TIP PROJECT: B-3684

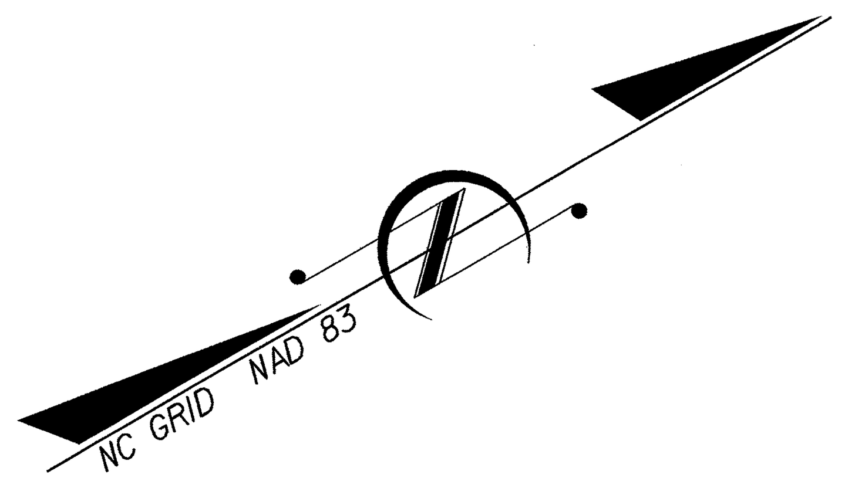
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3684	EC-1	

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

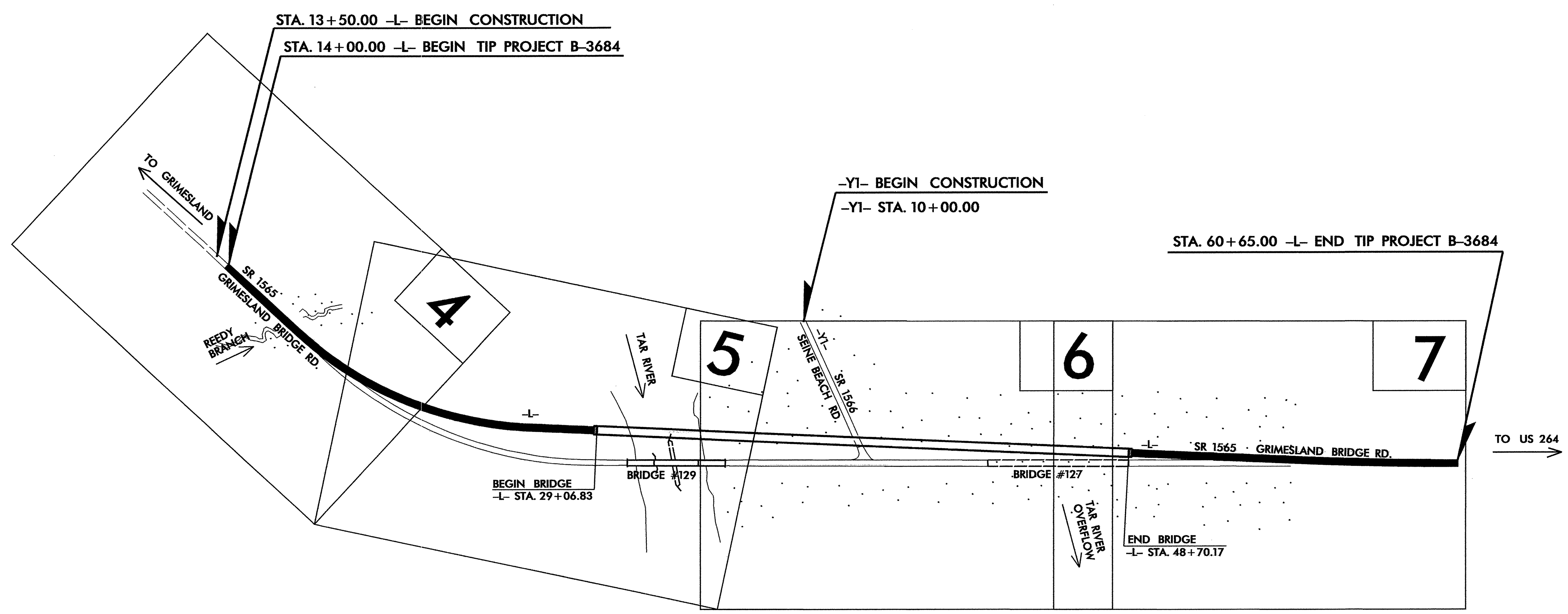
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

PITT COUNTY



LOCATION: BRIDGE NO. 129 OVER TAR RIVER AND BRIDGE NO. 127 OVER TAR RIVER OVERFLOW ON SR 1565 (GRIMESLAND BRIDGE RD.)

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



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	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
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	
	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.

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Prepared In the Office of:

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

2006 STANDARD SPECIFICATIONS

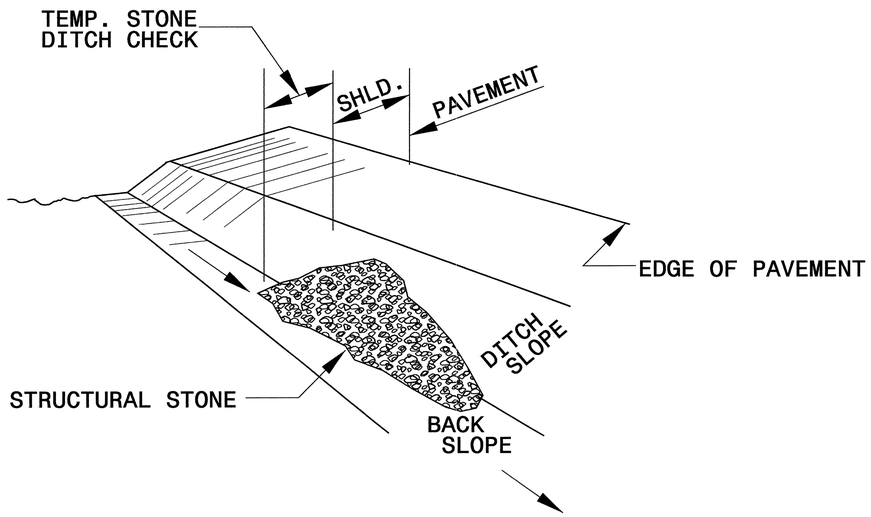
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.06 Special Stilling Basin
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A
1630.03 Temporary Silt Ditch	1634.02 Temporary Rock Sediment Dam Type B
1630.05 Temporary Diversion	1635.01 Rock Pipe Inlet Sediment Trap Type A

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

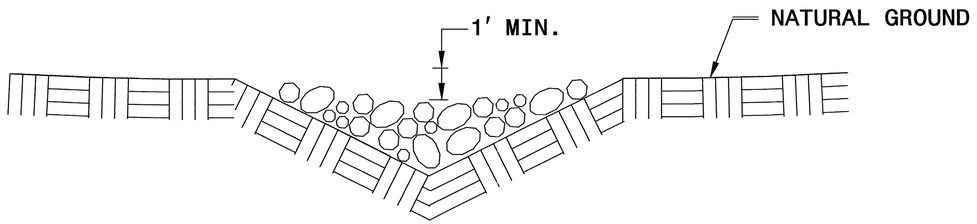


ISOMETRIC VIEW

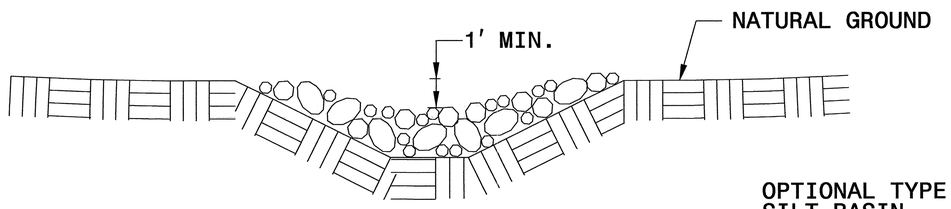
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

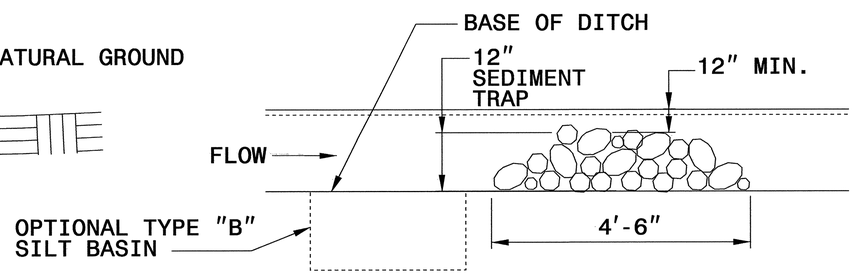
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



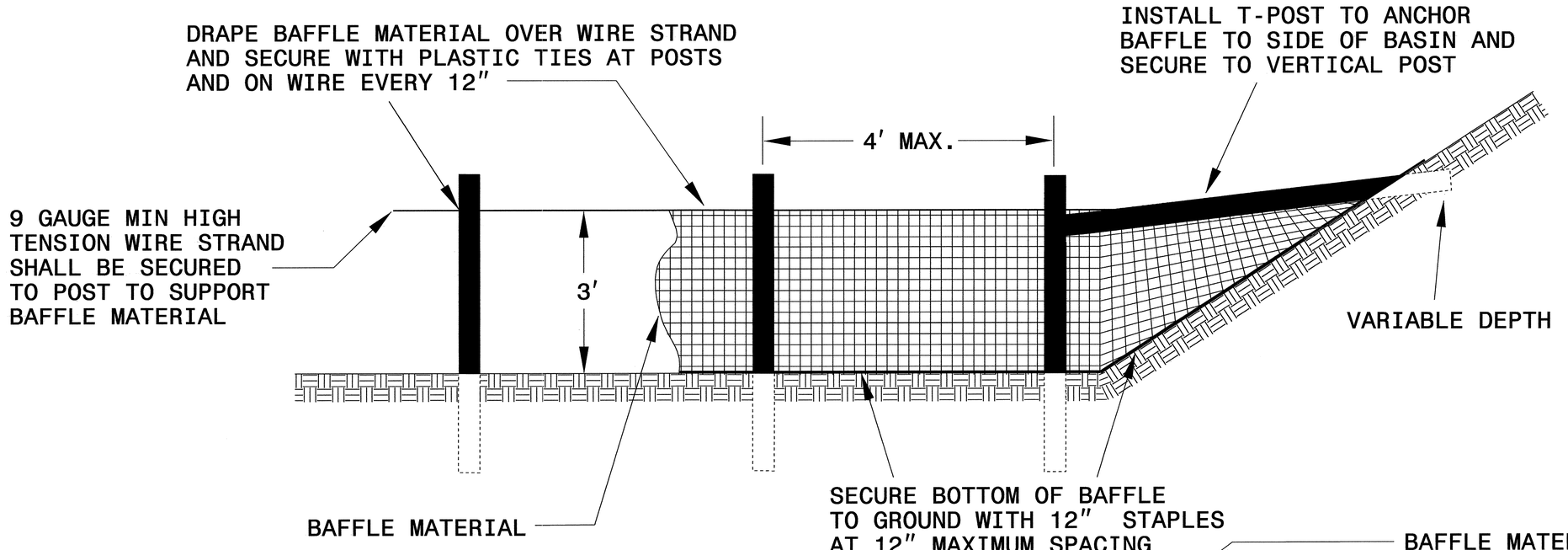
CROSS SECTION TRAPEZOIDAL DITCH

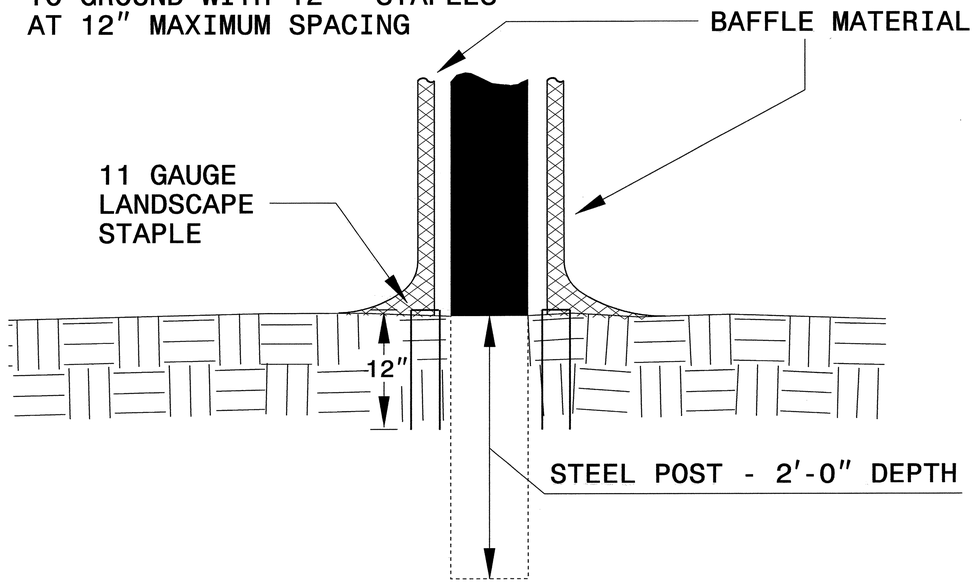


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



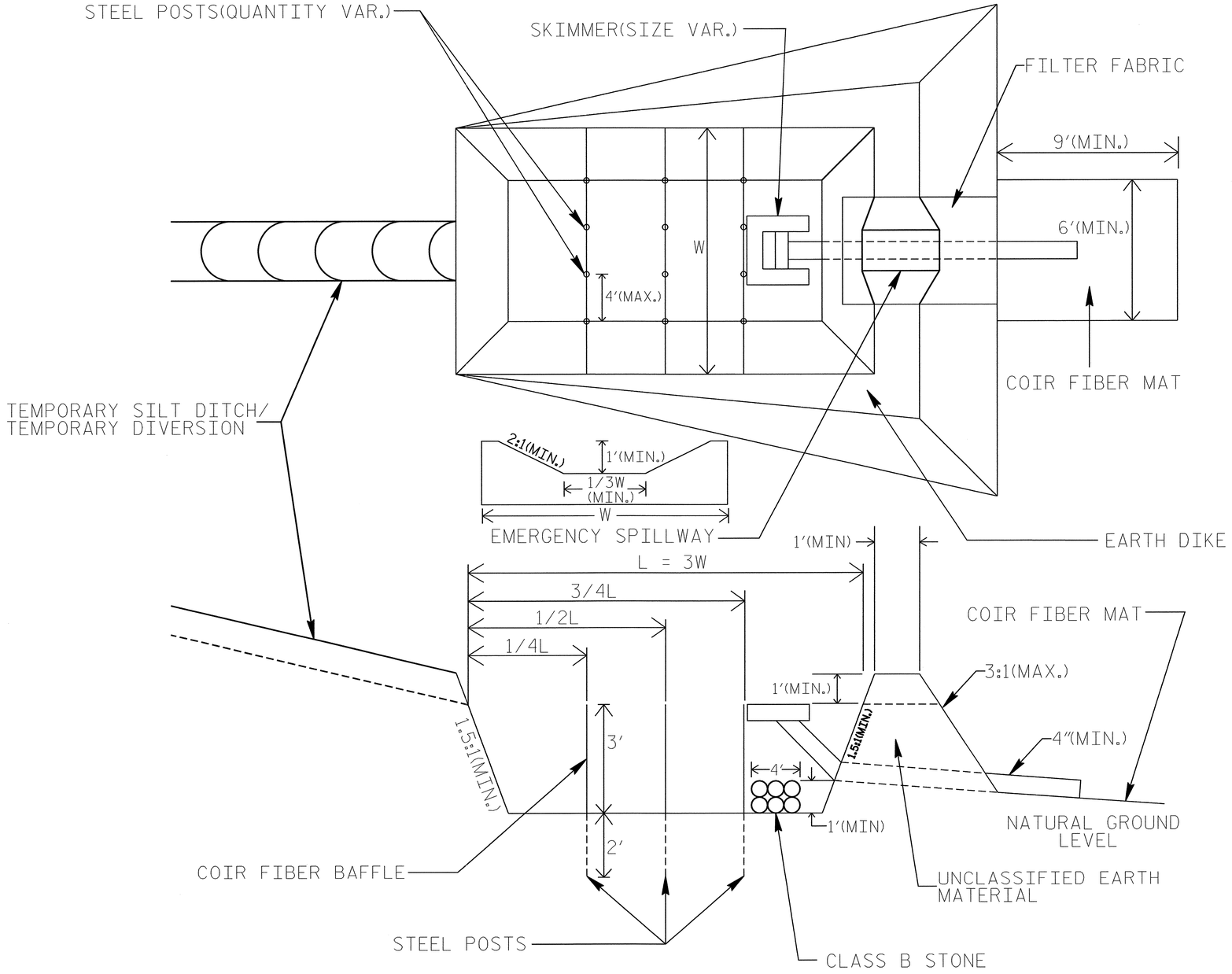


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12″ LANDSCAPE STAPLES

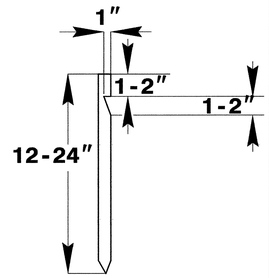
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

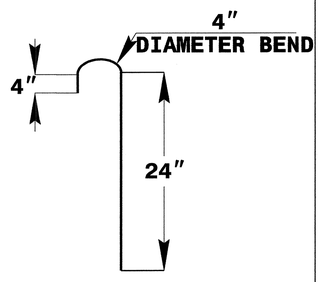
SKIMMER BASIN WITH BAFFLES DETAIL



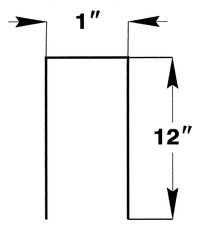
2" x 2" (nominal)
WOODEN STAKE



#10 STEEL
REINFORCEMENT BAR



1" (nominal)
STAPLE

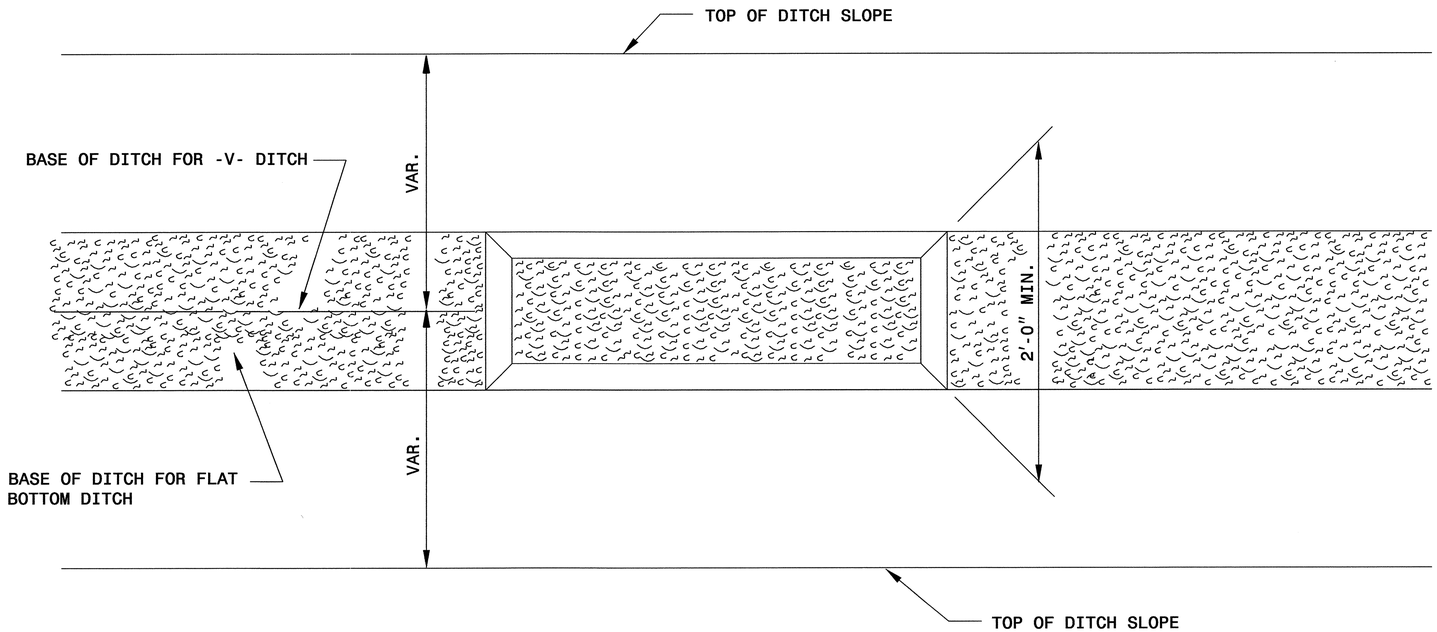


COIR FIBER MAT ANCHOR OPTIONS

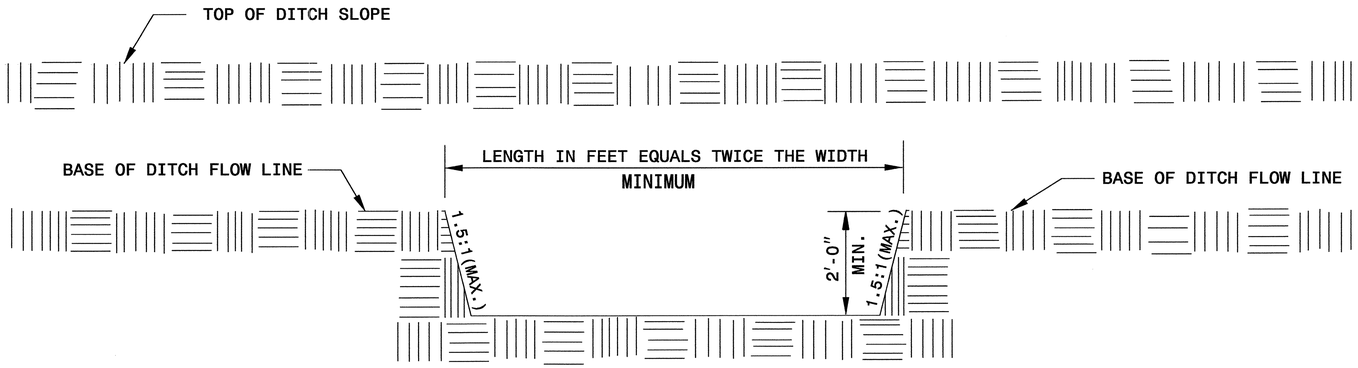
NOTES:
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



PLAN



ELEVATION

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-3
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	19+50	22+00	LT	285
				SUBTOTAL	285
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1090
				TOTAL	1375
				SAY	1380

MATTING FOR EROSION CONTROL

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

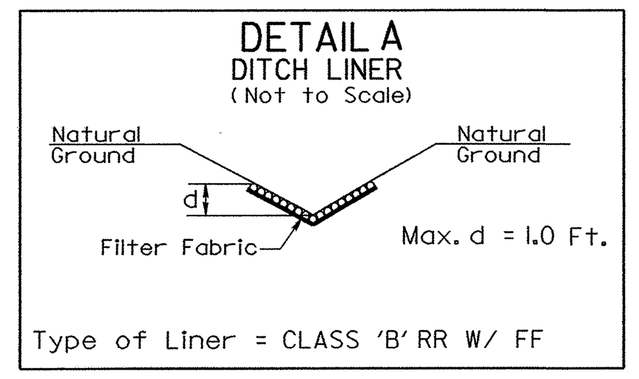
PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

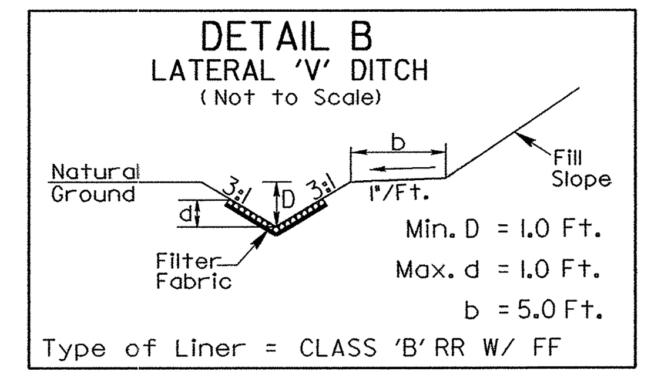
INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

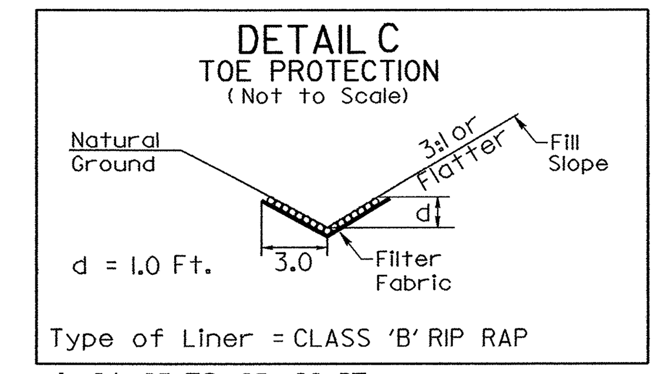
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



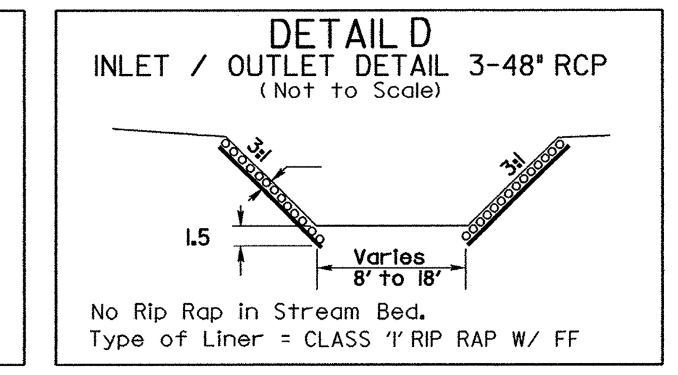
-L- STA. 14+75 TO 15+84 LT.



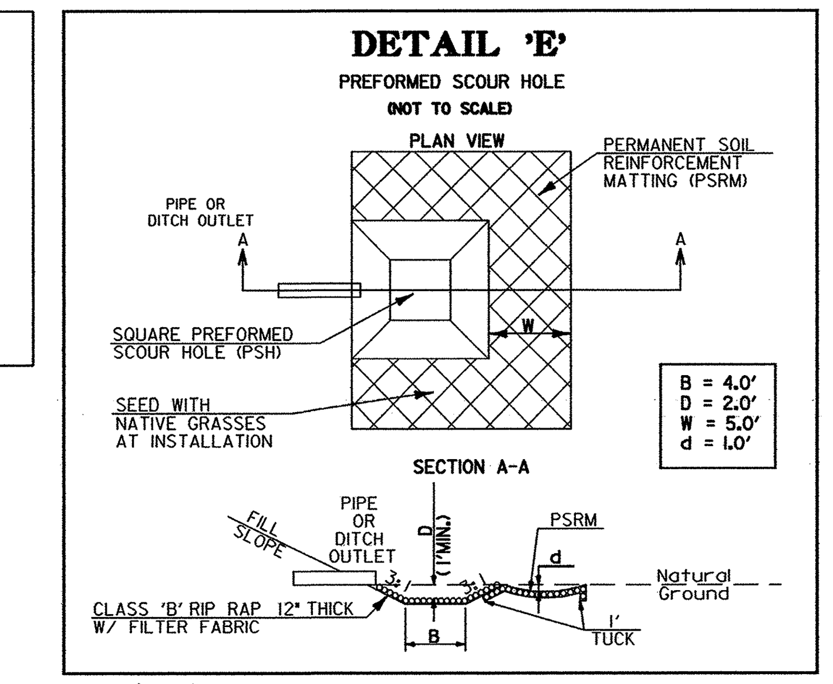
-L- 15+84 TO 16+50 LT.



-L- 14+15 TO 15+00 RT.
-L- 17+50 TO 19+00 RT.
-L- 18+50 TO 19+25 LT.

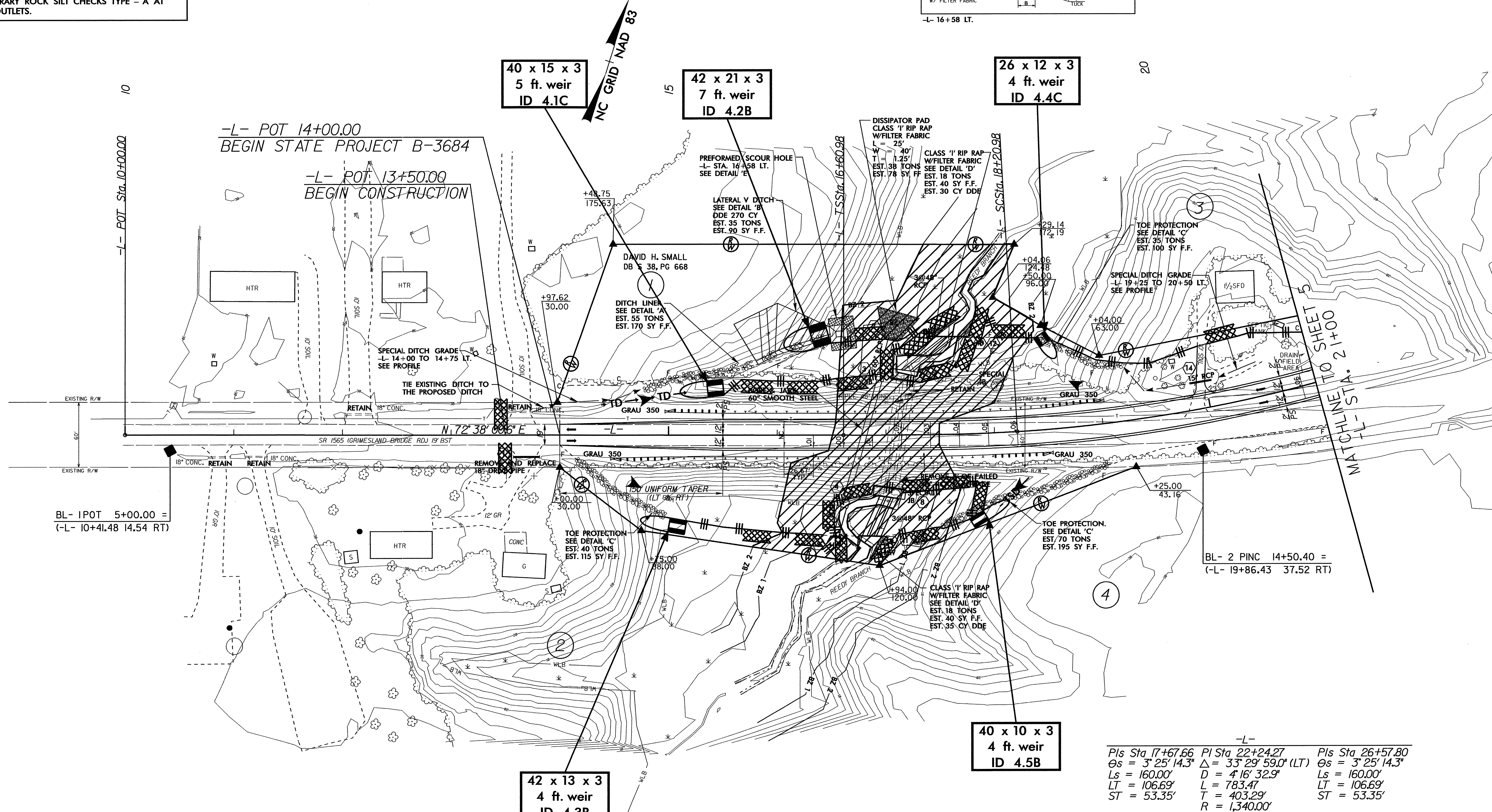


-L- 17+60 LT.
-L- 16+88 RT.



DETAIL 'E'
PREFORMED SCOUR HOLE
(NOT TO SCALE)
PLAN VIEW
PIPE OR DITCH OUTLET
PERMANENT SOIL REINFORCEMENT MATTING (PSRM)
SQUARE PREFORMED SCOUR HOLE (PSH)
SEED WITH NATIVE GRASSES AT INSTALLATION
B = 4.0'
D = 2.0'
W = 5.0'
d = 1.0'
SECTION A-A
PIPE OR DITCH OUTLET
PSRM
Natural Ground
CLASS 'B' RIP RAP 12" THICK W/ FILTER FABRIC
TUCK

-L- 16+58 LT.



NC GRID NAD 83
40 x 15 x 3
5 ft. weir
ID 4.1C
42 x 21 x 3
7 ft. weir
ID 4.2B
26 x 12 x 3
4 ft. weir
ID 4.4C
42 x 13 x 3
4 ft. weir
ID 4.3B
40 x 10 x 3
4 ft. weir
ID 4.5B
-L- POT 14+00.00
BEGIN STATE PROJECT B-3684
-L- POT 13+50.00
BEGIN CONSTRUCTION
-L- POT Sta 10+00.00
DAVID H. SMALL
DB 538, PG 668
DISSIPATOR PAD
CLASS 'I' RIP RAP
W/FILTER FABRIC
L = 25'
W = 40'
T = 1.25'
EST. 38 TONS
EST. 78 SY FF
PREFORMED SCOUR HOLE
-L- STA. 16+58 LT.
SEE DETAIL 'E'
CLASS 'I' RIP RAP
W/FILTER FABRIC
SEE DETAIL 'D'
EST. 18 TONS
EST. 40 SY F.F.
EST. 30 CY DDE
LATERAL V DITCH
SEE DETAIL 'B'
DDE 270 CY
EST. 35 TONS
EST. 90 SY F.F.
DITCH LINER
SEE DETAIL 'A'
EST. 55 TONS
EST. 170 SY F.F.
SPECIAL DITCH GRADE
-L- 14+00 TO 14+75 LT.
SEE PROFILE
TIE EXISTING DITCH TO THE PROPOSED DITCH
TOE PROTECTION
SEE DETAIL 'C'
EST. 35 TONS
EST. 100 SY F.F.
SPECIAL DITCH GRADE
-L- 19+25 TO 20+50 LT.
SEE PROFILE
TOE PROTECTION
SEE DETAIL 'C'
EST. 40 TONS
EST. 115 SY F.F.
TOE PROTECTION.
SEE DETAIL 'C'
EST/70 TONS
EST. 195 SY F.F.
CLASS 'I' RIP RAP
W/FILTER FABRIC
SEE DETAIL 'D'
EST. 18 TONS
EST. 40 SY F.F.
EST. 35 CY DDE
N 72° 38' 00.6" E
SR 1565 (GRIMESLAND BRIDGE RD) 19' BST
EXISTING R/W
RETAIN
GRAU 350
150' UNIFORM TAPER
REMOVE AND REPLACE 18" DRAIN PIPE
3@48" RCP
REEDY BRANCH
BL- 1POT 5+00.00 =
(-L- 10+41.48 14.54 RT)
BL- 2 PINC 14+50.40 =
(-L- 19+86.43 37.52 RT)
MATCHLINE TO SHEET 5
-L- STA. 21+00
-L- TSSta 16+60.98
-L- SCSta 18+20.98
HTR

Pls Sta 17+67.66	PI Sta 22+24.27	Pls Sta 26+57.80
Θs = 3° 25' 14.3"	Δ = 33° 29' 59.0" (LT)	Θs = 3° 25' 14.3"
Ls = 160.00'	D = 4° 16' 32.9"	Ls = 160.00'
LT = 106.69'	L = 783.47	LT = 106.69'
ST = 53.35'	T = 403.29'	ST = 53.35'
	R = 1,340.00'	
	Se = 0.06	

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

FOR -L- PROFILE SEE SHEET 8

OBLITERATION OF EXISTING ROAD

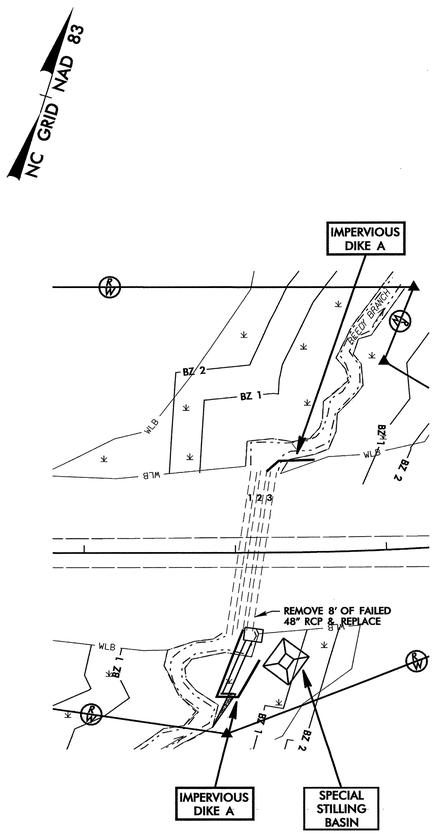
$DATE$
$FILE$

PIPE CONSTRUCTION SEQUENCE +/– STA. 17+10 –L–

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

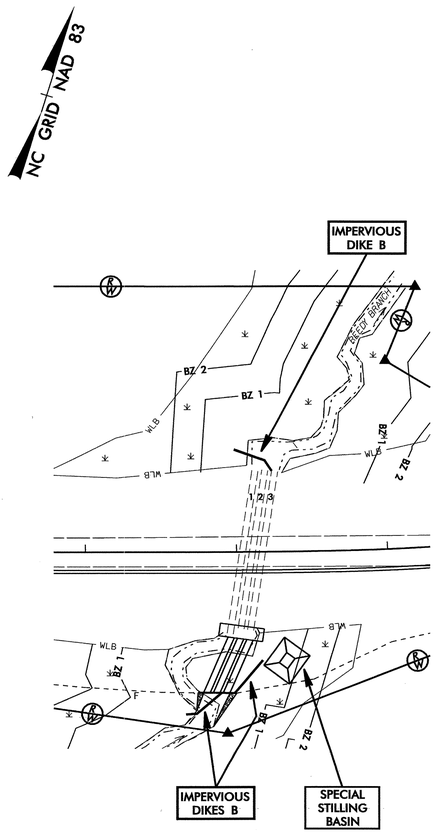
PHASE I

1. UTILIZE SPECIAL STILLING BASINS AS NEEDED THROUGHOUT INSTALLATION OF THE PIPE EXTENSIONS.
2. CONSTRUCT IMPERVIOUS DIKES A, DIVERTING FLOW THROUGH PIPES 1 AND 2.
3. REMOVE AND REPLACE 8 FEET OF FAILED PIPE 3.
4. CONSTRUCT UPSTREAM EXTENSION OF PIPE 3, PORTION OF UPSTREAM JB, AND PORTION OF UPSTREAM CHANNEL IMPROVEMENTS.
5. REMOVE IMPERVIOUS DIKES A.



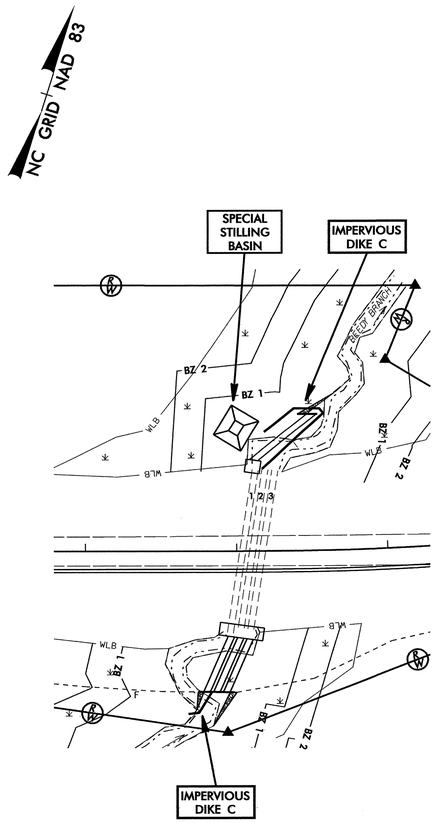
PHASE II

6. CONSTRUCT IMPERVIOUS DIKES B, DIVERTING FLOW THROUGH PIPE 3.
7. CONSTRUCT UPSTREAM EXTENSION OF PIPES 1 AND 2, REMAINDER OF UPSTREAM JB, AND REMAINDER OF UPSTREAM CHANNEL IMPROVEMENTS.
8. REMOVE IMPERVIOUS DIKES B.



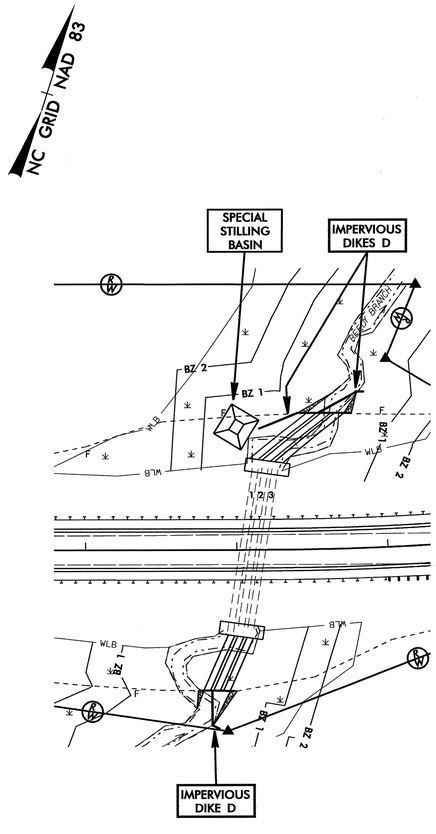
PHASE III

9. CONSTRUCT IMPVERVIOUS DIKES C, DIVERTING FLOW THROUGH PIPES 2 AND 3.
10. CONSTRUCT DOWNSTREAM EXTENSION OF PIPE 1, PORTION OF DOWNSTREAM JB, AND PORTION OF DOWNSTREAM CHANNEL IMPROVEMENTS.
11. REMOVE IMPERVIOUS DIKES C.



PHASE IV

12. CONSTRUCT IMPERVIOUS DIKES D, DIVERTING FLOW THROUGH PIPE 1.
13. CONSTRUCT DOWNSTREAM EXTENSION OF PIPES 2 AND 3, REMAINDER OF DOWNSTREAM JB, AND REMAINDER OF DOWNSTREAM CHANNEL IMPROVEMENTS.
14. REMOVE IMPERVIOUS DIKES D AND ANY REMAINING SPECIAL STILLING BASIN(S).
15. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-6/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

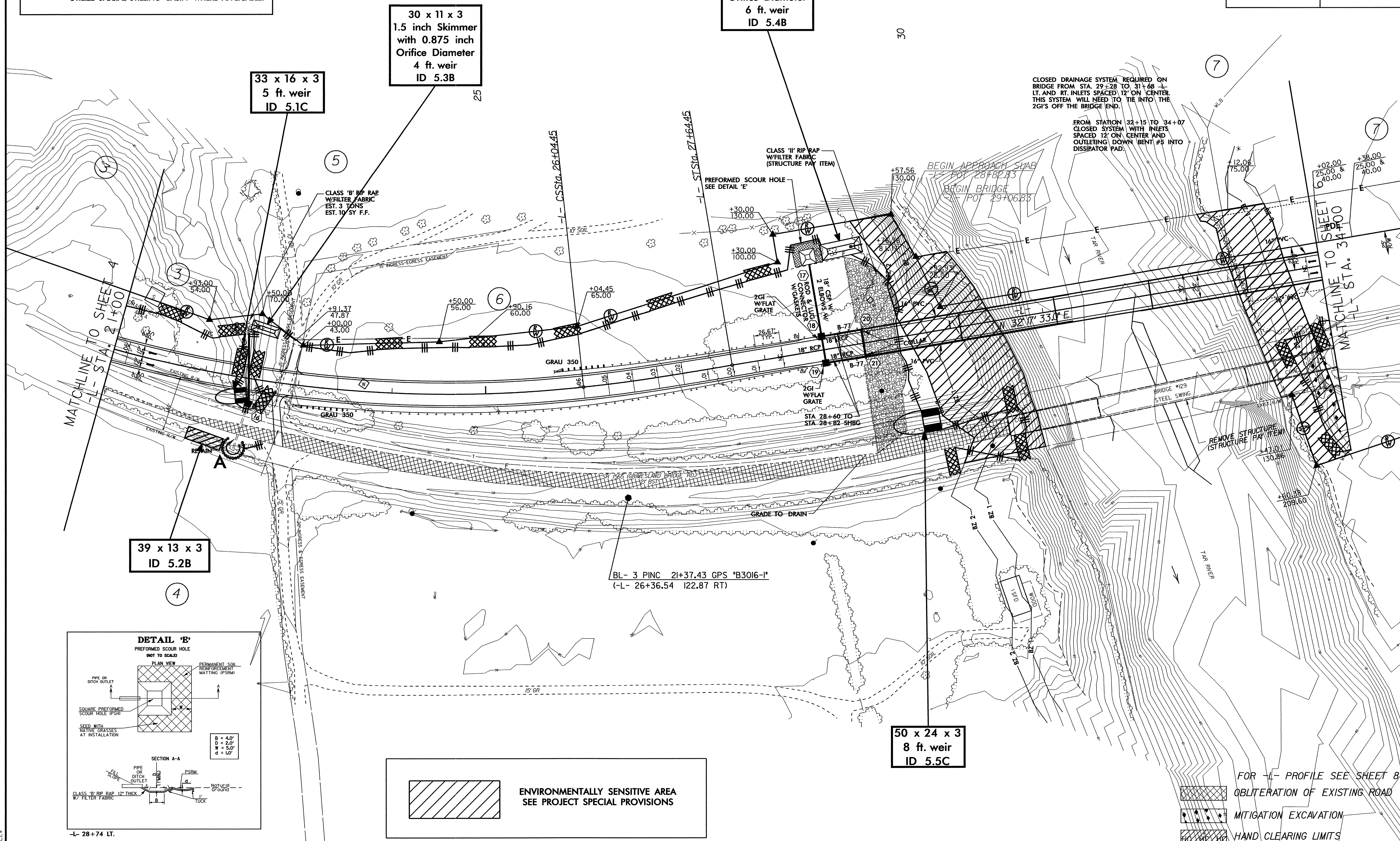
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

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

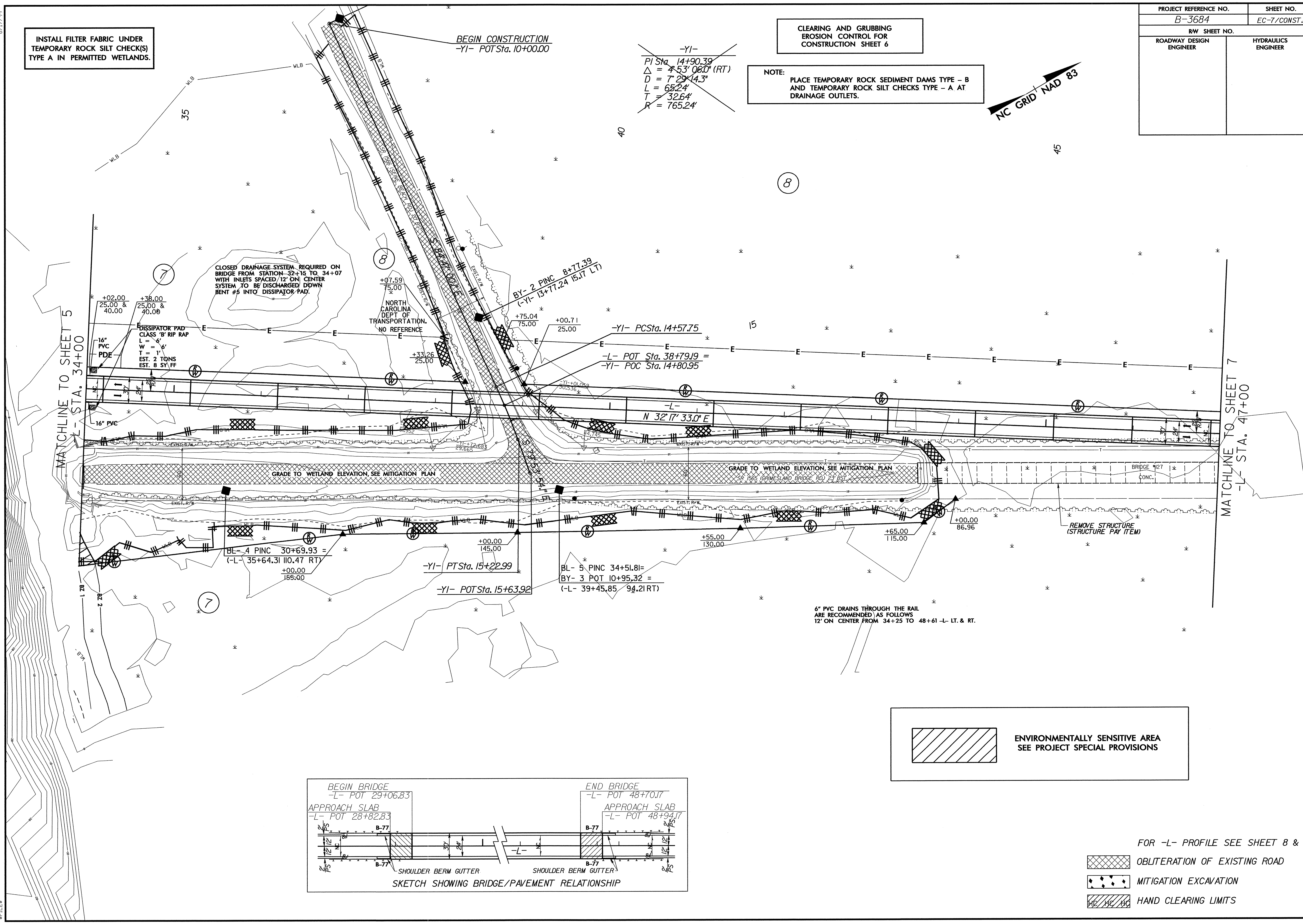
NOTE:
UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.

-L-

PIs Sta 17+67.66	PI Sta 22+24.27	PIs Sta 26+57.80
Θs = 3° 25' 14.3"	Δ = 33° 29' 59.0" (LT)	Θs = 3° 25' 14.3"
Ls = 160.00'	D = 4° 16' 32.9"	Ls = 160.00'
LT = 106.69'	L = 783.47'	LT = 106.69'
ST = 53.35'	T = 403.29'	ST = 53.35'
	R = 1,340.00'	
	Se = 0.06	



NC GRID NAD 83
30 x 11 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 5.3B
33 x 16 x 3
5 ft. weir
ID 5.1C
43 x 17 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
6 ft. weir
ID 5.4B
39 x 13 x 3
ID 5.2B
50 x 24 x 3
8 ft. weir
ID 5.5C
MATCHLINE TO SHEET 4 -L- STA. 21+00
MATCHLINE TO SHEET 6 -L- STA. 34+00
CLOSED DRAINAGE SYSTEM REQUIRED ON BRIDGE FROM STA. 29+28 TO 31+68 -L- LT. AND RT. INLETS SPACED 12' ON CENTER. THIS SYSTEM WILL NEED TO TIE INTO THE 2GI'S OFF THE BRIDGE END.
FROM STATION 32+15 TO 34+07 CLOSED SYSTEM WITH INLETS SPACED 12' ON CENTER AND OUTLETING DOWN BENT #5 INTO DISSIPATOR PAD.
CLASS 'II' RIP RAP W/FILTER FABRIC (STRUCTURE PAY ITEM)
PREFORMED SCOUR HOLE SEE DETAIL 'E'
CLASS 'B' RIP RAP W/FILTER FABRIC EST. 3 TONS EST. 10 SY F.F.
BEGIN APPROACH SLAB -L- POT 28+82.83
BEGIN BRIDGE -L- POT 29+06.83
N 32° 17' 33.0" E
BRIDGE #129 STEEL SWING
REMOVE STRUCTURE (STRUCTURE PAY ITEM)
TAR RIVER
GRAU 350
GRADE TO DRAIN
STA 28+60 TO STA 28+82 SHBG
2GI W/FLAT GRATE
18" RCP
BL- 3 PINC 21+37.43 GPS "B3016-1"
(-L- 26+36.54 122.87 RT)
-L- CSSta. 26+04.45
-L- STSta. 27+64.45
DETAIL 'E'
PREFORMED SCOUR HOLE
(NOT TO SCALE)
PLAN VIEW
SECTION A-A
B = 4.0'
D = 2.0'
W = 5.0'
d = 1.0'
-L- 28+74 LT.
ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS
FOR -L- PROFILE SEE SHEET 8
OBLITERATION OF EXISTING ROAD
MITIGATION EXCAVATION
HAND CLEARING LIMITS



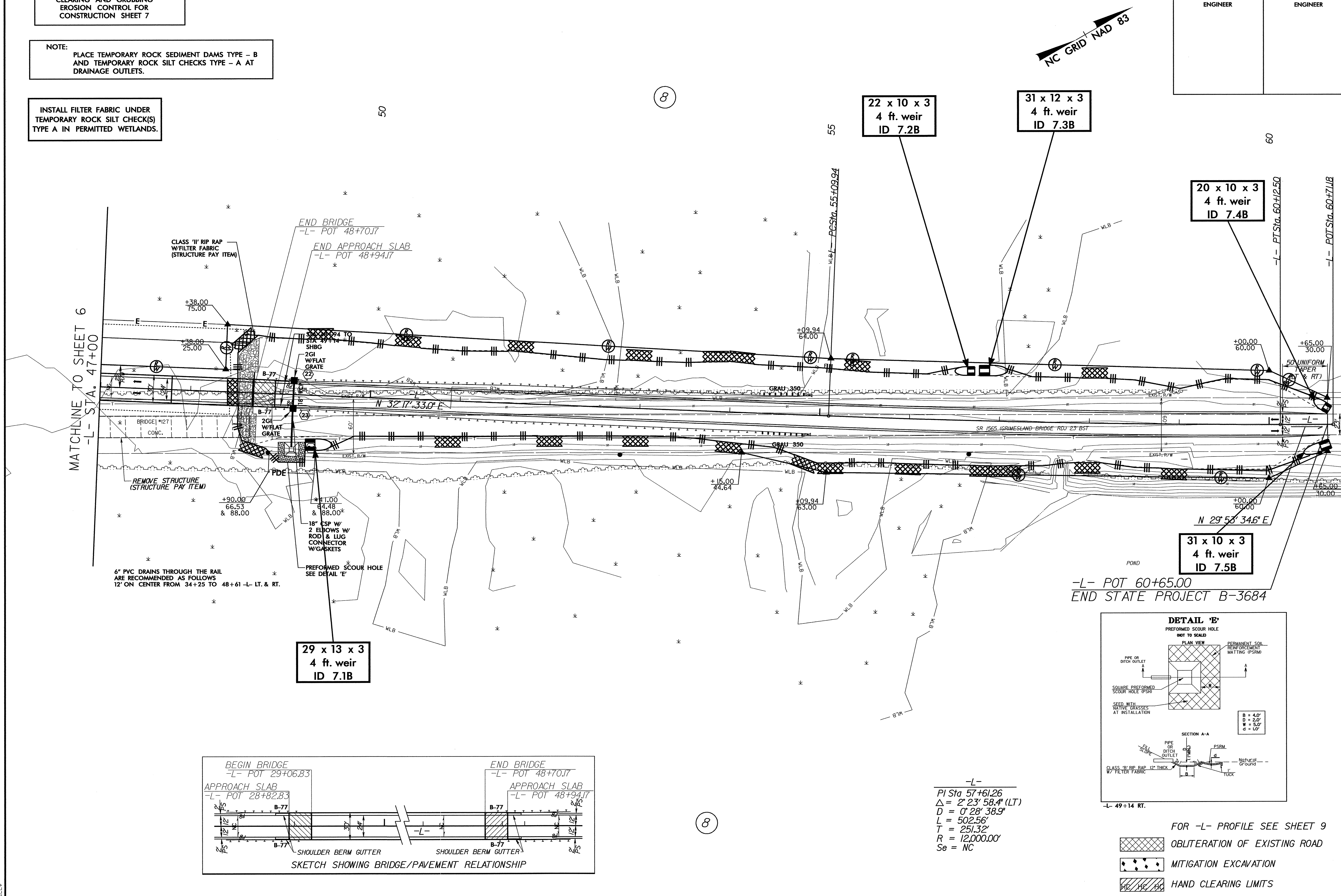
PROJECT REFERENCE NO.
B-3684
SHEET NO.
EC-7/CONST.6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.
BEGIN CONSTRUCTION -Y1- POT Sta. 10+00.00
-Y1-
PI Sta 14+90.39
Δ = 4°53' 06.0" (RT)
D = 7° 29' 14.3"
L = 65.24'
T = 32.64'
R = 765.24'
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.
NC GRID NAD 83
CLOSED DRAINAGE SYSTEM REQUIRED ON BRIDGE FROM STATION 32+15 TO 34+07 WITH INLETS SPACED 12' ON CENTER SYSTEM TO BE DISCHARGED DOWN BENT #5 INTO DISSIPATOR PAD.
NORTH CAROLINA DEPT OF TRANSPORTATION. NO REFERENCE
BY- 2 PINC 8+77.39 (-Y1- 13+77.24 15.17 LT)
-Y1- PC Sta. 14+57.75
-L- POT Sta. 38+79.19 = -Y1- POC Sta. 14+80.95
DISSIPATOR PAD CLASS 'B' RIP RAP L = 6' W = 6' T = 1' EST. 2 TONS EST. 8 SY FF
MATCHLINE TO SHEET 5 -L- STA. 34+00
MATCHLINE TO SHEET 7 -L- STA. 47+00
-L- N 32° 17' 33.0" E
GRADE TO WETLAND ELEVATION, SEE MITIGATION PLAN
SR 1565 (GRIMESLAND BRIDGE RD) 24' BST
BRIDGE #127 CONC.
REMOVE STRUCTURE (STRUCTURE PAY ITEM)
BL- 4 PINC 30+69.93 = (-L- 35+64.31 110.47 RT)
-Y1- PT Sta. 15+22.99
-Y1- POT Sta. 15+63.92
BL- 5 PINC 34+51.81= BY- 3 POT 10+95.32 = (-L- 39+45.85 94.21 RT)
6" PVC DRAINS THROUGH THE RAIL ARE RECOMMENDED AS FOLLOWS 12' ON CENTER FROM 34+25 TO 48+61 -L- LT. & RT.
ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS
BEGIN BRIDGE -L- POT 29+06.83
APPROACH SLAB -L- POT 28+82.83
END BRIDGE -L- POT 48+70.17
APPROACH SLAB -L- POT 48+94.17
SHOULDER BERM GUTTER
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
FOR -L- PROFILE SEE SHEET 8 & 9
OBLITERATION OF EXISTING ROAD
MITIGATION EXCAVATION
HAND CLEARING LIMITS

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-8/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.

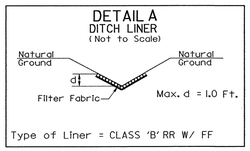


NC GRID NAD 83
22 x 10 x 3
4 ft. weir
ID 7.2B
31 x 12 x 3
4 ft. weir
ID 7.3B
20 x 10 x 3
4 ft. weir
ID 7.4B
31 x 10 x 3
4 ft. weir
ID 7.5B
29 x 13 x 3
4 ft. weir
ID 7.1B
MATCHLINE TO SHEET 6
-L- STA. 47+00
END BRIDGE
-L- POT 48+70.17
END APPROACH SLAB
-L- POT 48+94.17
CLASS 'II' RIP RAP W/FILTER FABRIC (STRUCTURE PAY ITEM)
-L- PCSta. 55+09.94
-L- PTSta. 60+12.50
-L- POTSta. 60+71.18
N 32° 17' 33.0" E
N 29° 53' 34.6" E
SR 1565 (GRIMESLAND BRIDGE RD) 23' BST
REMOVE STRUCTURE (STRUCTURE PAY ITEM)
18" CSP W/ 2 ELBOWS W/ ROD & LUG CONNECTOR W/GASKETS
PREFORMED SCOUR HOLE SEE DETAIL 'E'
6" PVC DRAINS THROUGH THE RAIL ARE RECOMMENDED AS FOLLOWS 12' ON CENTER FROM 34+25 TO 48+61 -L- LT. & RT.
POND
-L- POT 60+65.00
END STATE PROJECT B-3684
DETAIL 'E'
PREFORMED SCOUR HOLE
(NOT TO SCALE)
-L- 49+14 RT.
BEGIN BRIDGE
-L- POT 29+06.83
APPROACH SLAB
-L- POT 28+82.83
APPROACH SLAB
-L- POT 48+94.17
SHOULDER BERM GUTTER
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
-L-
PI Sta 57+61.26
Δ = 2° 23' 58.4" (LT)
D = 0° 28' 38.9"
L = 502.56'
T = 251.32'
R = 12,000.00'
Se = NC
FOR -L- PROFILE SEE SHEET 9
OBLITERATION OF EXISTING ROAD
MITIGATION EXCAVATION
HAND CLEARING LIMITS

8/17/99

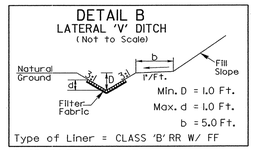
PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-9/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.



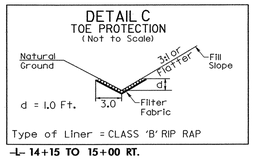
Type of Liner = CLASS 'B' RR W/ FF

-L- STA. 14+75 TO 15+84 LT.



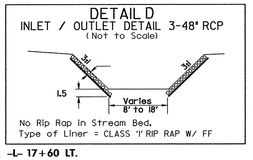
Type of Liner = CLASS 'B' RR W/ FF

-L- 15+84 TO 16+50 LT.



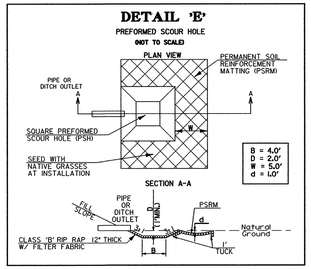
Type of Liner = CLASS 'B' RIP RAP

-L- 14+15 TO 15+00 RT.
-L- 17+50 TO 19+00 RT.
-L- 18+50 TO 19+25 LT.



No Rip Rap in Stream Bed.
Type of Liner = CLASS 'I' RIP RAP W/ FF

-L- 17+60 LT.
-L- 16+88 RT.



-L- 16+58 LT.

NC GRID NAD 83

-L- POT Sta. 10+00.00

-L- POT 14+00.00
BEGIN STATE PROJECT B-3684

-L- POT 13+50.00
BEGIN CONSTRUCTION

42 x 21 x 3
7 ft. weir
ID 4.2B

24 x 8 x 3
4 ft. weir
ID 4.7F

36 x 14 x 3
5 ft. weir
ID 4.6F

PREFORMED SCOUR HOLE
-L- STA. 16+58 LT.
SEE DETAIL 'E'

DISSIPATOR PAD
CLASS 'I' RIP RAP W/FILTER FABRIC
L = 25'
W = 40'
T = 1.25'
EST. 38 TONS
EST. 78 SY FF

CLASS 'I' RIP RAP W/FILTER FABRIC
SEE DETAIL 'D'
EST. 18 TONS
EST. 40 SY F.F.
EST. 30 CY DDE

LATERAL V DITCH
SEE DETAIL 'B'
DDE 270 CY
EST. 35 TONS
EST. 90 SY F.F.

DAVID H. SMALL
DB S 38, PG 668

DITCH LINER
SEE DETAIL 'A'
EST. 55 TONS
EST. 170 SY F.F.

TOE PROTECTION
SEE DETAIL 'C'
EST. 35 TONS
EST. 100 SY F.F.

SPECIAL DITCH GRADE
-L- 19+25 TO 20+50 LT.
SEE PROFILE

SPECIAL DITCH GRADE
-L- 14+00 TO 14+75 LT.
SEE PROFILE

TIE EXISTING DITCH TO THE PROPOSED DITCH

BORE & JACK
60" SMOOTH STEEL
TRIPLE 48" CONC.

REMOVE 8' OF FAILED 48" RCP & REPLACE

150' UNIFORM TAPER
(LT SIDE RT)

TOE PROTECTION
SEE DETAIL 'C'
EST. 40 TONS
EST. 115 SY F.F.

TOE PROTECTION.
SEE DETAIL 'C'
EST. 70 TONS
EST. 195 SY F.F.

CLASS 'I' RIP RAP W/FILTER FABRIC
SEE DETAIL 'D'
EST. 18 TONS
EST. 40 SY F.F.
EST. 35 CY DDE

40 x 10 x 3
4 ft. weir
ID 4.5B

42 x 13 x 3
4 ft. weir
ID 4.3B

N 72° 38' 00.6" E

SR 1565 (GRIMESLAND BRIDGE RD) 19' BST

EXISTING R/W

60'

RETAIN 18" CONC.

REMOVE AND REPLACE 18" DRAIN PIPE

BL- 1POT 5+00.00 =
(-L- 10+41.48 14.54 RT)

BL- 2 PINC 14+50.40 =
(-L- 19+86.43 37.52 RT)

MATCHLINE TO SHEET 5
-L- STA. 21+00

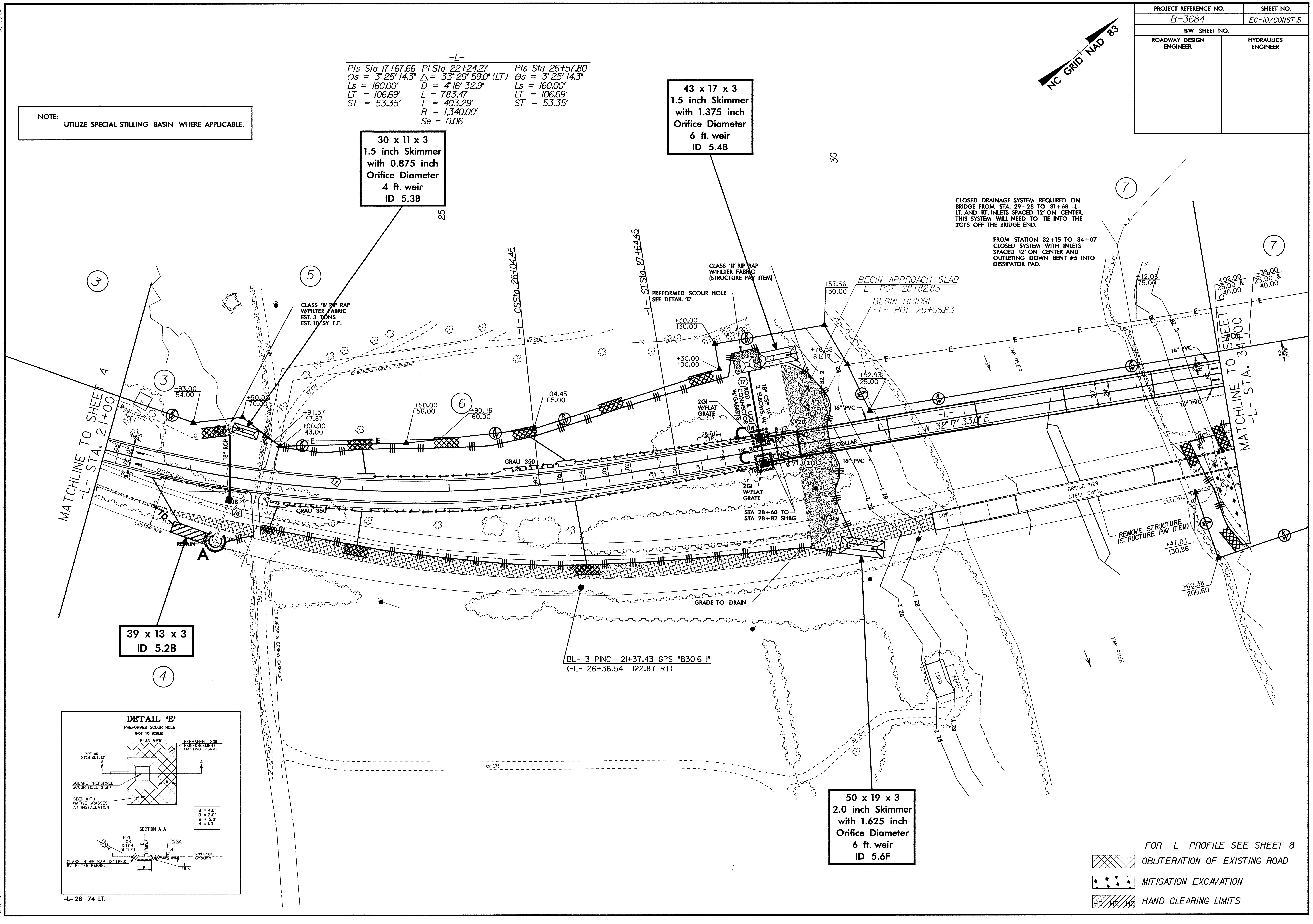
-L-

Pls Sta 17+67.66	Pl Sta 22+24.27	Pls Sta 26+57.80
θs = 3° 25' 14.3"	Δ = 33° 29' 59.0" (LT)	θs = 3° 25' 14.3"
Ls = 160.00'	D = 4° 16' 32.9"	Ls = 160.00'
LT = 106.69'	L = 783.47'	LT = 106.69'
ST = 53.35'	T = 403.29'	ST = 53.35'
	R = 1,340.00'	
	Se = 0.06	

FOR -L- PROFILE SEE SHEET 8

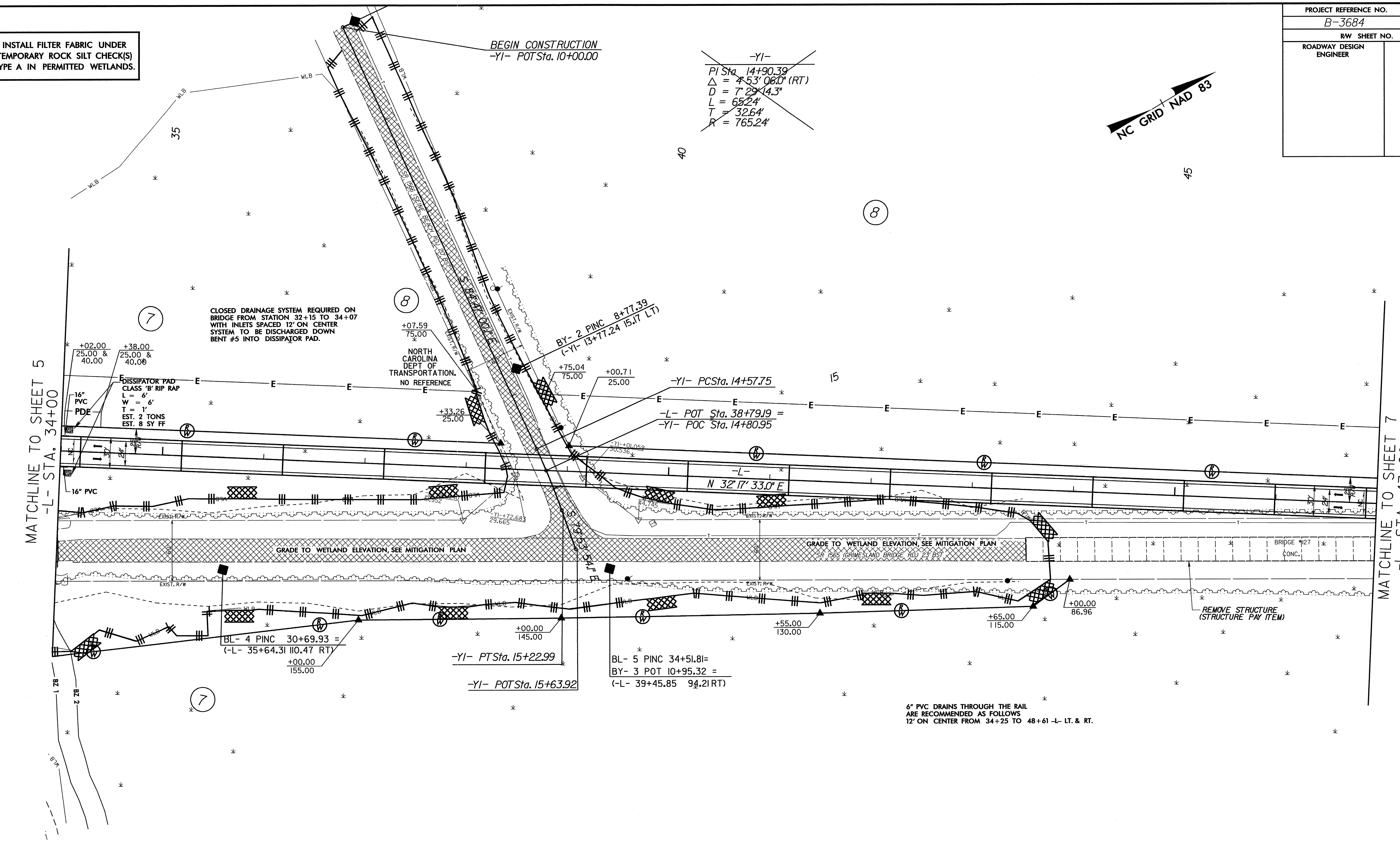
OBLITERATION OF EXISTING ROAD

$DATE$
$FILE$

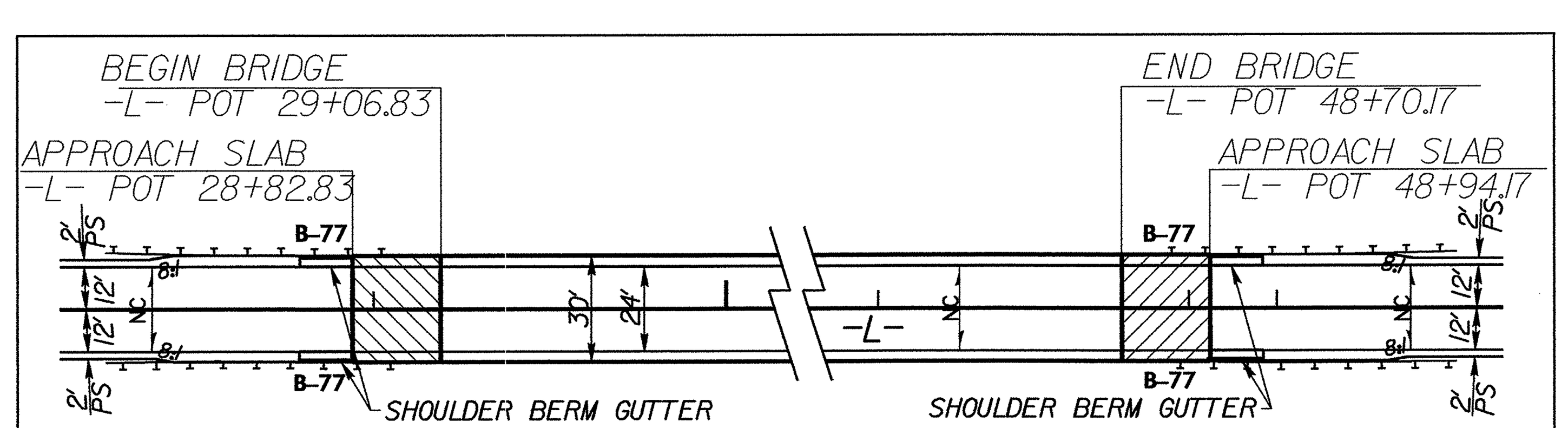

PROJECT REFERENCE NO. B-3684
SHEET NO. EC-10/CONST.5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NC GRID NAD 83
NOTE: UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.
-L-
PIs Sta 17+67.66 ΘS = 3° 25' 14.3" Ls = 160.00' LT = 106.69' ST = 53.35'
PI Sta 22+24.27 Δ = 33° 29' 59.0" (LT) D = 4° 16' 32.9" L = 783.47' T = 403.29' R = 1,340.00' Se = 0.06
PIs Sta 26+57.80 ΘS = 3° 25' 14.3" Ls = 160.00' LT = 106.69' ST = 53.35'
30 x 11 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 5.3B
43 x 17 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
6 ft. weir
ID 5.4B
39 x 13 x 3
ID 5.2B
50 x 19 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
6 ft. weir
ID 5.6F
CLOSED DRAINAGE SYSTEM REQUIRED ON BRIDGE FROM STA. 29+28 TO 31+68 -L- LT. AND RT. INLETS SPACED 12' ON CENTER. THIS SYSTEM WILL NEED TO TIE INTO THE 2GI'S OFF THE BRIDGE END.
FROM STATION 32+15 TO 34+07 CLOSED SYSTEM WITH INLETS SPACED 12' ON CENTER AND OUTLETING DOWN BENT #5 INTO DISSIPATOR PAD.
MATCHLINE TO SHEET 4 -L- STA. 21+00
MATCHLINE TO SHEET 6 -L- STA. 34+00
CLASS 'B' RIP RAP W/FILTER FABRIC EST. 3 TONS EST. 10 SY F.F.
CLASS 'II' RIP RAP W/FILTER FABRIC (STRUCTURE PAY ITEM)
PREFORMED SCOUR HOLE SEE DETAIL 'E'
BEGIN APPROACH SLAB -L- POT 28+82.83
BEGIN BRIDGE -L- POT 29+06.83
-L- CSSta. 26+04.45
-L- STSta. 27+64.45
18" CSP W/ 2 ELBOWS W/ ROD & LUG CONNECTOR W/GASKETS
2GI W/FLAT GRATE
STA 28+60 TO STA 28+82 SHBG
W 32° 17' 33.0" E
BRIDGE #129 STEEL SWING
REMOVE STRUCTURE (STRUCTURE PAY ITEM)
GRADE TO DRAIN
GRAU 350
TAR RIVER
BL- 3 PINC 21+37.43 GPS "B3016-1"
(-L- 26+36.54 122.87 RT)
15' INGRESS-EGRESS EASEMENT
20' INGRESS & EGRESS EASEMENT
DETAIL 'E'
PREFORMED SCOUR HOLE
(NOT TO SCALE)
PLAN VIEW
PIPE OR DITCH OUTLET
PERMANENT SOIL REINFORCEMENT MATTING (PSRM)
SQUARE PREFORMED SCOUR HOLE (PSH)
SEED WITH NATIVE GRASSES AT INSTALLATION
B = 4.0' D = 2.0' W = 5.0' d = 1.0'
SECTION A-A
CLASS 'B' RIP RAP 12" THICK W/ FILTER FABRIC
-L- 28+74 LT.
FOR -L- PROFILE SEE SHEET 8
OBLITERATION OF EXISTING ROAD
MITIGATION EXCAVATION
HAND CLEARING LIMITS

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-II/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.



BEGIN CONSTRUCTION
-Y1- POT Sta. 10+00.00
-Y1-
PI Sta 14+90.39
Δ = 4°53' 06.0" (RT)
D = 7°29' 14.3"
L = 65.24'
T = 32.64'
R = 765.24'
NC GRID NAD 83
CLOSED DRAINAGE SYSTEM REQUIRED ON BRIDGE FROM STATION 32+15 TO 34+07 WITH INLETS SPACED 12' ON CENTER SYSTEM TO BE DISCHARGED DOWN BENT #5 INTO DISSIPATOR PAD.
NORTH CAROLINA DEPT OF TRANSPORTATION. NO REFERENCE
BY- 2 PINC 8+77.39
(-Y1- 13+77.24 15.17 LT)
-Y1- PC Sta. 14+57.75
-L- POT Sta. 38+79.19 =
-Y1- POC Sta. 14+80.95
DISSIPATOR PAD
CLASS 'B' RIP RAP
L = 6'
W = 6'
T = 1'
EST. 2 TONS
EST. 8 SY FF
16" PVC
PDE
MATCHLINE TO SHEET 5 -L- STA. 34+00
MATCHLINE TO SHEET 7 -L- STA. 47+00
-L-
N 32°17' 33.0" E
GRADE TO WETLAND ELEVATION, SEE MITIGATION PLAN
SR 1565 (GRIMESLAND BRIDGE RD) 23' BST
BRIDGE 127 CONC.
BL- 4 PINC 30+69.93 =
(-L- 35+64.31 110.47 RT)
-Y1- PT Sta. 15+22.99
-Y1- POT Sta. 15+63.92
BL- 5 PINC 34+51.81=
BY- 3 POT 10+95.32 =
(-L- 39+45.85 94.21 RT)
REMOVE STRUCTURE (STRUCTURE PAY ITEM)
6" PVC DRAINS THROUGH THE RAIL ARE RECOMMENDED AS FOLLOWS 12' ON CENTER FROM 34+25 TO 48+61 -L- LT. & RT.



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

FOR -L- PROFILE SEE SHEET 8 & 9

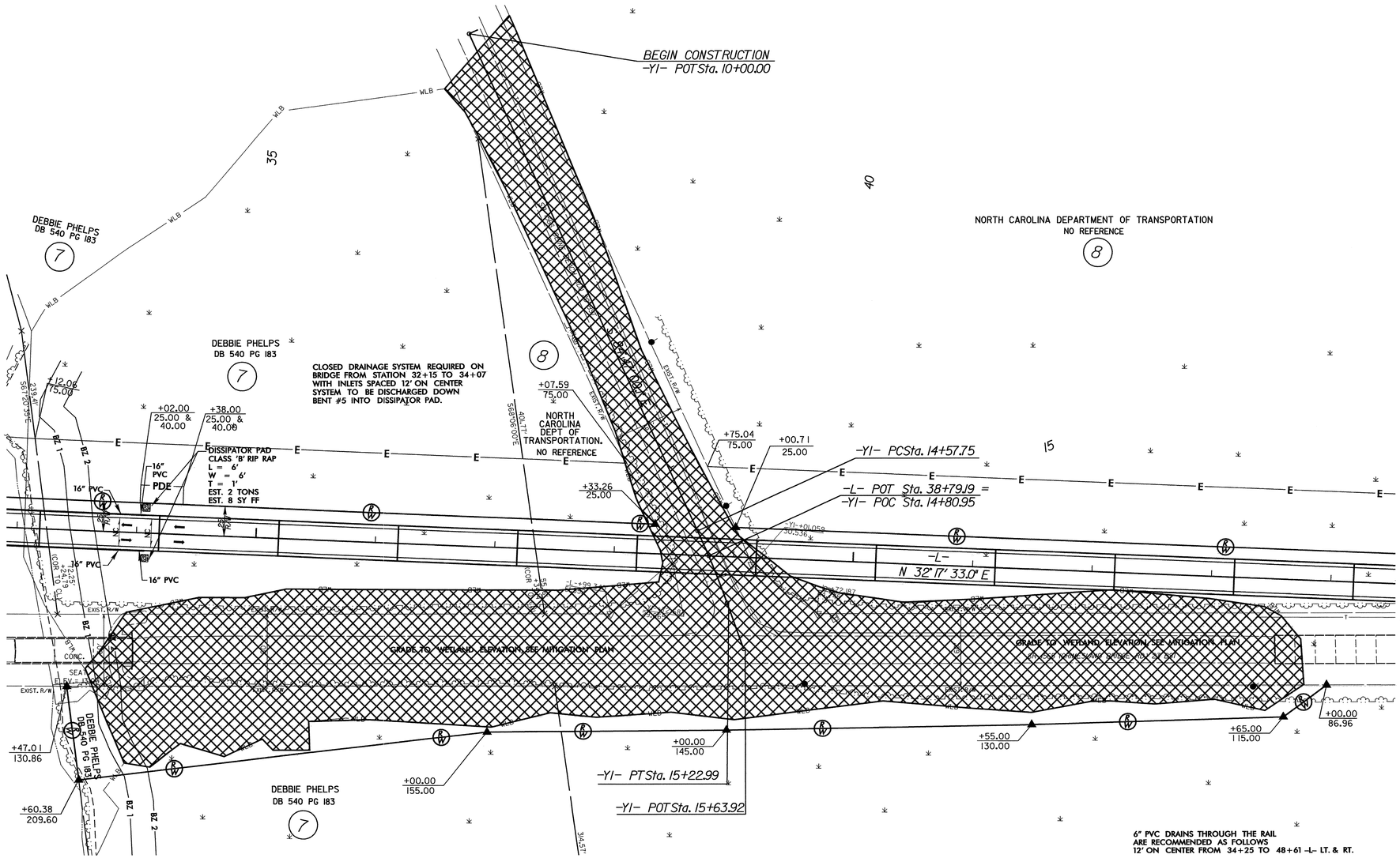
OBLITERATION OF EXISTING ROAD

MITIGATION EXCAVATION

HAND CLEARING LIMITS

3.05 ACRES WETLAND REFORESTATION

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-12/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE RF-1 AND PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-3684	EC-13/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

INSTALL FILTER FABRIC UNDER TEMPORARY ROCK SILT CHECK(S) TYPE A IN PERMITTED WETLANDS.

NC GRID NAD 83

(8)

22 x 10 x 3
4 ft. weir
ID 7.2B

31 x 12 x 3
4 ft. weir
ID 7.3B

20 x 10 x 3
4 ft. weir
ID 7.4B

29 x 13 x 3
4 ft. weir
ID 7.1B

31 x 10 x 3
4 ft. weir
ID 7.5B

MATCHLINE TO SHEET 6
-L- STA. 47+00

END BRIDGE
-L- POT 48+70.17

END APPROACH SLAB
-L- POT 48+94.17

CLASS 'II' RIP RAP W/FILTER FABRIC (STRUCTURE PAY ITEM)

-L- POT Sta. 55+09.94

-L- PT Sta. 60+12.50

-L- POT Sta. 60+71.18

+38.00
75.00

+38.00
25.00

+09.94
64.00

+00.00
60.00

+65.00
30.00

50' UNIFORM TAPER (LT & RT)

B-77

2GI W/FLAT GRATE

GRAU 350

N 32° 17' 33.0" E

SR 1565 (GRIMESLAND BRIDGE RDJ 23' BST

BRIDGE #127
CONC.

EXIST. R/W

PDE

REMOVE STRUCTURE (STRUCTURE PAY ITEM)

+90.00
66.53
& 88.00

+11.00
64.48
& 88.00

18" CSP W/ 2 ELBOWS W/ ROD & LUG CONNECTOR W/GASKETS

PREFORMED SCOUR HOLE SEE DETAIL 'E'

6" PVC DRAINS THROUGH THE RAIL ARE RECOMMENDED AS FOLLOWS 12' ON CENTER FROM 34+25 TO 48+61 -L- LT. & RT.

+15.00
44.64

+09.94
63.00

+00.00
60.00

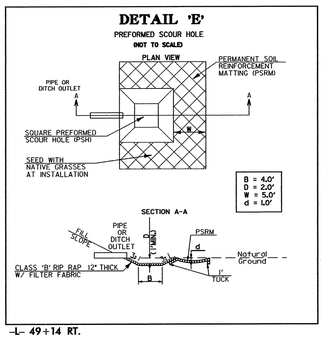
+65.00
30.00

N 29° 53' 34.6" E

POND

-L- POT 60+65.00
END STATE PROJECT B-3684

DETAIL 'E'
PREFORMED SCOUR HOLE
(NOT TO SCALE)



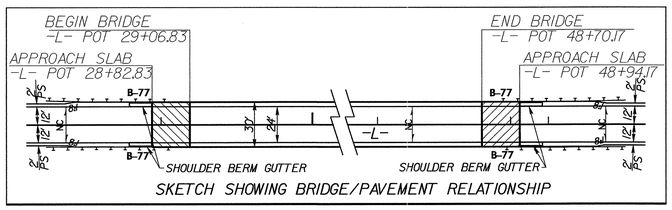
-L- 49+14 RT.

BEGIN BRIDGE
-L- POT 29+06.83

APPROACH SLAB
-L- POT 28+82.83

END BRIDGE
-L- POT 48+70.17

APPROACH SLAB
-L- POT 48+94.17



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

-L-
PI Sta 57+61.26
Δ = 2° 23' 58.4" (LT)
D = 0° 28' 38.9"
L = 502.56'
T = 251.32'
R = 12,000.00'
Se = NC

(8)

FOR -L- PROFILE SEE SHEET 9

OBLITERATION OF EXISTING ROAD

MITIGATION EXCAVATION

HC HC HC HAND CLEARING LIMITS

$DATE$
$FILE$