PROJECT: B-3654

TIP

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3654	EC-1	

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

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

PLAN FOR PROPOSED

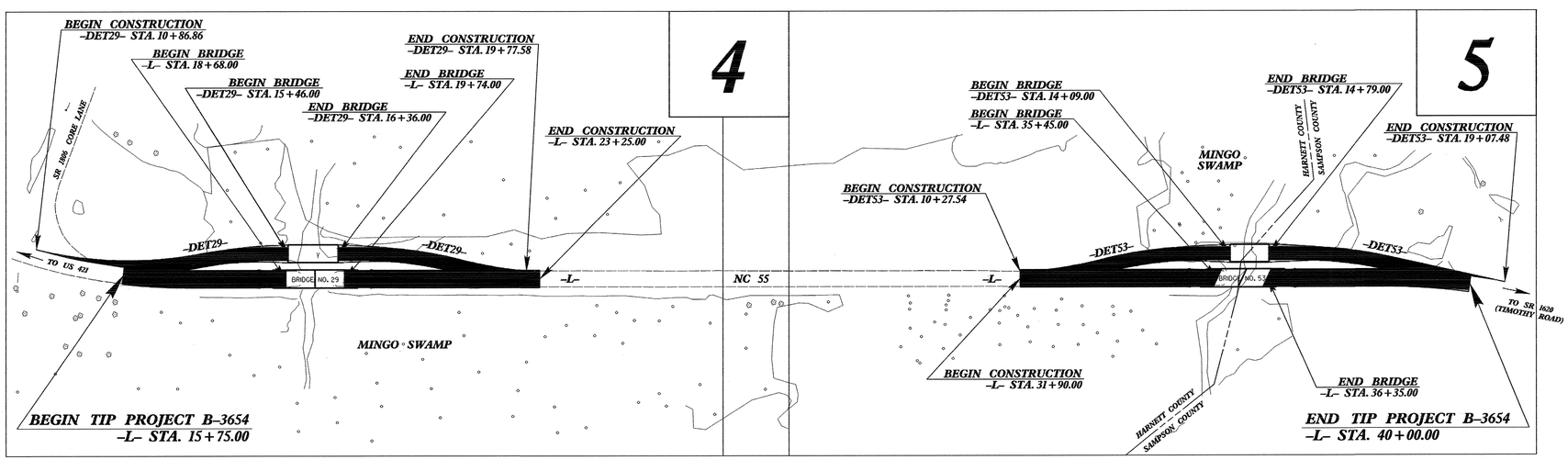
HIGHWAY EROSION CONTROL

HARNETT & SAMPSON COUNTIES

LOCATION: BRIDGES No. 29 AND 53 OVER MINGO SWAMP ON NC 55

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURES

NAD 83



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	
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.

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

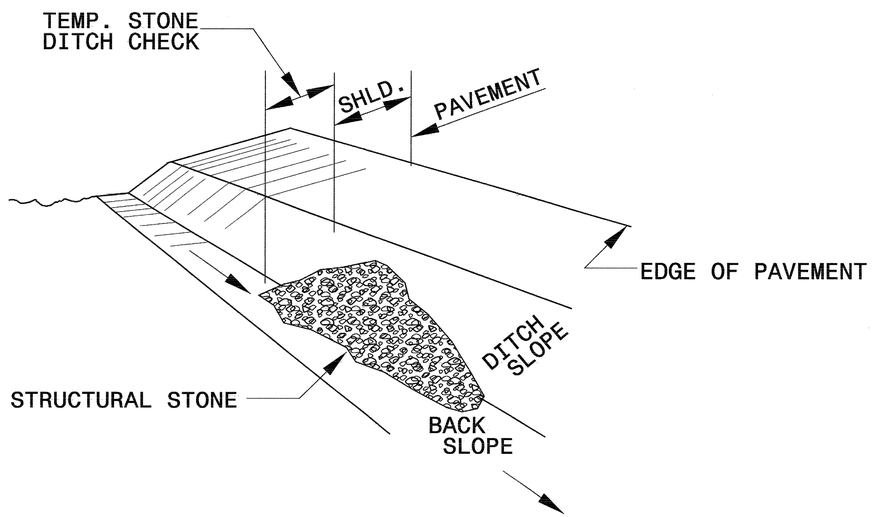
Roadway Standard Drawings

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
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.05 Temporary Diversion
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A

PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

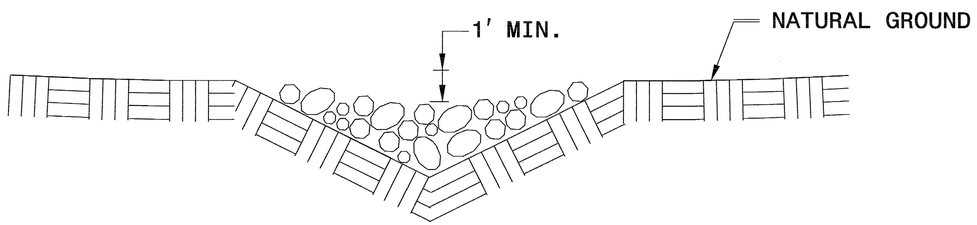


ISOMETRIC VIEW

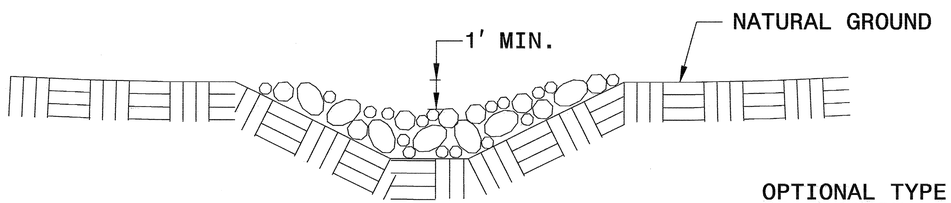
NOTES:

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

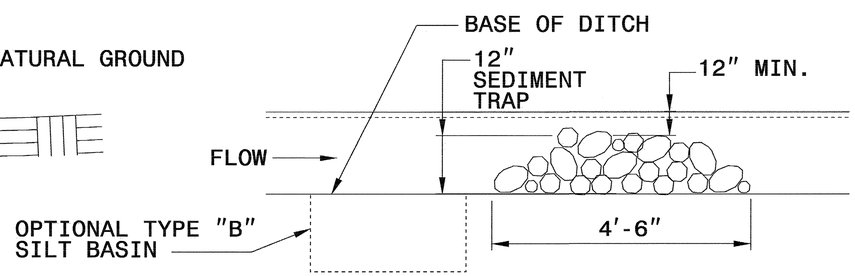
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



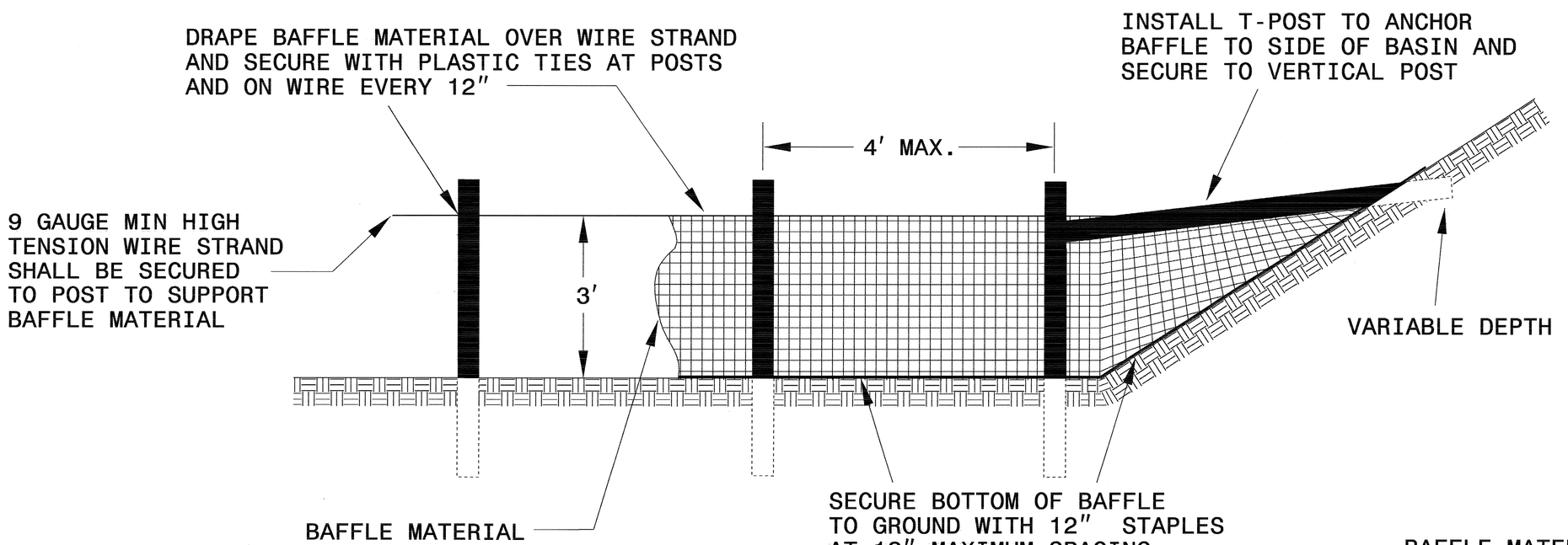
CROSS SECTION TRAPEZOIDAL DITCH

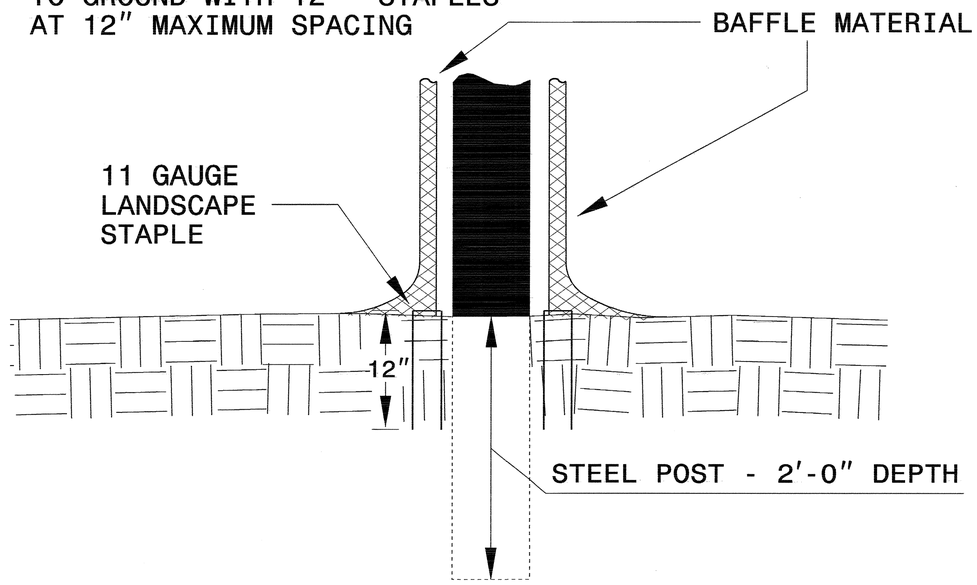


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-2A
RW 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

NOTES:

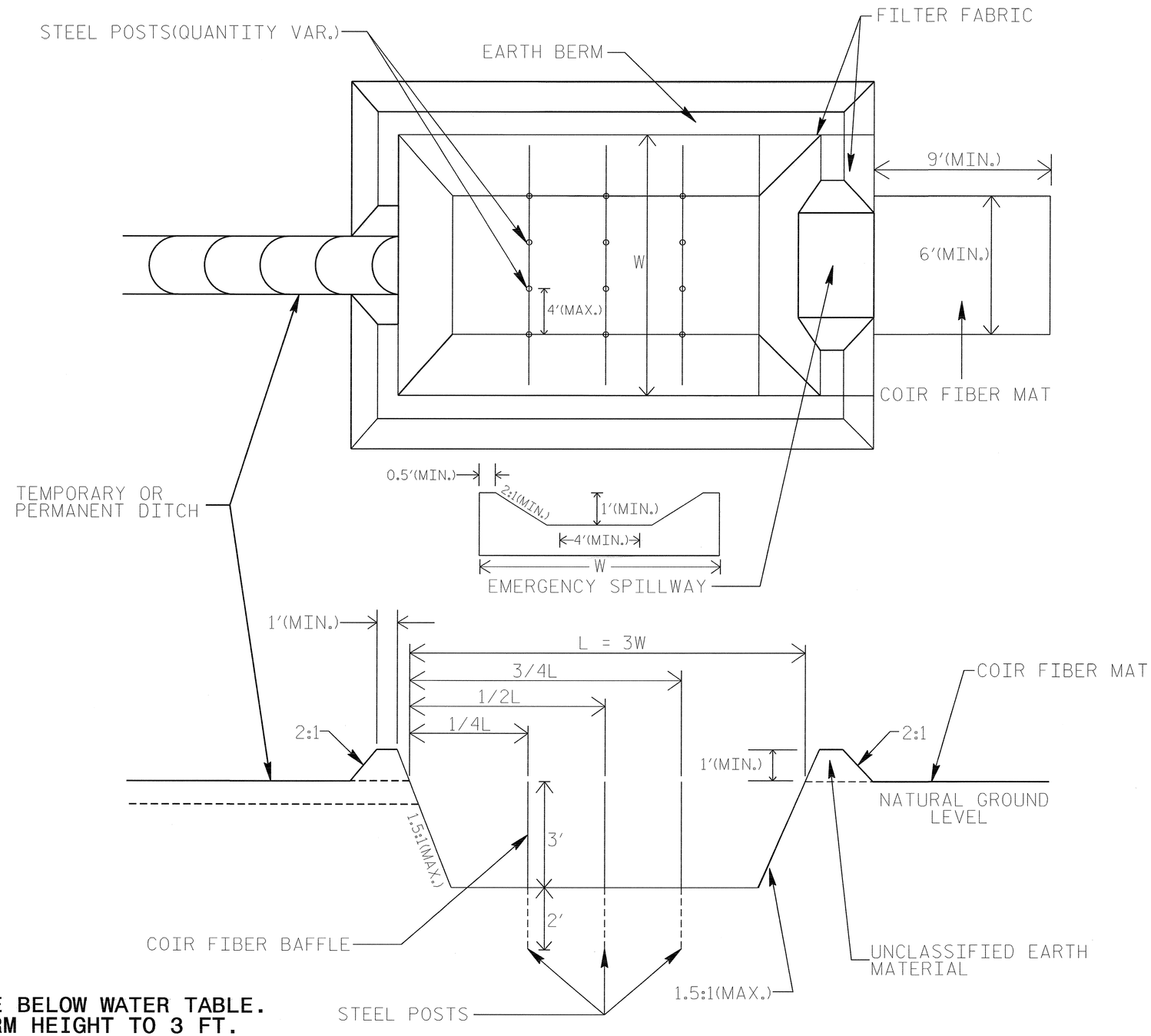
1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH.

2. 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.

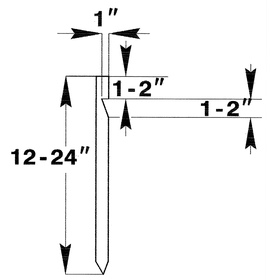
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

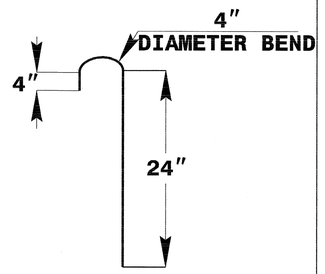
INFILTRATION BASIN WITH BAFFLES DETAIL



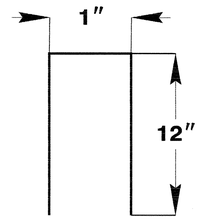
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE

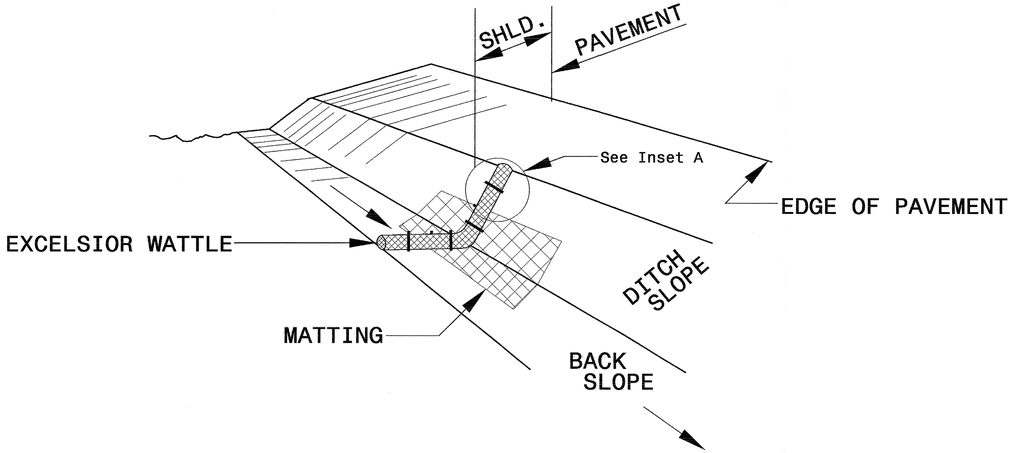


COIR FIBER MAT ANCHOR OPTIONS

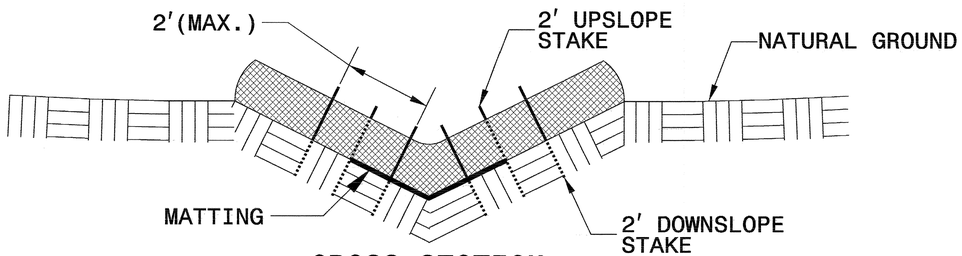
NOTES:
1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE INTO BASIN.

PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

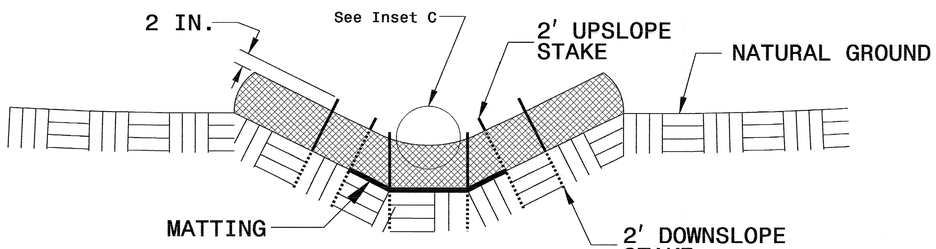
WATTLE WITH POLYACRYLAMIDE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. 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.

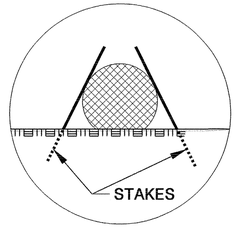
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

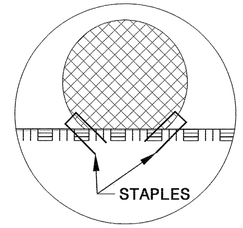
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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.

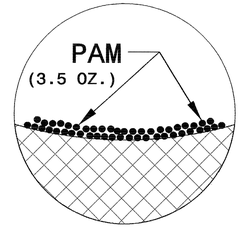
INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



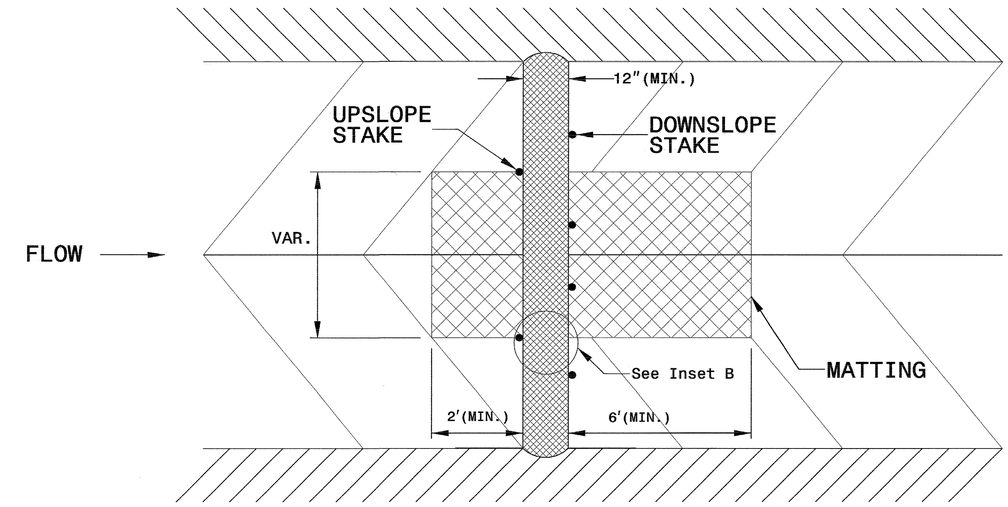
INSET A



INSET B



INSET C



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3654	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-	14+50	15+50	LT	140
5	-L-	38+00	39+50	RT	485
				SUBTOTAL	625
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					12977
				TOTAL	13602
				SAY	14000

MATTING FOR EROSION CONTROL

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

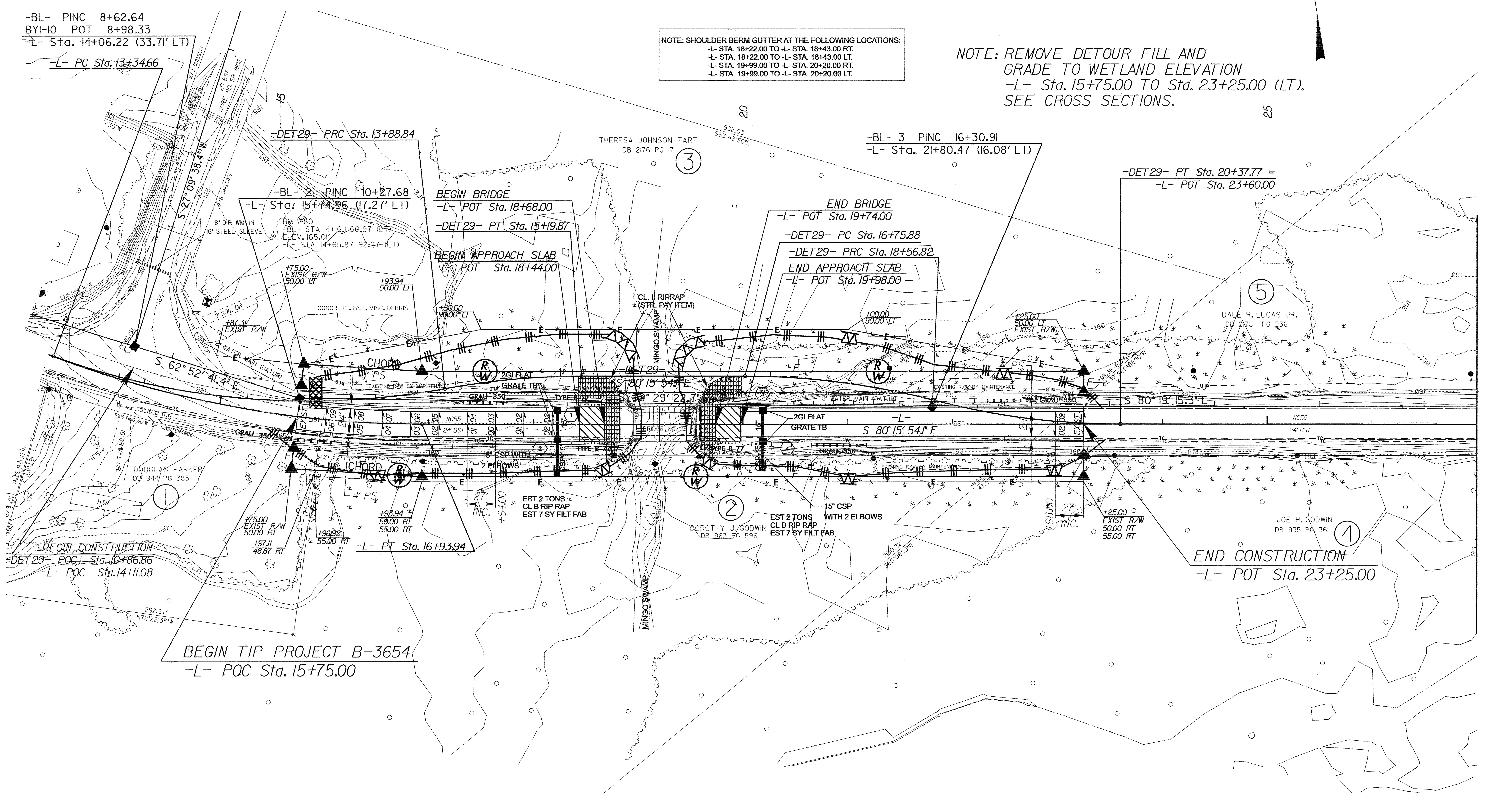
PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NOTE: SHOULDER BERM GUTTER AT THE FOLLOWING LOCATIONS:
-L- STA. 18+22.00 TO -L- STA. 18+43.00 RT.
-L- STA. 18+22.00 TO -L- STA. 18+43.00 LT.
-L- STA. 19+99.00 TO -L- STA. 20+20.00 RT.
-L- STA. 19+99.00 TO -L- STA. 20+20.00 LT.

NOTE: REMOVE DETOUR FILL AND
GRADE TO WETLAND ELEVATION
-L- Sta. 15+75.00 TO Sta. 23+25.00 (LT).
SEE CROSS SECTIONS.



REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

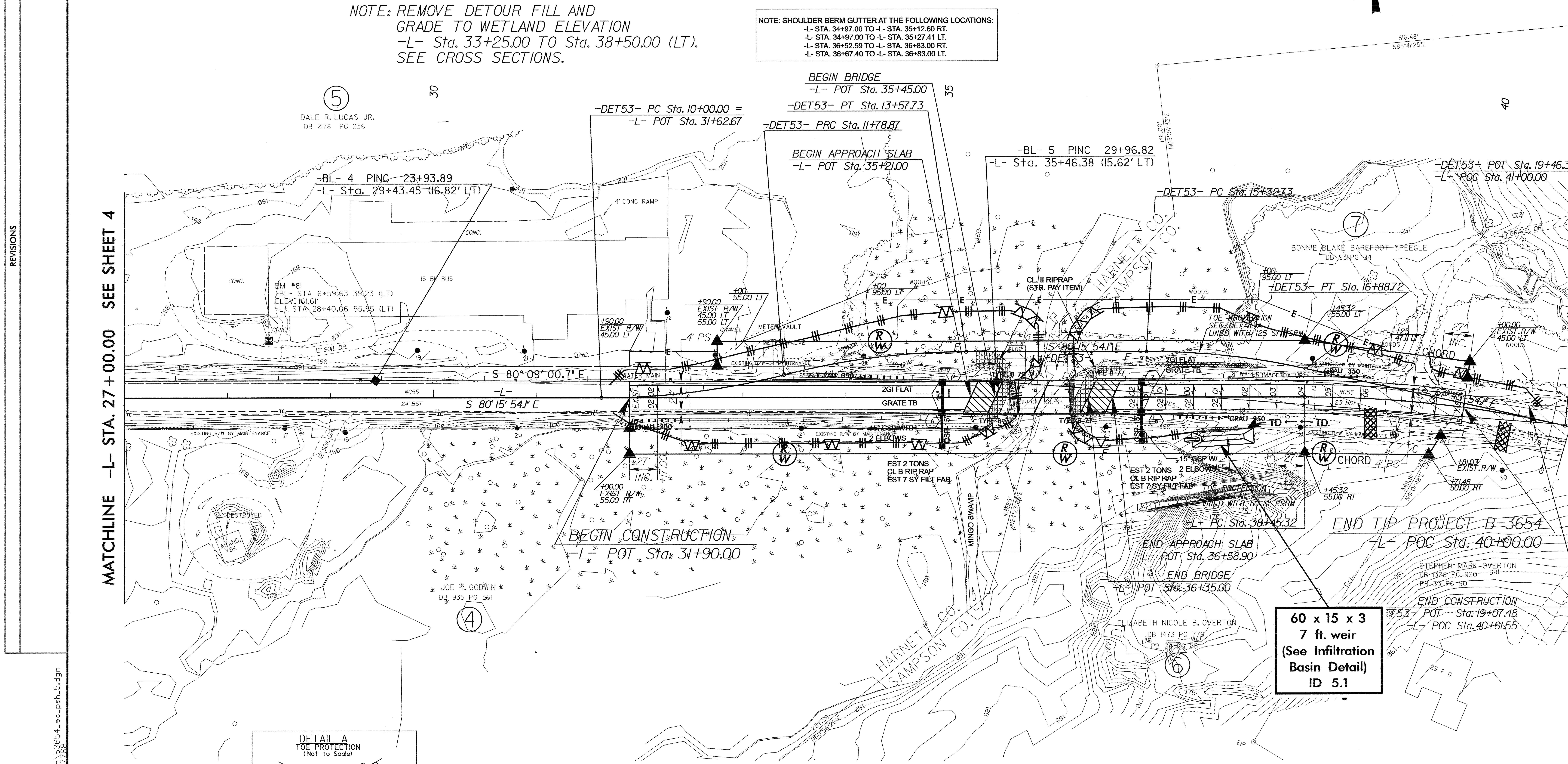
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

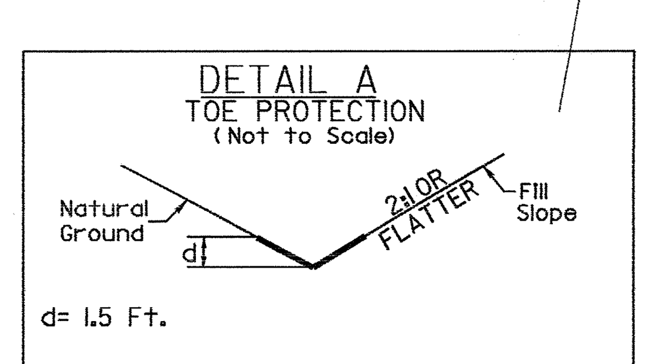
NOTE:
UTILIZE INFILTRATION BASIN AS STILLING BASIN WHERE APPLICABLE.

NOTE: REMOVE DETOUR FILL AND GRADE TO WETLAND ELEVATION -L- Sta. 33+25.00 TO Sta. 38+50.00 (LT). SEE CROSS SECTIONS.

NOTE: SHOULDER BERM GUTTER AT THE FOLLOWING LOCATIONS:
-L- STA. 34+97.00 TO -L- STA. 35+12.60 RT.
-L- STA. 34+97.00 TO -L- STA. 35+27.41 LT.
-L- STA. 36+52.59 TO -L- STA. 36+83.00 RT.
-L- STA. 36+67.40 TO -L- STA. 36+83.00 LT.



MATCHLINE -L- STA. 27+00.00 SEE SHEET 4
REVISIONS
-BL- 4 PINC 23+93.89
-L- Sta. 29+43.45 (16.82' LT)
DALE R. LUCAS JR.
DB 2178 PG 236
-DET53- PC Sta. 10+00.00 =
-L- POT Sta. 31+62.67
-DET53- PRC Sta. 11+78.87
-DET53- PT Sta. 13+57.73
BEGIN BRIDGE
-L- POT Sta. 35+45.00
BEGIN APPROACH SLAB
-L- POT Sta. 35+21.00
-BL- 5 PINC 29+96.82
-L- Sta. 35+46.38 (15.62' LT)
-DET53- PC Sta. 15+32.73
-DET53- POT Sta. 19+46.30 =
-L- POC Sta. 41+00.00
BONNIE BLAKE BAREFOOT SPEEGLE
DB 931 PG 94
-DET53- PT Sta. 16+88.72
BM #81
-BL- STA 6+59.63 39.23 (LT)
ELEV. 161.61'
-L- STA 28+40.06 55.95 (LT)
S 80° 09' 00.7" E
S 80° 15' 54.1" E
CL. II RIPRAP (STR. PAY ITEM)
TOE PROTECTION SEE DETAIL A LINED WITH 125 SY PSRM
2GI FLAT
GRATE TB
GRAU 350
GRAU 250
15" CSP WITH 2 ELBOWS
EST 2 TONS CL B RIP RAP EST 7 SY FILT FAB
15" CSP W/ 2 ELBOWS
MINGO SWAMP
HARNETT CO.
SAMPSON CO.
BEGIN CONSTRUCTION
-L- POT Sta. 31+90.00
JOE H. GODWIN
DB 935 PG 361
-L- PC Sta. 38+45.32
END APPROACH SLAB
-L- POT Sta. 36+58.90
END BRIDGE
-L- POT Sta. 36+35.00
END TIP PROJECT B-3654
-L- POC Sta. 40+00.00
STEPHEN MARK OVERTON
DB 1326 PG 920
END CONSTRUCTION
-DET53- POT Sta. 19+07.48
-L- POC Sta. 40+61.55
ELIZABETH NICOLE B. OVERTON
DB 1473 PG 779
60 x 15 x 3
7 ft. weir
(See Infiltration Basin Detail)
ID 5.1



FROM -L- STA. 37+40 RT TO -L- STA 37+80 RT.
FROM -L- STA.37+00 LT TO -L- STA 38+00 LT.

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8/17/99

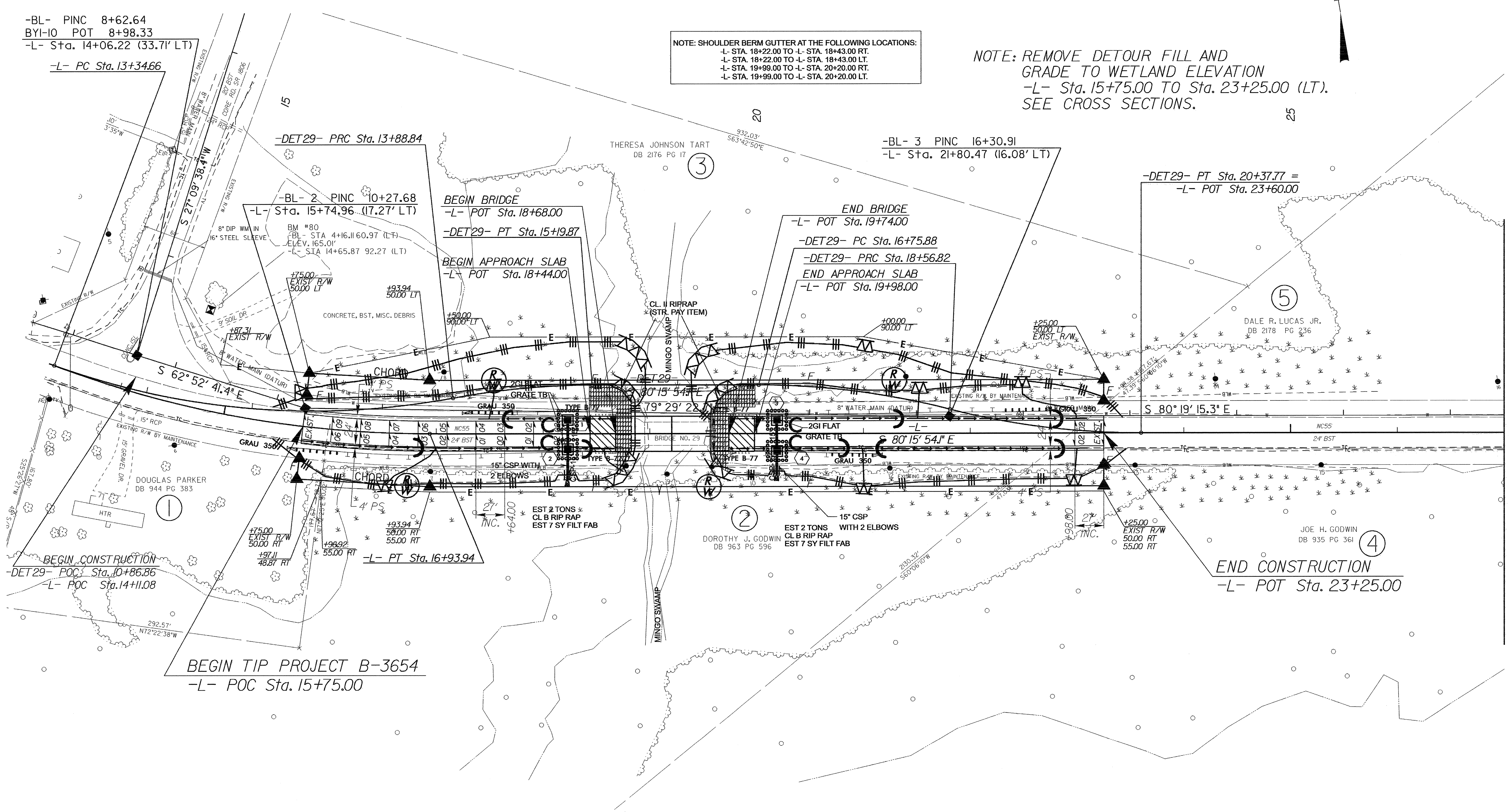
PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-6/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

NOTE: SHOULDER BERM GUTTER AT THE FOLLOWING LOCATIONS:
-L- STA. 18+22.00 TO -L- STA. 18+43.00 RT.
-L- STA. 18+22.00 TO -L- STA. 18+43.00 LT.
-L- STA. 19+99.00 TO -L- STA. 20+20.00 RT.
-L- STA. 19+99.00 TO -L- STA. 20+20.00 LT.

NOTE: REMOVE DETOUR FILL AND GRADE TO WETLAND ELEVATION -L- Sta. 15+75.00 TO Sta. 23+25.00 (LT). SEE CROSS SECTIONS.



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PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-7/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

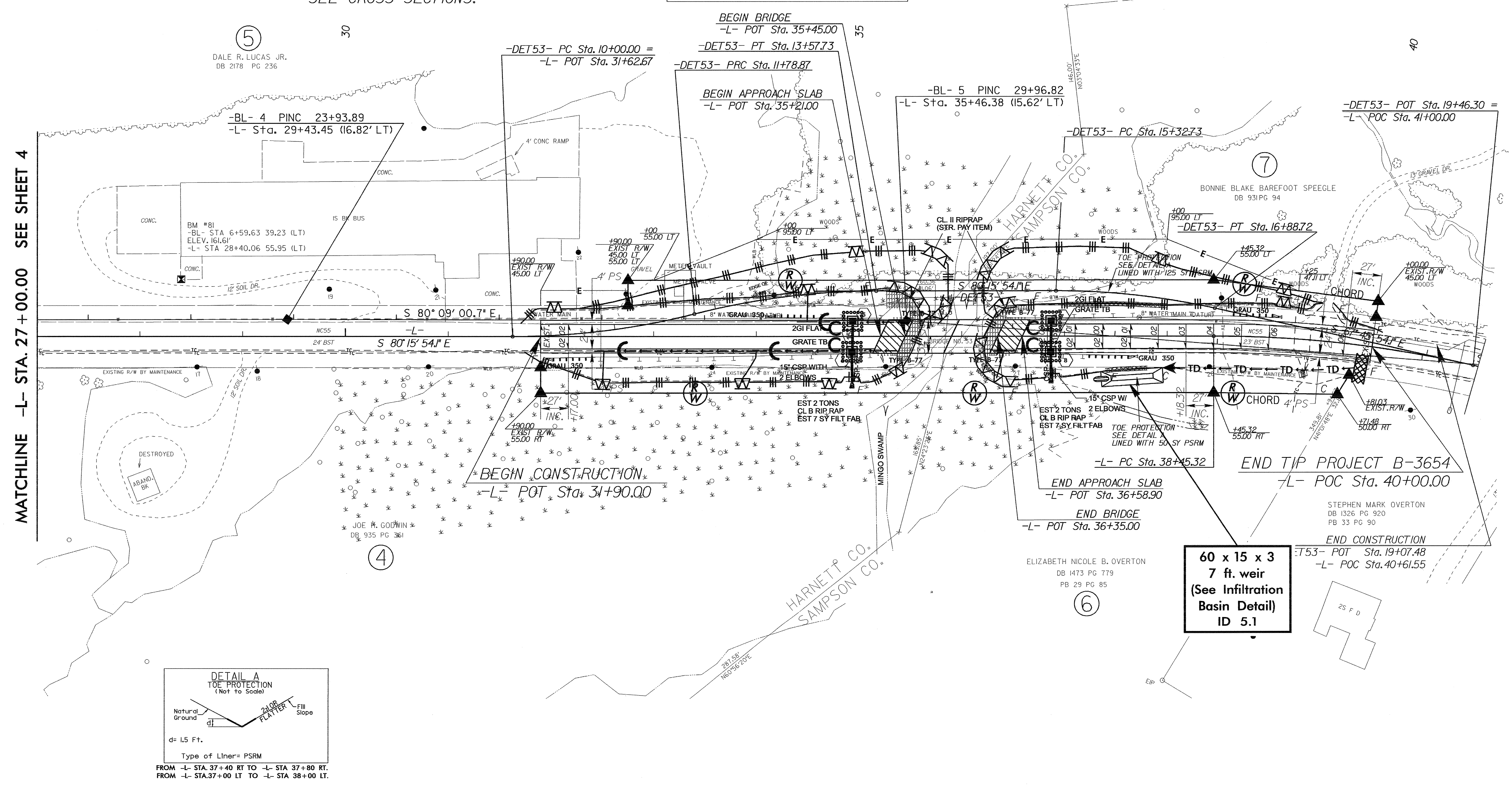
REVISIONS

NOTE:
UTILIZE INFILTRATION BASIN AS STILLING BASIN WHERE APPLICABLE.

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

NOTE: REMOVE DETOUR FILL AND GRADE TO WETLAND ELEVATION -L- Sta. 33+25.00 TO Sta. 38+50.00 (LT). SEE CROSS SECTIONS.

NOTE: SHOULDER BERM GUTTER AT THE FOLLOWING LOCATIONS:
-L- STA. 34+97.00 TO -L- STA. 35+12.60 RT.
-L- STA. 34+97.00 TO -L- STA. 35+27.41 LT.
-L- STA. 36+52.59 TO -L- STA. 36+83.00 RT.
-L- STA. 36+67.40 TO -L- STA. 36+83.00 LT.



MATCHLINE -L- STA. 27+00.00 SEE SHEET 4
DALE R. LUCAS JR.
DB 2178 PG 236
-BL- 4 PINC 23+93.89
-L- Sta. 29+43.45 (16.82' LT)
-DET53- PC Sta. 10+00.00 =
-L- POT Sta. 31+62.67
-DET53- PRC Sta. 11+78.87
-DET53- PT Sta. 13+57.73
BEGIN BRIDGE
-L- POT Sta. 35+45.00
BEGIN APPROACH SLAB
-L- POT Sta. 35+21.00
-BL- 5 PINC 29+96.82
-L- Sta. 35+46.38 (15.62' LT)
-DET53- PC Sta. 15+32.73
-DET53- PT Sta. 16+88.72
-DET53- POT Sta. 19+46.30 =
-L- POC Sta. 41+00.00
BONNIE BLAKE BAREFOOT SPEEGLE
DB 931 PG 94
BM #81
-BL- STA 6+59.63 39.23 (LT)
ELEV. 161.61'
-L- STA 28+40.06 55.95 (LT)
S 80° 09' 00.7" E
S 80° 15' 54.1" E
CL. II RIPRAP
(STR. PAY ITEM)
HARNETT CO.
SAMPSON CO.
TOE PROTECTION
SEE DETAIL A
LINED WITH 125 SY PSRM
2GI FLAT
GRATE TB
GRAU 350
CHORD
EST 2 TONS
CL B RIP RAP
EST 7 SY FILT FAB
15" CSP WITH
2 ELBOWS
15" CSP W/
2 ELBOWS
TOE PROTECTION
SEE DETAIL A
LINED WITH 50 SY PSRM
MINGO SWAMP
BEGIN CONSTRUCTION
-L- POT Sta. 31+90.00
-L- PC Sta. 38+45.32
END APPROACH SLAB
-L- POT Sta. 36+58.90
END BRIDGE
-L- POT Sta. 36+35.00
END TIP PROJECT B-3654
-L- POC Sta. 40+00.00
STEPHEN MARK OVERTON
DB 1326 PG 920
PB 33 PG 90
END CONSTRUCTION
-DET53- POT Sta. 19+07.48
-L- POC Sta. 40+61.55
JOE H. GODWIN
DB 935 PG 361
ELIZABETH NICOLE B. OVERTON
DB 1473 PG 779
PB 29 PG 85
DESTROYED
ABAND. BK
60 x 15 x 3
7 ft. weir
(See Infiltration Basin Detail)
ID 5.1
DETAIL A
TOE PROTECTION
(Not to Scale)
Natural Ground
2:1 OR FLATTER
Fill Slope
d= 1.5 Ft.
Type of Liner= PSRM
FROM -L- STA. 37+40 RT TO -L- STA 37+80 RT.
FROM -L- STA.37+00 LT TO -L- STA 38+00 LT.

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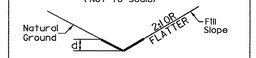
PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-8/CONST.2-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETOUR

REVISIONS 8/17/99

DETAIL A
TOE PROTECTION
(Not to Scale)



d= 1.5 Ft.

Type of Liner= PSRM

FROM -DET29- STA. 12+50 TO -DET29- STA. 13+00 LT

-BL- PINC 8+62.64
BYI-10 POT 8+98.33
-L- Sta. 14+06.22 (33.71' LT)

-L- PC Sta. 13+34.66

-DET29- PRC Sta. 13+88.84

BEGIN BRIDGE
-DET29- POT Sta. 15+46.00

-BL- 2 PINC 10+27.68
-L- Sta. 15+74.96 (17.27' LT)

-DET29- PT Sta. 15+19.87

-BL- 3 PINC 16+30.91
-L- Sta. 21+80.47 (16.08' LT)

END BRIDGE
-DET29- POT Sta. 16+36.00

-DET29- PC Sta. 16+75.88

-DET29- PRC Sta. 18+56.82

-DET29- PT Sta. 20+37.77 =
-L- POT Sta. 23+60.00

-DET29- PC Sta. 10+00.00 =
-L- POT Sta. 13+24.72

BEGIN GRADE
-DET29- POC Sta. 12+44.60

BEGIN CONSTRUCTION
-DET29- POC Sta. 10+86.86
-L- POC Sta. 14+11.08

-L- PT Sta. 16+93.94

END GRADE
-DET29- POC Sta. 18+90.95

END CONSTRUCTION
-DET29- POC Sta. 19+77.58

CL. II RIPRAP
(STR. PAY ITEM)

CONCRETE, BST, MISC. DEBRIS
TOE PROTECTION
SEE DETAIL A
LINED WITH 65 SY PSRM

BEATRICE T. STRICKLAND
DB 760 PG 708

MICHAEL JACKSON
DB 1404 PG 949

DOUGLAS PARKER
DB 944 PG 383

THERESA JOHNSON TART
DB 2176 PG 17

DOROTHY J. GODWIN
DB 963 PG 596

DALE R. LUCAS JR.
DB 2178 PG 236

JOE H. GODWIN
DB 935 PG 361

BRIDGE NO. 23

S 27° 09' 36.4" W

S 62° 42' 41.4" E

S 80° 15' 54.1" E

S 80° 19' 15.3" E

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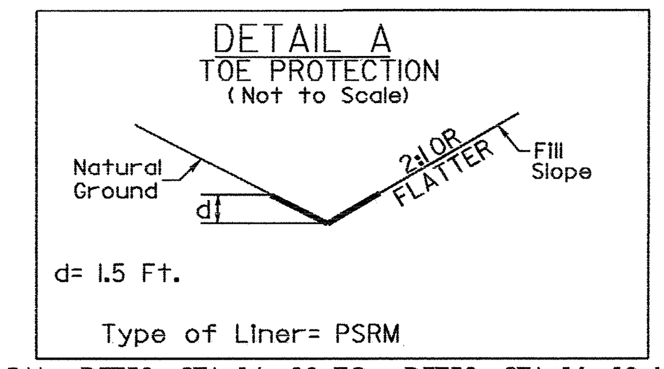
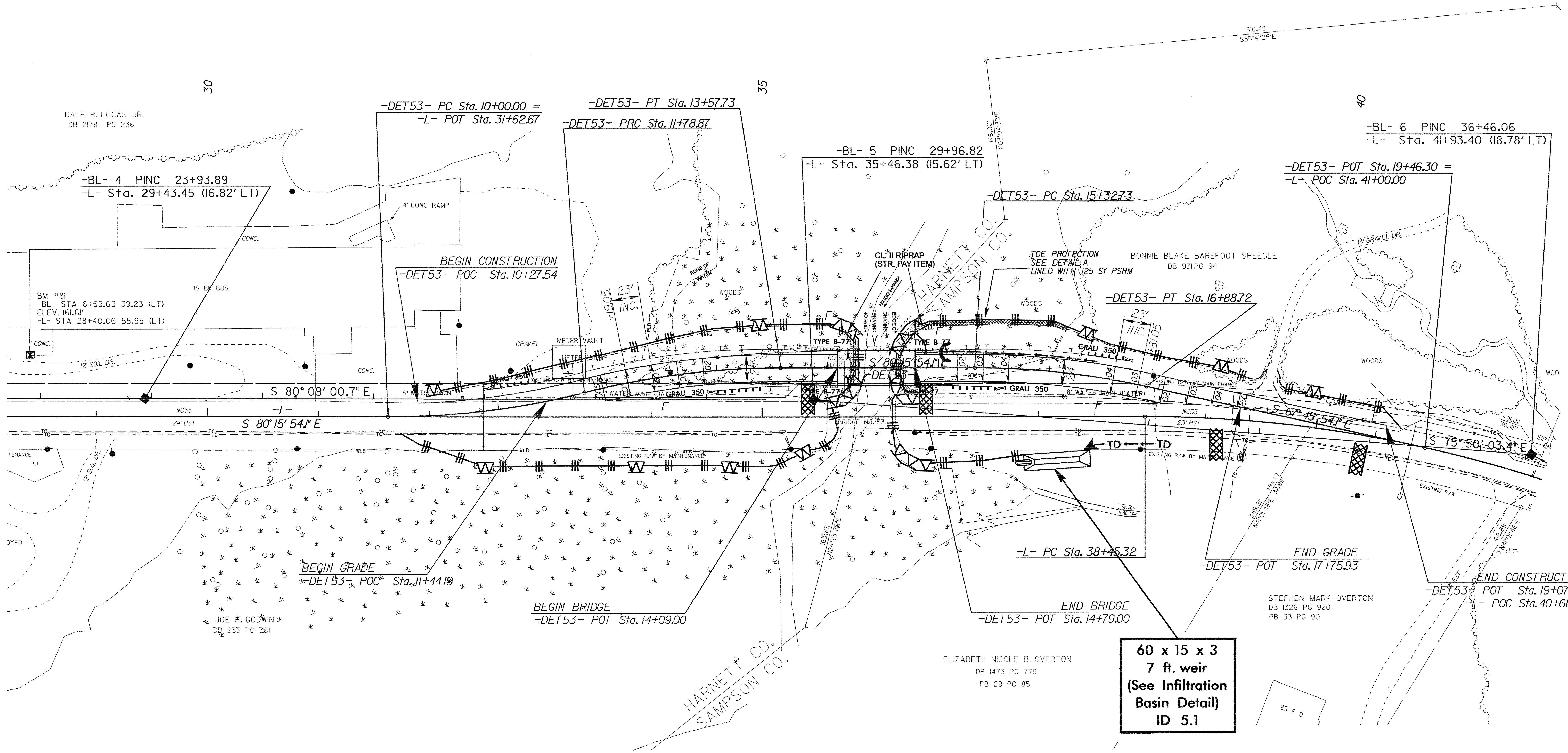
PROJECT REFERENCE NO.	SHEET NO.
B-3654	EC-9/CONST.2-B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE INFILTRATION BASIN AS STILLING BASIN WHERE APPLICABLE.

DETOUR



FROM -DET53- STA. 14+90 TO -DET53- STA. 16+10 LT



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REVISIONS

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