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PROJECT: B–5301

TIP B

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5301	EC-1	

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

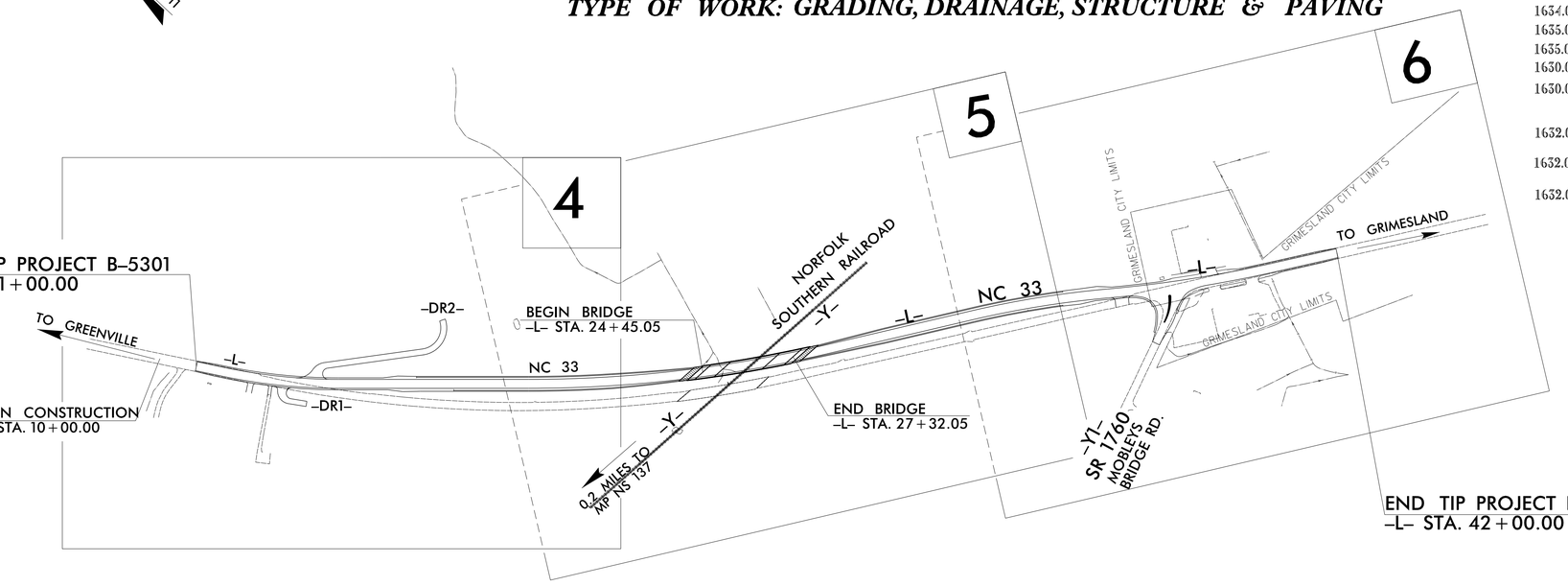
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

PITT COUNTY

LOCATION: BRIDGE NO. 87 OVER NORFOLK SOUTHERN RAILROAD ON NC 33

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE & PAVING



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	EW 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	

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

GRAPHIC SCALE

50 25 0 50 100
PLANS

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

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Designed by:

Noelle Ring — *NAME*
3456 — *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

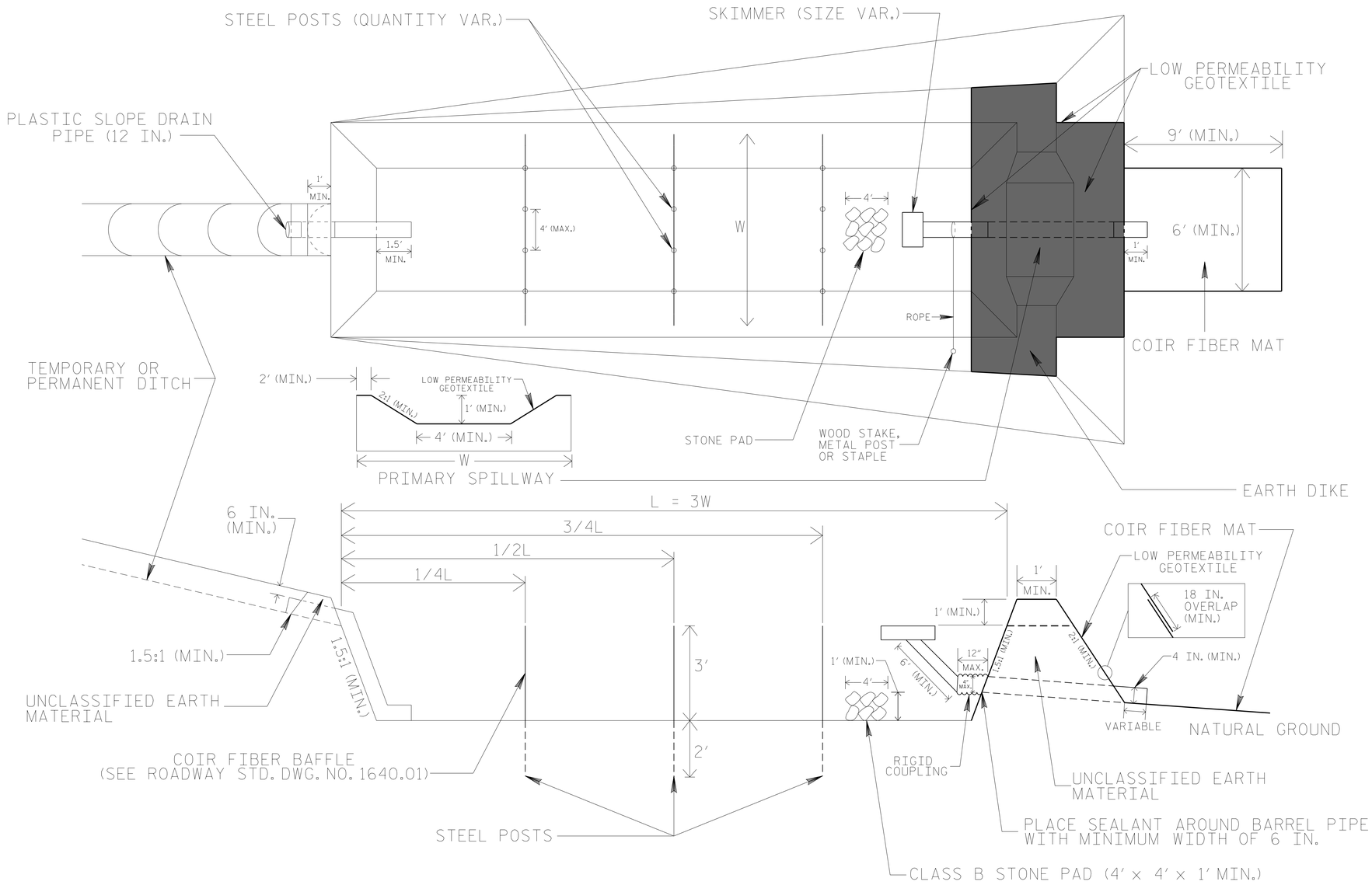
The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

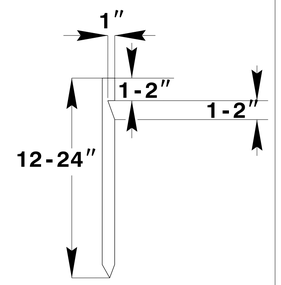
$$$$SYSTIME$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

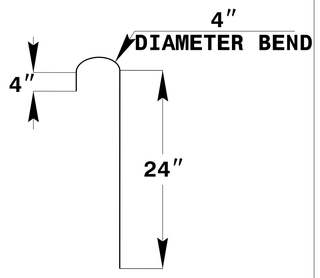
SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



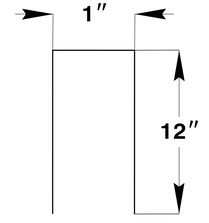
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

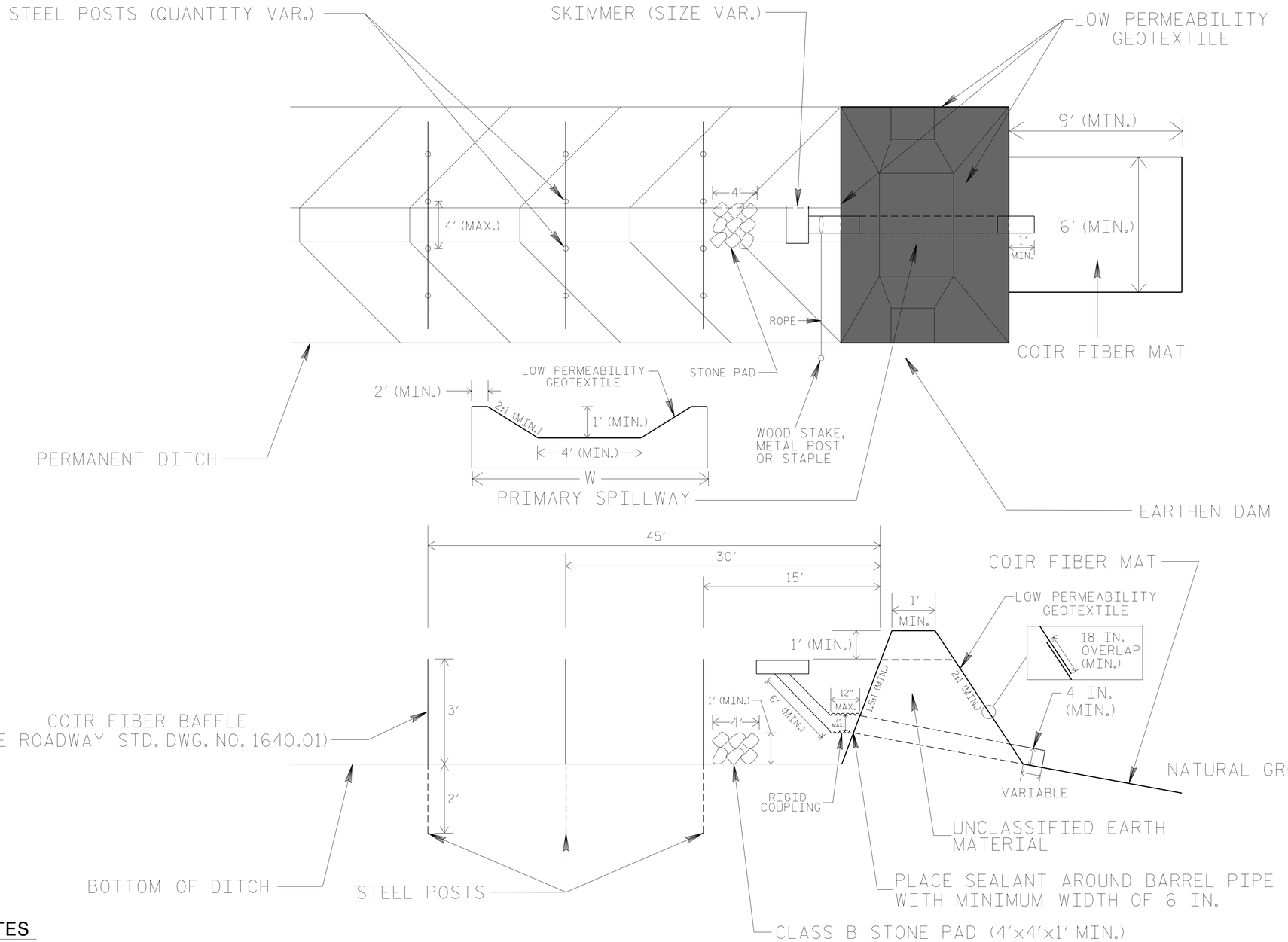
NOTES

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.).

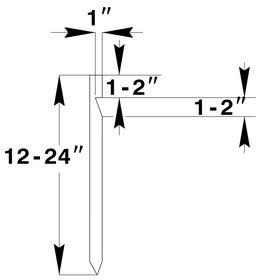
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

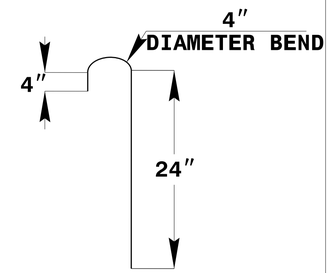
EARTHEN DAM WITH SKIMMER DETAIL (EAST)



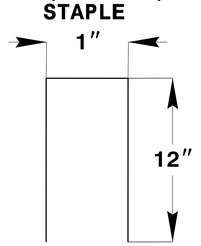
2″ x 2″ (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1″ (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. 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.
B-5301	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 1060-14.

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.

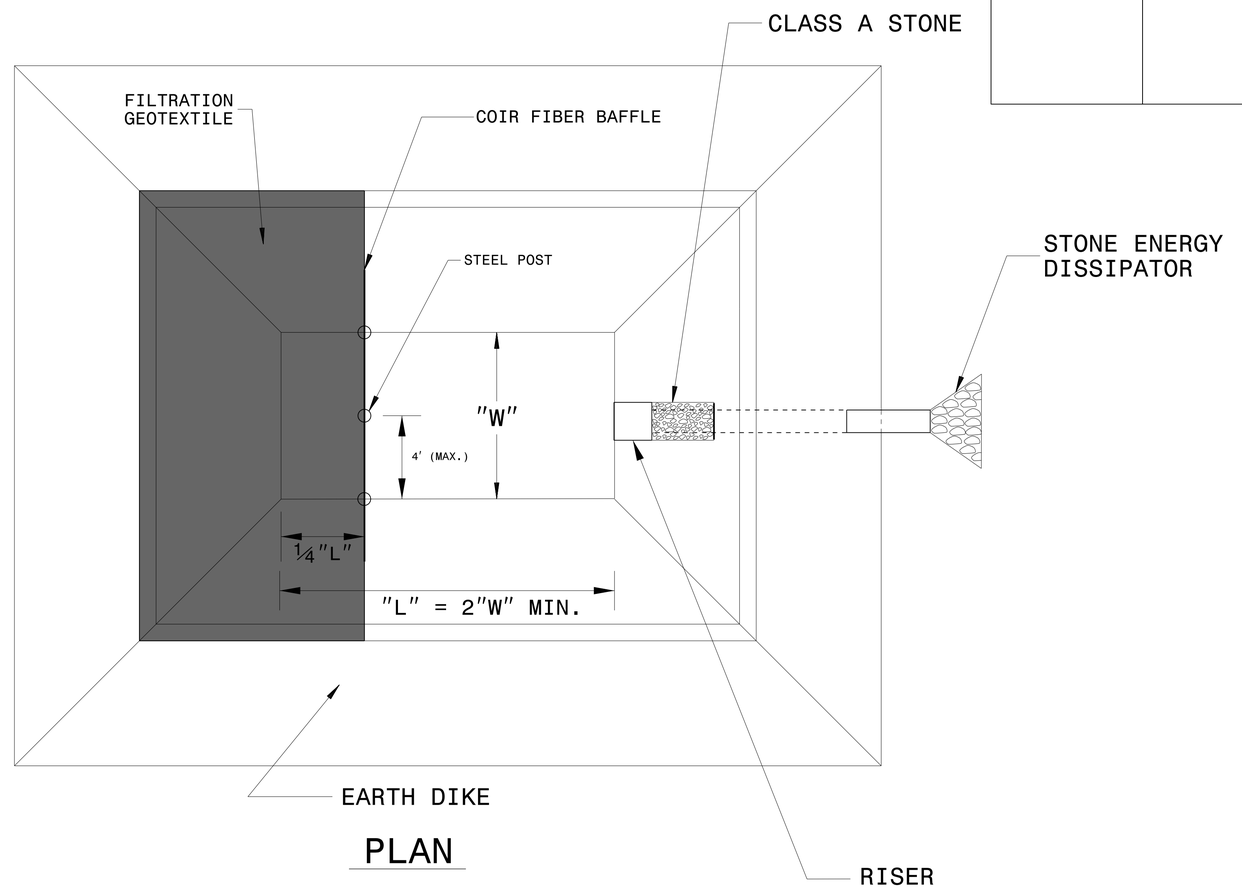
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

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

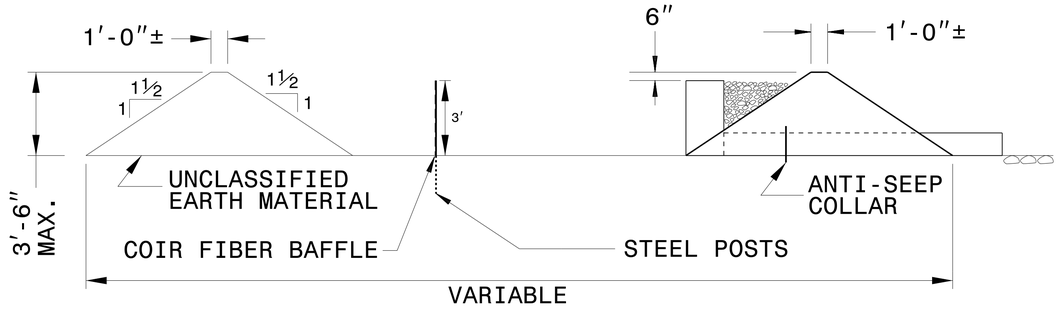
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

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.



PLAN

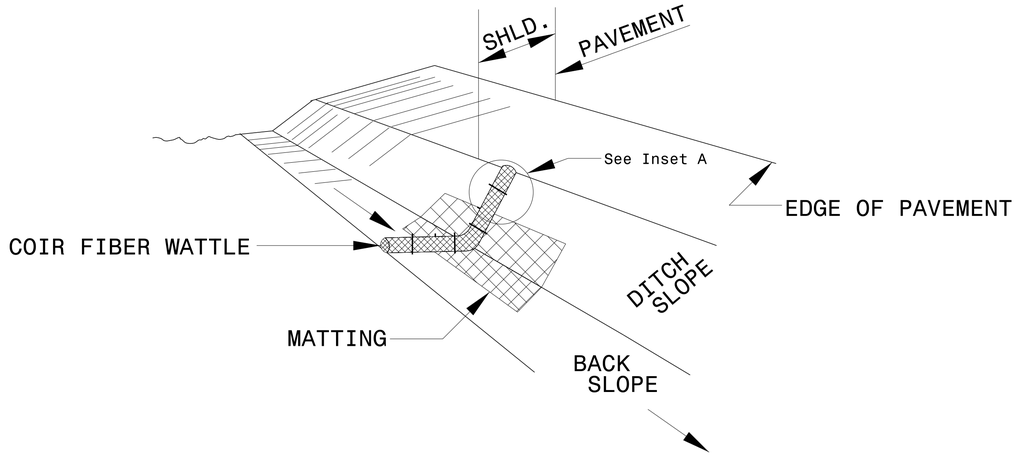


TYPICAL SECTION VIEW

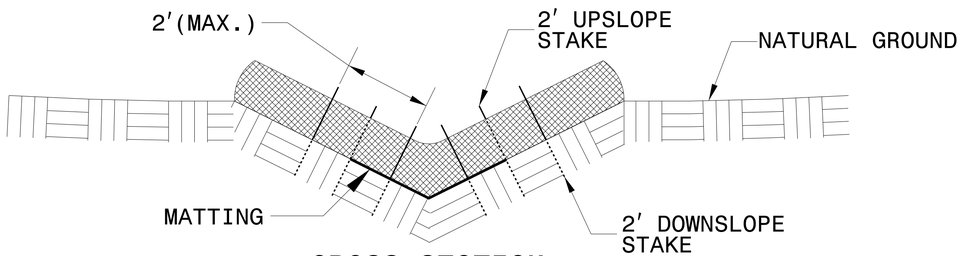
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

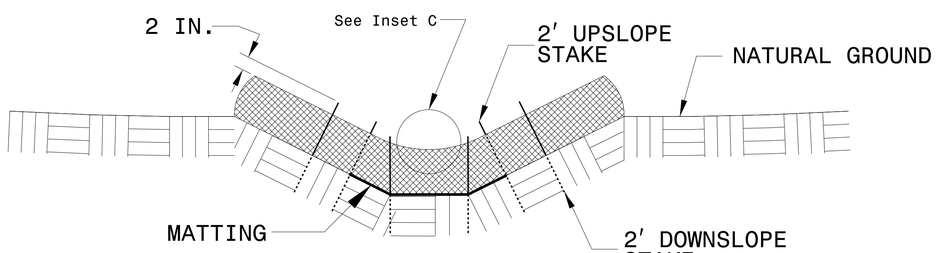
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



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.

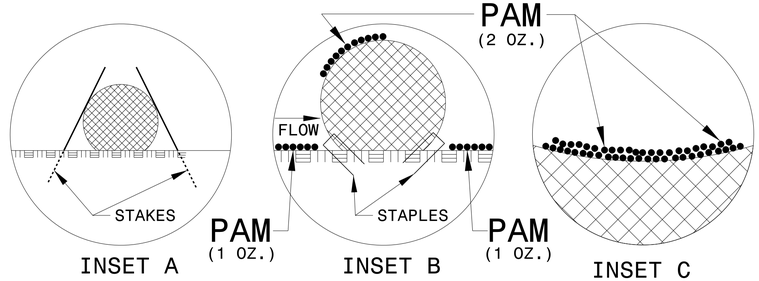
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

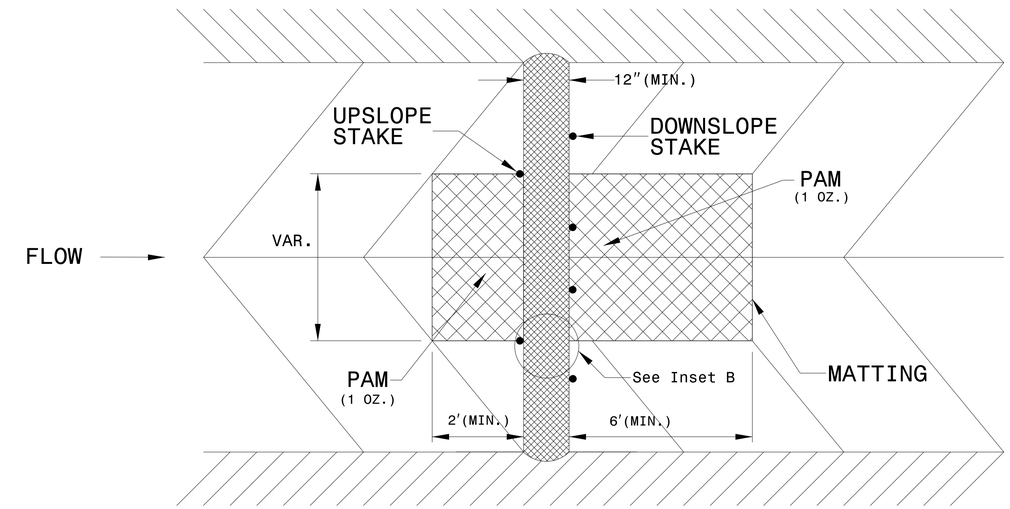
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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.

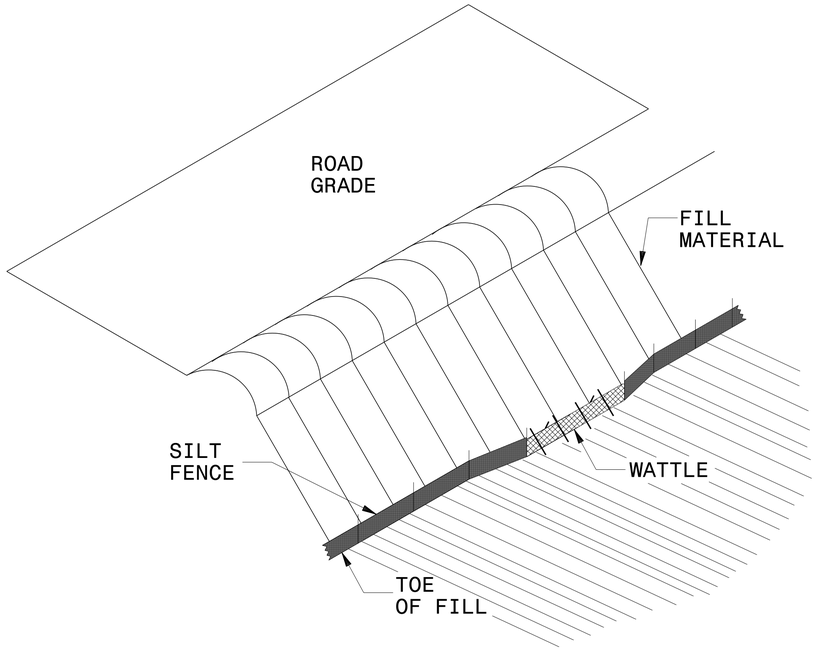




TOP VIEW

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

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.

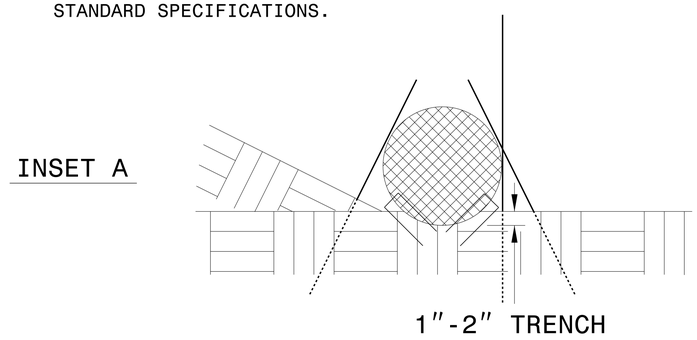
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

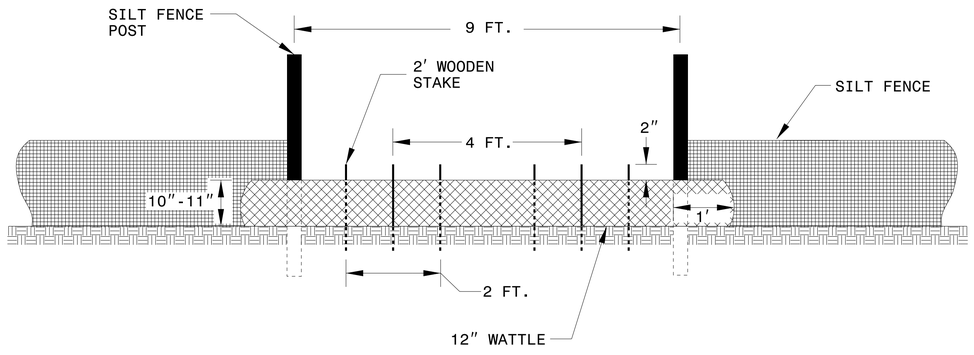
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

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

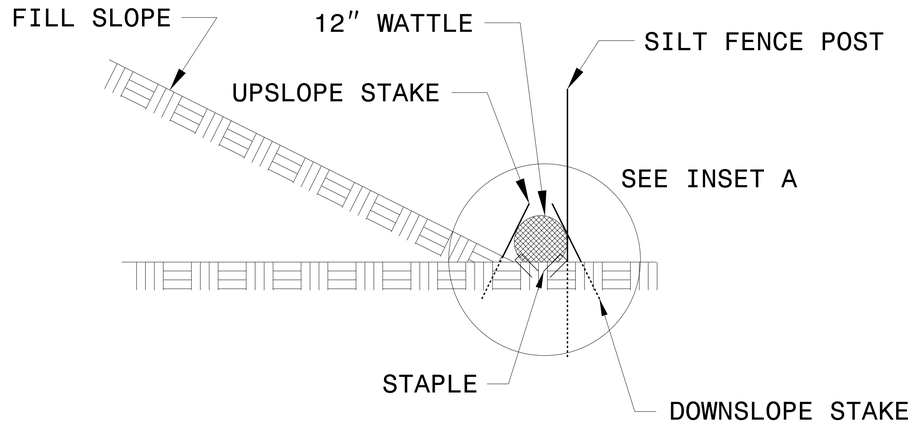
WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

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





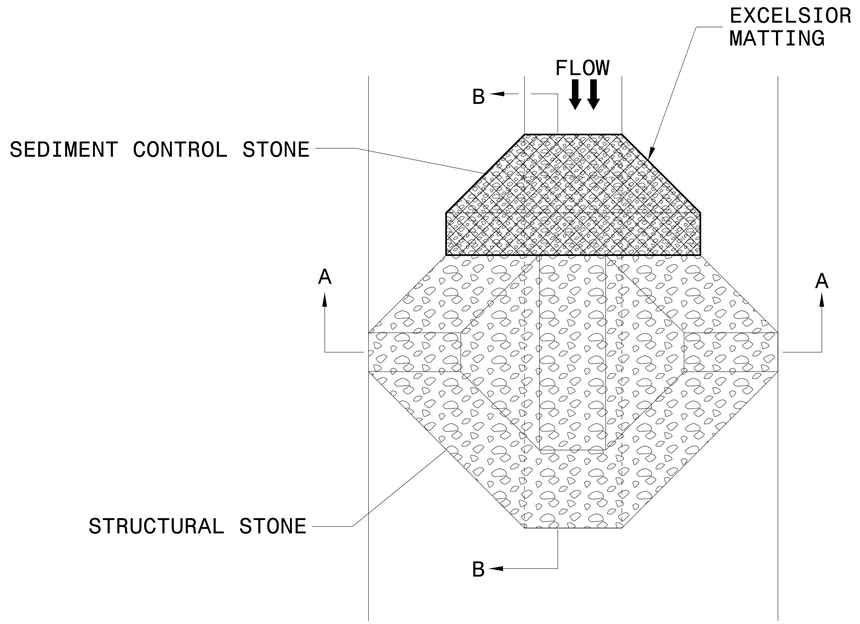
VIEW FROM SLOPE



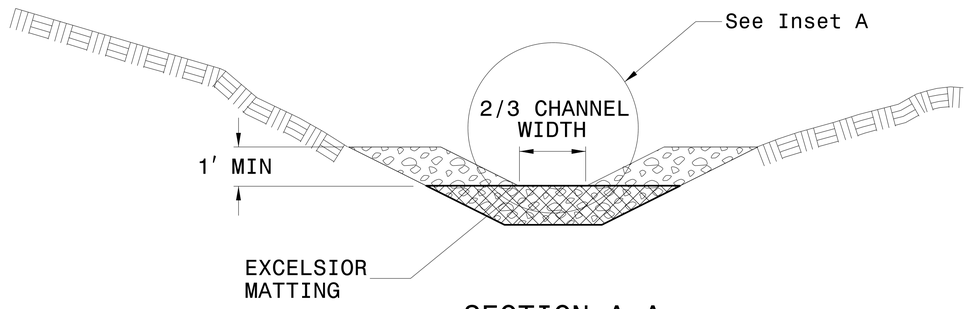
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

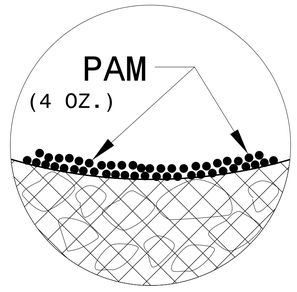
NOTES:

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

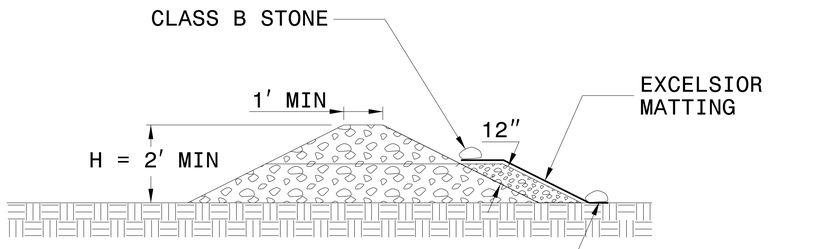
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



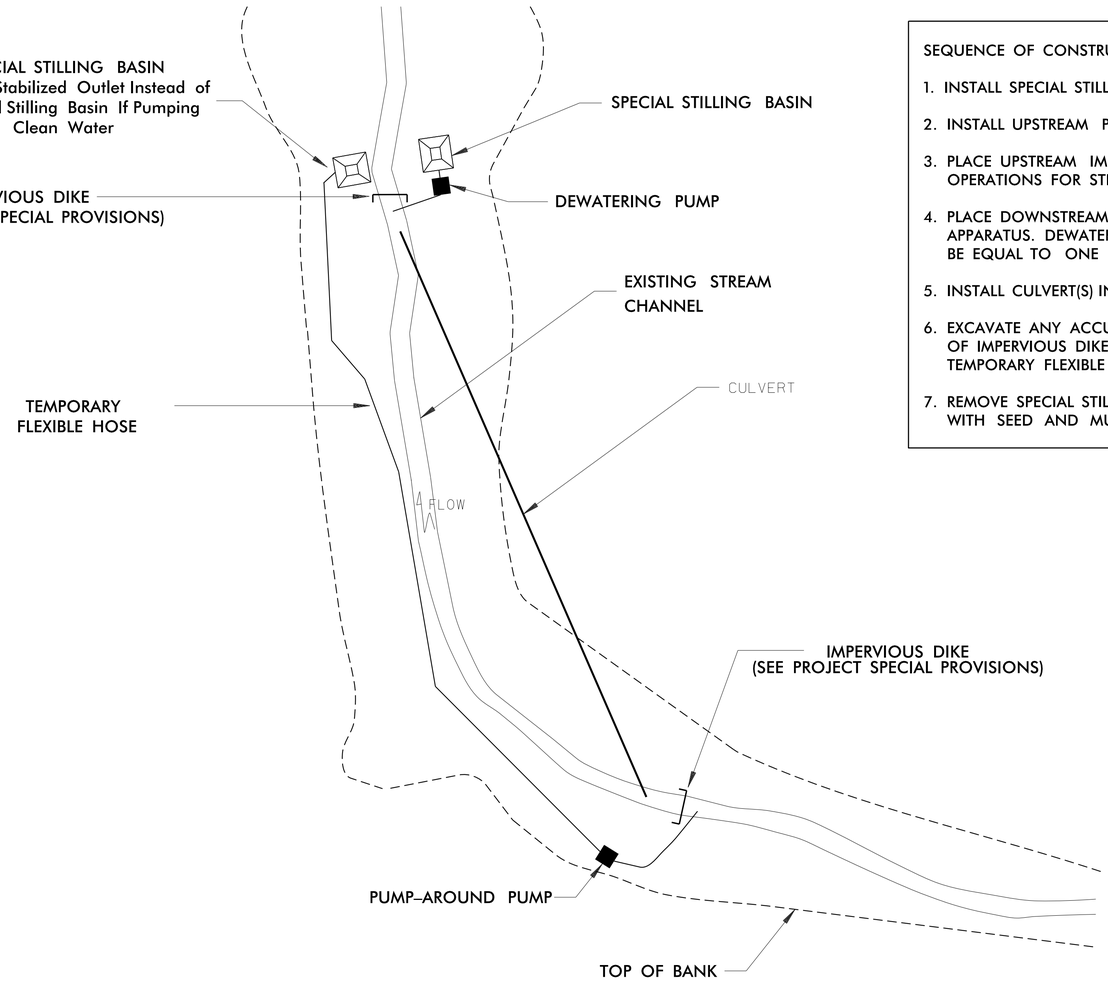
SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-2F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 to dewater the work area.



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.

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.
B-5301	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

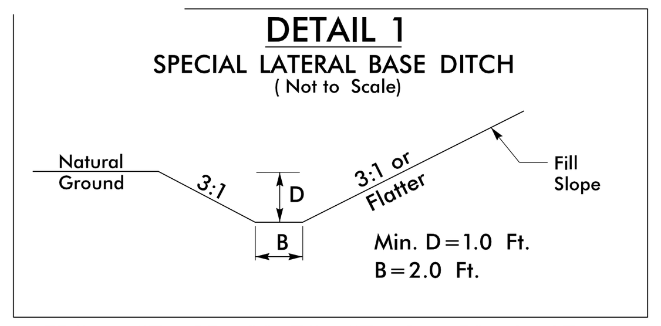
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	10+50	14+00	LT	715
4	-DR1-	10+50	11+00	RT	135
5	-L-	26+00	34+50	RT	1625
6	-L-	36+00	37+00	LT	115
6	-L-	39+50	40+00	LT	85
6	-L-	36+50	37+50	RT	90
				SUBTOTAL	2765
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					23,630
				TOTAL	26,395
				SAY	27,000

MATTING FOR EROSION CONTROL

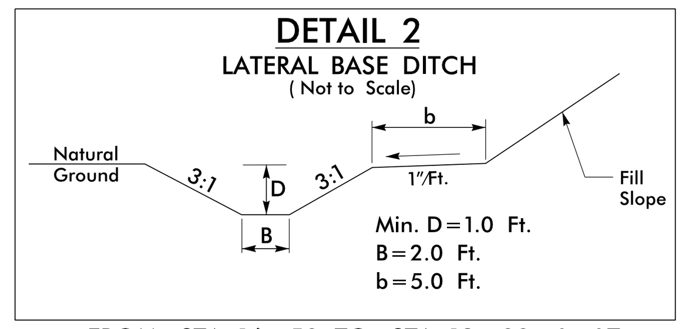
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

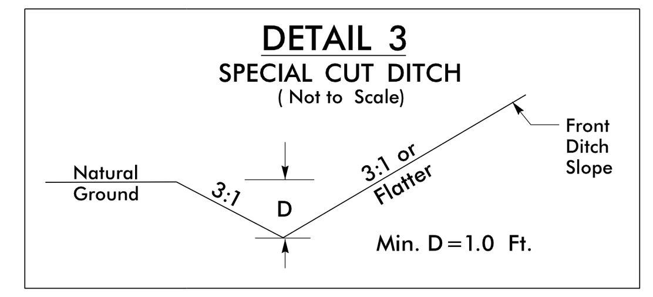
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



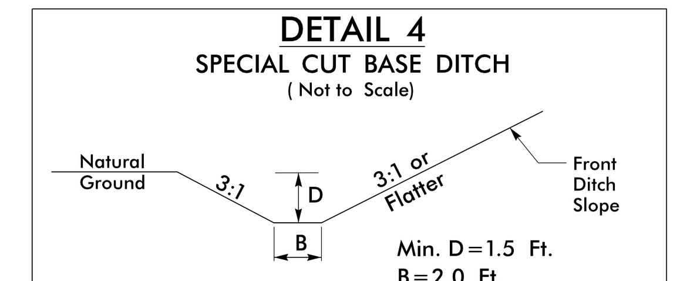
FROM STA. 15+00 TO STA. 16+50 -L- LT



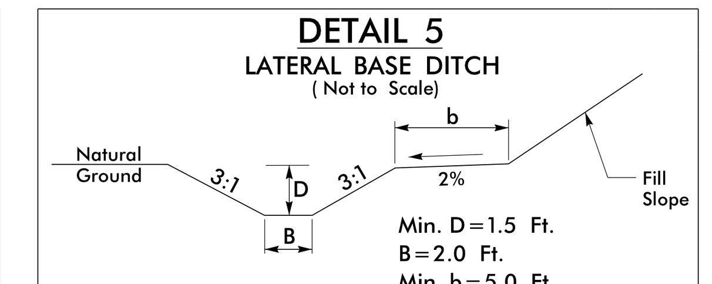
FROM STA. 16+50 TO STA. 18+00 -L- LT



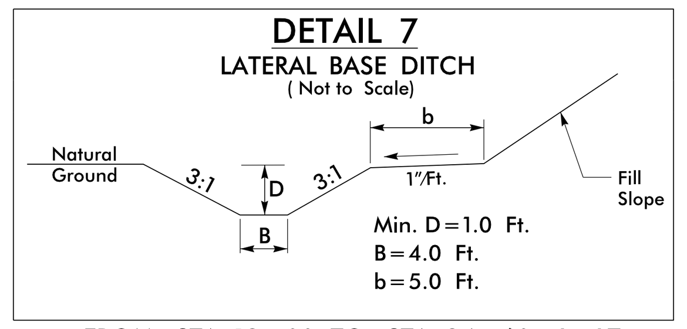
FROM STA. 10+86 TO STA. 13+15 -L- RT
FROM STA. 10+50 TO STA. 11+00 -DR1- LT
FROM STA. 10+32 TO STA. 11+00 -DR1- RT
FROM STA. 10+50 TO STA. 11+00 -DR2- LT
FROM STA. 11+00 TO STA. 11+25 -DR2- LT
FROM STA. 10+50 TO STA. 12+00 -DR2- RT
FROM STA. 12+00 TO STA. 14+40 -DR2- RT



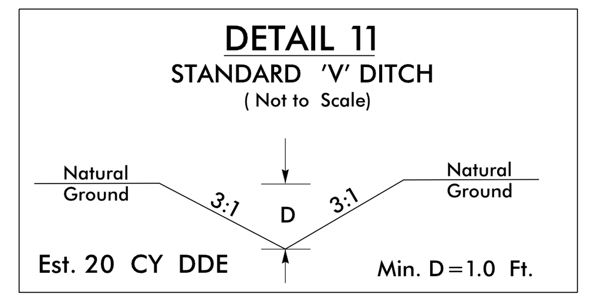
FROM STA. 10+44 TO STA. 14+00 -L- LT



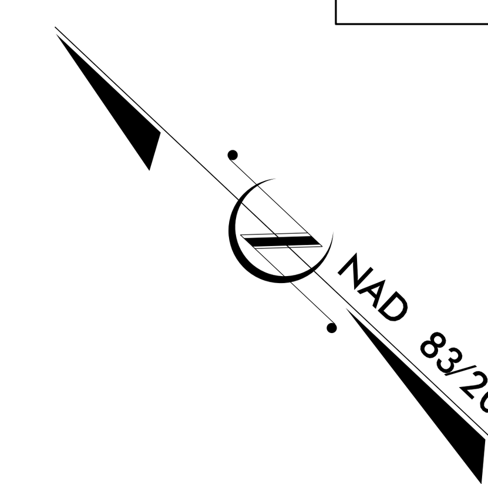
FROM STA. 14+00 TO STA. 23+45 -L- RT



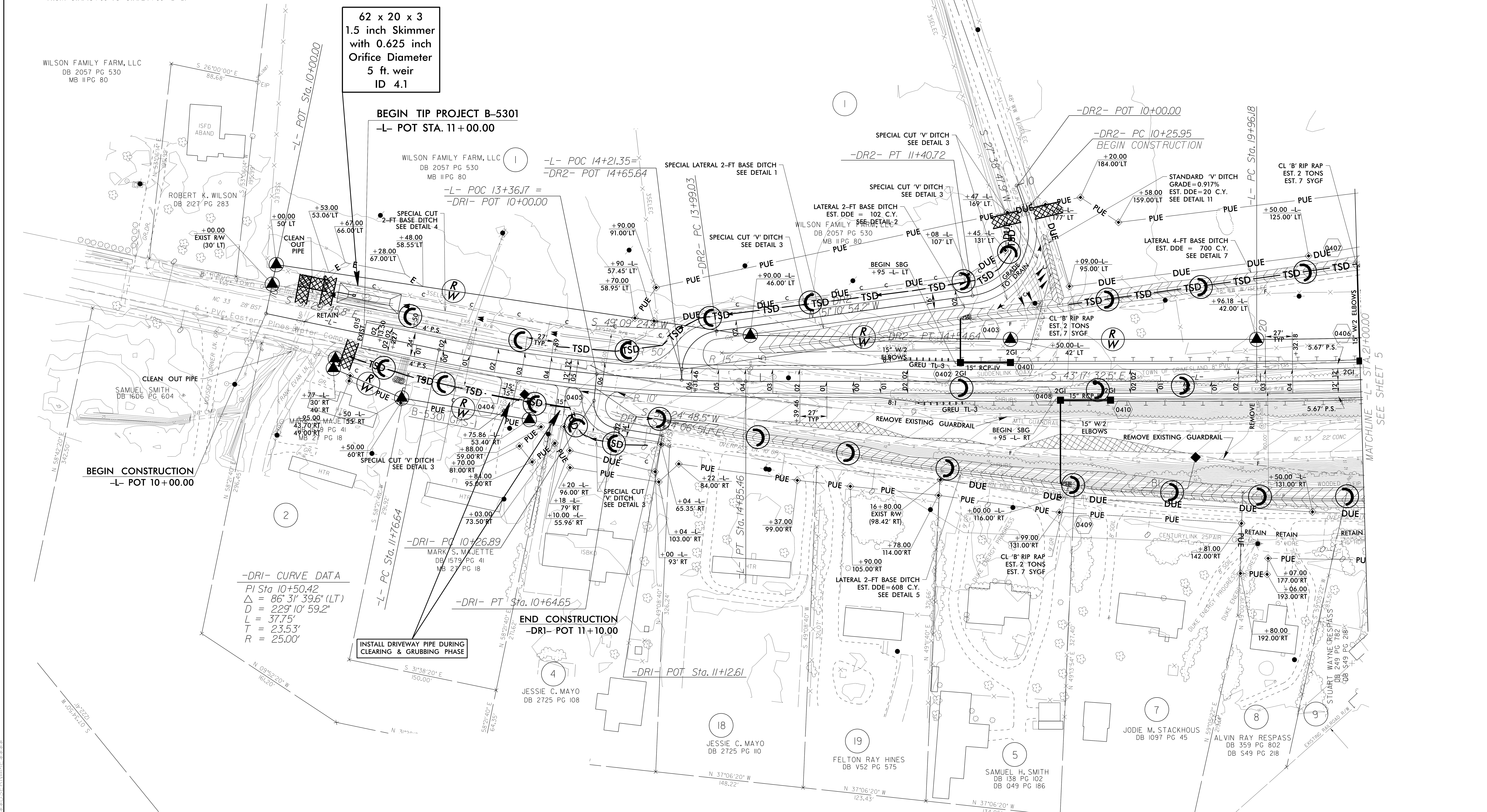
FROM STA. 18+00 TO STA. 24+60 -L- LT



FROM STA. 10+50 -DR2- LT TO STA. 18+00 -L- LT



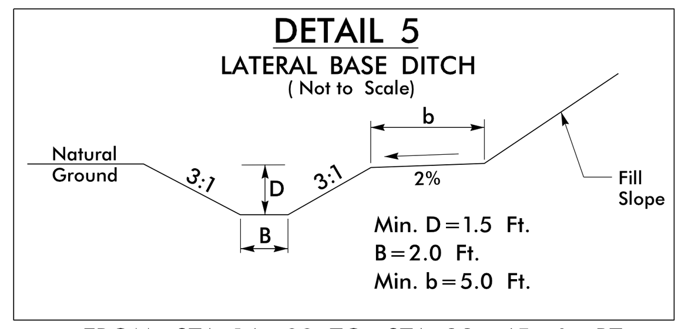
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



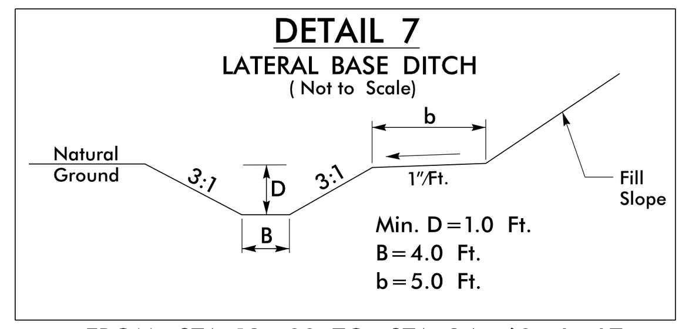
PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-05/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

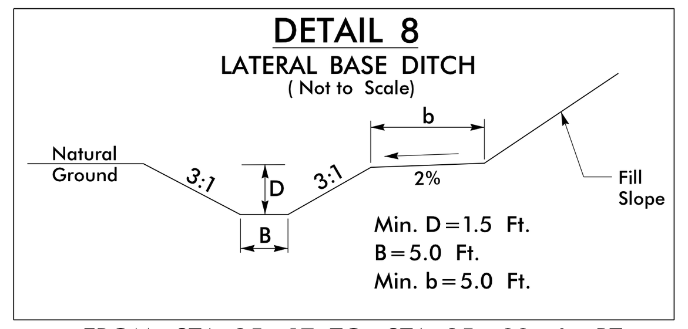
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



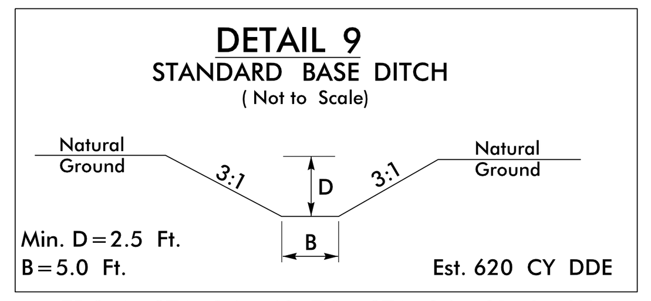
FROM STA. 14+00 TO STA. 23+45 –L– RT



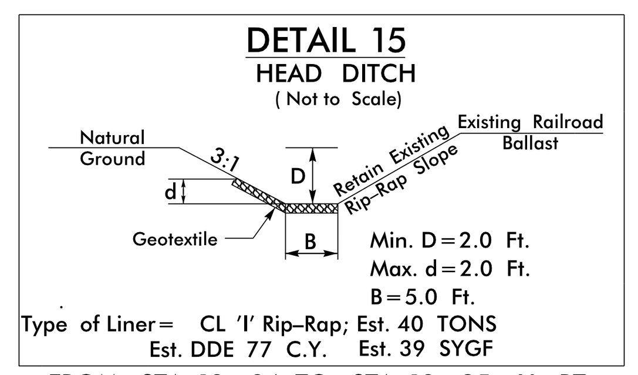
FROM STA. 18+00 TO STA. 24+60 –L– LT



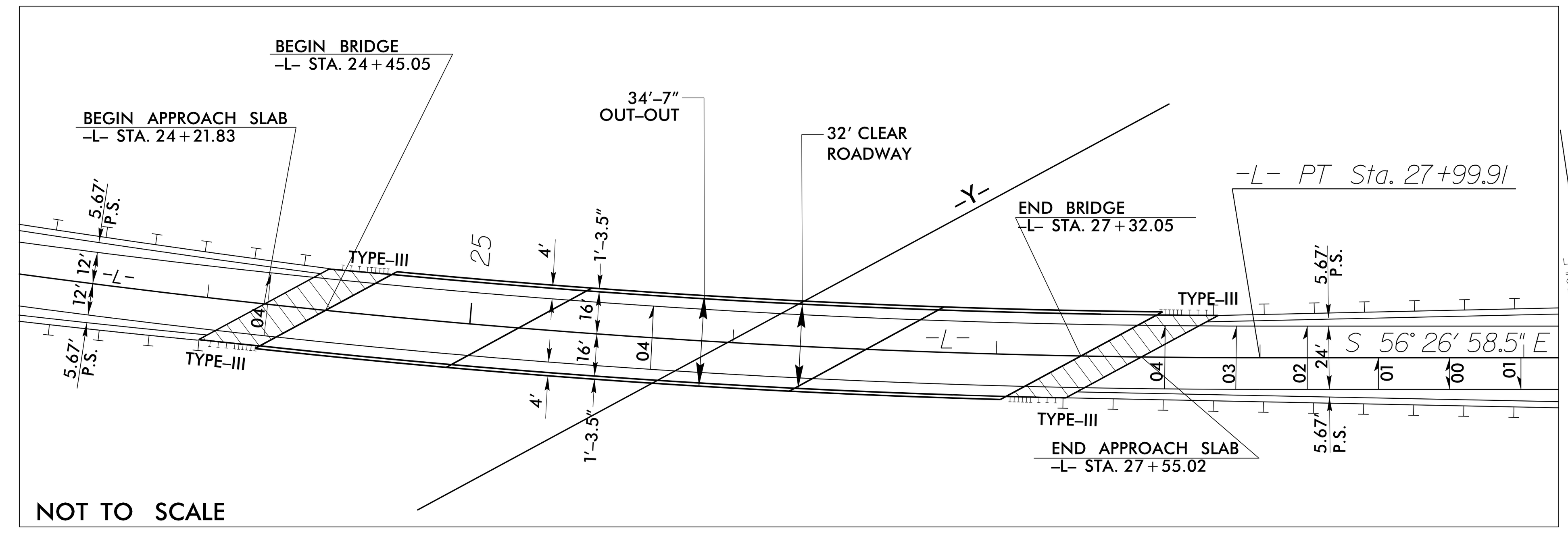
FROM STA. 25+17 TO STA. 35+00 –L– RT



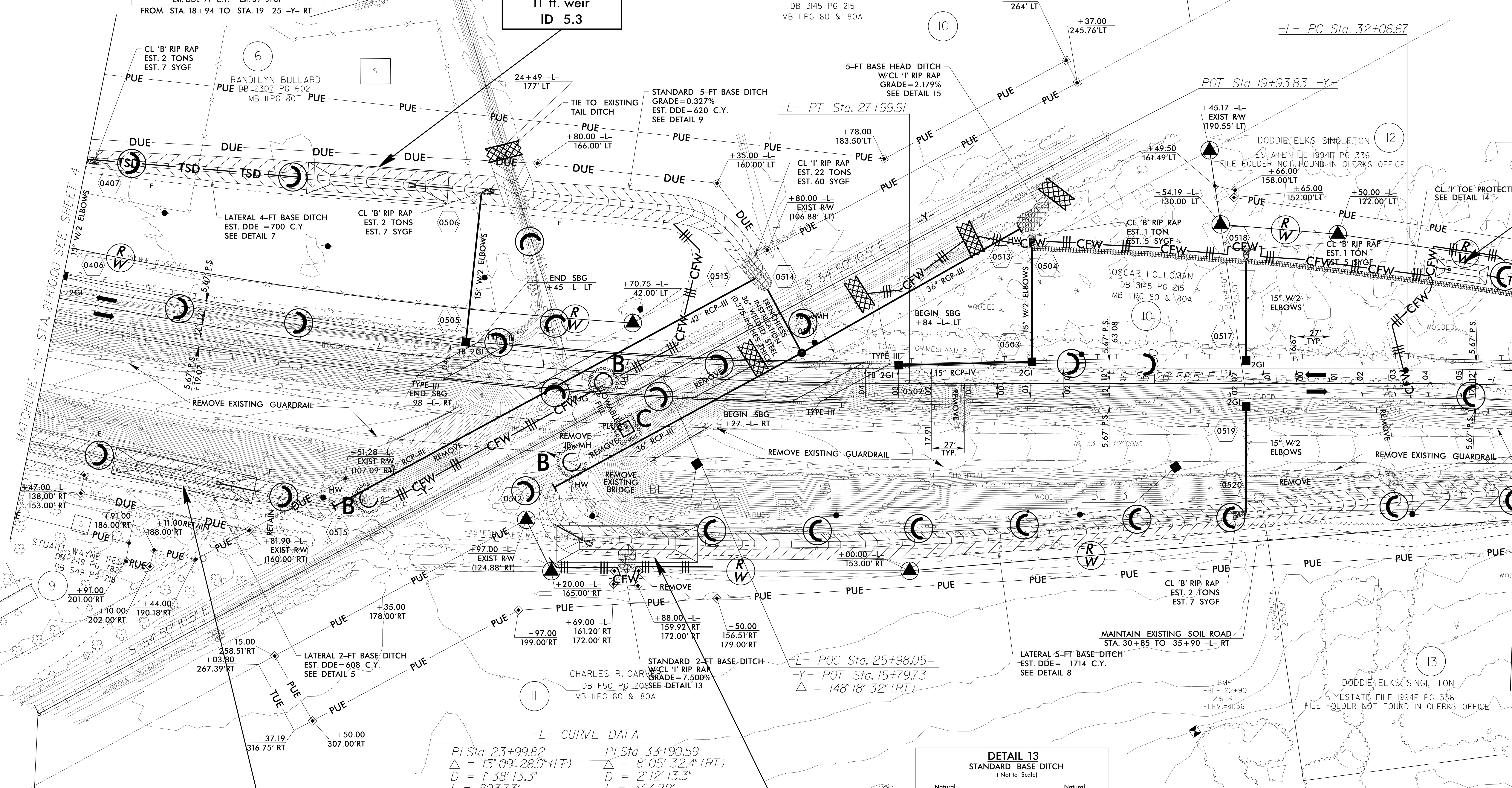
FROM STA. 24+49 TO STA. 26+81 –L– LT

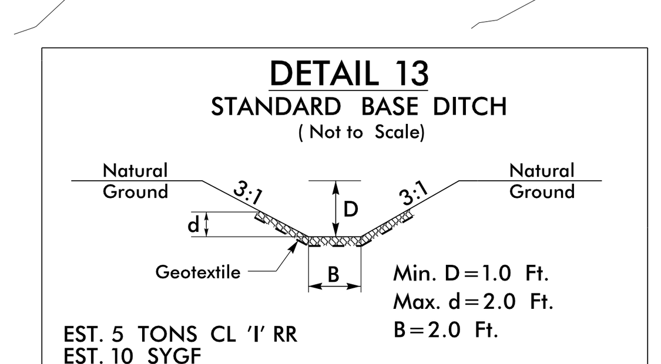


FROM STA. 18+94 TO STA. 19+25 –Y– RT



Sketch showing Dimensions of Pavement and Shoulder in Relation to Proposed Bridge Width





STA. 25+78 –L– RT

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-06/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1 or Flatter, Front Ditch Slope, Min. D=1.0 Ft.
FROM STA. 10+50 -Y1- LT TO STA. 38+00 -L- RT
FROM STA. 10+75 TO STA. 11+47 -Y1- RT

DETAIL 6
RIP RAP AT EMBANKMENT
(Not to Scale)
Ditch Grade, 10'min., 1.0'min., 1.0'min., GEOTEXTILE
Type of Liner= CL 'I' Rip-Rap
FROM STA. 39+79 TO STA. 39+97 -L- LT
FROM STA. 39+96 TO STA. 40+17 -L- LT
FROM STA. 40+03 TO STA. 40+17 -L- RT
FROM STA. 40+18 TO STA. 40+31 -L- RT

DETAIL 8
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, 2%, Fill Slope
Min. D=1.5 Ft.
B=5.0 Ft.
Min. b=5.0 Ft.
FROM STA. 25+17 TO STA. 35+00 -L- RT

DETAIL 10
SPECIAL CUT GRASSED SWALE
(Not to Scale)
Natural Ground, 3:1, D, B, 3:1 or Flatter, Front Ditch Slope
Min. D=1.0 Ft.
B=2.0 Ft.
FROM STA. 39+06 TO STA. 39+90 -L- LT

DETAIL 14
TOE PROTECTION
(Not to Scale)
Natural Ground, b, d, 3:1 or Flatter Fill Slope, Geotextile
d=2.0 Ft.
b=2.0 Ft.
Type of Liner= CL 'I' Rip-Rap; Est. 600 TONS
EST. 555 SY GF
FROM STA. 29+00 TO STA. 35+00 -L- LT

DETAIL 12
SPECIAL CUT GRASSED SWALE
(Not to Scale)
Natural Ground, 3:1, D, 3:1 or Flatter, Front Ditch Slope
Min. D=1.0 Ft.
FROM STA. 36+00 TO STA. 37+25 -L- LT
FROM STA. 40+10 TO STA. 42+00 -L- LT
FROM STA. 40+25 TO STA. 42+00 -L- RT

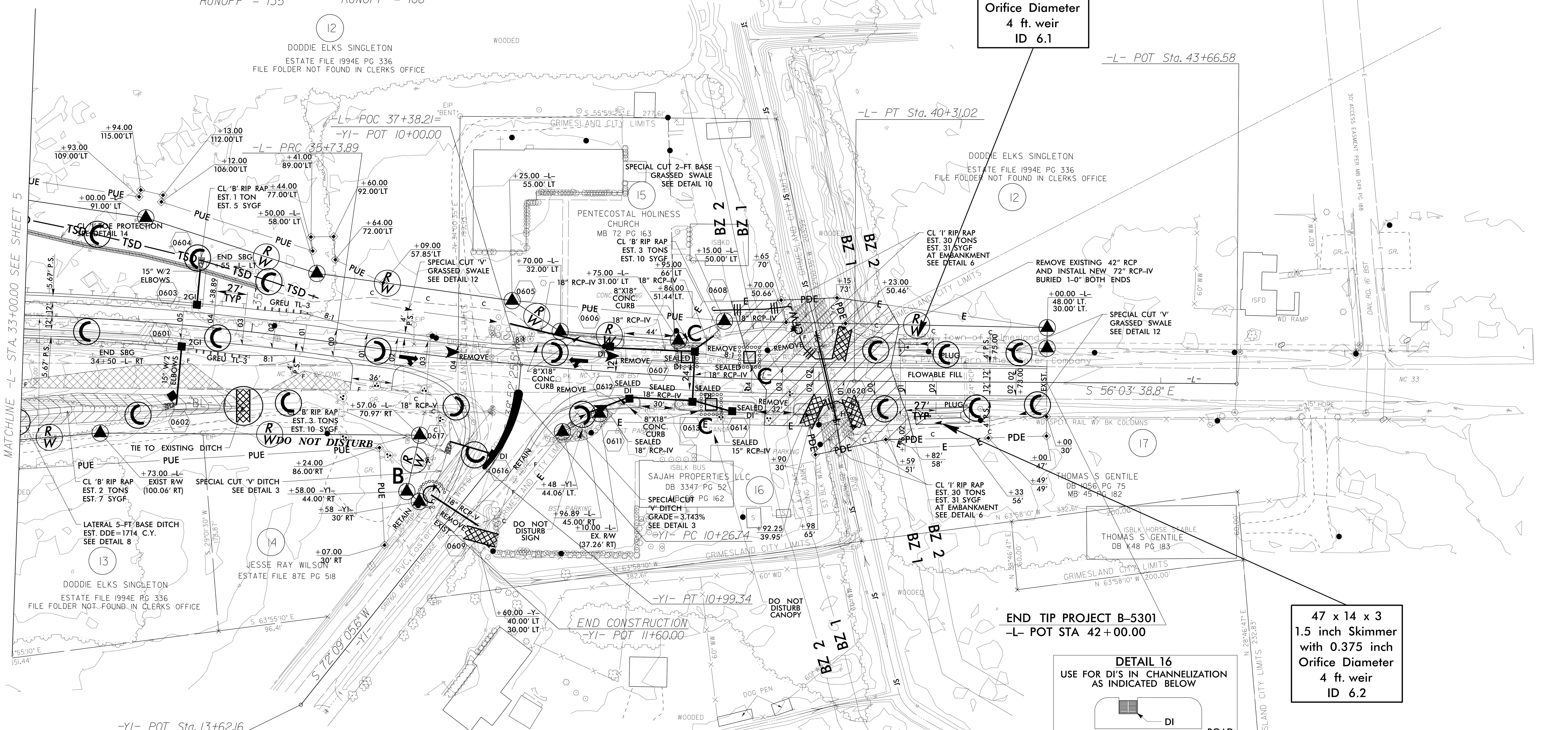
NOTE: UTILIZE PUMP AROUND OPERATION FOR REMOVAL OF EXISTING 42" RCP AND INSTALLATION OF PROPOSED 72" RCP-IV STA. 40+00. SEE EC-2F
SEE TRAFFIC MANAGEMENT PLAN (TMP-3) FOR ROAD CLOSURE DETAILS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

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

-L- CURVE DATA

PI Sta 33+90.59	PI Sta 38+02.80
Δ = 8° 05' 32.4" (RT)	Δ = 7° 42' 12.7" (LT)
D = 2° 12' 13.3"	D = 1° 41' 06.6"
L = 367.22'	L = 457.14'
T = 183.91'	T = 228.91'
R = 2,600.00'	R = 3,400.00'
SUPER = 0.05	SUPER = 0.04
RUNOFF = 135'	RUNOFF = 108'



NAD 83/2011
30 x 15 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 6.1
DODDIE ELKS SINGLETON
ESTATE FILE 1994E PG 336
FILE FOLDER NOT FOUND IN CLERKS OFFICE
PENTECOSTAL HOLINESS CHURCH
MB 72 PG 163
-L- POT Sta. 43+66.58
-L- PT Sta. 40+31.02
-L- POC 37+38.21
-Y1- POT 10+00.00
-L- PRC 35+73.89
MATCHLINE -L- STA. 33+00.00 SEE SHEET 5
SAJAH PROPERTIES LLC
DB 3347 PG 52
MB 78 PG 162
THOMAS S GENTILE
DB 1056 PG 75
MB 45 PG 182
THOMAS S GENTILE
DB K48 PG 183
JESSE RAY WILSON
ESTATE FILE 87E PG 518
REMOVE EXISTING 42" RCP AND INSTALL NEW 72" RCP-IV BURIED 1-0" BOTH ENDS
SPECIAL CUT 'V' GRASSED SWALE SEE DETAIL 12
SPECIAL CUT 2-FT BASE GRASSED SWALE SEE DETAIL 10
LATERAL 5-FT BASE DITCH EST. DDE=1714 C.Y. SEE DETAIL 8
WDO NOT DISTURB
-Y1- PC 10+26.74
-Y1- PT 10+99.34
END CONSTRUCTION -Y1- POT 11+60.00
-Y1- POT Sta. 13+62.16
S 56° 03' 38.8" E
GRIMESLAND CITY LIMITS
END TIP PROJECT B-5301
-L- POT STA 42+00.00
47 x 14 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 6.2

DETAIL 16
USE FOR DI'S IN CHANNELIZATION AS INDICATED BELOW
DI
ROAD
STA. 38+90 -L-; 28.8' LT
STA. 39+25 -L-; 28.8' RT

5" MONLITHIC CONCRETE ISLAND

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

-Y1- CURVE DATA
PI Sta 10+64.10
Δ = 33° 16' 40.2" (RT)
D = 45° 50' 11.8"
L = 72.60'
T = 37.36'
R = 125.00'

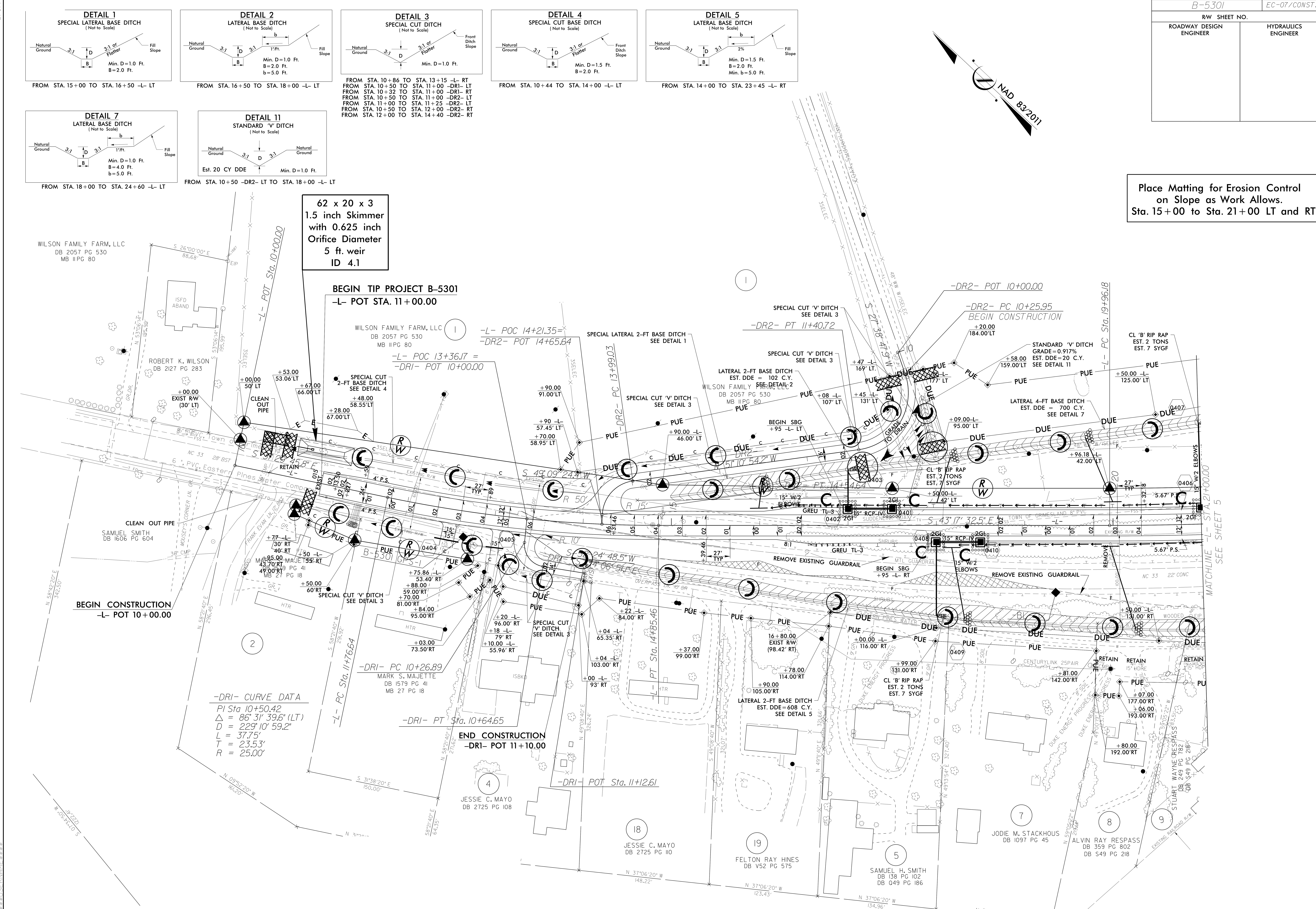
NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

	NC 33	-L-	
8,700 / 12,300	1050 / 1400	1,650 / 2300	9,300 / 13,200
	-Y1- SR 1760		
ADT 2020	2,700		
ADT 2040	3,700		

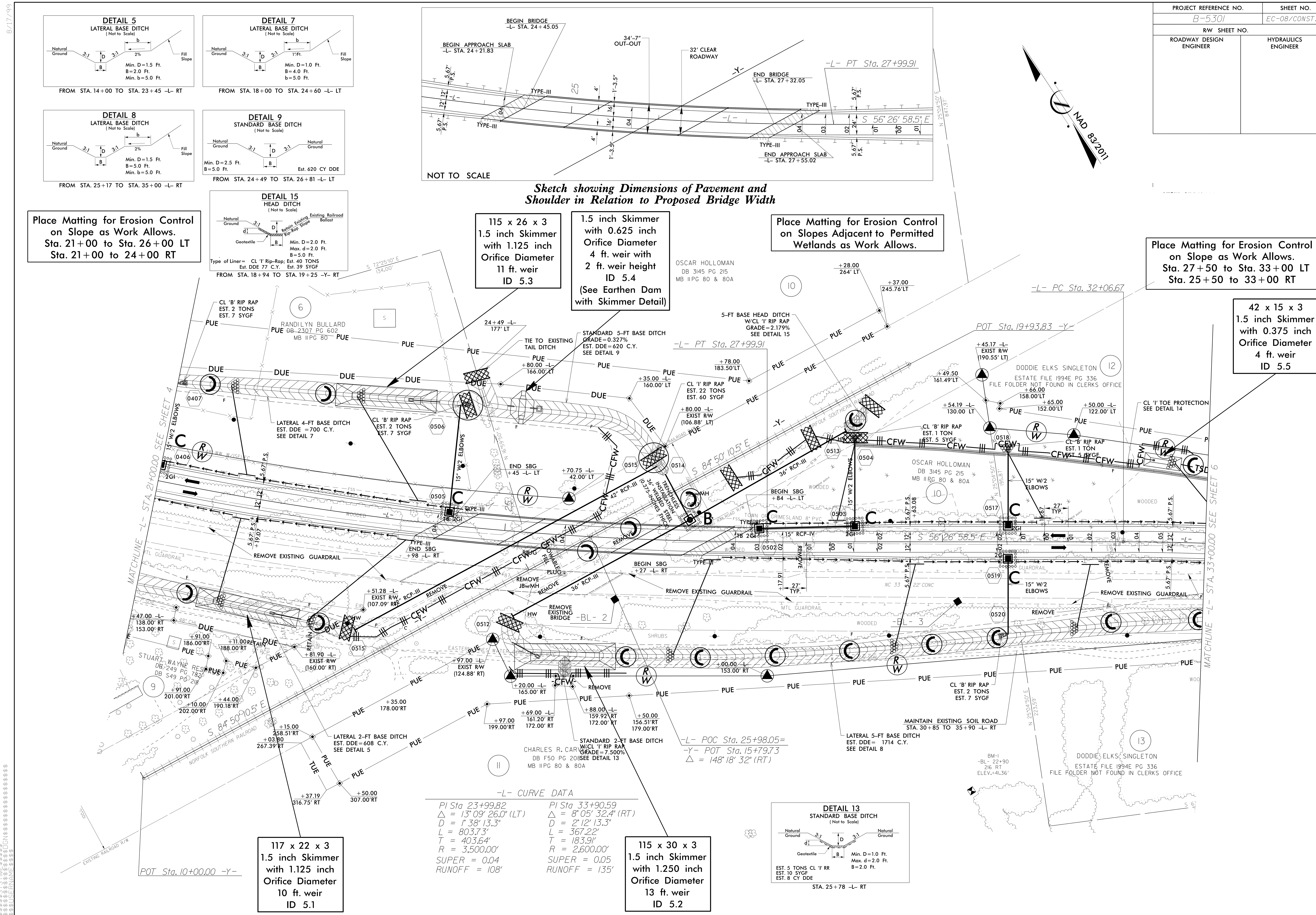
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO AVOID IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC

PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-07/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

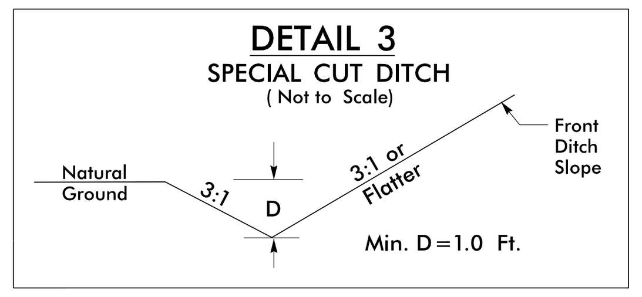
Place Matting for Erosion Control on Slope as Work Allows. Sta. 15+00 to Sta. 21+00 LT and RT



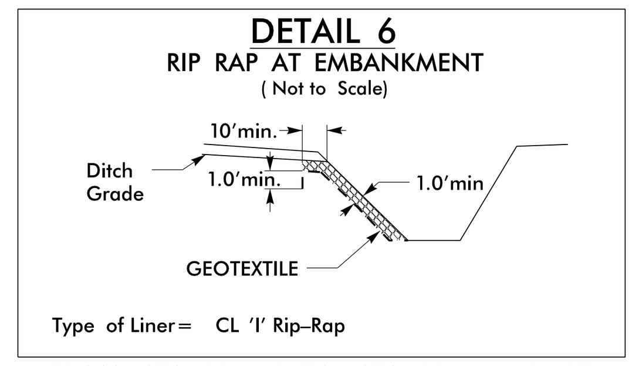
DETAIL 1
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
B=2.0 Ft.
FROM STA. 15+00 TO STA. 16+50 -L- LT
DETAIL 2
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.
FROM STA. 16+50 TO STA. 18+00 -L- LT
DETAIL 3
SPECIAL CUT DITCH
(Not to Scale)
Min. D=1.0 Ft.
FROM STA. 10+86 TO STA. 13+15 -L- RT
FROM STA. 10+50 TO STA. 11+00 -DR1- LT
FROM STA. 10+32 TO STA. 11+00 -DR1- RT
FROM STA. 10+50 TO STA. 11+00 -DR2- LT
FROM STA. 11+00 TO STA. 11+25 -DR2- LT
FROM STA. 10+50 TO STA. 12+00 -DR2- RT
FROM STA. 12+00 TO STA. 14+40 -DR2- RT
DETAIL 4
SPECIAL CUT BASE DITCH
(Not to Scale)
Min. D=1.5 Ft.
B=2.0 Ft.
FROM STA. 10+44 TO STA. 14+00 -L- LT
DETAIL 5
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.5 Ft.
B=2.0 Ft.
Min. b=5.0 Ft.
FROM STA. 14+00 TO STA. 23+45 -L- RT
DETAIL 7
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
B=4.0 Ft.
b=5.0 Ft.
FROM STA. 18+00 TO STA. 24+60 -L- LT
DETAIL 11
STANDARD 'V' DITCH
(Not to Scale)
Est. 20 CY DDE
Min. D=1.0 Ft.
FROM STA. 10+50 -DR2- LT TO STA. 18+00 -L- LT
NAD 83/2011
62 x 20 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
5 ft. weir
ID 4.1
BEGIN TIP PROJECT B-5301
-L- POT STA. 11+00.00
BEGIN CONSTRUCTION
-L- POT 10+00.00
END CONSTRUCTION
-DR1- POT 11+10.00
-DR1- CURVE DATA
PI Sta 10+50.42
Δ = 86° 31' 39.6" (LT)
D = 229° 10' 59.2"
L = 37.75'
T = 23.53'
R = 25.00'
-DR2- POT 10+00.00
-DR2- PC 10+25.95
BEGIN CONSTRUCTION
-DR2- PT 11+40.72
-L- POC 14+21.35= -DR2- POT 14+65.64
-L- POC 13+36.17 = -DR1- POT 10+00.00
-DR1- PC 10+26.89
-DR1- PT Sta. 10+64.65
-DR1- POT Sta. 11+12.61
MATCHLINE -L- STA. 21+00.00 SEE SHEET 5
WILSON FAMILY FARM, LLC
DB 2057 PG 530
MB 11 PG 80
ROBERT K. WILSON
DB 2127 PG 283
SAMUEL SMITH
DB 1606 PG 604
MARK S. MAJETTE
DB 1579 PG 41
MB 27 PG 18
JESSIE C. MAYO
DB 2725 PG 108
JESSIE C. MAYO
DB 2725 PG 110
FELTON RAY HINES
DB V52 PG 575
SAMUEL H. SMITH
DB 138 PG 102
DB 049 PG 186
JODIE M. STACKHOUS
DB 1097 PG 45
ALVIN RAY RESPASS
DB 359 PG 802
DB 549 PG 218
STUART WAYNE RESPASS
CLEAN OUT PIPE
SPECIAL CUT 'V' DITCH SEE DETAIL 3
SPECIAL LATERAL 2-FT BASE DITCH SEE DETAIL 1
LATERAL 2-FT BASE DITCH EST. DDE = 102 C.Y. SEE DETAIL 2
STANDARD 'V' DITCH GRADE=0.917% EST. DDE=20 C.Y. SEE DETAIL 11
CL 'B' RIP RAP EST. 2 TONS EST. 7 SYGF
LATERAL 4-FT BASE DITCH EST. DDE = 700 C.Y. SEE DETAIL 7
LATERAL 2-FT BASE DITCH EST. DDE=608 C.Y. SEE DETAIL 5
REMOVE EXISTING GUARDRAIL
BEGIN SBG +95 -L- LT
BEGIN SBG +95 -L- RT


PROJECT REFERENCE NO. B-5301
SHEET NO. EC-08/CONST.05
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NAD 83/2011
DETAIL 5
LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D=1.5 Ft.
B=2.0 Ft.
Min. b=5.0 Ft.
FROM STA. 14+00 TO STA. 23+45 -L- RT
DETAIL 7
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
B=4.0 Ft.
b=5.0 Ft.
FROM STA. 18+00 TO STA. 24+60 -L- LT
DETAIL 8
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.5 Ft.
B=5.0 Ft.
Min. b=5.0 Ft.
FROM STA. 25+17 TO STA. 35+00 -L- RT
DETAIL 9
STANDARD BASE DITCH
(Not to Scale)
Min. D=2.5 Ft.
B=5.0 Ft.
Est. 620 CY DDE
FROM STA. 24+49 TO STA. 26+81 -L- LT
DETAIL 15
HEAD DITCH
(Not to Scale)
Existing Railroad Ballast
Retain Existing Rip-Rap Slope
Geotextile
Min. D=2.0 Ft.
Max. d=2.0 Ft.
B=5.0 Ft.
Type of Liner= CL 'I' Rip-Rap; Est. 40 TONS
Est. DDE 77 C.Y. Est. 39 SYGF
FROM STA. 18+94 TO STA. 19+25 -Y- RT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 21+00 to Sta. 26+00 LT Sta. 21+00 to 24+00 RT
BEGIN BRIDGE -L- STA. 24+45.05
BEGIN APPROACH SLAB -L- STA. 24+21.83
34'-7" OUT-OUT
32' CLEAR ROADWAY
END BRIDGE -L- STA. 27+32.05
END APPROACH SLAB -L- STA. 27+55.02
-L- PT Sta. 27+99.91
S 56° 26' 58.5" E
NOT TO SCALE
Sketch showing Dimensions of Pavement and Shoulder in Relation to Proposed Bridge Width
115 x 26 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 11 ft. weir ID 5.3
1.5 inch Skimmer with 0.625 inch Orifice Diameter 4 ft. weir with 2 ft. weir height ID 5.4 (See Earthen Dam with Skimmer Detail)
Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.
Place Matting for Erosion Control on Slope as Work Allows. Sta. 27+50 to Sta. 33+00 LT Sta. 25+50 to 33+00 RT
42 x 15 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir ID 5.5
OSCAR HOLLOMAN DB 3145 PG 215 MB II PG 80 & 80A
RANDILYN BULLARD DB 2307 PG 602 MB II PG 80
DODDIE ELKS SINGLETON ESTATE FILE 1994E PG 336 FILE FOLDER NOT FOUND IN CLERKS OFFICE
STUART WAYNE RES DB 249 PG 782 DB S49 PG 218
CHARLES R. CARVER DB F50 PG 208 MB II PG 80 & 80A
CL 'B' RIP RAP EST. 2 TONS EST. 7 SYGF
LATERAL 4-FT BASE DITCH EST. DDE =700 C.Y. SEE DETAIL 7
TIE TO EXISTING TAIL DITCH
STANDARD 5-FT BASE DITCH GRADE=0.327% EST. DDE=620 C.Y. SEE DETAIL 9
5-FT BASE HEAD DITCH W/CL 'I' RIP RAP GRADE=2.179% SEE DETAIL 15
CL 'I' RIP RAP EST. 22 TONS EST. 60 SYGF
-L- PC Sta. 32+06.67
POT Sta. 19+93.83 -Y-
CL 'I' TOE PROTECTION SEE DETAIL 14
CL 'B' RIP RAP EST. 1 TON EST. 5 SYGF
S 84° 50' 10.5" E
TRENCHLESS INSTALLATION 36" WELDED STEEL (0.375-INCHES THICK)
BEGIN SBG +84 -L- LT
END SBG +45 -L- LT
END SBG +98 -L- RT
BEGIN SBG +27 -L- RT
REMOVE EXISTING GUARDRAIL
REMOVE EXISTING BRIDGE
REMOVE JBw/MH
FLOWABLE FILL PLUG
MATCHLINE -L- STA. 21+00.00 SEE SHEET 4
MATCHLINE -L- STA. 33+00.00 SEE SHEET 6
LATERAL 2-FT BASE DITCH EST. DDE=608 C.Y. SEE DETAIL 5
STANDARD 2-FT BASE DITCH W/CL 'I' RIP RAP GRADE=7.500% SEE DETAIL 13
-L- POC Sta. 25+98.05= -Y- POT Sta. 15+79.73 △ = 148° 18' 32" (RT)
LATERAL 5-FT BASE DITCH EST. DDE= 1714 C.Y. SEE DETAIL 8
MAINTAIN EXISTING SOIL ROAD STA. 30+85 TO 35+90 -L- RT
CL 'B' RIP RAP EST. 2 TONS EST. 7 SYGF
BM-I -BL- 22+90 216 RT ELEV.=41.36'
POT Sta. 10+00.00 -Y-
117 x 22 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 10 ft. weir ID 5.1
-L- CURVE DATA
PI Sta 23+99.82 △ = 13° 09' 26.0" (LT) D = 1° 38' 13.3" L = 803.73' T = 403.64' R = 3,500.00' SUPER = 0.04 RUNOFF = 108'
PI Sta 33+90.59 △ = 8° 05' 32.4" (RT) D = 2° 12' 13.3" L = 367.22' T = 183.91' R = 2,600.00' SUPER = 0.05 RUNOFF = 135'
115 x 30 x 3 1.5 inch Skimmer with 1.250 inch Orifice Diameter 13 ft. weir ID 5.2
DETAIL 13
STANDARD BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
Max. d=2.0 Ft.
B=2.0 Ft.
EST. 5 TONS CL 'I' RR
EST. 10 SYGF
EST. 8 CY DDE
STA. 25+78 -L- RT

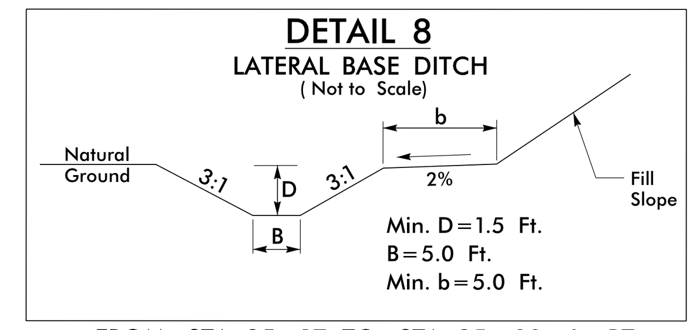
PROJECT REFERENCE NO.	SHEET NO.
B-5301	EC-09/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



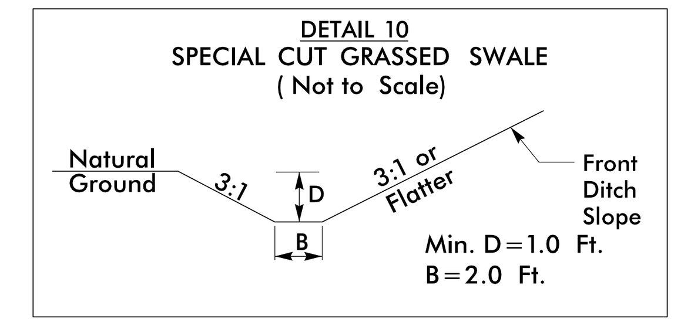
FROM STA. 10+50 -Y1- LT TO STA. 38+00 -L- RT
FROM STA. 10+75 TO STA. 11+47 -Y1- RT



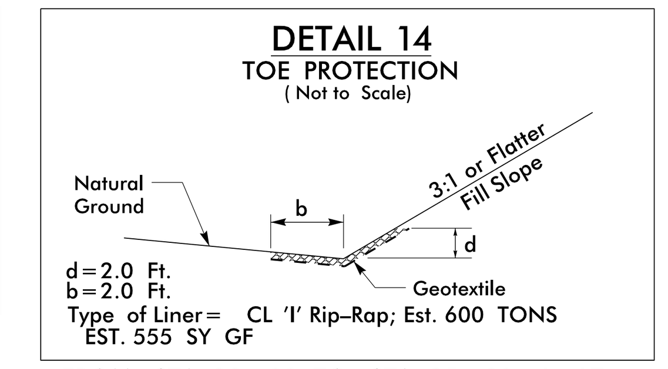
FROM STA. 39+79 TO STA. 39+97 -L- LT
FROM STA. 39+96 TO STA. 40+17 -L- LT
FROM STA. 40+03 TO STA. 40+17 -L- RT
FROM STA 40+18 TO STA. 40+31 -L- RT



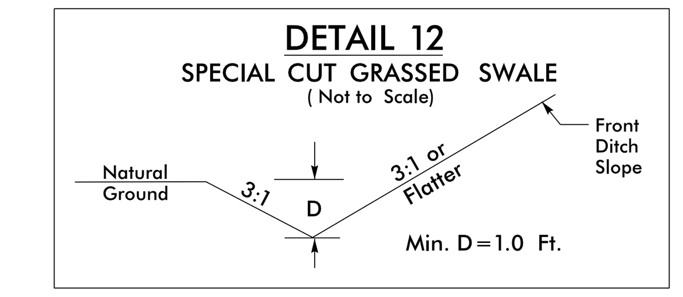
FROM STA. 25+17 TO STA. 35+00 -L- RT



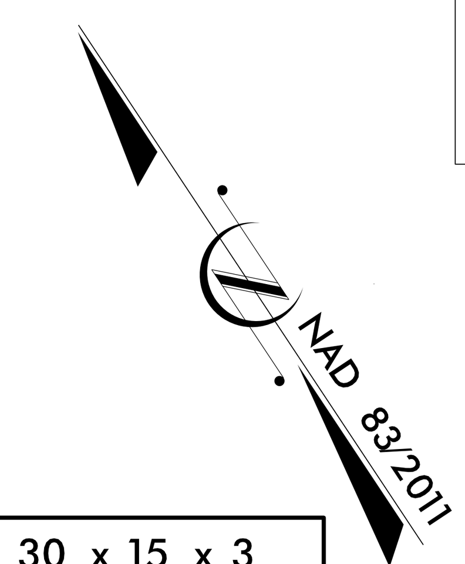
FROM STA. 39+06 TO STA. 39+90 -L- LT



FROM STA. 29+00 TO STA. 35+00 -L- LT



FROM STA. 36+00 TO STA. 37+25 -L- LT
FROM STA. 40+10 TO STA. 42+00 -L- LT
FROM STA. 40+25 TO STA. 42+00 -L- RT

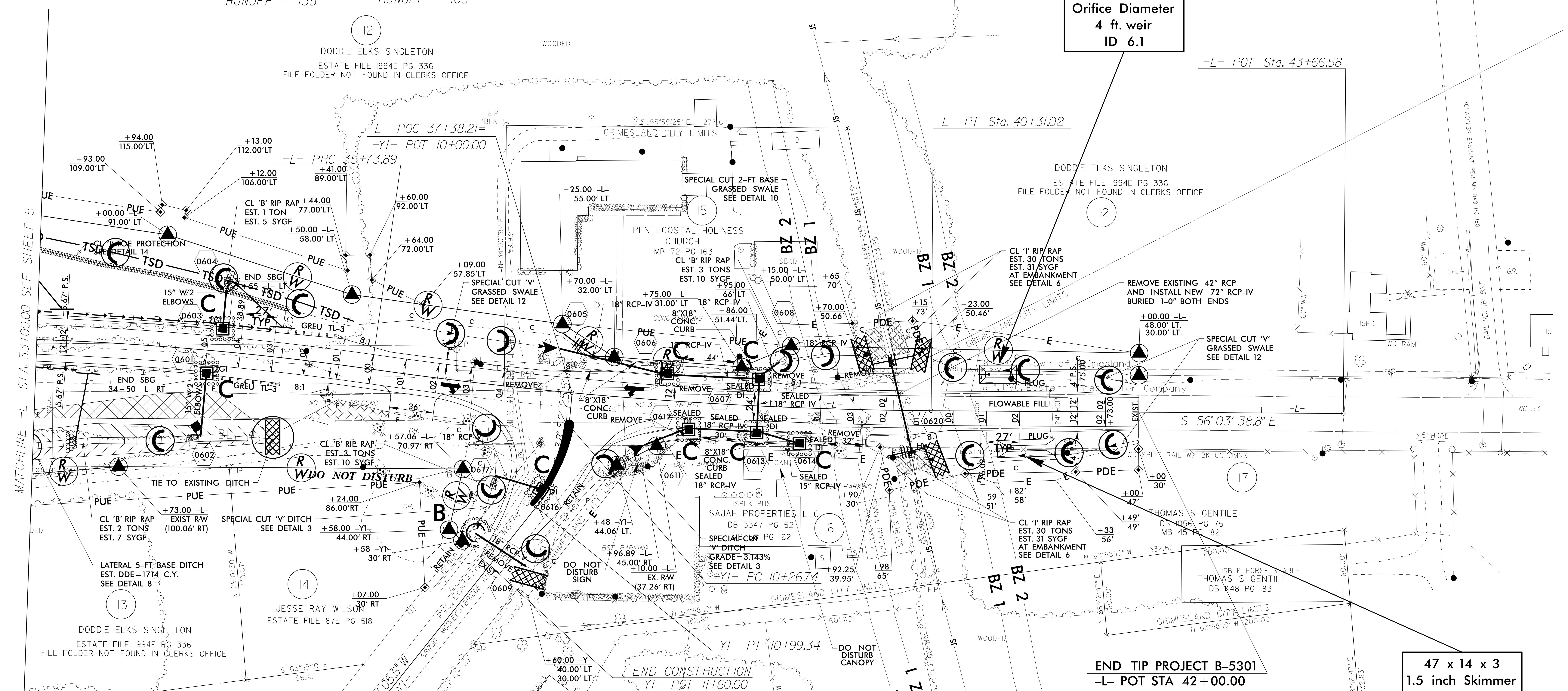


Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 33+00 to Sta. 35+50 LT and RT

-L- CURVE DATA

PI Sta 33+90.59	PI Sta 38+02.80
△ = 8° 05' 32.4" (RT)	△ = 7° 42' 12.7" (LT)
D = 2° 12' 13.3"	D = 1° 41' 06.6"
L = 367.22'	L = 457.14'
T = 183.91'	T = 228.91'
R = 2,600.00'	R = 3,400.00'
SUPER = 0.05	SUPER = 0.04
RUNOFF = 135'	RUNOFF = 108'

30 x 15 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 6.1



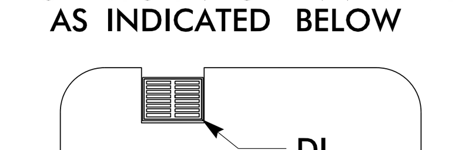
END TIP PROJECT B-5301
-L- POT STA 42+00.00

47 x 14 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 6.2

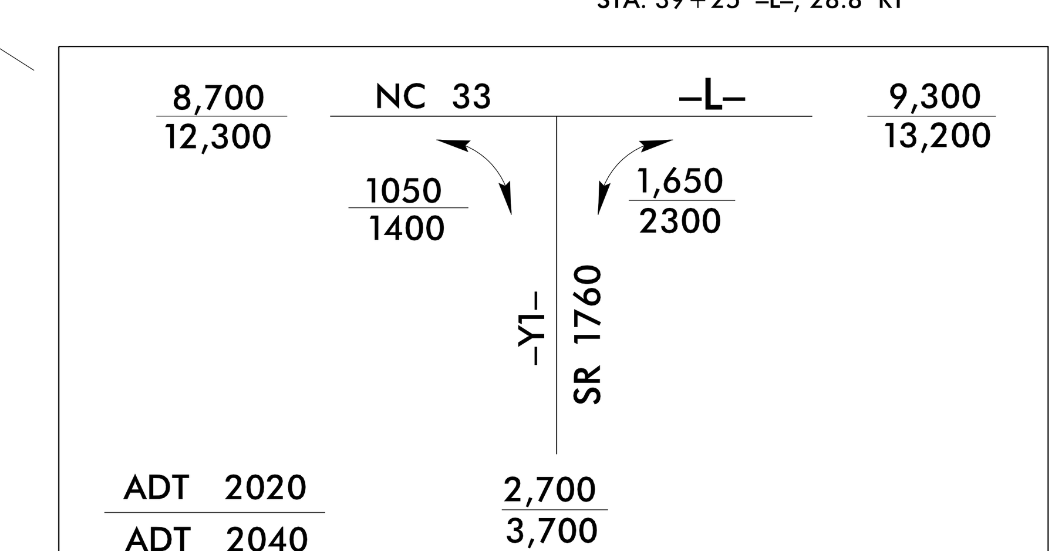
5" MONLITHIC CONCRETE ISLAND

-Y1- CURVE DATA
PI Sta 10+64.10
△ = 33° 16' 40.2" (RT)
D = 45° 50' 11.8"
L = 72.60'
T = 37.36'
R = 125.00'

DETAIL 16
USE FOR DI'S IN CHANNELIZATION
AS INDICATED BELOW



STA. 38+90 -L-; 28.8' LT
STA. 39+25 -L-; 28.8' RT



NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO AVOID IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC

8/17/99

$$$$$$$SYSTIME$$$$$$$
$$$$$$$$DGN$$$$$$$$$$
$$$$$$USERNAME$$$$$$$