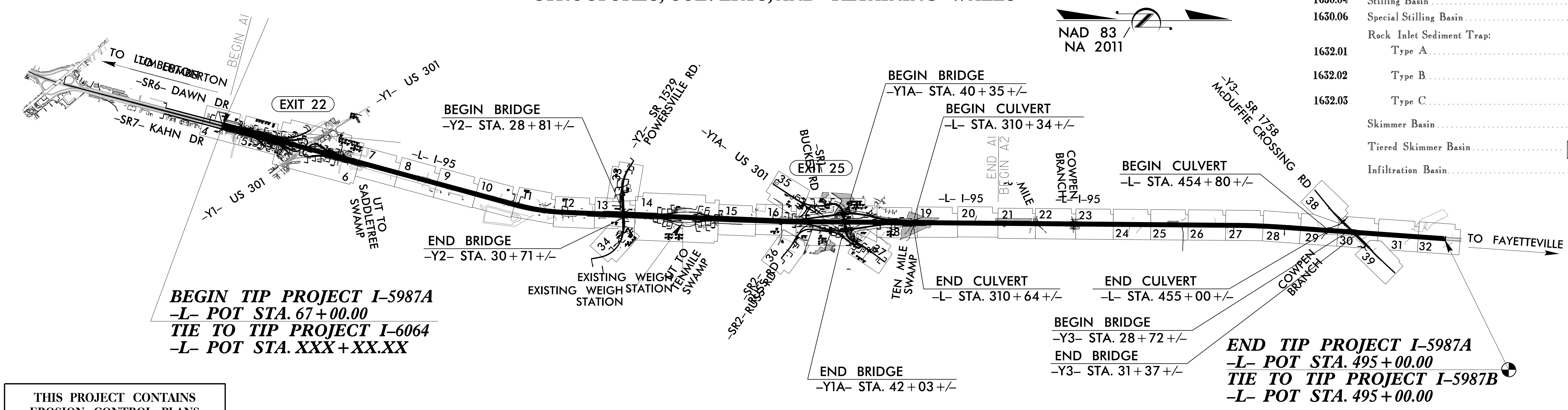
VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROBESON COUNTY

LOCATION: I-95 IMPROVEMENTS
FROM SOUTH OF US 301 (EXIT 22)
TO NORTH OF SR 1758 (McDUFFIE CROSSING RD.)
TYPE OF WORK: GRADING, PAVING, DRAINAGE,
STRUCTURES, CULVERTS, AND RETAINING WALLS



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

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	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	
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	CFW
	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	

GRAPHIC SCALE

50 25 0 50 100

PLANS

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.

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Prepared in the Office of:

NV5
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CHARLOTTE, NC 28227

Designed by:

WILL J. WEATHERSBEE ***3161***
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 revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

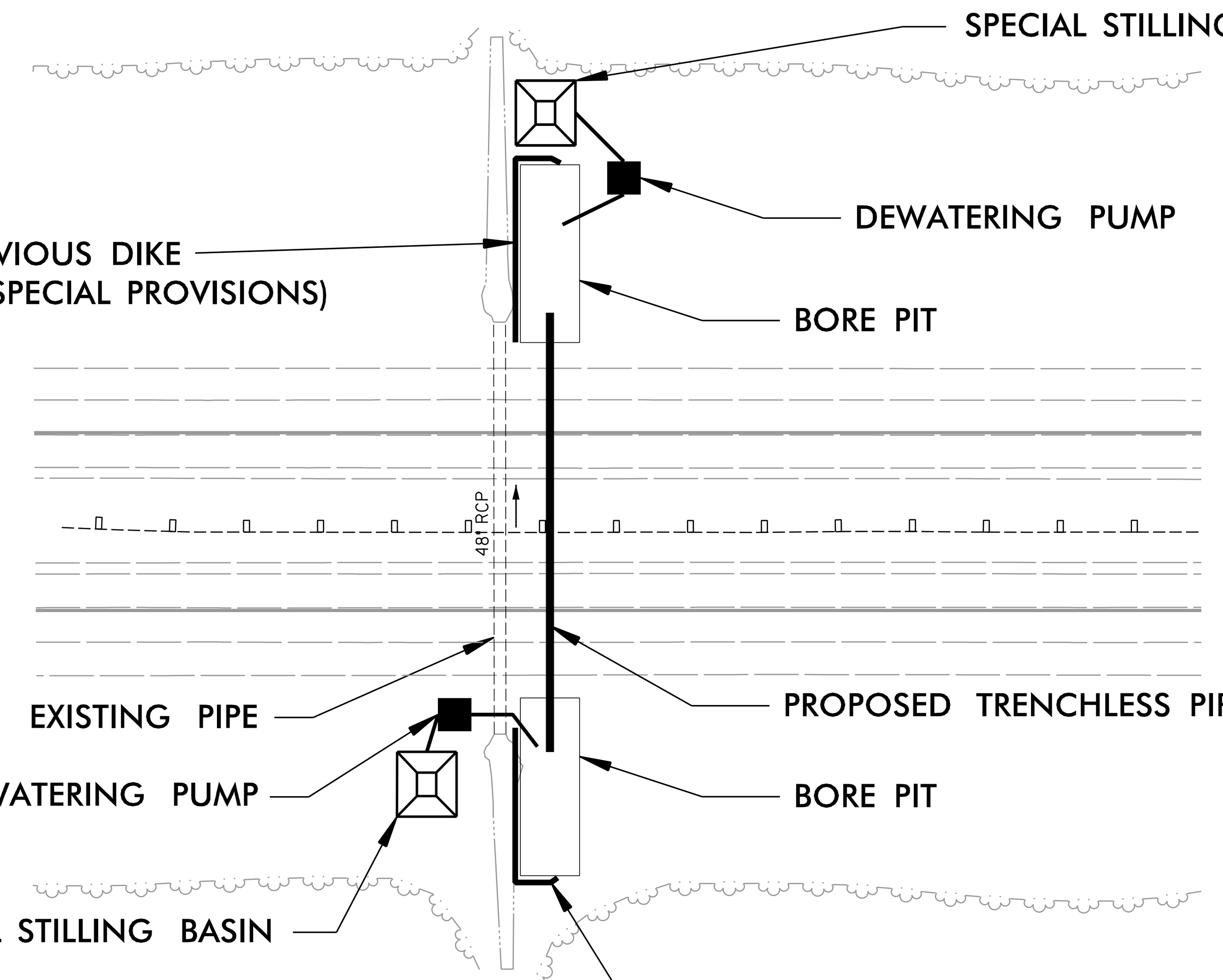
1604.01 Railroad Erosion Control Detail
1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.01 Riser Basin
1630.02 Silt Basin Type B
1630.03 Temporary Silt Ditch
1630.04 Stilling Basin
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1631.01 Matting Installation
1632.01 Rock Inlet Sediment Trap Type A
1632.02 Rock Inlet Sediment Trap Type B
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
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
1640.01 Coir Fiber Baffle
1645.01 Temporary Stream Crossing

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2
R/W SHEET NO.	

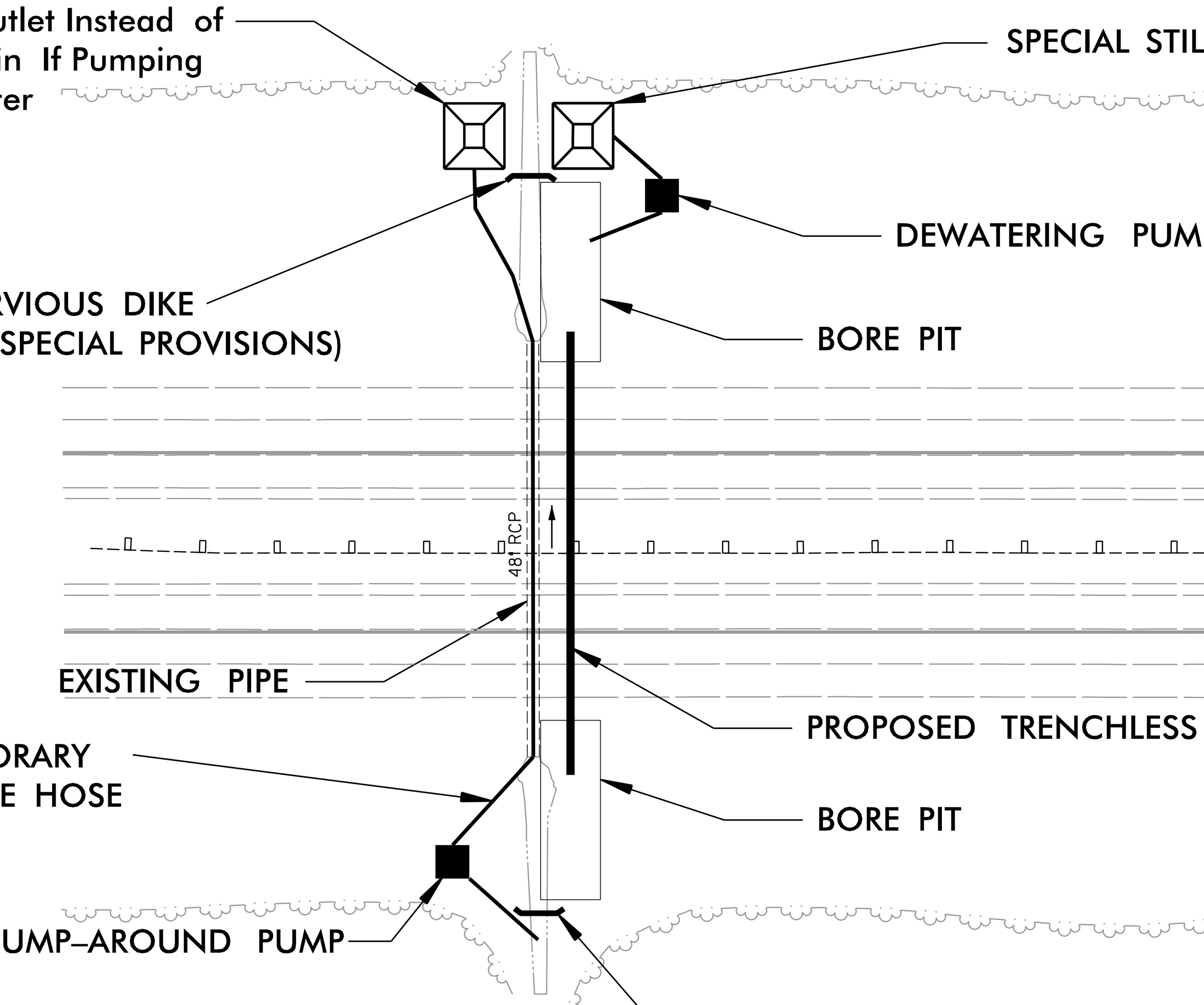
CONSTRUCTION SEQUENCE FOR TRENCHLESS INSTALLATION

NOTES:
1) All excavation shall be performed in only dry or isolated areas of the work zone.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
4) Pumps and hoses shall be of sufficient size to dewater the work area.

METHOD 1



METHOD 2



METHOD 1: CONSTRUCTION SEQUENCE FOR TYPICAL WORK AREA

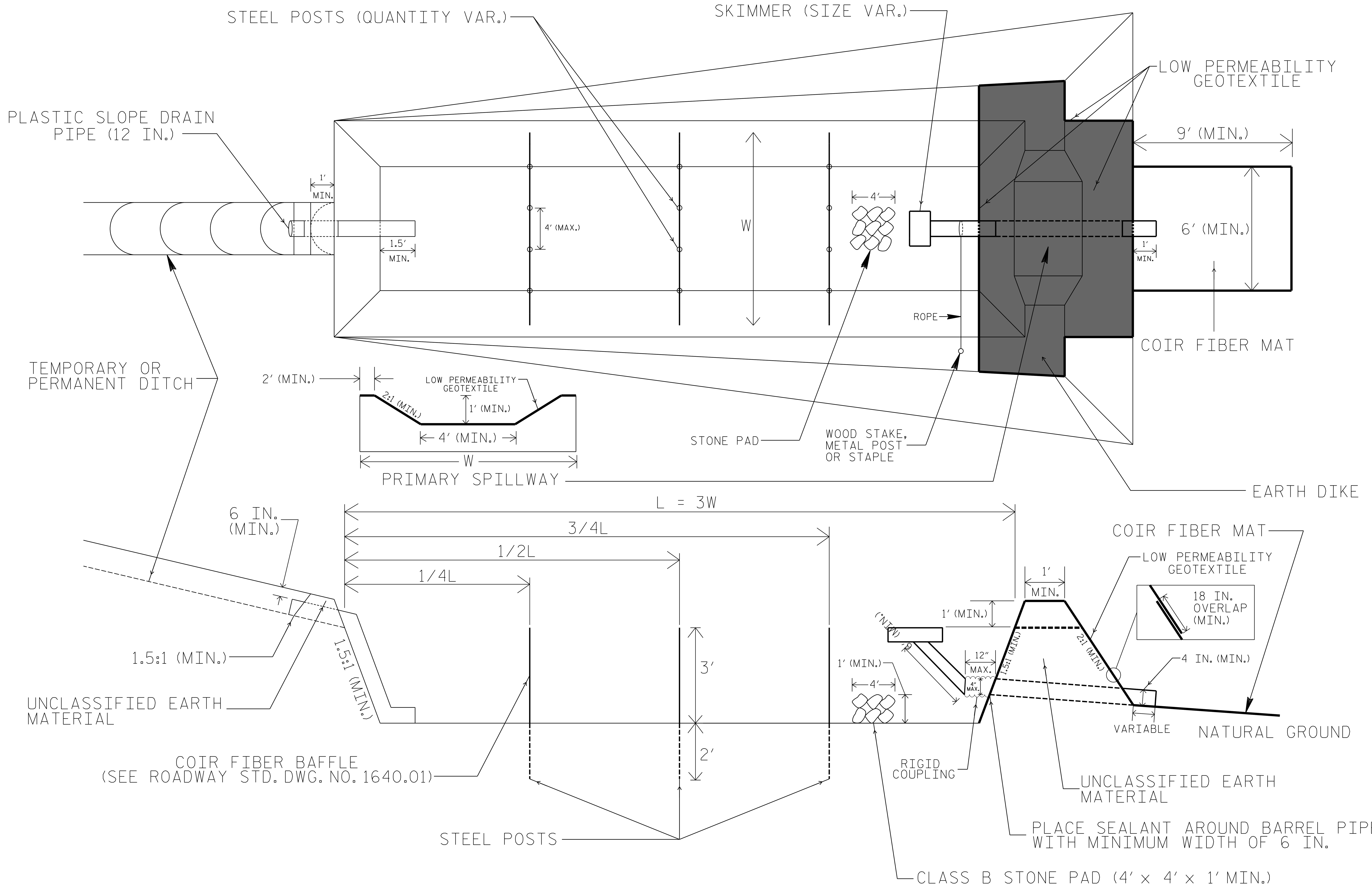
1. INSTALL SPECIAL STILLING BASIN(S) AS NEEDED.
2. PLACE UPSTREAM IMPERVIOUS DIKE AND CONSTRUCT BORE PIT FOR TRENCHLESS INSTALLATION. INSTALL PUMPING APPARATUS AND DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
3. PLACE DOWNSTREAM IMPERVIOUS DIKE AND CONSTRUCT BORE PIT FOR TRENCHLESS INSTALLATION. INSTALL PUMPING APPARATUS AND DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
4. INSTALL TRENCHLESS PIPE IN ACCORDANCE WITH THE PLANS.
5. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
6. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

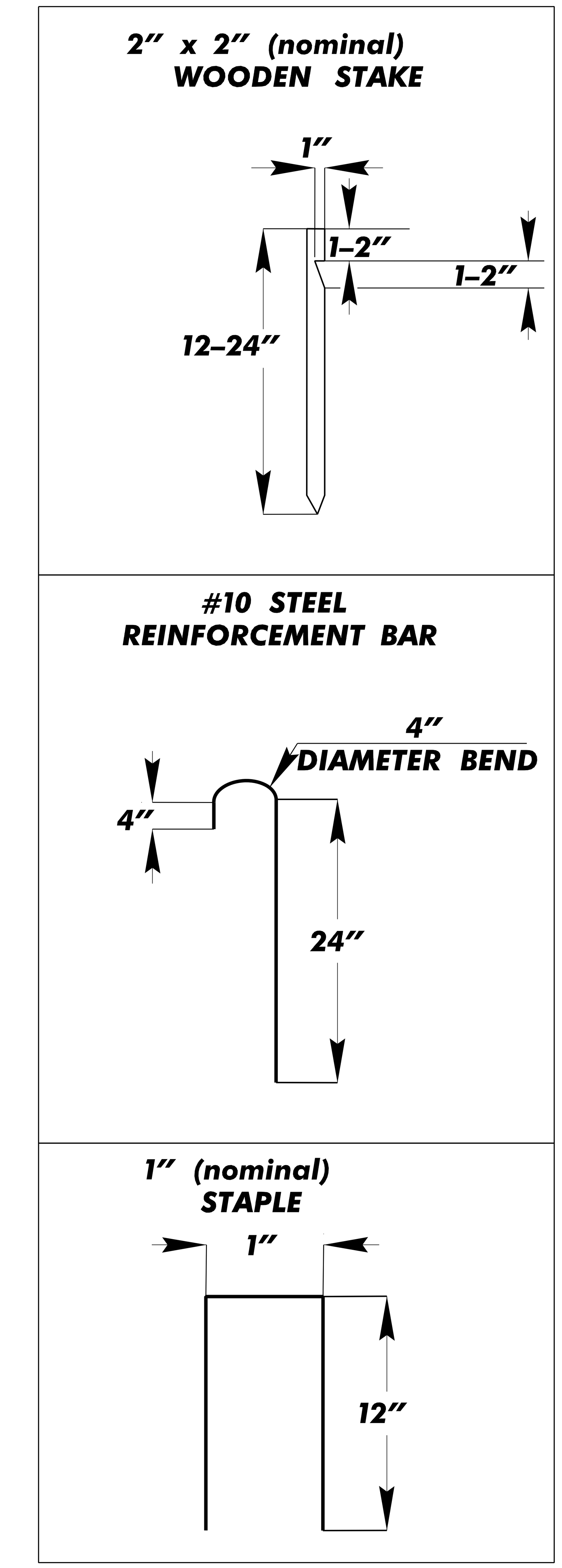
METHOD 2: CONSTRUCTION SEQUENCE FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND CONSTRUCT BORE PIT FOR TRENCHLESS INSTALLATION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
6. INSTALL TRENCHLESS PIPE IN ACCORDANCE WITH THE PLANS.
7. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
8. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2A
R/W SHEET NO.	

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

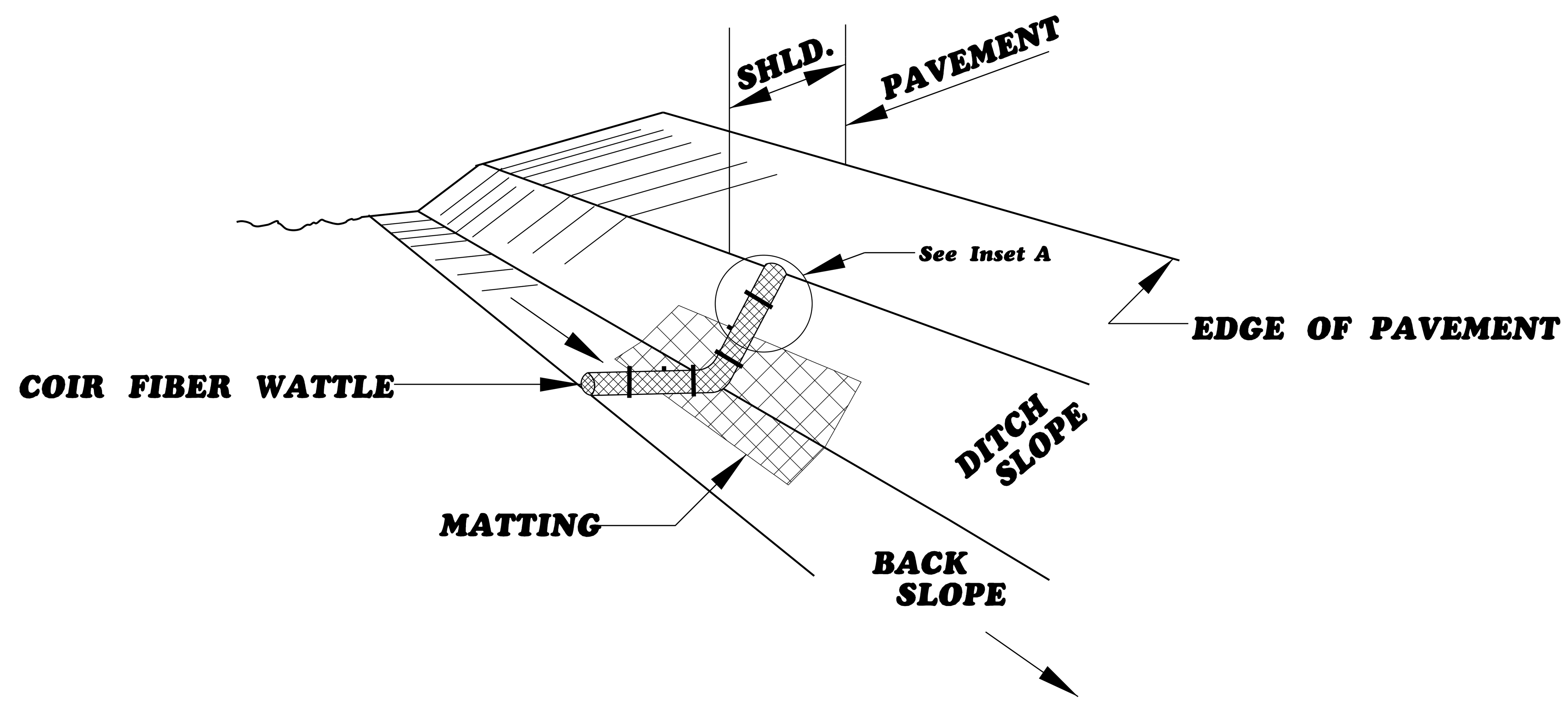
NOTES

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. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

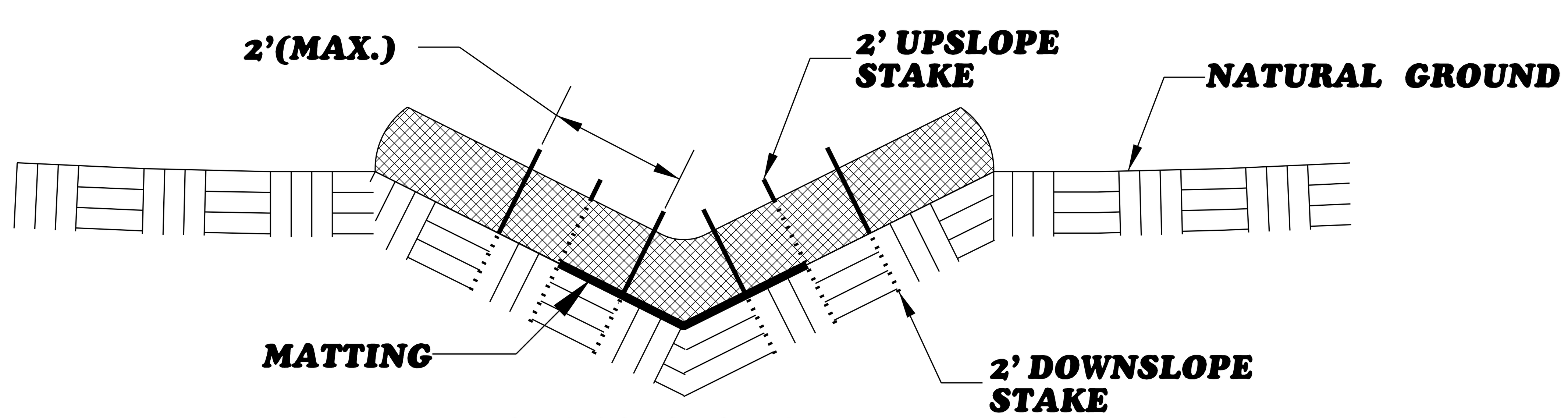
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2B
R/W SHEET NO.	

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

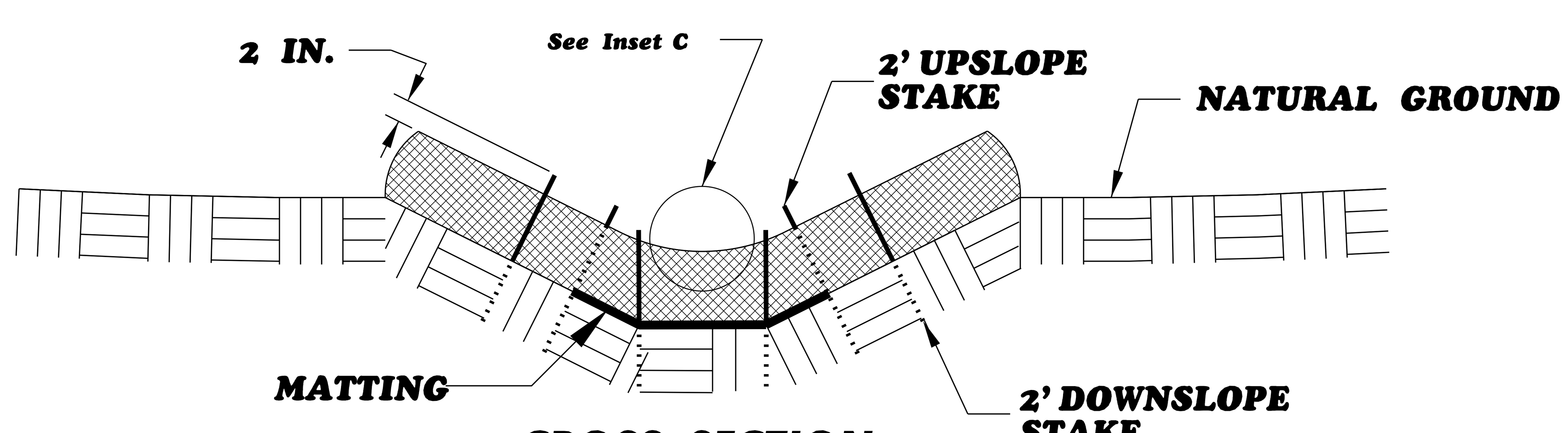


ISOMETRIC VIEW



CROSS SECTION

VEE DITCH



CROSS SECTION

TRAPEZOIDAL DITCH

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.

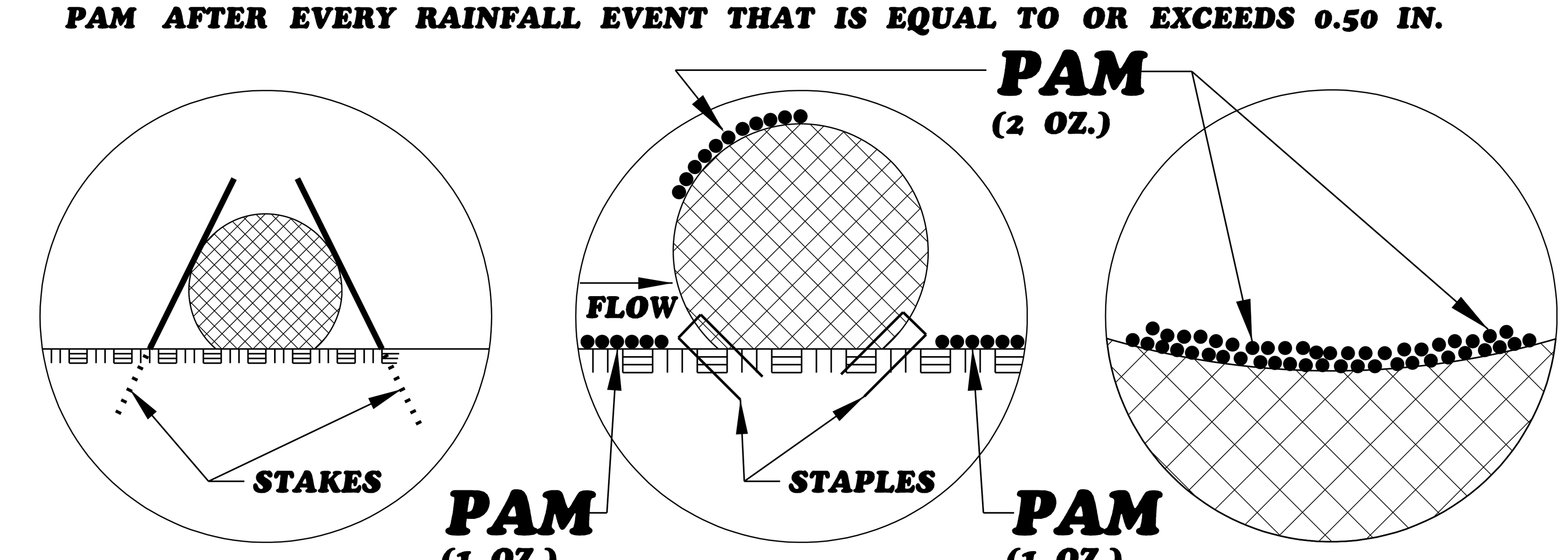
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

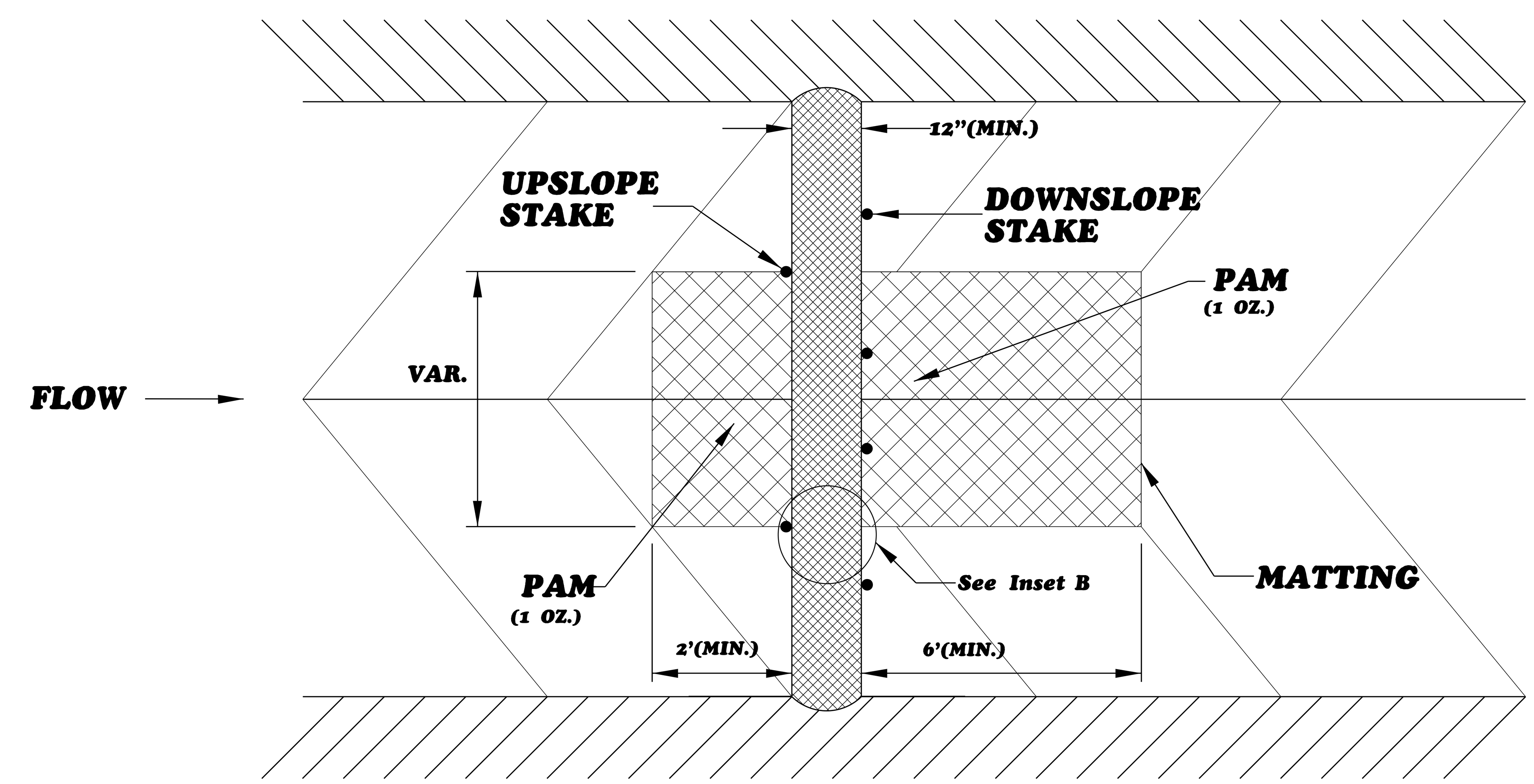
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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.



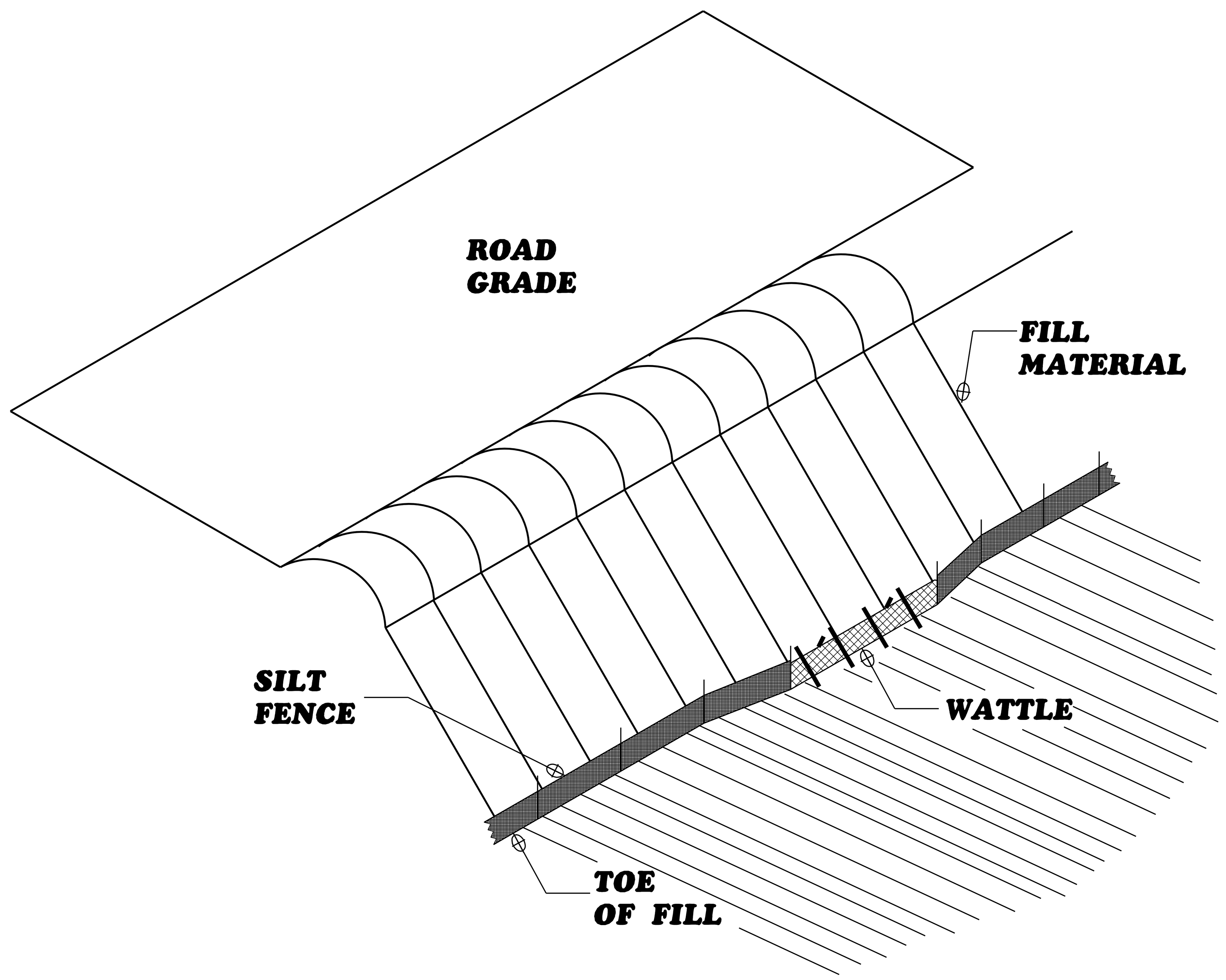
INSET A INSET B INSET C



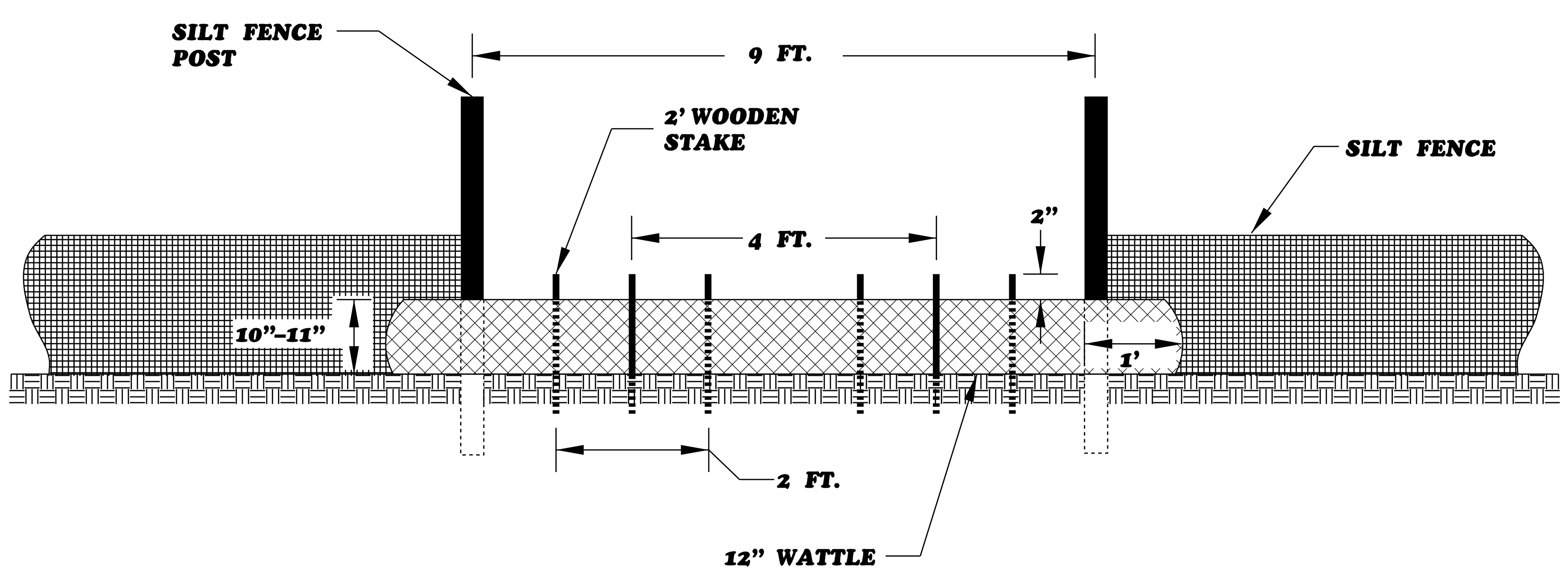
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2C

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

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

DO NOT PLACE WATTLE 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.

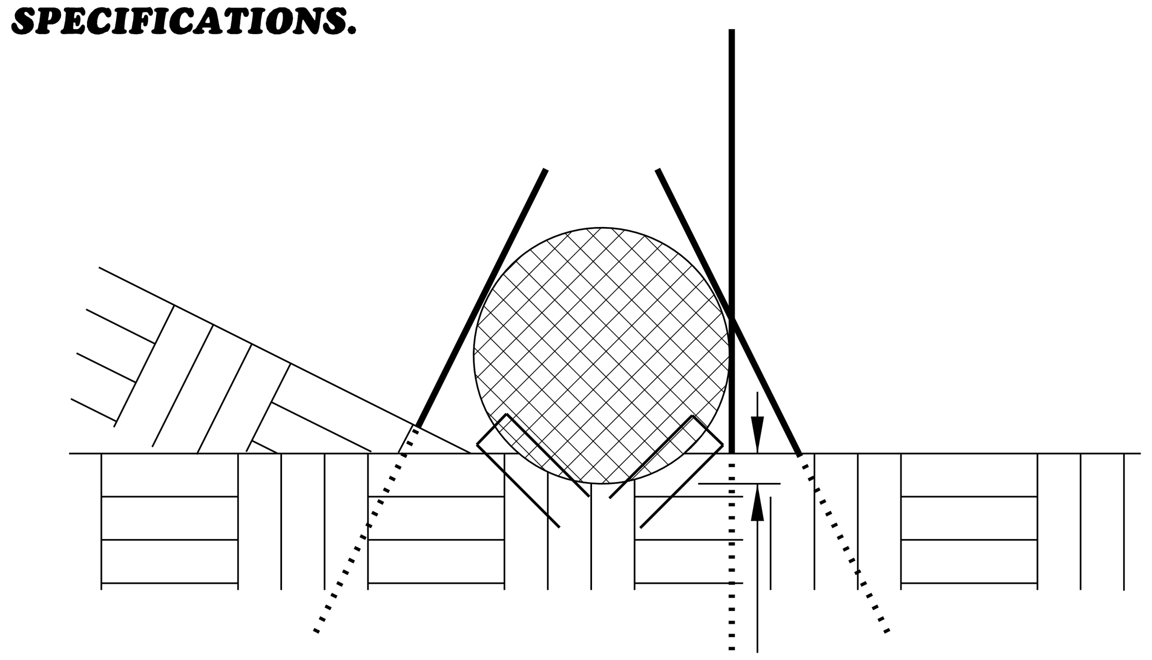
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

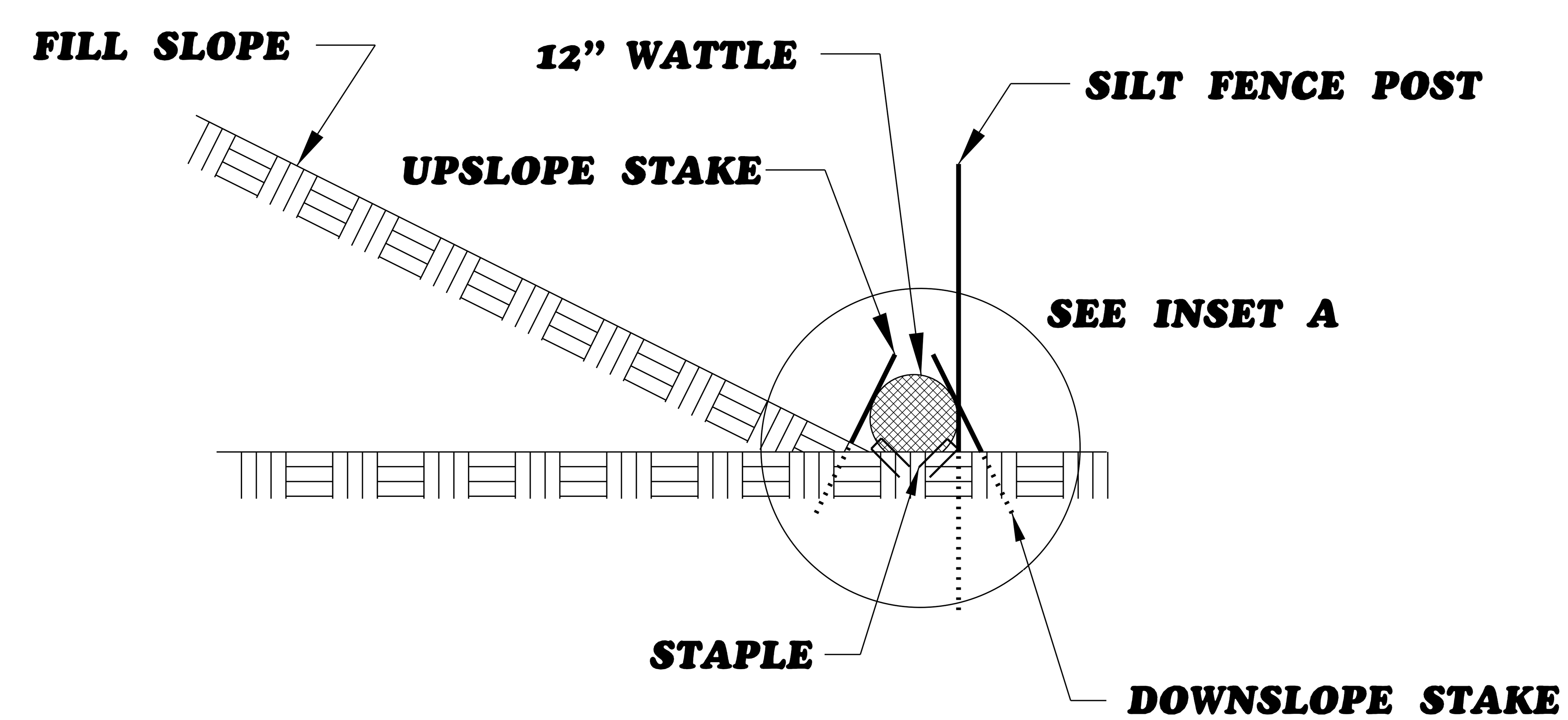
WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A

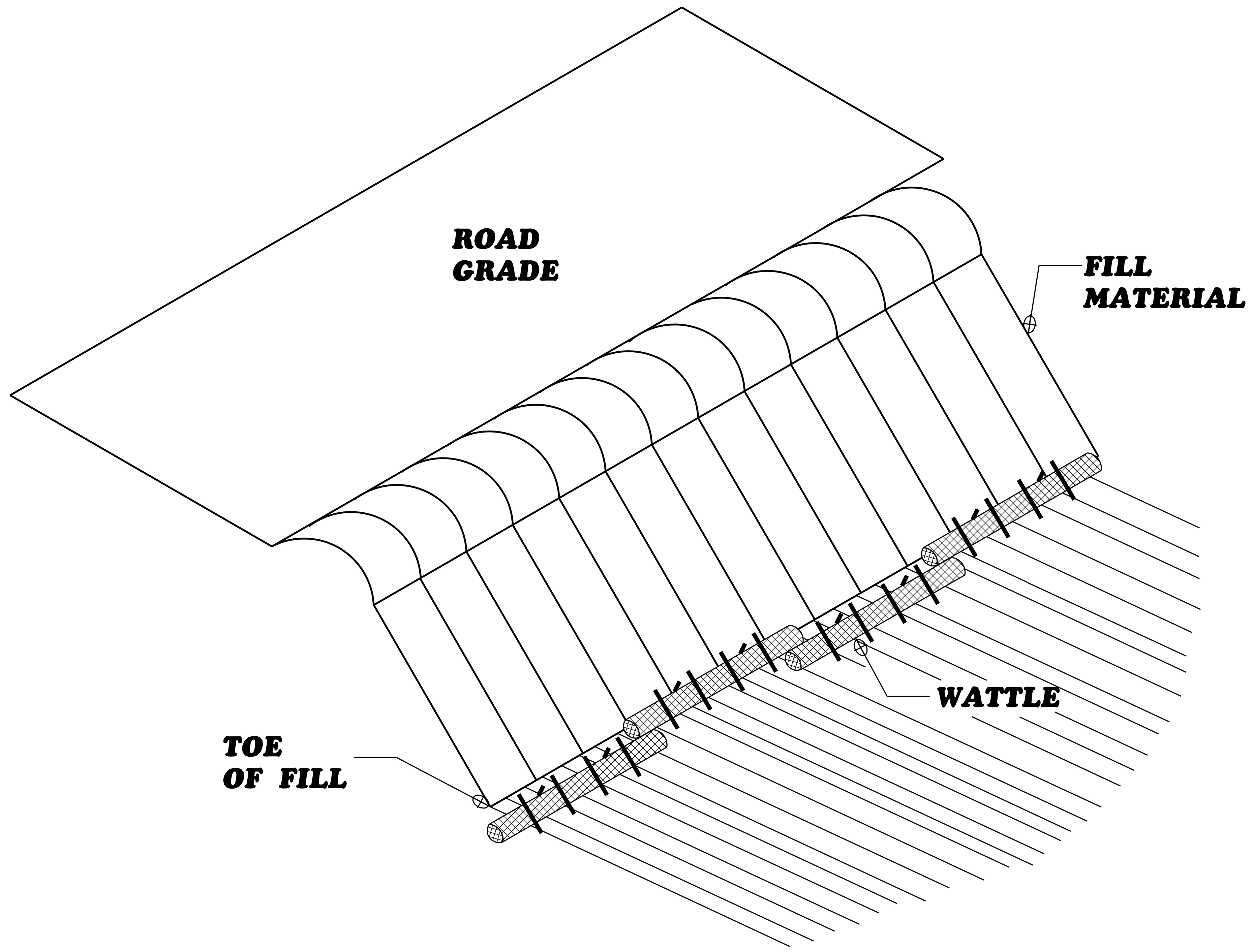


1"–2" TRENCH



SIDE VIEW

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

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

EXCAVATE A 2 TO 3 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.

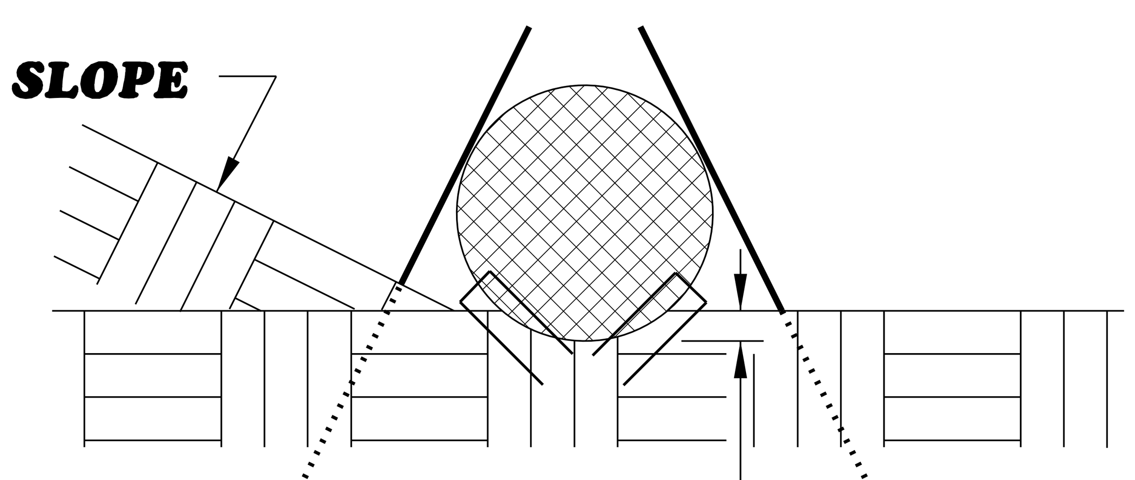
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

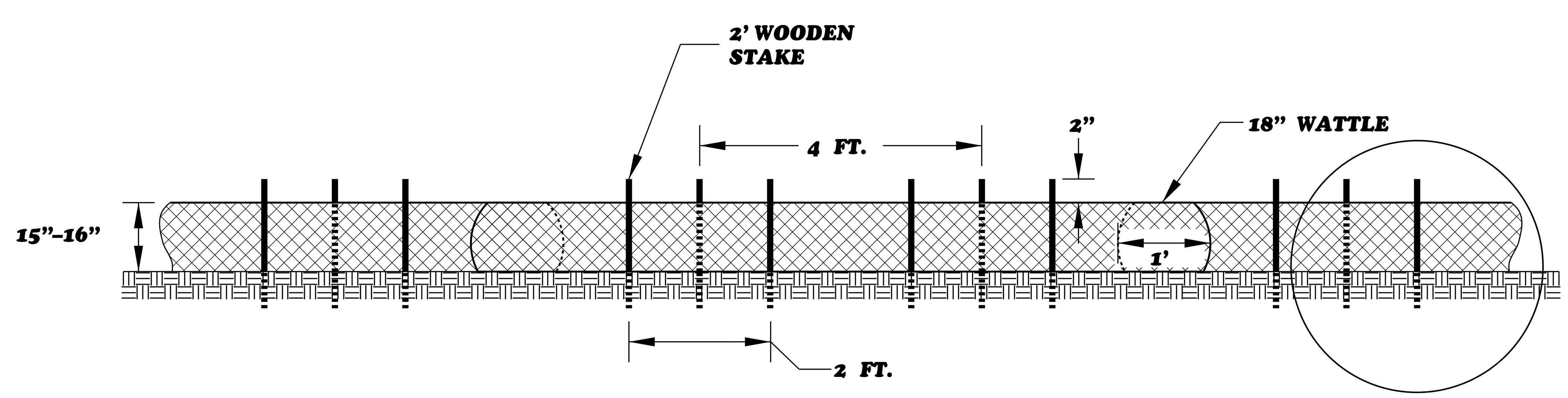
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

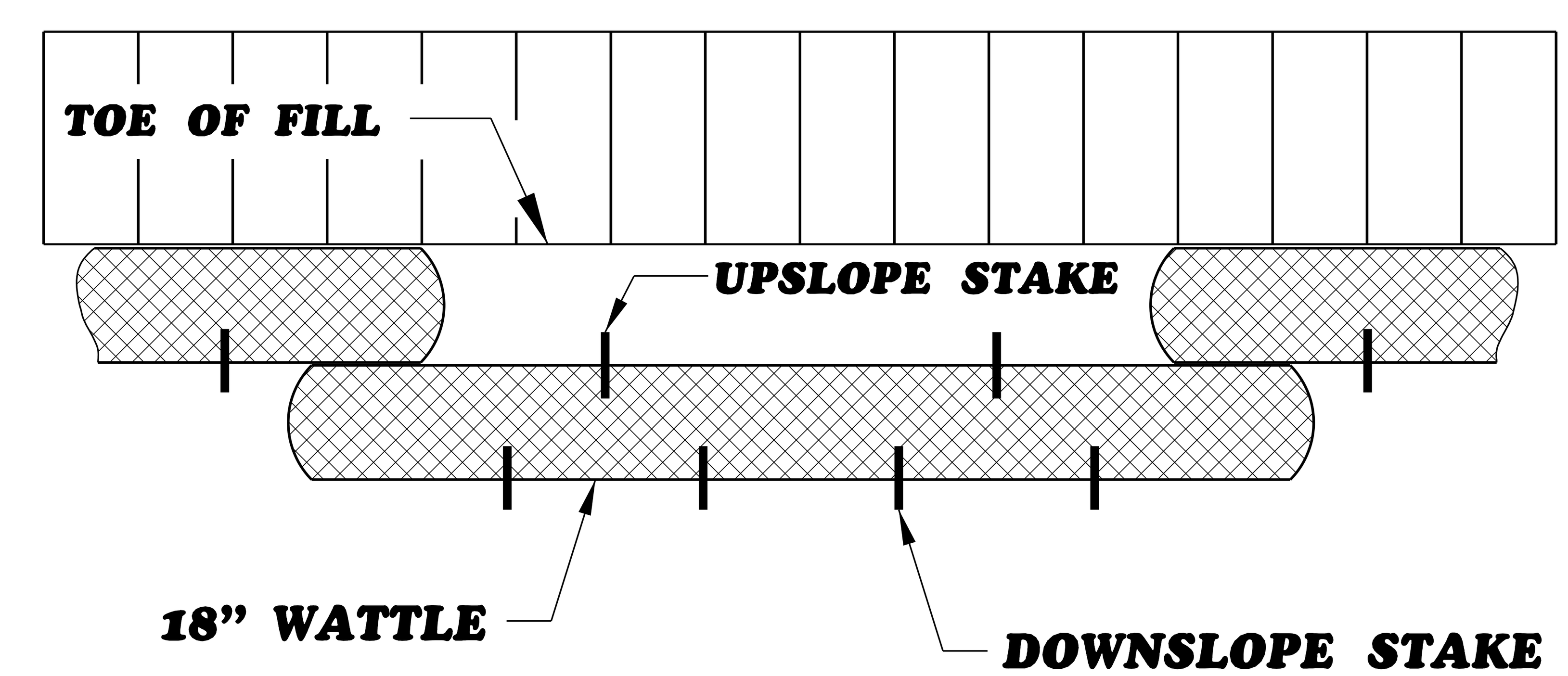
FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.

INSET A





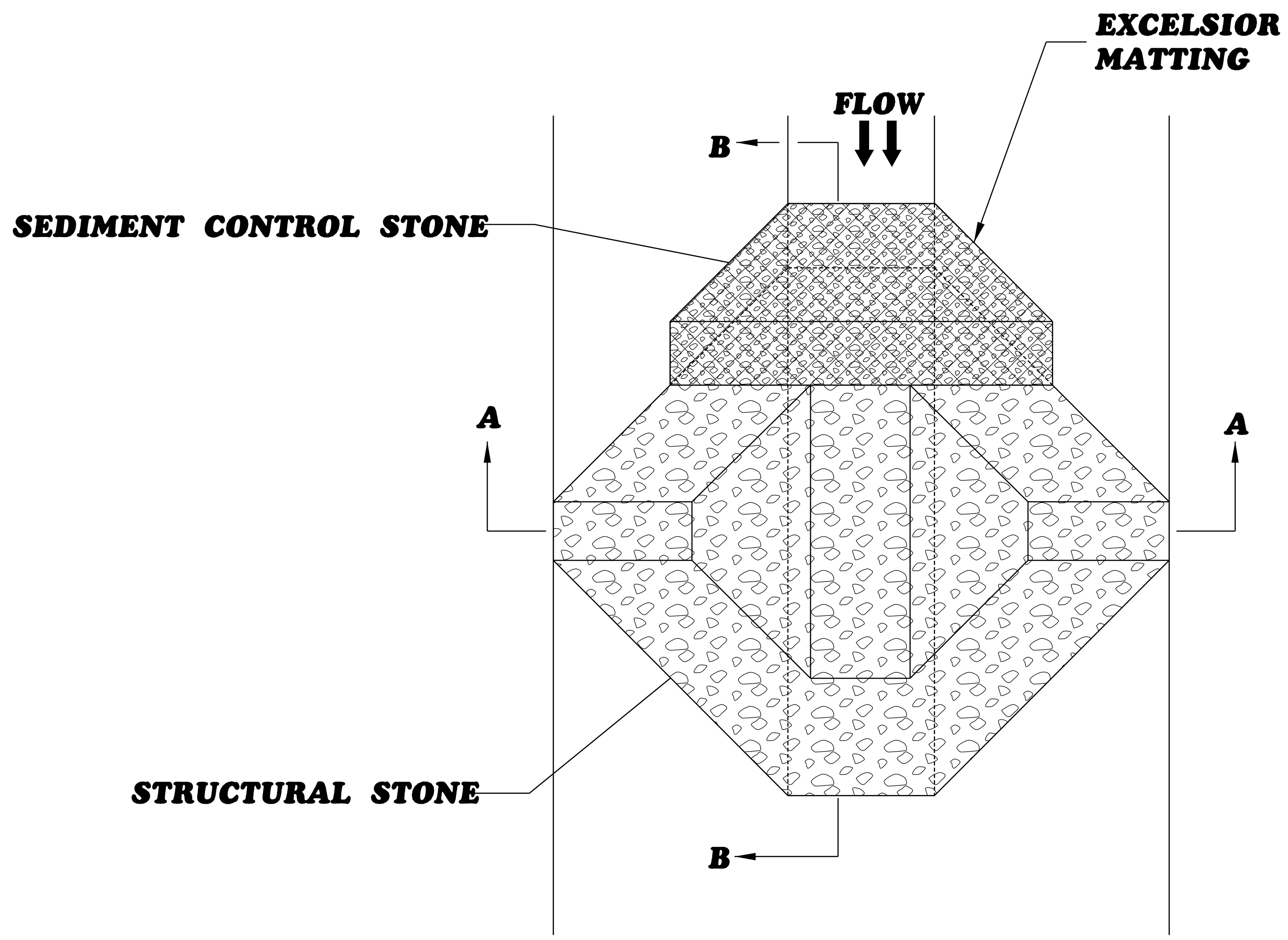
FRONT VIEW



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2E

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



PLAN

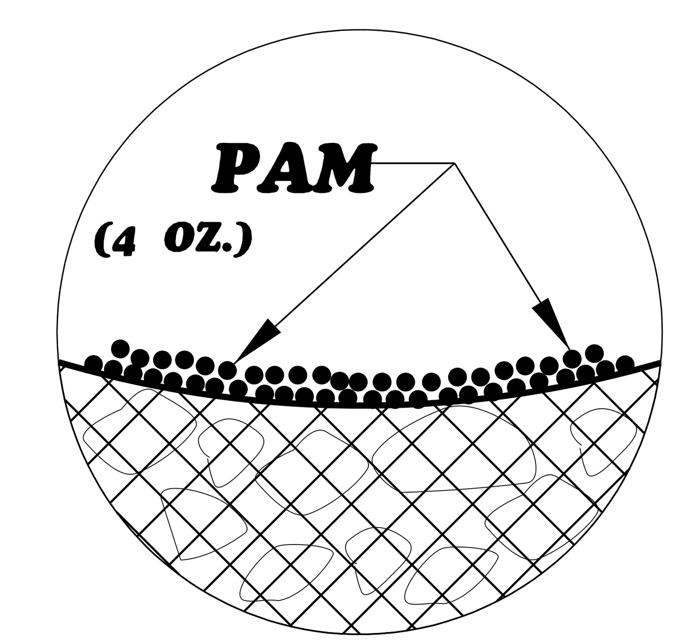
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

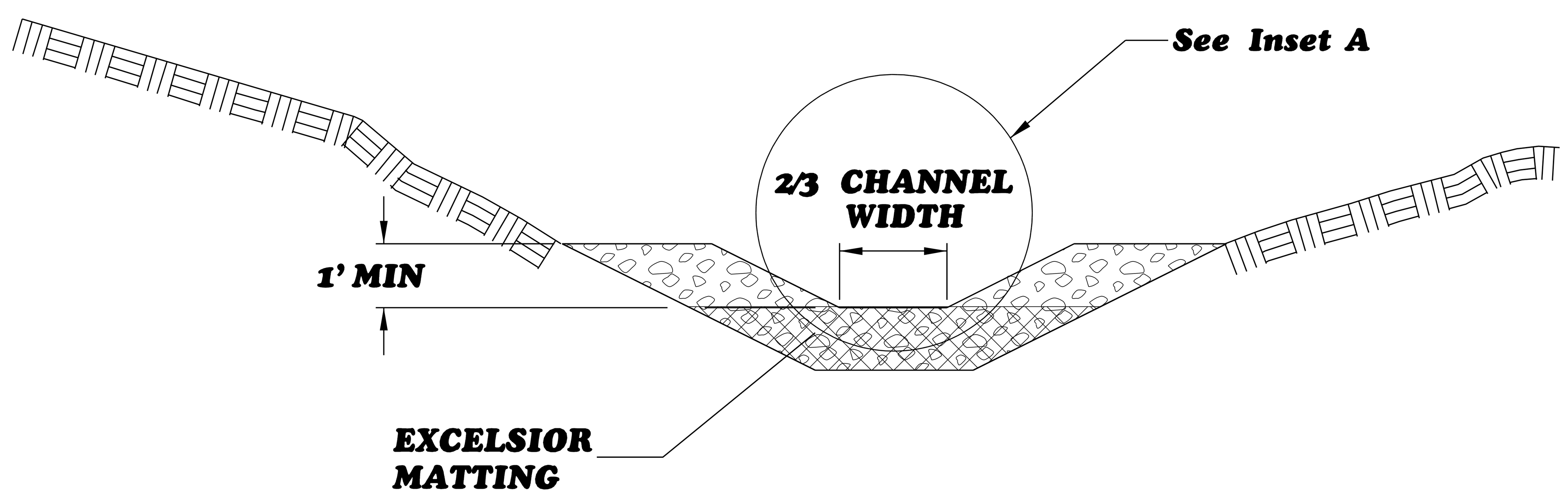
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

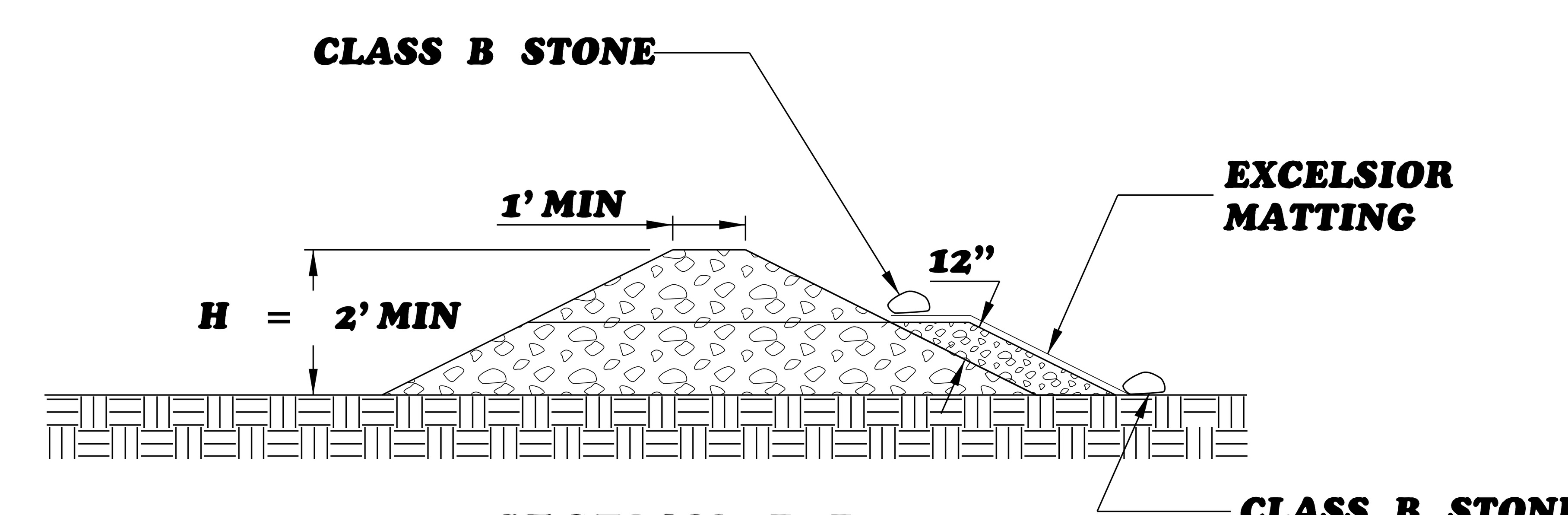
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2F

BORROW PIT DEWATERING BASIN DETAIL

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT^3), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

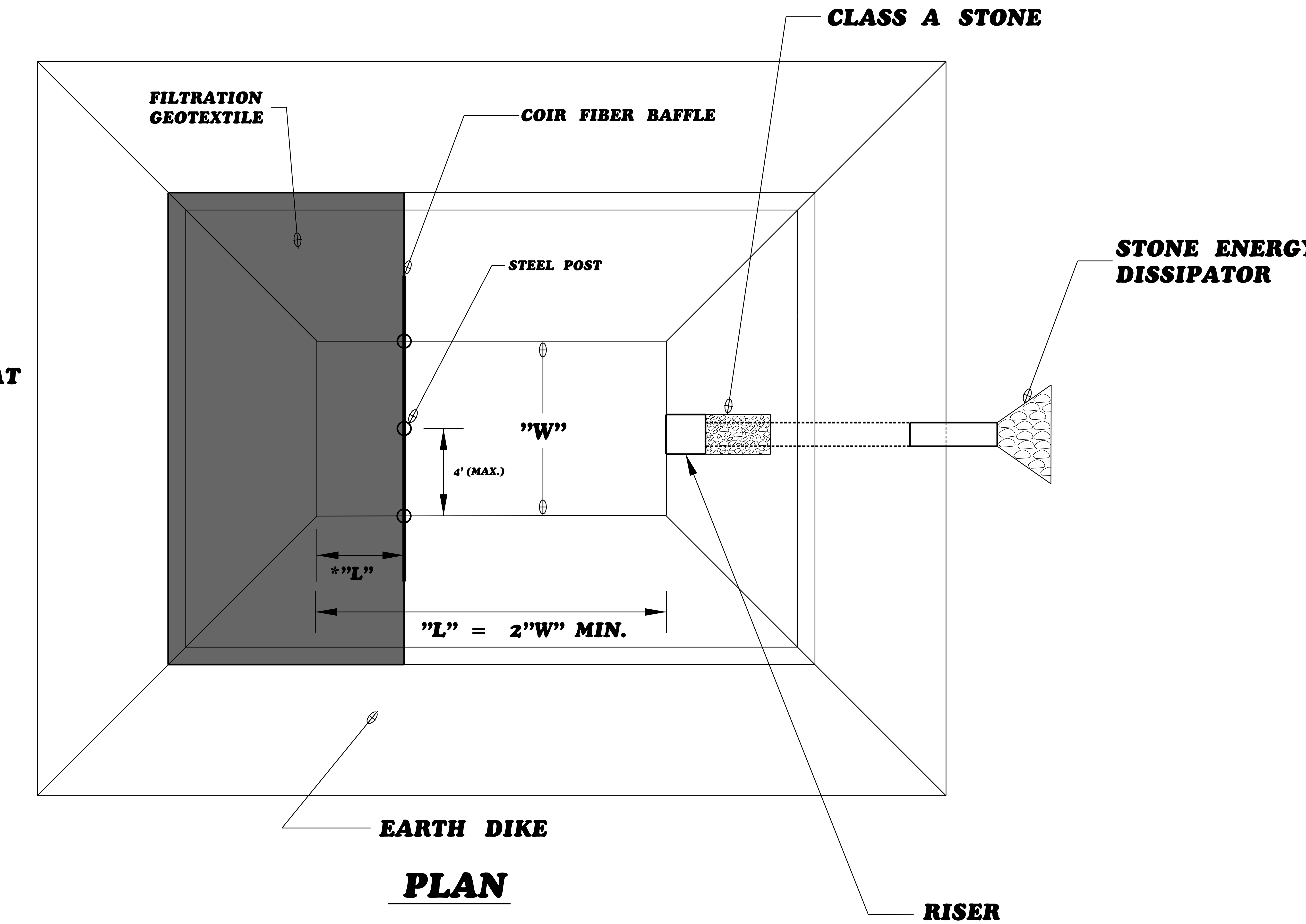
DO NOT EXCEED 3* FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

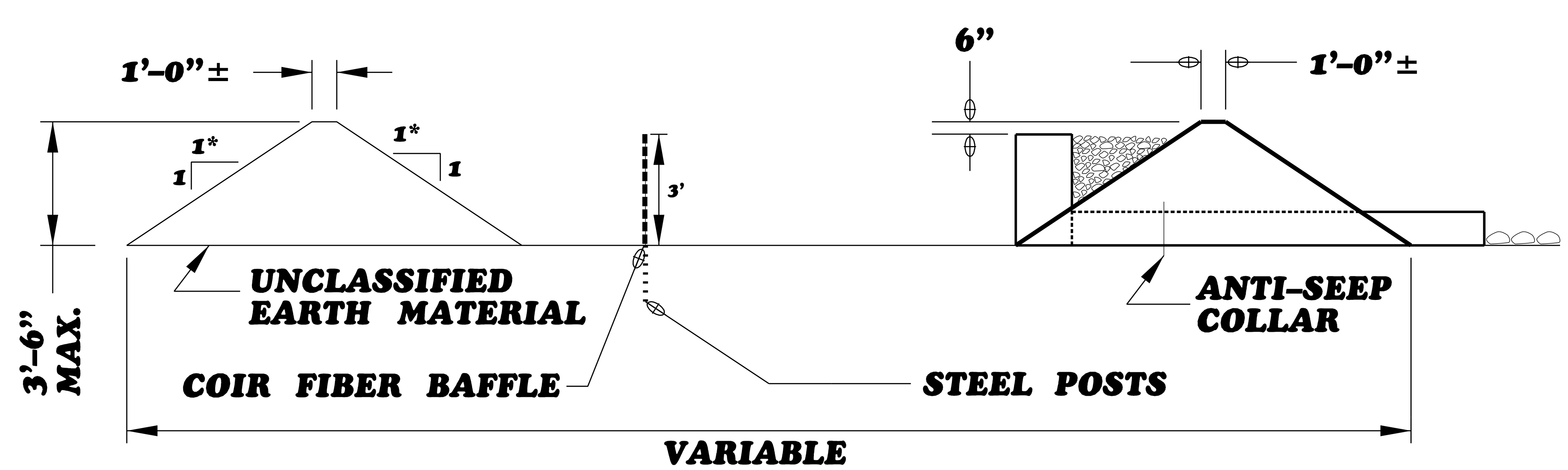
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



PLAN

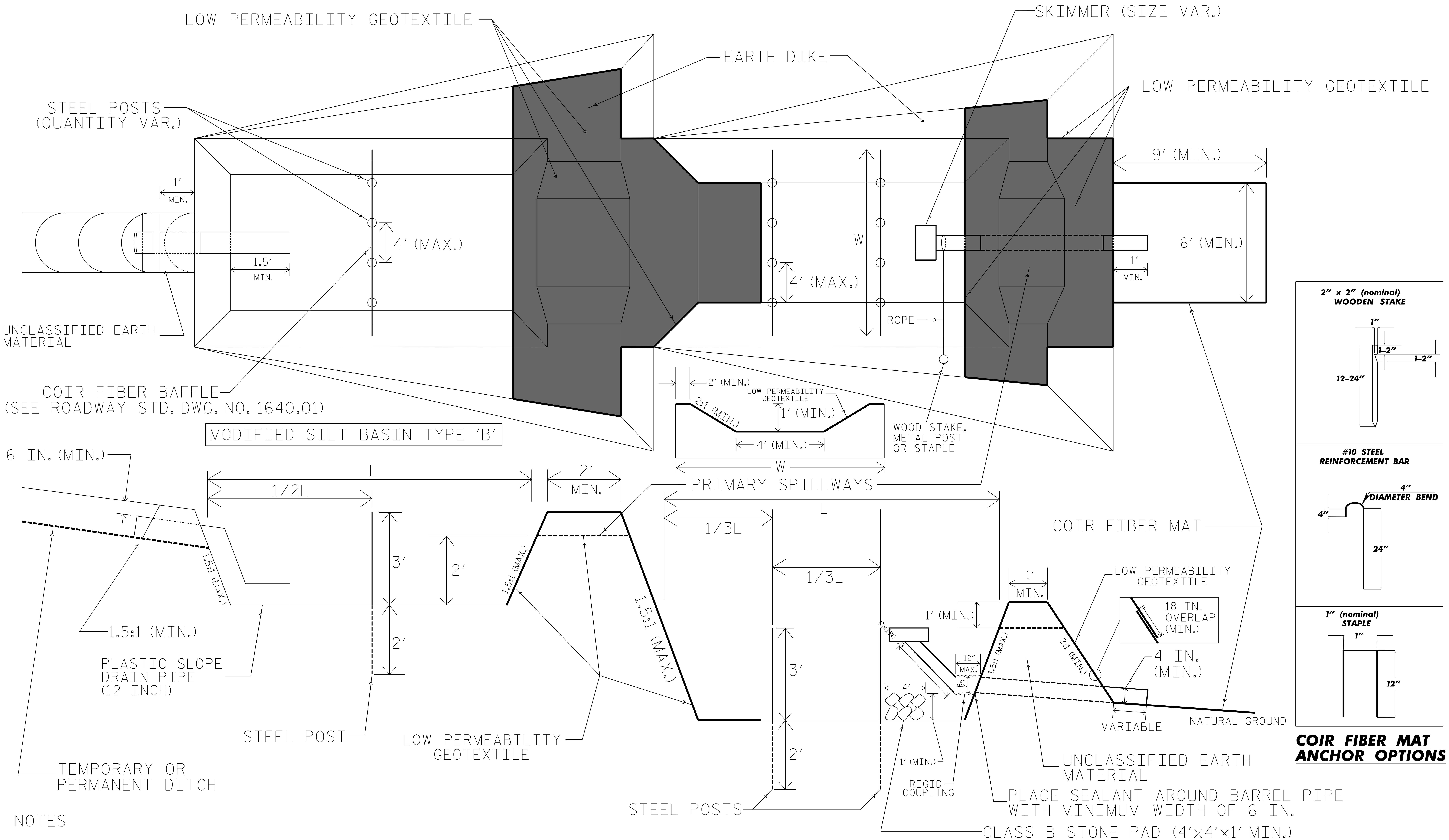


TYPICAL SECTION VIEW

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-2G

TIERED SKIMMER BASIN DETAIL (EAST)



NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY WEIR LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.	SHEET NO.
I-5987A	EC-3A

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	SR6	48+00	51+00	LT	240
6	L	91+00	95+50	LT	905
6	L	99+50	102+50	LT	410
6	L	111+00	135+00	LT	3850
6	L	89+50	94+00	RT	715
6	L	97+50	102+50	RT	640
6	L	107+88	112+00	RT	495
6	L	112+50	123+50	RT	1765
6	Y1RPA	12+43	16+50	RT	375
6	Y1RPD	10+00	14+50	LT	345
7	L	123+50	137+50	RT	2545
8	L	135+00	148+50	LT	2385
8	L	137+50	144+00	RT	1215
9	L	148+50	151+25	LT	520
9	L	144+00	145+00	RT	205
10	L	157+50	174+50	LT	4315
10	L	160+00	168+00	RT	1650
11	L	174+50	180+50	LT	780
11	L	183+00	198+50	LT	2935
11	L	178+50	187+00	RT	1165
12	L	198+50	199+50	LT	50
12	L	187+00	199+80	RT	1630
13	L	211+50	216+50	LT	655
13	L	211+50	217+50	RT	825
13	Y2	31+00	35+00	LT	335
14	L	235+15	236+00	RT	125
15	L	247+50	251+25	LT	440
16	L	258+00	264+90	LT	840
16	L	265+10	269+34	LT	925
17	L	281+50	285+50	LT	420

MATTING FOR EROSION CONTROL DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
17	L	287+50	298+00	LT	2525
17	L	277+00	278+18	RT	135
17	L	278+50	281+00	RT	425
17	L	281+90		RT	205
17	L	283+00	293+50	RT	1435
17	SR2	32+00	39+90	RT	180
17	SR2	40+20	42+50	RT	80
17	Y1A	31+50	32+40	LT	70
17	Y1A	45+15	46+90	RT	215
17	Y1ARPB	12+00	16+00	LT	775
17	Y1ARPB	16+20	17+20	LT	195
17	Y1ARPB	21+50	26+25	LT	370
17	Y1ARPC	16+10	18+50	RT	325
17	Y1ARPD	18+50	20+50	LT	435
18	L	304+22	306+65	RT	645
18	Y1ARPA	14+10	14+75	RT	50
18	Y1ARPD	10+00	18+50	LT	2885
19	L	319+50	324+00	LT	660
19	L	317+00	327+80	RT	1200
20	L	331+50	332+00	LT	95
20	L	335+00	339+10	LT	545
20	L	327+80	339+00	RT	1370
21	L	340+55	354+50	RT	1915
22	L	359+76	365+81	LT	885
22	L	354+82	365+16	RT	1570
23	L	367+55	385+21	LT	4685
23	L	368+42	379+12	RT	1565
23	L	379+26	385+30	RT	885
				SUBTOTAL	60,025

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-3B

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
24	L	386+70	402+00	LT	3420
24	L	386+38	389+36	RT	440
24	L	389+50	390+33	RT	345
24	L	390+42	397+35	RT	1010
25	L	402+00	409+17	LT	1650
25	L	403+98		RT	3145
25	L	404+10	414+76	RT	4125
26	L	409+17	419+55	LT	2370
26	L	414+76	419+55	RT	1845
27	L	419+55	434+60	LT	3425
27	L	419+55	437+71	RT	6905
28	L	434+60	446+40	LT	2900
28	L	437+71	453+69	RT	2805
29	L	446+40	455+65	LT	2295
29	L	455+88	457+00	LT	280
30	L	463+65	473+00	LT	1470
30	L	466+50	468+00	RT	240
30	L	468+15	475+62	RT	1510
30	Y3	24+00	24+79	LT	85
30	Y3	34+08	38+50	LT	470
31	L	479+00	486+15	LT	1080
31	L	475+62	479+87	RT	670
31	L	483+17		RT	130
31	L	483+50	489+50	RT	1270
32	L	486+15	489+00	LT	450
32	L	489+50	495+00	RT	1165
33	DR3	11+25	15+00	RT	425
33	Y2	12+50	14+00	LT	105
33	Y2	17+50	22+50	LT	520
34	Y2	35+00	35+70	LT	50

MATTING FOR EROSION CONTROL DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
34	Y2	36+30	38+30	RT	140
34	Y2	36+50	39+00	RT	105
35	Y1A	18+50	19+50	LT	140
36	SR2	18+50	19+00	LT	20
37	Y1A	51+00	53+00	LT	150
38	Y3	16+50	24+00	LT	775
38	Y3	16+50	21+00	RT	420
38	Y3	22+25	22+74	RT	60
39	Y3	36+81	39+30	RT	430
				SUBTOTAL	48,840
EXCELSIOR MATTING SECTIONS:					
6	Y1RPA	16+50	18+00	RT	240
17	L	283+00	282+50	RT	60
17	Y1ARPB	18+85	19+50	LT	40
17	Y1ARPB	20+00	20+50	LT	60
24	L	386+10	386+38	RT	50
				SUBTOTAL	450
				TOTAL-DITCHES	109,315

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-3C

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
6	Y1RPB	17+50	19+60	LT	904
6	Y1RPB	18+50	19+60	RT	590
6	Y1RPD	17+00	19+60	LT	1318
6	Y1RPD	17+50	19+00	RT	581
9	L	150+50	153+50	LT	604
10	L	169+50	174+00	RT	2506
11	L	181+00	182+50	LT	453
13	Y2	27+00	28+50	RT	781
13	Y2	30+50	36+00	LT	2644
14	L	217+00	219+00	LT	726
14	L	217+00	220+00	RT	927
14	L	236+00	237+50	LT	961
15	L	246+00	247+00	LT	242
16	L	257+00	258+00	RT	311
17	L	293+50	296+00	LT	1780
17	SR2	27+50	30+00	LT	776
17	SR2	28+50	34+00	RT	2738
17	SR2	34+00	36+50	LT	915
17	SR2	34+50	36+50	RT	768
17	SR2	36+60	38+50	RT	491
17	Y1A	32+50	38+00	LT	4142
17	Y1A	33+00	38+00	RT	2997
17	Y1A	44+50	48+50	LT	2092
17	Y1A	44+50	49+00	RT	2989
17	Y1ARPA	19+00	29+00	LT	7354
17	Y1ARPA	20+00	29+00	RT	5514
17	Y1ARPB	16+50	18+70	LT	1011
17	Y1ARPB	17+70	28+00	RT	9257
17	Y1ARPB	21+50	28+00	LT	5006
17	Y1ARPC	17+00	24+00	LT	3933

MATTING FOR EROSION CONTROL SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
17	Y1ARPC	18+50	27+00	RT	3899
17	Y1ARPC	25+00	37+00	LT	2227
17	Y1ARPD	18+00	26+70	LT	4606
17	Y1ARPD	20+50	26+70	RT	5857
18	L	304+00	307+00	LT	603
18	L	307+00	310+00	RT	1051
18	L	308+50	310+20	LT	585
19	L	311+00	318+00	RT	2284
19	L	311+20	320+00	LT	2782
20	L	327+00	331+50	LT	1637
21	L	339+50	353+50	LT	4899
22	L	355+50	356+25	RT	222
22	L	366+50	367+50	LT	268
23	L	356+75	358+00	RT	453
30	Y3	25+00	28+50	LT	3616
30	Y3	25+00	28+00	RT	1841
33	Y2	19+00	22+90	RT	1372
38	Y3	21+00	24+50	RT	1292
38	Y3	21+50	24+50	LT	1348
39	Y3	31+50	38+50	LT	4152
39	Y3	31+50	36+00	RT	1827
39	Y3	36+50	38+50	RT	681
			TOTAL-SLOPES		112,812
			TOTAL-DITCHES		109,315
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					143,775
				TOTAL	365,902
				SAY	366,000

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-4/CONST.4
R/W SHEET NO.	

NV5 ENGINEERS & CONSULTANTS, INC.
7500 E. INDEPENDENCE BLVD, STE 100
CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-1333

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

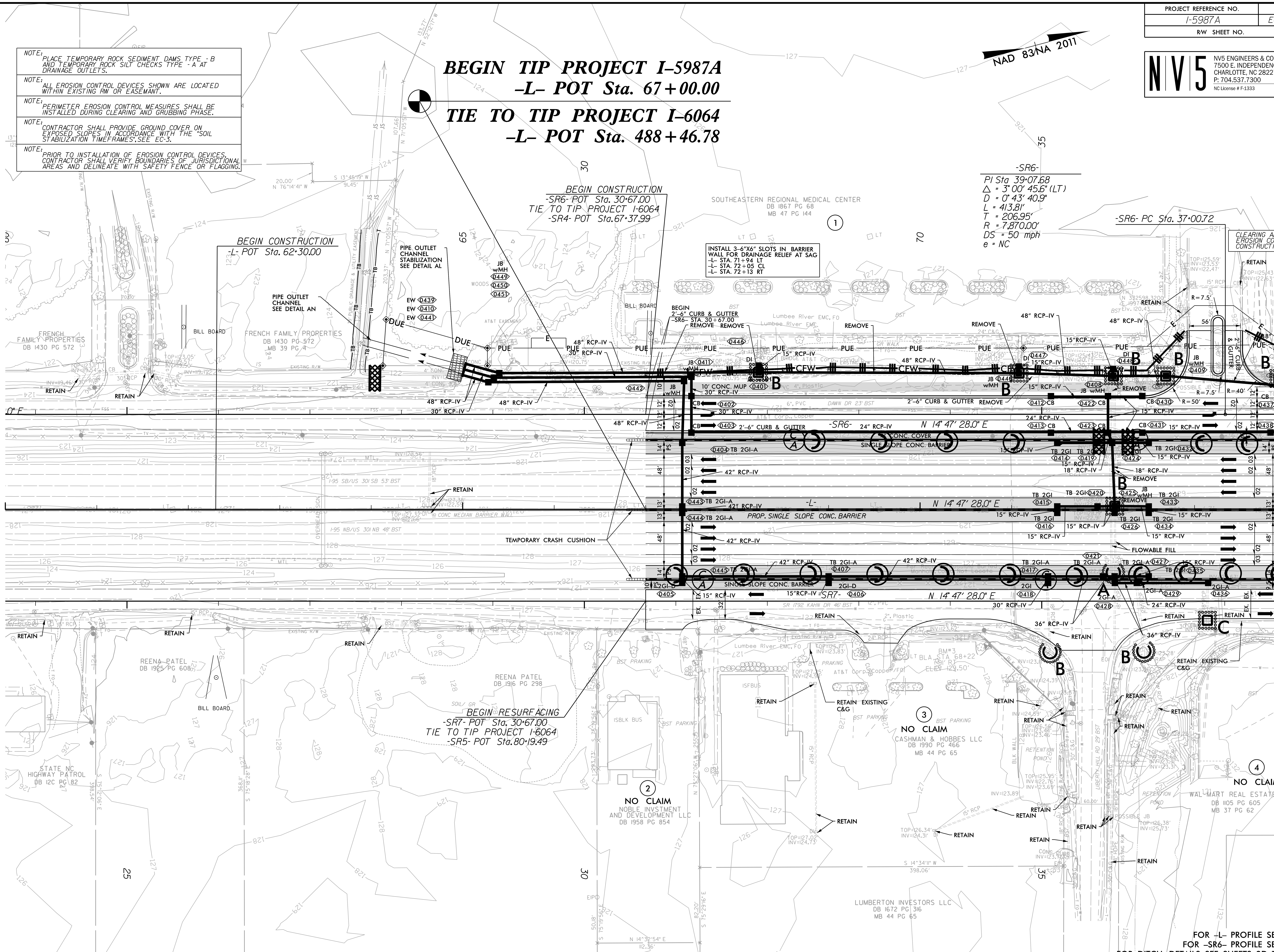
NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES".SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

BEGIN TIP PROJECT I-5987A
-L- POT Sta. 67+00.00
TIE TO TIP PROJECT I-6064
-L- POT Sta. 488+46.78



FOR -L- PROFILE SEE SHEET 40
FOR -SR6- PROFILE SEE SHEET 78
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-5/CONST.5
R/W SHEET NO.	

NV5 ENGINEERS & CONSULTANTS, INC.
7500 E. INDEPENDENCE BLVD, STE 100
CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-1333

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

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES".SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

-SR6-

PI Sta 39+07.68	PI Sta 43+12.89	PI Sta 53+74.13
△ = 3° 00' 45.6" (LT)	△ = 2° 53' 15.0" (RT)	△ = 33° 38' 33.1" (LT)
D = 0° 43' 40.9"	D = 0° 43' 40.9"	D = 4° 29' 37.6"
L = 413.81'	L = 396.62'	L = 748.65'
T = 206.95'	T = 198.35'	T = 385.46'
R = 7,870.00'	R = 7,870.00'	R = 1,275.00'
DS = 50 mph	DS = 50 mph	DS = 50 mph
e = NC	e = NC	e = .04
		RO = 100.00'

-SR8-

PI Sta 11+20.99	PI Sta 13+49.88
△ = 50° 04' 26.4" (RT)	△ = 2° 57' 44.1" (LT)
D = 67° 24' 24.5"	D = 2° 30' 26.9"
L = 74.29'	L = 118.14'
T = 39.70'	T = 59.08'
R = 85.00'	R = 2,285.00'
DS = EXIST.	DS = EXIST.
e = EXIST.	e = EXIST.

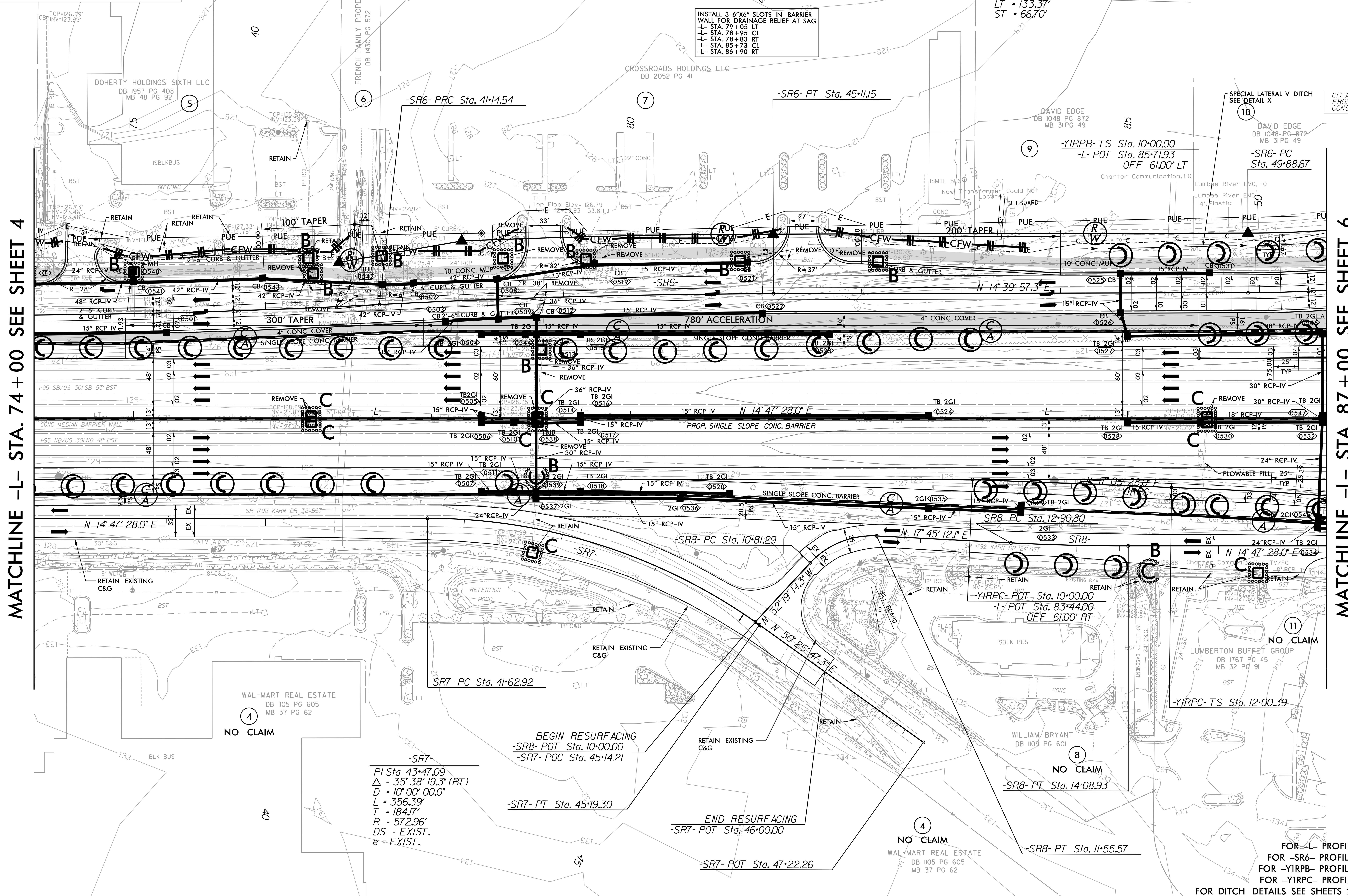
-YIRPB-
PIs Sta 11+33.37
Θs = 3° 52' 16.8"
Ls = 200.00'
LT = 133.37'
ST = 66.70'

-YIRPC-
PIs Sta 13+33.76
Θs = 3° 52' 16.8"
Ls = 200.00'
LT = 133.37'
ST = 66.70'

NAD 83/NA 2011

INSTALL 3-6"X6" SLOTS IN BARRIER WALL FOR DRAINAGE RELIEF AT SAG
-L- STA. 79+05 LT
-L- STA. 78+95 CL
-L- STA. 78+83 RT
-L- STA. 85+73 CL
-L- STA. 86+90 RT

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5



-SR7-
PI Sta 43+47.09
△ = 35° 38' 19.3" (RT)
D = 10° 00' 00.0"
L = 356.39'
T = 184.17'
R = 572.96'
DS = EXIST.
e = EXIST.

FOR -L- PROFILE SEE SHEET 41
FOR -SR6- PROFILE SEE SHEET 78
FOR -YIRPB- PROFILE SEE SHEET 80
FOR -YIRPC- PROFILE SEE SHEET 81
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2
FOR WALL PLANS SEE W-? THRU W-?

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4/7/2022
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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-6/CONST.6
R/W SHEET NO.	

NV5 ENGINEERS & CONSULTANTS, INC.
7500 E. INDEPENDENCE BLVD, STE 100
CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-1333

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

REVISIONS

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

NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE:
CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES",SEE EC-3.

NOTE:
PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

-L-
PI Sta 106+48.19
△ = 0° 24′ 48.3" (RT)
D = 0° 04′ 54.7"
L = 505.08′
T = 252.54′
R = 70,000.00′
DS = 75 mph
e = NC

-SR6-

PI Sta 53+74.13	PI Sta 59+36.50
△ = 33° 38′ 33.1" (LT)	△ = 11° 44′ 34.4" (LT)
D = 4° 29′ 37.6"	D = 2° 57′ 29.1"
L = 748.65′	L = 396.98′
T = 385.46′	T = 199.19′
R = 1,275.00′	R = 1,936.93′
DS = 50 mph	DS = EXIST.
e = 04	e = EXIST.
RO = 100.00′	

-SR8-
PI Sta 17+38.27
△ = 30° 48′ 19.3" (RT)
D = 12° 43′ 56.6"
L = 241.94′
T = 123.97′
R = 450.00′
DS = EXIST.
e = EXIST.

-YIRPA-

PIs Sta 13+33.73	PI Sta 15+06.19	PIs Sta 16+78.35	PI Sta 20+99.95
θs = 3° 52′ 16.8"	△ = 8° 10′ 47.3" (RT)	θs = 3° 52′ 16.8"	△ = 71° 46′ 53.0" (LT)
Ls = 200.00′	D = 3° 52′ 16.8"	Ls = 200.00′	D = 19° 05′ 54.9"
LT = 133.37′	L = 211.29′	LT = 133.37′	L = 375.85′
ST = 66.70′	T = 105.83′	ST = 66.70′	T = 217.09′
	R = 1,480.00′		R = 300.00′
	DS = 65 mph		DS = EXIST.
	e = 08		e = EXIST.
	RO = 200.00′		

-YIRPB-

PIs Sta 11+33.37	PI Sta 14+06.66	PIs Sta 16+77.35	PI Sta 24+76.97
θs = 3° 52′ 16.8"	△ = 15° 53′ 52.5" (LT)	θs = 3° 52′ 16.8"	△ = 150° 37′ 07.3" (RT)
Ls = 200.00′	D = 3° 52′ 16.8"	Ls = 200.00′	D = 44° 24′ 55.2"
LT = 133.37′	L = 410.66′	LT = 133.37′	L = 339.11′
ST = 66.70′	T = 206.66′	ST = 66.70′	T = 492.05′
	R = 1,480.00′		R = 129.00′
	DS = 65 mph		DS = EXIST.
	e = 08		e = EXIST.
	RO = 200.00′		

-YIRPC-

PIs Sta 13+33.76	PI Sta 14+85.14	PIs Sta 16+36.40	PI Sta 20+86.11
θs = 3° 52′ 16.8"	△ = 6° 33′ 16.4" (RT)	θs = 3° 52′ 16.8"	△ = 69° 37′ 08.8" (LT)
Ls = 200.00′	D = 3° 52′ 16.8"	Ls = 200.00′	D = 22° 02′ 12.6"
LT = 133.37′	L = 169.31′	LT = 133.37′	L = 315.92′
ST = 66.70′	T = 84.75′	ST = 66.70′	T = 180.77′
	R = 1,480.00′		R = 260.00′
	DS = 65 mph		DS = EXIST.
	e = 08		e = EXIST.
	RO = 200.00′		

-YIRPD-

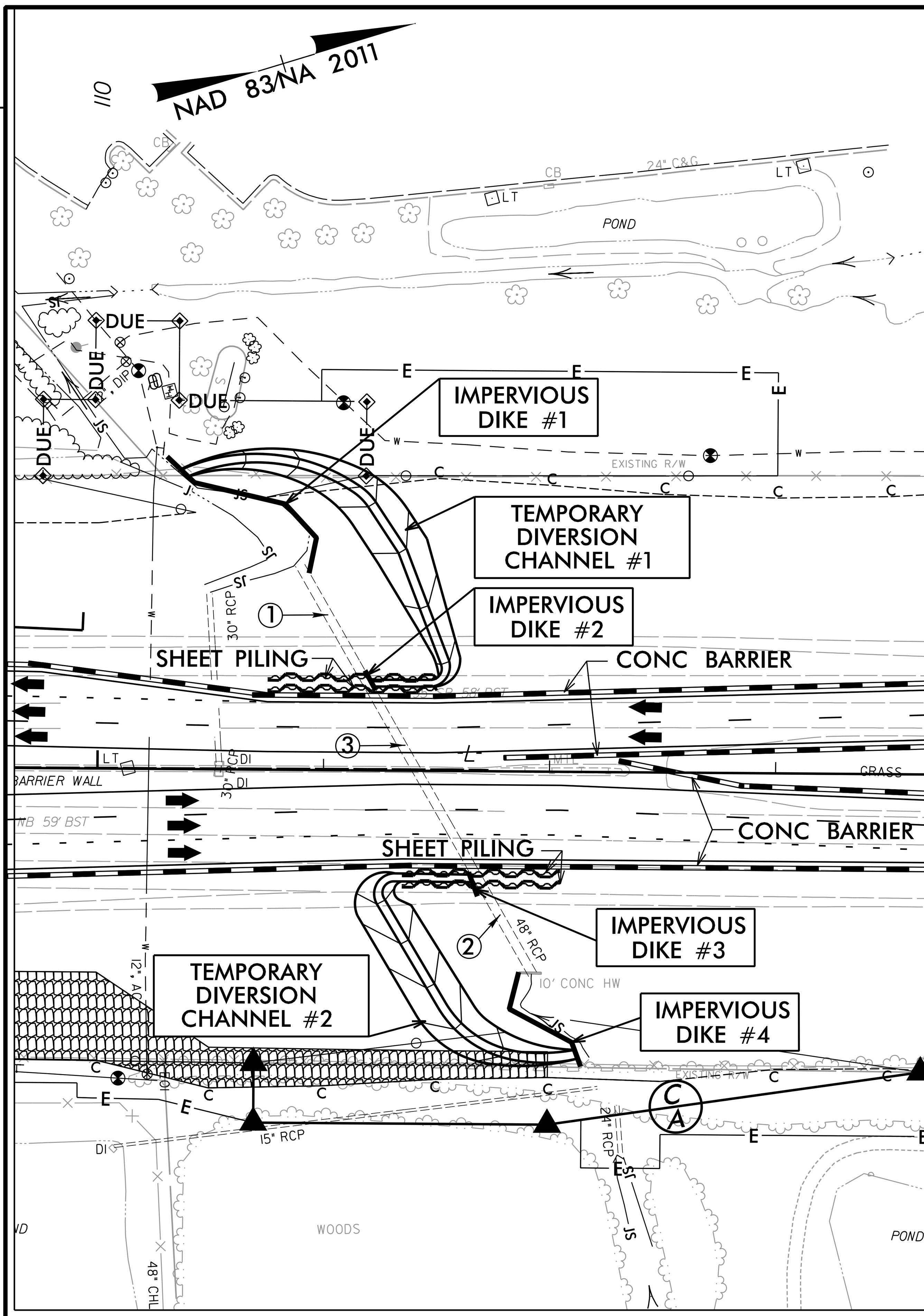
PIs Sta 11+31.99	PI Sta 13+65.62	PIs Sta 15+96.57	PI Sta 24+63.97
θs = 0° 04′ 54.9"	△ = 12° 46′ 13.9" (LT)	θs = 3° 52′ 16.8"	△ = 147° 07′ 41.3" (RT)
θs = 3° 52′ 16.8"	D = 3° 52′ 16.8"	Ls = 200.00′	D = 42° 07′ 45.3"
Ls = 200.00′	L = 329.87′	LT = 133.37′	L = 349.23′
LT = 131.99′	T = 165.62′	ST = 66.70′	T = 461.02′
ST = 68.08′	R = 1,480.00′		R = 136.00′
	DS = 65 mph		DS = EXIST.
	e = 08		e = EXIST.
	RO = 200.00′		

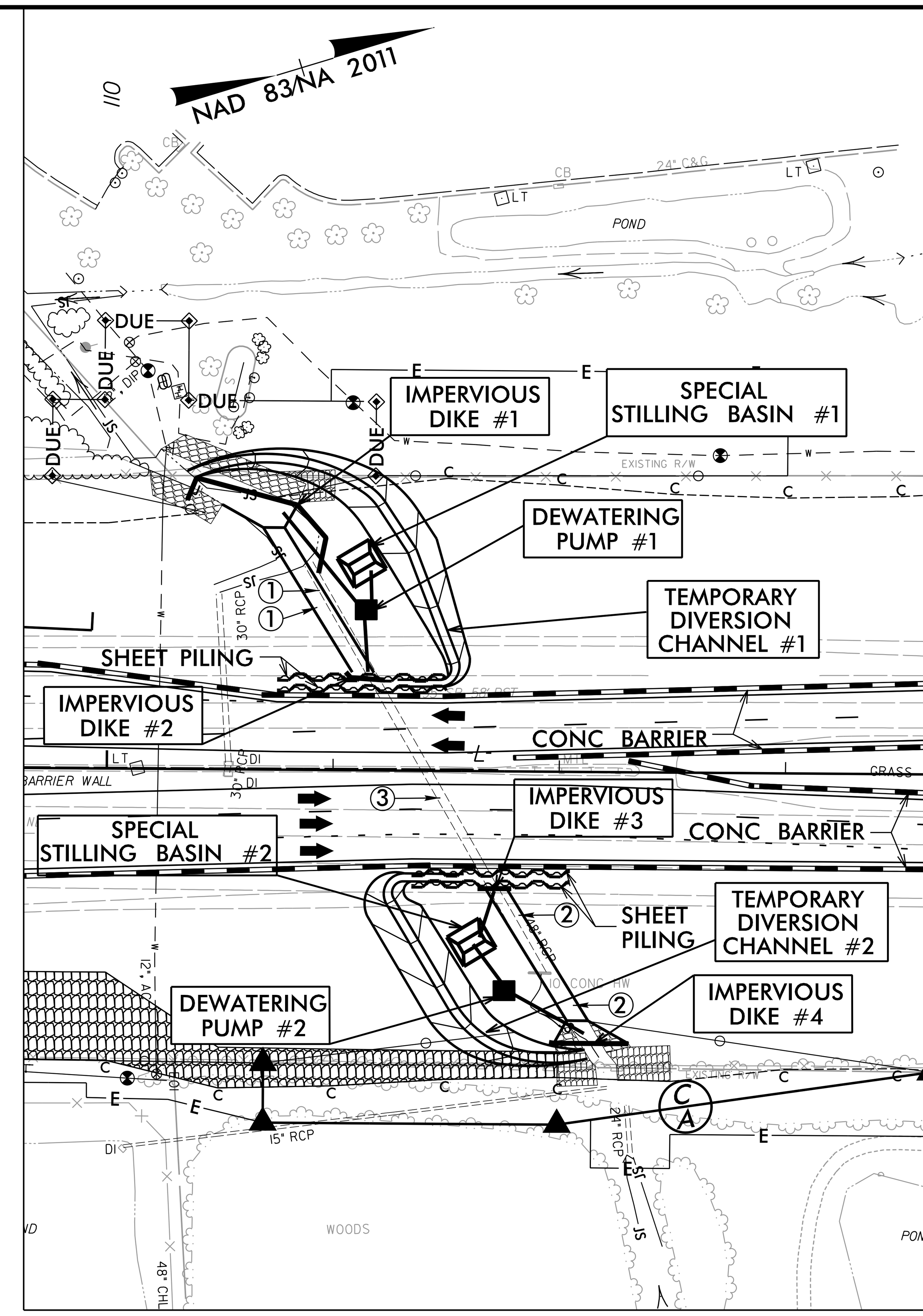
PROPOSED ROCK PLATING
STEEPEN SLOPE FROM -L- STA. 104+00.00 TO 112+50.00 RT
AND -L- STA. 104+50.00 TO 107+75.00 LT (SEE CROSS SECTIONS)
SEE DETAIL SHEET 2C-13 FOR ROCK PLATING

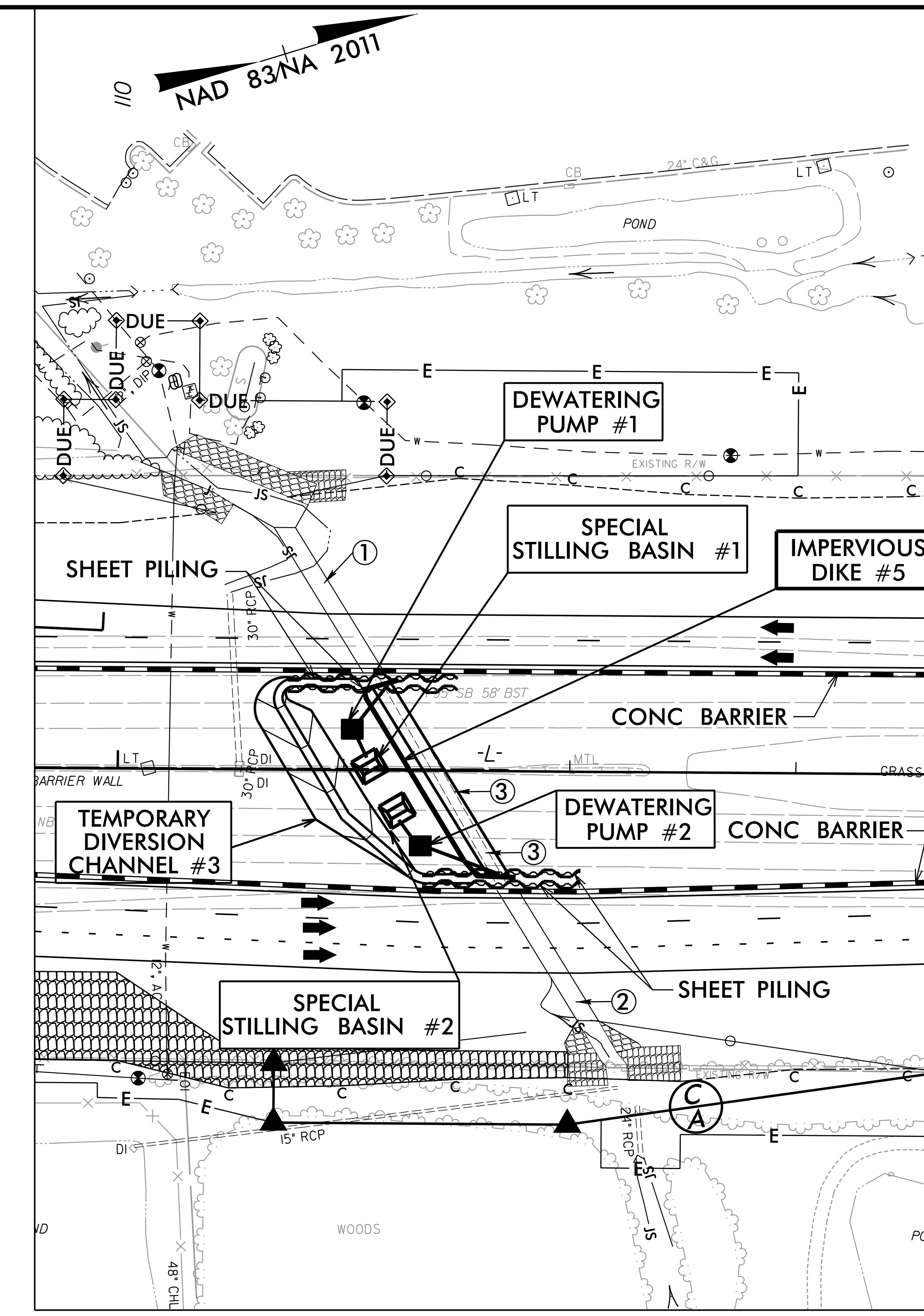
FOR -L- PROFILE SEE SHEET 41 – 43
FOR -SR6- PROFILE SEE SHEET 78, 79
FOR -Y1RPA- PROFILE SEE SHEET 80
FOR -Y1RPB- PROFILE SEE SHEET 80
FOR -Y1RPC- PROFILE SEE SHEET 81
FOR -Y1RPD- PROFILE SEE SHEET 81
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2
FOR CULVERT PLANS SEE C19-1 THRU C19-8

GRAPHIC SCALE
50 25 0 50 100
PLANS

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-6A/CONST.6
R/W SHEET NO.	







CONSTRUCTION SEQUENCE STA. 111+25 –L– FOR PROPOSED 7' X 7' RCBC

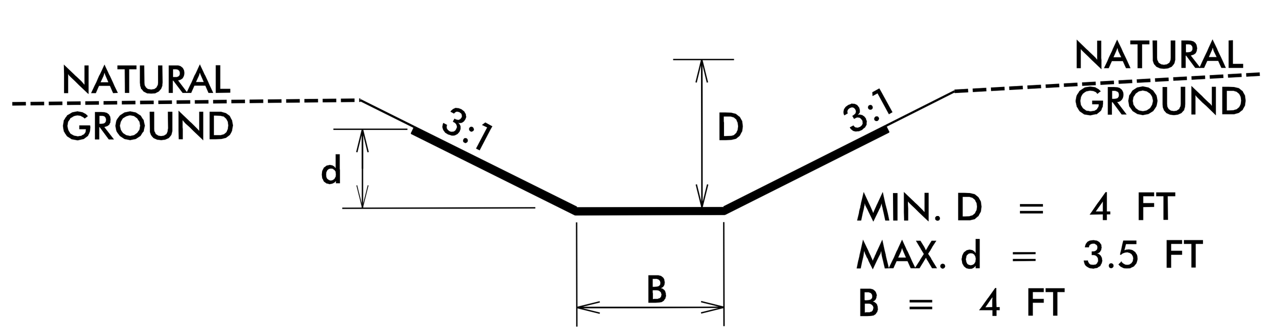
EXECUTE ALL PHASES OF CONSTRUCTION IN A CONTINUOUS MANNER, AS MUCH AS PERMITTED BY TRAFFIC MANAGEMENT PLAN PHASING.

PHASE I

1. INSTALL SHEET PILING AS SHOWN ON THE TRAFFIC CONTROL PLANS.
2. INSTALL IMPERVIOUS DIKES #1, #2, #3 AND #4. CONSTRUCT IMPERVIOUS DIKES AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
3. CONSTRUCT TEMPORARY DIVERSION CHANNELS #1 AND #2 WHILE MAINTAINING FLOW IN THE EXISTING RCP.

TEMPORARY DIVERSION CHANNEL

(NOT TO SCALE)



TYPE OF LINER = GEOTEXTILE FOR SOIL STABILIZATION

CONSTRUCTION SEQUENCE STA. 111+25 –L– FOR PROPOSED 7' X 7' RCBC

PHASE II

1. INSTALL SPECIAL STILLING BASIN #1 AND DEWATERING PUMP #1. MODIFY IMPERVIOUS DIKE #1 AND #2. CONSTRUCT IMPERVIOUS DIKE AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
2. INSTALL SPECIAL STILLING BASIN #2 AND DEWATERING PUMP #2. MODIFY IMPERVIOUS DIKE #3 AND #4. CONSTRUCT IMPERVIOUS DIKE AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
3. REMOVE SECTIONS #1 AND #2 OF THE EXISTING RCP AND THE EXISTING HW AS SHOWN.
4. MAINTAIN FLOW THROUGH THE CONSTRUCTION AREA UTILIZING THE MIDDLE SECTION (SECTION #3) OF THE EXISTING RCP AND TEMPORARY DIVERSION CHANNELS #1 AND #2.
5. CONSTRUCT SECTIONS #1 AND #2 OF THE 7'X7' RCBC AND THE UPSTREAM AND DOWNSTREAM HW AND OUTLET CHANNEL AND INSTALL BANK STABILIZATION.

CONSTRUCTION SEQUENCE STA. 111+25 –L– FOR PROPOSED 7' X 7' RCBC

PHASE III

1. REMOVE TEMPORARY DIVERSION CHANNELS #1 AND #2, AND IMPERVIOUS DIKES #1, #2, #3, AND #4. DIVERT FLOW INTO THE NEWLY CONSTRUCTED SECTIONS OF THE 7'X7' RCBC. RELOCATE THE SPECIAL STILLING BASINS AND DEWATERING PUMPS.
2. COMPLETE THE NORTHBOUND AND SOUTHBOUND ROADWAY. SHIFT TRAFFIC AS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. CONSTRUCT TEMPORARY DIVERSION CHANNEL #3 WHILE MAINTAINING FLOW IN THE CONSTRUCTION AREA THROUGH THE NEWLY CONSTRUCTED SECTIONS #1 AND #2 OF THE 7'X7' RCBC AND THE REMAINING SECTION OF THE EXISTING RCP.
4. INSTALL IMPERVIOUS DIKE #5. MAKE FINAL CONNECTION OF TEMPORARY DIVERSION CHANNEL #3 TO CONVEY FLOW BETWEEN SECTIONS #1 AND #2 OF THE 7'X7' RCBC. CONSTRUCT IMPERVIOUS DIKE AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
5. REMOVE SECTION #3 OF THE EXISTING RCP.
6. CONSTRUCT THE REMAINING SECTION OF THE 7'X7' RCBC.
7. REMOVE IMPERVIOUS DIKE #5 AND TEMPORARY DIVERSION CHANNEL #3. CONNECT ALL SECTIONS OF 7'X7' RCBC AND DIVERT FLOW INTO THE NEWLY COMPLETED SECTION OF THE 7'X7' RCBC.
8. REMOVE THE SPECIAL STILLING BASINS, DEWATERING PUMPS, AND SHEET PILING. STABILIZE ALL DISTURBED AREAS.
9. COMPLETE BANK STABILIZATION AT BOTH ENDS OF THE NEWLY CONSTRUCTED RCBC.
10. COMPLETE ROADWAY.
11. SHIFT TRAFFIC AS SHOWN ON THE TRAFFIC CONTROL PLANS.

REVISIONS

8/17/99

4/7/2022
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8/17/99

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

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES", SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-7/CONST.7
R/W SHEET NO.	

NV5 ENGINEERS & CONSULTANTS, INC.
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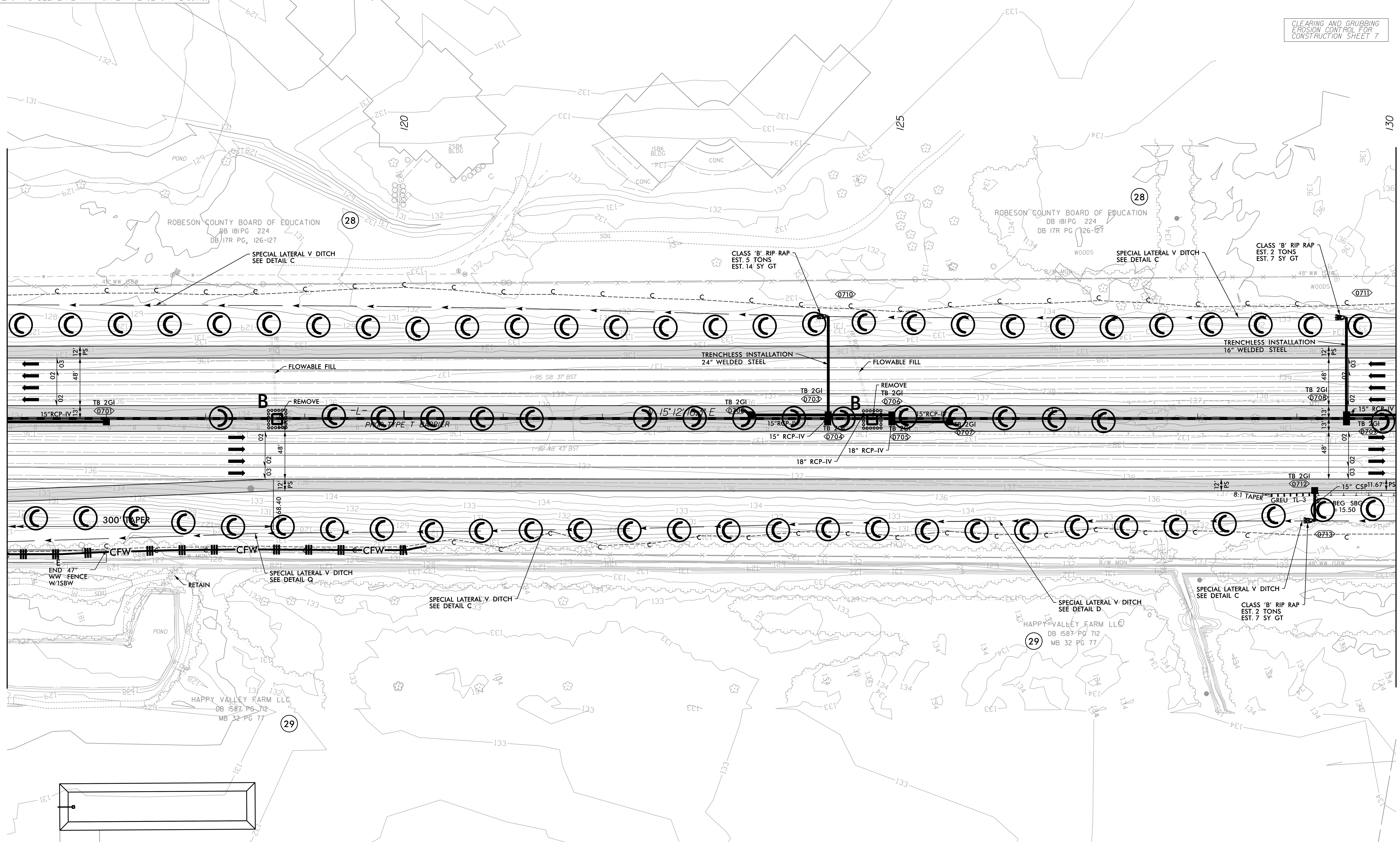
CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-1333

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7



FOR –L– PROFILE SEE SHEET 44
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

8/19/2022
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8/17/99

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

NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE:
CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES". SEE EC-3.

NOTE:
PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-8/CONST.8
R/W SHEET NO.	

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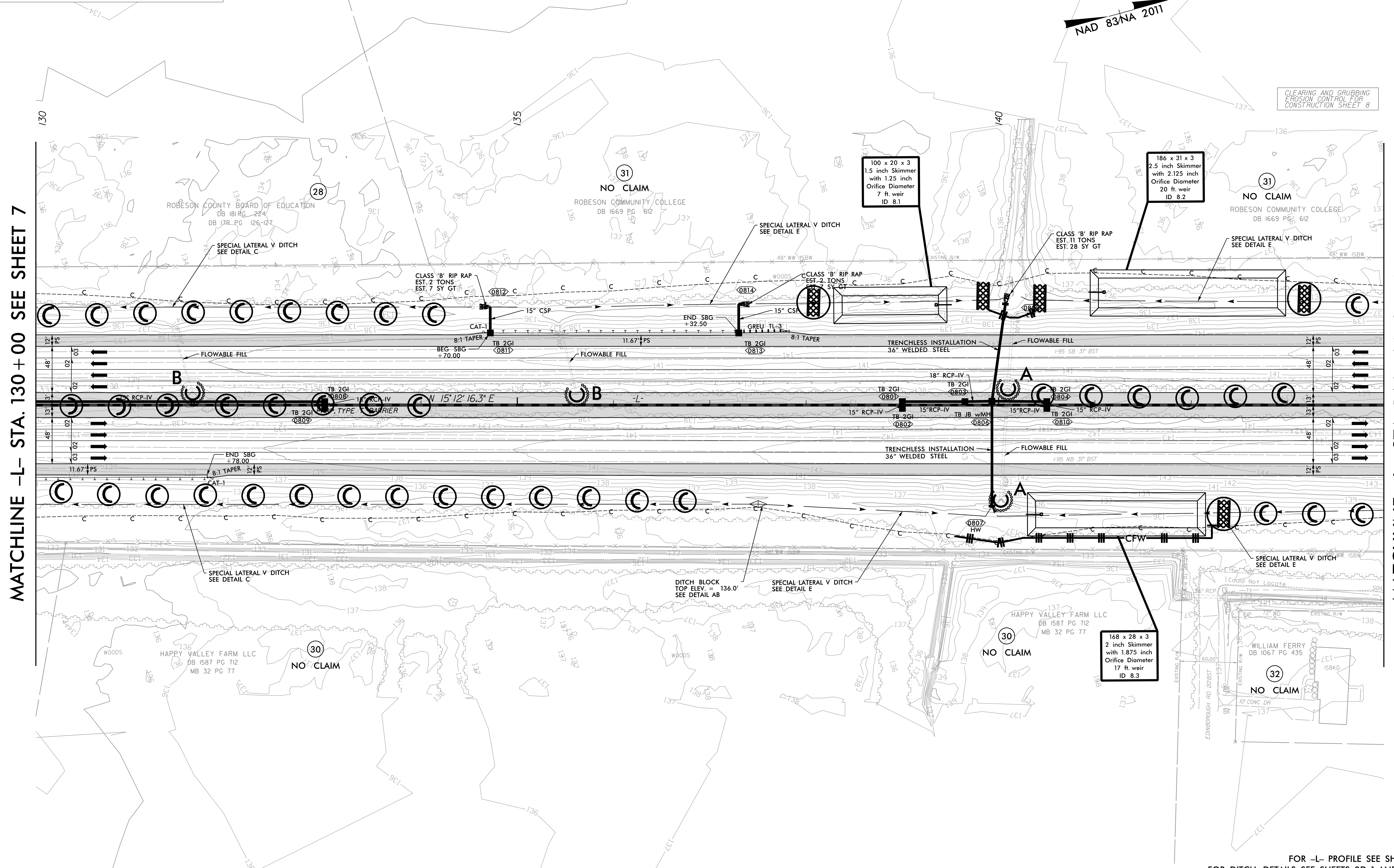
NC License # F-1333

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8



FOR -L- PROFILE SEE SHEET 45
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

4/7/2022
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8/17/99

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

NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE:
CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES".SEE EC-3.

NOTE:
PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-9/CONST.9
R/W SHEET NO.	

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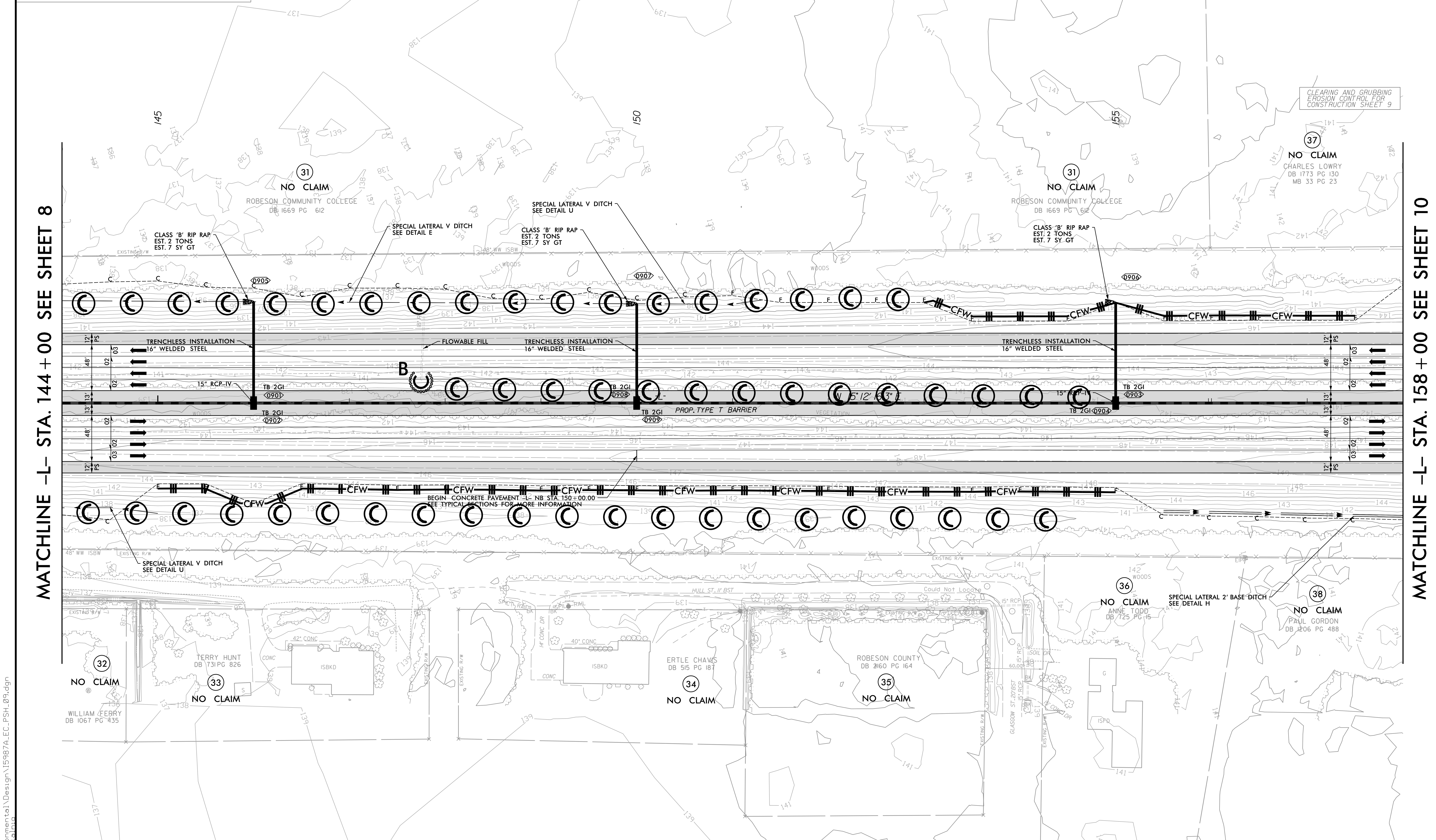

FOR -L- PROFILE SEE SHEET 46
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

4/7/2022
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P: 704.537.7300
www.NV5.com
NC License # F-3333

8/17/99

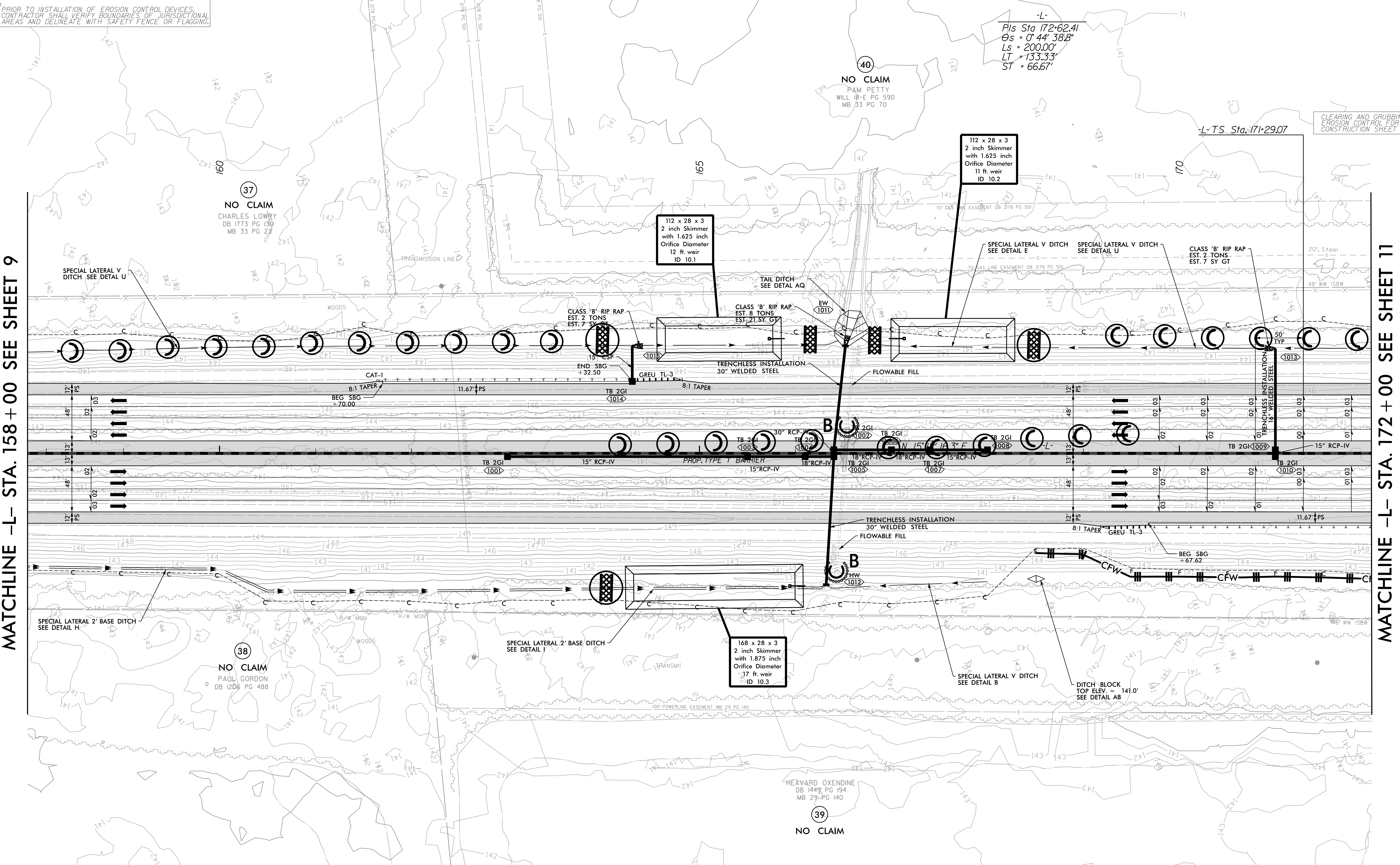
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES", SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.



FOR -L- PROFILE SEE SHEET 47
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

4/7/2022
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NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE:
CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES", SEE EC-3.

NOTE:
PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-11/CONSTJI
R/W SHEET NO.	

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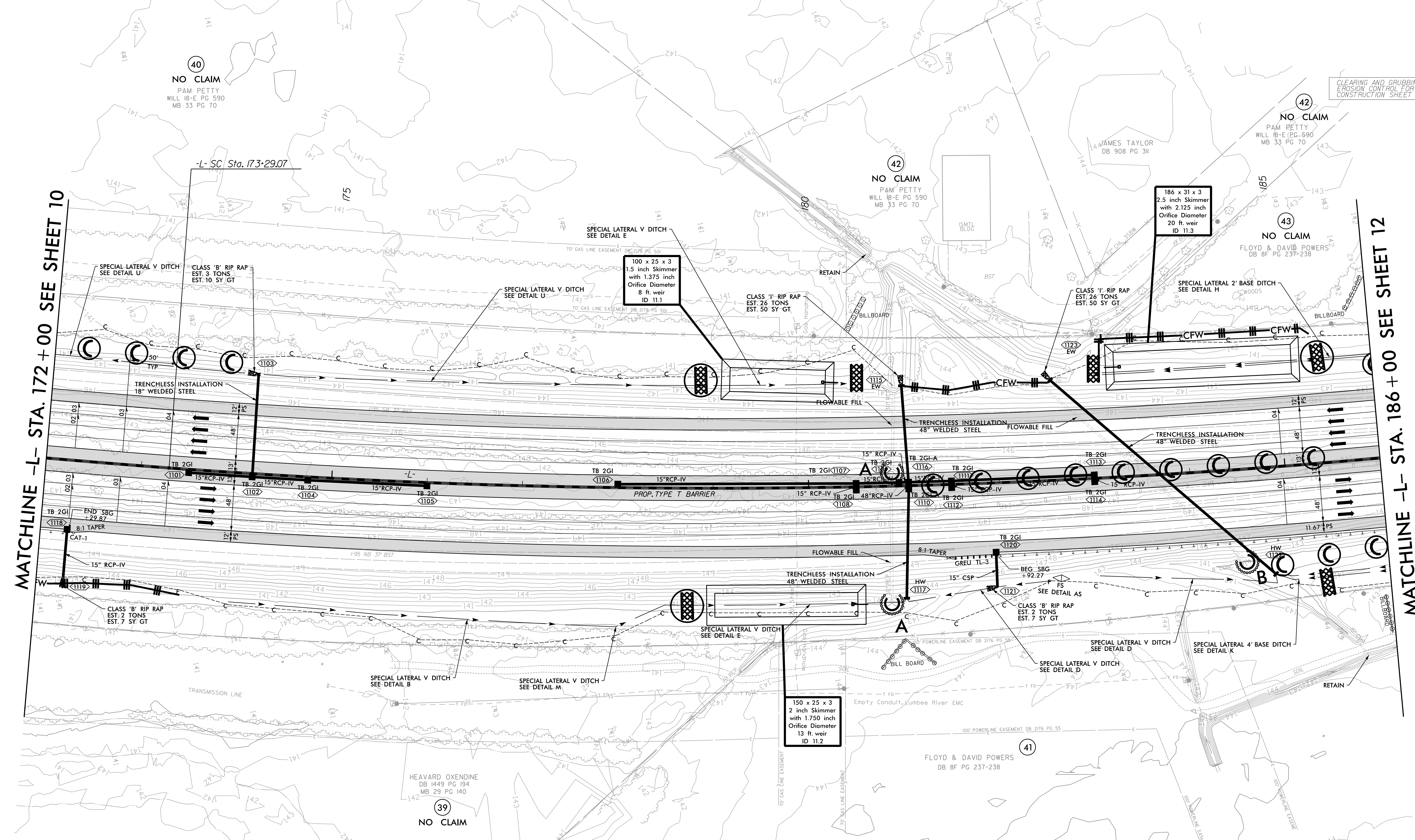
-L-

PIs Sta 172+62.41	PI Sta 180+96.63
Θs = 0° 44' 38.8"	Δ = 11° 23' 06.4" (LT)
Ls = 200.00'	D = 0° 44' 38.8"
LT = 133.33'	L = 1,530.05'
ST = 66.67'	T = 767.55'
	R = 7,700.00'
	DS = 75 mph
	e = .04
	RO = 200.00'



FOR -L- PROFILE SEE SHEET 48
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

4/7/2022
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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-12/CONST12
R/W SHEET NO.	

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CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-3333

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

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

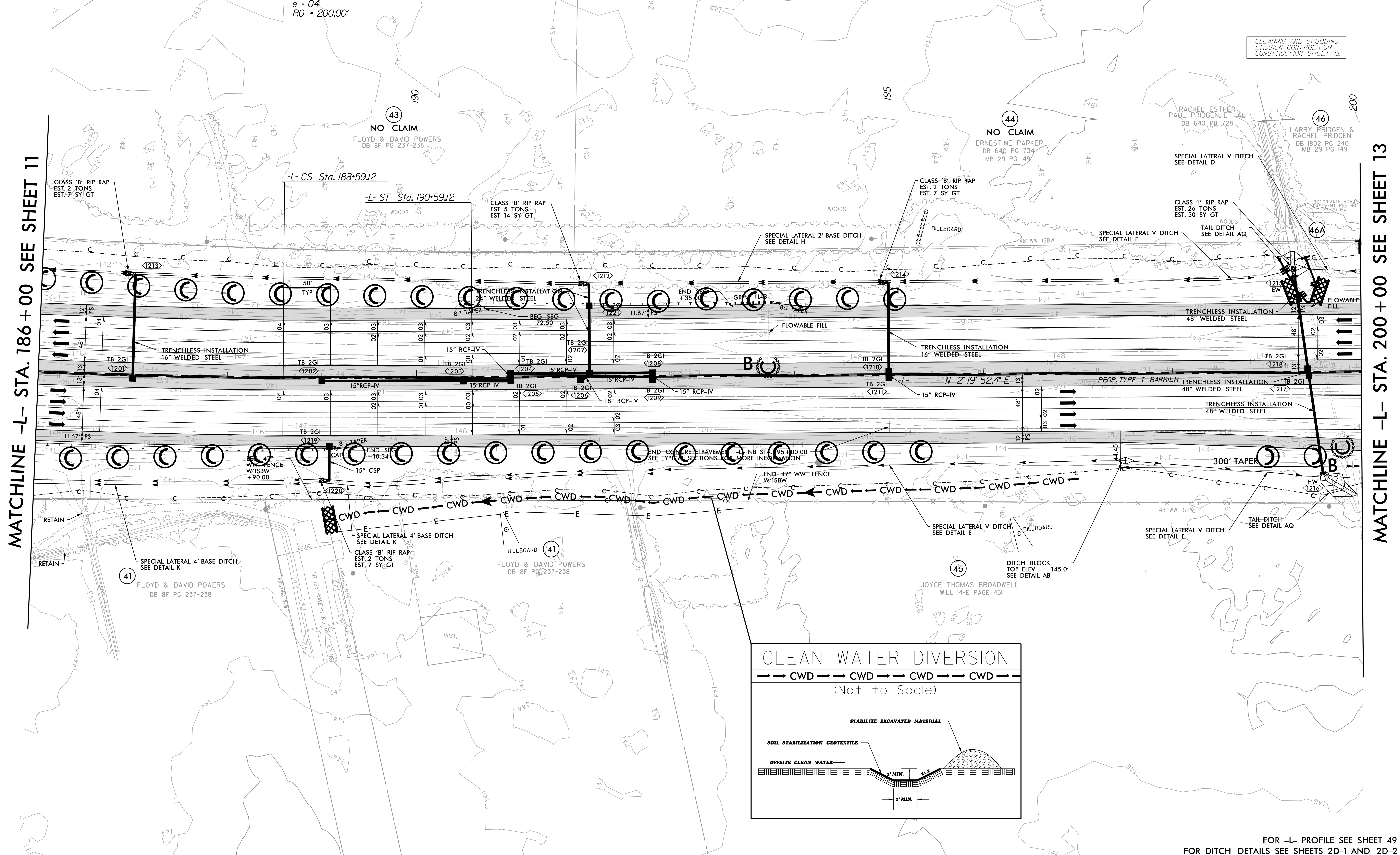
NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES", SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

-L-

PI Sta 180+96.63	PIs Sta 189+25.79
Δ = 11° 23' 06.4" (LT)	Θs = 0° 44' 38.8"
D = 0° 44' 38.8"	Ls = 200.00'
L = 1,530.05'	LT = 133.33'
T = 767.55'	ST = 66.67'
R = 7,700.00'	
DS = 75 mph	
e = .04	
RO = 200.00'	



FOR -L- PROFILE SEE SHEET 49
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

8/17/99

4/7/2022
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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-13/CONST13
R/W SHEET NO.	

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CHARLOTTE, NC 28227
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NC License # F-1333

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

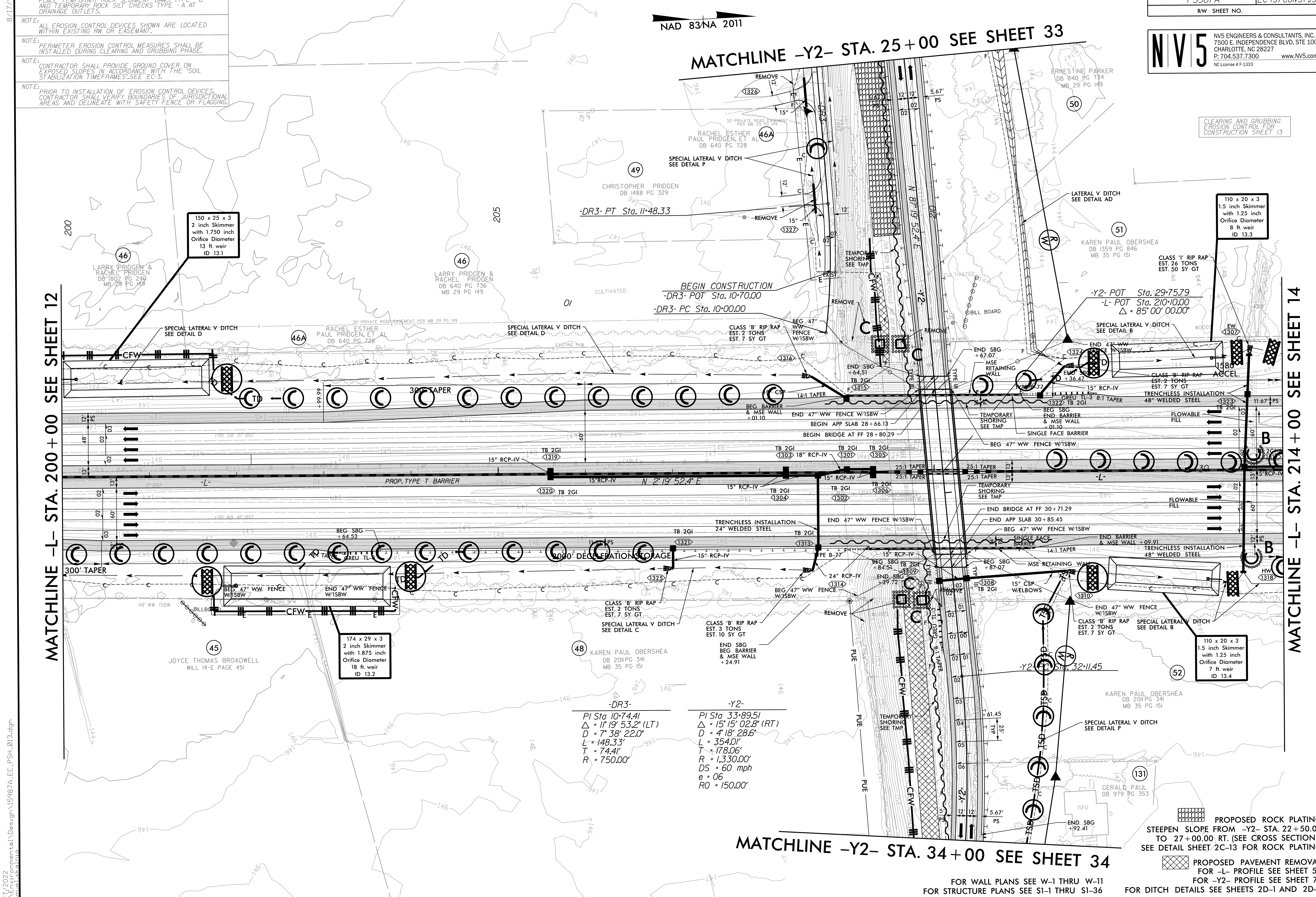
NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES".SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13



PROPOSED ROCK PLATING

STEEPEN SLOPE FROM -Y2- STA. 22+50.00 TO 27+00.00 RT. (SEE CROSS SECTIONS)

SEE DETAIL SHEET 2C-13 FOR ROCK PLATING

PROPOSED PAVEMENT REMOVAL

FOR -L- PROFILE SEE SHEET 50

FOR -Y2- PROFILE SEE SHEET 72

FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

FOR WALL PLANS SEE W-1 THRU W-11

FOR STRUCTURE PLANS SEE S1-1 THRU S1-36

8/17/99

6/7/2022
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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-14/CONST.14
R/W SHEET NO.	

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CHARLOTTE, NC 28227
P: 704.537.7300 www.NV5.com
NC License # F-1333

REVISIONS

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

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES",SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

NOTE: FOR TRENCHLESS PIPE INSTALLATIONS AT JURISDICTIONAL STREAMS.FOLLOW CONSTRUCTION SEQUENCE FOR TRENCHLESS INSTALLATION ON SHEET EC-2.

NAD 83/NA 2011

-WSRPA-		
PIs Sta 11+00.01	PI Sta 12+56.67	PIs Sta 14+13.07
Θs = 2° 31' 39.9"	Δ = 7° 10' 51.1" (RT)	Θs = 2° 31' 39.9"
Ls = 150.00'	D = 3° 22' 13.2"	Ls = 150.00'
LT = 100.01'	L = 213.06'	LT = 100.01'
ST = 50.01'	T = 106.67'	ST = 50.01'
	R = 1,700.00'	
	DS = 50 mph	
	e = 06	
	R0 = 150.00'	

-WSRPB-		
PIs Sta 11+00.01	PI Sta 12+57.77	PIs Sta 14+15.25
Θs = 2° 31' 39.9"	Δ = 7° 15' 16.1" (LT)	Θs = 2° 31' 39.9"
Ls = 150.00'	D = 3° 22' 13.2"	Ls = 150.00'
LT = 100.01'	L = 215.24'	LT = 100.01'
ST = 50.01'	T = 107.77'	ST = 50.01'
	R = 1,700.00'	
	DS = 50 mph	
	e = 06	
	R0 = 150.00'	

-WSRPC-		
PIs Sta 11+00.01	PI Sta 12+58.66	PIs Sta 14+17.03
Θs = 2° 31' 39.9"	Δ = 7° 18' 51.4" (RT)	Θs = 2° 31' 39.9"
Ls = 150.00'	D = 3° 22' 13.2"	Ls = 150.00'
LT = 100.01'	L = 217.02'	LT = 100.01'
ST = 50.01'	T = 108.66'	ST = 50.01'
	R = 1,700.00'	
	DS = 50 mph	
	e = 06	
	R0 = 150.00'	

-WSRPD-		
PIs Sta 11+00.01	PI Sta 12+47.33	PIs Sta 13+94.45
Θs = 2° 31' 39.9"	Δ = 6° 33' 12.1" (LT)	Θs = 2° 31' 39.9"
Ls = 150.00'	D = 3° 22' 13.2"	Ls = 150.00'
LT = 100.01'	L = 194.44'	LT = 100.01'
ST = 50.01'	T = 97.33'	ST = 50.01'
	R = 1,700.00'	
	DS = 50 mph	
	e = 06	
	R0 = 150.00'	

CONCRETE PAVEMENT FOR WEIGH STATION
RAMPS BEGINS AT BACK OF GORE
SEE TYPICAL SECTIONS FOR MORE INFORMATION

FOR -L- PROFILE SEE SHEET 51 - 53
FOR -WSRPA- PROFILE SEE SHEET 82
FOR -WSRPB- PROFILE SEE SHEET 82
FOR -WSRPC- PROFILE SEE SHEET 83
FOR -WSRPD- PROFILE SEE SHEET 83
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2
FOR CULVERT PLANS SEE C20-1 THRU C20-8

GRAPHIC SCALE
50 25 0 50 100
PLANS

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-15/CONSTJ5
R/W SHEET NO.	

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8/17/99

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

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

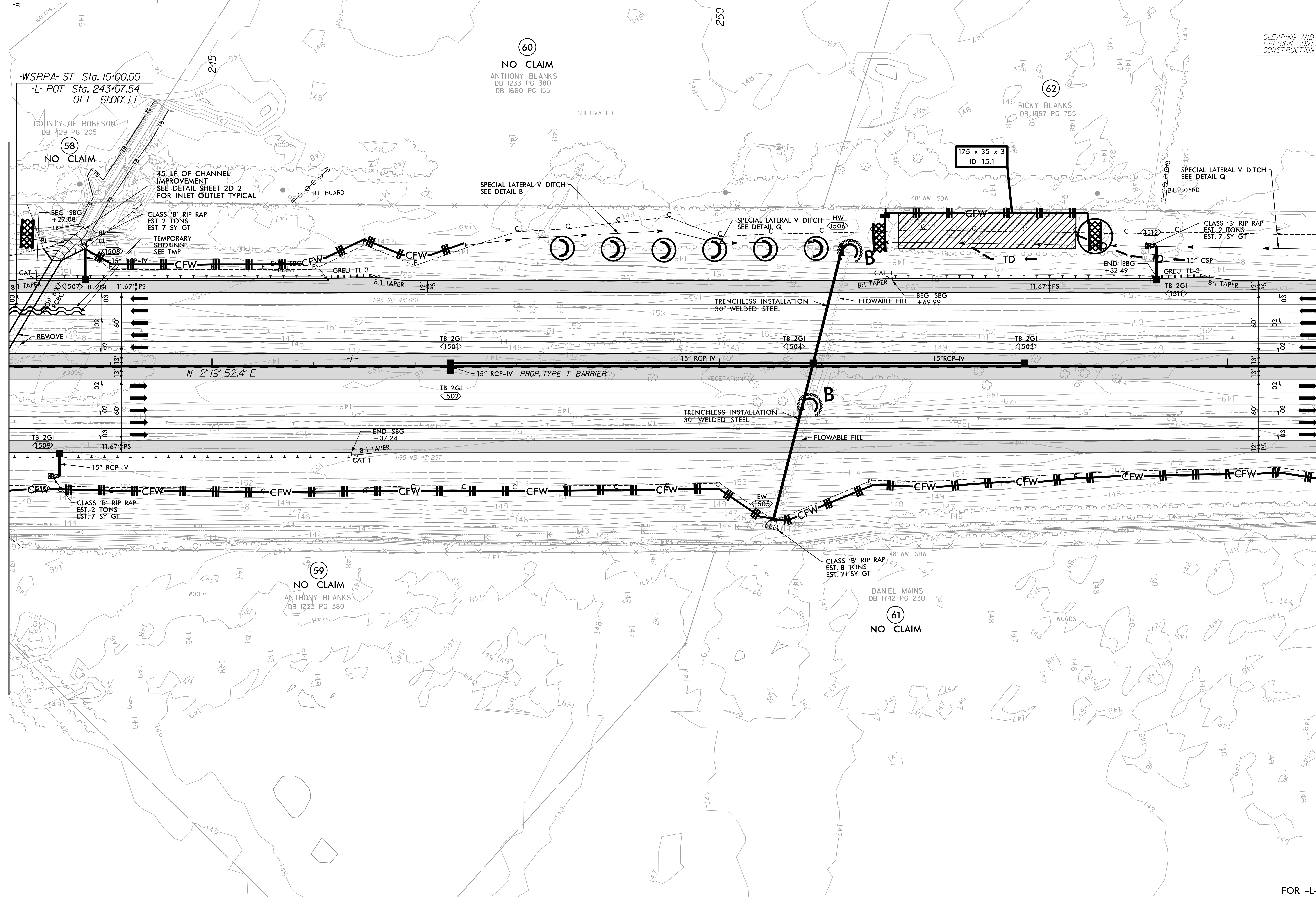
NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES",SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

NAD 83/NA 2011

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15

MATCHLINE -L- STA. 243+00 SEE SHEET 14



MATCHLINE -L- STA. 256+00 SEE SHEET 16

FOR -L- PROFILE SEE SHEET 53
FOR -WSRPA- PROFILE SEE SHEET 82
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2
FOR CULVERT PLANS SEE C2-1 THRU C2-8

4/7/2022
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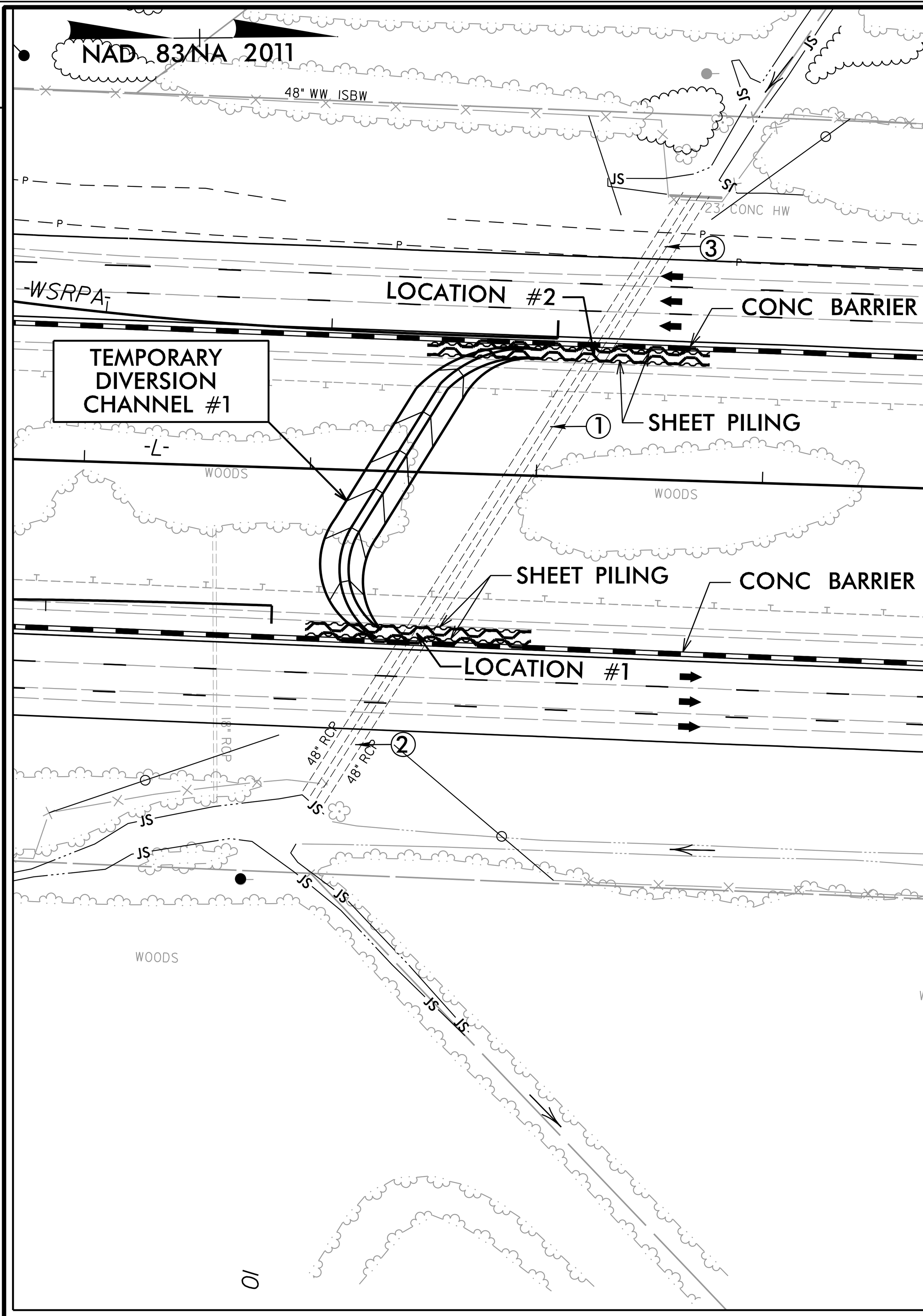
PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-I5A/CONSTJ5
R/W SHEET NO.	



CONSTRUCTION SEQUENCE
STA. 242+85 –L–
FOR PROPOSED 8′ X 7′ RCBC

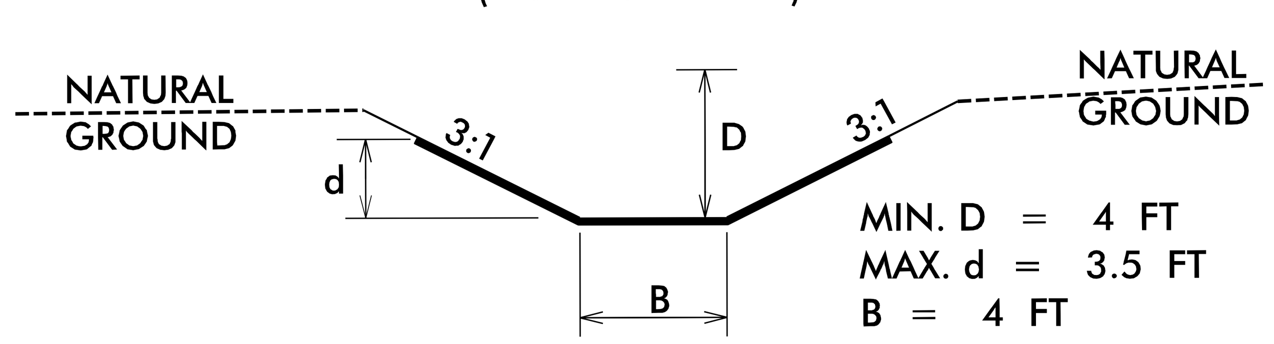
EXECUTE ALL PHASES OF CONSTRUCTION IN A CONTINUOUS MANNER, AS MUCH AS PERMITTED BY TRAFFIC MANAGEMENT PLAN PHASING.

PHASE I

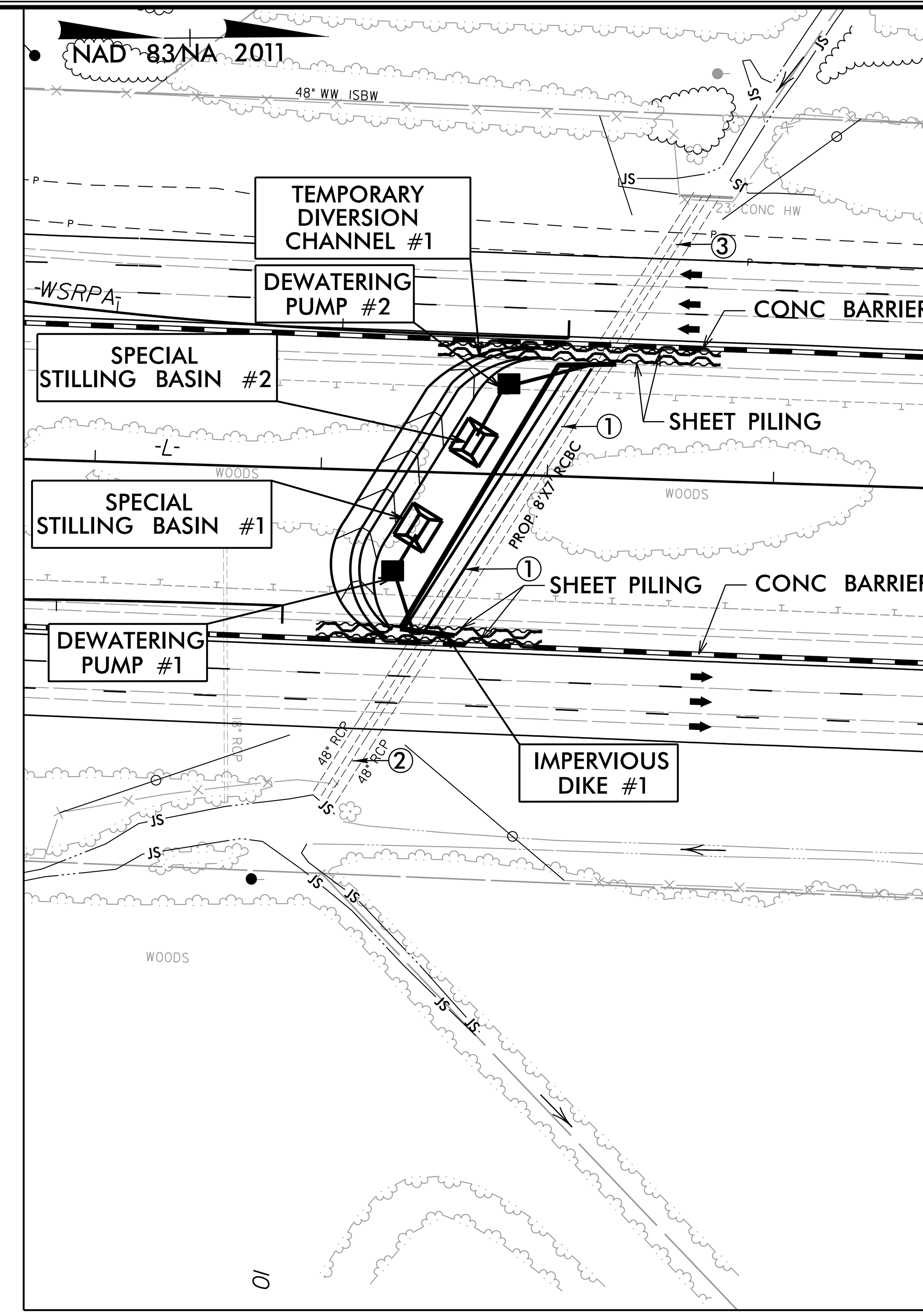
1. INSTALL SHEET PILING AS SHOWN ON THE TRAFFIC CONTROL PLANS.
2. CONSTRUCT TEMPORARY DIVERSION CHANNEL #1 WHILE MAINTAINING FLOW IN THE EXISTING DUAL 48″ RCP.
3. BREAK OPEN BOTH EXISTING 48″ RCP AT LOCATIONS #1 AND #2 THE AREA BETWEEN THE SHEET PILING.
4. DIVERT FLOW INTO TEMPORARY DIVERSION CHANNEL #1.

TEMPORARY DIVERSION CHANNEL

(NOT TO SCALE)



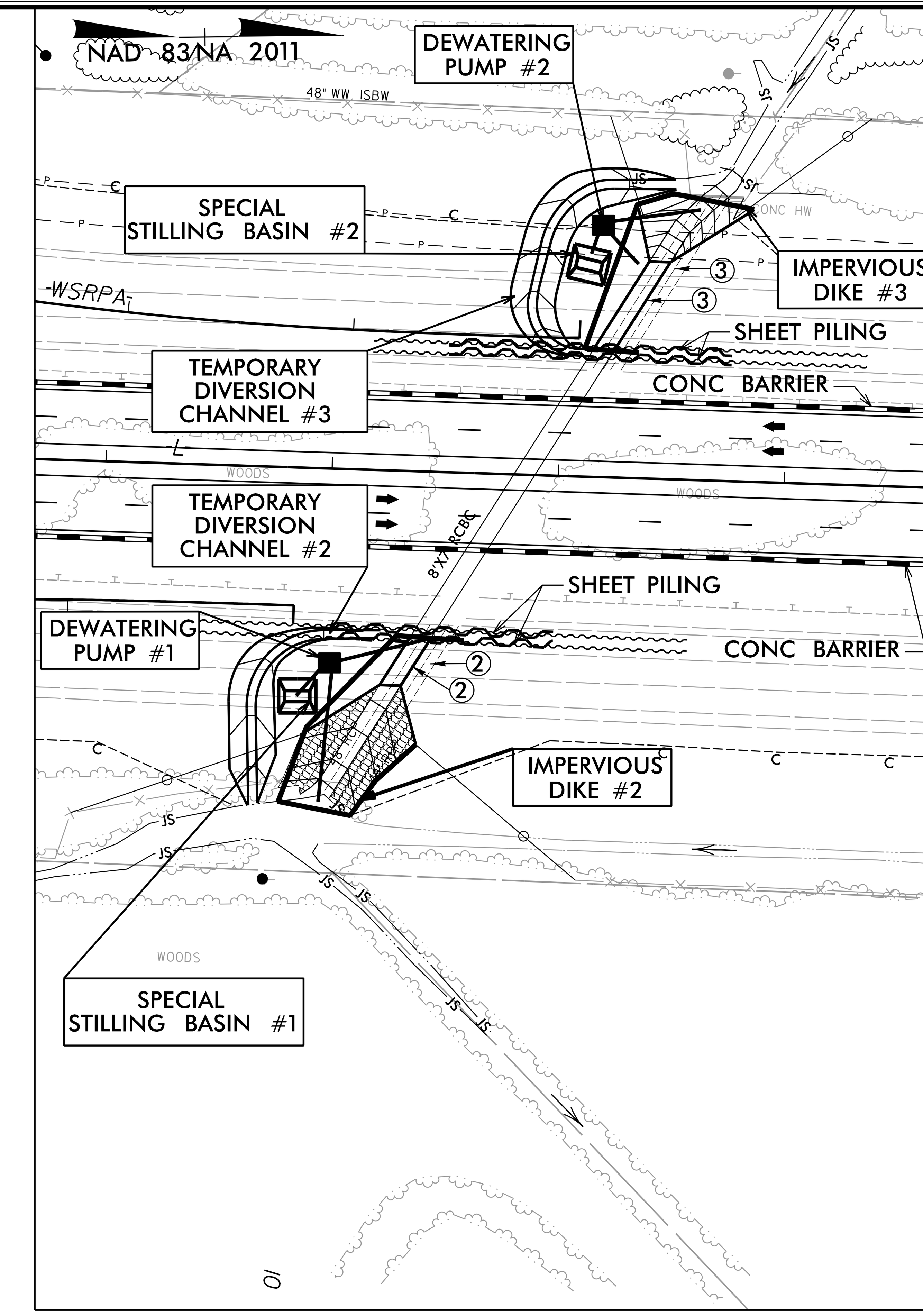
TYPE OF LINER = GEOTEXTILE FOR SOIL STABILIZATION



CONSTRUCTION SEQUENCE
STA. 242+85 –L–
FOR PROPOSED 8′ X 7′ RCBC

PHASE II

1. INSTALL SPECIAL STILLING BASINS #1 AND #2 AND DEWATERING PUMPS #1 AND #2 AND IMPERVIOUS DIKE #1. CONSTRUCT IMPERVIOUS DIKE AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
2. REMOVE THE SECTION #1 OF THE EXISTING DUAL 48″ RCP IN THE MEDIAN BETWEEN THE SHEET PILING.
3. MAINTAIN FLOW THROUGH THE CONSTRUCTION AREA UTILIZING THE REMAINING SECTIONS OF THE EXISTING DUAL 48″ RCP AND TEMPORARY DIVERSION CHANNEL #1.
4. CONSTRUCT SECTION #1 OF THE 8′X7′ RCBC AS SHOWN.



CONSTRUCTION SEQUENCE
STA. 242+85 –L–
FOR PROPOSED 8′ X 7′ RCBC

PHASE III

1. REMOVE TEMPORARY DIVERSION CHANNEL #1 AND IMPERVIOUS DIKE #1. RELOCATE THE SPECIAL STILLING BASINS AND DEWATERING PUMPS. DIVERT FLOW INTO THE NEWLY CONSTRUCTED SECTION OF THE 8′X7′ RCBC.
2. COMPLETE THE MEDIAN ROADWAY AND SHIFT TRAFFIC AS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. CONSTRUCT TEMPORARY DIVERSION CHANNELS #2 AND #3 WHILE MAINTAINING FLOW IN THE CONSTRUCTION AREA THROUGH SECTIONS #2 AND #3 OF THE EXISTING 48″ RCP AND THE NEWLY CONSTRUCTED 8′X7′ RCBC.
4. INSTALL IMPERVIOUS DIKES #2 AND #3. CONSTRUCT IMPERVIOUS DIKE AT AN ELEVATION TO OVERTOP DURING HIGH STREAM LEVELS.
5. REMOVE THE UPSTREAM HW AND THE TWO REMAINING SECTIONS OF THE EXISTING 48″ RCP.
6. CONSTRUCT SECTIONS #2 AND #3 OF THE 8′X7′ RCBC AND THE UPSTREAM AND DOWNSTREAM HW AND OUTLET CHANNEL AND INSTALL BANK STABILIZATION.
7. REMOVE IMPERVIOUS DIKES #2 AND #3 AND DIVERT FLOW INTO THE NEWLY COMPLETED SECTIONS OF THE 8′X7′ RCBC.
8. REMOVE TEMPORARY DIVERSION CHANNELS # 2 AND #3.
9. REMOVE THE SPECIAL STILLING BASINS AND DEWATERING PUMPS. STABILIZE ALL DISTURBED AREAS.
10. COMPLETE ROADWAY.
11. SHIFT ALL TRAFFIC TO CONFIGURATION SHOWN ON THE TRAFFIC CONTROL PLANS.

REVISIONS

8/17/99

4/7/2022
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PROJECT REFERENCE NO.	SHEET NO.
I-5987A	EC-16/CONST.16
R/W SHEET NO.	

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NC License # F-1333

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

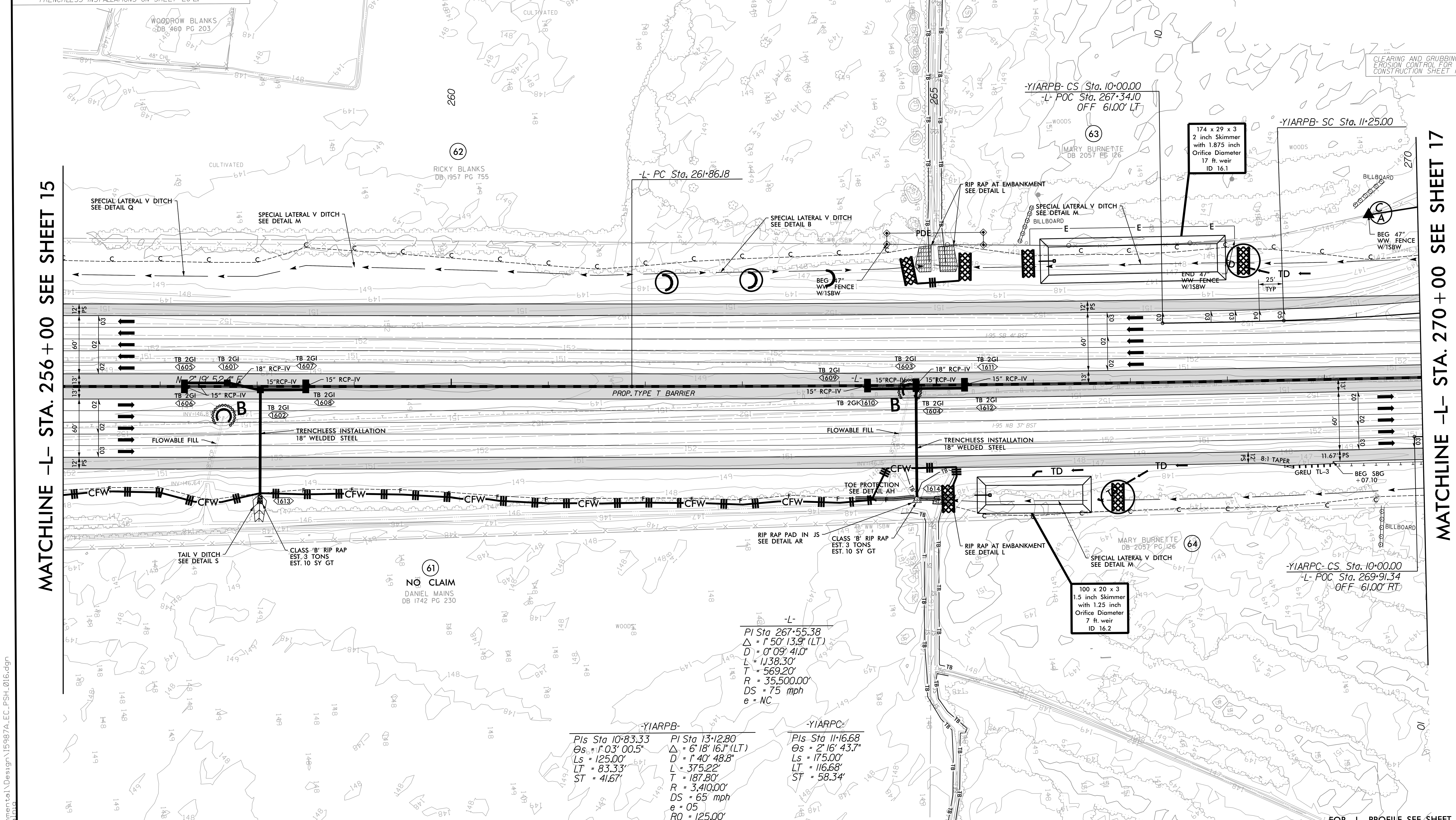
NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING RW OR EASEMANT.

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

NOTE: CONTRACTOR SHALL PROVIDE GROUND COVER ON EXPOSED SLOPES IN ACCORDANCE WITH THE "SOIL STABILIZATION TIMEFRAMES",SEE EC-3.

NOTE: PRIOR TO INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL VERIFY BOUNDARIES OF JURISDICTIONAL AREAS AND DELINEATE WITH SAFETY FENCE OR FLAGGING.

NOTE: FOR TRENCHLESS PIPE INSTALLATIONS AT JURISDICTIONAL STREAMS. FOLLOW CONSTRUCTION SEQUENCE FOR TRENCHLESS INSTALLATIONS ON SHEET EC-2.



-L-
PI Sta 267+55.38
Δ = 1° 50' 13.9" (LT)
D = 0° 09' 41.0"
L = 1,138.30'
T = 569.20'
R = 35,500.00'
DS = 75 mph
e = NC

-Y1ARPB-
PIs Sta 10+83.33
Θs = 1° 03' 00.5"
Ls = 125.00'
LT = 83.33'
ST = 41.67'

PI Sta 13+12.80
Δ = 6° 18' 16.1" (LT)
D = 1° 40' 48.8"
L = 375.22'
T = 187.80'
R = 3,410.00'
DS = 65 mph
e = 05
RO = 125.00'

-Y1ARPC-
PIs Sta 11+16.68
Θs = 2° 16' 43.7"
Ls = 175.00'
LT = 116.68'
ST = 58.34'

FOR -L- PROFILE SEE SHEET 54
FOR -Y1ARPB- PROFILE SEE SHEET 85
FOR -Y1ARPC- PROFILE SEE SHEET 86
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

8/17/99
4/7/2022
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