TIP PROJECT: B-4129

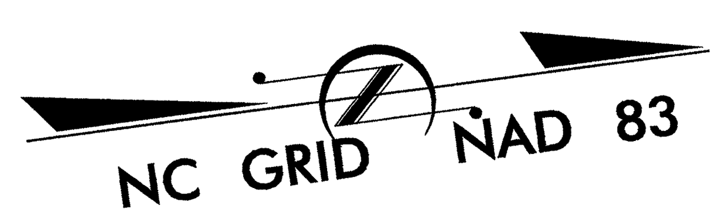
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4129	EC-1	

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

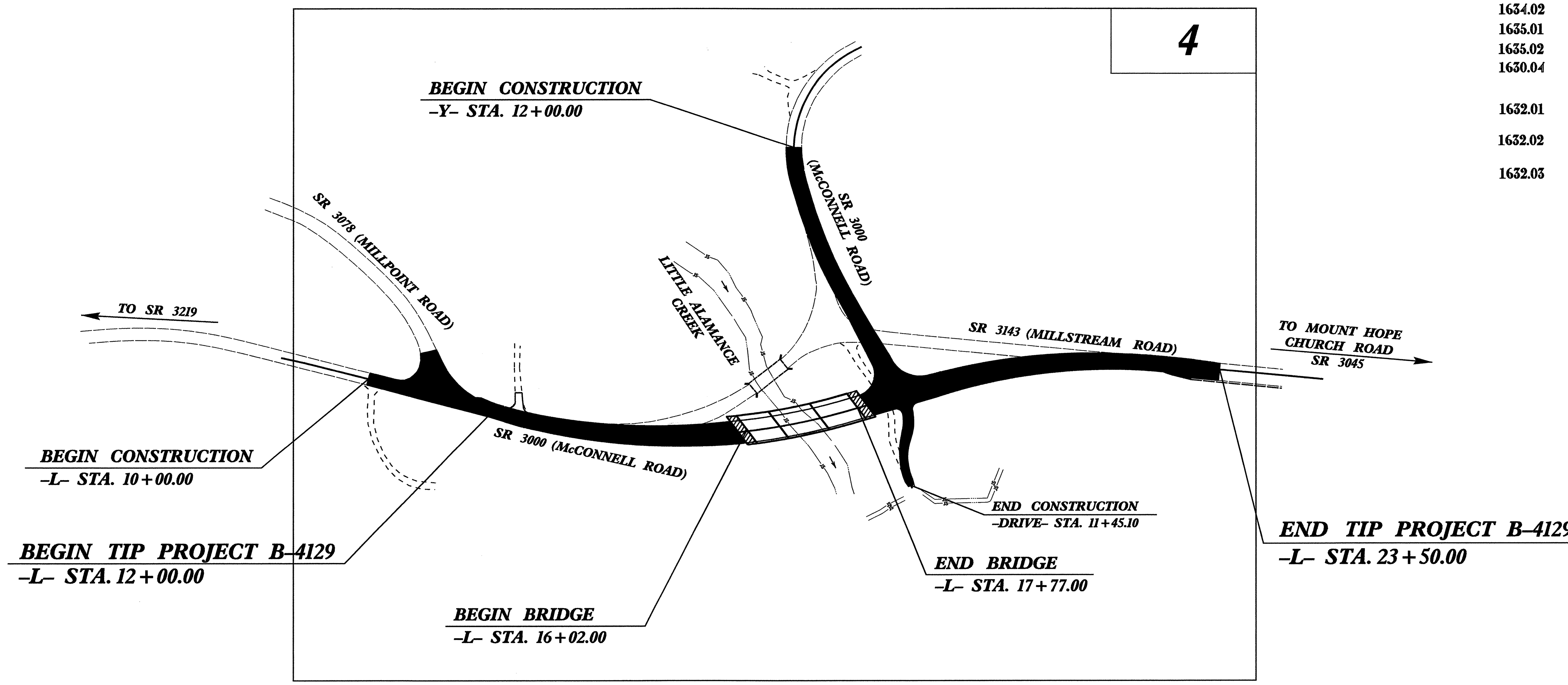
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

GUILFORD COUNTY



LOCATION: ***BRIDGE NO. 226 OVER LITTLE ALAMANCE CREEK ON SR 3000***

TYPE OF WORK: ***GRADING, DRAINAGE, PAVING & STRUCTURE***



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
	Streambank Reforestation	
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	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
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.

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

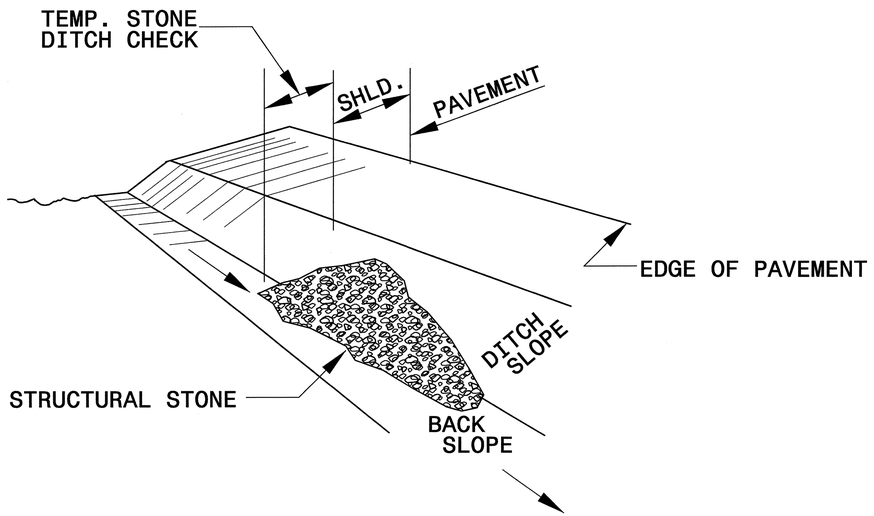
Roadway Standard Drawings

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
1607.01 Gravel Construction Entrance
1630.02 Silt Basin Type B
1630.03 Temporary Silt Ditch
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1632.02 Rock Inlet Sediment Trap Type B
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1634.02 Temporary Rock Sediment Dam Type B
1635.02 Rock Pipe Inlet Sediment Trap Type B

PROJECT REFERENCE NO.	SHEET NO.
B-4129	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

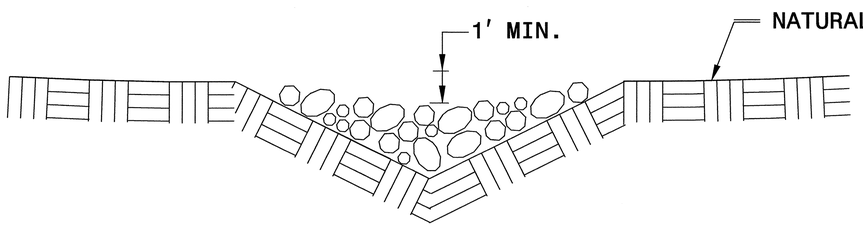


ISOMETRIC VIEW

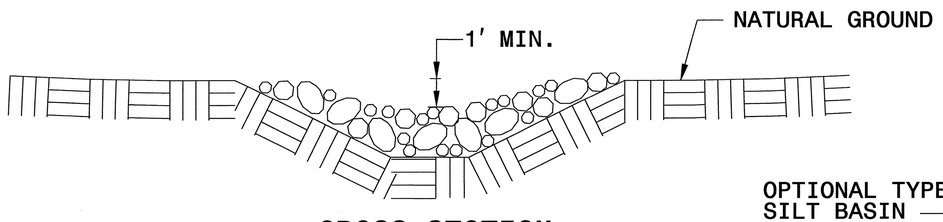
NOTES:

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

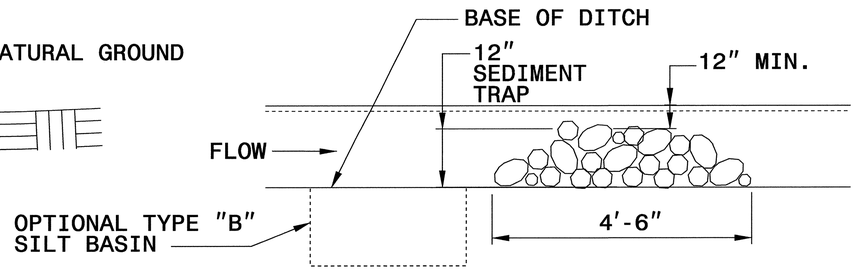
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



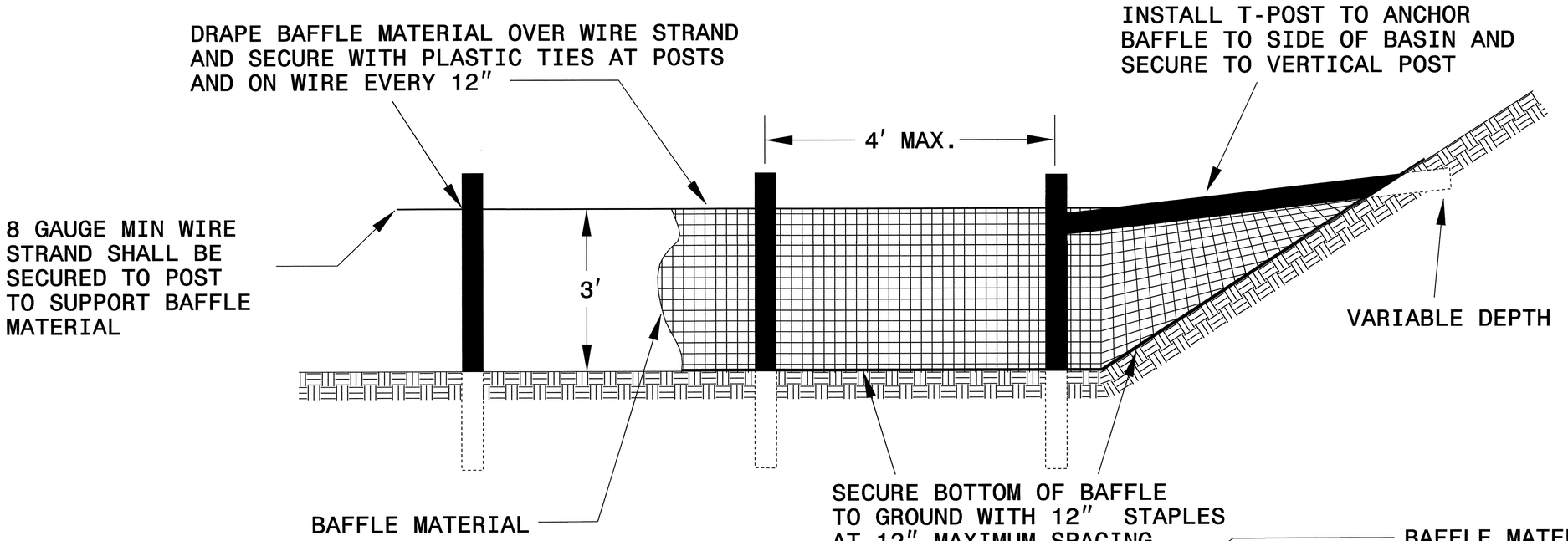
CROSS SECTION TRAPEZOIDAL DITCH

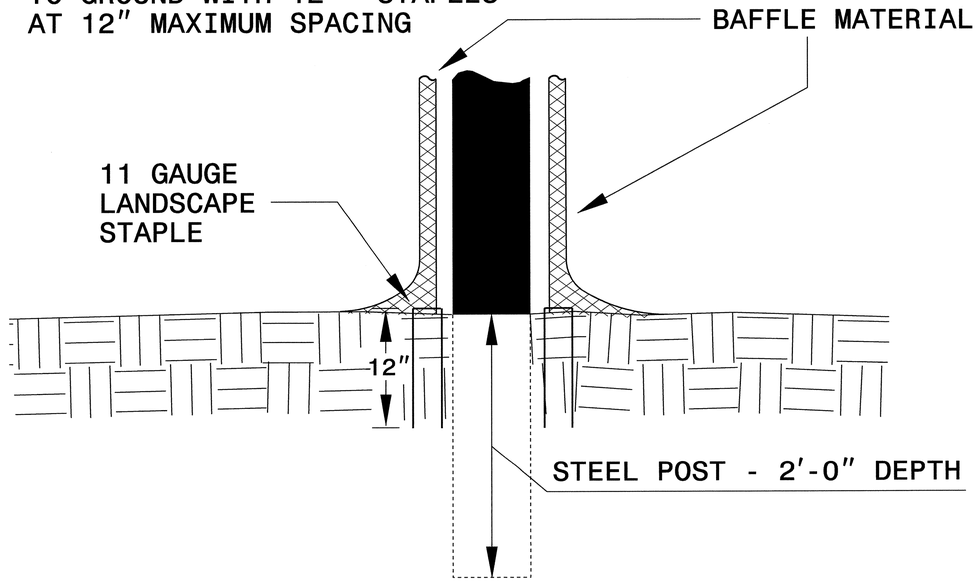


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4129	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



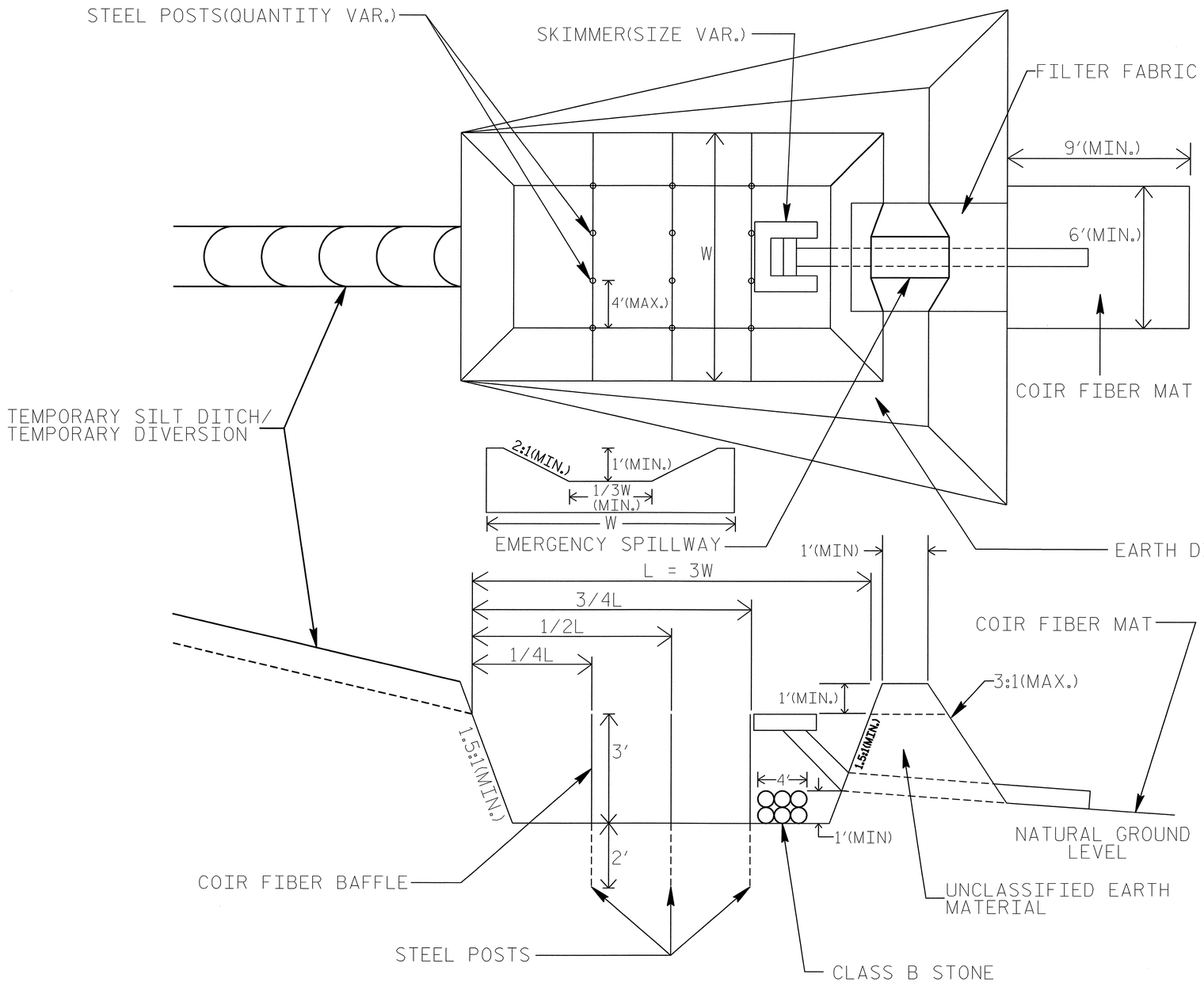


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

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

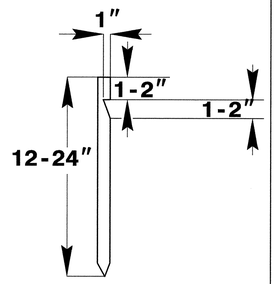
PROJECT REFERENCE NO.	SHEET NO.
B-4129	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL

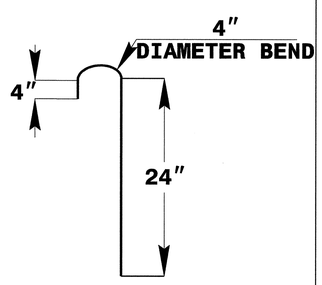


NOTES:
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.

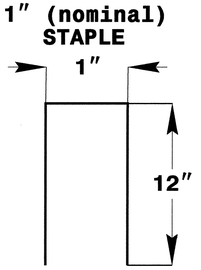
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4129	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-	12+50	13+00	RT	55
4	-L-	12+50	15+50	LT	235
				SUBTOTAL	290
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					655
				TOTAL	945
				SAY	950

PERMANENT SOIL REINFORCEMENT MAT

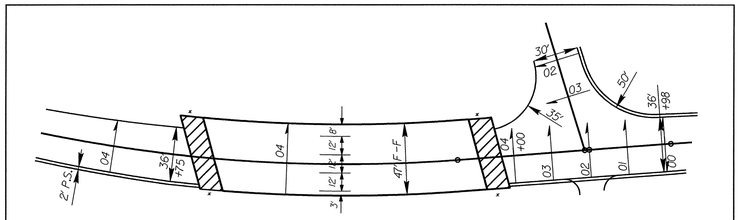
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	19+50	20+50	RT	105
4	-L-	21+00	22+50	LT	165
4	-Y-	12+50	15+50	LT	385
			SUBTOTAL		655
		ADDITIONAL PSRM TO BE INSTALLED			110
				TOTAL	765
				SAY	775

PROJECT REFERENCE NO.	SHEET NO.
B-4129	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE TEMPORARY ROCK SEDIMENT DAM TYPE – B AND SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

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



PAVEMENT – BRIDGE RELATIONSHIP SKETCH

NC GRID NAD 83

BEGIN PROJECT B-4129
–L– POT STA. 12+00.00
-BL-I5- POT 5+00.00 =
-L- POC 9+06.30, (13.73' LT)

BEGIN CONSTRUCTION
–L– POT STA. 10+00.00
(MIN. OVERLAY)

END PROJECT B-4129
–L– POT STA. 23+50.00

-L- PT 9+26.94

-L- PC 12+23.91

BEGIN CONSTRUCTION
–Y– POC STA. 12+00.00
(S 20° 07' 00.2" E)

-BL-I8- POT I7+67.78 =
-Y- POC II+05.06, (30.3I' RT)

-Y- PT 10+00.00
-Y- PC 10+12.88

-Y- PT 12+54.81
N 80° 40' 29.2" E

-Y- PC 12+83.77

-Y- PT 14+46.74
N 68° 13' 30.3" E

-L- POT 18+47.00 =
-Y- POT 16+25.43

-L- PC 19+03.90

-L- PT 22+57.06

-DRIVE- POT 10+00.00 =
N 81° 13' 23.7" E

-DRIVE- PC 10+21.64

-DRIVE- PT 10+60.25
S 69° 16' 45.3" E

-DRIVE- PC 10+72.95

-DRIVE- PT 11+36.82
N 74° 07' 28.8" E

-DRIVE- PT 11+45.10
END CONSTRUCTION

-DRIVE- POT 11+49.96

-BL-I7- PINC I3+33.37 =
-BY2- POT 5+00.00 =
-L- POC I7+43.44, (93.01' LT) =
-Y- POT I5+11.75, (78.19' RT)

-BL-I6- PINC 9+09.15 =
-BYI- POT 11+09.04 =
-L- POC I3+13.11, (16.15' RT)

BEGIN APPROACH SLAB
-L- STA. 15+87.00

BEGIN BRIDGE
-L- STA. 16+02.00

END APPROACH SLAB
-L- STA. 17+92.00

END BRIDGE
-L- STA. 17+77.00

BEGIN SHOULDER BERM GUTTER
STA. 15+60 LT

-L-
PI Sta 15+00.13
Δ = 30° 52' 58.6" (LT)
D = 5° 43' 46.5"
L = 539.01'
T = 276.22'
R = 1,000.00'
SE = 0.040
DS = 50 MPH

-L-
PI Sta 20+82.66
Δ = 21° 45' 17.0" (RT)
D = 6° 09' 39.0"
L = 353.11'
T = 178.71'
R = 930.00'
SE = 0.040
DS = 50 MPH

-DRIVE-
PI Sta 11+06.02
Δ = 36° 35' 45.9" (LT)
D = 57° 17' 44.8"
L = 63.87'
T = 33.07'
R = 100.00'

20 x 9 x 3
4 ft. weir
ID 4.6CG

42 x 15 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
5 ft. weir
ID 4.1F

42 x 12 x 3
ID 4.8CG

42 x 8 x 3
ID 4.9CG

40 x 8 x 3
ID 4.11CG

30 x 8 x 3
ID 4.10CG

30 x 8 x 3
4 ft. weir
ID 4.2CG

32 x 15 x 3
5 ft. weir
ID 4.5CG

45 x 8 x 3
ID 4.4CG

CLASS 'I' RIP RAP
EST I7 TONS
EST 32 SY FF

100 LF TAIL DITCH
W/CLASS 'B' RIP RAP
EST 45 TONS CL 'B'
EST I27 SY FF
EST DDE = I5 CY
SEE DETAIL C

RIP RAP EMBANKMENT
SEE DETAIL D

REMOVE EXISTING ROADWAY EMBANKMENT TO NATURAL GROUND

55 LF TAIL DITCH
W/CL 'B' RIP RAP, EST 35 TONS,
EST 70 SY FF, EST DDE = 8 CY
SEE DETAIL C

CLASS 'B' RIP RAP
EST 2 TONS, EST 7 SY FF

I5" CSP W/ELBOWS

2' LAT. BASE DITCH
EST DDE = 20 CY
SEE DETAIL A

SPECIAL LAT V DITCH
SEE DETAIL H

40' HEAD DITCH
W/CLASS 'B' RIP RAP
EST 22 TONS CL 'B'
EST 60 SY FF
EST DDE = I0 CY
SEE DETAIL B

I5" CSP W/ELBOWS,
RODS AND LUG CONN.
CLASS 'B' RIP RAP
EST I TON
EST 5 SY FF

SPECIAL CUT BASE DITCH
SEE DETAIL E

FS-I
SEE DETAIL F

CUT-FILL TRANSITION
30 LF PRSM

GRADE TO DRAIN
STA. 18+90 – 20+25

GRADE TO DRAIN

REMOVE EXISTING
I5" RCP

CLASS 'B' RIP RAP
EST 2 TONS
EST 7 SY FF

SPECIAL LAT 'V'
DITCH W/PSRM
SEE DETAIL G

CLASS 'B' RIP RAP
EST 3 TONS
EST I0 SY FF

CLASS II RIP RAP
(STR. ITEM)

50' TAPER

OAKES, MARSHALL
DB 3519 PG 0734
PB 78 PG 53

BRESLYN, BEVERLY
WILL 80-E-840
DB 1004 PG 185

RAGAN, CAROLYN K.
DB 2495 PG 532

JACOBI, WICK G.
DB 6620 PG 3081

WRAY, MAURICE
DB 5035 PG 1259

WILSON, JAMES
DB 5053 PG 1775

PURVIS, DAVID E.
DB 3508 PG 0060

PURVIS, DAVID E.
DB 3666 PG 2215

VILLAGES OF MILLSTREAM
DB 5056 PG 1161

2007 ADT
2027 ADT

-Y-
McCONNELL ROAD
SR 3000
1550
2700

1150
2300

400
400

-L-
McCONNELL ROAD
SR 3000
3350
6050

2600
4150

-L-
MILLSTREAM ROAD
SR 3143

PROJECTED TRAFFIC VOLUMES

LEGEND
PAVED SHOULDER
APPROACH SLAB
PAVEMENT REMOVAL

FOR GRADING DETAIL, SEE SHEET NO. 2-C

FOR DITCH DETAILS, SEE SHEET NO. 2-C

FOR -L-, -Y- & DRIVE PROFILES, SEE SHEET NO. 5

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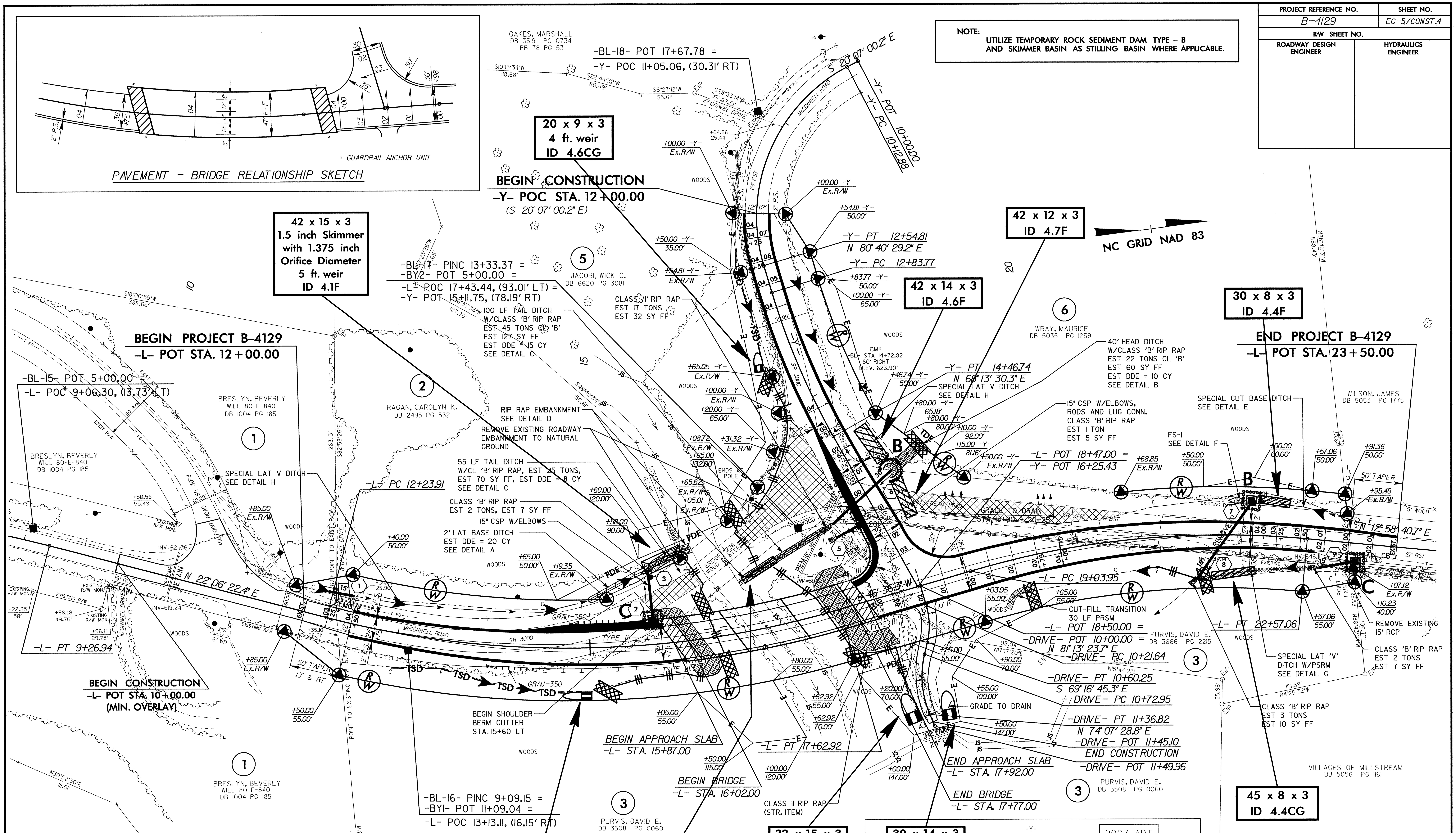
jennifer.parish AT BENTLEY46

PROJECT REFERENCE NO.	SHEET NO.
B-4129	EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE TEMPORARY ROCK SEDIMENT DAM TYPE – B AND SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.



PAVEMENT – BRIDGE RELATIONSHIP SKETCH
* GUARDRAIL ANCHOR UNIT
NC GRID NAD 83
BEGIN PROJECT B-4129
-L- POT STA. 12+00.00
END PROJECT B-4129
-L- POT STA. 23+50.00
BEGIN CONSTRUCTION
-Y- POC STA. 12+00.00
(S 20° 07' 00.2" E)
BEGIN CONSTRUCTION
-L- POT STA. 10+00.00
(MIN. OVERLAY)
END CONSTRUCTION
-DRIVE- POT 11+49.96
-BL-18- POT 17+67.78 =
-Y- POC 11+05.06, (30.31' RT)
-BL-17- PINC 13+33.37 =
-BY2- POT 5+00.00 =
-L- POC 17+43.44, (93.01' LT) =
-Y- POT 15+11.75, (78.19' RT)
-BL-15- POT 5+00.00 =
-L- POC 9+06.30, (13.73' LT)
-BL-16- PINC 9+09.15 =
-BY1- POT 11+09.04 =
-L- POC 13+13.11, (16.15' RT)
42 x 15 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
5 ft. weir
ID 4.1F
20 x 9 x 3
4 ft. weir
ID 4.6CG
42 x 12 x 3
ID 4.7F
42 x 14 x 3
ID 4.6F
30 x 8 x 3
ID 4.4F
30 x 8 x 3
4 ft. weir
ID 4.2CG
40 x 8 x 3
1.5 inch Skimmer
with 1.25inch
Orifice Diameter
6 ft. weir
ID 4.8F
32 x 15 x 3
5 ft. weir
ID 4.5CG
30 x 14 x 3
5 ft. weir
ID 4.5F
45 x 8 x 3
ID 4.4CG
OAKES, MARSHALL
DB 3519 PG 0734
PB 78 PG 53
JACOBI, WICK G.
DB 6620 PG 3081
RAGAN, CAROLYN K.
DB 2495 PG 532
BRESLYN, BEVERLY
WILL 80-E-840
DB 1004 PG 185
WRAY, MAURICE
DB 5035 PG 1259
WILSON, JAMES
DB 5053 PG 1775
PURVIS, DAVID E.
DB 3508 PG 0060
PURVIS, DAVID E.
DB 3666 PG 2215
VILLAGES OF MILLSTREAM
DB 5056 PG 1161
100 LF TAIL DITCH
W/CLASS 'B' RIP RAP
EST 45 TONS CL 'B'
EST 127 SY FF
EST DDE = 15 CY
SEE DETAIL C
CLASS 'I' RIP RAP
EST 17 TONS
EST 32 SY FF
RIP RAP EMBANKMENT
SEE DETAIL D
REMOVE EXISTING ROADWAY
EMBANKMENT TO NATURAL
GROUND
55 LF TAIL DITCH
W/CL 'B' RIP RAP, EST 25 TONS,
EST 70 SY FF, EST DDE = 8 CY
SEE DETAIL C
CLASS 'B' RIP RAP
EST 2 TONS, EST 7 SY FF
15" CSP W/ELBOWS
2' LAT BASE DITCH
EST DDE = 20 CY
SEE DETAIL A
SPECIAL LAT V DITCH
SEE DETAIL H
40' HEAD DITCH
W/CLASS 'B' RIP RAP
EST 22 TONS CL 'B'
EST 60 SY FF
EST DDE = 10 CY
SEE DETAIL B
15" CSP W/ELBOWS,
RODS AND LUG CONN.
CLASS 'B' RIP RAP
EST 1 TON
EST 5 SY FF
SPECIAL CUT BASE DITCH
SEE DETAIL E
FS-1
SEE DETAIL F
CUT-FILL TRANSITION
30 LF PRSM
REMOVE EXISTING
15" RCP
CLASS 'B' RIP RAP
EST 2 TONS
EST 7 SY FF
SPECIAL LAT 'V'
DITCH W/PSRM
SEE DETAIL G
CLASS 'B' RIP RAP
EST 3 TONS
EST 10 SY FF
CLASS II RIP RAP
(STR. ITEM)
BEGIN SHOULDER
BERM GUTTER
STA. 15+60 LT
GRADE TO DRAIN
BEGIN APPROACH SLAB
-L- STA. 15+87.00
BEGIN BRIDGE
-L- STA. 16+02.00
END APPROACH SLAB
-L- STA. 17+92.00
END BRIDGE
-L- STA. 17+77.00
-L- PC 12+23.91
-L- PT 9+26.94
-L- PT 17+62.92
-L- PC 19+03.95
-L- PT 22+57.06
-L- POT 18+47.00 =
-Y- POT 16+25.43
-L- POT 18+50.00 =
-DRIVE- POT 10+00.00 =
N 8° 13' 23.7" E
-DRIVE- PC 10+21.64
-DRIVE- PT 10+60.25
S 69° 16' 45.3" E
-DRIVE- PC 10+72.95
-DRIVE- PT 11+36.82
N 74° 07' 28.8" E
-DRIVE- POT 11+45.10
-Y- PT 12+54.81
N 80° 40' 29.2" E
-Y- PC 12+83.77
-Y- PT 14+46.74
N 68° 13' 30.3" E
-Y- POT 10+00.00
-Y- PC 10+12.88
S 20° 07' 00.2" E
N 22° 06' 22.4" E
N 12° 58' 40.7" E
BM#1
-BL- STA 14+72.82
80' RIGHT
ELEV. 623.90'
McCONNELL ROAD
SR 3000
WOODS

-L-	
PI Sta 15+00.13	
Δ = 30° 52' 58.6" (LT)	
D = 5° 43' 46.5"	
L = 539.01'	
T = 276.22'	
R = 1,000.00'	
SE = 0.040	
DS = 50 MPH	

-L-	
PI Sta 20+82.66	
Δ = 21° 45' 17.0" (RT)	
D = 6° 09' 39.0"	
L = 353.11'	
T = 178.71'	
R = 930.00'	
SE = 0.040	
DS = 50 MPH	

-DRIVE-	
PI Sta 11+06.02	
Δ = 36° 35' 45.9" (LT)	
D = 57° 17' 44.8"	
L = 63.87'	
T = 33.07'	
R = 100.00'	

PROJECTED TRAFFIC VOLUMES

2007 ADT / 2027 ADT

-Y- McCONNELL ROAD SR 3000: 1550 / 2700

-L- McCONNELL ROAD SR 3000: 3350 / 6050

-L- MILLSTREAM ROAD SR 3143: 2600 / 4150

Turning movements: 1150 / 2300; 400 / 400

LEGEND

- PAVED SHOULDER
- APPROACH SLAB
- PAVEMENT REMOVAL

FOR GRADING DETAIL, SEE SHEET NO. 2-C

FOR DITCH DETAILS, SEE SHEET NO. 2-C

FOR -L-, -Y- & DRIVE PROFILES, SEE SHEET NO. 5

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jenniferparrish AT RENV214546