TIP PROJECT: B–3924

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3924	EC-1	

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

STATE OF NORTH CAROLINA

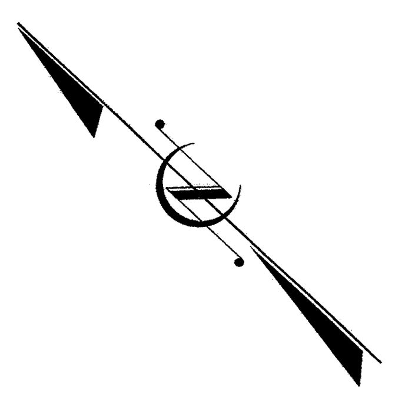
DIVISION OF HIGHWAYS

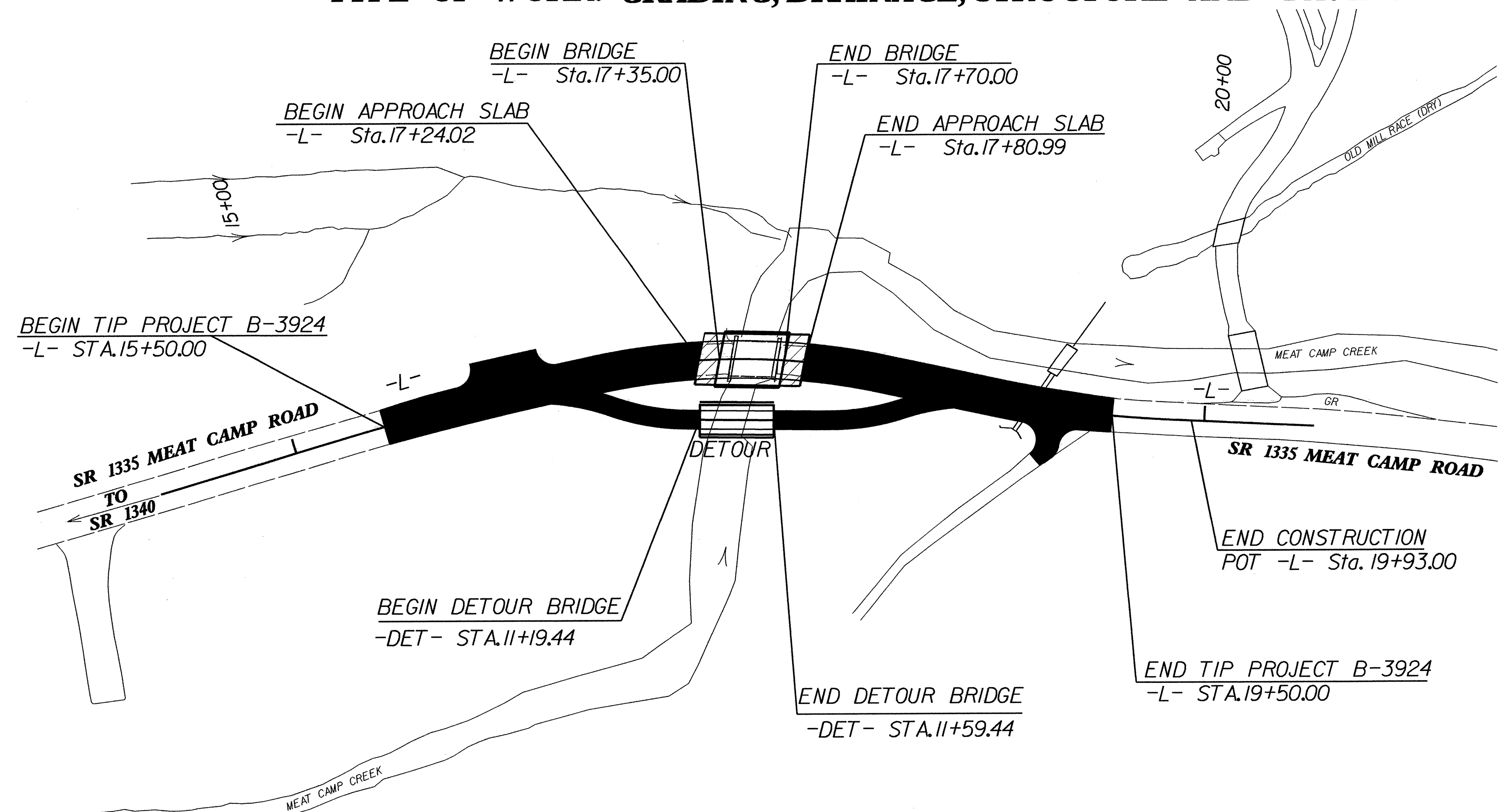
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WATAUGA COUNTY

LOCATION: BRIDGE NO. 33 OVER MEAT CAMP CREEK ON SR 1335 (MEAT CAMP ROAD)

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND 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	
	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.

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

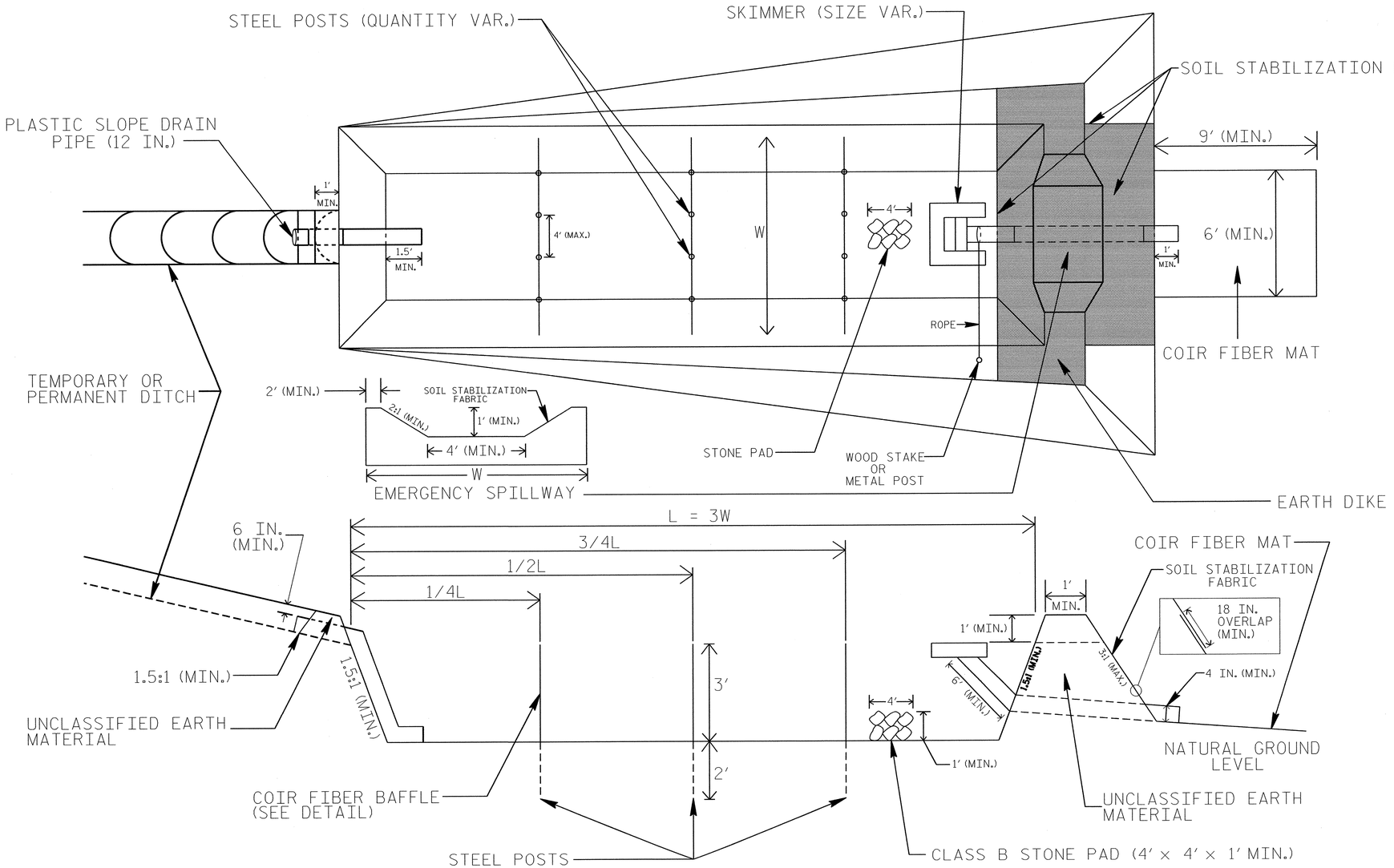
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

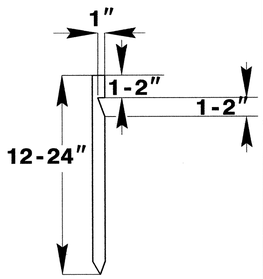
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type 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		

PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

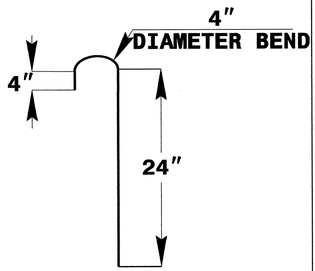
SKIMMER BASIN WITH BAFFLES DETAIL



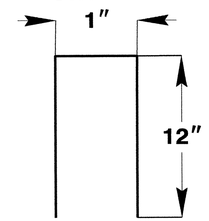
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

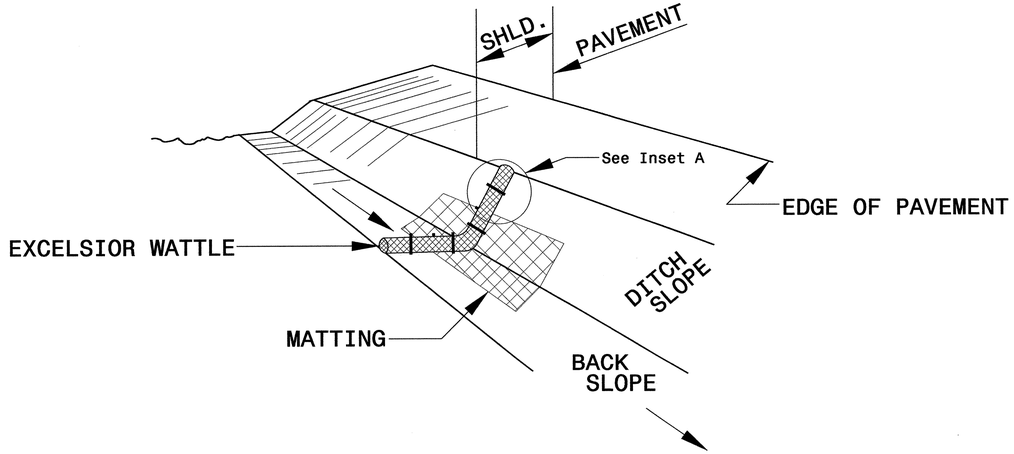
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON 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 EMERGENCY SPILLWAY 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 FILTER FABRIC AS DIRECTED.
6. SOIL STABILIZATION FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

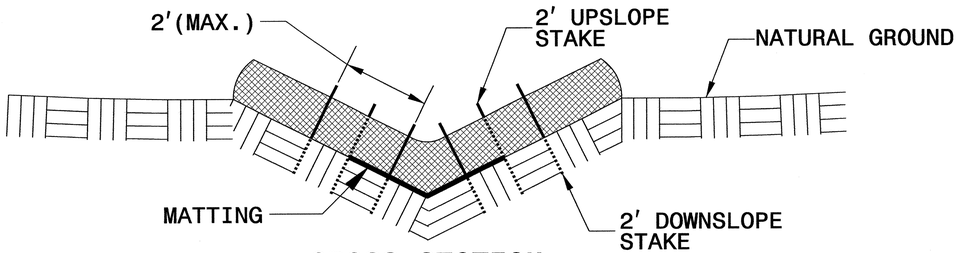
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

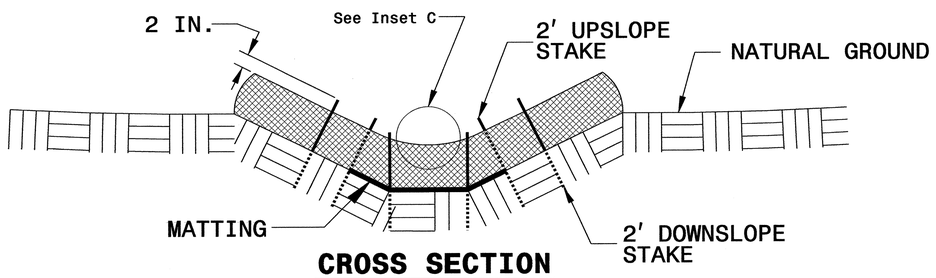
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



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. 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.

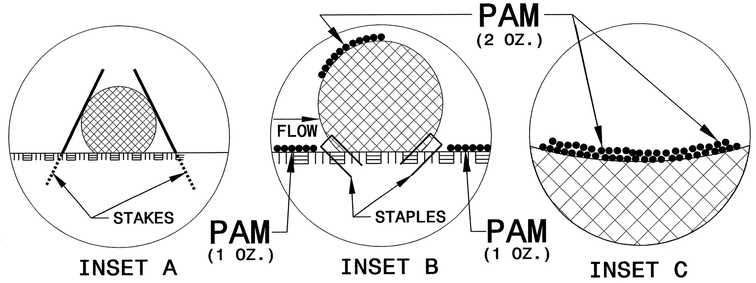
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

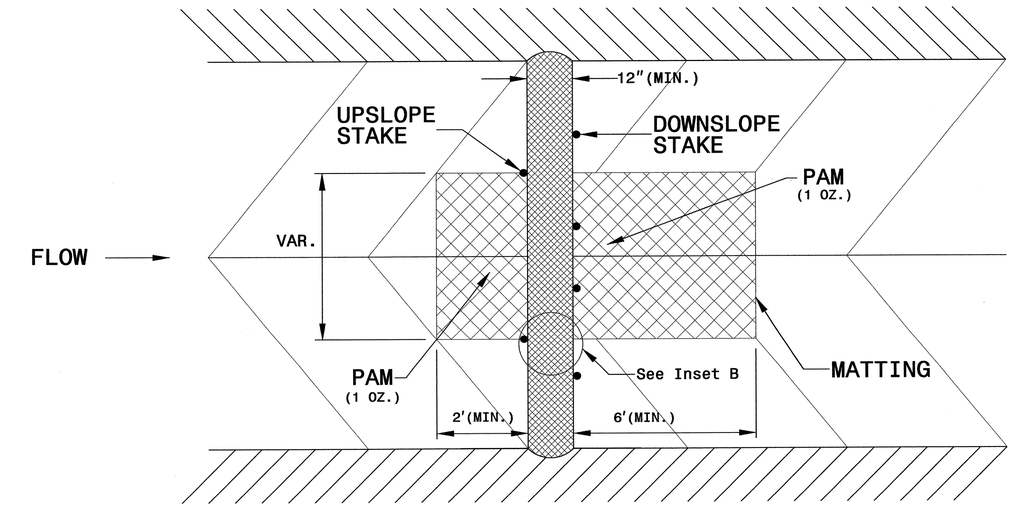
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

PROJECT REFERENCE NO.	SHEET NO.
B-3924	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.

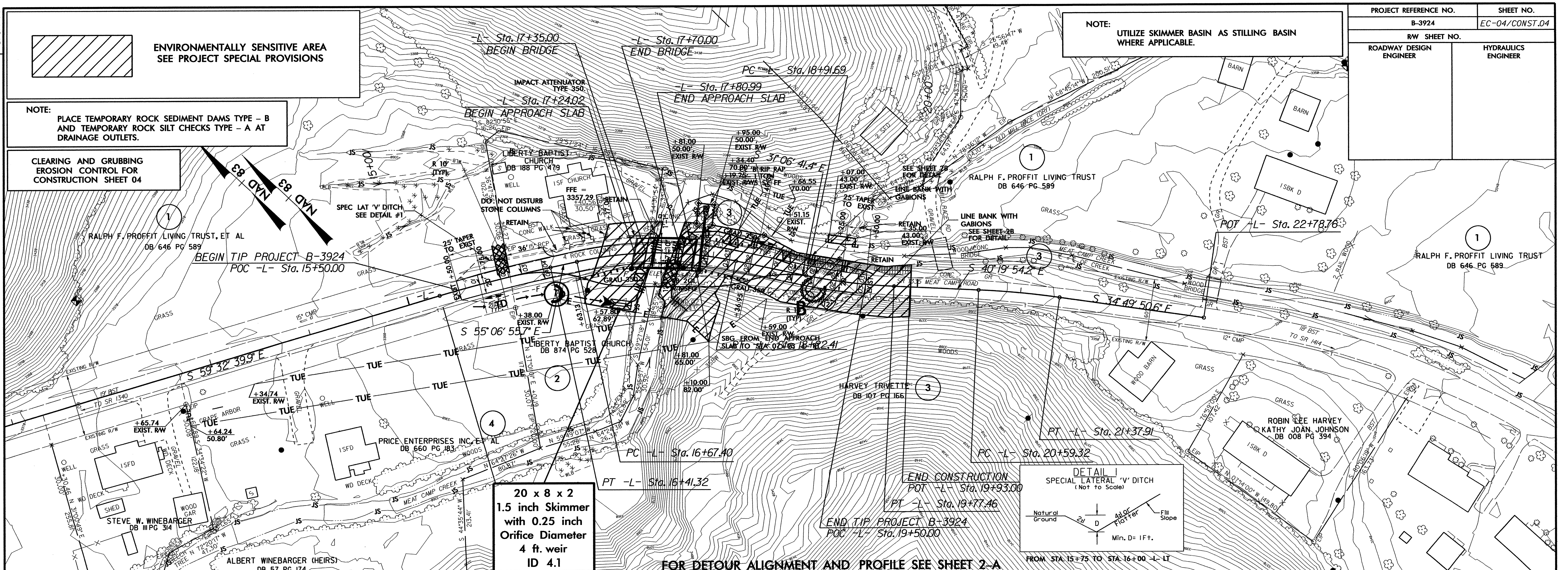
PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

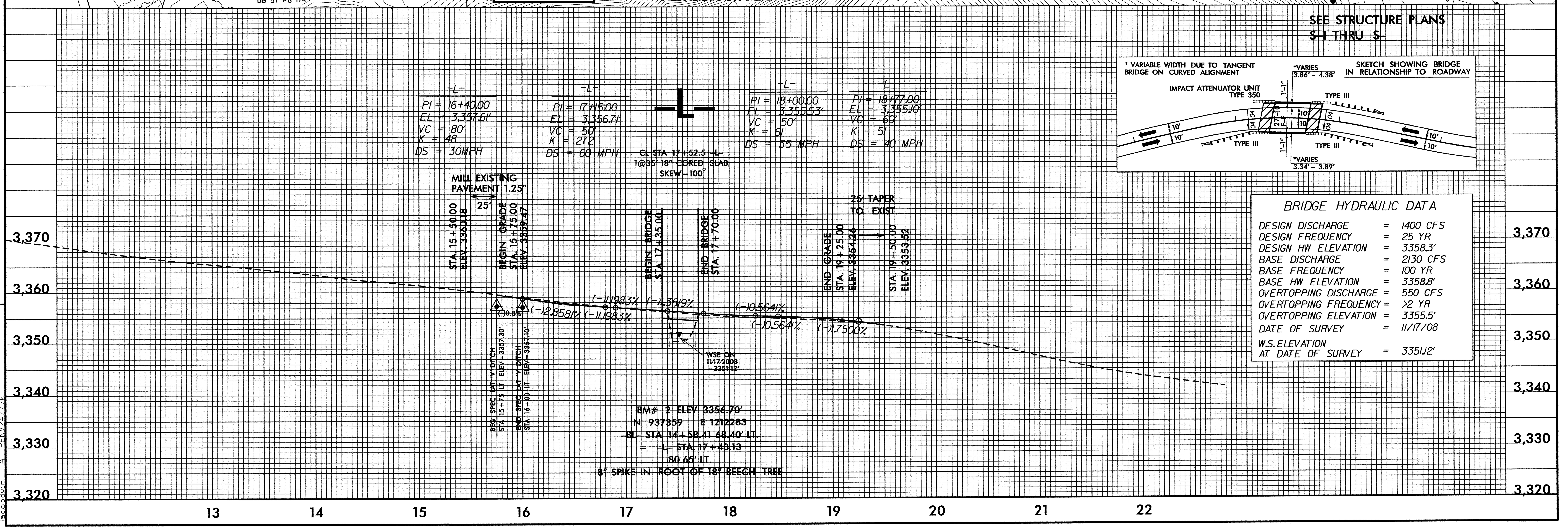
NOTE: UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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 04





BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1400 CFS
DESIGN FREQUENCY	=	25 YR
DESIGN HW ELEVATION	=	3358.3'
BASE DISCHARGE	=	2130 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	3358.8'
OVERTOPPING DISCHARGE	=	550 CFS
OVERTOPPING FREQUENCY	=	>2 YR
OVERTOPPING ELEVATION	=	3355.5'
DATE OF SURVEY	=	11/17/08
W.S. ELEVATION AT DATE OF SURVEY	=	3351.12'

REVISIONS

1. REVISED PLAN TO ADD TUE ON PARCELS 1, 2, & 3 OCTOBER 6, 2010.
2. REVISED PLAN TO ADD PROPERTY LINE AT CENTER OF CREEK BETWEEN PARCEL 1, & 3; AND ADDED PARCEL 4 LABLE, FEB. 3, 2011.

8/17/99

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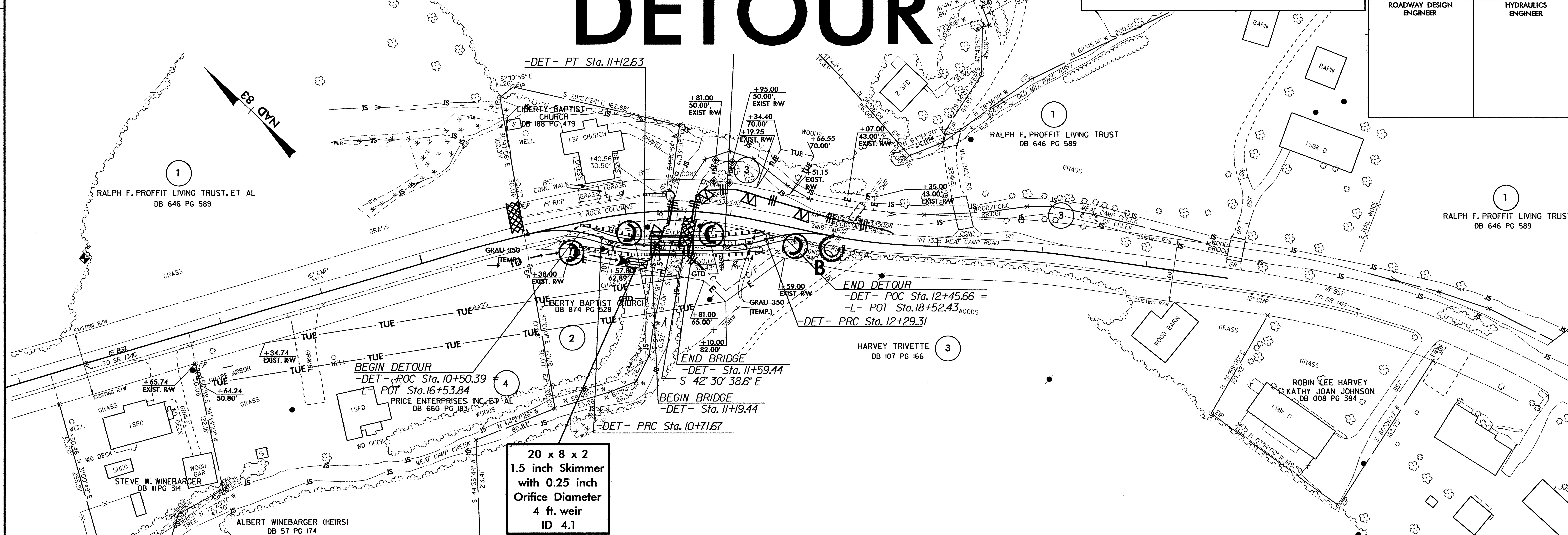
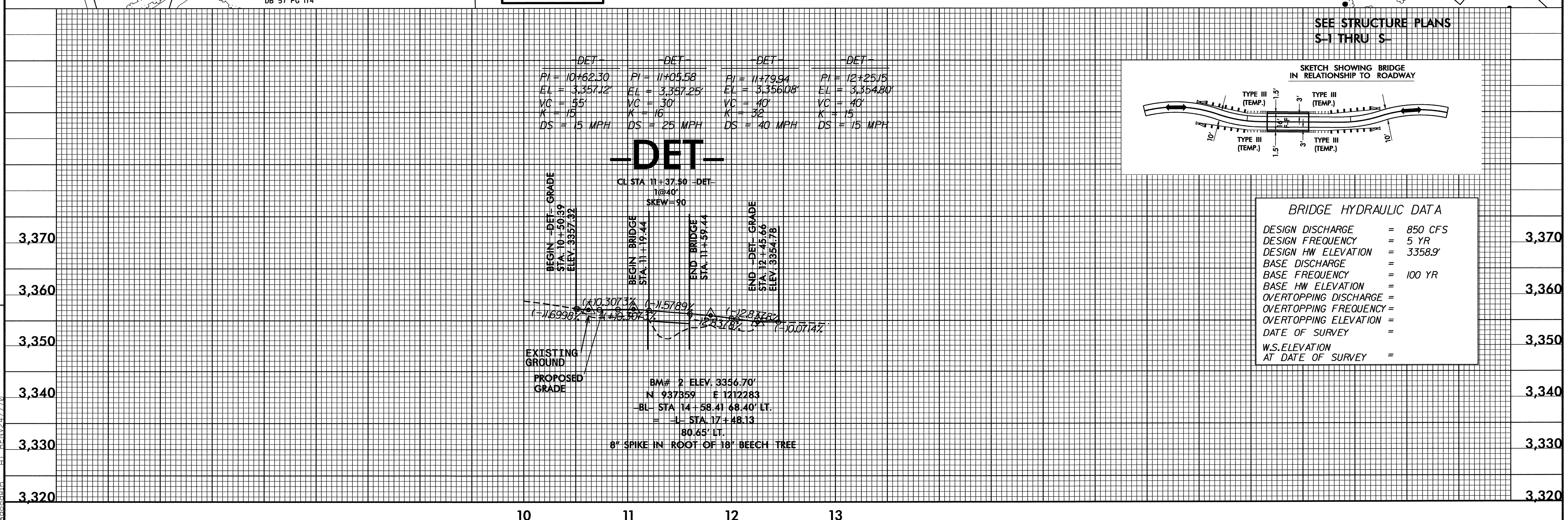
PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-05/CONST.2-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

DETOUR



SEE STRUCTURE PLANS
S-1 THRU S-



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	850 CFS
DESIGN FREQUENCY	=	5 YR
DESIGN HW ELEVATION	=	3358.9'
BASE DISCHARGE	=	
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	
OVERTOPPING DISCHARGE	=	
OVERTOPPING FREQUENCY	=	
OVERTOPPING ELEVATION	=	
DATE OF SURVEY	=	
W.S. ELEVATION AT DATE OF SURVEY	=	

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-06/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GABION BASKET CONSTRUCTION SEQUENCE STA. 18+90 & 19+77 –L–

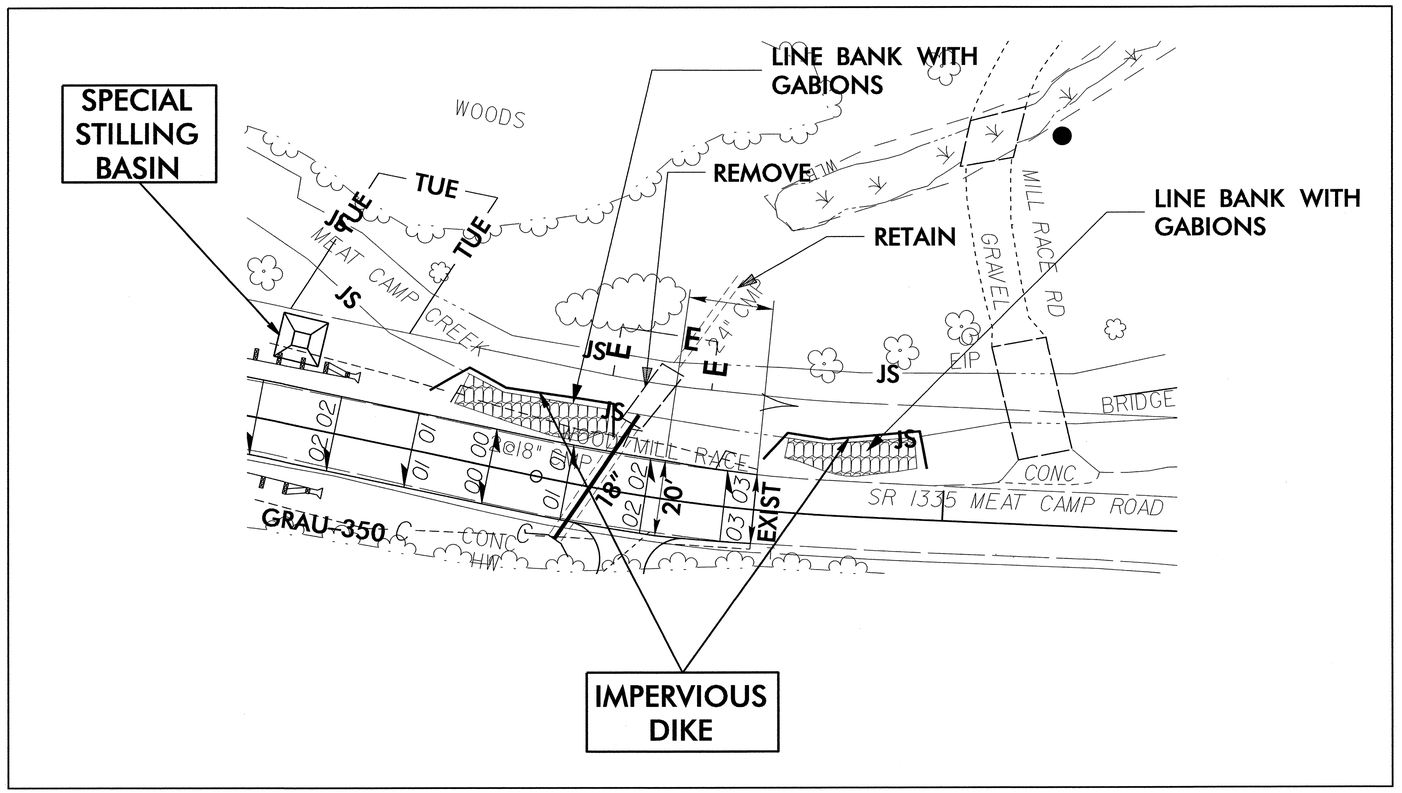
1. INSTALL SPECIAL STILLING BASIN.

2. CONSTRUCT IMPERVIOUS DIKES AROUND WORK AREA FOR GABION BASKET INSTALLATION.

3. DEWATER WORK SITE USING PUMP AND SPECIAL STILLING BASIN.

4. CONSTRUCT GABION BASKET RETAINING WALL AND COMPLETE ROADWAY.

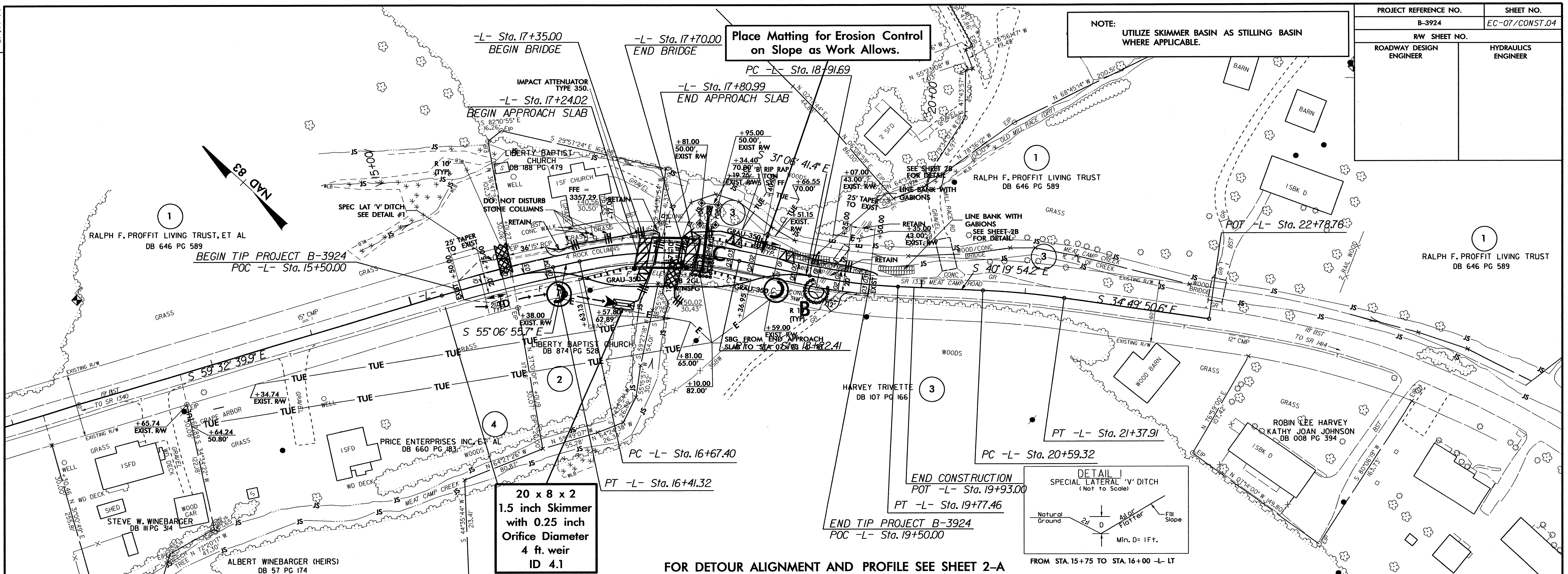
5. REMOVE IMPERVIOUS DIKES.



PROJECT REFERENCE NO.	SHEET NO.
B-3924	EC-07/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

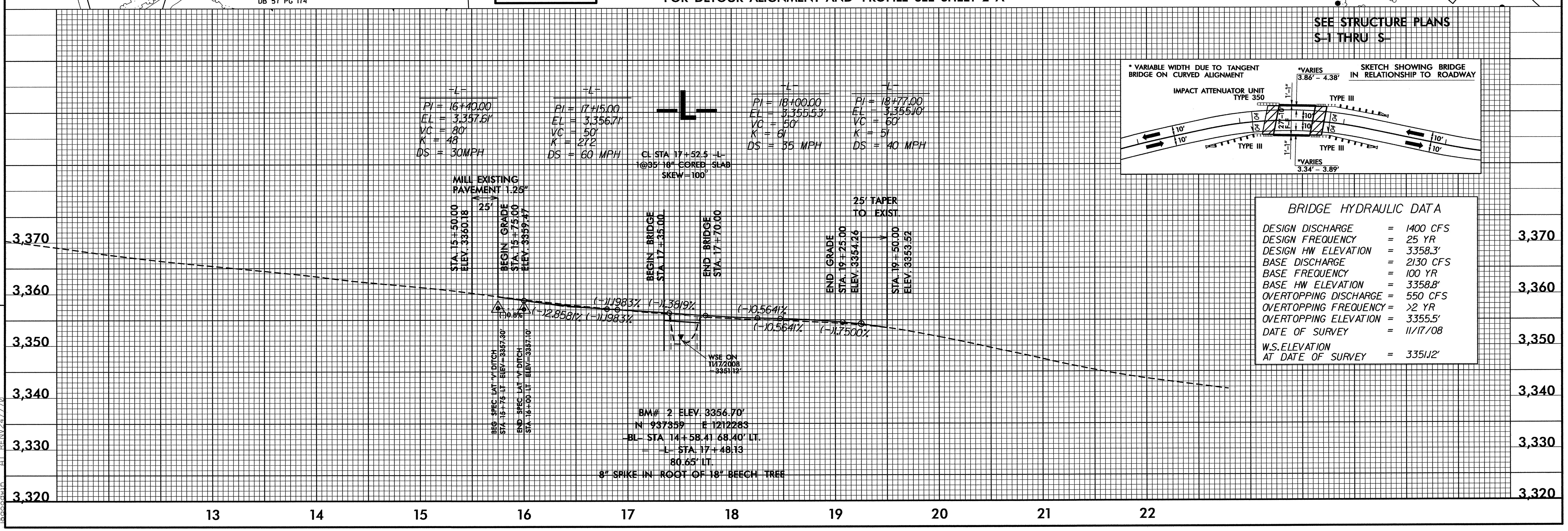
Place Matting for Erosion Control on Slope as Work Allows.



-L- Sta. 17+35.00 BEGIN BRIDGE
-L- Sta. 17+70.00 END BRIDGE
PC -L- Sta. 18+91.69
IMPACT ATTENUATOR TYPE 350.
-L- Sta. 17+80.99 END APPROACH SLAB
-L- Sta. 17+24.02 BEGIN APPROACH SLAB
NAD 83
LIBERTY BAPTIST CHURCH DB 188 PG 479
RALPH F. PROFFIT LIVING TRUST, ET AL DB 646 PG 589
RALPH F. PROFFIT LIVING TRUST DB 646 PG 589
BEGIN TIP PROJECT B-3924
POC -L- Sta. 15+50.00
S 59°32' 39.9" E
S 55°06' 55.7" E
S 31°06' 41.4" E
S 40°19' 54.2" E
S 34°49' 50.6" E
POT -L- Sta. 22+78.76
LIBERTY BAPTIST CHURCH DB 874 PG 528
PRICE ENTERPRISES INC., ET AL DB 660 PG 183
STEVE W. WINEBARGER DB III PG 314
ALBERT WINEBARGER (HEIRS) DB 57 PG 174
HARVEY TRIVETTE DB 107 PG 166
ROBIN LEE HARVEY KATHY JOAN JOHNSON DB 008 PG 394
PC -L- Sta. 16+67.40
PT -L- Sta. 16+41.32
PT -L- Sta. 21+37.91
PC -L- Sta. 20+59.32
END CONSTRUCTION POT -L- Sta. 19+93.00
PT -L- Sta. 19+77.46
END TIP PROJECT B-3924 POC -L- Sta. 19+50.00
20 x 8 x 2 1.5 inch Skimmer with 0.25 inch Orifice Diameter 4 ft. weir ID 4.1
DETAIL 1 SPECIAL LATERAL 'V' DITCH (Not to Scale)
Natural Ground
Fill Slope
Min. D= 1 Ft.
FROM STA. 15+75 TO STA. 16+00 -L- LT
SPEC LAT 'V' DITCH SEE DETAIL #1
DO NOT DISTURB STONE COLUMNS
SEE SHEET 2B FOR DETAIL
LINE BANK WITH GABIONS
MEAT CAMP CREEK
SR 1335 MEAT CAMP ROAD

FOR DETOUR ALIGNMENT AND PROFILE SEE SHEET 2-A

SEE STRUCTURE PLANS S-1 THRU S-



-L-
PI = 16+40.00 EL = 3,357.61' VC = 80' K = 48 DS = 30MPH
PI = 17+15.00 EL = 3,356.71' VC = 50' K = 272 DS = 60 MPH
PI = 18+00.00 EL = 3,355.53' VC = 50' K = 61 DS = 35 MPH
PI = 18+77.00 EL = 3,355.10' VC = 60' K = 51 DS = 40 MPH
CL STA 17+52.5 -L- 1@35' 18" CORED SLAB SKEW=100°
MILL EXISTING PAVEMENT 1.25"
25' TAPER TO EXIST.
STA. 15+50.00 ELEV. 3360.18
BEGIN GRADE STA. 15+75.00 ELEV. 3359.47
BEGIN BRIDGE STA. 17+35.00
END BRIDGE STA. 17+70.00
END GRADE STA. 19+25.00 ELEV. 3354.26
STA. 19+50.00 ELEV. 3353.52
WSE ON 11/17/2008 =3351.12'
BM# 2 ELEV. 3356.70'
N 937359 E 1212283
-BL- STA 14+58.41 68.40' LT.
-L- STA. 17+48.13 80.65' LT.
8" SPIKE IN ROOT OF 18" BEECH TREE
* VARIABLE WIDTH DUE TO TANGENT BRIDGE ON CURVED ALIGNMENT
SKETCH SHOWING BRIDGE IN RELATIONSHIP TO ROADWAY
IMPACT ATTENUATOR UNIT TYPE 350
TYPE III
3,370
3,360
3,350
3,340
3,330
3,320
13
14
15
16
17
18
19
20
21
22

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1400 CFS
DESIGN FREQUENCY	=	25 YR
DESIGN HW ELEVATION	=	3358.3'
BASE DISCHARGE	=	2130 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	3358.8'
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