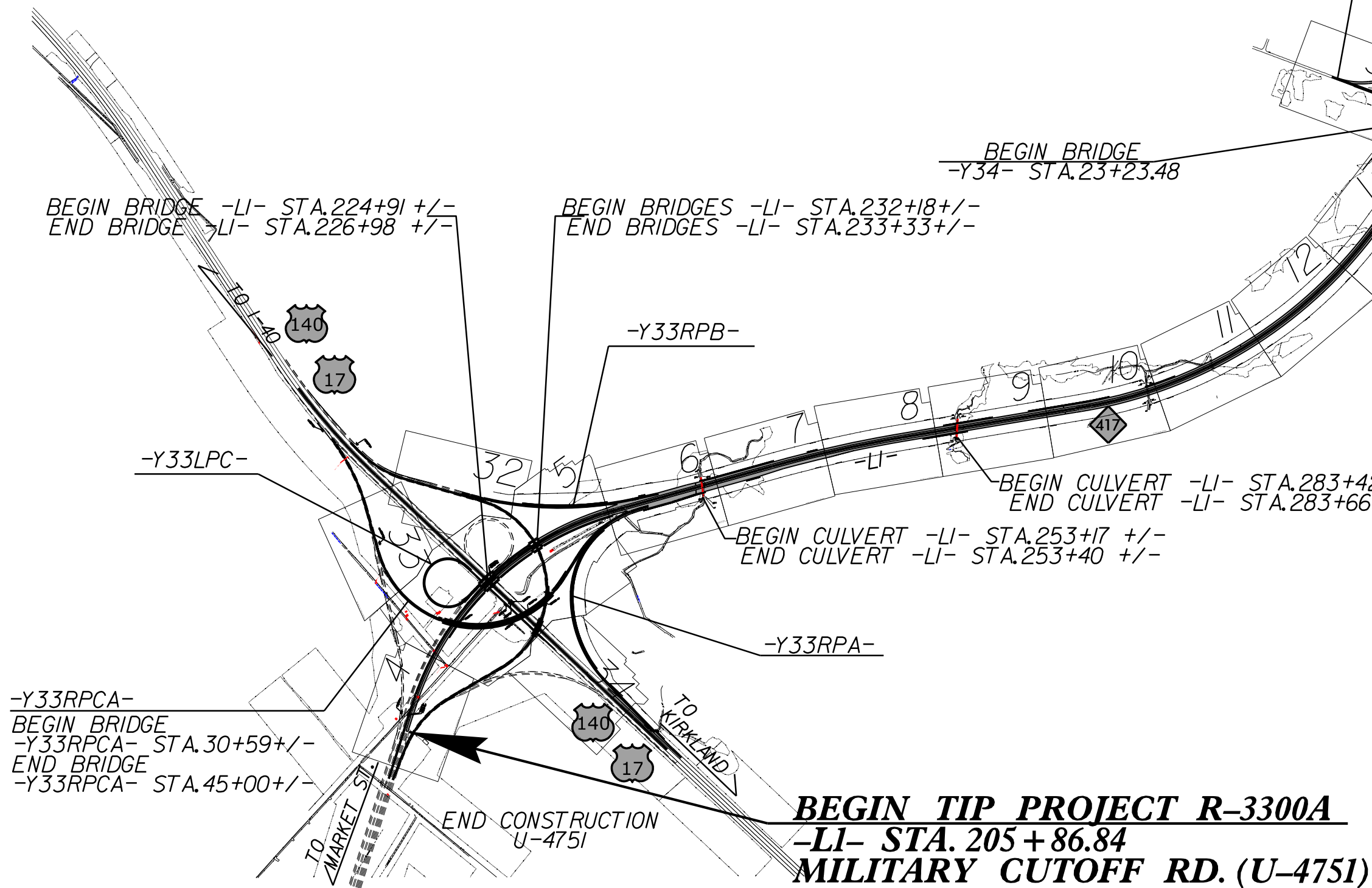
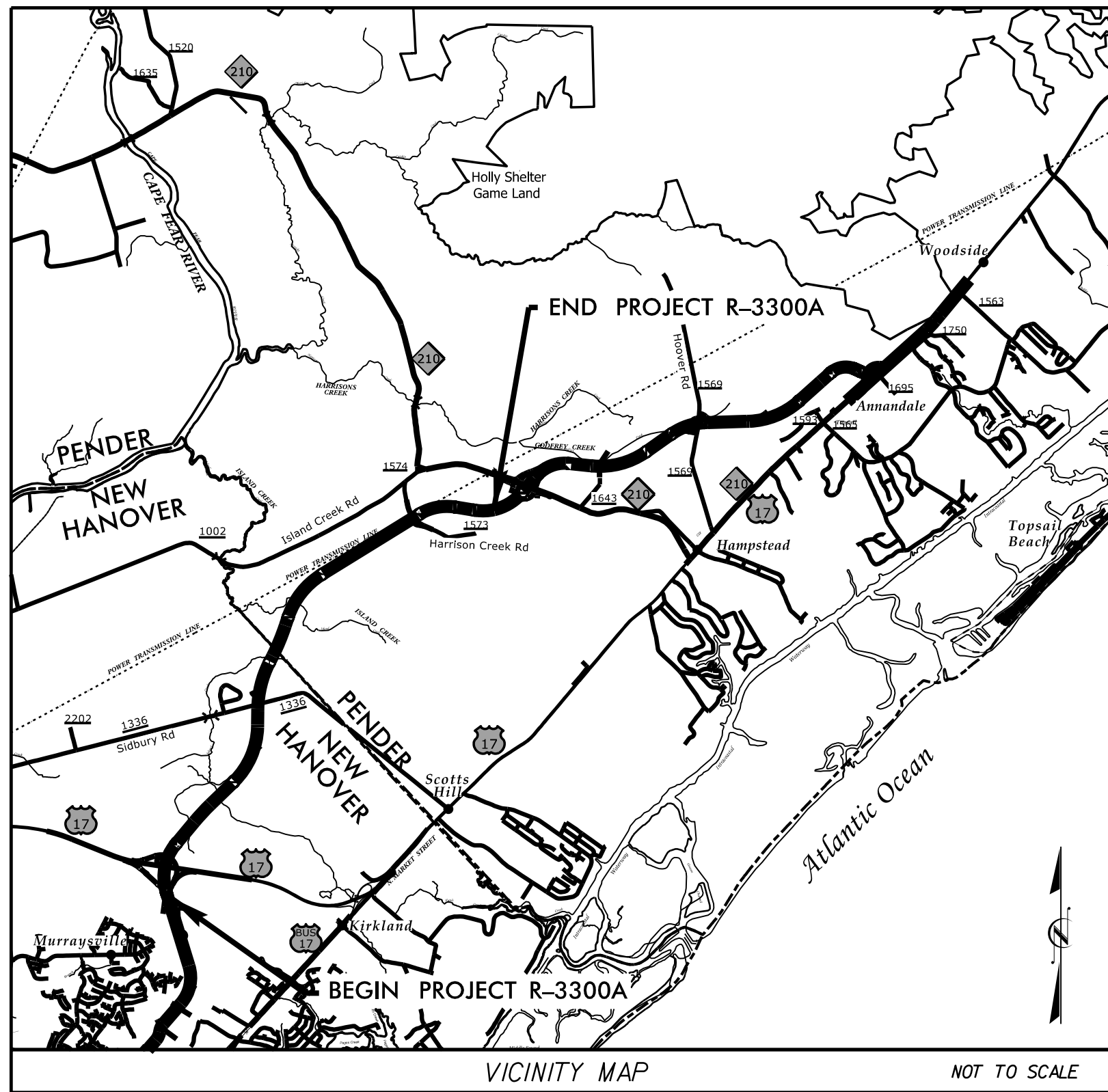


TIP PROJECT: R-3300A



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

NEW HANOVER & PENDER COUNTIES

LOCATION: NC 417 (HAMPSTEAD BYPASS) FROM WILMINGTON BYPASS TO SOUTH OF NC 210
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES, AND CULVERTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3300A	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

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

THE OUTSIDE BUFFER, WETLAND,
OR WATER BOUNDARY SHALL BE
CLEARLY MARKED BY HIGHLY
VISIBLE FENCING
(ORANGE SAFETY FENCE)

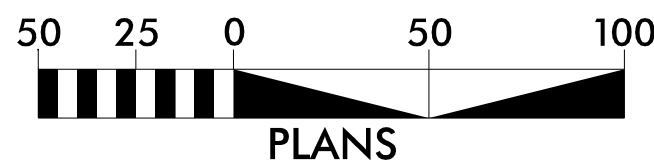
MATting FOR EROSION CONTROL
(SLOPES) SHOWN ON FINAL PHASE
PLANS

LEVEL III CERTIFIED BY:
KAREN HEFNER, PE
CERTIFICATION NUMBER: 3824
ISSUED: MARCH 6, 2025

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

-CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY MODIFIED METHOD III.
-THIS IS CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

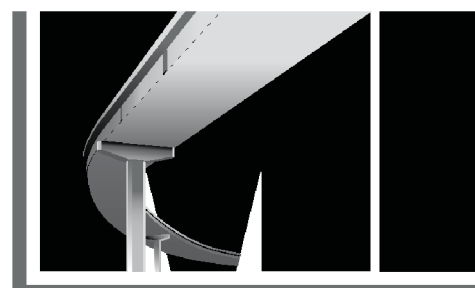
GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE NCG 010000 GENERAL
STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH
CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION
OF ENERGY, MINERAL, AND LAND RESOURCES.

Dewberry

2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929



Prepared in the Office of:

Dewberry

2610 WYCLIFF ROAD
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RALEIGH, NC 27607
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NC COA No. F-0929



MI ENGINEERING, PLLC

1011 SCHAU DR, SUITE 100
RALEIGH, NC 27606
(919) 851-6666
FIRM PE NUMBER: P-0671

Designed by:

ALLISON THOMPSON, PE 4282

KAREN HEFNER, PE 3824

NAME

LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C.
Department of Transportation - Raleigh, N. C., dated January 2024
and the latest revision thereto are applicable to this project and by
reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
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		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-2A
R/W SHEET NO.	

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT³), 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.

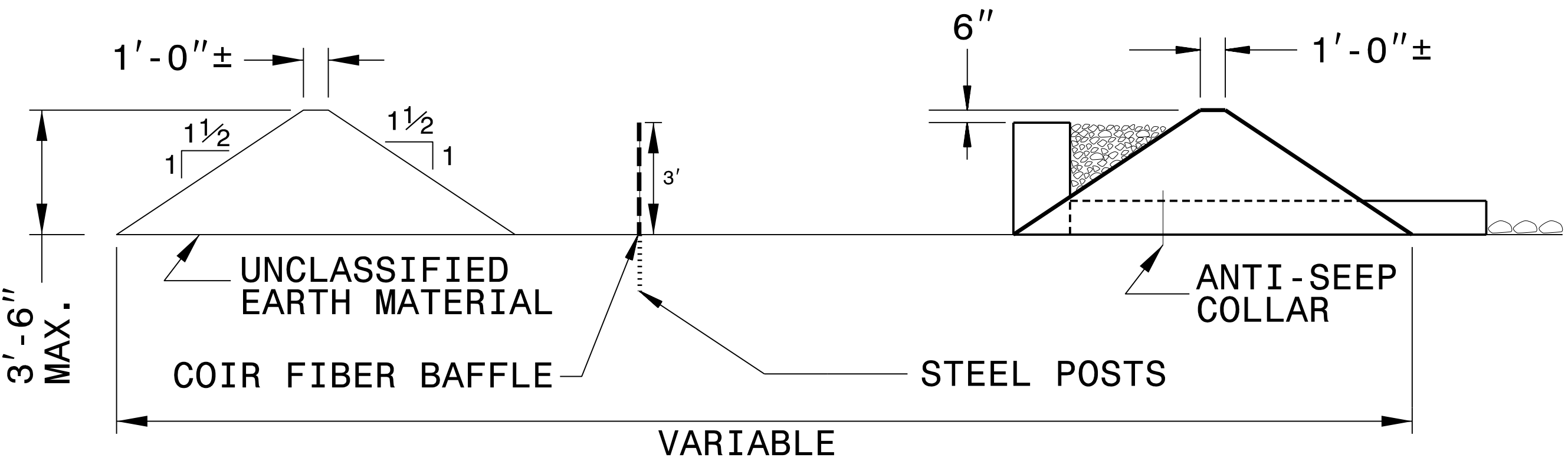
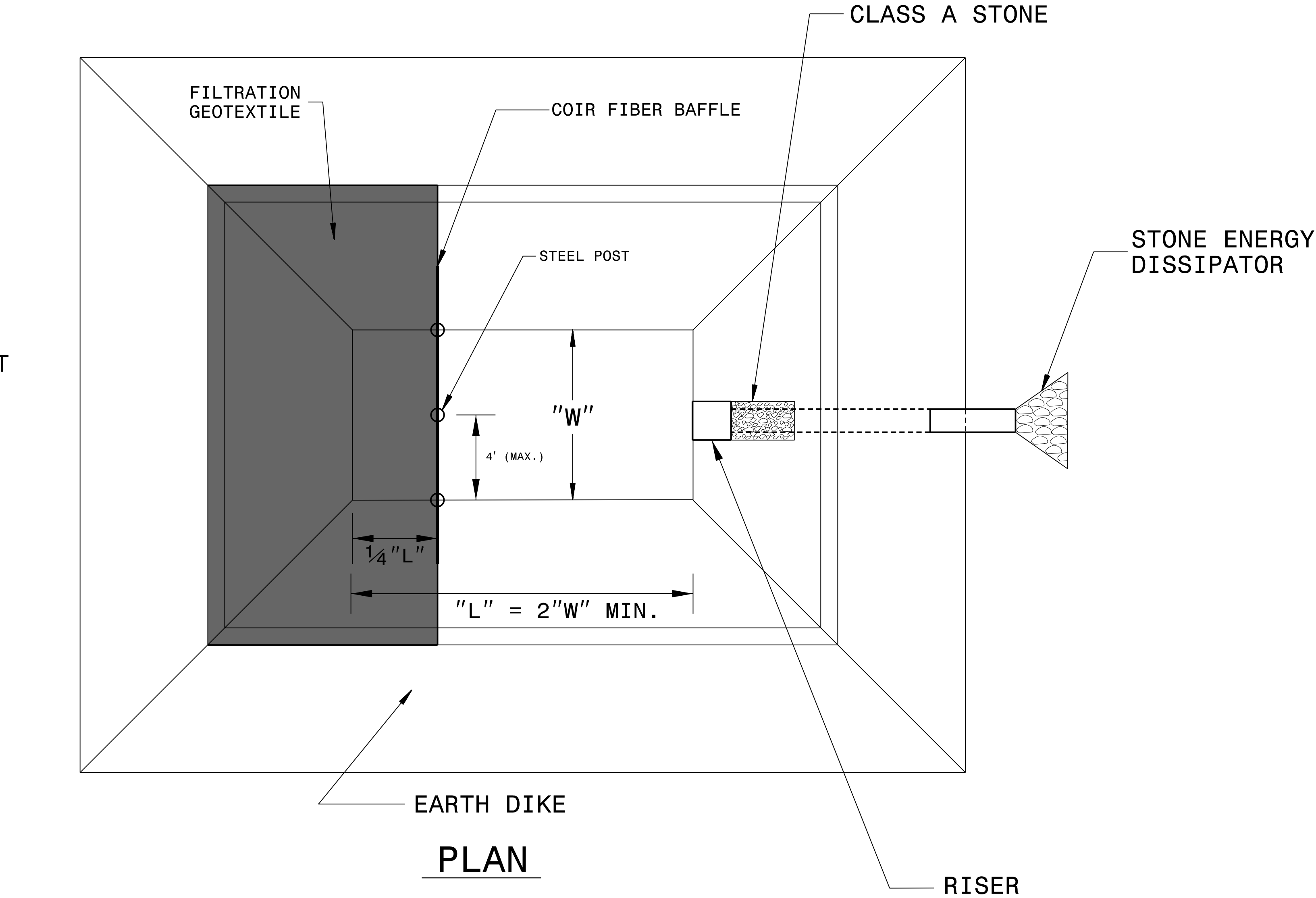
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

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.

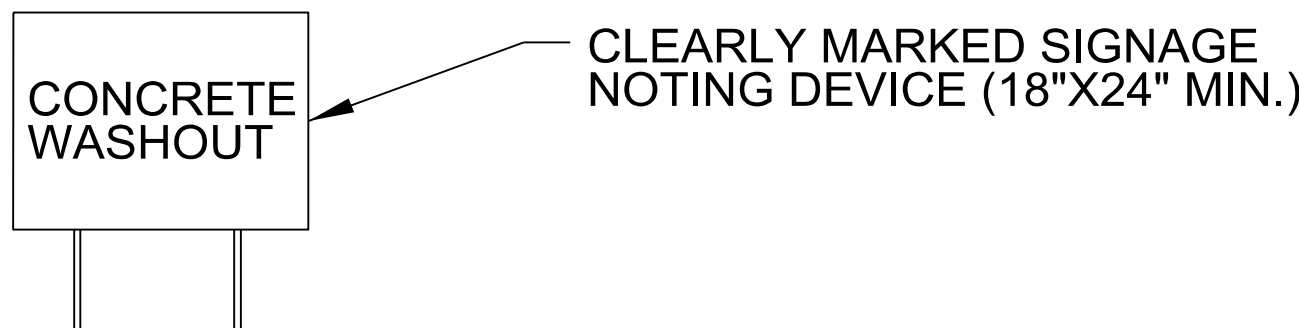
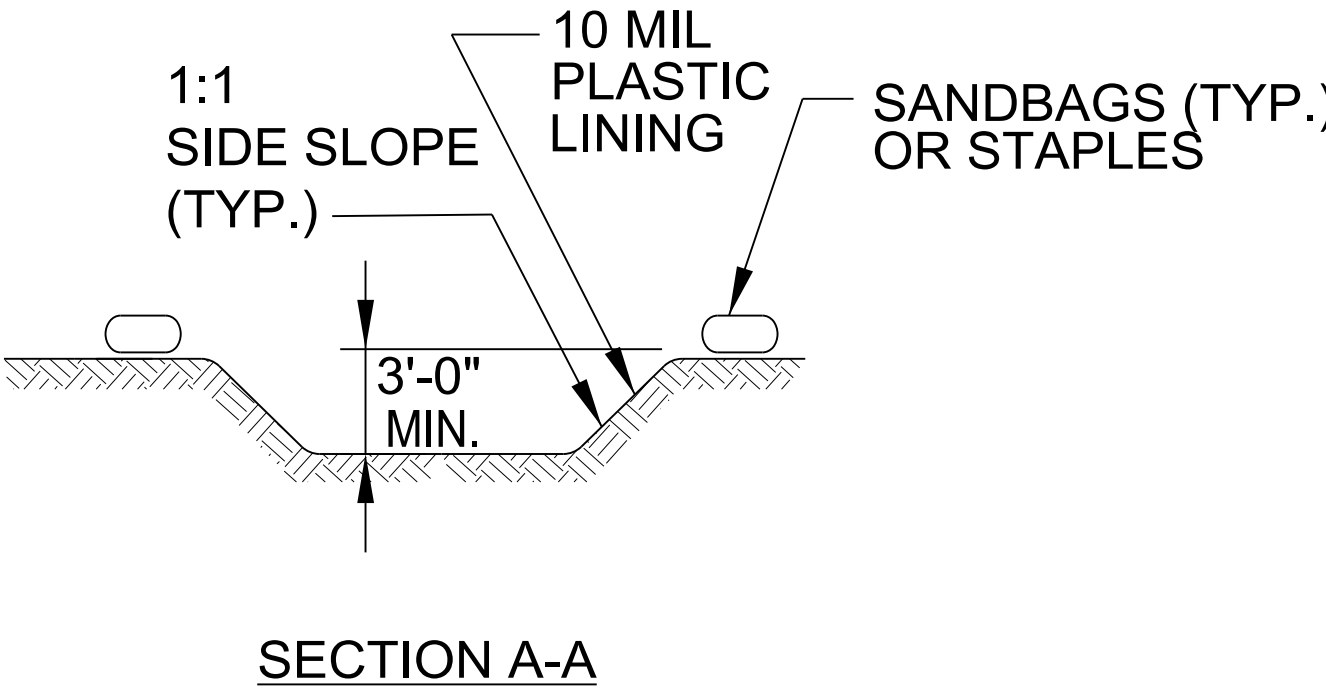
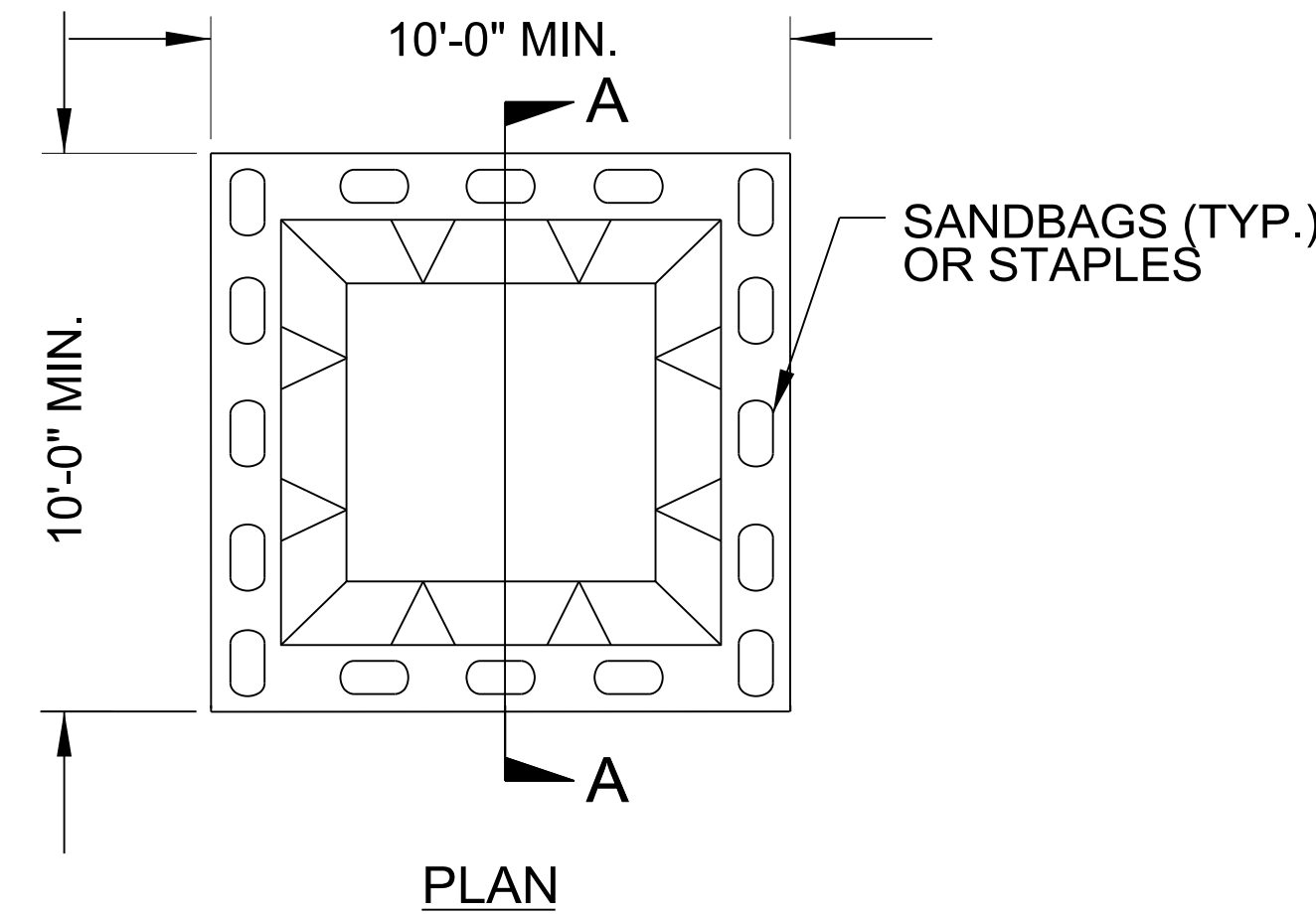
PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



NOT TO SCALE

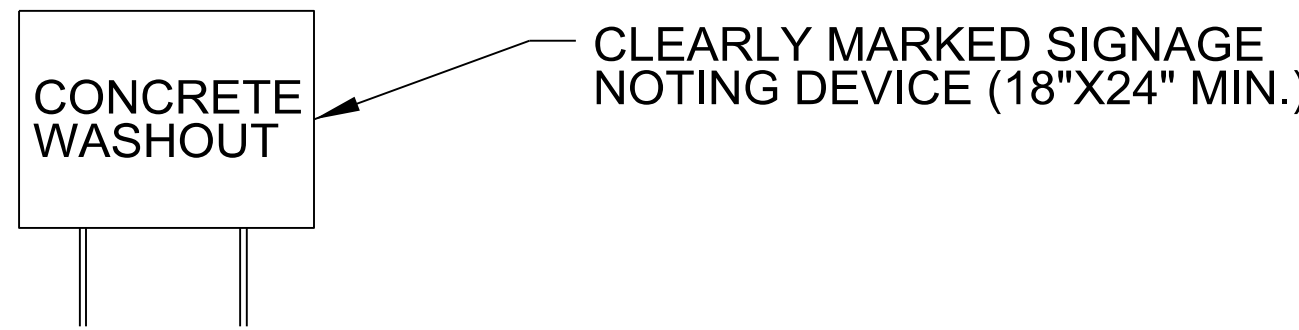
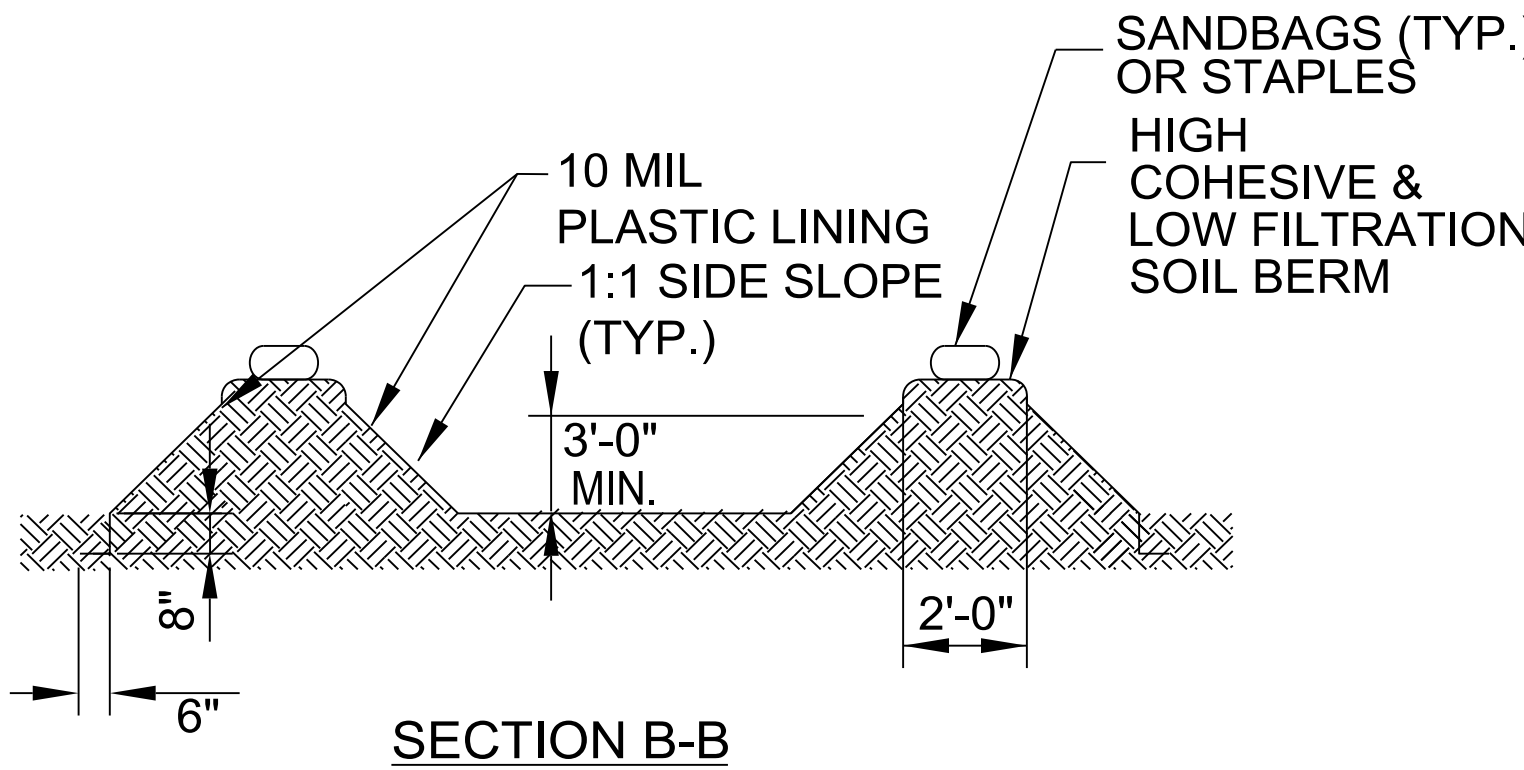
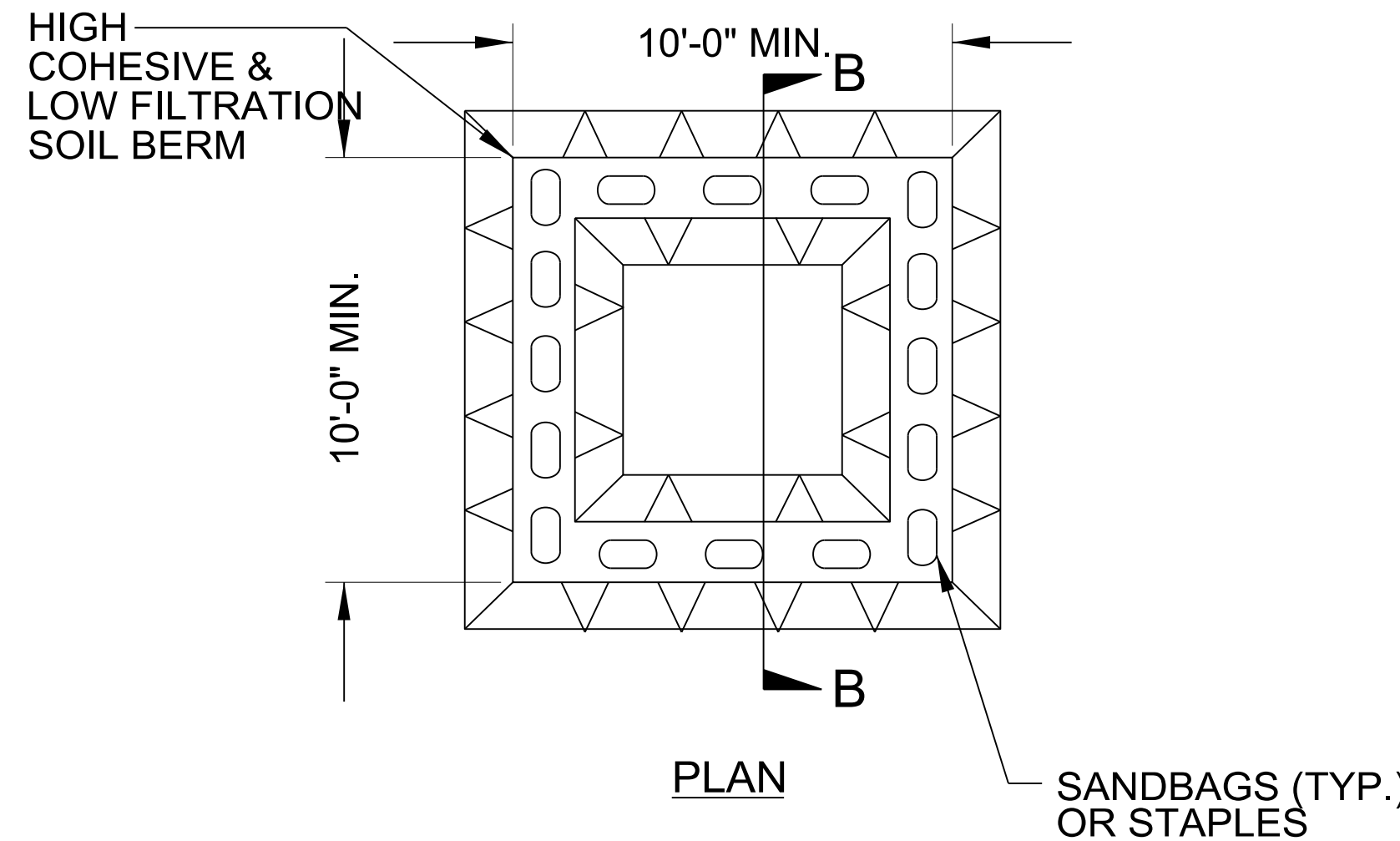
PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-2B
R/W SHEET NO.	

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

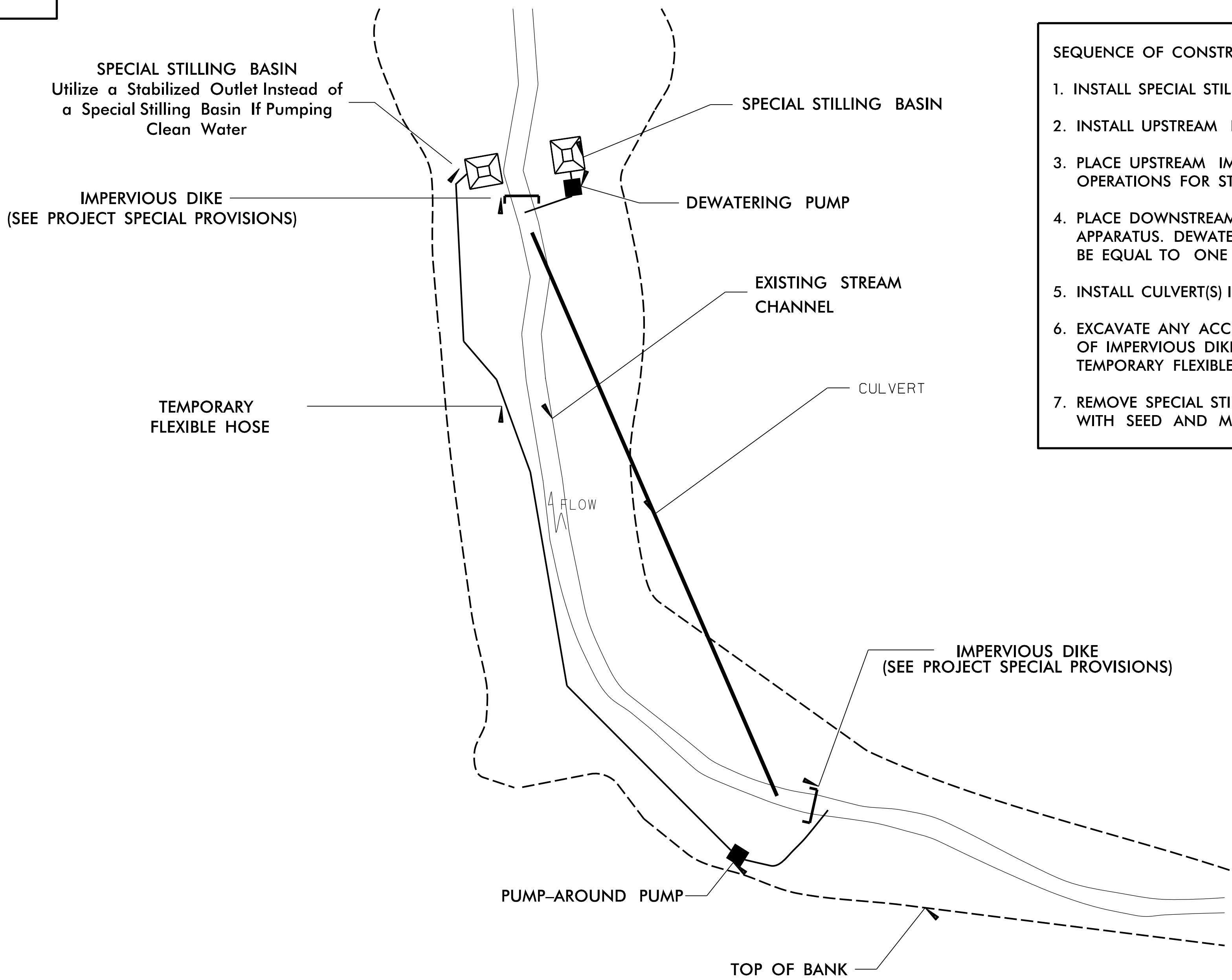


ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

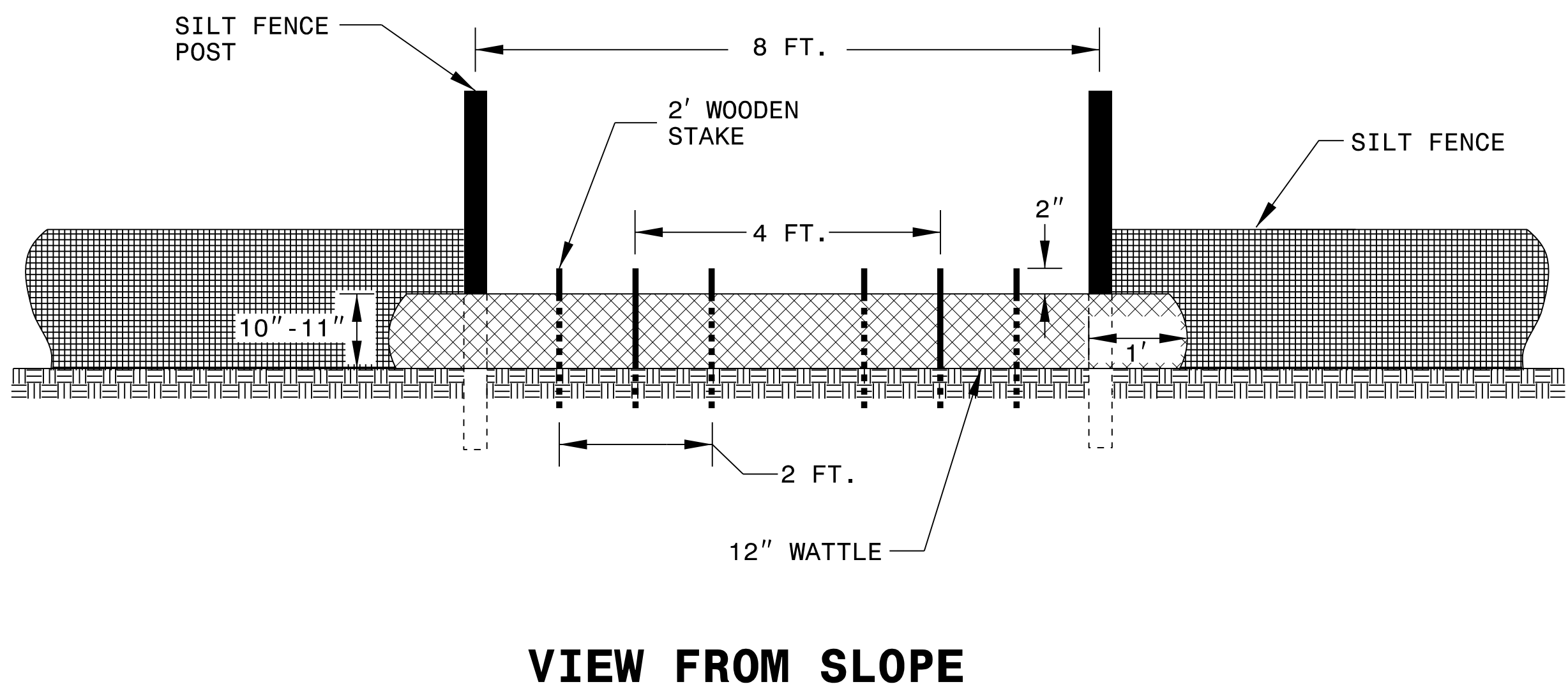
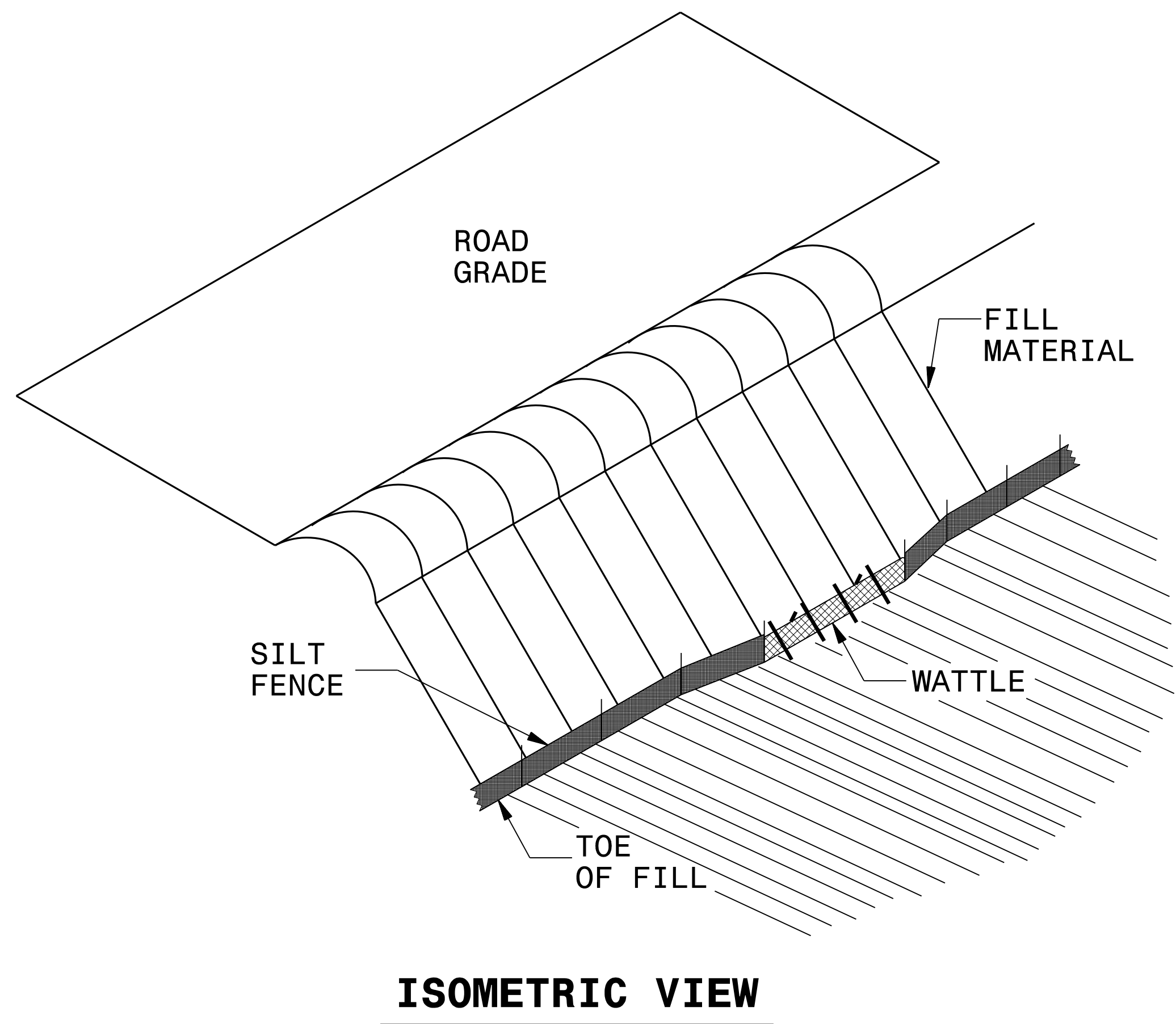
EXAMPLE OF PUMP-AROUND OPERATION

- 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 and quantity to dewater the work area and maintain stream bypass flow.



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

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



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.

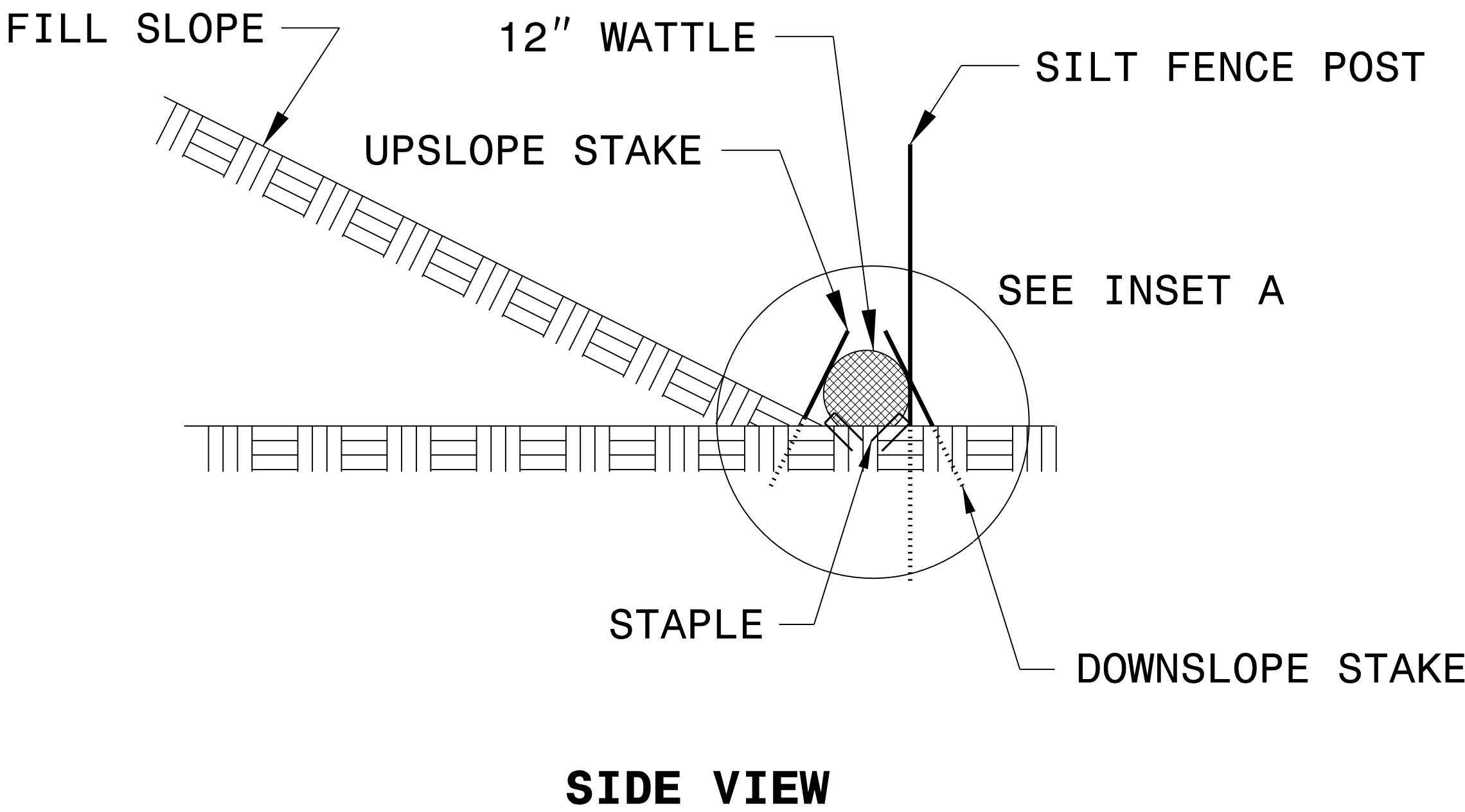
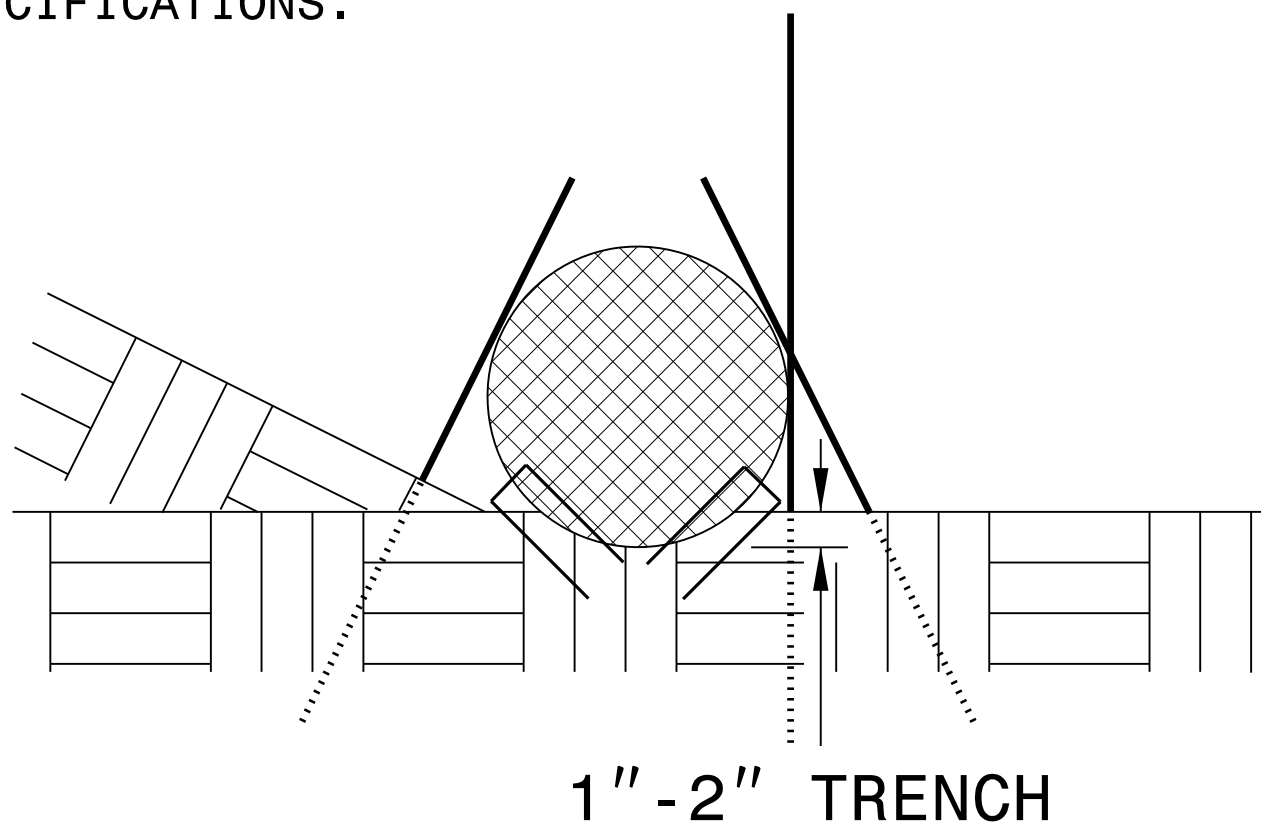
PROVIDE STAPLES MADE OF 11 GUAGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.

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



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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50’ IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

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)
5	-L1-	223+00	224+90	RT	1,200
5	-L1-	227+00	232+13	RT	5,035
5	-L1-	233+31	241+00	RT	5,715
5	-L1-	232+00	232+30	LT	1,340
5	-L1-	233+35	239+50	LT	8,225
5, 34	-Y33RPA-	9+00	33+50	RT	14,500
5, 6, 32	-Y33RPB-	10+00	23+50	RT	6,600
5	-Y33RPC-	5+00	15+00	RT	9,000
5	-Y33RPC-	8+50	16+00	LT	6,220
5, 33	-Y33RPCA-	23+50	30+50	RT	7,840
5	-Y33RPCA-	44+50	47+00	RT	1,800
5, 33	-Y33RPCA-	23+00	30+50	LT	6,000
5	-Y33RPCA-	44+50	53+50	LT	8,135
6, 7	-L1-	250+00	263+00	LT	5,730
6, 7	-L1-	250+00	260+00	RT	3,500
7	-L1-	264+50	268+00	LT	1,750
8,9	-L1-	280+50	284+50	RT	1,610
8,9	-L1-	281+00	286+50	LT	2,560
9	-L1-	287+50	302+50	LT	5,560
10	-L1-	305+00	307+00	LT	760
10	-L1-	304+50	306+50	RT	840
11	-L1-	311+00	316+00	LT	1,900
11, 12	-L1-	312+00	333+00	RT	7,950
12	-L1-	320+50	322+00	LT	570
13	-L1-	338+50	342+00	LT	1,140
13	-L1-	337+50	342+00	RT	1,690
14	-L1-	356+50	360+00	LT	1,210
14, 35	-Y34-	15+00	23+22	LT	5,870
14, 35	-Y34-	16+00	23+35	RT	5,310
14, 35	-SR1-	13+50	16+00	LT	890

MATTING FOR EROSION CONTROL (SLOPES)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
14, 36	-Y34	25+35	32+00	LT	4,220
14, 36	-Y34	25+35	31+50	RT	4,010
14	L1	357+14	360+50	LT	1,651
15	L1	371+00	372+50	LT	796
15	L1	372+00	375+00	RT	1,650
16	L1	377+00	383+20	LT	4,234
16	L1	380+50	382+90	RT	1,305
17	L1	385+50	391+00	LT	4,297
17	L1	385+21	392+50	RT	4,373
17	L1	394+00	396+50	LT	1,791
17	L1	395+50	397+50	RT	1,080
18	L1	408+50	409+00	LT	246
19	L1	412+00	417+50	LT	2,843
19	L1	415+00	417+00	RT	928
19	L1	420+00	422+00	RT	1,036
19	L1	421+50	426+37	LT	3,300
19	L1	422+00	426+00	RT	2,389
20	L1	428+77	439+50	LT	7,152
20	L1	428+50	431+00	RT	1,226
20	L1	435+50	439+00	RT	1,847
21	L1	441+50	444+50	LT	1,857
21	L1	442+50	444+50	RT	971
22	L1	451+00	456+50	LT	2,878
22	L1	451+50	457+00	RT	3,018
22	L1	460+00	461+00	RT	544
22	L1	462+00	468+50	LT	3,365
23	L1	469+50	470+50	RT	420
23	L1	473+00	479+00	RT	2,678
			SUBTOTAL - MATTING FOR SLOPES		196,555

3/6/2025
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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	-L1-	223+00	224+50	MED	555
5	-L1-	233+50	241+00	MED	1,665
5, 6	-L1-	241+00	243+50	MED	2,030
5, 32	-Y33RPB-	20+90	25+05	RT	1,050
6	-L1-	243+50	245+00	MED	555
6	-L1-	245+00	250+00	MED	1,815
6	-L1-	250+00	253+50	MED	1,410
6	-Y33RPB-	7+00	8+28	RT	200
7	-L1-	258+24		LT	160
7, 8	-L1-	267+63	270+71	RT	250
8	-L1-	271+00	275+93	RT	400
8	-L1-	273+00	273+45	LT	110
8	-L1-	273+45	274+00	LT	135
8	-L1-	274+00	275+00	LT	85
8	-L1-	276+50	278+50	RT	165
8	-L1-	278+50	280+00	RT	125
8, 9	-L1-	275+00	284+00	MED	3,615
9, 10	-L1-	284+00	297+50	MED	3,615
9, 10	-L1-	293+00	297+50	RT	820
10	-L1-	297+50	306+00	MED	3,415
10, 11	-L1-	306+27	308+50	LT	345
11, 12	-L1-	312+29	322+05	LT	1,810
12	-L1-	323+54	324+83	RT	120
12, 13, 14	-L1-	329+50	351+50	MED	8,835
14	-SR1-	19+50	22+51	LT	460
14	-Y34-	20+00	22+84	RT	525
14	-L1-	351+14	352+12	LT	245
14, 35	-Y34-	15+31	20+02	RT	865
14, 35	-Y34-	15+39	19+47	LT	430
14, 36	-Y34-	26+00	33+14	LT	995

MATting FOR EROSION CONTROL (DITCHES)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
35	-Y34-	12+23	14+50	LT	185
35	-Y34-	12+24	14+67	RT	305
35	-SR1-	13+37	14+50	LT	105
36	-SR2-	15+00	15+50	LT	105
36	-Y34-	32+25	36+50	RT	530
14	L1	357+97	359+19	LT	170
15	L1	366+50	372+07	LT	1,395
15	L1	361+75	367+00	RT	2,360
15	L1	367+00	371+00	RT	1,805
15	L1	371+00	373+33	RT	500
16	L1	377+75	380+50	LT	450
16	L1	380+50	382+50	LT	405
16	L1	382+50	383+50	LT	235
16	L1	383+50	383+80	LT	70
16	L1	377+15	379+00	RT	250
17	L1	388+50	390+36	LT	220
17	L1	395+95	396+50	LT	80
17	L1	396+50	396+95	LT	105
17	L1	389+20	390+00	RT	155
17	L1	390+00	391+00	RT	155
17	L1	391+00	392+50	RT	335
17	L1	392+50	393+23	RT	210
17	L1	394+50	395+50	RT	245
17	L1	395+50	396+00	RT	110
18	L1	408+50	409+00	LT	55
18	L1	409+00	410+50	LT	265
18	L1	399+50	400+56	RT	170
18	L1	400+56	403+50	RT	555
			SUBTOTAL - MATting IN DITCHES		48,335

3/6/2025
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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)
18	L1	403+50	404+70	RT	235
18	L1	406+10	406+75	RT	90
18	L1	409+58	414+15	RT	1,080
19	L1	416+50	419+50	LT	1,125
20	L1	425+00	426+00	LT	180
20	L1	426+00	426+37	LT	55
20	L1	437+50	438+50	LT	135
20	L1	428+17	428+50	RT	45
20	L1	428+50	429+50	RT	240
20	L1	432+00	432+50	RT	75
20	L1	433+50	434+00	RT	215
20	L1	435+00	436+34	RT	385
21	L1	445+94	447+50	LT	235
21	L1	450+90	452+68	LT	185
21	L1	452+68	454+04	LT	90
21	L1	438+77	439+77	RT	90
21	L1	444+75	446+55	RT	485
21	L1	446+55	447+25	RT	175
22	L1	454+40	455+30	LT	95
22	L1	455+36	456+78	LT	205
22	L1	463+25	464+00	LT	80
22	L1	460+67	465+00	RT	1,805
23	L1	467+90	469+62	LT	215
23	L1	465+00	467+15	RT	565
25	L1	496+65	500+75	LT	1,255
25	L1	501+48	501+75	LT	115
25	L1	500+36	502+50	RT	960
25	L1	502+50	504+00	RT	505
26	L1	504+00	507+50	LT	1,340
26	LREV	514+50	515+50	LT	275

MATTING FOR EROSION CONTROL (DITCHES)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
27	LREV	519+47	521+51	LT	495
27	LREV	524+29	528+11	LT	860
27	LREV	524+62	527+50	RT	940
27	Y35	24+69	28+00	LT	765
27	Y35	19+75	22+00	RT	435
27	Y35	24+32	26+50	RT	385
28	LREV	537+00	537+50	LT	140
28	LREV	537+50	538+20	LT	245
28	LREV	537+40	540+50	RT	710
28	LREV	540+50	542+50	RT	490
29	LREV	544+08	544+75	LT	55
29	LREV	547+00	547+25	LT	30
29	LREV	549+00	549+87	LT	115
29	LREV	551+85	553+62	LT	275
29	LREV	542+88	544+71	RT	450
29	LREV	547+25	547+77	RT	140
29	LREV	549+78	550+00	RT	35
29	LREV	550+00	552+50	RT	880
29	LREV	553+32	555+00	RT	400
30	L1	557+50	559+68	RT	485
31	L1	567+39	568+00	LT	165
31	L1	570+50	572+00	LT	240
31	L1	572+00	574+68	LT	725
31	L1	568+12	569+50	RT	340
31	L1	577+00	578+00	RT	125
37	Y35	12+50	14+17	LT	450
37	Y35	14+33	16+50	LT	250
37	Y35	12+75	13+50	RT	155
			SUBTOTAL - MATTING IN DITCHES		23,315

3/6/2025
R:\Erosion Control\CADD\R3300A_EC_PSH_3_STABILIZATION.dgn
MI ENGINEERING, RALEIGH NC

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)
38	Y35	33+00	33+77	RT	195
38	SR3	10+30	11+00	LT	115
39	SR3	15+50	18+14	LT	850
39	SR3	14+50	18+14	RT	1,090
2B-4	Y35DET	12+86	13+08	RT	50
2B-4	Y35DET	13+08	13+48	RT	75
2B-4	Y35DET	14+35	14+56	RT	35
2B-4	Y35DET	15+26	19+27	RT	1,020
		SHEET EC-3E SUBTOTAL - MATTING FOR DITCHES			3,430
		SHEET EC-3D SUBTOTAL - MATTING FOR DITCHES			23,315
		SHEET EC-3C SUBTOTAL - MATTING FOR DITCHES			48,335
		SUBTOTAL - MATTING FOR DITCHES			75,080
		SUBTOTAL - EXCELSIOR MATTING FOR DITCHES			1,085
			SUBTOTAL - DITCH MATTING		76,165
		SHEET EC-3B SUBTOTAL - MATTING FOR SLOPES			269,798
			TOTAL MATTING		345,963
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				71,560
				TOTAL	417,523
				SAY	417,550

PERMANENT SOIL REINFORCEMENT MAT - TYPE 1

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7,8	-L1-	266+08	270+72	LT	375
10, 11	-L1-	306+00	309+50	RT	535
14	-Y34-	198+50	23+62	LT	575
		TOTAL PSRM - TYPE 1 FOR DITCHES			1,485

EXCELSIOR MATTING

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
20	L1	429+50	431+00	RT	270
20	L1	431+00	432+00	RT	285
31	L1	568+50	570+50	LT	530
		TOTAL - EXCELSIOR MATTING FOR DITCHES			1,085

3/6/2025
R:\Erosion Control\CADD\R3300A_EC_PSH_3_STABILIZATION.dgn
MIENGINEERING, RALEIGH NC

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

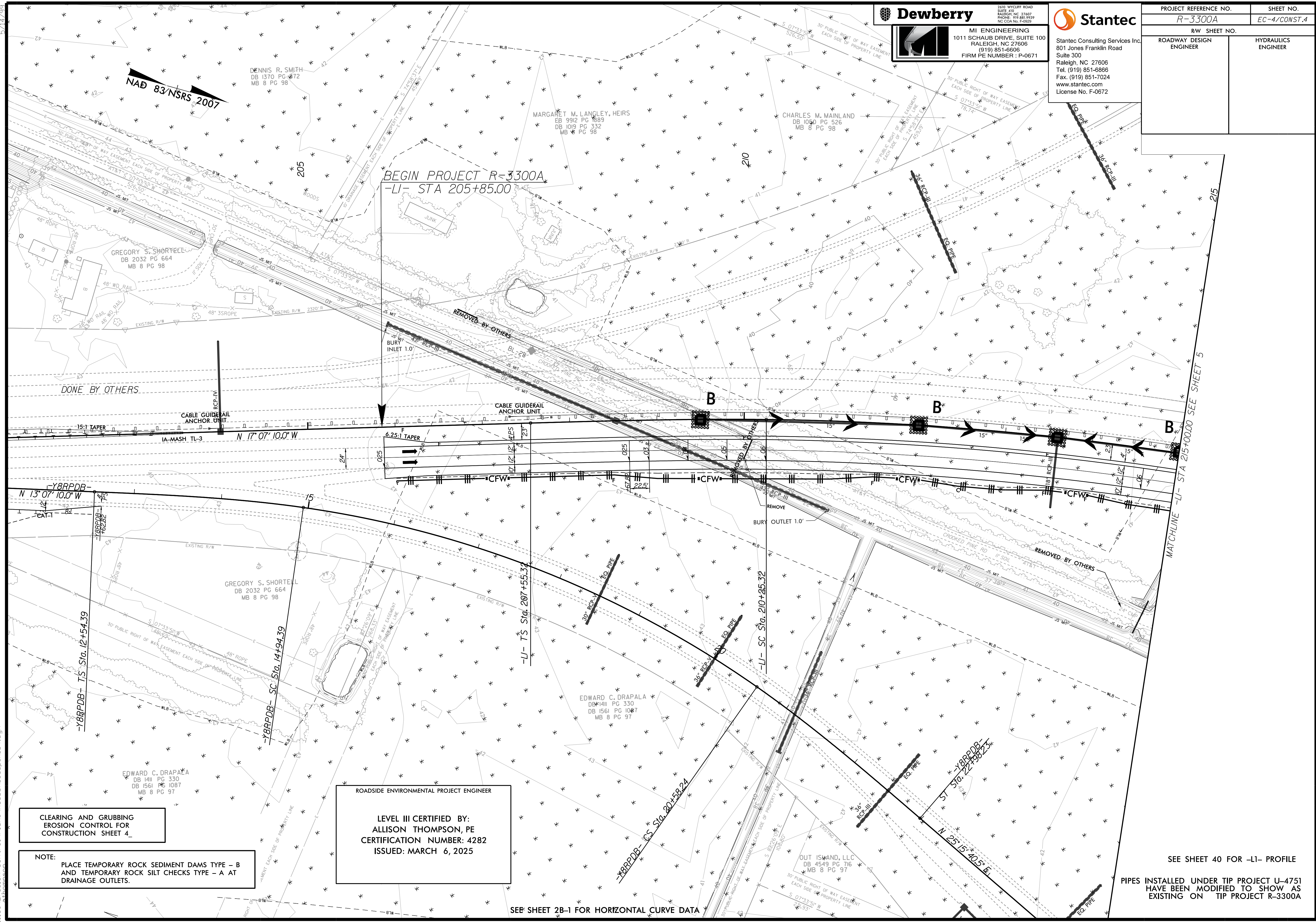
COIR FIBER MAT ON SLOPES
ADJACENT TO JURISDICTIONAL AREA

COIR FIBER MAT ON SLOPES
ADJACENT TO JURISDICTIONAL AREA

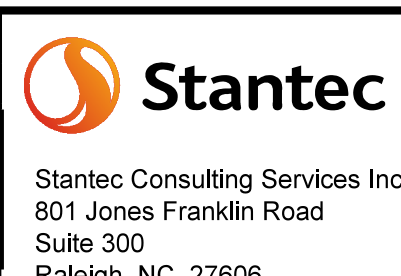
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-L1-	223+00	224+90	RT	170
5	-Y33RPB-	14+00	15+00	RT	90
5, 33	-Y33RPCA-	23+50	30+50	RT	630
5, 33	-Y33RPCA-	23+00	30+50	LT	670
6, 7	-L1-	250+60	259+80	LT	820
6, 7	-L1-	250+00	260+00	RT	890
9	-L1-	283+50	285+60	LT	190
9	-L1-	282+60	284+10	RT	140
11	-L1-	314+10	315+50	RT	130
13	-L1-	338+50	342+00	LT	320
13	-L1-	338+50	342+00	RT	290
14	-L1-	358+60	360+00	LT	130
14	-Y34-	19+80	20+90	RT	100
14	-L1-	357+59	360+14	LT	283
16	-L1-	384+95	385+66	LT	158
16/17	-L1-	385+75	388+31	LT	284
17	-L1-	386+56	386+88	RT	71
17	-L1-	394+65	395+80	LT	128
18	-L1-	399+85	401+34	RT	166
18	-L1-	408+70	409+17	LT	52
19	-L1-	412+21	413+40	LT	132
19	-L1-	414+82	415+48	LT	73
19	-L1-	415+38	415+70	RT	36
20	-L1-	434+11	434+23	LT	36
20	-L1-	434+65	434+76	RT	47
21	-L1-	442+50	442+72	LT	127
21	-L1-	443+24	443+66	RT	152
22	-L1-	452+30	452+65	RT	39
22	-L1-	455+30	455+53	LT	26
22	-L1-	454+82	454+92	RT	11

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
22	-L1-	455+43	455+83	RT	44
22	-L1-	458+74	459+87	LT	126
22	-L1-	460+38	460+81	RT	48
22	-L1-	461+69	461+75	LT	7
22	-L1-	462+36	462+49	LT	14
23	-L1-	464+07	464+50	LT	48
23	-L1-	465+10	465+81	LT	79
23, 24	-L1-	469+65	485+59	RT	1771
23, 24	-L1-	469+64	484+91	LT	1697
27	-L1REV-	518+70	519+16	LT	51
27	-L1REV-	519+90	522+06	RT	553
27	-Y35-	20+20	22+66	LT	309
27, 28	-L1REV-	528+48	529+82	LT	149
28	-L1REV-	537+41	537+69	RT	31
28	-L1REV-	538+00	538+53	LT	78
29	-L1REV-	545+23	545+95	LT	80
29	-L1REV-	546+17	546+63	RT	51
30	-L1-	560+10	560+19	RT	10
30	-L1-	562+65	563+72	LT	131
30, 31	-L1-	564+43	566+54	LT	281
30, 31	-L1-	564+90	567+00	RT	303
30, 31	-L1-	566+88	567+60	LT	268
31	-L1-	567+47	568+24	RT	237
37	-Y35-	13+41	14+18	RT	137
38	-Y35-	35+62	36+49	LT	164
		SUBTOTAL COIR FIBER MATTING			13,058
	COIR FIBER MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				34,677
				TOTAL	47,735
				SAY	47,750

3/5/2025
Hydraulics\EROSION Control\Plans\R3300A.ec.psh.04.dgn



MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671



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Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.
R-3300A		EC-4/CONST.4
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		

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.

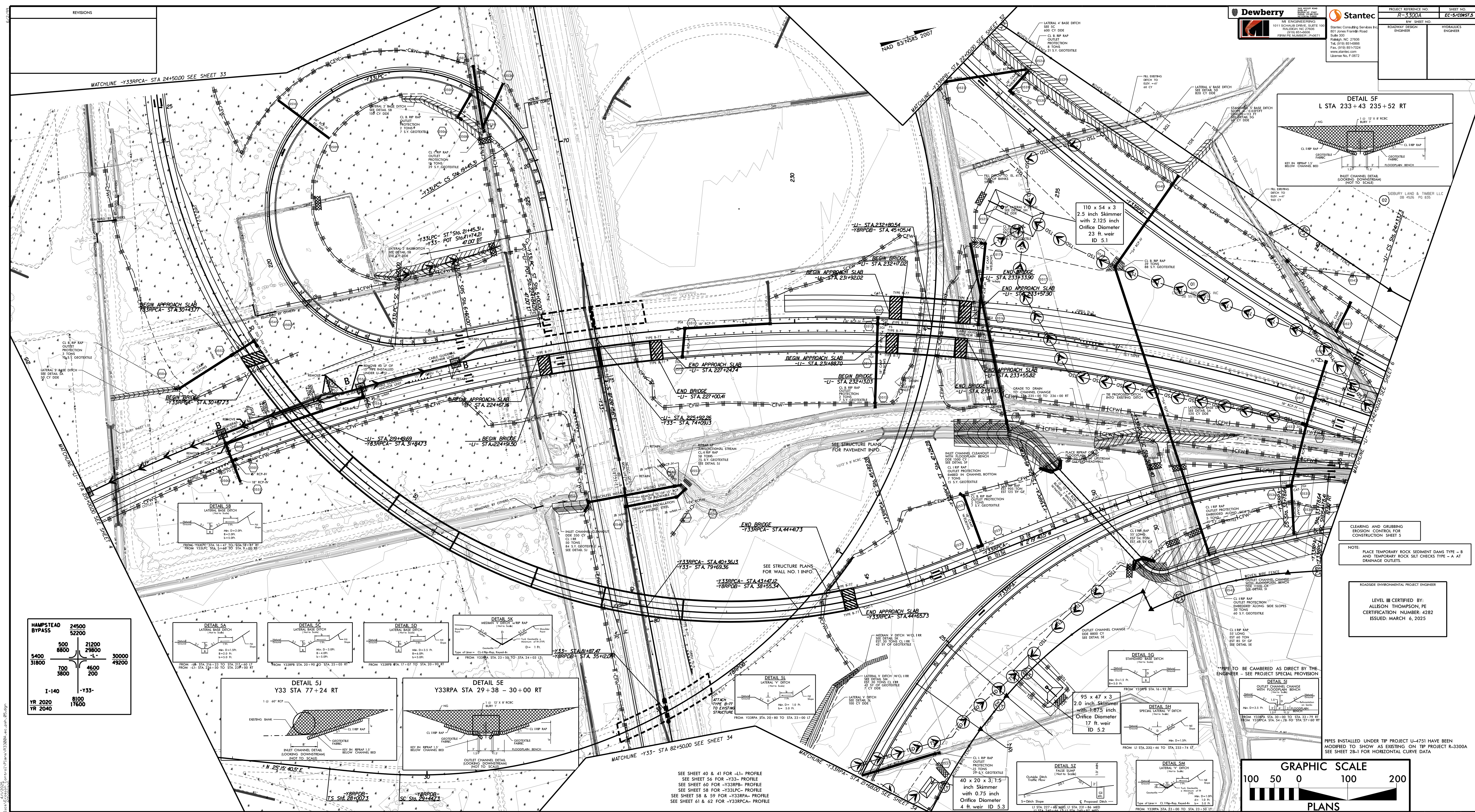
ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

SEE SHEET 2B-1 FOR HORIZONTAL CURVE DATA

SEE SHEET 40 FOR -LI- PROFILE

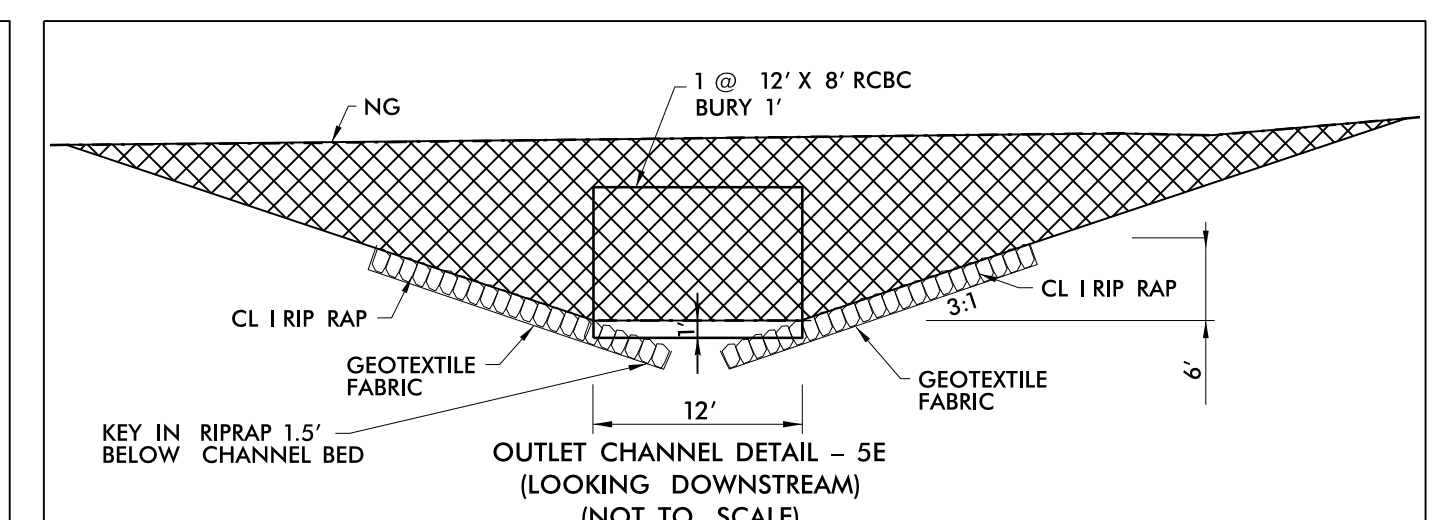
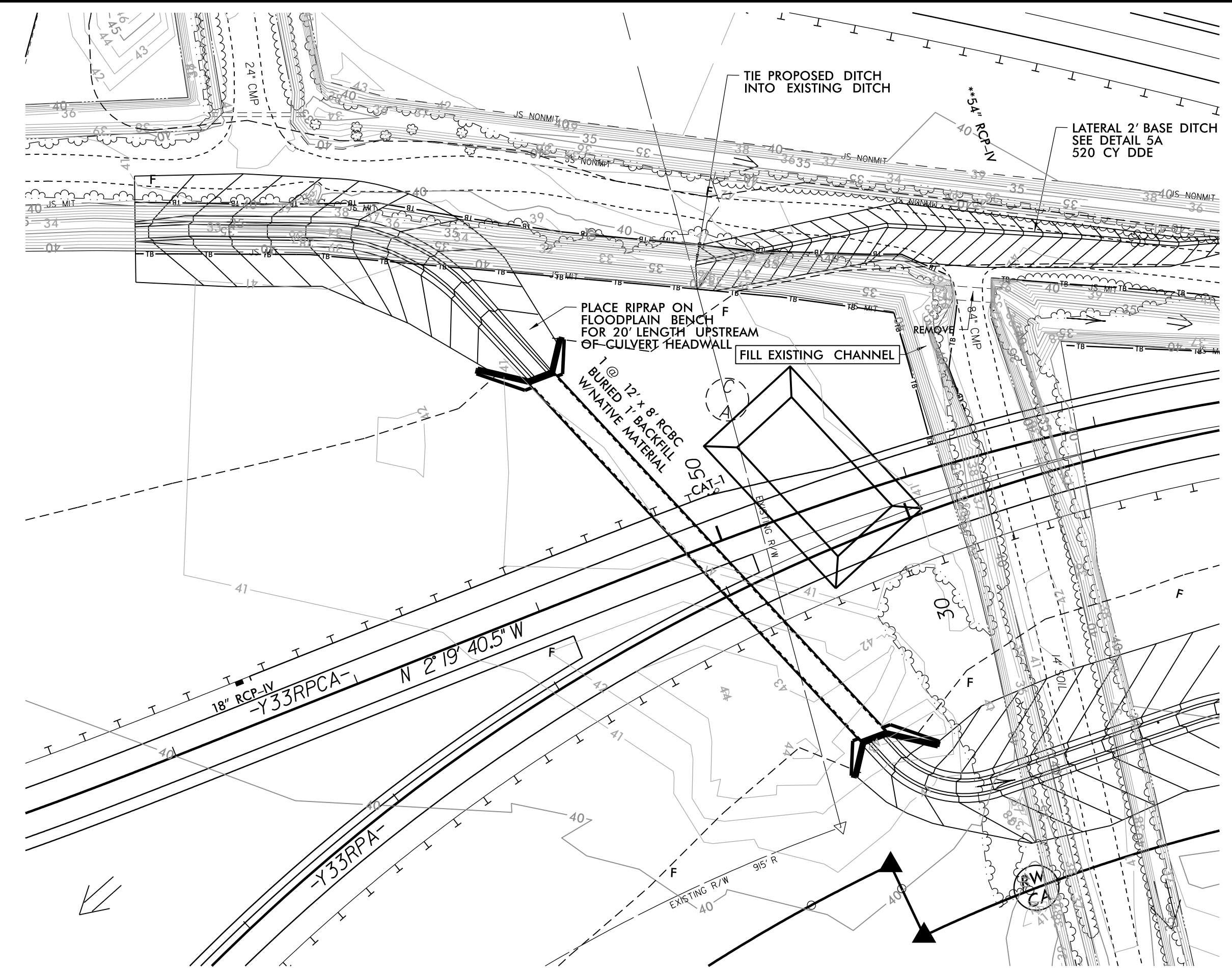
PIPES INSTALLED UNDER TIP PROJECT U-4751
HAVE BEEN MODIFIED TO SHOW AS
EXISTING ON TIP PROJECT R-3300A



PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-5A/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. CONSTRUCT STILLING BASIN AT SIZE SPECIFIED.
2. MAINTAIN FLOW IN EXISTING STREAM CHANNEL.
3. CONSTRUCT CULVERT AND WINGWALLS.
4. INSTALL IMPERVIOUS DIKES AND PUMP AROUND OPERATION. PUMP EXISTING FLOW AROUND WORK AREA AND DISCHARGE DOWNSTREAM OF DOWNSTREAM IMPERVIOUS DIKE.
5. FLOW IN EXISTING OUTLET CHANNEL SHALL BE MAINTAINED DURING PROPOSED OUTLET CHANNEL CONSTRUCTION AND TIE-IN. USE IMPERVIOUS DIKES AS NEEDED.
6. REMOVE UPSTREAM IMPERVIOUS DIKE. DIVERT FLOW TO CULVERT.
7. REMOVE DOWNSTREAM IMPERVIOUS DIKE AND PUMP AROUND OPERATION.

1. FILL EXISTING STREAM CHANNEL BEGINNING AT UPSTREAM END.
2. REMOVE STILLING BASIN.
3. CONSTRUCT ROADWAY.



CULVERT CONSTRUCTION SEQUENCE STA.77+24 -Y33- TRENCHLESS 60" WELDED STEEL (NOT TO SCALE)

PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-5B/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PHASE I

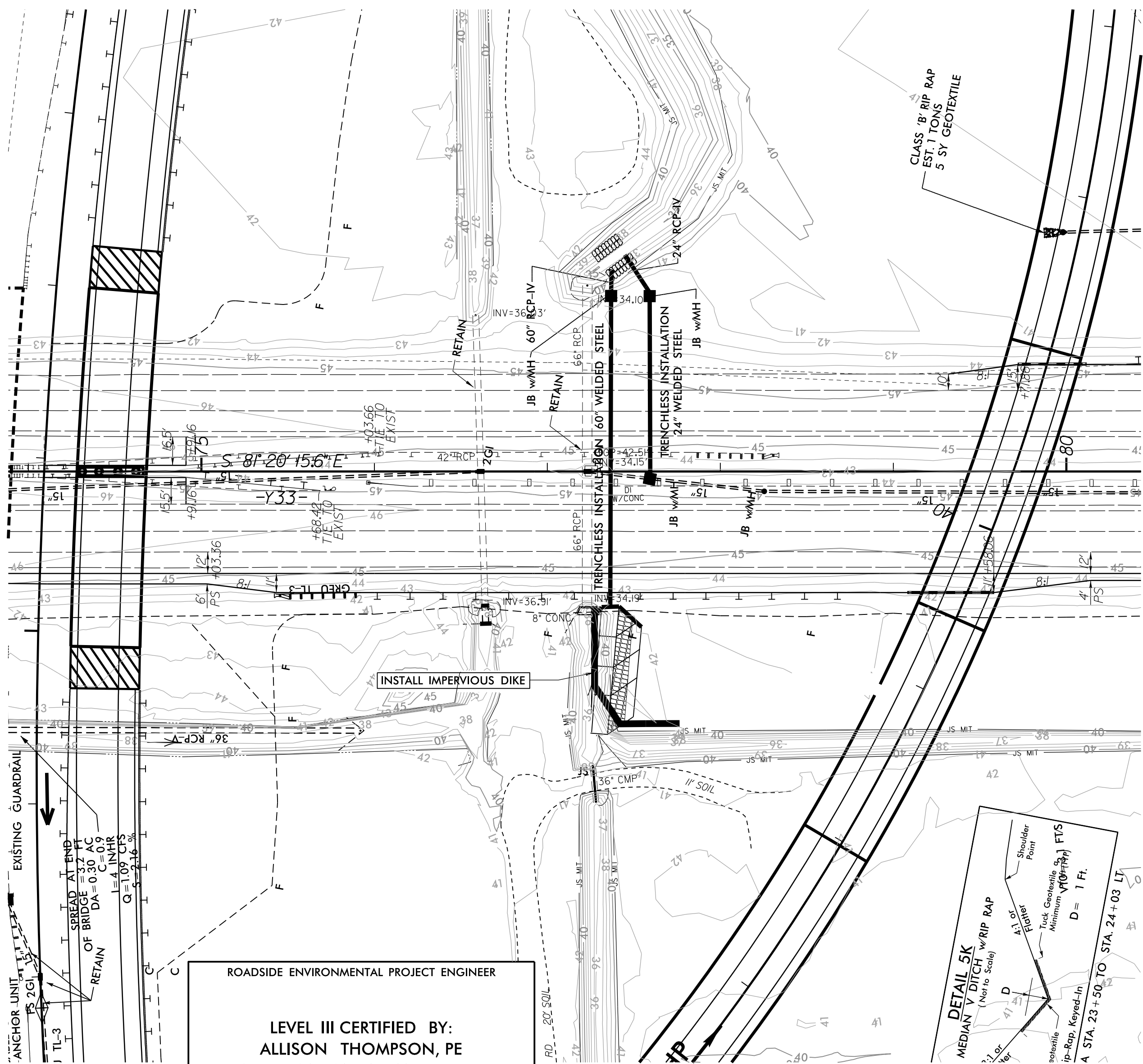
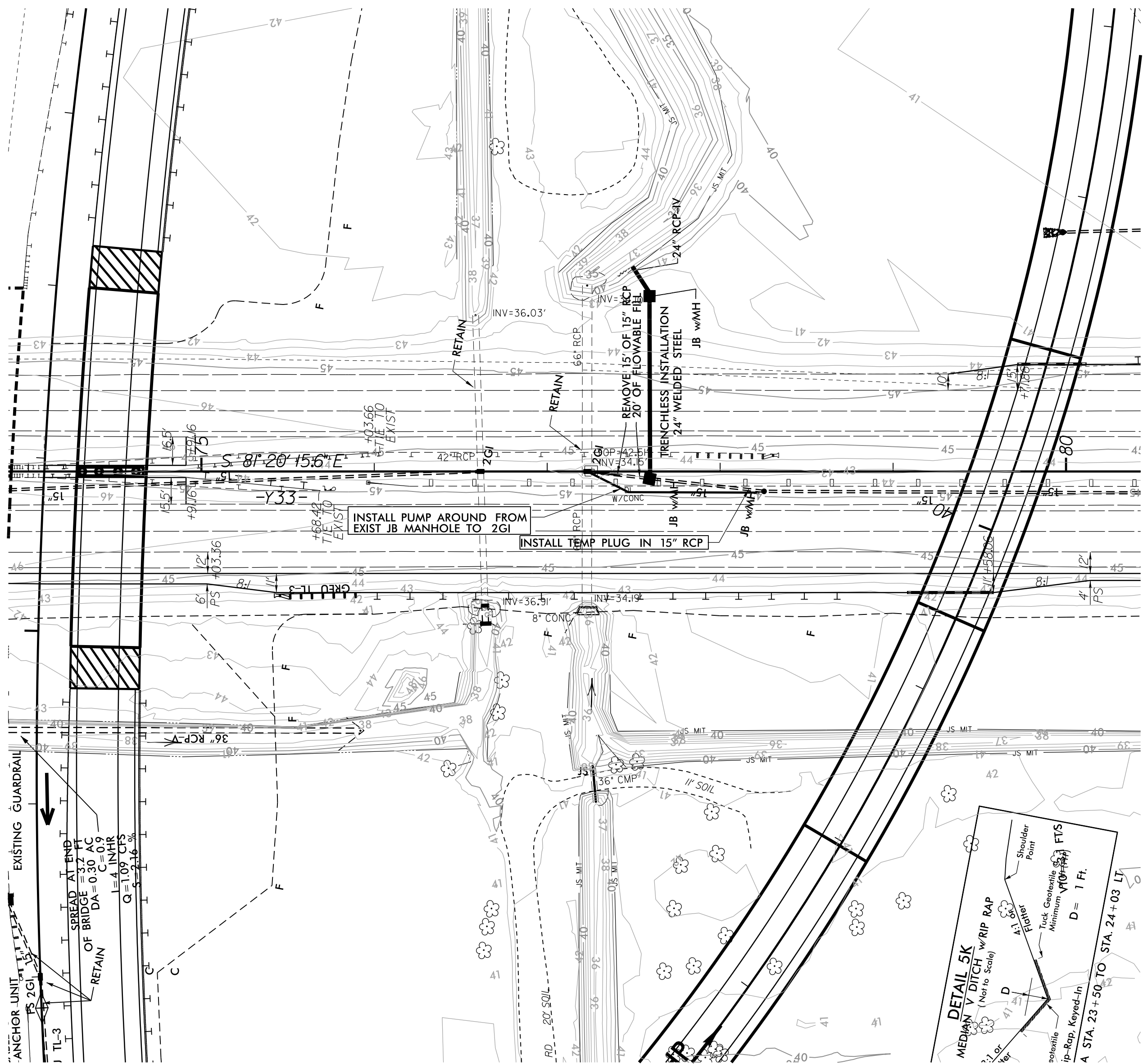
1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. INSTALL TEMP PLUG IN EXIST 15" RCP.
3. INSTALL PUMP AROUND FROM EXIST JBMH TO 2GI.
4. REMOVE 15' OF 15" RCP. PLACE 25' FLOWABLE FILL IN 15" RCP.
5. INSTALL 15" TRENCHLESS PIPE.
6. INSTALL JBMHs AND 15" RCP
7. REMOVE PUMP AROUND OPERATION.

NAD 83/NSRS 2007

PHASE II

1. INSTALL IMPERVIOUS DIKE UPSTREAM.
2. INSTALL 60" TRENCHLESS PIPE AND HEADWALL.
3. INSTALL JBMH AND 60" RCP.
4. REMOVE IMPERVIOUS DIKE.
5. CONSTRUCT UPSTREAM CHANNEL CLEANOUT.
6. INSTALL RIPRAP OUTLET PROTECTION ON BANKS ONLY.
7. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).

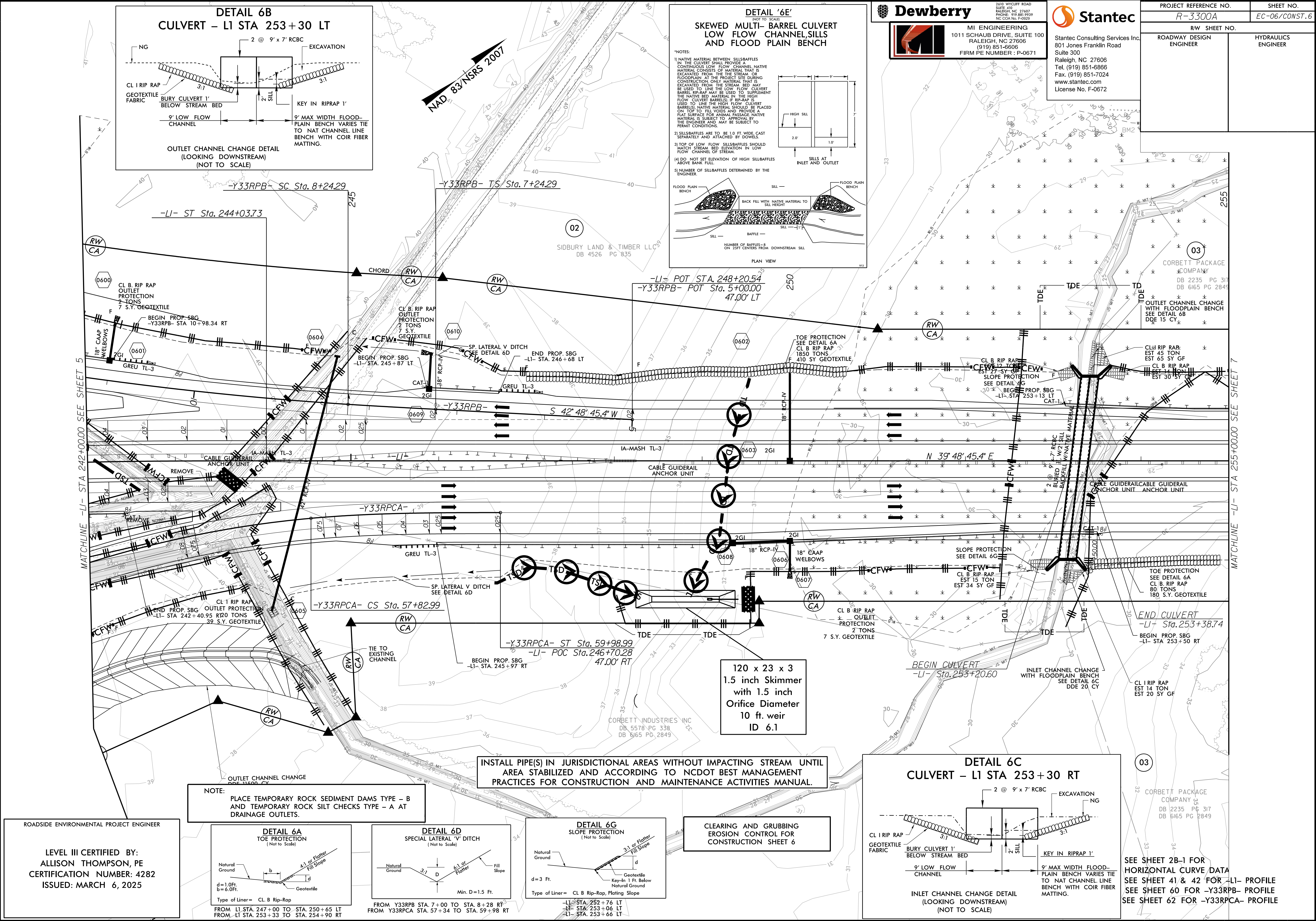
NAD 83/NSRS 2007



LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

5/14/99

3/5/2025
Hydraulics\Corbett\Plans\RR3300A.ec.psh.06.dgn



CULVERT CONSTRUCTION SEQUENCE STA. 253 + 30 -L1- 2 @ 9'x7' RCBC (NOT TO SCALE)

PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-6A/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. CONSTRUCT STILLING BASIN PER NCDOT DWG 1630.04 AT SIZE SPECIFIED.

2. CONSTRUCT TEMPORARY DIVERSION CHANNEL WITH LINER.

3. CONSTRUCT IMPERVIOUS DIKE UPSTREAM, DOWNSTREAM.

4. DIVERT FLOW THROUGH TEMPORARY DIVERSION CHANNEL.

5. CONSTRUCT PROPOSED CULVERT.

6. CONSTRUCT WINGWALLS, INLET AND OUTLET CHANNEL.
7. REMOVE IMPERVIOUS DIKES

8. DIVERT FLOW THROUGH CULVERT.

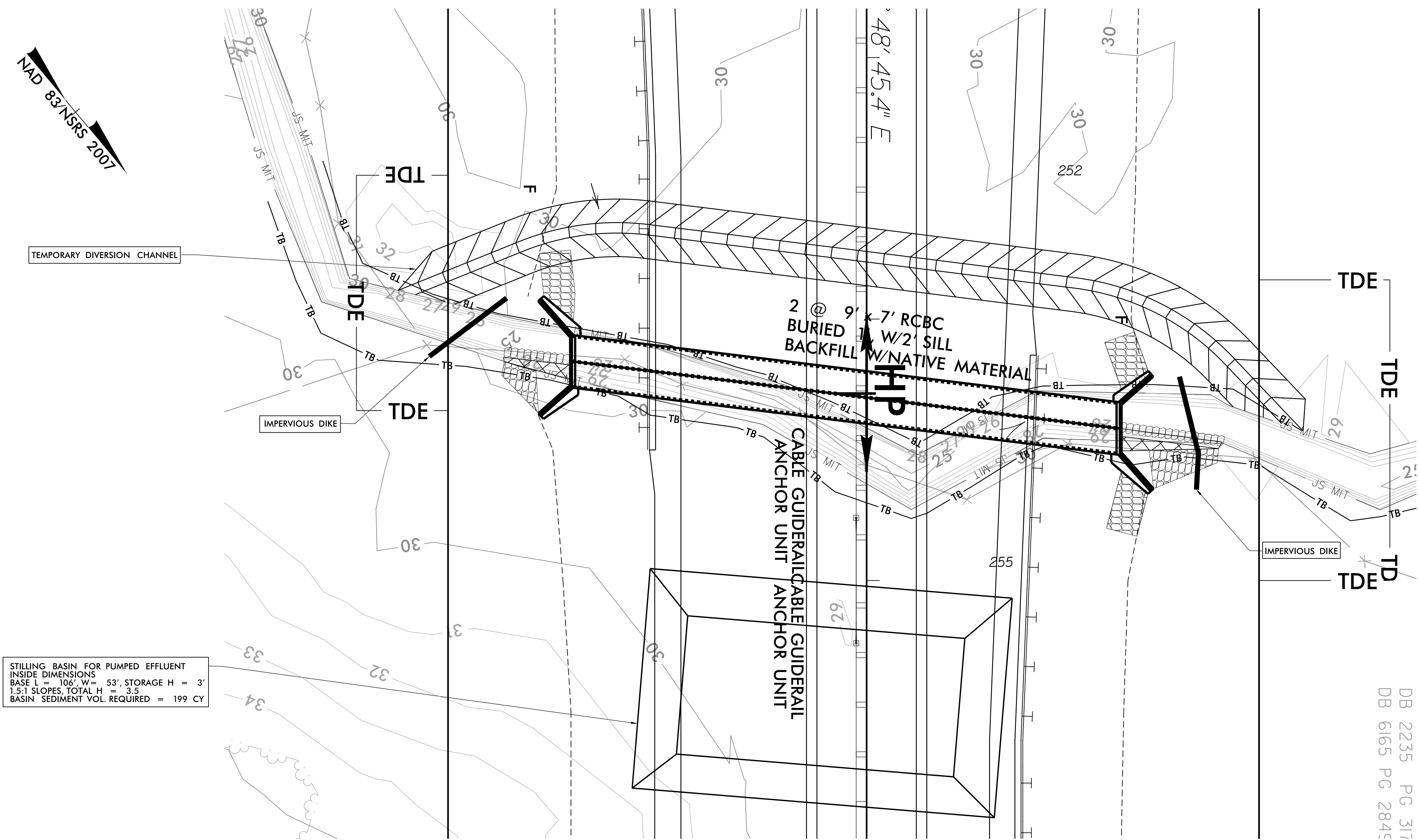
9. FILL TEMPORARY DIVERSION CHANNEL FROM UPSTREAM END.

10. REMOVE STILLING BASIN.

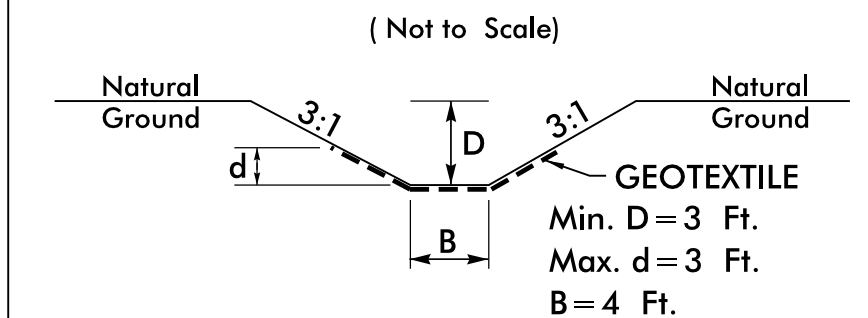
11. CONSTRUCT ROADWAY.

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

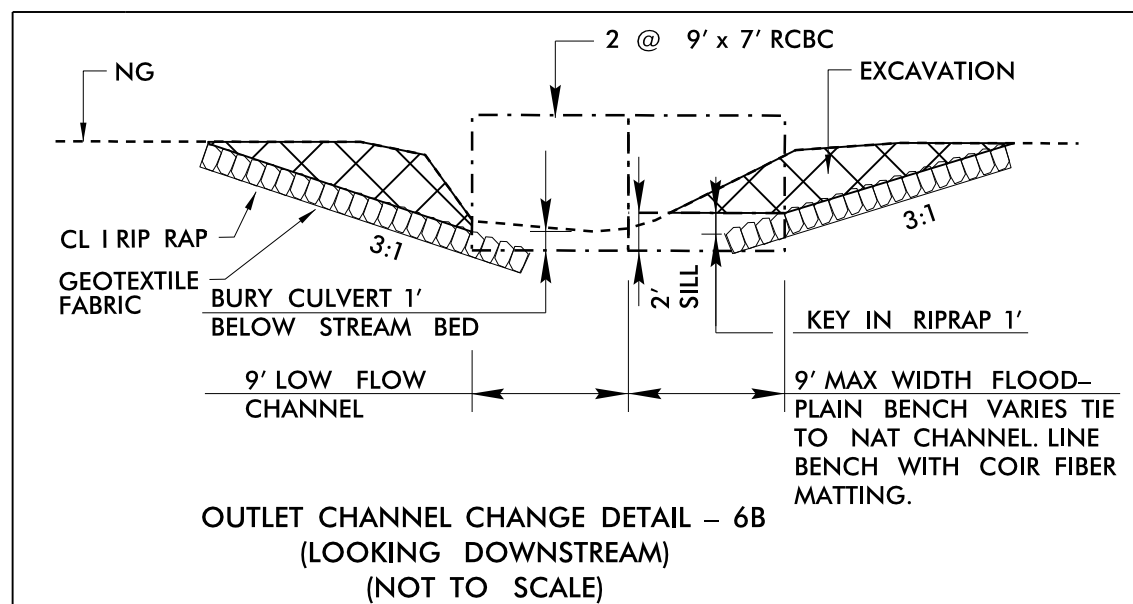
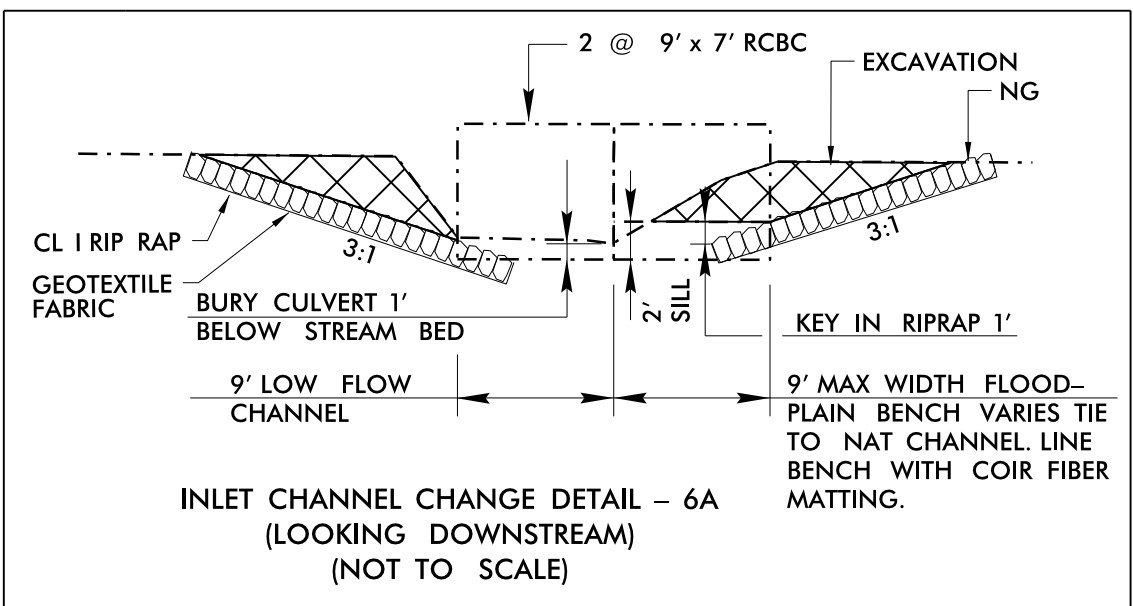


TEMP. DIVERSION CHANNEL



Type of Liner = GEOTEXTILE

DDE = 550 CY
GEOTEXTILE = 1090 SY

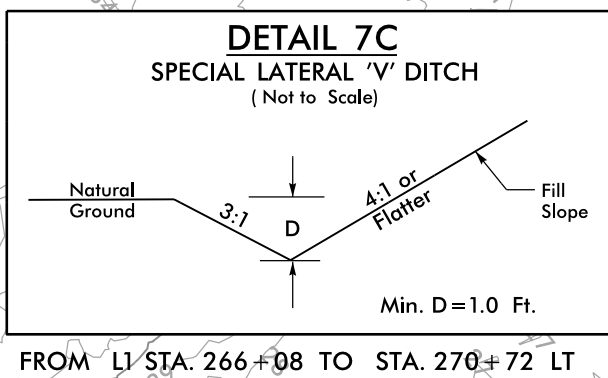
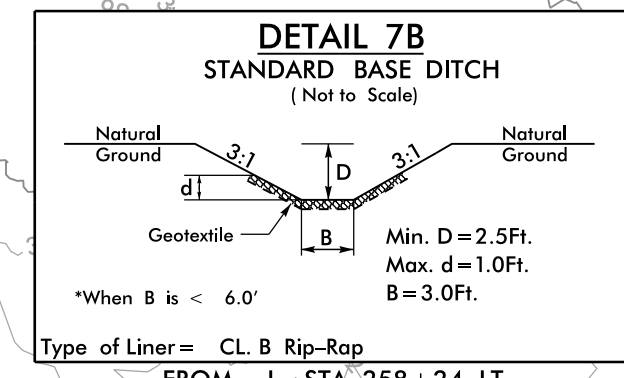
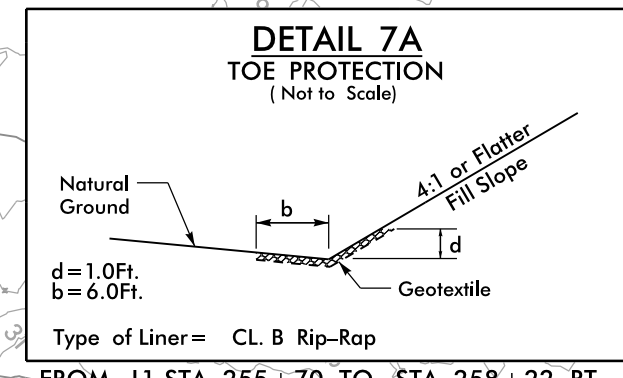


STILLING BASIN FOR PUMPED EFFLUENT
INSIDE DIMENSIONS
BASE L = 106', W = 53', STORAGE H = 3'
1.5:1 SLOPES, TOTAL H = 3.5'
BASIN SEDIMENT VOL. REQUIRED = 199 CY

DB 2235 PG. 317
DB 6165 PG. 2849

5/14/99

3/5/2025
Hydraulics\ERosion Control\Plans\R3300A.ec.psh.07.dgn



Dewberry



MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671

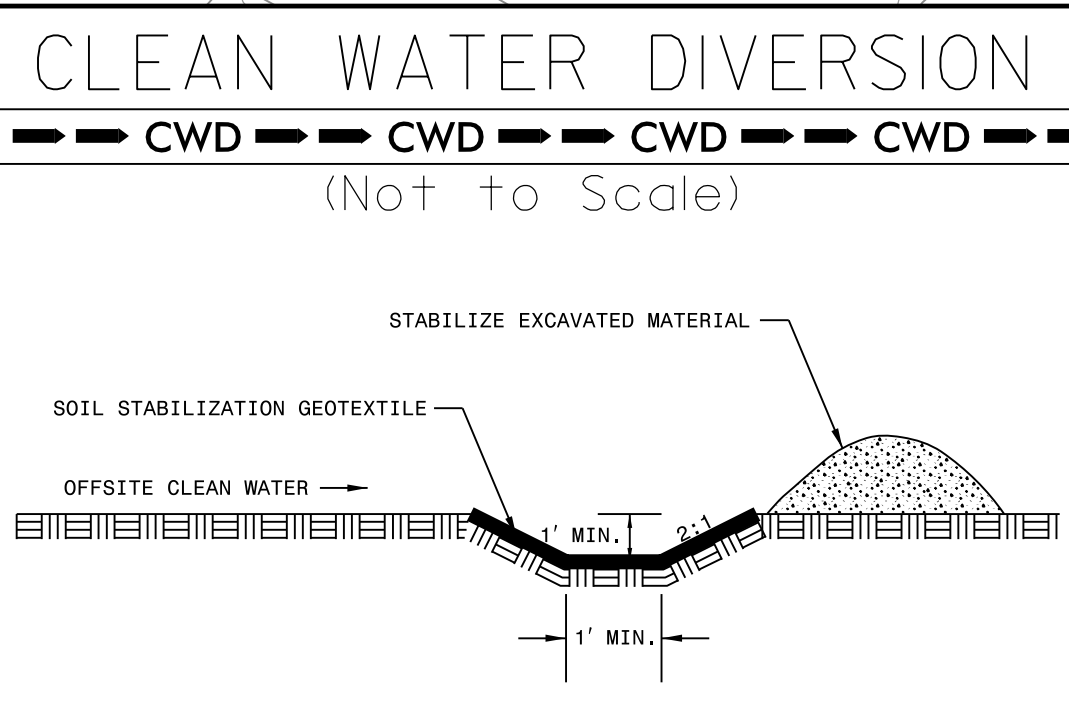
Stantec

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801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.
R-3300A		EC-07/CONST.7
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		

MATCHLINE -L1- STA 255+00.00 SEE SHEET 6

MATCHLINE -L1- STA 268+00.00 SEE SHEET 8



Outside Ditch
Traffic Flow

DETAIL 77
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

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

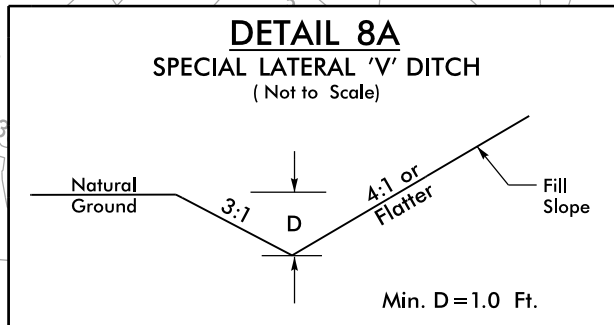
ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

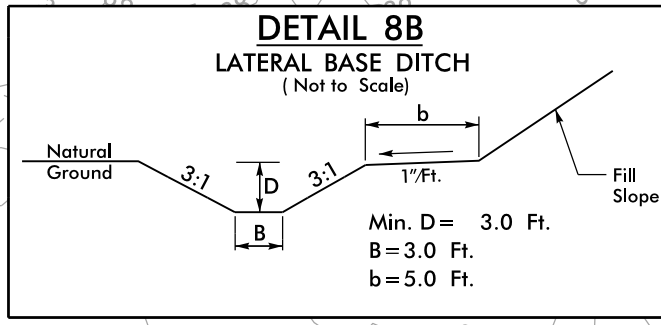
SEE SHEET 42 FOR -L1- PROFILE
SEE SHEET 28-1 FOR HORIZONTAL CURVE DATA

5/14/99

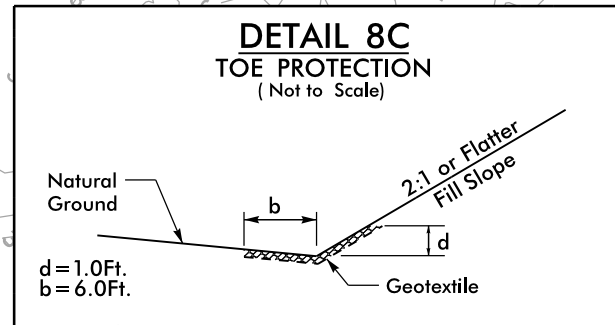
3/5/2025
Hydraulics\EROSION Control\Plans\R3300A.ec.psh.08.dgn



FROM LI STA. 266+08 TO STA. 270+72 LT
FROM LI STA. 267+63 TO STA. 270+71 RT
FROM LI STA. 271+00 TO STA. 275+93 RT
FROM LI STA. 276+20 TO STA. 278+50 RT
FROM LI STA. 278+51 TO STA. 280+00 RT
FROM LI STA. 271+00 TO STA. 273+00 LT
FROM LI STA. 274+00 TO STA. 275+00 LT



FROM LI STA. 273+00 TO STA. 273+45 LT
FROM LI STA. 273+45 TO STA. 274+00 LT



Type of Liner = CL B Rip-Rap
FROM -LI- STA. 280+00 TO STA. 282+87 RT

Dewberry



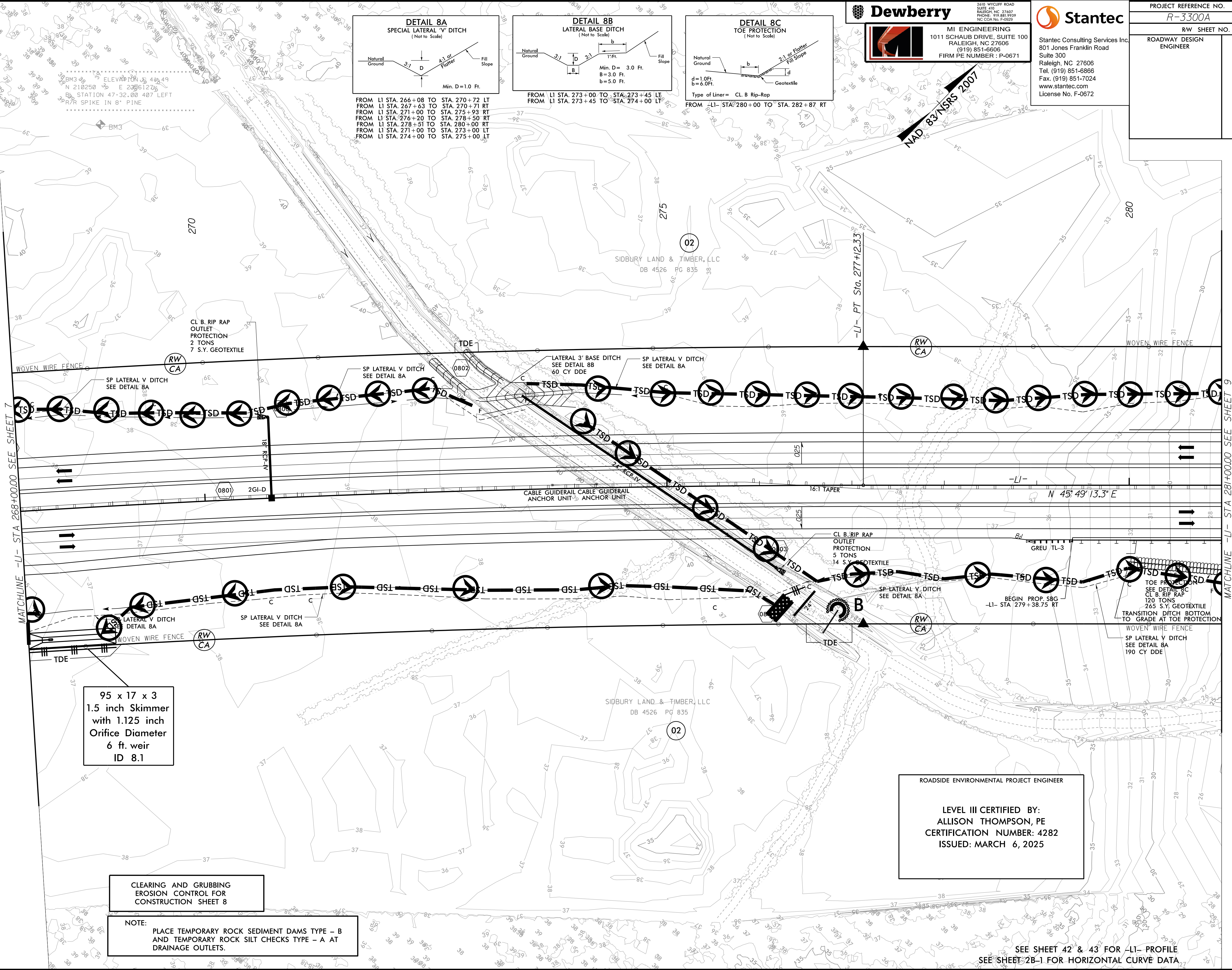
2410 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0529

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671

Stantec

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www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.
R-3300A		EC-08/CONST.B
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		



5/14/99

3/5/2025 hydraulics\errosion\Control\Plans\R33000A.ec.psh.09.dgn

Dewberry



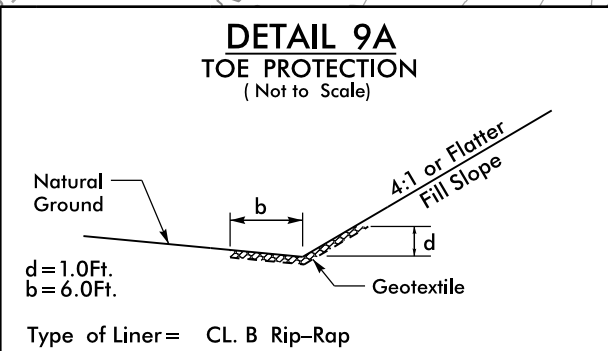
2410 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9799
NC COA No. F-0629

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671

Stantec

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Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.
R-3300A		EC-09/CONST.9
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		



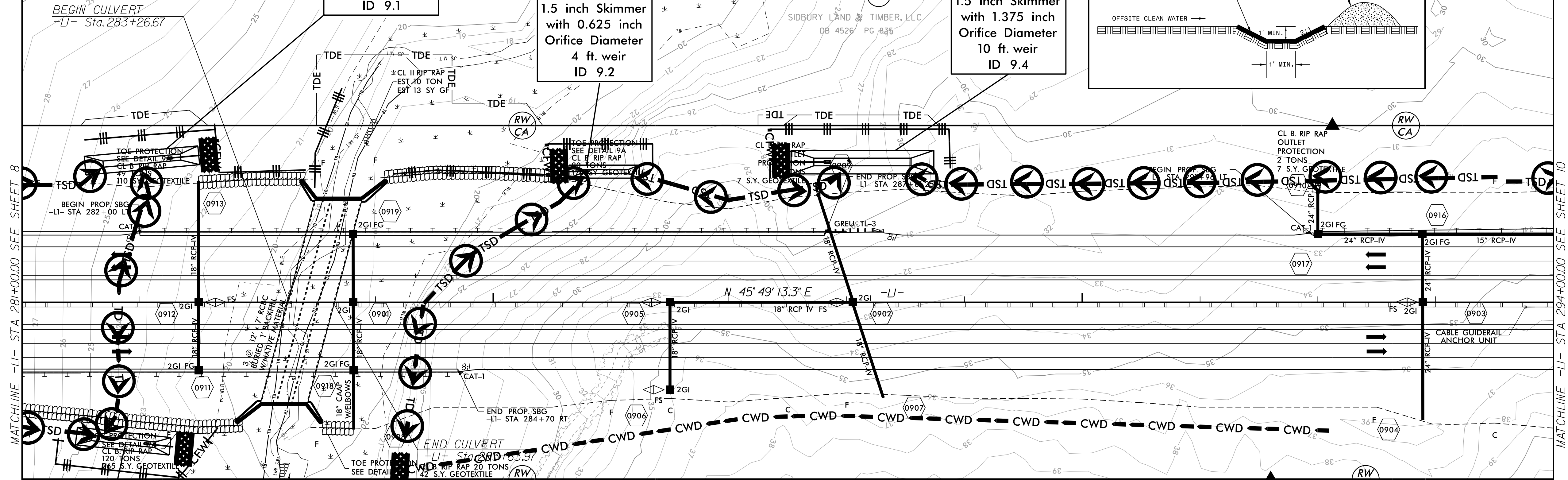
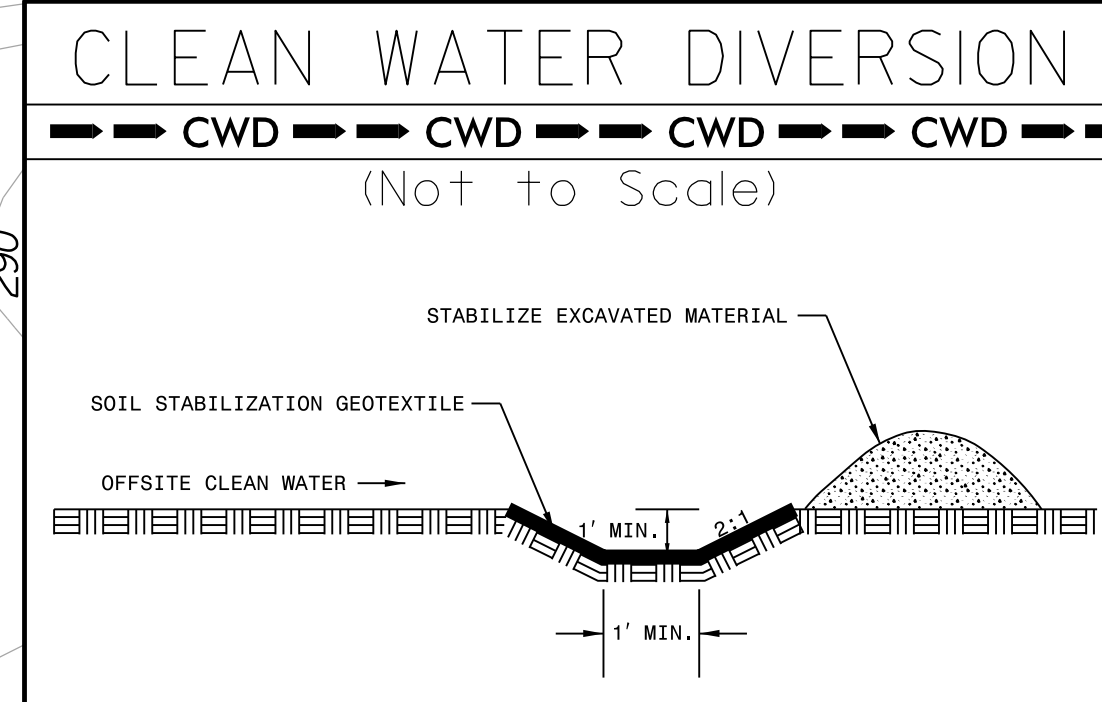
FROM LI STA. 282+50 TO STA. 283+47 LT
FROM LI STA. 284+04 TO STA. 285+58 LT
FROM LI STA. 283+45 TO STA. 283+82 RT
FROM LI STA. 280+00 TO STA. 282+87 RT

BM4 ELEVATION = 25.16
N 211254 E 2357236
BL STATION 62+34.00 349 LEFT
R/R SPIKE IN 8" PINE

95 x 16 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 9.1

60 x 11 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 9.2

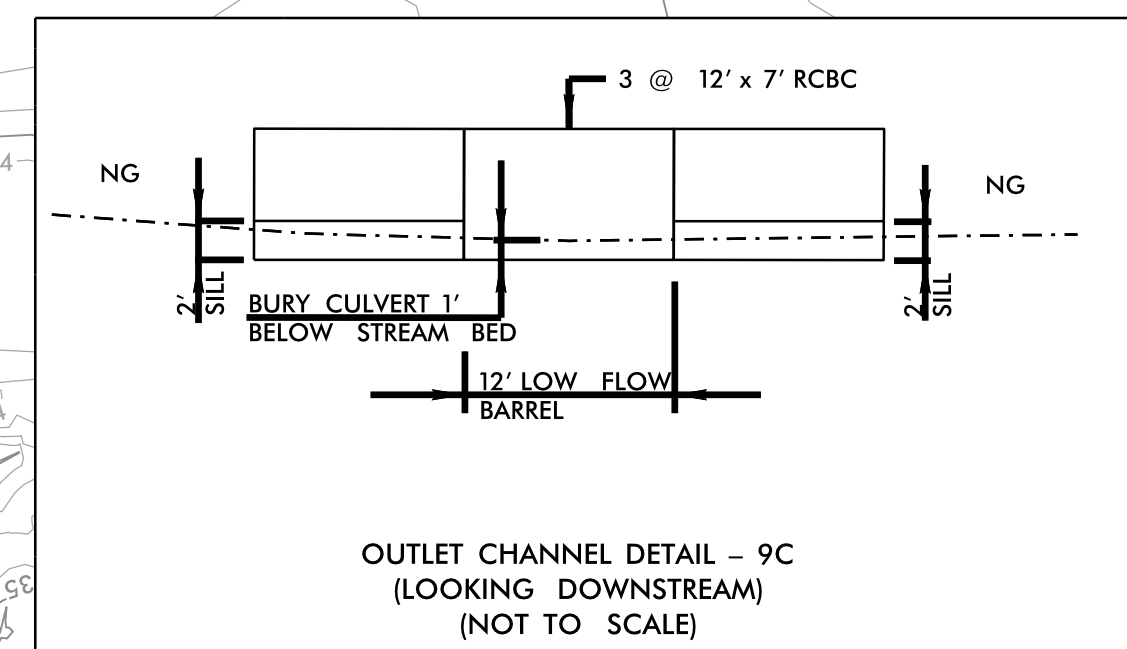
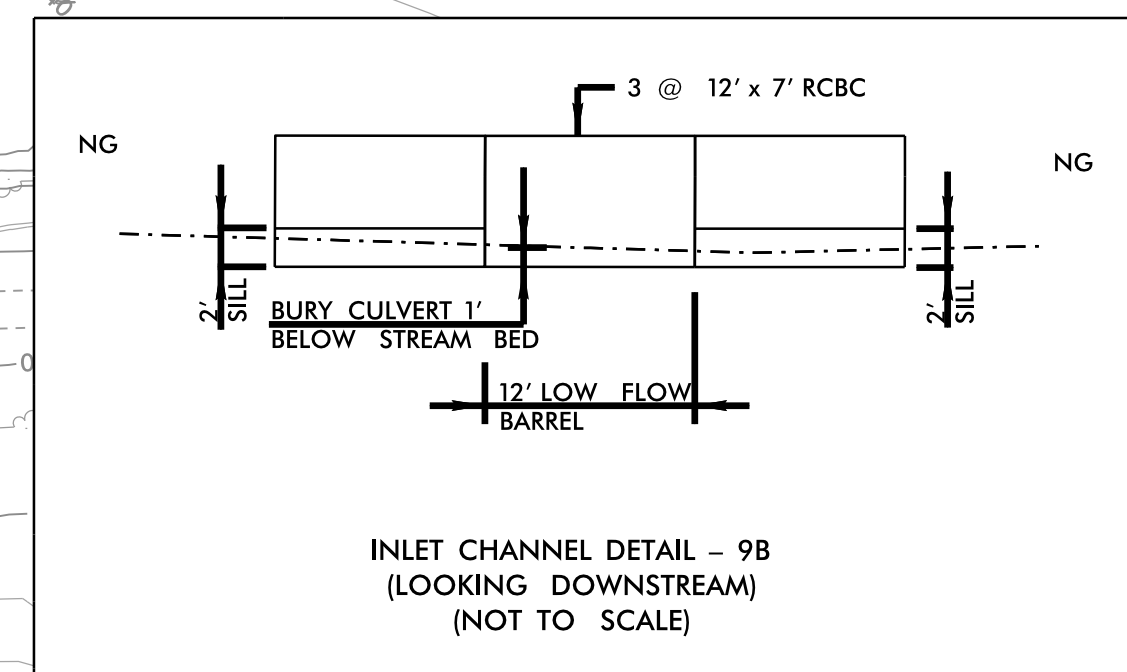
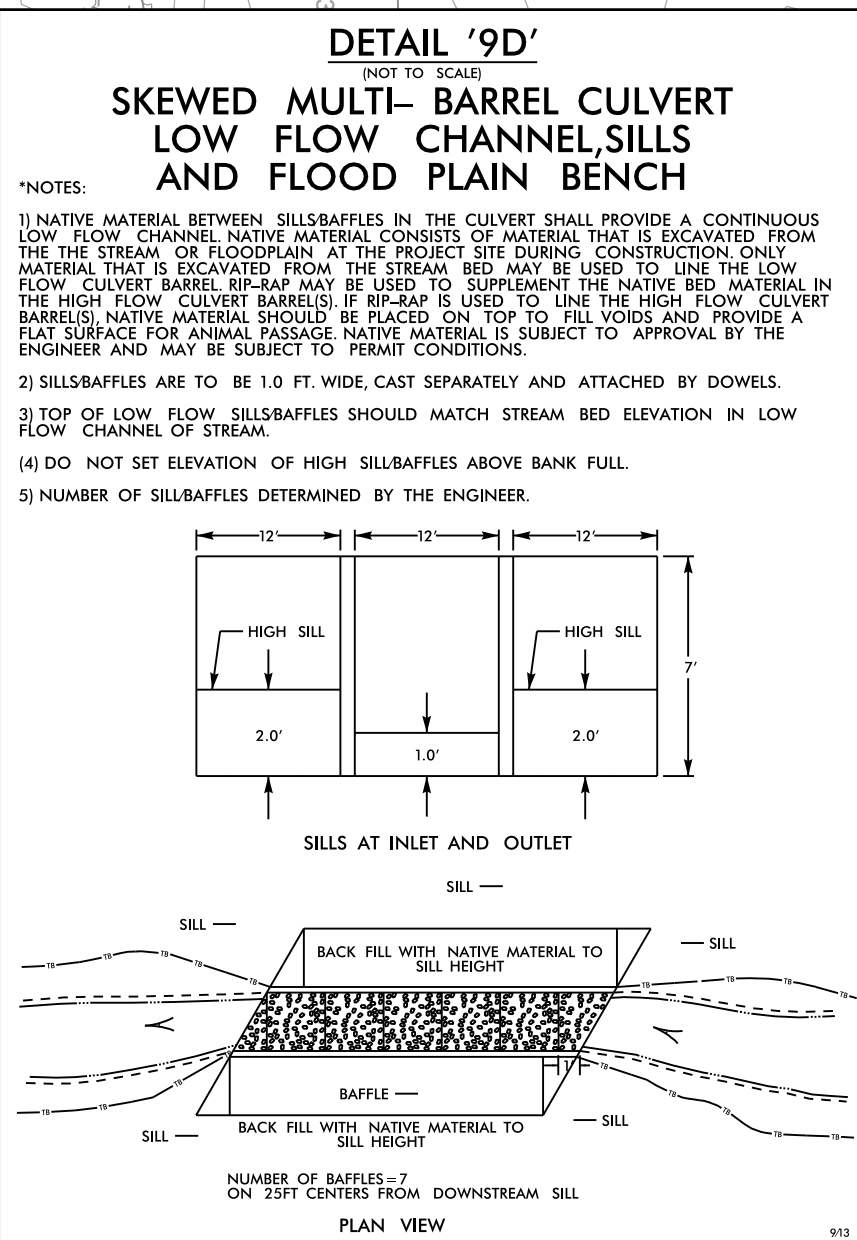
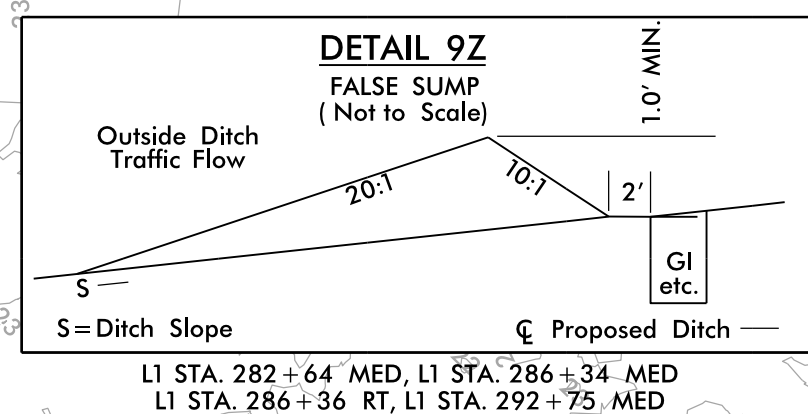
120 x 22 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 9.4



82 x 15 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
5 ft. weir
ID 9.3

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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



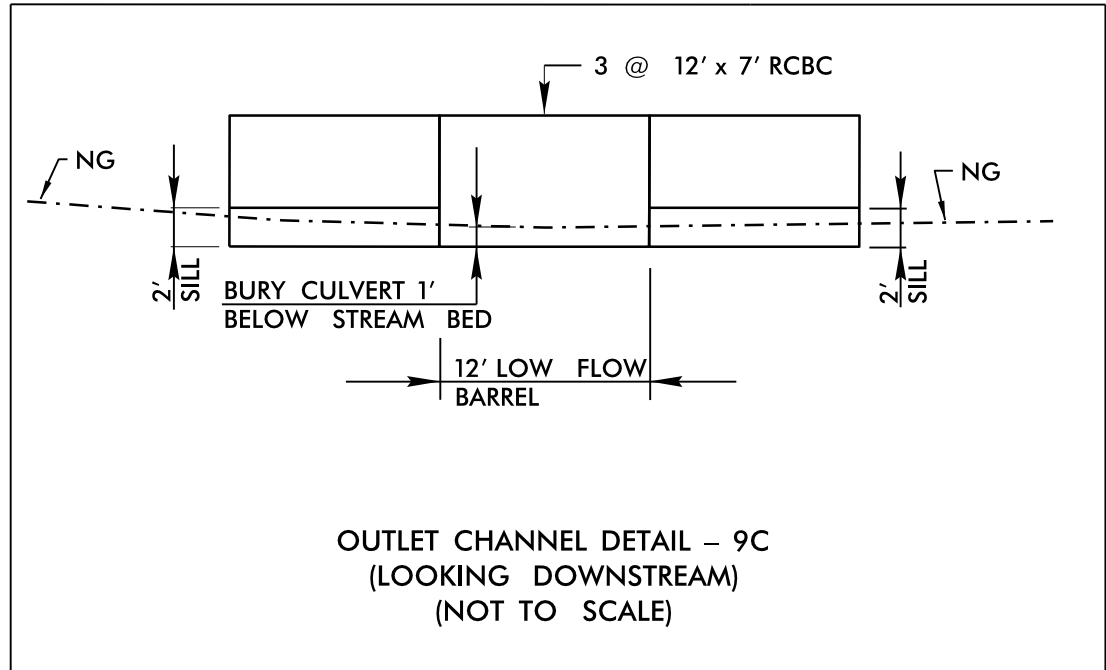
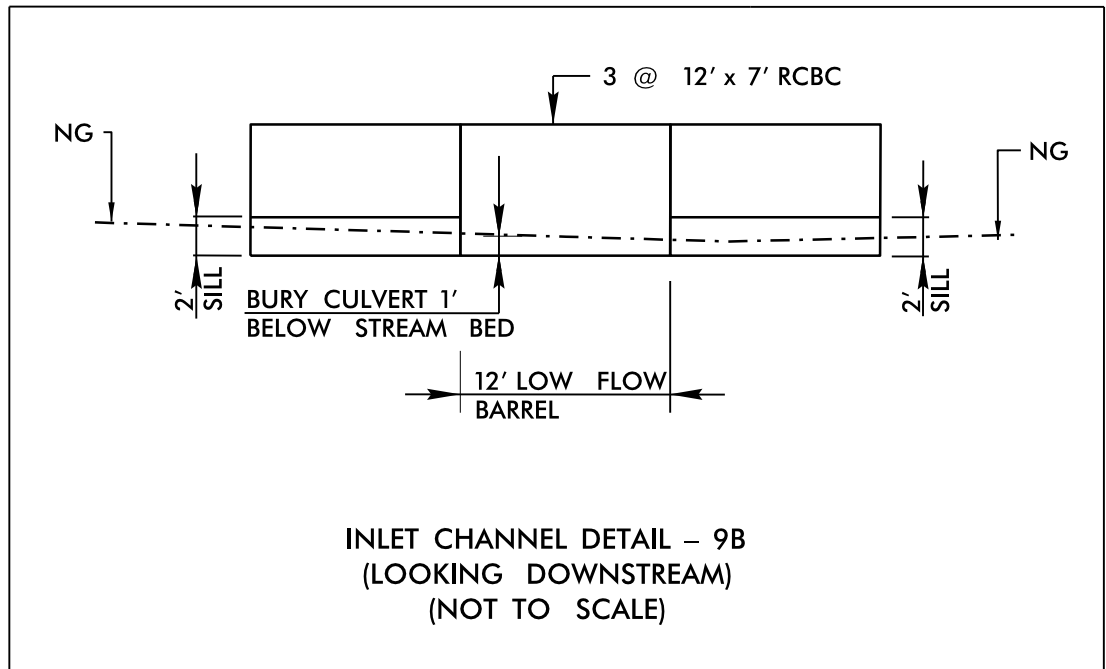
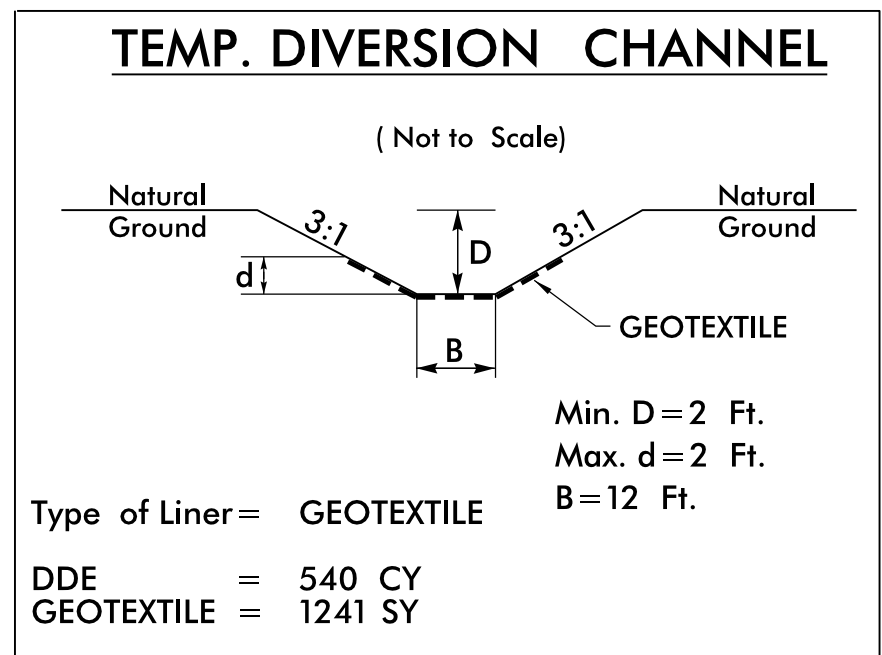
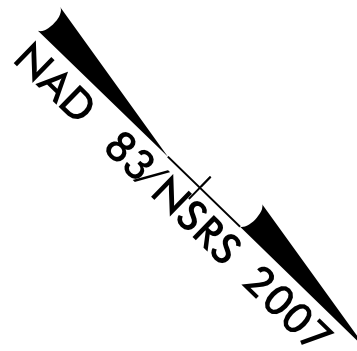
ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

SEE SHEET 43 FOR -LI- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-3300A	EC-9A/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

- ROADSIDE ENVIRONMENTAL PROJECT ENGINEER
- LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025



5/14/99

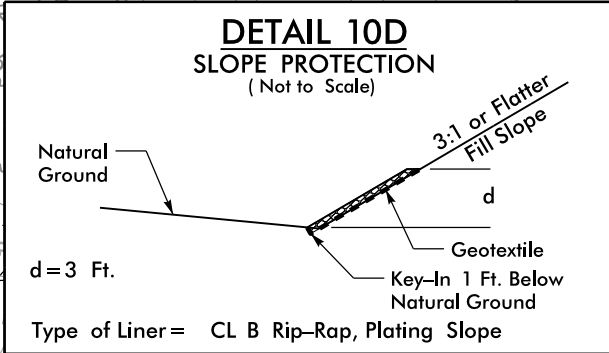
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

22 x 125 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 10.1



-LI- STA. 305+56 RT
-LI- STA. 305+85/LT
-LI- STA. 306+00 RT
-LI- STA. 306+28 LT

Dewberry



MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671

Stantec

Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.

R-3300A

SHEET NO.

EC-10/CONST.10

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

120 x 22 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 10.2

BM5 ELEVATION = 33.10
N 212813 E 2358657
BL STATION 83+94.00 423 LEFT
R/R SPIKE IN 10' TIME

CL B RIP RAP
OUTLET
PROTECTION
2 TONS
S.Y. GEOTEXTILE

SLOPE PROTECTION
SEE DETAIL 10D
CL B RR
EST 13 TON
EST 30 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

OUTLET CHANNEL
SEE DETAIL 10A
DDE 15 CY

CL II RIP RAP
6'W X 20'L
EST 24 TON
EST 42 SY GF

SLOPE PROTECTION
SEE DETAIL 10D
CL B RR
EST 25 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

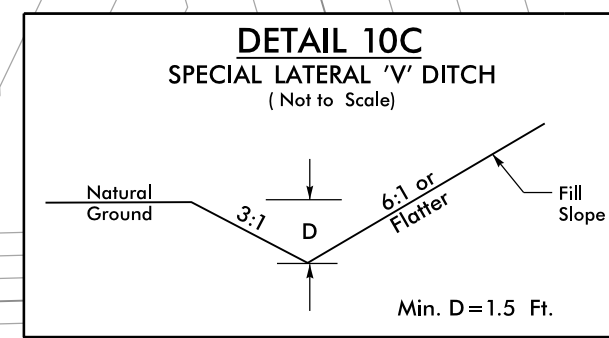
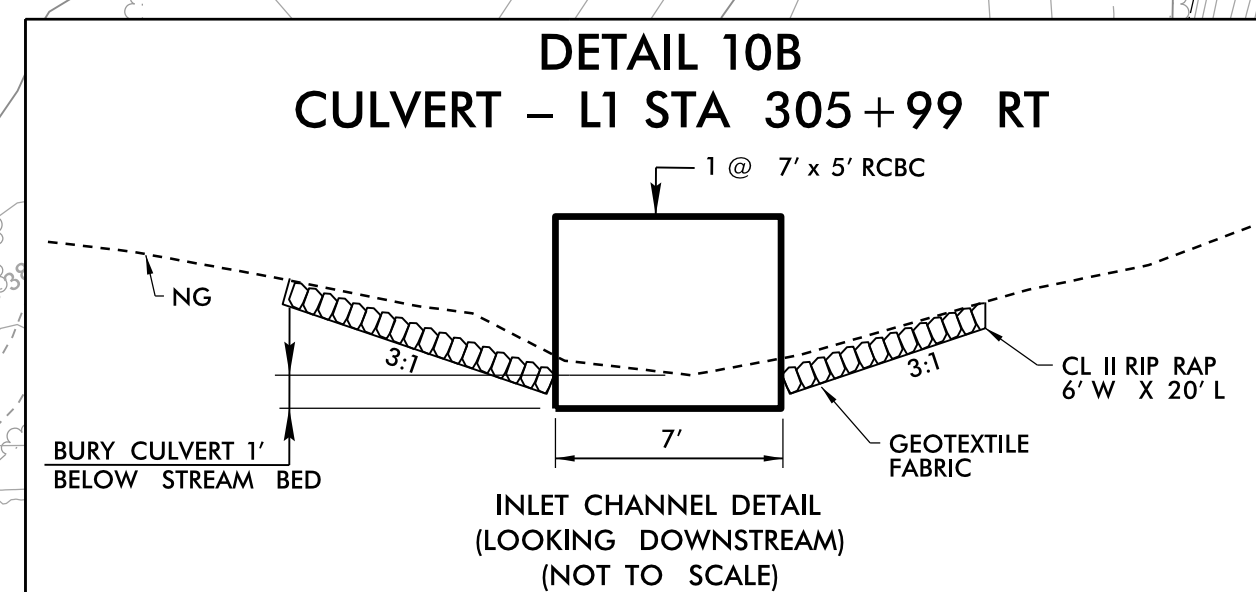
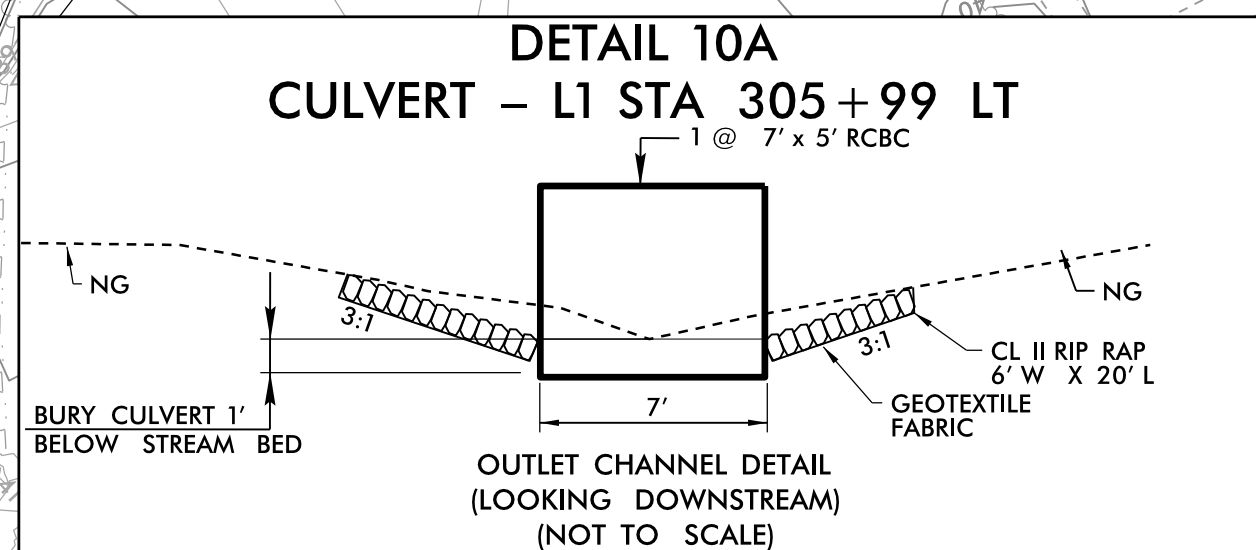
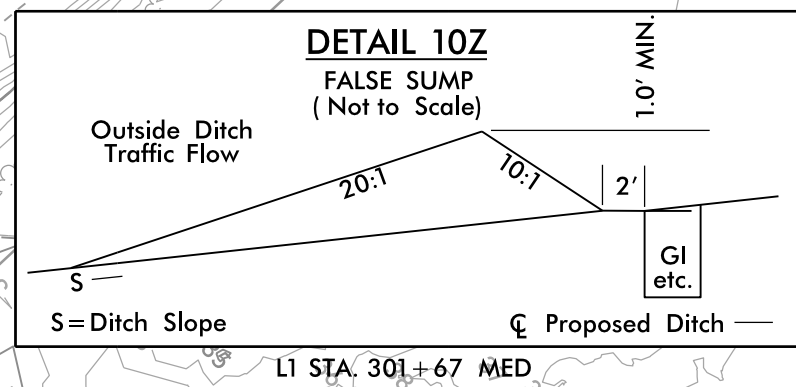
CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF

CL II RIP RAP
6'W X 20'L
EST 12 TON
EST 28 SY GF
CL II RIP RAP
6'W X 20'L
EST 7 TON
EST 10 SY GF



FROM -LI- STA. 306+27 TO STA. 308+50 LT
FROM -LI- STA. 306+00 TO STA. 309+50 RT

SEE SHEET 43 & 44 FOR LI- PROFILE
SEE SHEET 28-1 FOR HORIZONTAL
CURVE DATA

3/5/2025 Hydrolics\Erosion Control\Plans\NR3300A.ec.psh.10.dgn

CULVERT CONSTRUCTION SEQUENCE STA. 305 + 99 -L1- 1 @ 7'X5' RCBC (NOT TO SCALE)

PROJECT REFERENCE NO. <i>R-3300A</i>	SHEET NO. <i>EC-10A/CONST.10A</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. CONSTRUCT STILLING BASIN PER NCDOT DWG 1630.04 AT SIZE SPECIFIED.

2. CONSTRUCT TEMPORARY DIVERSION CHANNEL WITH LINER.

3. CONSTRUCT IMPERVIOUS DIKE UPSTREAM AND DOWNSTREAM

4. DIVERT FLOW THROUGH TEMPORARY DIVERSION CHANNEL.

5. CONSTRUCT PROPOSED CULVERT.
6. CONSTRUCT WINGWALLS, INLET AND OUTLET CHANNEL.

7. REMOVE IMPERVIOUS DIKES, ALLOWING FLOW THROUGH PROPOSED CULVERT.

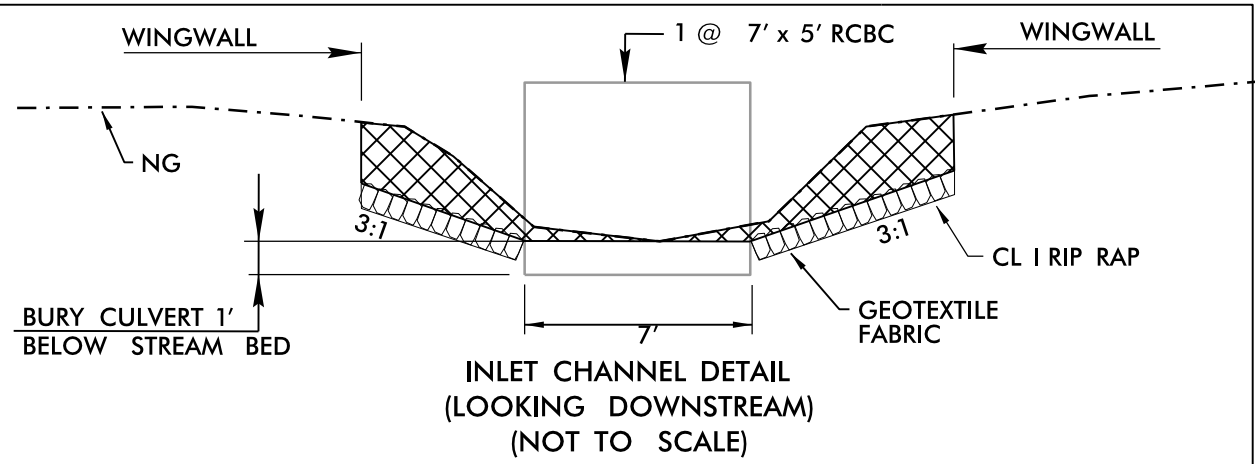
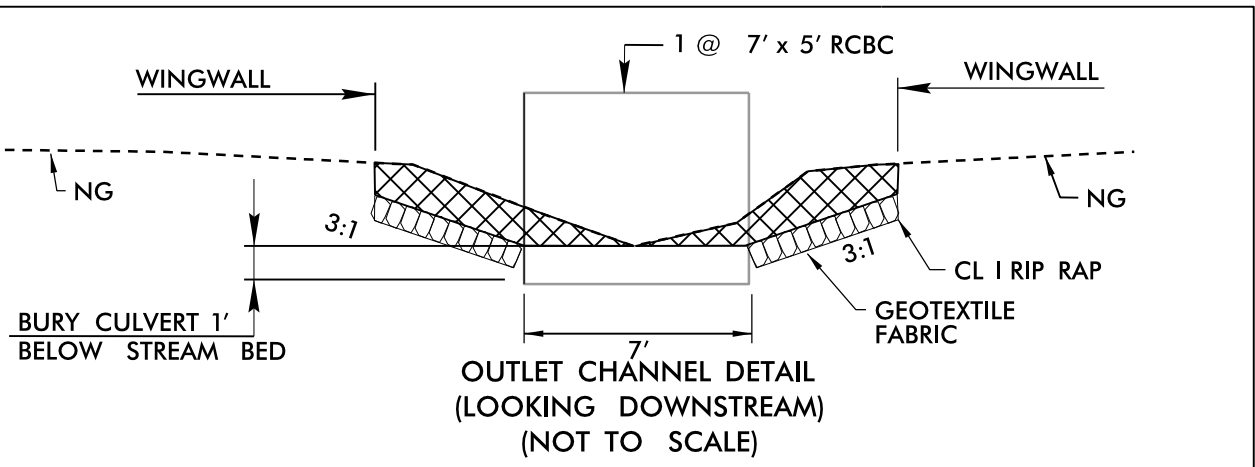
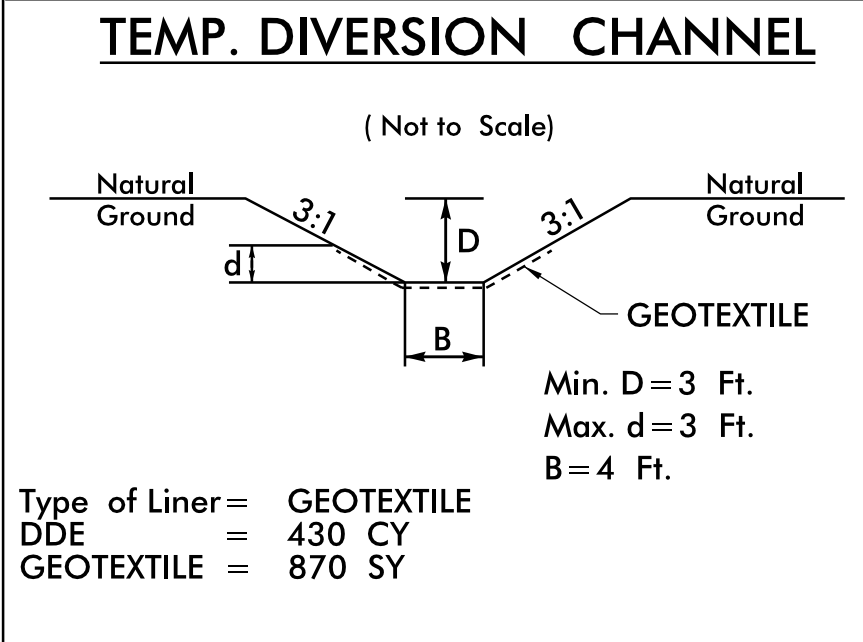
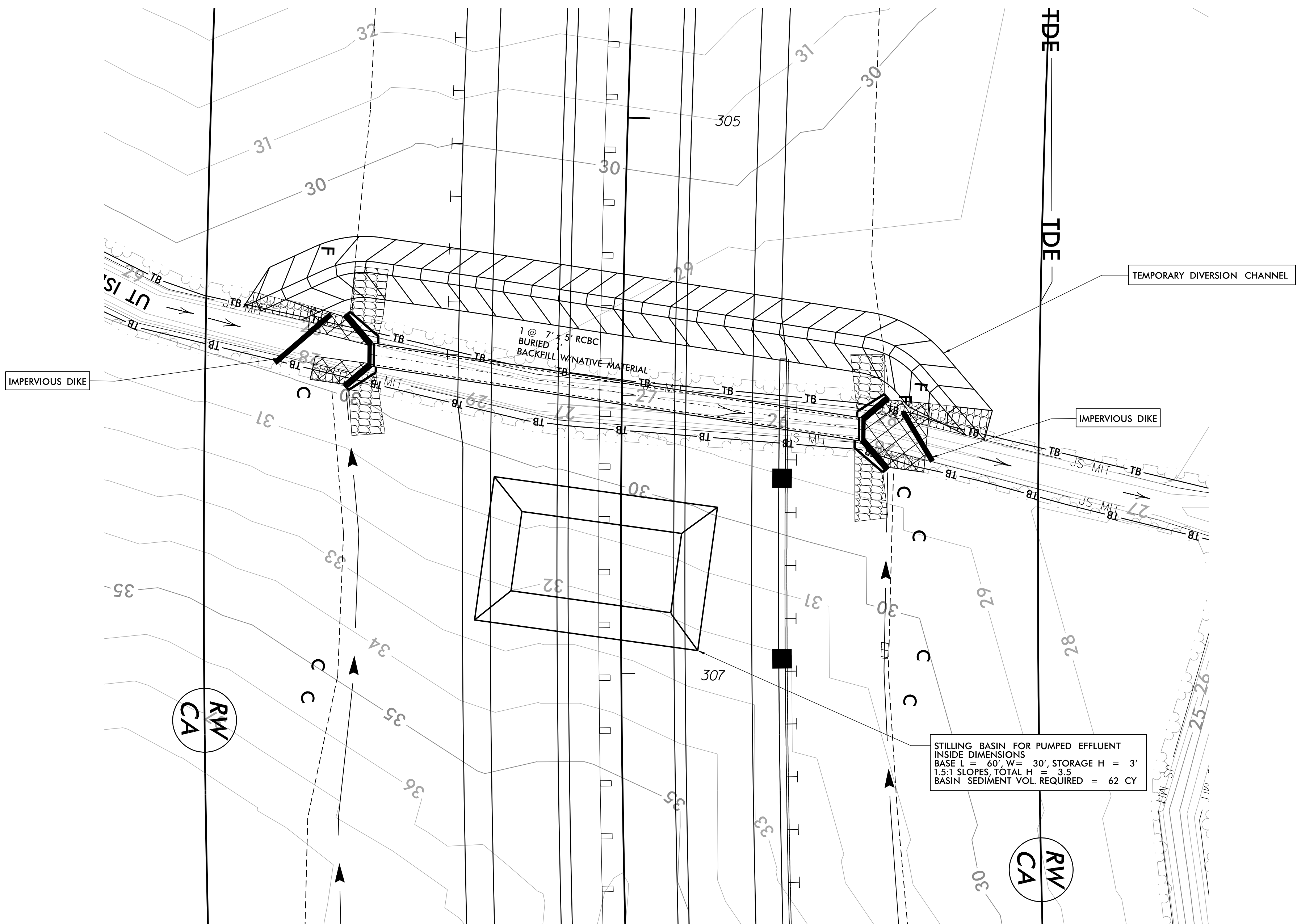
8. FILL TEMPORARY DIVERSION CHANNEL FROM UPSTREAM END.

9. REMOVE STILLING BASIN.

10. CONSTRUCT ROADWAY.

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

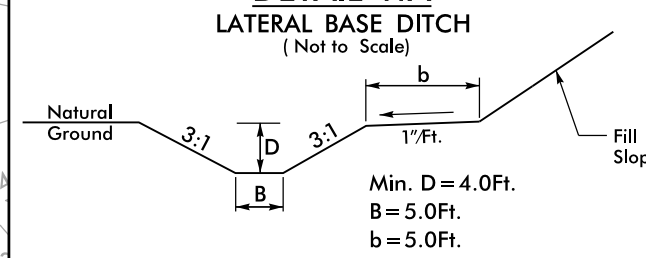
LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025



ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

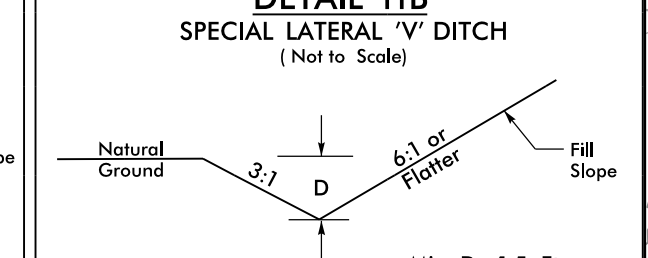
LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025

DETAIL 11A
LATERAL BASE DITCH
(Not to Scale)



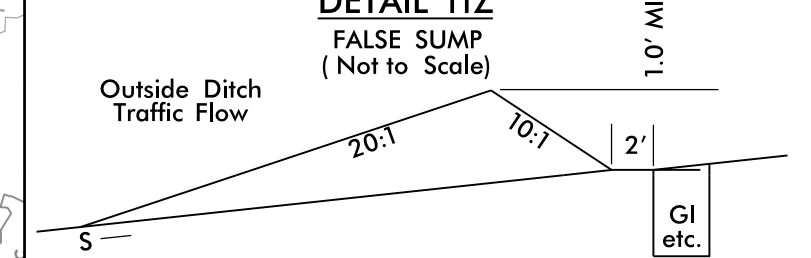
FROM L1 STA. 312+29 TO STA. 322+05 LT

DETAIL 11B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM -L1- STA. 304+27 TO STA. 308+50 LT
FROM -L1- STA. 306+00 TO STA. 309+50 RT

DETAIL 11Z
FALSE SUMP
(Not to Scale)



L1 STA. 309+36 MED L1 STA. 315+85 MED

Dewberry



MI ENGINEERING
1011 SCHUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6806
FIRM PE NUMBER: P-0671

Stantec

Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.	
R-3300A		EC-11/CONST.11	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

60 x 11 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 11.1

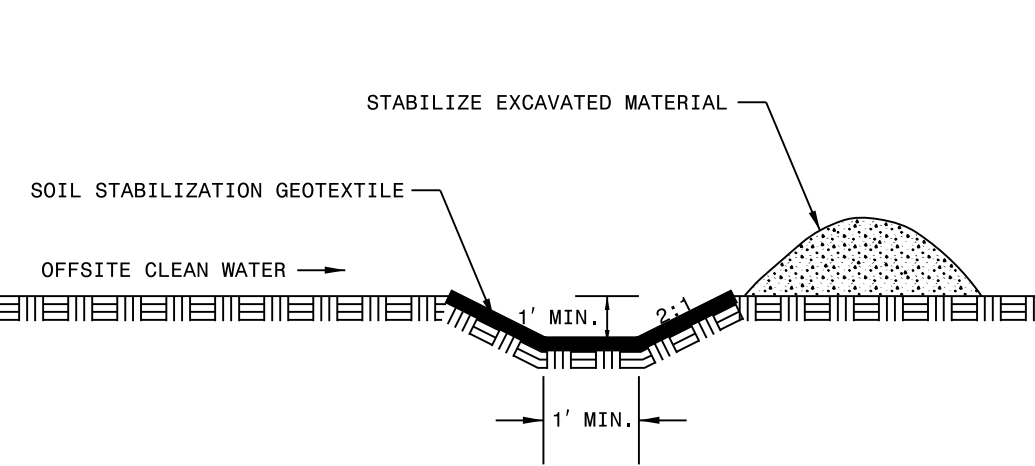
100 x 17 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 11.2

100 x 21 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 11.3

CLEAN WATER DIVERSION

--- CWD --- CWD --- CWD --- CWD ---

(Not to Scale)



INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL
AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

SEE SHEET 44 FOR -L1- PROFILE
SEE SHEET 2B-1 FOR HORIZONTAL CURVE DATA

5/14/99

3/5/2025
Hydraulics\ER\p\Plans\NR3300A_ec.psh.12.dgn

Dewberry



MI ENGINEERING
1011 SCHAU DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

Stantec

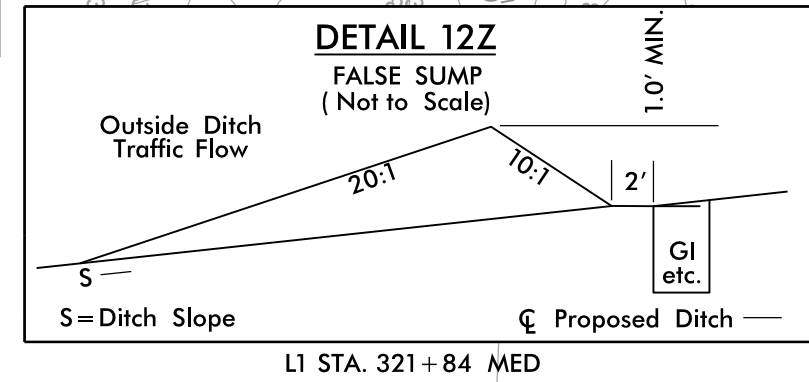
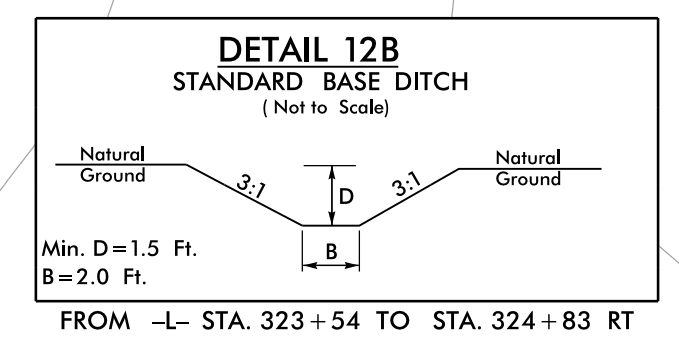
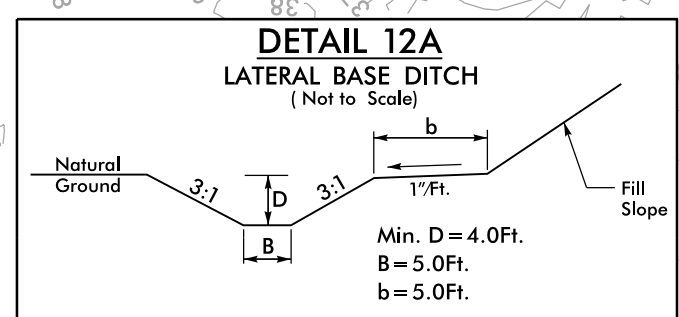
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.		SHEET NO.
R-3300A		EC-12/CONST.12
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		

NAD 83/NSRS 2007

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

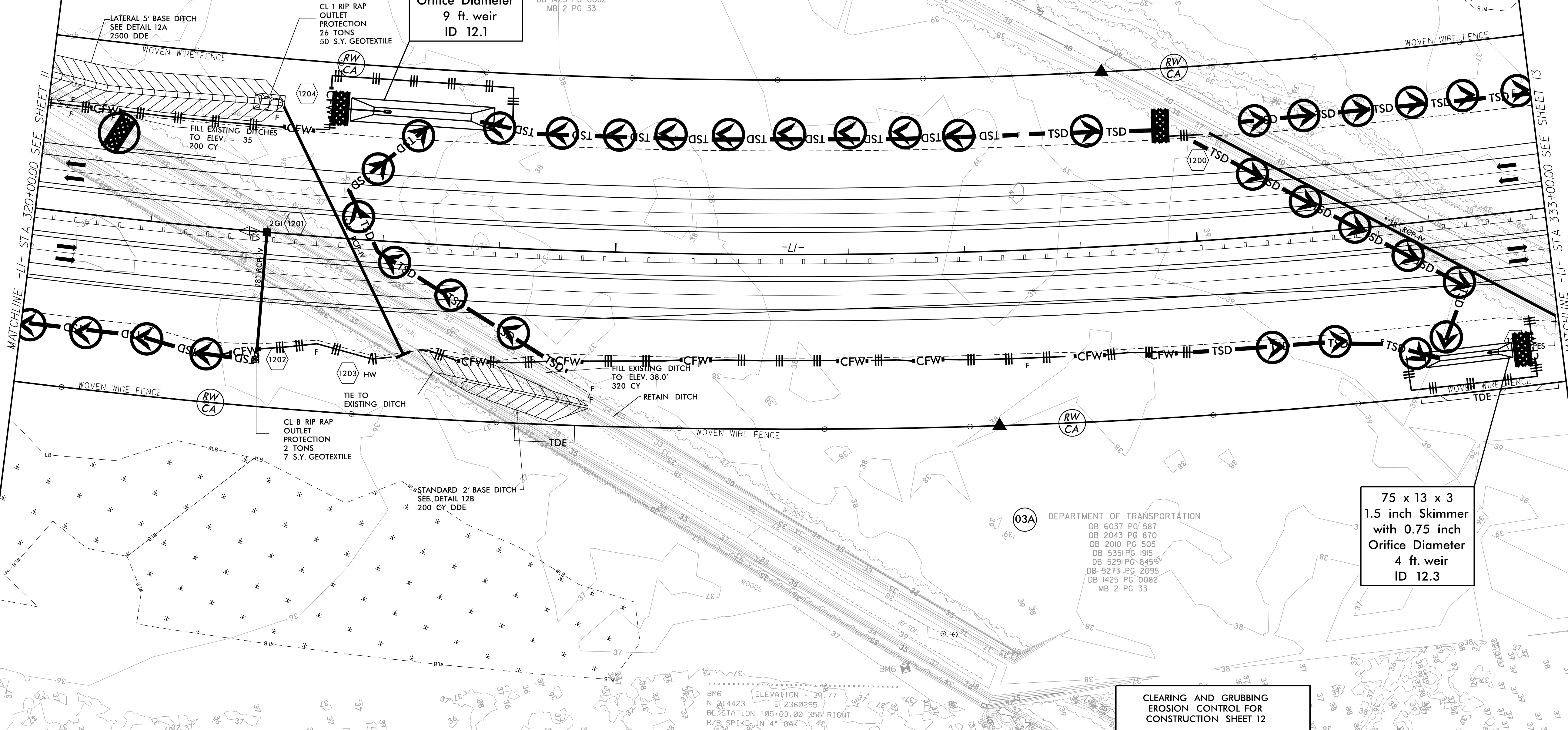
LEVEL III CERTIFIED BY:
ALLISON THOMPSON, PE
CERTIFICATION NUMBER: 4282
ISSUED: MARCH 6, 2025



**PIPE TO BE CAMBERED AS DIRECT BY
ENGINEER - SEE PROJECT SPECIAL PROVISION

120 x 21 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9 ft. weir
ID 12.1

DEPARTMENT OF TRANSPORTATION
DB 6037 PG 587
DB 2043 PG 870
DB 2010 PG 505
DB 5351 PG 1915
DB 5291 PG 845
DB 5273 PG 2095
DB 1425 PG 0082
MB 2 PG 33



03A DEPARTMENT OF TRANSPORTATION
DB 6037 PG 587
DB 2043 PG 870
DB 2010 PG 505
DB 5351 PG 1915
DB 5291 PG 845
DB 5273 PG 2095
DB 1425 PG 0082
MB 2 PG 33

75 x 13 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 12.3

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

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

SEE SHEET 44 & 45 FOR LT PROFILE
SEE SHEET 2B-1 FOR HORIZONTAL CURVE DATA