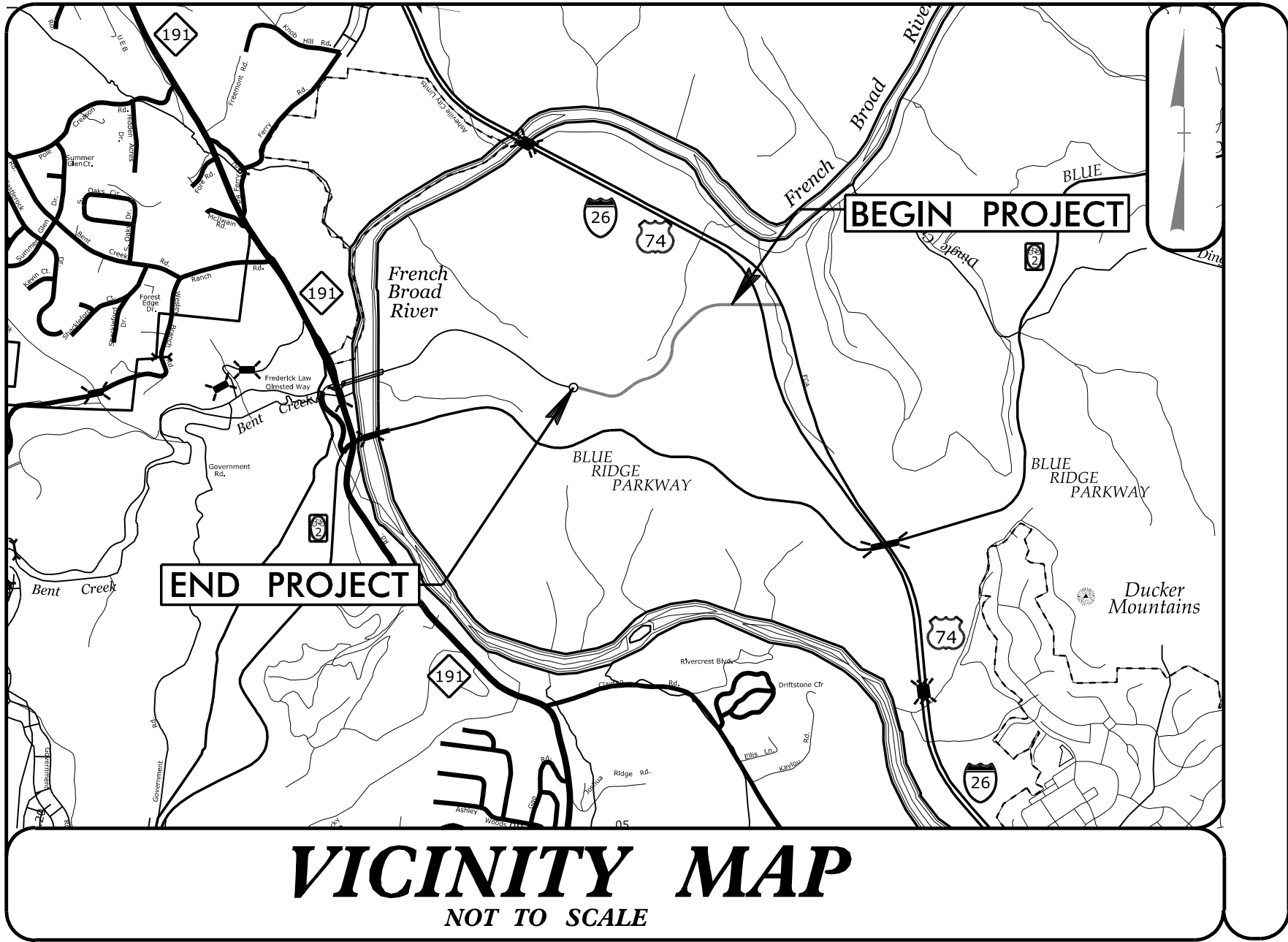


TIP PROJECT: HE-0001B



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

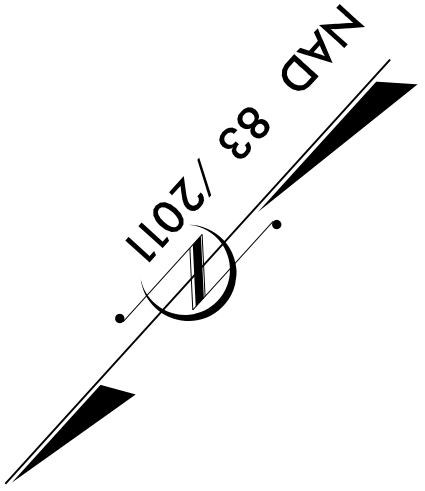
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

BUNCOMBE COUNTY

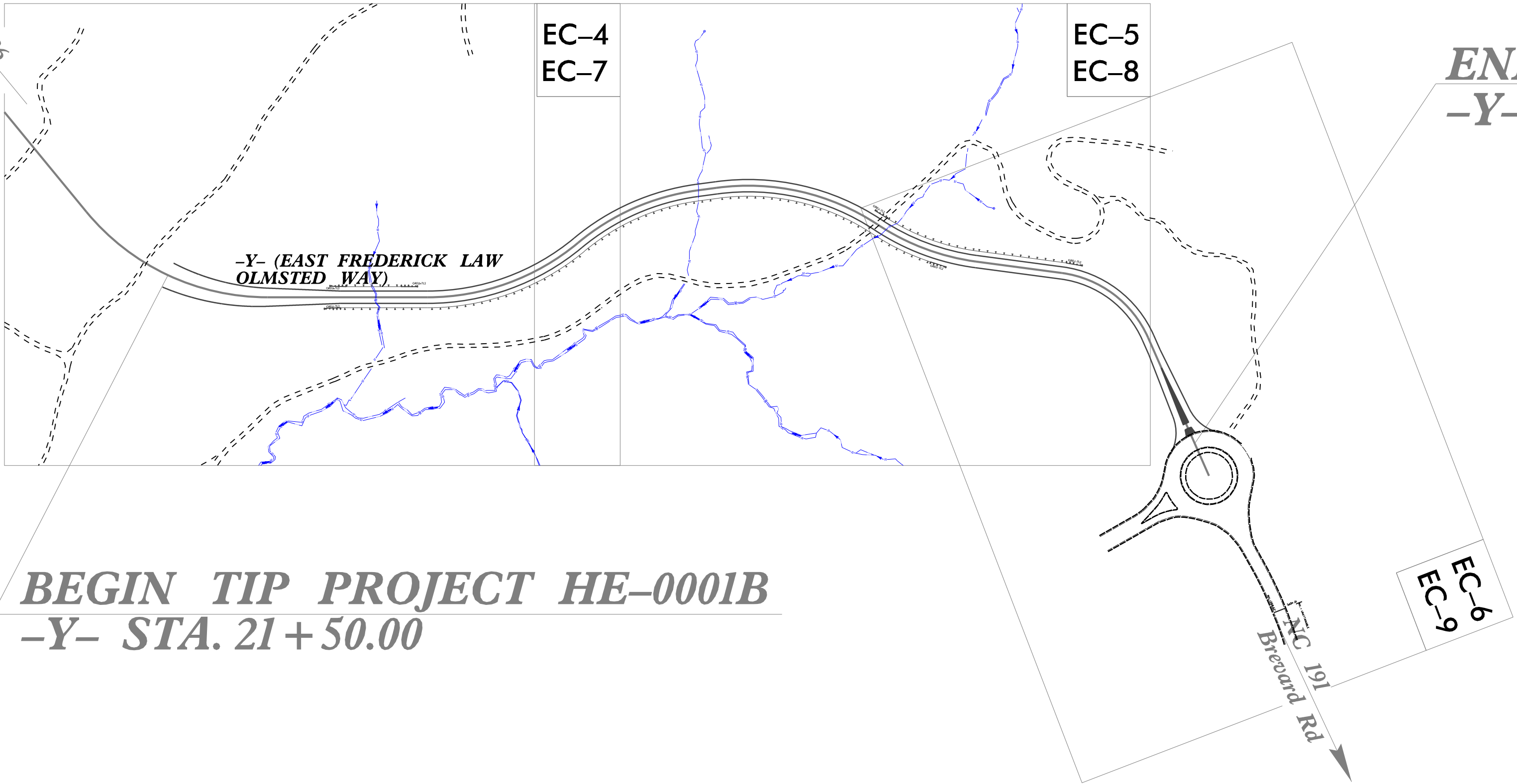
LOCATION: CONNECTOR ROAD FROM RAB ON E.
FREDERICK LAW OLMSTED WAY TO
NEW I-26 INTERCHANGE

TYPE OF WORK: GRADING, DRAINAGE, AND PAVING

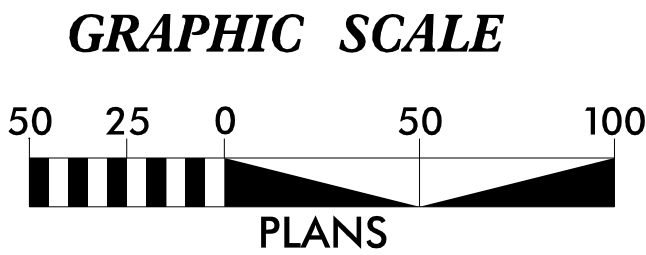
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HE-0001B	EC-1	11
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



END TIP PROJECT HE-0001B
-Y- STA. 48 + 03.58



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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL STORMWATER CONSTRUCTION PERMIT
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL
QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

Prepared in the Office of:

 **GANNETT
FLEMING** One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

Designed by:

Hannah Arey 4651
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C.
Department of Transportation - Raleigh, N. C., dated January 2024
and the latest revision thereto are applicable to this project and by
reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

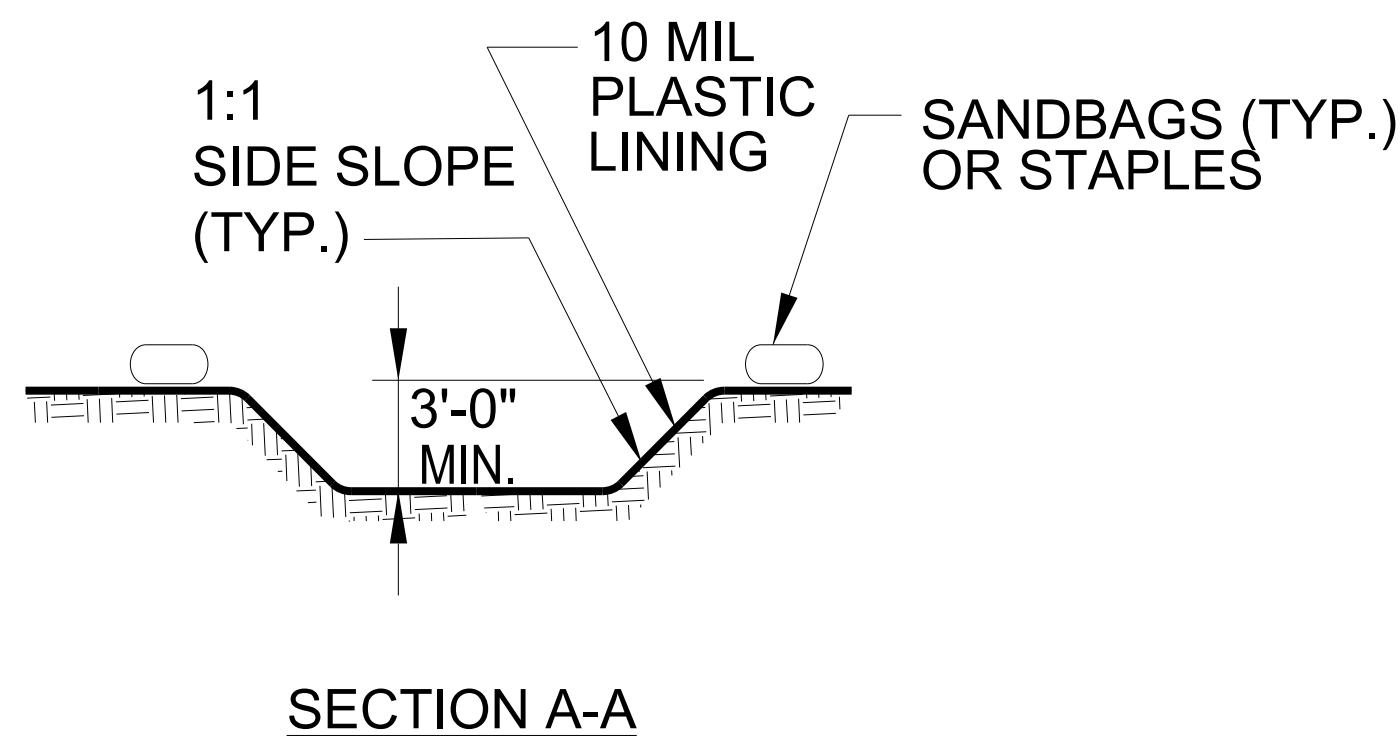
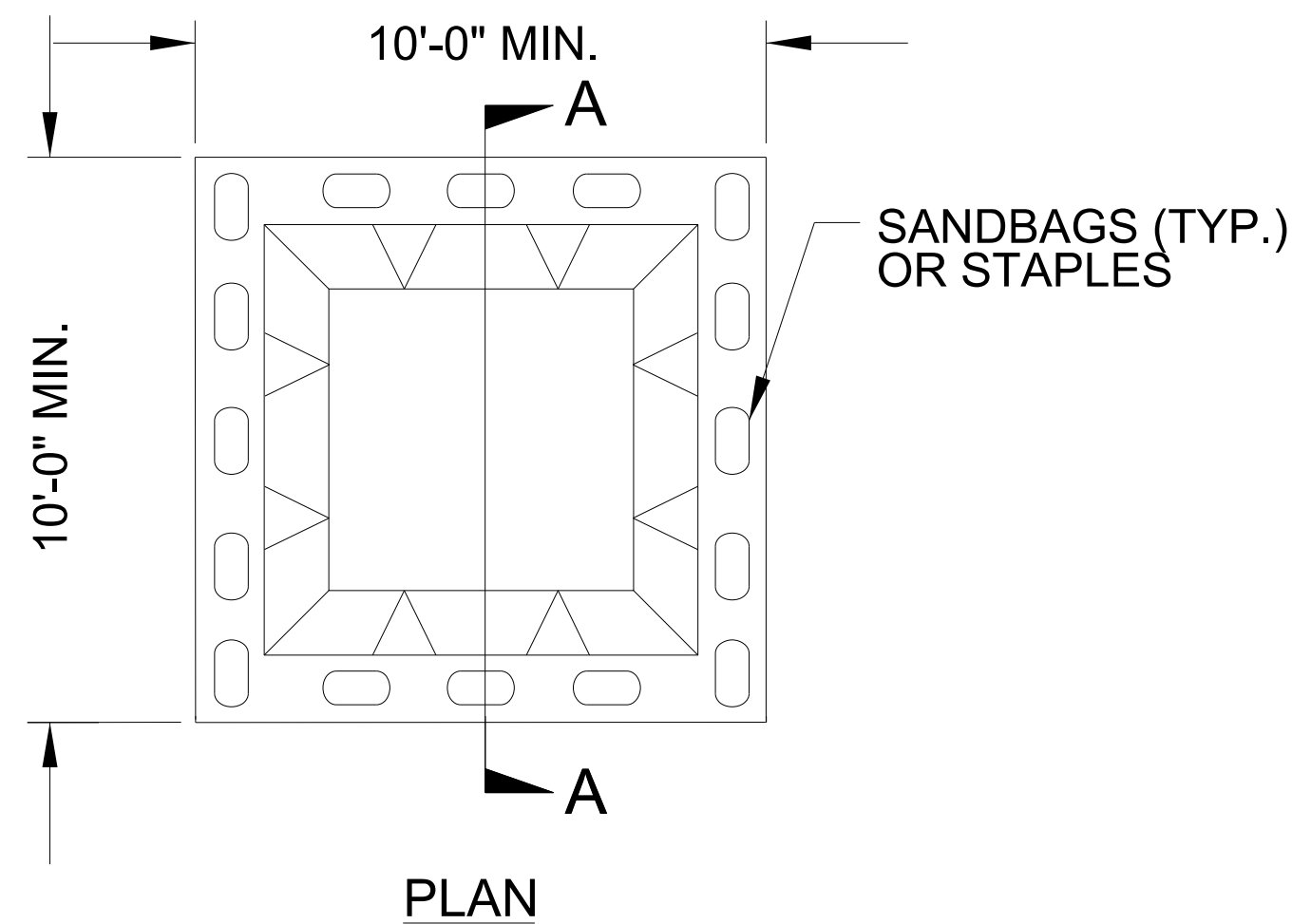
PROJECT REFERENCE NO.		SHEET NO.	
HE-0001B		EC-02	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A				
1632.02	Type B		1636.03	Excelsior Wattle Barrier	
1632.03	Type C		1636.03	Coir Fiber Wattle Barrier	

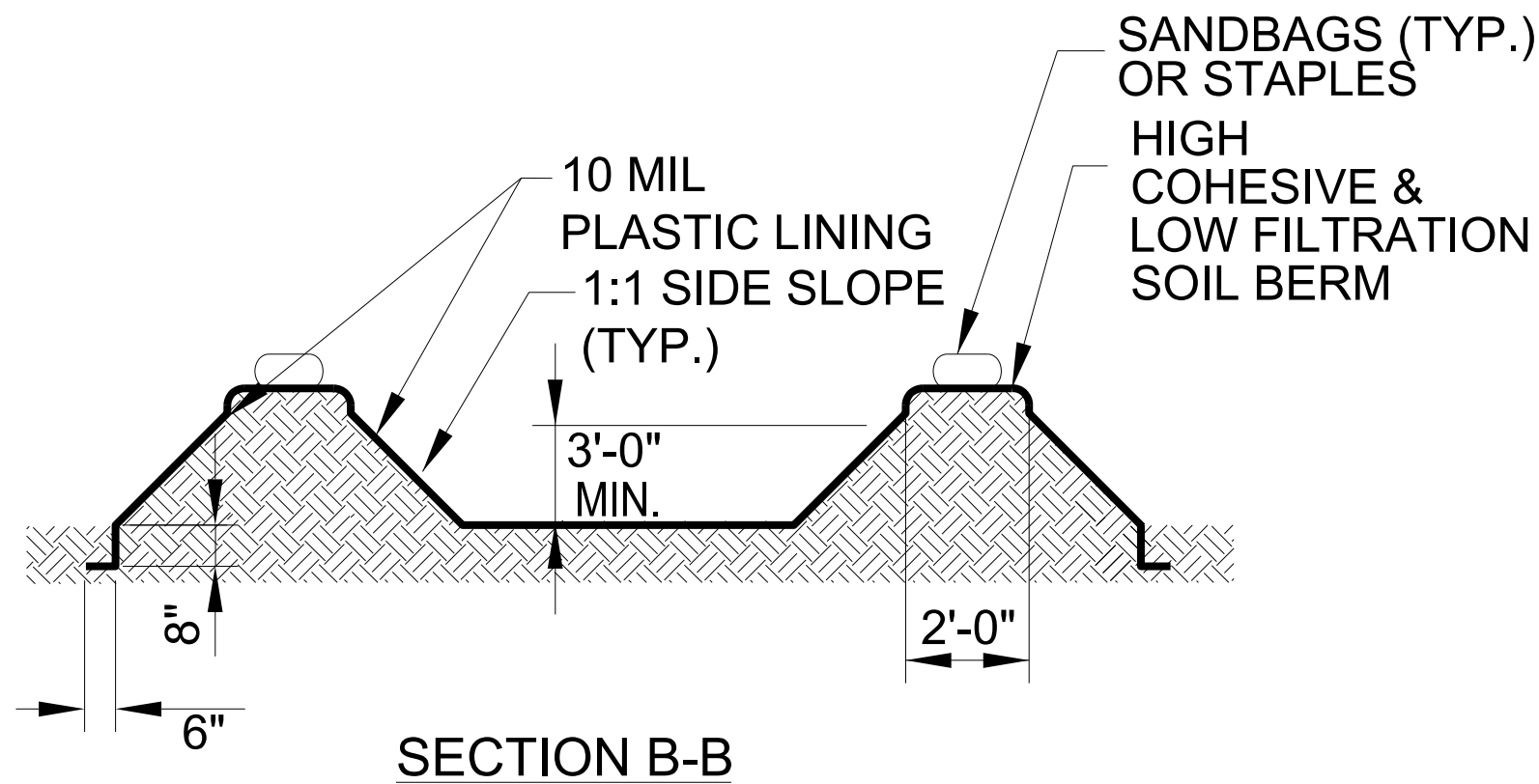
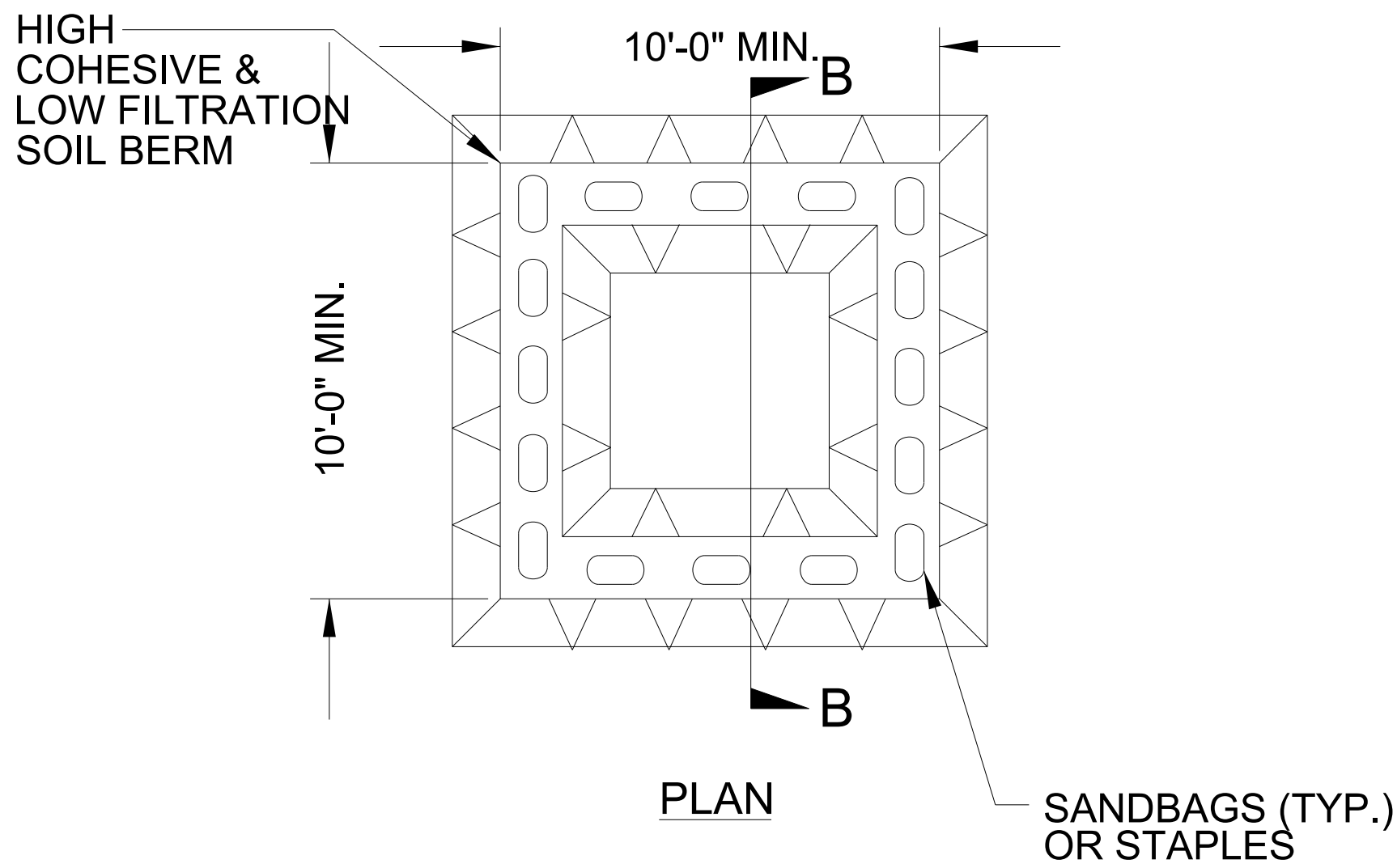
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

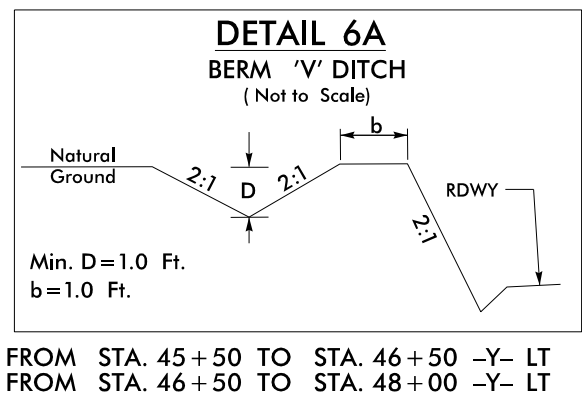
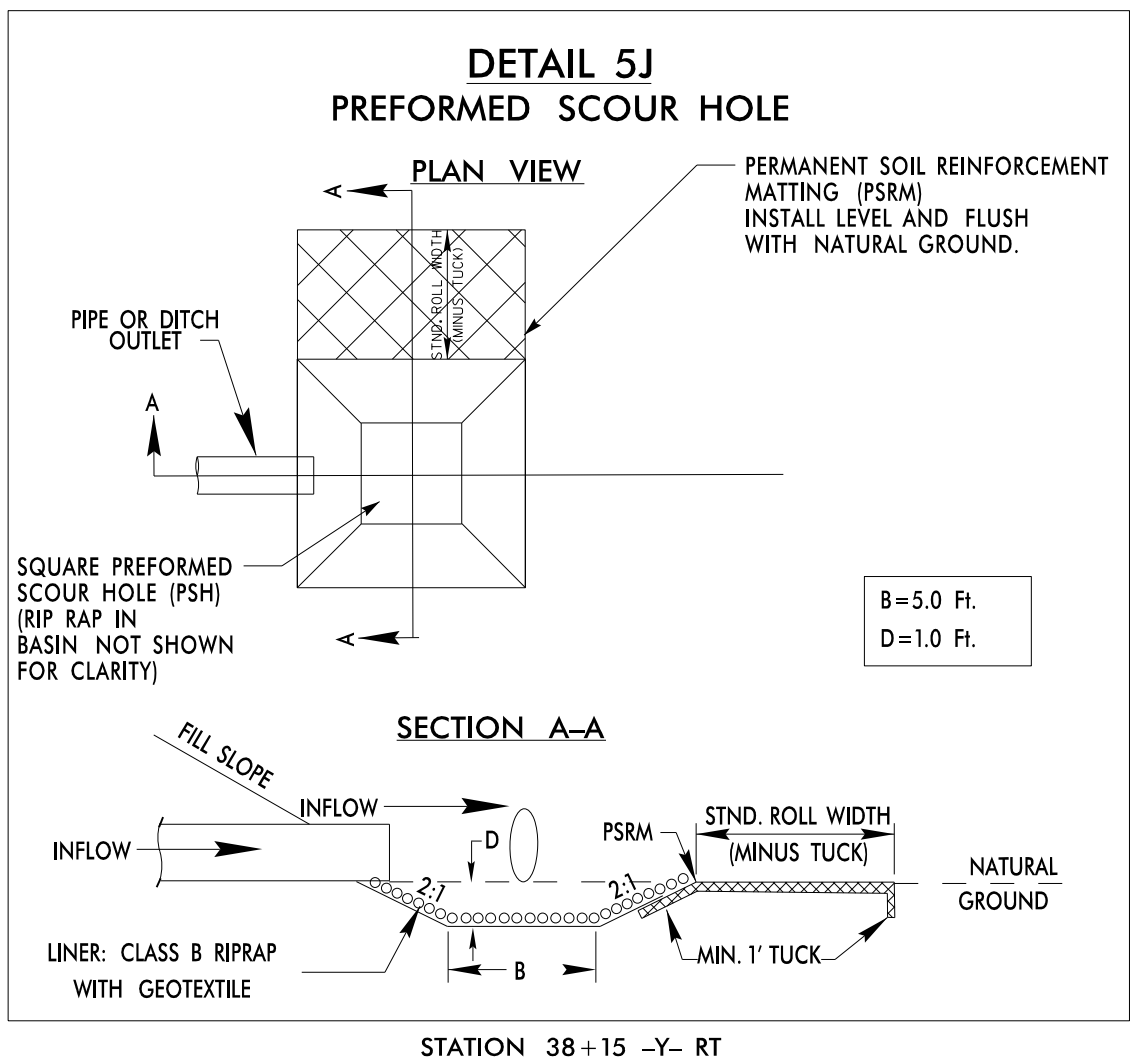
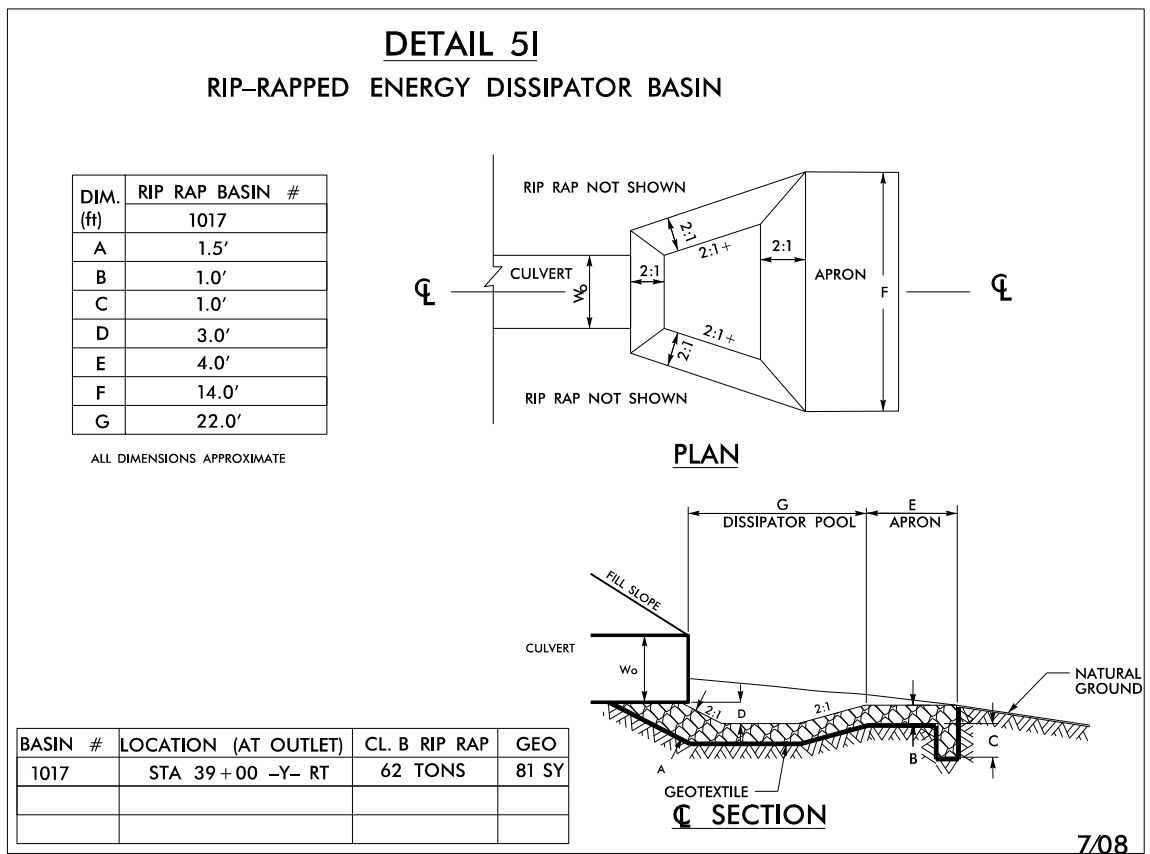
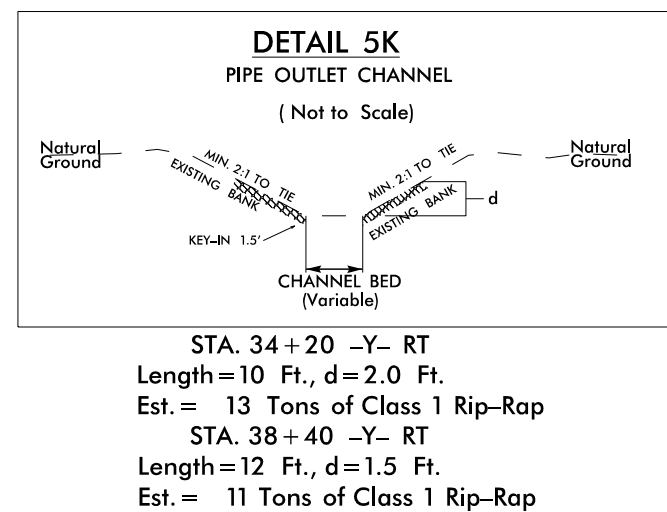
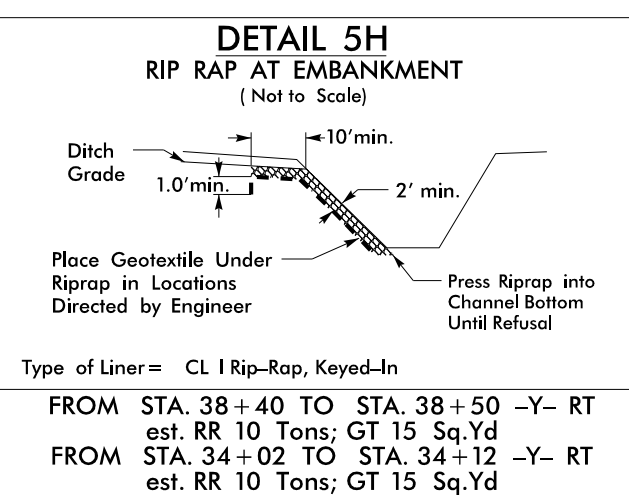
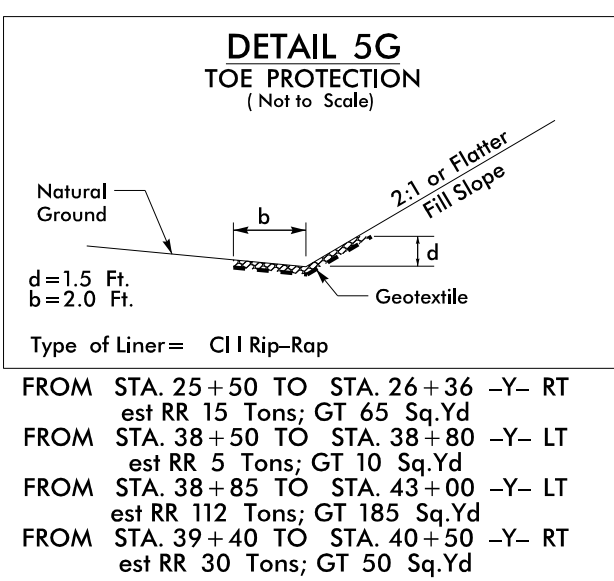
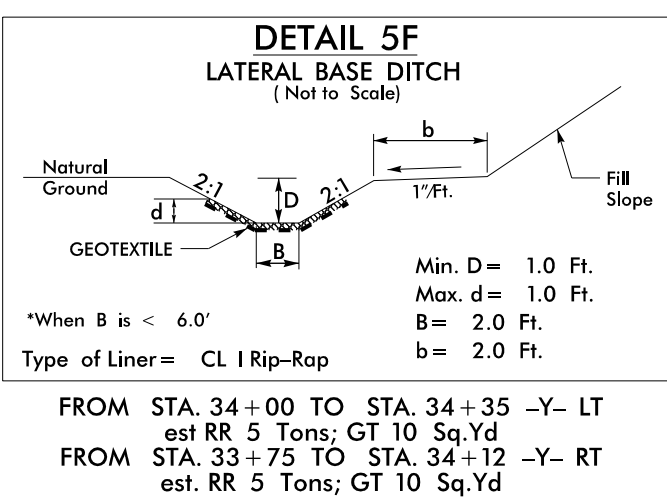
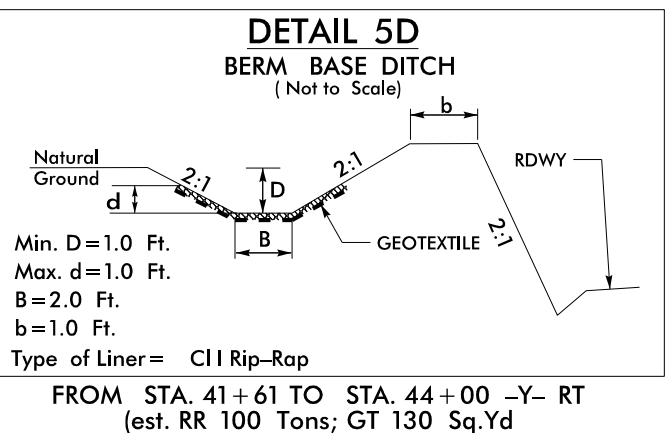
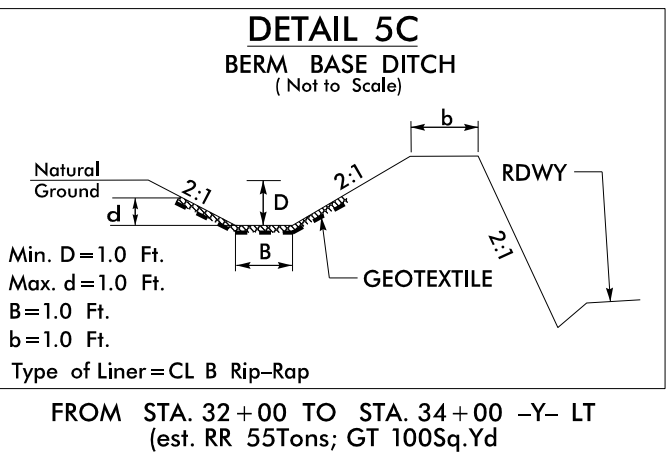
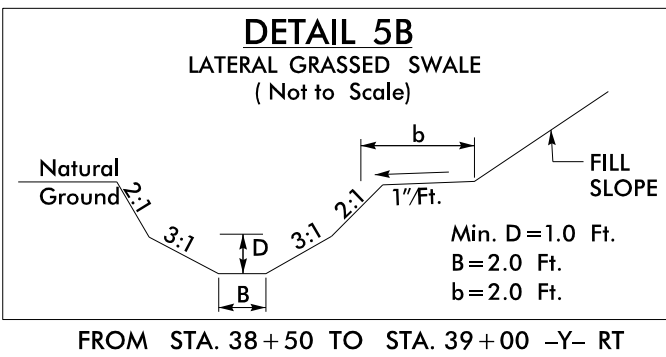
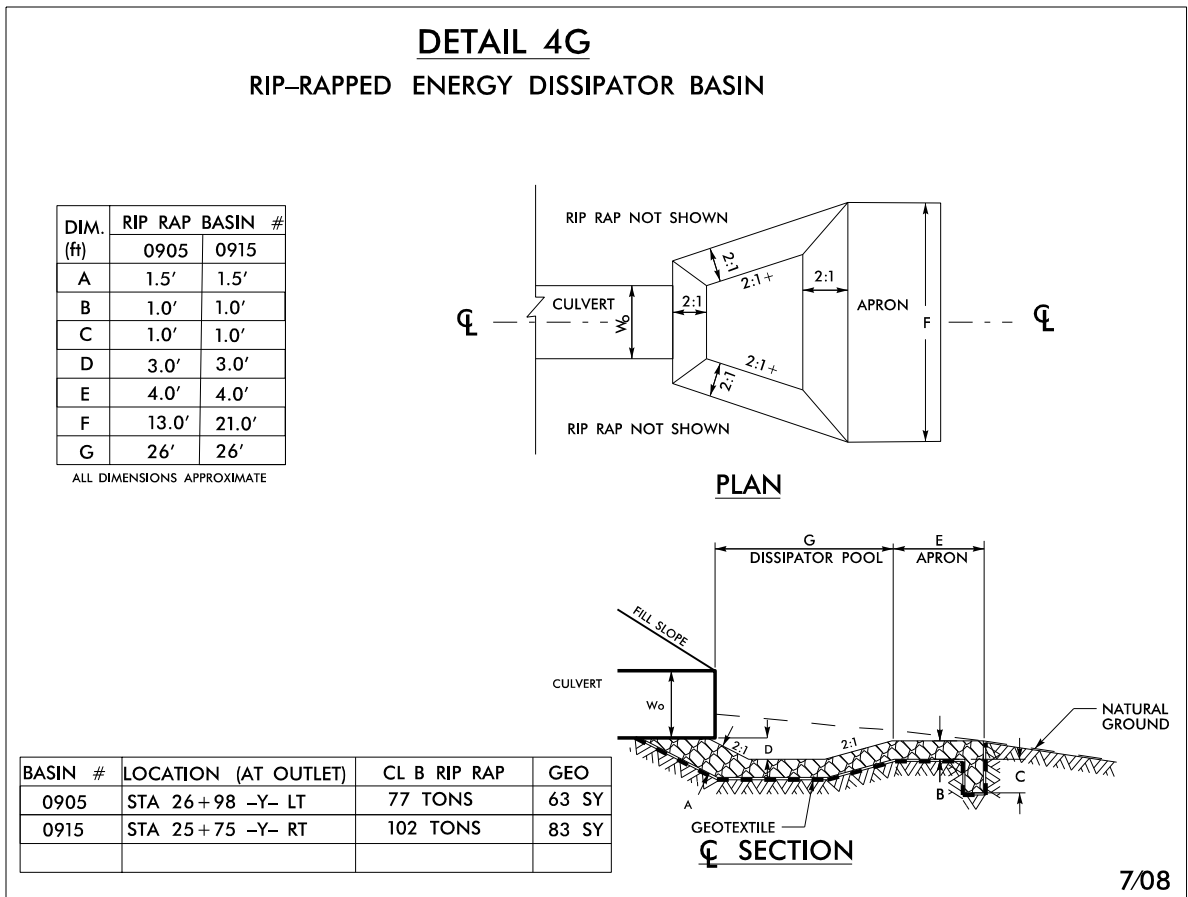
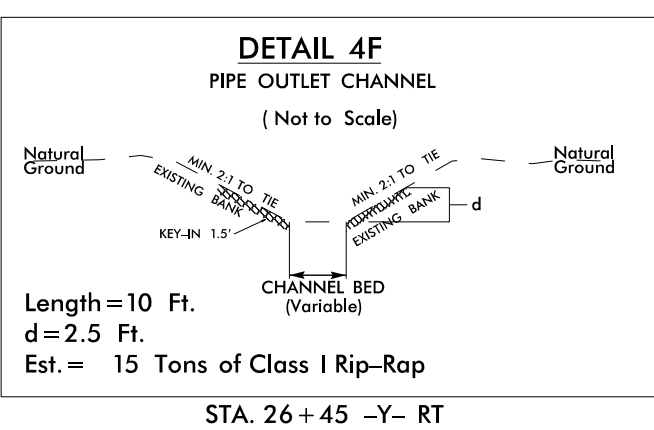
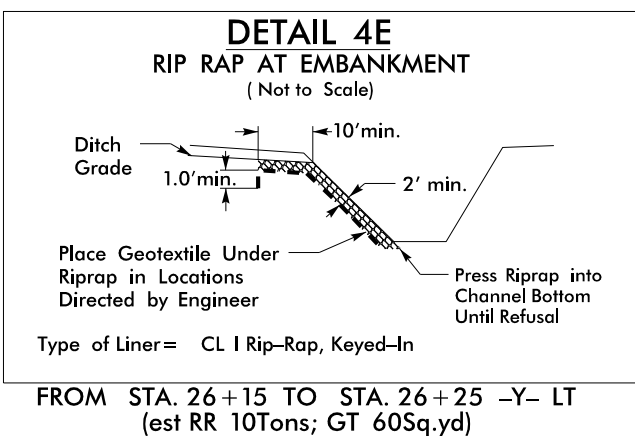
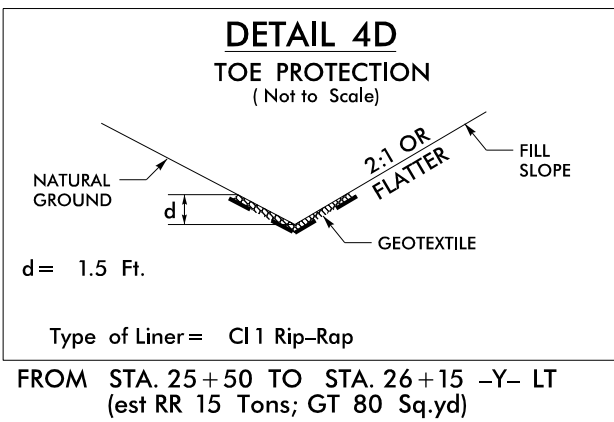
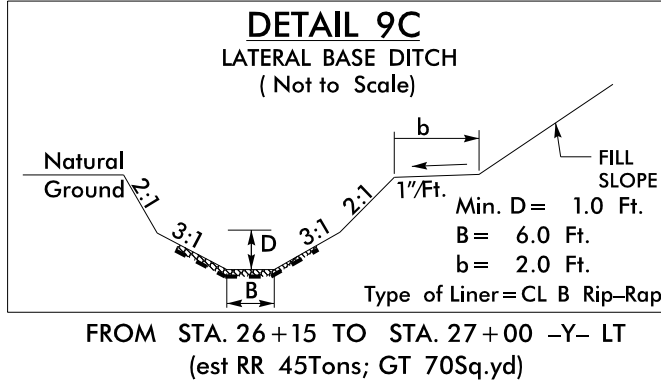
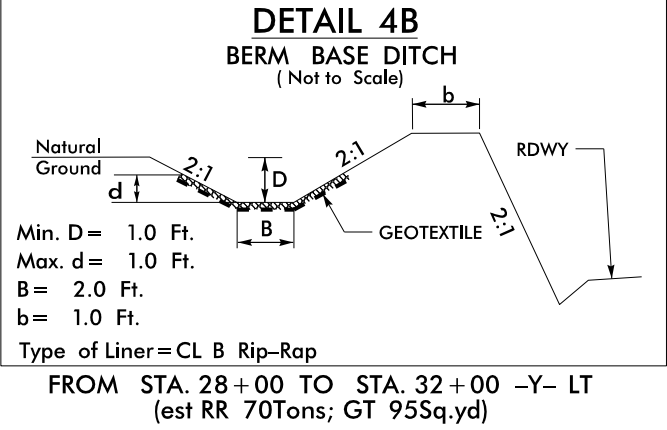
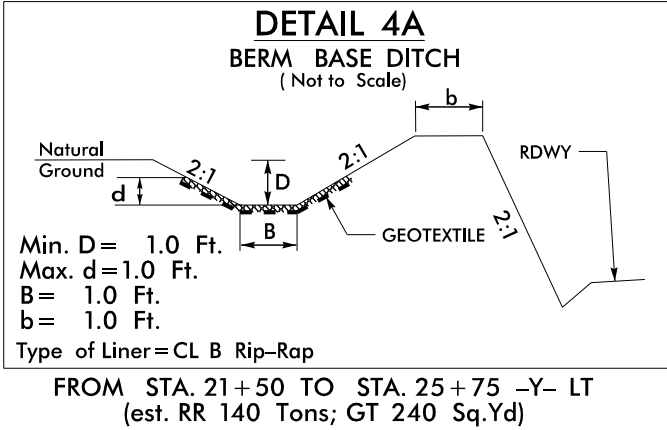
- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

PROJECT REFERENCE NO.		SHEET NO.	
HE-0001B		EC-2B	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

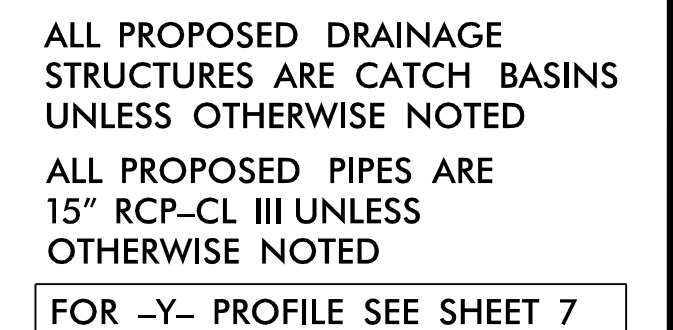
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

CONTROL (DITCH LINE) PERMANENT SOIL REINFORCEMENT MAT

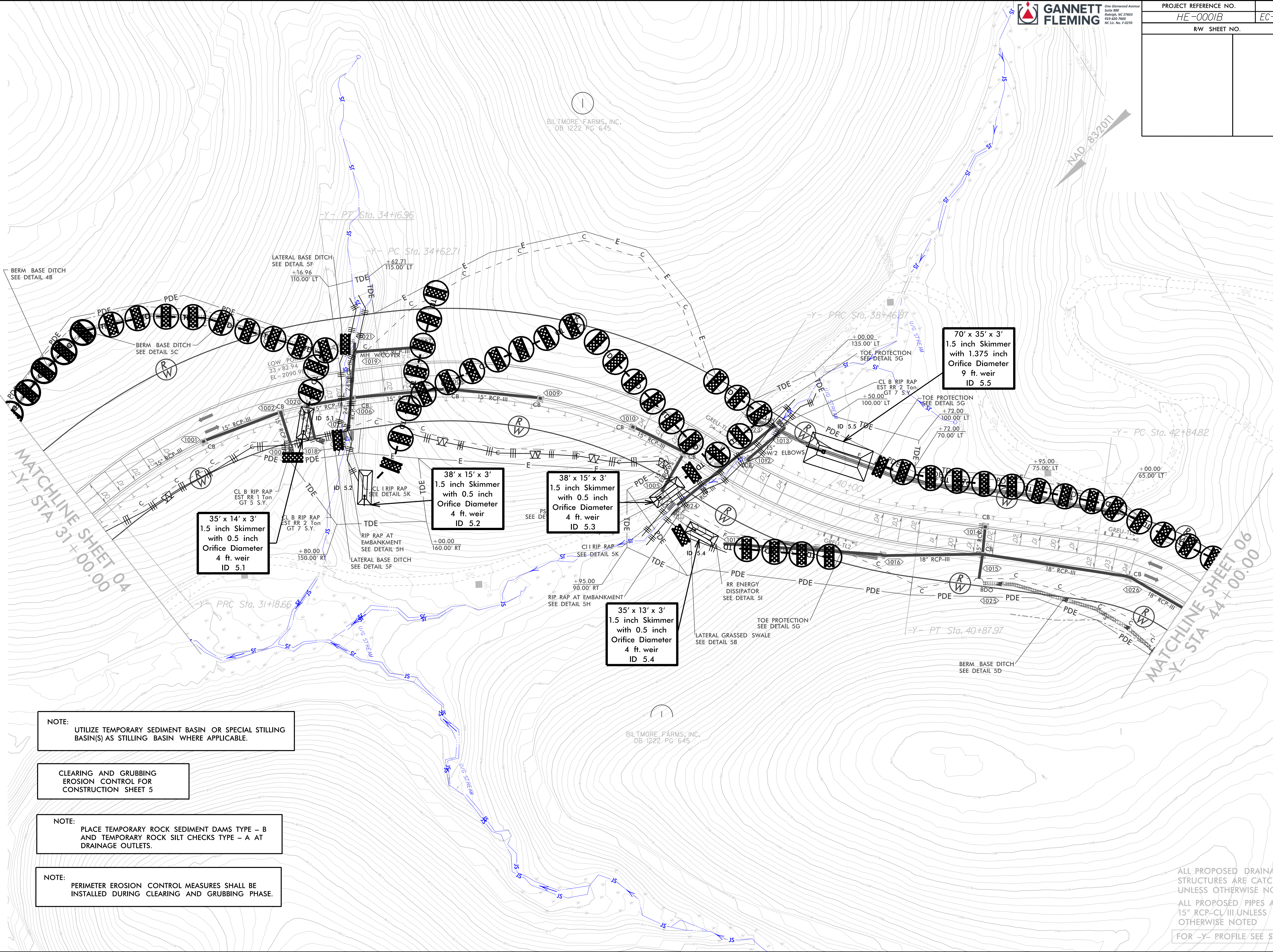
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	- Y -	26+15	27+00	LT	110 (EXCELSIOR)
4	- Y -	33+75	34+12	RT	30 (EXCELSIOR)
4	- Y -	46+50	48+00	LT	85 (EXCELSIOR)
			SUBTOTAL		225
MATTING FOR EROSION CONTROL (SLOPE)					
4	- Y -	20+50	27+00	LT	6100 (EXCELSIOR)
4	- Y -	28+00	33+50	LT	5600 (EXCELSIOR)
4	- Y -	35+00	43+00	LT	6435 (EXCELSIOR)
4	- Y -	44+50	47+00	LT	1140 (EXCELSIOR)
4	- Y -	20+50	22+50	RT	1400 (EXCELSIOR)
4	- Y -	26+00	29+50	RT	2165 (EXCELSIOR)
4	- Y -	35+00	37+50	RT	1185 (EXCELSIOR)
4	- Y -	38+50	39+50	RT	500 (EXCELSIOR)
4	- Y -	41+00	46+00	RT	1805 (EXCELSIOR)
			SUBTOTAL		26330
	SUBTOTAL (DITCHLINE + SLOPE)				26555
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					21,000
				TOTAL	47,555
				SAY	48,000

[illegible]

1. BEGIN CULVERT CONSTRUCTION PRIOR TO ROADWAY FILL.
2. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED.
3. CONSTRUCT CULVERT DIVERSION CHANNEL (3 FT BASE, 2.5 FT DEEP, 2:1 SIDE SLOPES). INSTALL IMPERVIOUS DIKE A FOR ONE SIDE OF THE CHANNEL.
4. INSTALL IMPERVIOUS DIKES B AND C, DIVERTING FLOW INTO TEMPORARY CHANNEL.
5. DEWATER WORK AREA, CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVEMENTS IN THE DRY.
6. REMOVE IMPERVIOUS DIKES B AND C, ALLOWING FLOW THROUGH NEWLY CONSTRUCTED CULVERT.
7. REMOVE IMPERVIOUS DIKE A AND CULVERT DIVERSION CHANNEL.
8. FINISH INLET/OUTLET IMPROVEMENTS.
7. REMOVE SPECIAL STILLING BASIN(S) AND COMPLETE ROADWAY.



8.17/99



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

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.

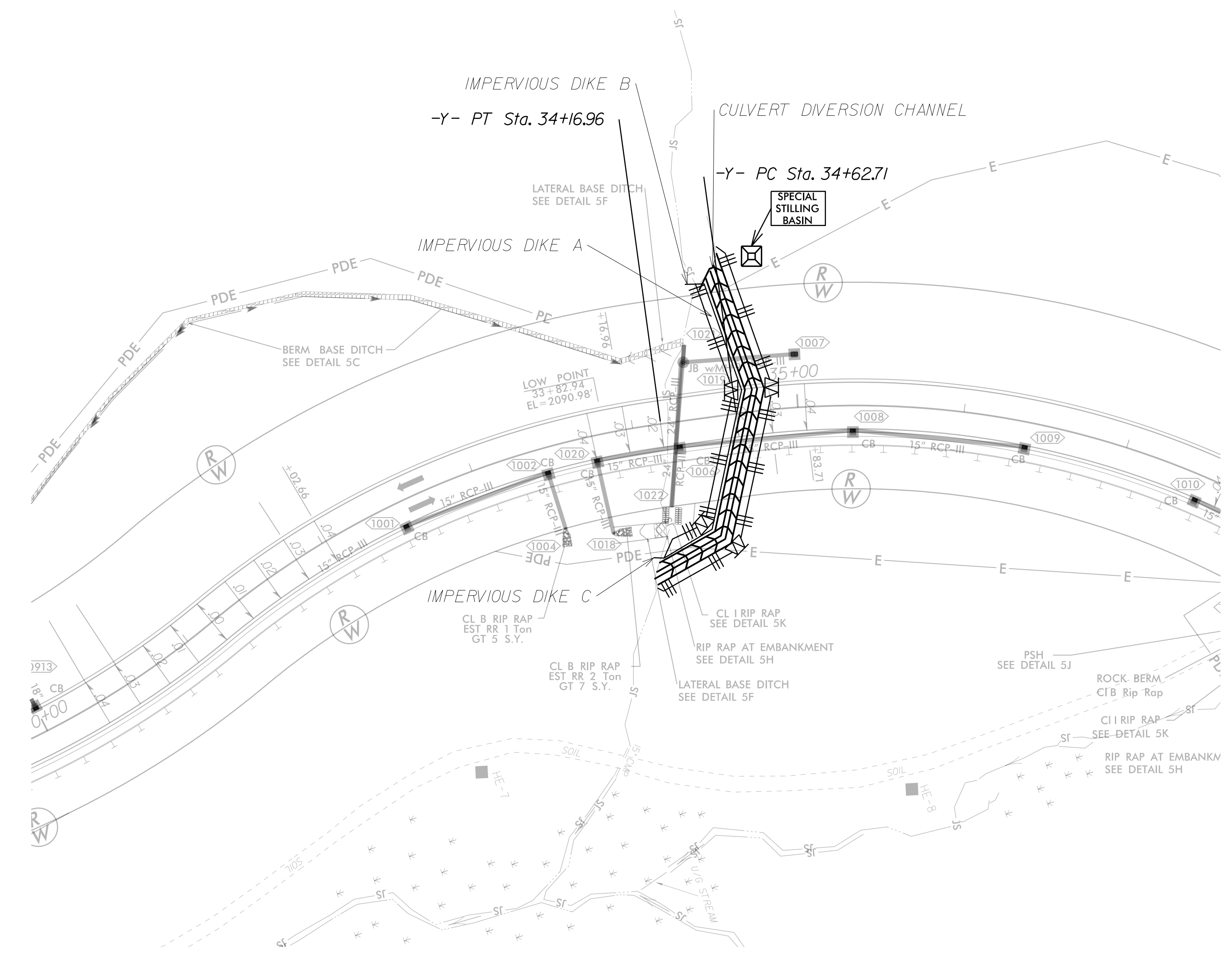
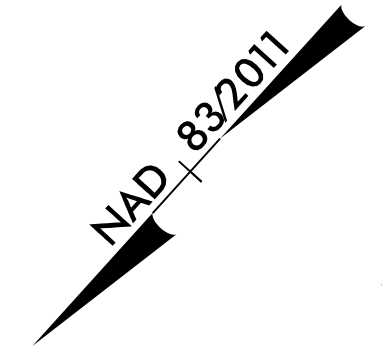
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED
ALL PROPOSED PIPES ARE
15" RCP-CL/III UNLESS
OTHERWISE NOTED
FOR -Y- PROFILE SEE SHEET 8

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-5A/CONST.5
RW SHEET NO.	

CULVERT CONSTRUCTION SEQUENCE STA. 34+50 -Y-

1. BEGIN CULVERT CONSTRUCTION PRIOR TO ROADWAY FILL.
2. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED.
3. CONSTRUCT CULVERT DIVERSION CHANNEL (3 FT BASE, 2.5 FT DEEP, 2:1 SIDE SLOPES). INSTALL IMPERVIOUS DIKE A FOR ONE SIDE OF THE CHANNEL.
4. INSTALL IMPERVIOUS DIKES B AND C, DIVERTING FLOW INTO TEMPORARY CHANNEL.
5. DEWATER WORK AREA, CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVMENTS IN THE DRY.
6. REMOVE IMPERVIOUS DIKES B AND C, ALLOWING FLOW THROUGH NEWLY CONSTRUCTED CULVERT.
7. REMOVE IMPERVIOUS DIKE A AND CULVERT DIVERSION CHANNEL.
8. FINISH INLET/OUTLET IMPROVEMENTS.
9. REMOVE SPECIAL STILLING BASIN(S) AND COMPLETE ROADWAY.



ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED

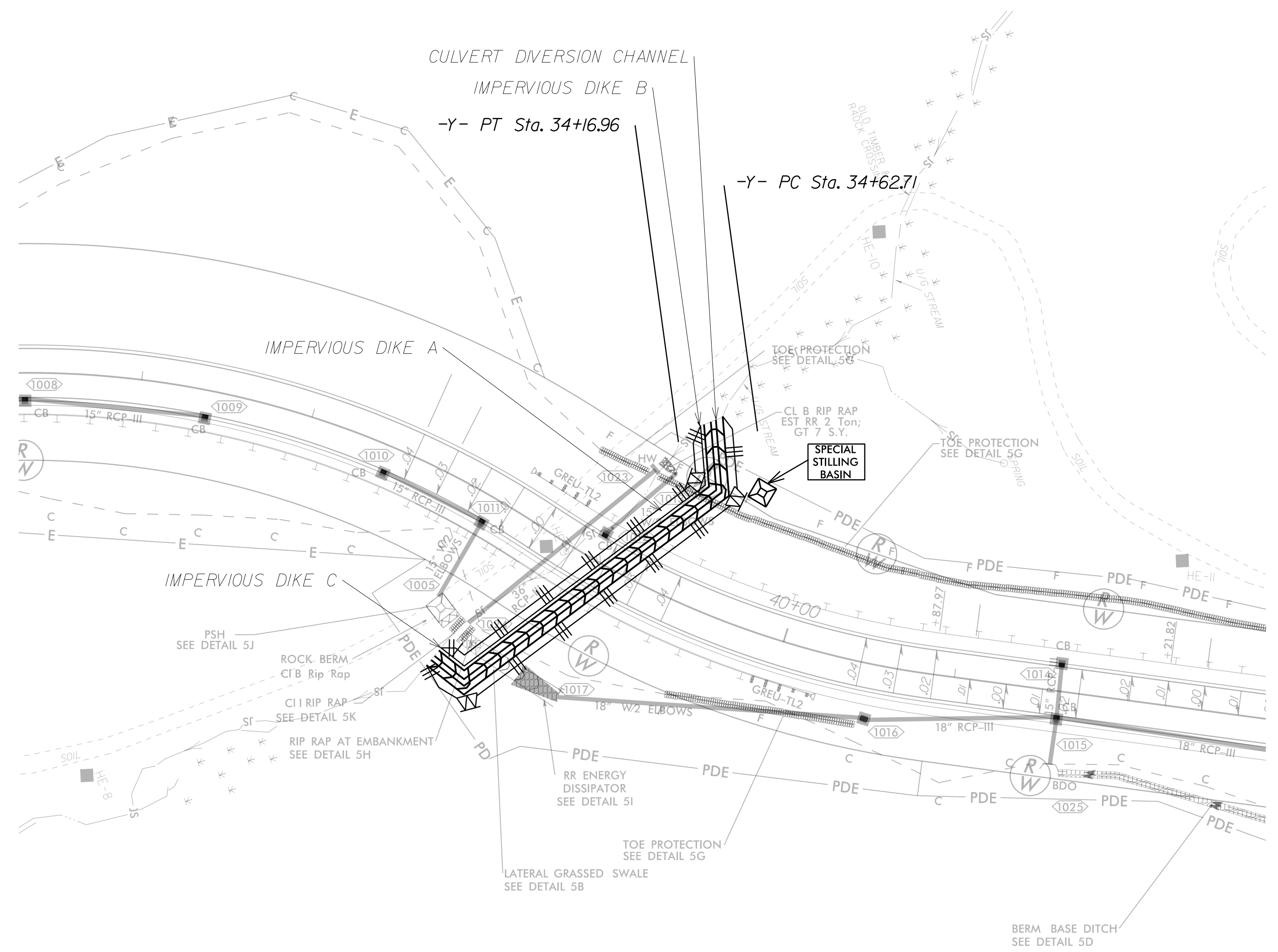
ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED

FOR -Y- PROFILE SEE SHEET 8

 GANNETT FLEMING One Glenwood Avenue Suite 900 Raleigh, NC 27603 919-420-7660 NC Lic. No. F-0270	PROJECT REFERENCE NO.	SHEET NO.
	HE-0001B	EC-5B/1/CONST.5
	RW SHEET NO.	

CULVERT CONSTRUCTION SEQUENCE STA. 39+00 -Y-

1. BEGIN CULVERT CONSTRUCTION PRIOR TO ROADWAY FILL.
2. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED.
3. CONSTRUCT CULVERT DIVERSION CHANNEL (3 FT BASE, 2.5 FT DEEP, 2:1 SIDE SLOPES). INSTALL IMPERVIOUS DIKE A FOR ONE SIDE OF THE CHANNEL.
4. INSTALL IMPERVIOUS DIKES B AND C, DIVERTING FLOW INTO THE TEMPORARY CHANNEL.
5. DEWATER WORK AREA, CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVEMENTS IN THE DRY.
6. REMOVE IMPERVIOUS DIKES B AND C, ALLOWING FLOW THROUGH NEWLY CONSTRUCTED CULVERT.
7. REMOVE IMPERVIOUS DIKE A AND CULVERT DIVERSION CHANNEL.
8. FINISH INLET/OUTLET IMPROVEMENTS.
9. REMOVE SPECIAL STILLING BASIN(S) AND COMPLETE ROADWAY.



ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED

ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED

FOR -Y- PROFILE SEE SHEET 8

8/17/99

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

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



**GANNETT
FLEMING**

One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-2070

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-6//CONST.6
RW SHEET NO.	

NOTE: ROUNDABOUT DESIGN TO
BE COMPLETED BY OTHERS

END TIP PROJECT HE-0001B
-Y- POT Sta. 48+03.58

MATCHLINE SHEET 5
-Y- STA 44+00.00

-Y- PT Sta. 45+40.39

BERM 'V' DITCH
SEE DETAIL 6A
END 2'-6" C&G
+03.58

BERM 'V' DITCH
SEE DETAIL 6A

15" W
ELBOW

15" W
TYP.

15" W
TYP.

15" W
TYP.

15" W
TYP.

15" W
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15" W
TYP.

15" W
TYP.

15" W
TYP.

END 2'-6" C&G
& SIDEWALK
+99.74

BILTMORE FARMS, INC.
DB 1222 PG 645

HE-12

HE-14

NAD 83/2011

BILTMORE FARMS, INC.
DB 1222 PG 645

RAYTHEON TE
CORPOR.
DB 6057 F

ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED
ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED

FOR -Y- PROFILE SEE SHEET 9

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-7/CONST.4
RW SHEET NO.	

Place Matting for Erosion Control
on Slope as Work Allows.
-Y- Sta. 20+50 to Sta. 27+00 LT,
-Y- Sta. 28+00 to Sta. 31+00 LT,
-Y- Sta. 20+50 to Sta. 22+50 RT,
-Y- Sta. 26+00 to Sta. 29+50 RT

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.
-Y- Sta. 26+15 to Sta. 27+00 LT

For Slopes Excavated Greater Than 10 feet
Install Matting for Erosion Control on
Entire Slope as Work Allows.

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

END TIP PROJECT HE-0001A
BEGIN TIP PROJECT HE-0001B
-Y- POC STA. 21+50.00

There will be a 60 foot access break on
the north side of line -Y- between
Station 23+00 and 26+00. The exact
location of the access break between
these two stations will be determined
by NCDOT as part of its approval of any
future driveway permit that the
property owner will apply for at such
time the property owner develops the
property.

35' x 35' x 3'
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9 ft. weir
ID 4.1a
ID 4.1b

40' x 20' x 3'
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 4.2

MATCHLINE SHEET 05
-Y- STA 31+00.00

ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED

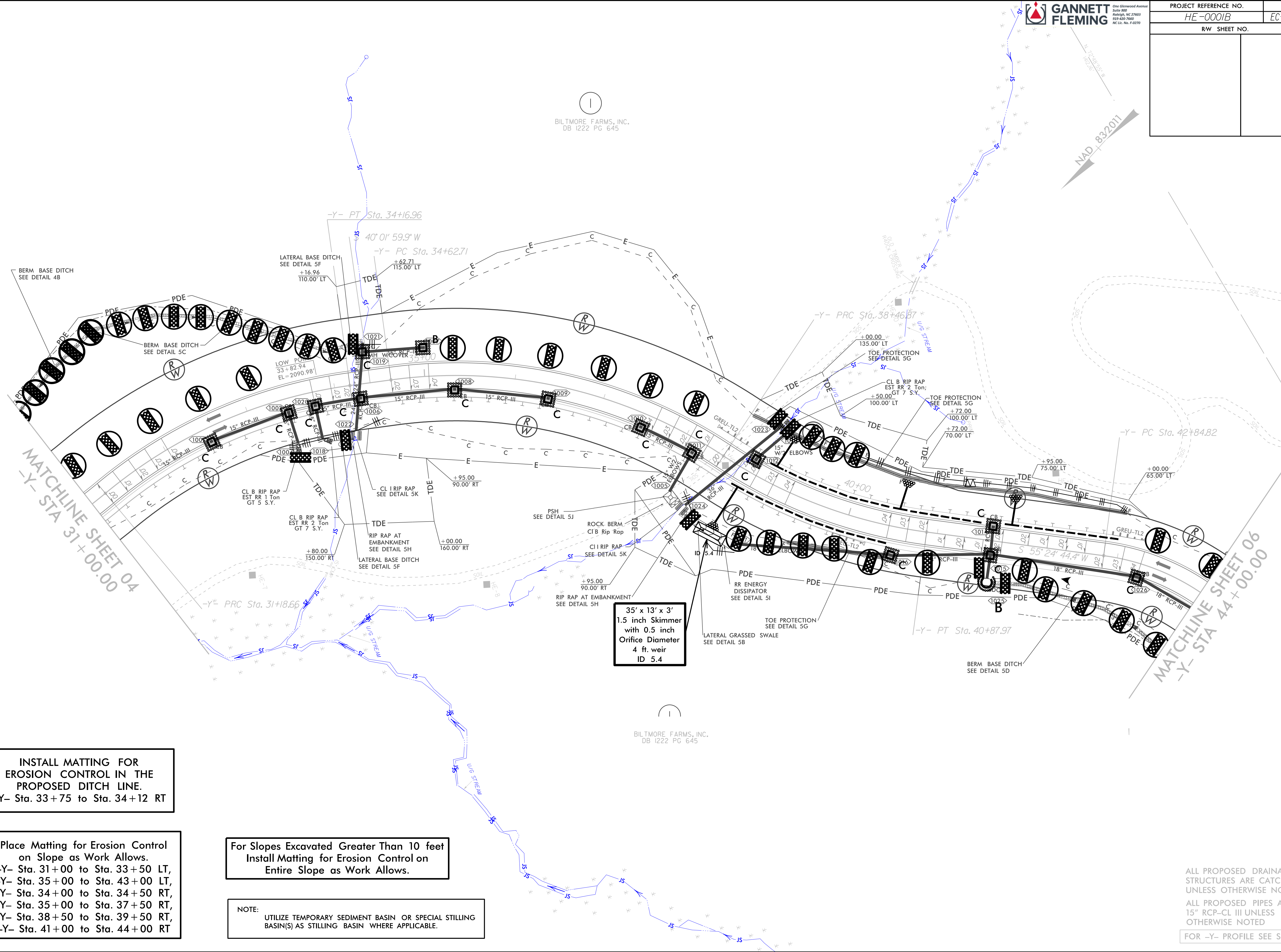
ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED

FOR -Y- PROFILE SEE SHEET 7

8/17/99



PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-8/1/CONST.5
RW SHEET NO.	



INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.
-Y- Sta. 33+75 to Sta. 34+12 RT

Place Matting for Erosion Control
on Slope as Work Allows.
-Y- Sta. 31+00 to Sta. 33+50 LT,
-Y- Sta. 35+00 to Sta. 43+00 LT,
-Y- Sta. 34+00 to Sta. 34+50 RT,
-Y- Sta. 35+00 to Sta. 37+50 RT,
-Y- Sta. 38+50 to Sta. 39+50 RT,
-Y- Sta. 41+00 to Sta. 44+00 RT

For Slopes Excavated Greater Than 10 feet
Install Matting for Erosion Control on
Entire Slope as Work Allows.

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

ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED
ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED
FOR -Y- PROFILE SEE SHEET 8

8/17/99

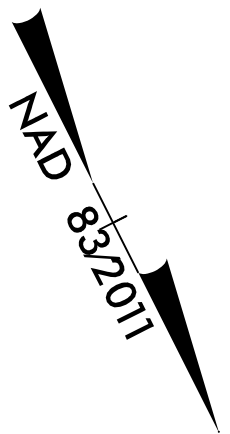


PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	EC-9/1/CONST.6
RW SHEET NO.	

Place Matting for Erosion Control
on Slope as Work Allows.
-Y- Sta. 44+50 to Sta. 47+00 LT,
-Y- Sta. 44+00 to Sta. 46+00 RT

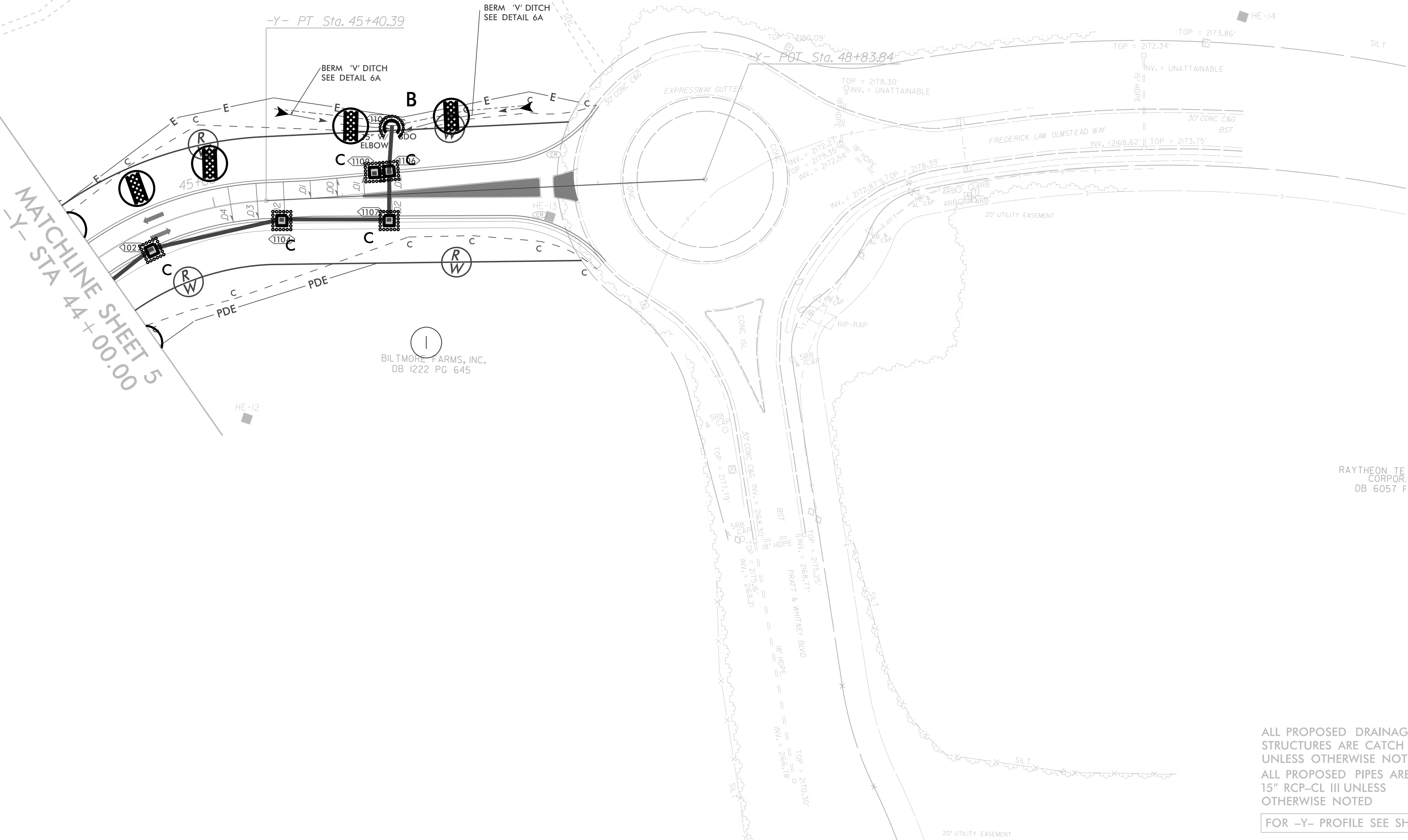
INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.
-Y- Sta. 46+50 to Sta. 48+00 LT

For Slopes Excavated Greater Than 10 feet
Install Matting for Erosion Control on
Entire Slope as Work Allows.



BILTMORE FARMS, INC.
DB 1222 PG 645

NOTE: ROUNDABOUT DESIGN TO
BE COMPLETED BY OTHERS



ALL PROPOSED DRAINAGE
STRUCTURES ARE CATCH BASINS
UNLESS OTHERWISE NOTED
ALL PROPOSED PIPES ARE
15" RCP-CL III UNLESS
OTHERWISE NOTED

FOR -Y- PROFILE SEE SHEET 9