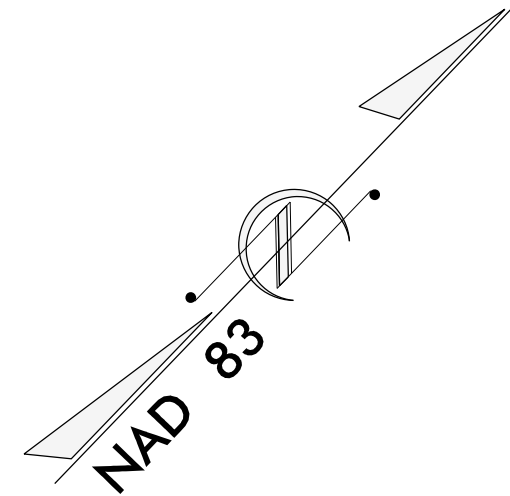
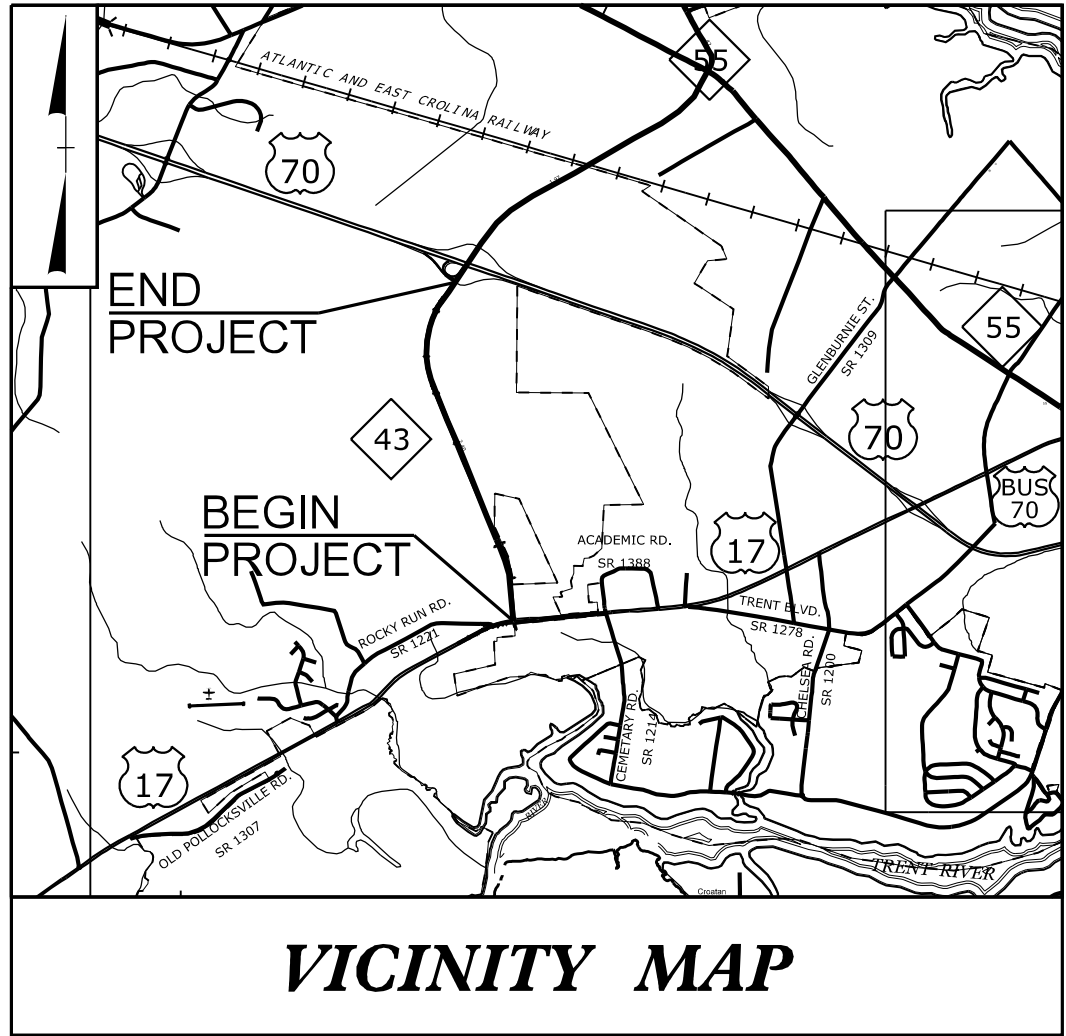


TIP PROJECT: R-4463A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
CRAVEN COUNTY

LOCATION: NC 43 CONNECTOR FROM
US 70 TO US 17 BUSINESS

TYPE OF WORK: GRADING, PAVING, DRAINAGE,
SIGNALS, & STRUCTURES



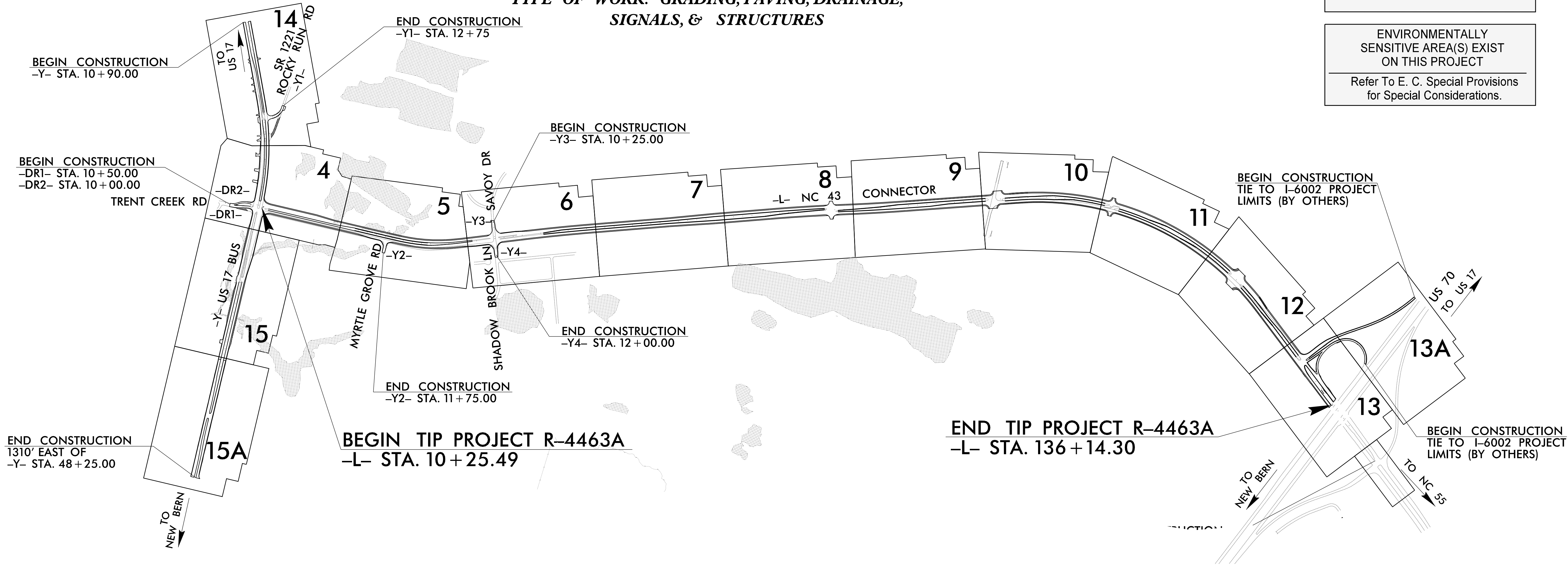
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4463A	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35601.1.R2		PE	
35601.2.1		ROW/UTIL	
35601.3.1		CONSTRUCTION	

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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
THE APPLICABLE 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:

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

Designed by:

David R. Wagner II, PE
NAME

4286

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

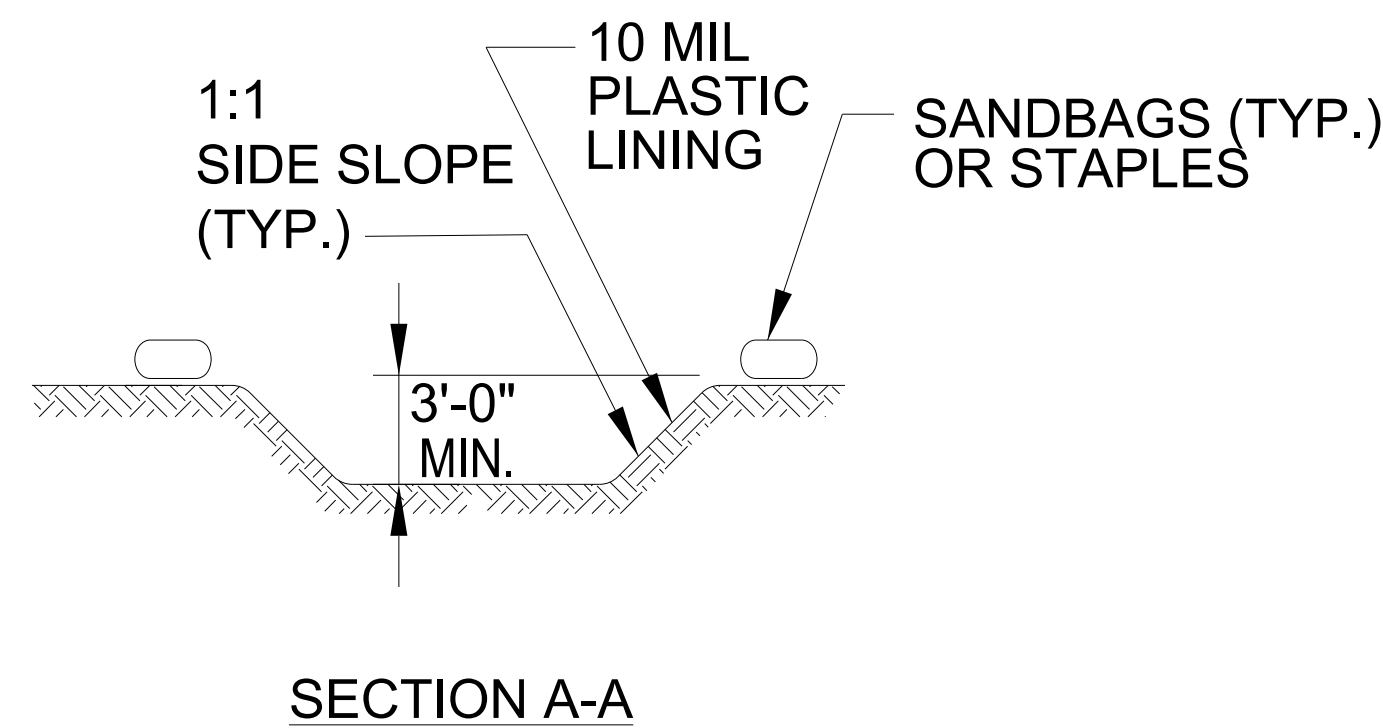
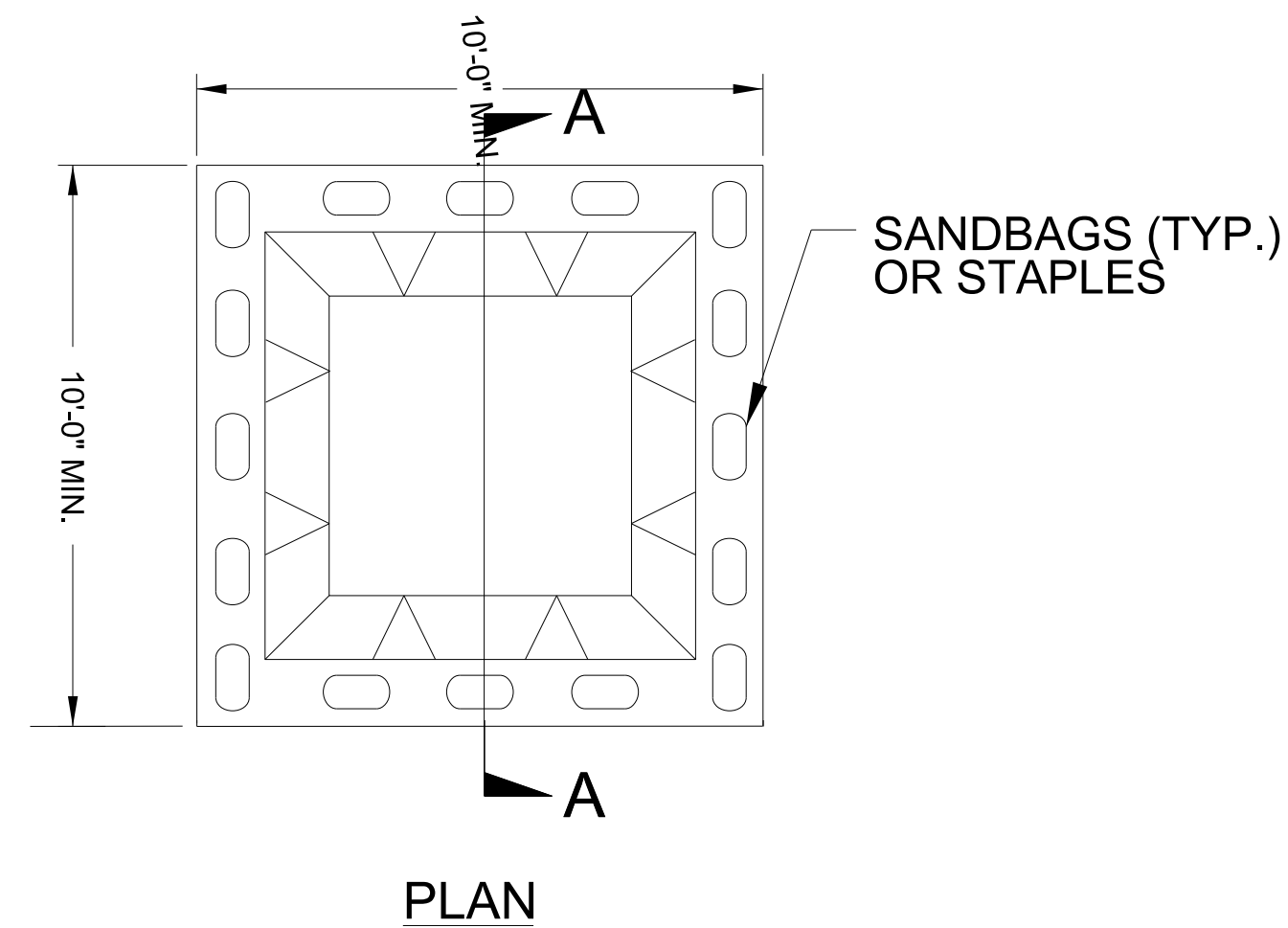
PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

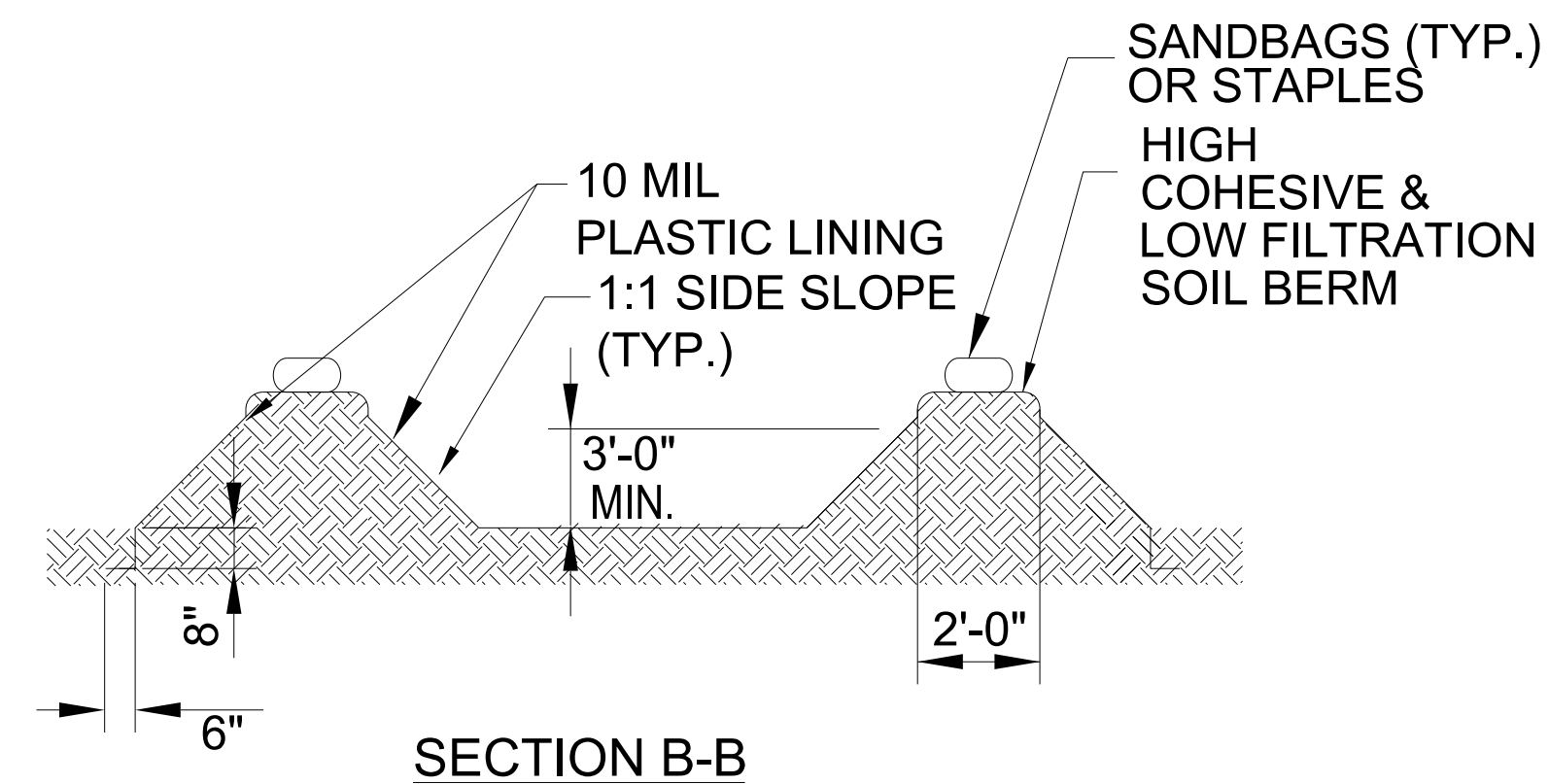
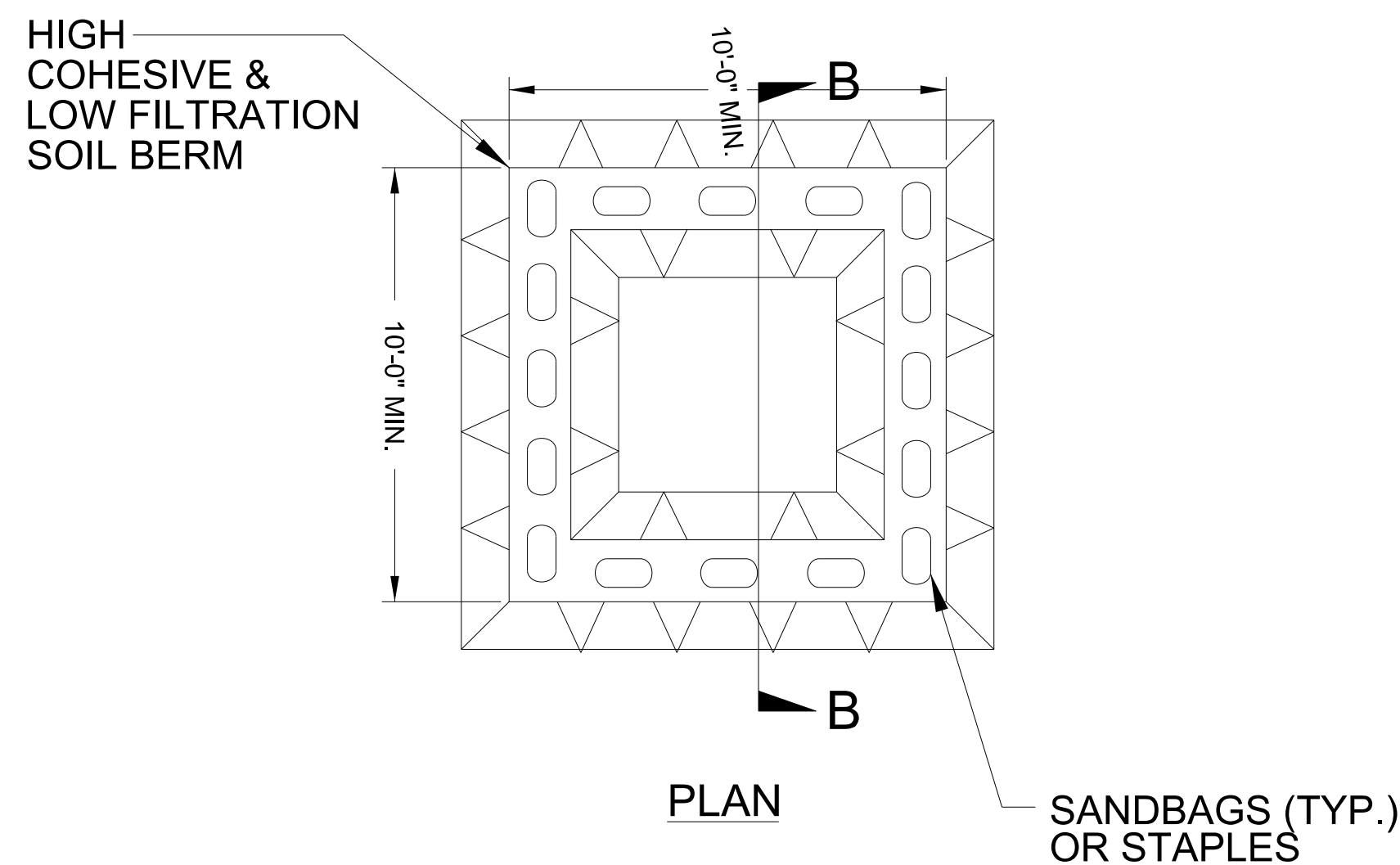
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	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.



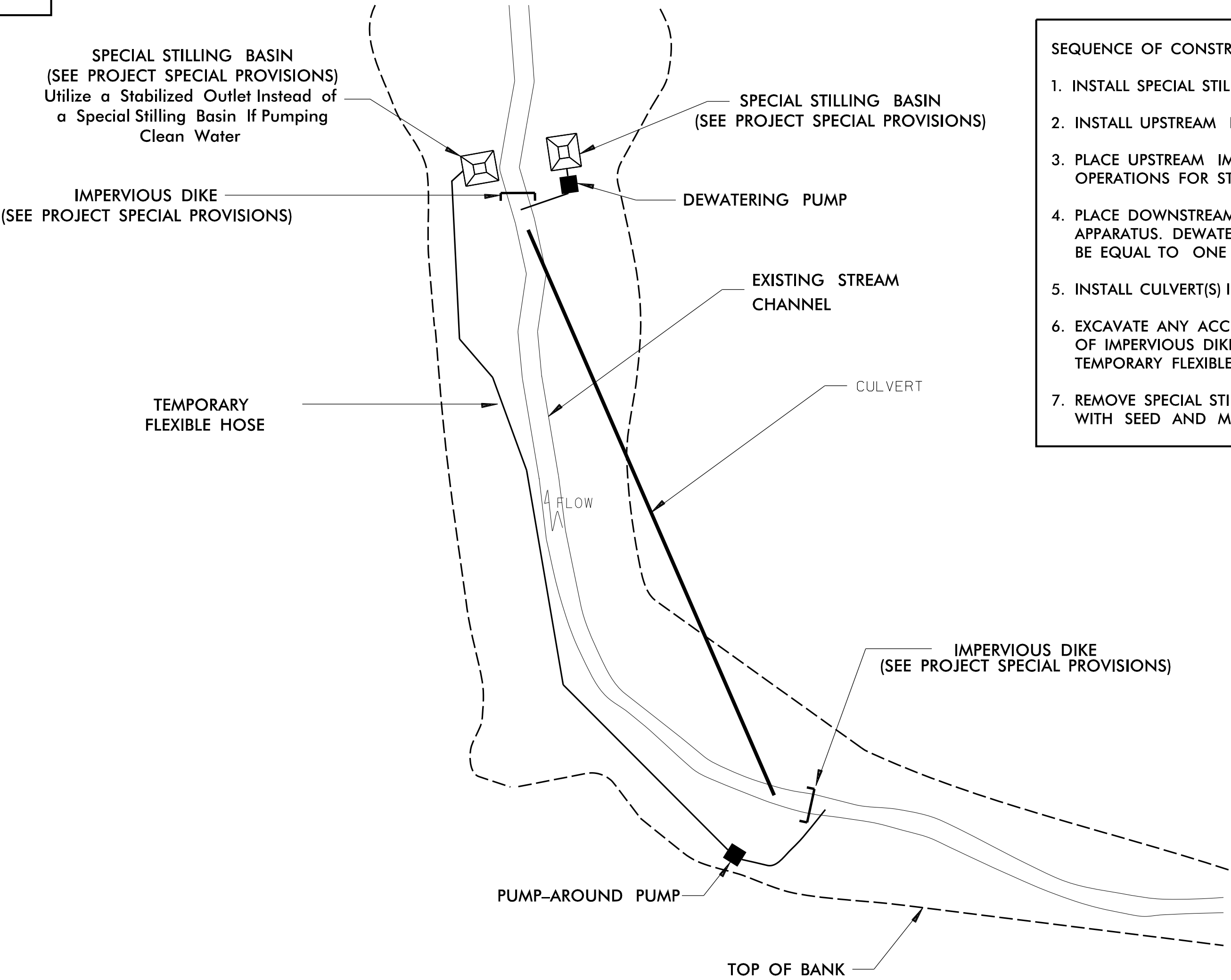
ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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.
R-4463A	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
H&R HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

PUMP-AROUND OPERATION

- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
 - 4) Pumps and hoses shall be of sufficient size to dewater the work area and maintain stream bypass flow.



- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT³), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

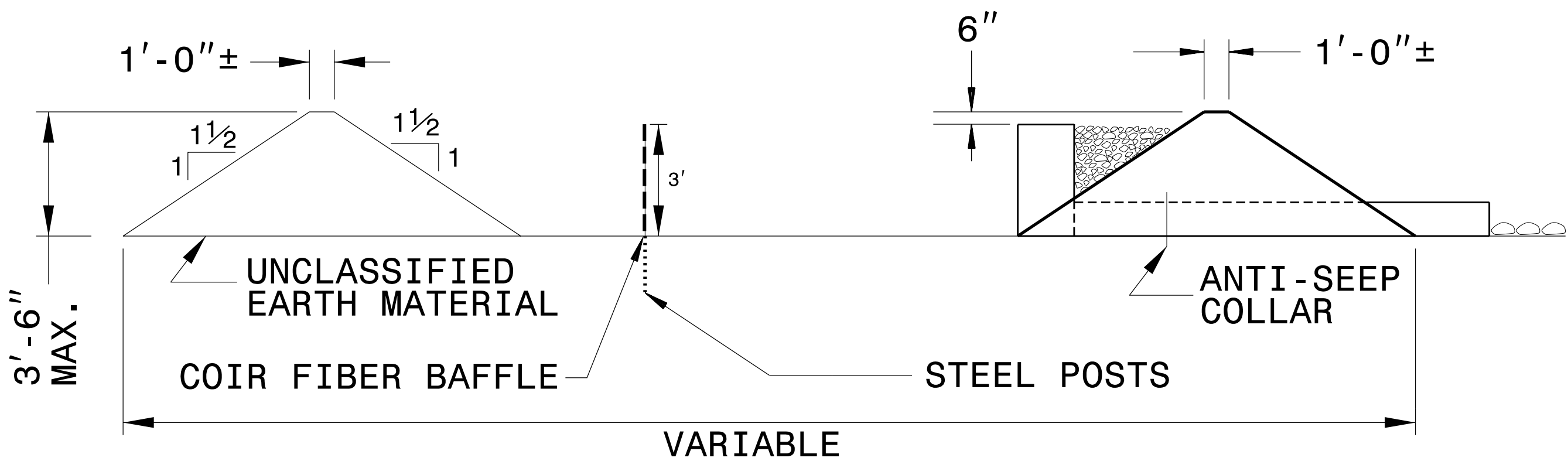
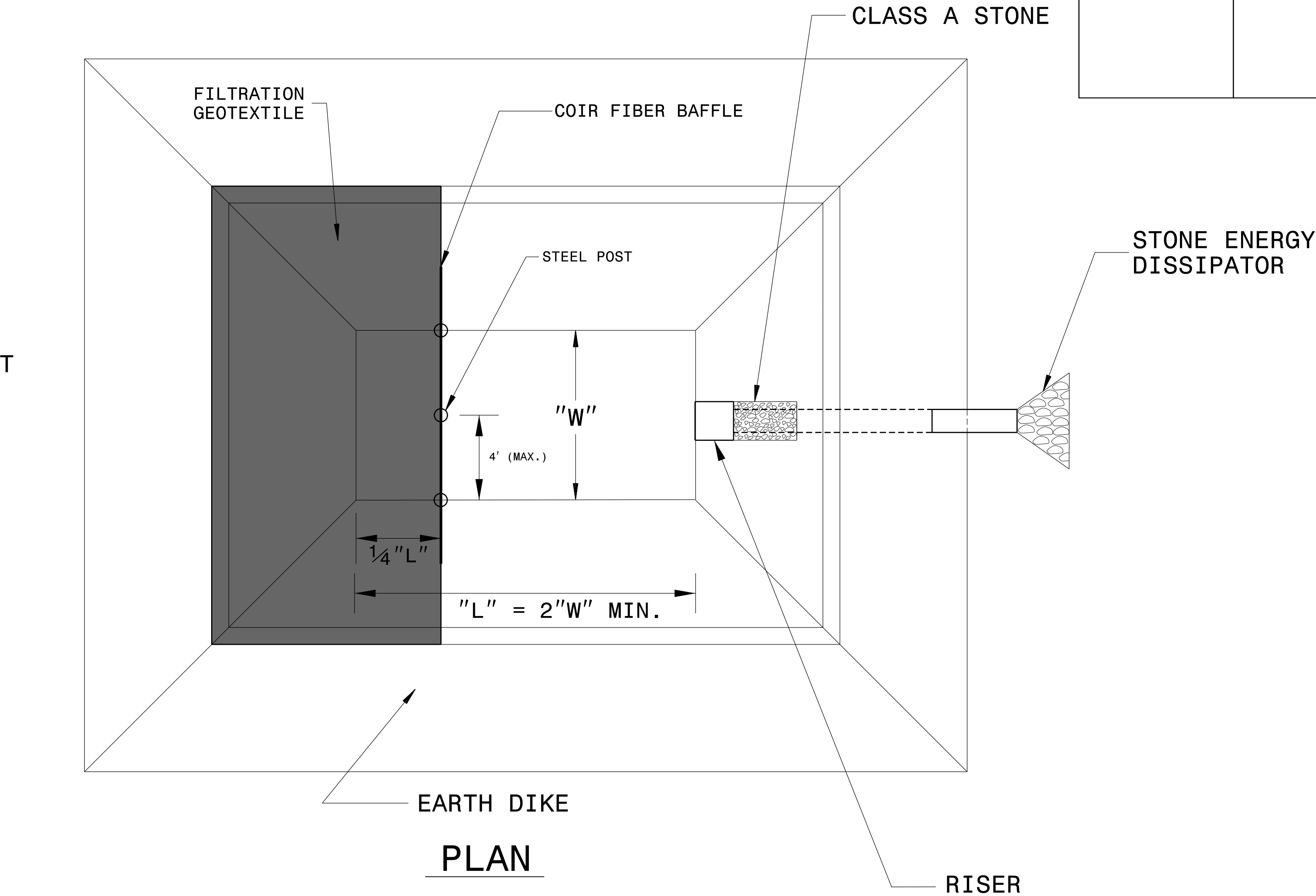
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.

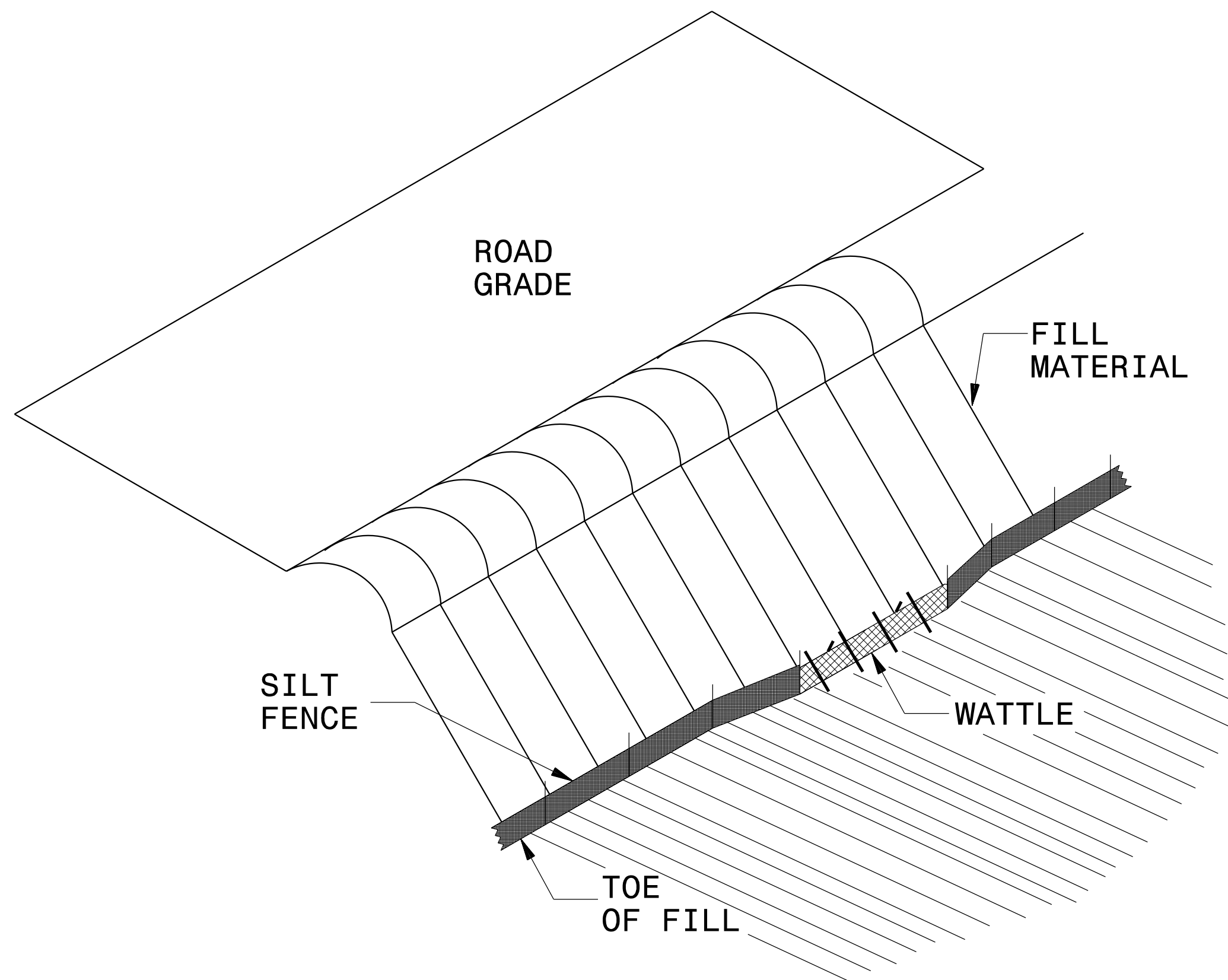


TYPICAL SECTION VIEW

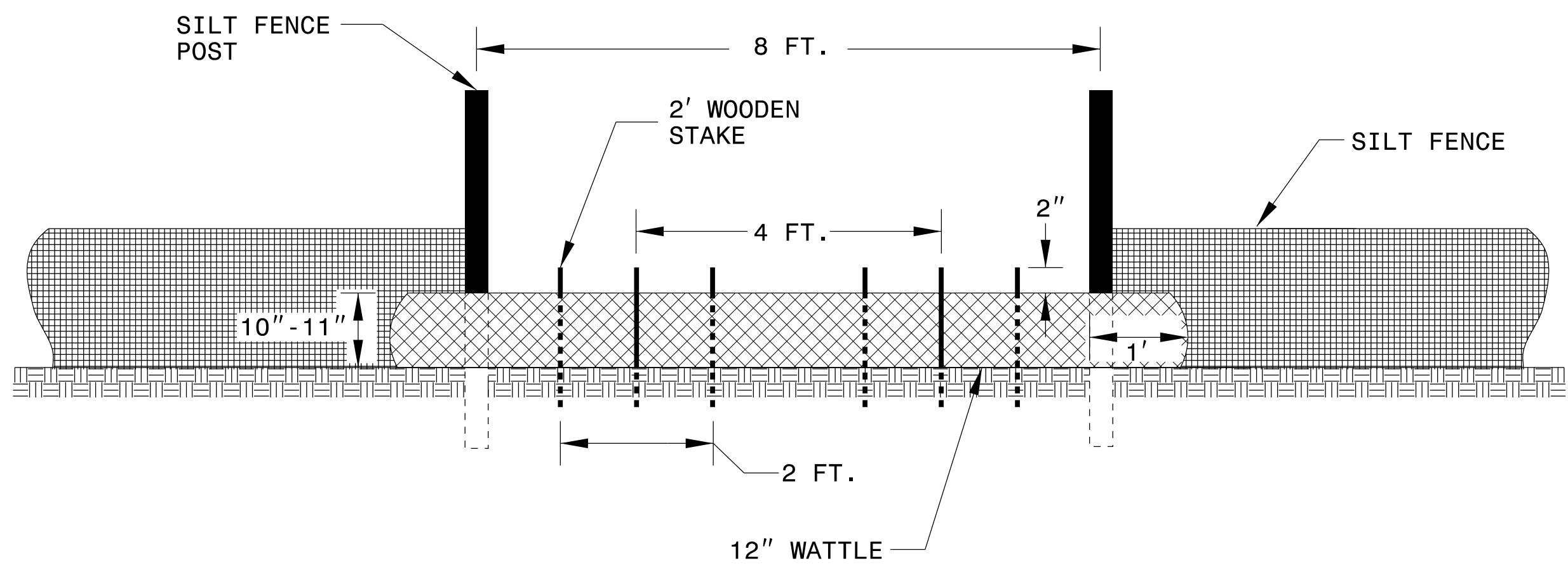
NOT TO SCALE

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

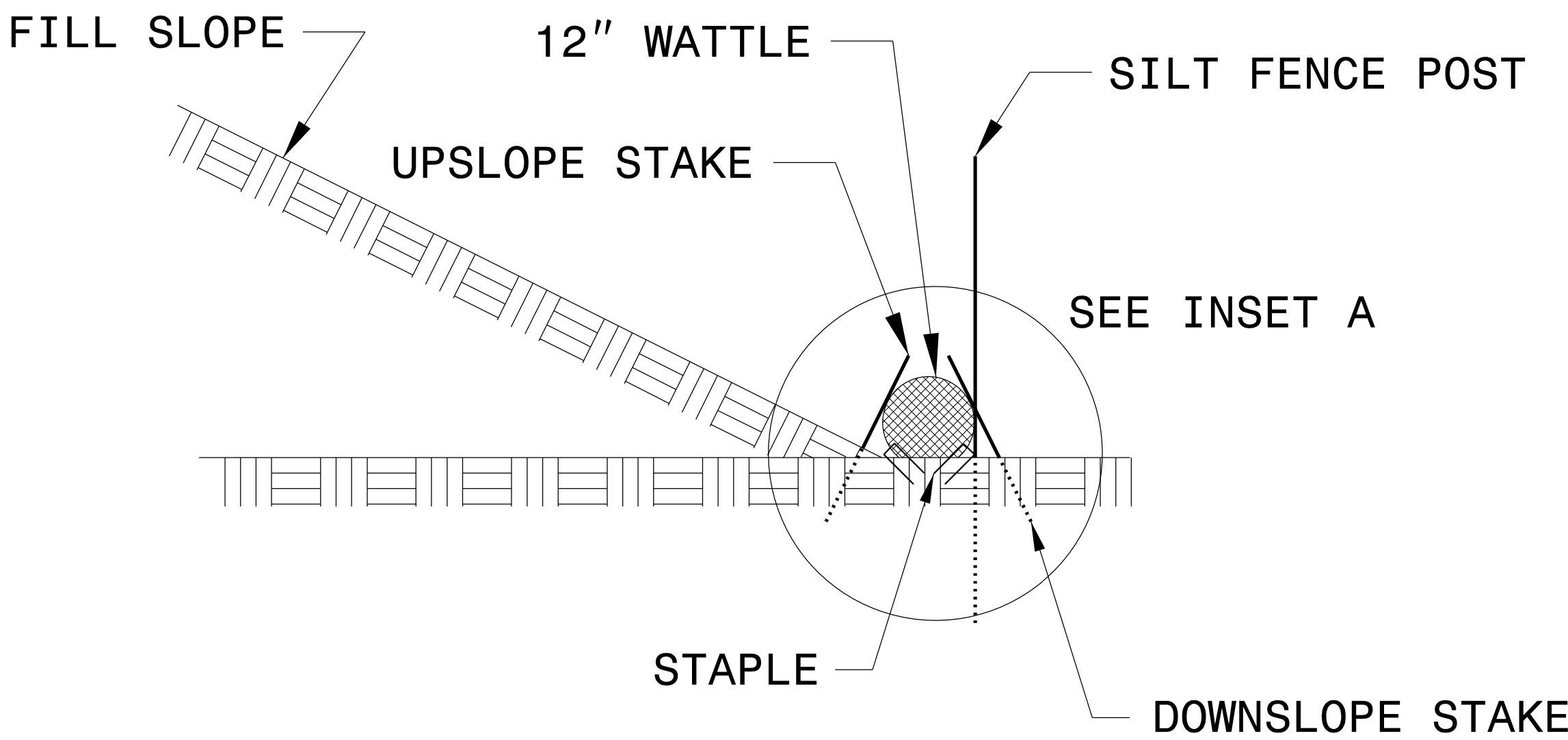
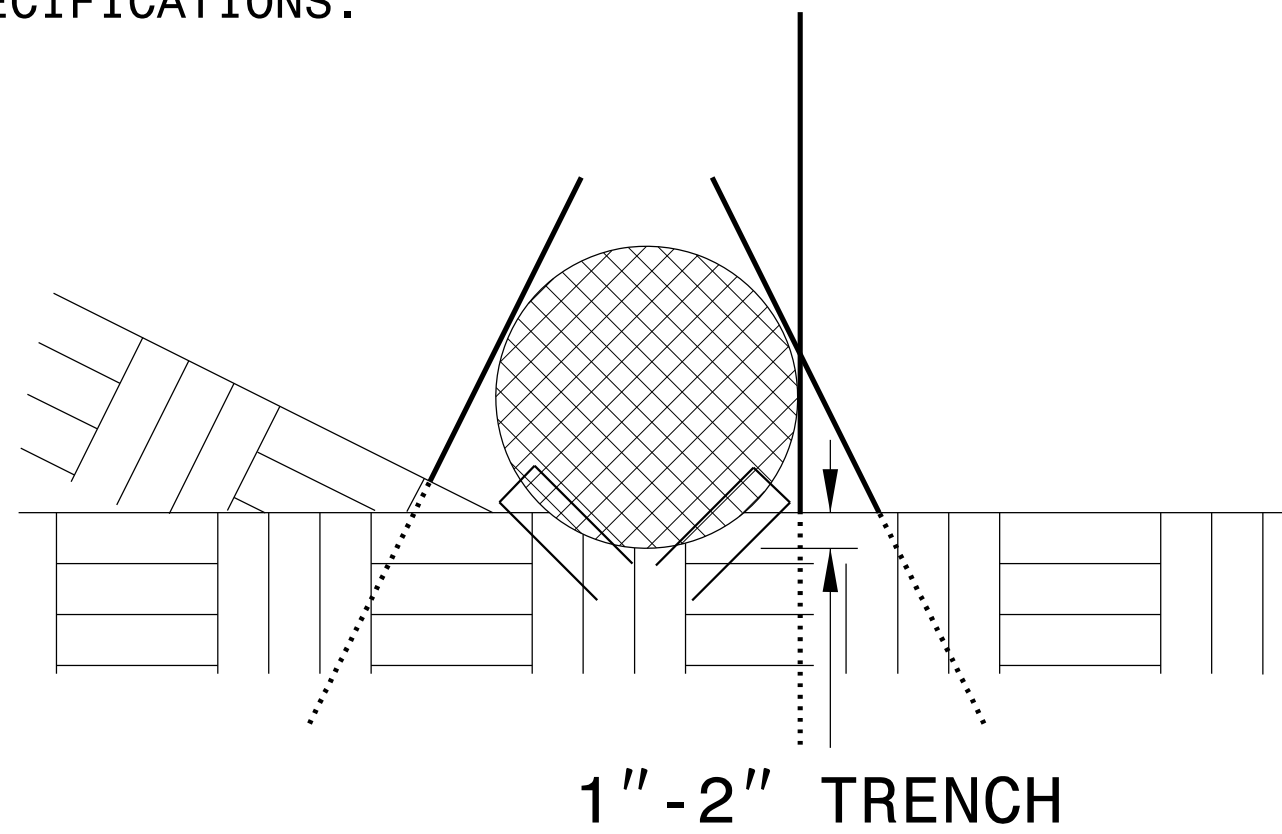
PROVIDE STAPLES MADE OF 11 GAUGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.

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

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



SIDE VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



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PROJECT REFERENCE NO.
R-4463A

SHEET NO.
EC-3

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

SOIL STABILIZATION SUMMARY SHEET

MATTING ON SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	- L -	15+00	15+50	L T	189
4	- L -	16+50	17+00	L T	192
4	- L -	16+50	17+00	R T	144
5	- L -	28+00	28+50	R T	146
5	- L -	29+50	32+00	R T	794
6	- L -	44+00	58+00	L T	4939
6	- L -	46+50	59+50	R T	5180
8	- L -	63+00	63+50	R T	144
8	- L -	71+00	71+50	L T	157
8	- L -	72+50	79+00	L T	2062
8	- L -	68+50	80+50	R T	3731
10	- L -	92+50	93+00	R T	151
10	- L -	93+00	93+50	L T	176
10	- L -	99+50	101+00	L T	505
11	- L -	109+50	112+50	R T	895
11	- L -	107+00	117+00	L T	3521
13	- L -	127+00	127+50	R T	166
13	- L -	127+50	128+50	L T	340
15	- Y -	36+00	46+00	L T	4233
15	- Y -	36+00	46+00	R T	4928
			SUBTOTAL		32593 SY

MATTING IN DITCHES (STRAW)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	- DR 2 -	10+95	10+20	L T	60
4	- DR 2 -	12+44	11+30	R T	90
4	- L -	10+90	10+70	L T	45
4	- L -	16+53	10+90	L T	1920
4	- L -	15+50	11+08	M	655
4	- L -	21+00	15+50	M	810
4	- Y -	30+20	24+93	L T	1060
4	- Y -	30+60	25+50	R T	980
4	- Y -	31+20	31+05	R T	30
4	- Y -	36+00	31+75	R T	860
4	- Y -	32+28	31+95	L T	130
4	- Y -	33+50	32+38	L T	380
5	- L -	24+05	21+00	M	450
5	- L -	28+70	24+05	M	685
5	- L -	30+00	29+20	R T	85
6	- L -	35+00	30+00	R T	505
6	- L -	39+80	36+78	M	445
6	- L -	41+25	39+50	L T	220
6	- L -	46+00	39+80	M	915
6	- L -	50+00	47+75	L T	345
7	- L -	52+25	46+00	M	925
7	- L -	58+00	52+25	M	850
8	- L -	65+00	58+00	M	1035
8	- L -	69+00	65+00	M	590
8	- L -	71+81	69+00	M	415
8	- L -	78+00	73+40	M	680
9	- L -	82+31	78+00	M	635
9	- L -	85+00	82+31	M	400
9	- L -	87+50	85+00	M	370
9	- L -	89+80	87+50	M	340

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



SHEET NO.

EC-3A

HYDRAULICS
ENGINEER

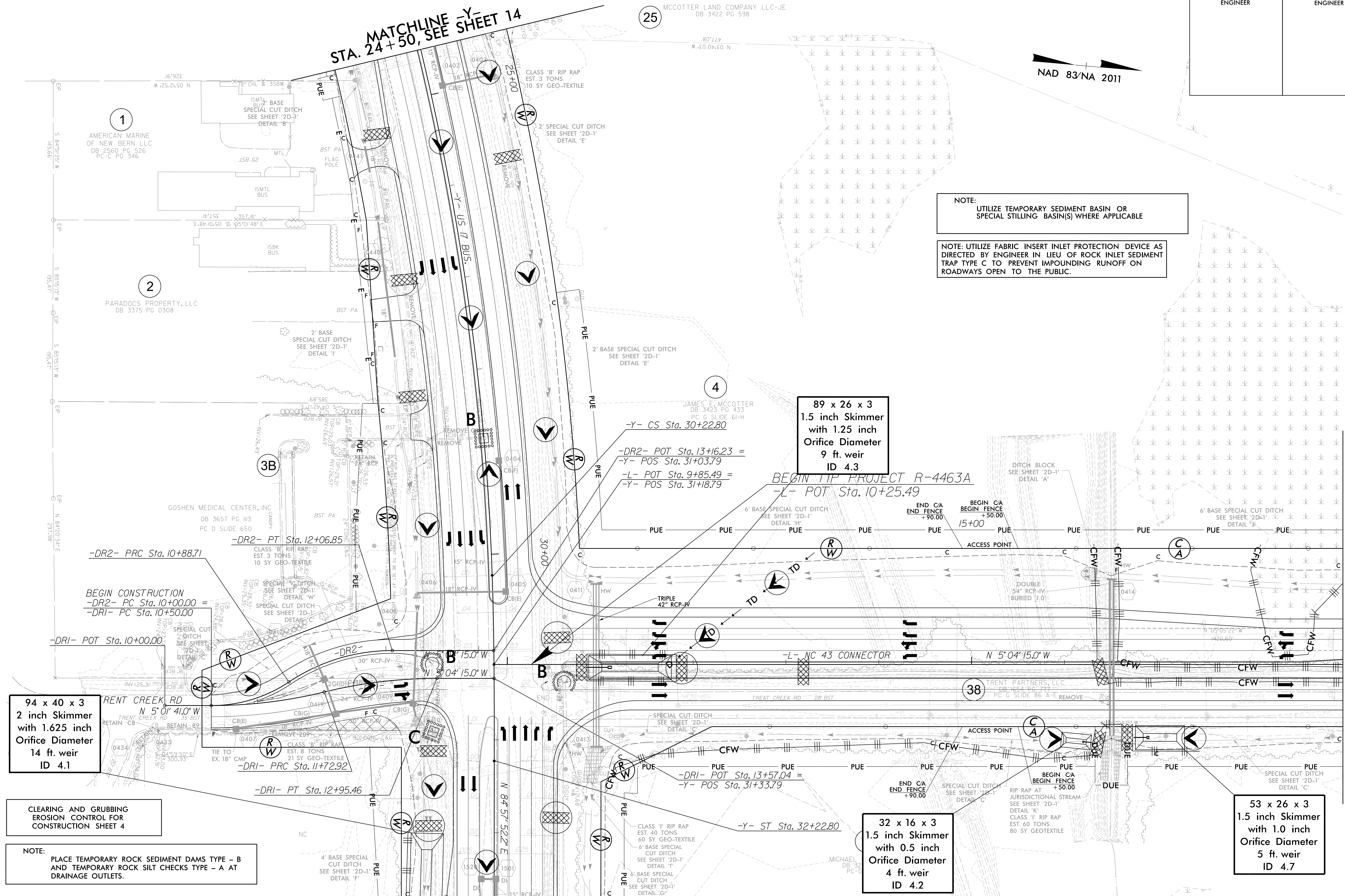
SOIL STABILIZATION SUMMARY SHEET

MATTING IN DITCHES (STRAW)

[illegible]

MATTING IN DITCHES (EXCELSIOR)

[illegible]



MATCHLINE -Y- STA. 33+70, SEE SHEET 15

MATCHLINE -L- STA. 19+00, SEE SHEET 5

PHASE I

-
- Technical drawing of a bridge pier and abutment. The drawing includes the following annotations and features:
- IMPERVIOUS DIKE**: Two labels pointing to different locations on the structure.
 - DOUBLE 54" RCP-IV BURIED 1.0'**: Label indicating the type and depth of the structure.
 - HW**: High Water mark.
 - 0414**: A hexagonal marker or label.
 - REMOVE**: Label indicating a section to be removed.
 - SS**: Substrate or similar material.
 - TC**: Top of Channel.
 - DU**: Dredge or similar material.
 - C**: Centerline or similar marker.
 - A**: A circular marker with the letter A inside.
 - Flow Arrows**: Indicate the direction of water flow.
 - Structural Details**: Includes a cross-section of a pier, a cross-section of an abutment, and various lines representing the structure and surrounding environment.

NAD 83

-

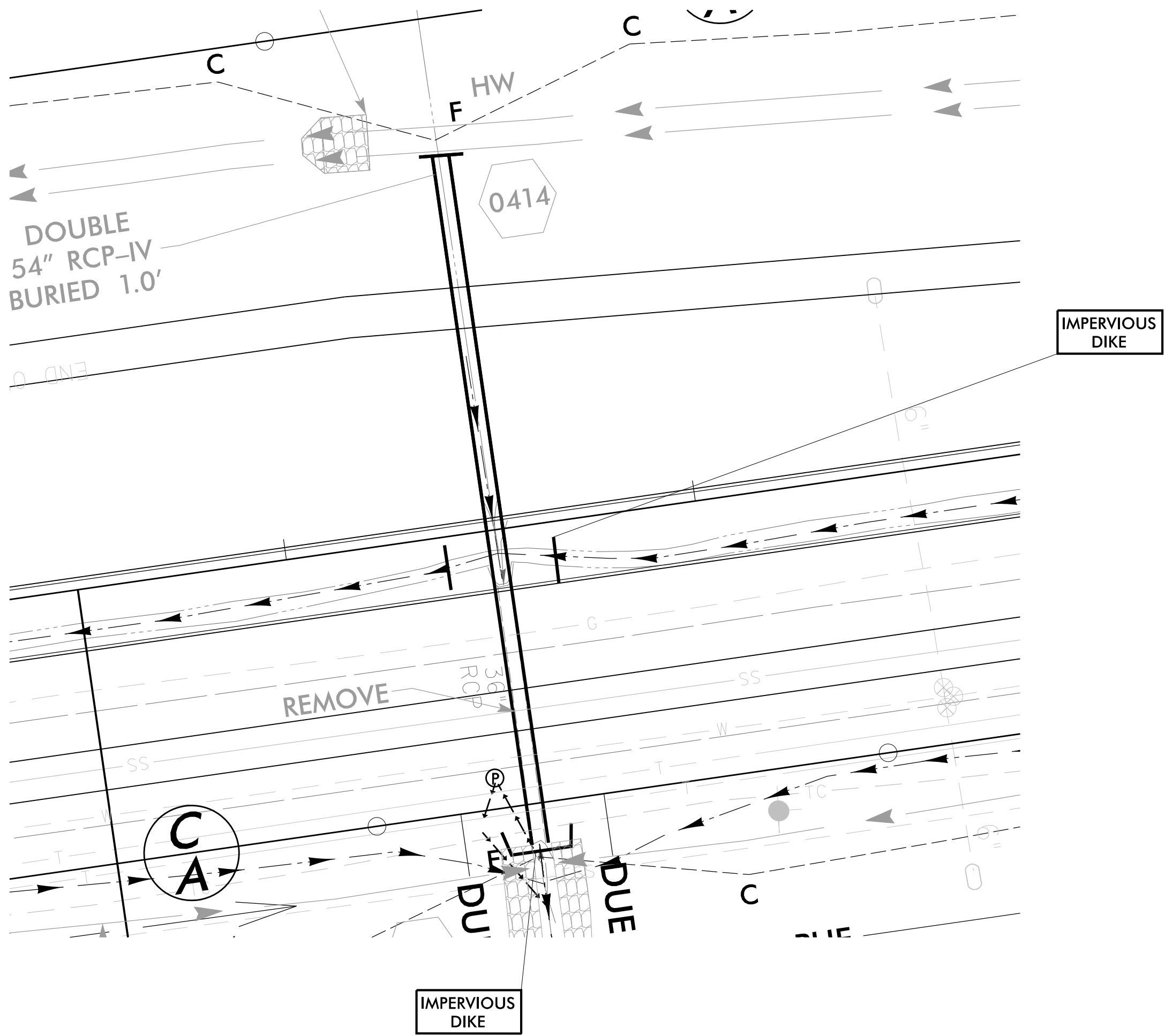
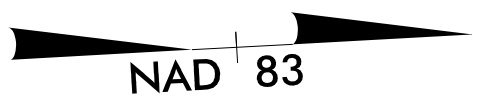
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	PROJECT REFERENCE NO.	
	SHEET NO.	
	RW SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

2 @ 54" RCP CONSTRUCTION SEQUENCE STA. 16+50 -L-

PHASE III

1. INSTALL IMPERVIOUS DIKES AS SHOWN.
2. CONSTRUCT REMAINING PORTION OF 2 @ 54" RCPs.
3. COMPLETE ANY NECESSARY CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES TO ESTABLISH FLOW THROUGH NEWLY CONSTRUCTED CULVERT.
5. COMPLETE ROADWAY WORK.

NOT TO SCALE

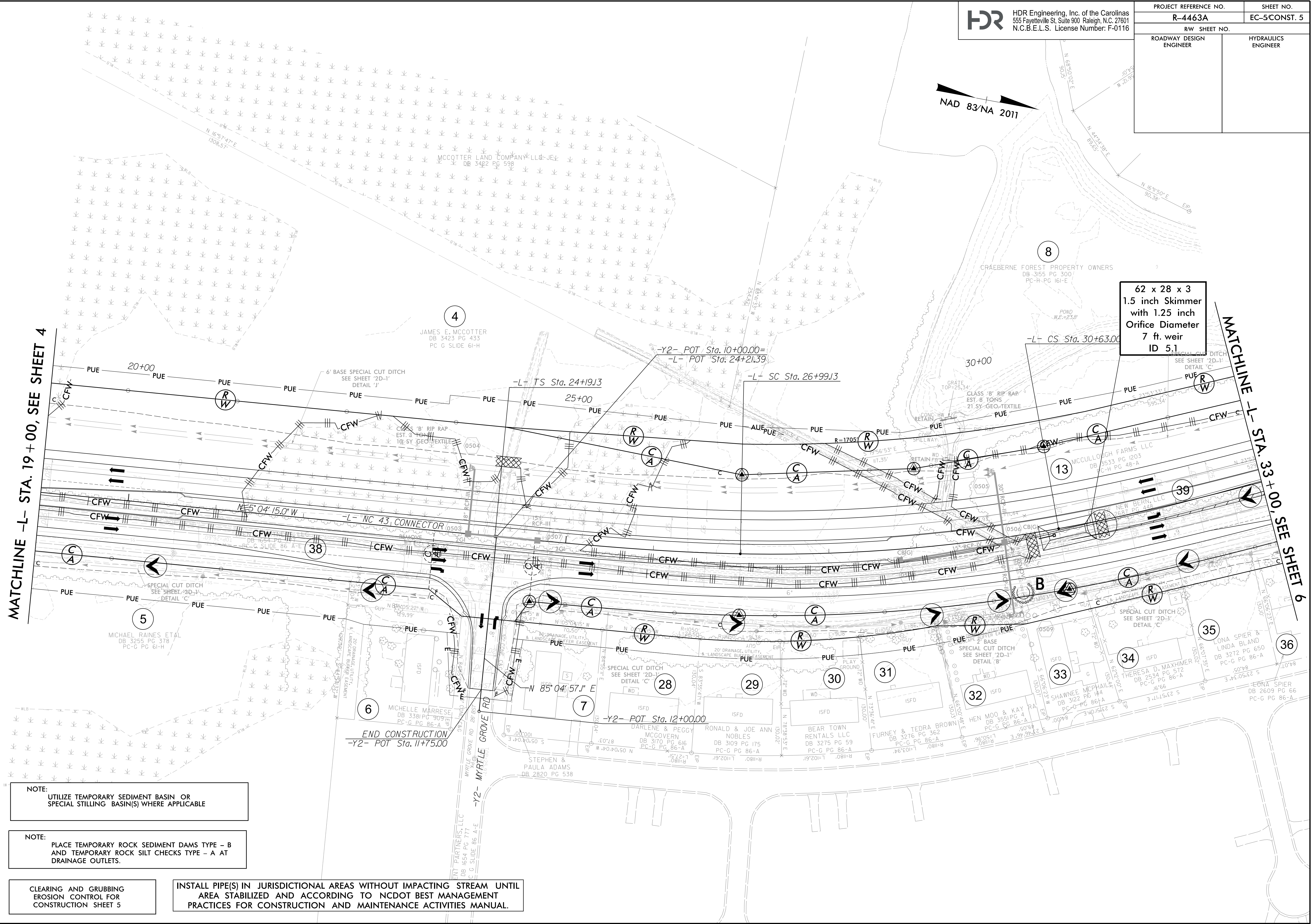


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PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-5/CONST. 5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



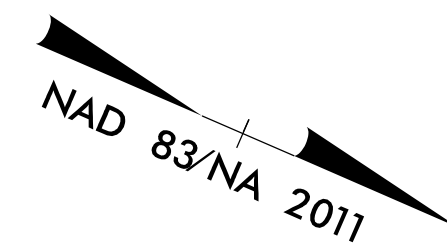
NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR
SPECIAL STILLING BASIN(S) WHERE APPLICABLE

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 5

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL
AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-6CONST. 6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

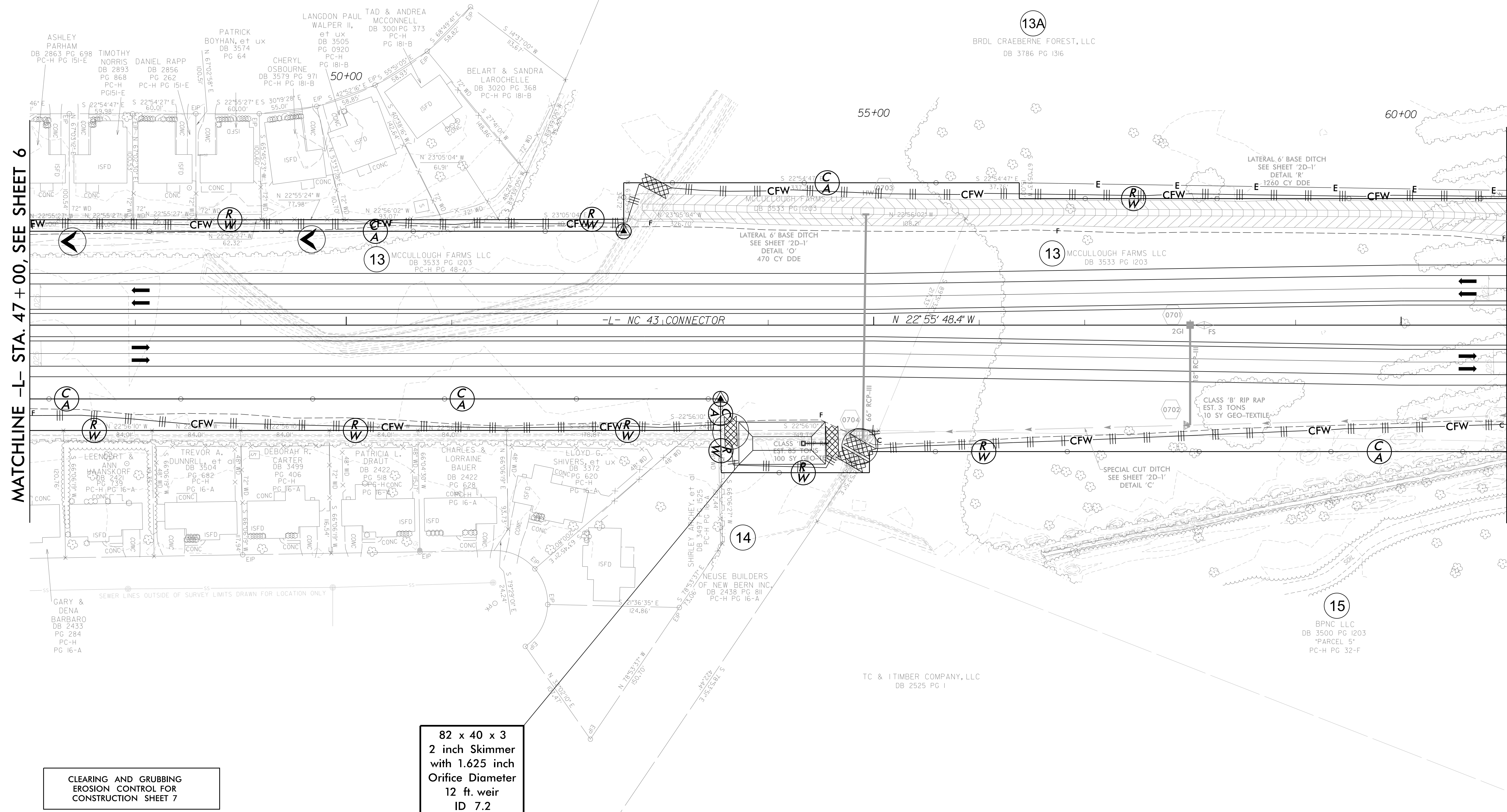
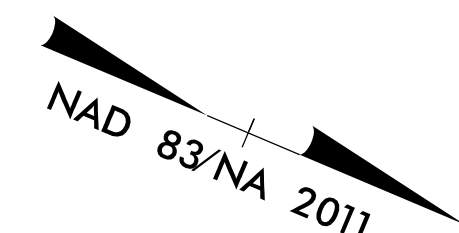


MATCHLINE -L- STA. 33+00, SEE SHEET 5

MATCHLINE -L- STA. 47+00, SEE SHEET 7

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.



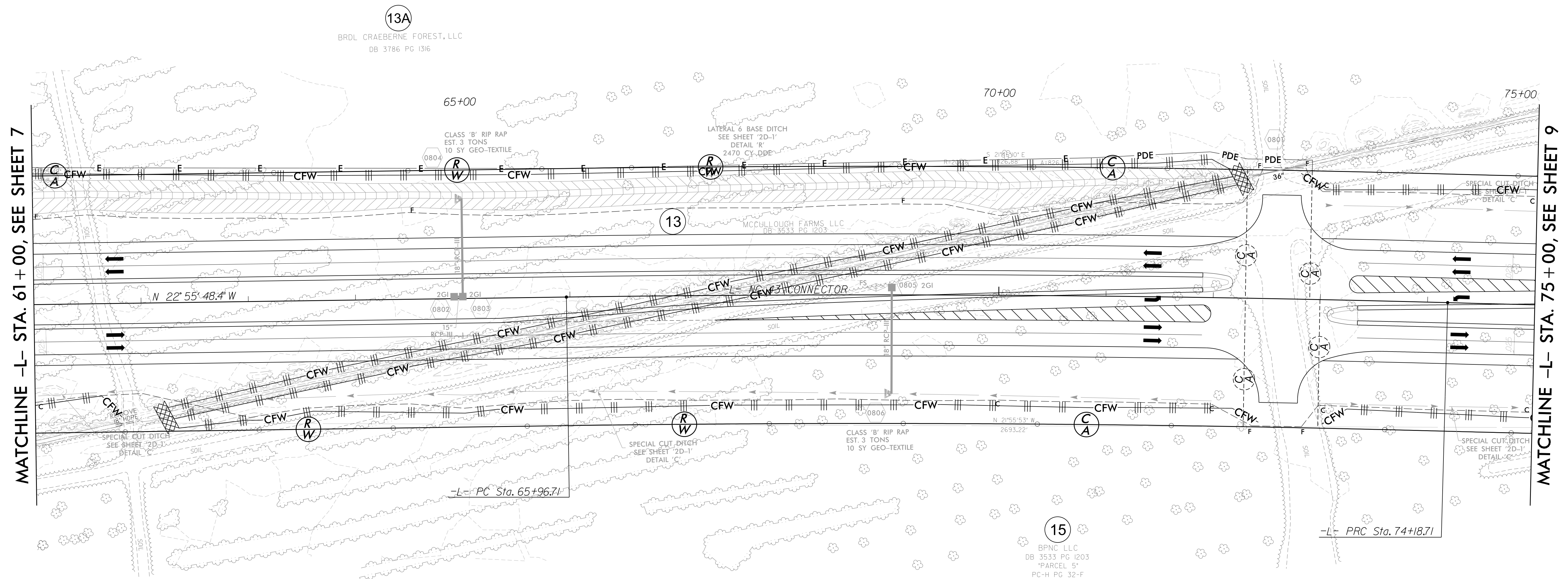
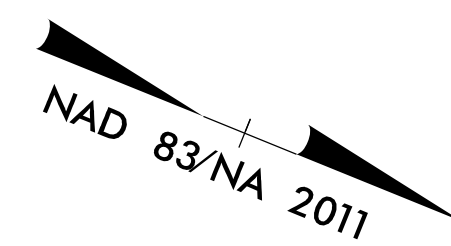
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

82 x 40 x 3
2 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 7.2

MATCHLINE -L- STA. 47+00, SEE SHEET 6

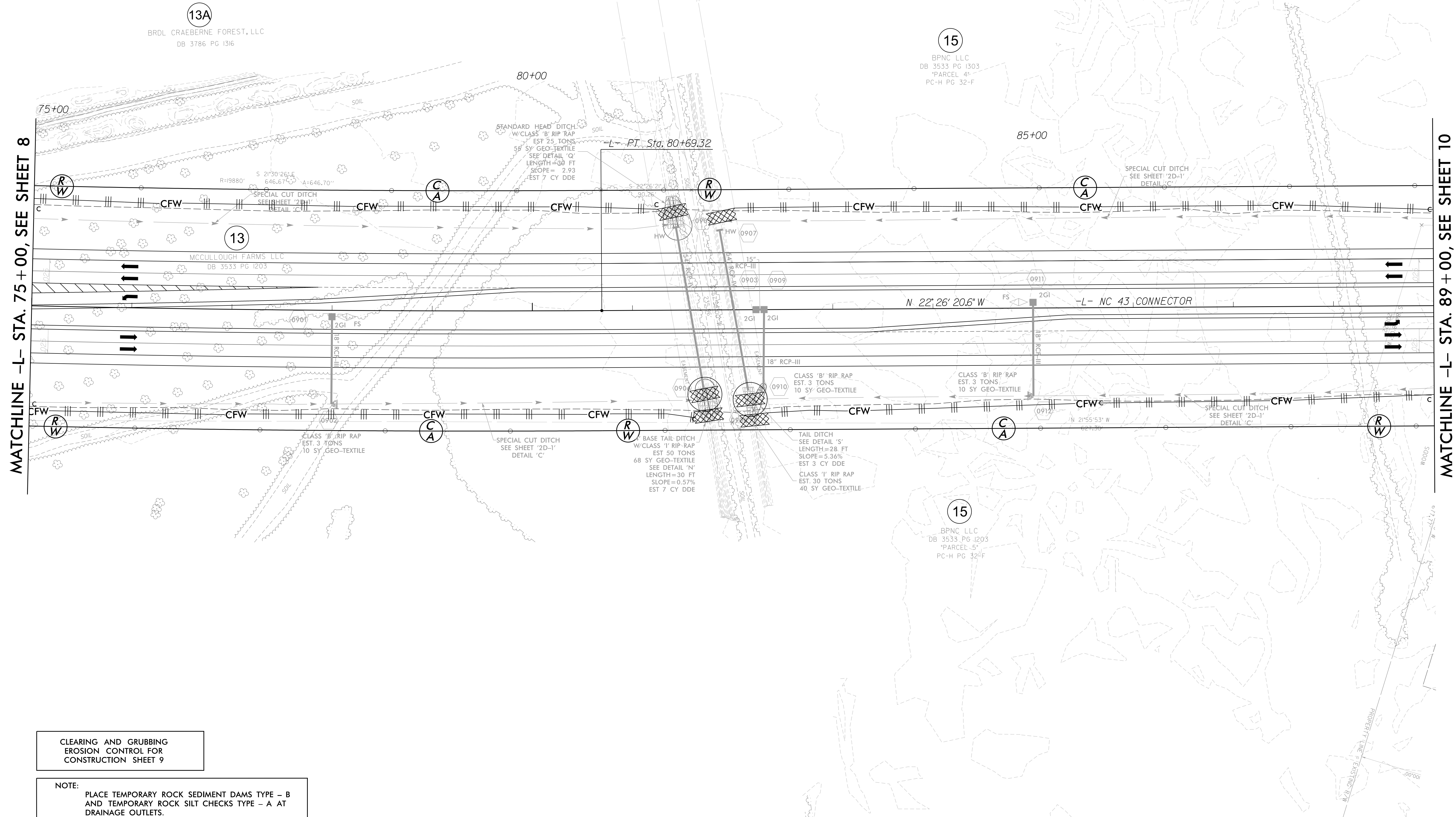
MATCHLINE -L- STA. 61+00, SEE SHEET 8

REVISIONS



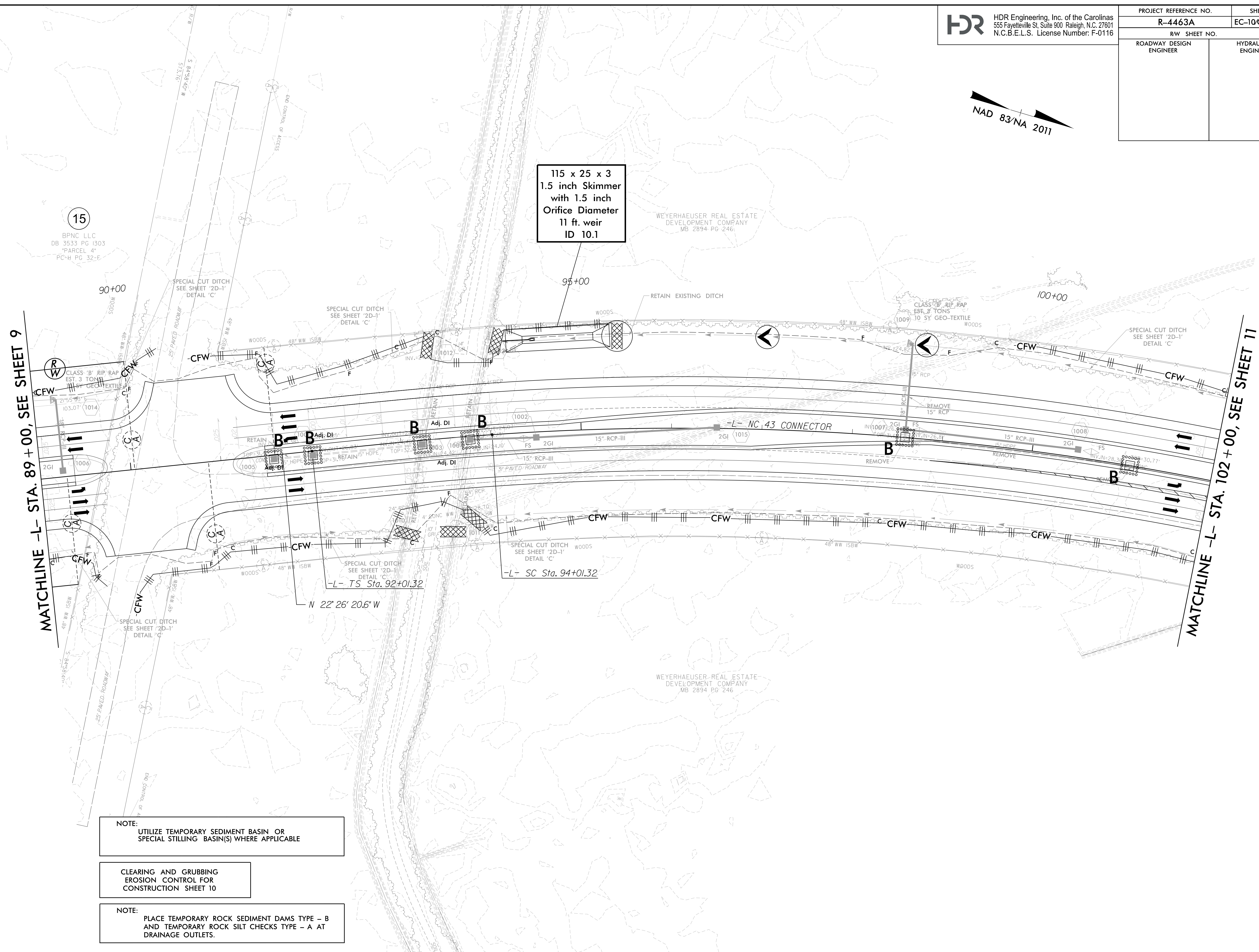
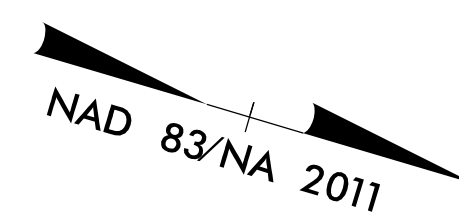
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

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 9

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



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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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

PLOT DRIVER: NCDOT_pdf_color_eng100_CGM USE FOR 24x36 INCHES: NCDOT_EC.C&G BW.tbl
USER: DWAGNER DATE: 3/7/2025 TIME: 11:07:28 AM
FILE: ...\\PSHNR4463A\\EC.PSH-10_C&G.dgn

REVISIONS

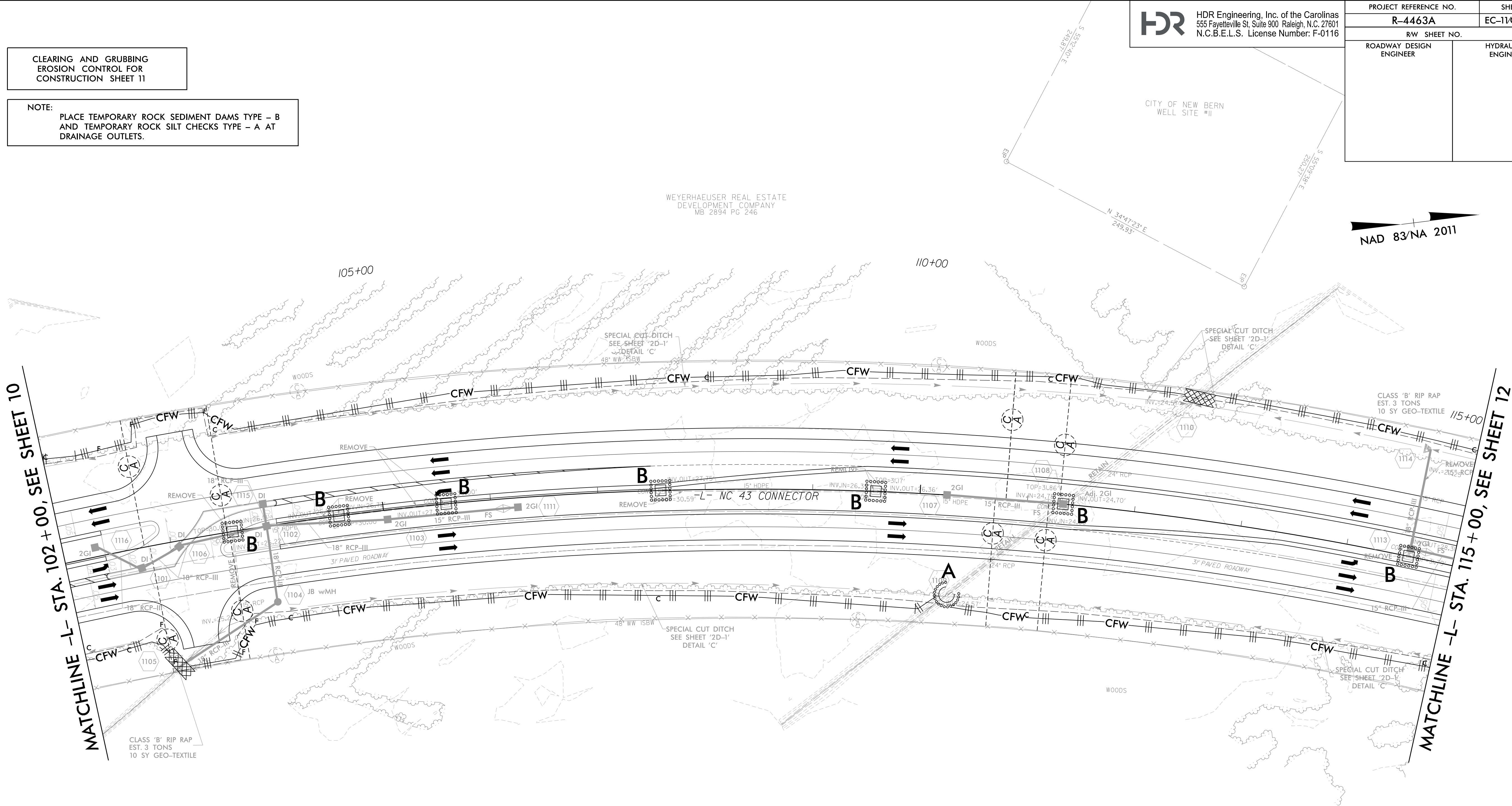
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

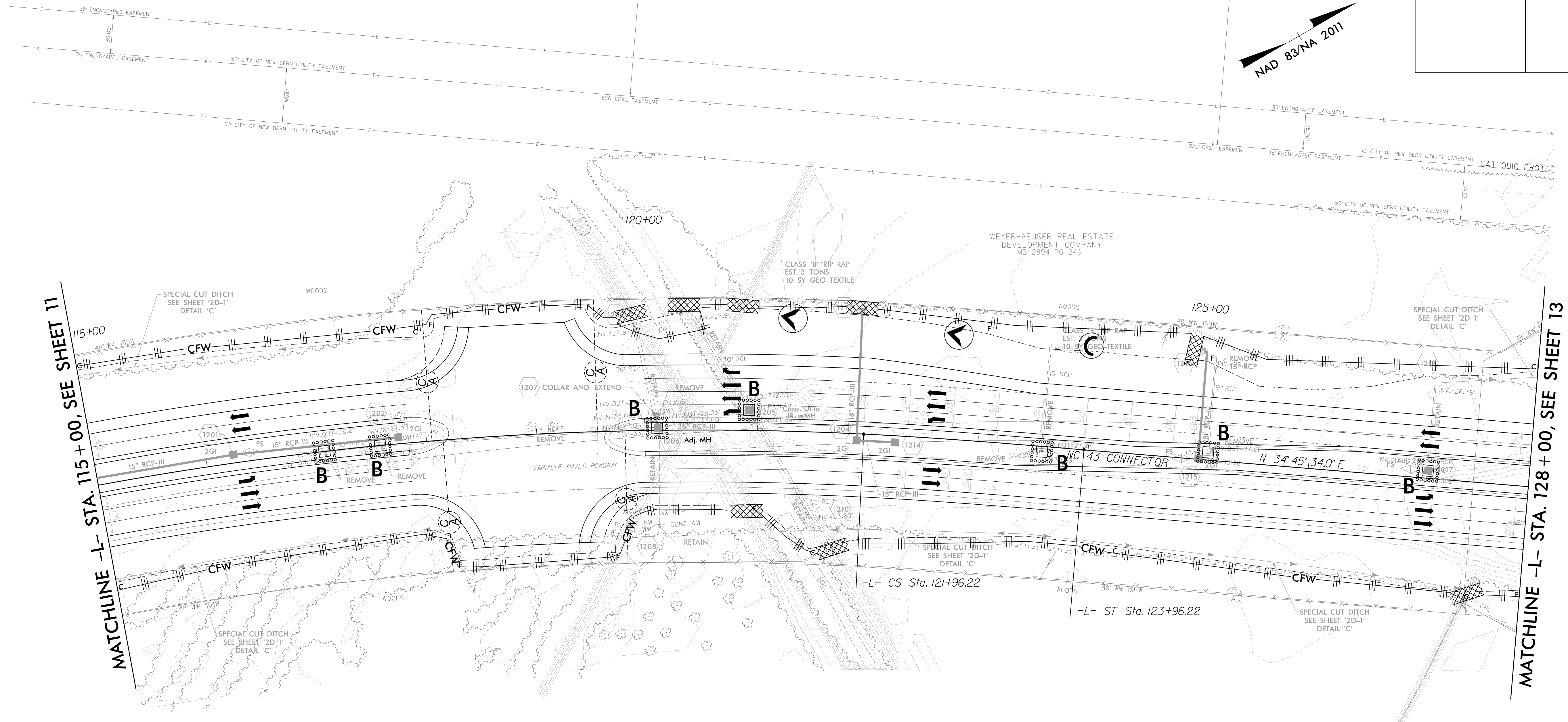


HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-11/CONST. 11
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



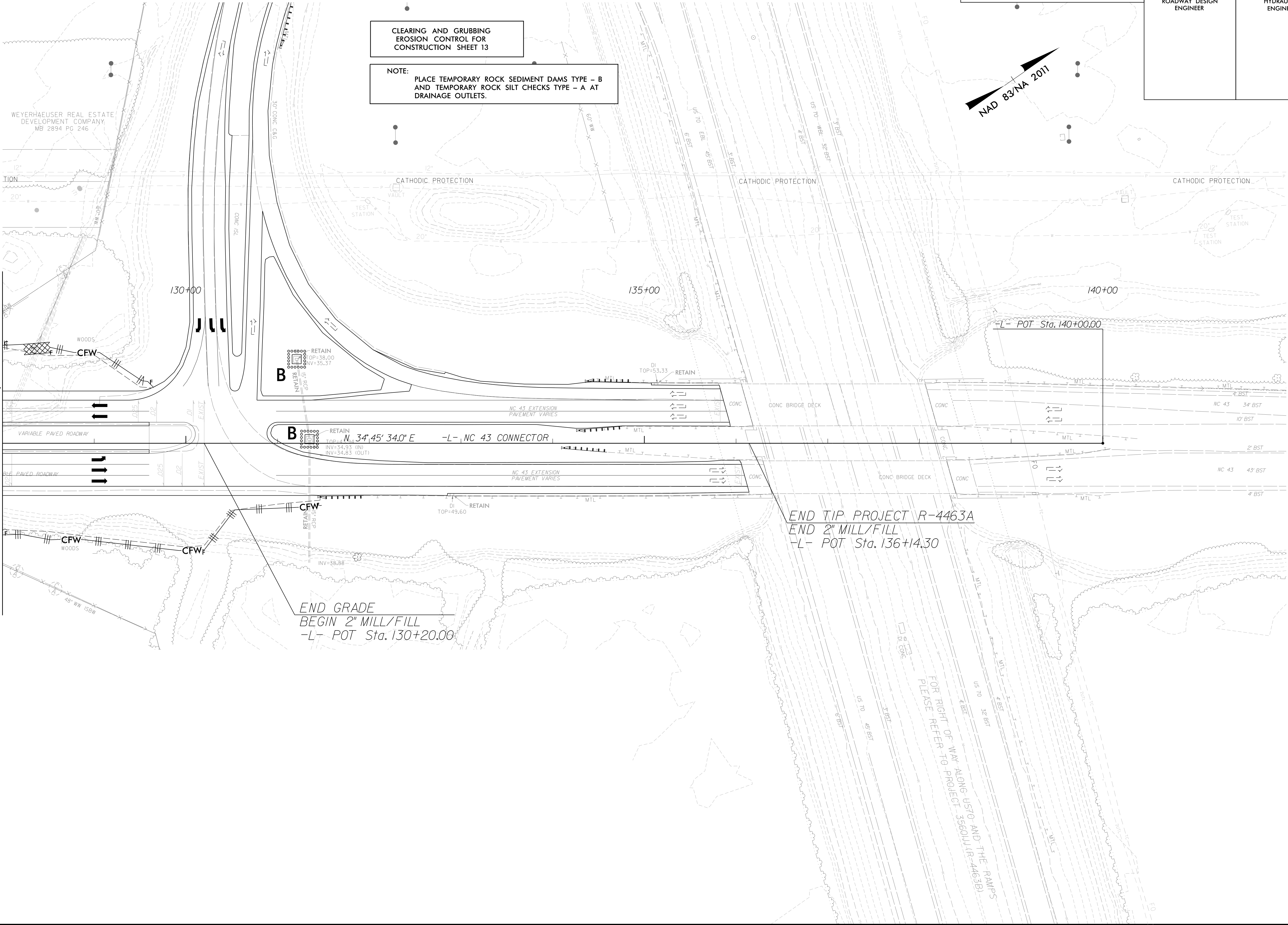
WEYERHAEUSER REAL ESTATE
DEVELOPMENT COMPANY
MB 2894 PG 246

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

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

REVISIONS

MATCHLINE -L- STA. 128+00, SEE SHEET 12



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555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-13/CONST. 13
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

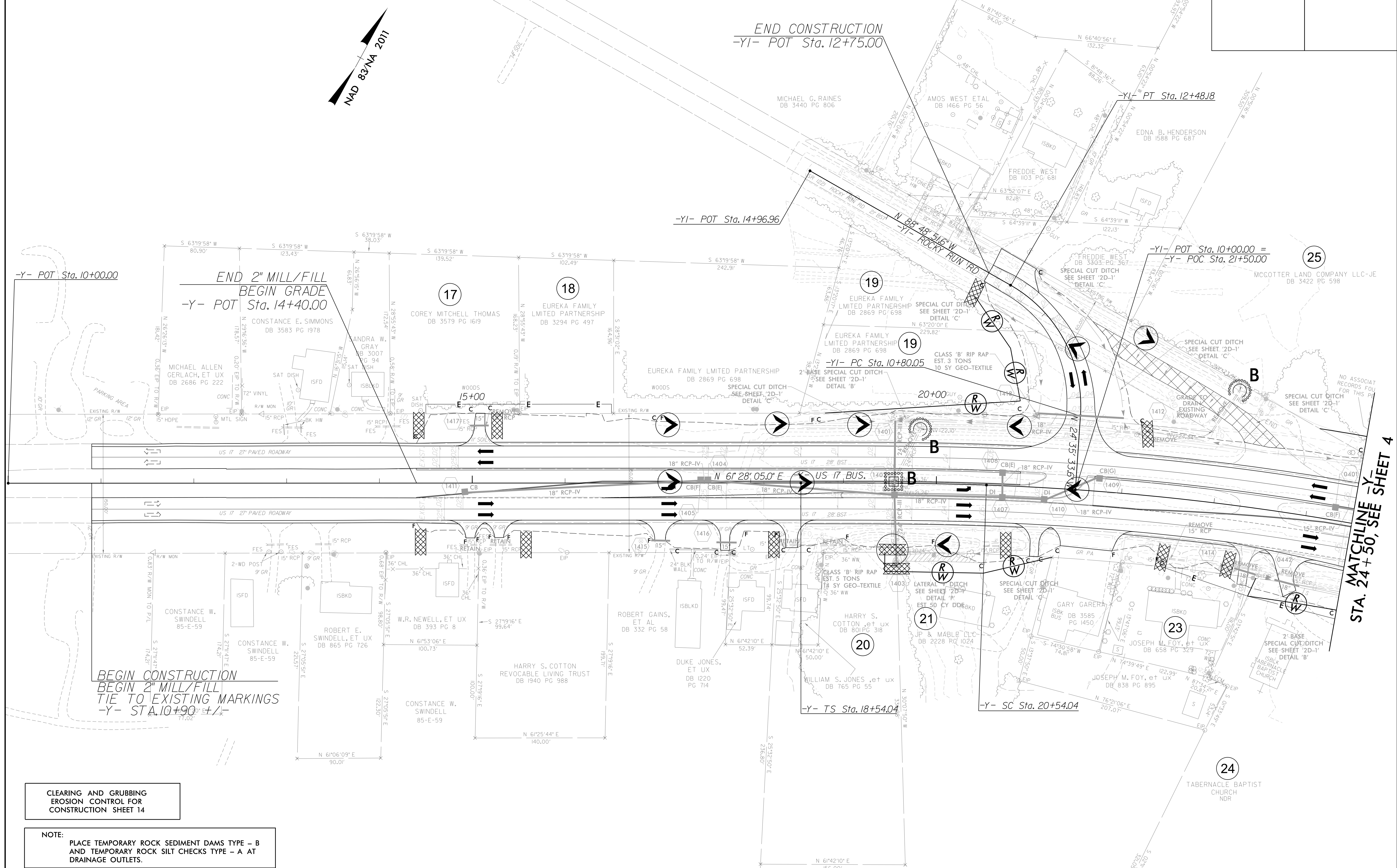
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FILE: ...\\PSH\\R4463A_EC.PSH-13A.C&G.dgn

REVISIONS



MATCHLINE RESURFACING, SEE SHEET 13

PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-13A/CONST.13A
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



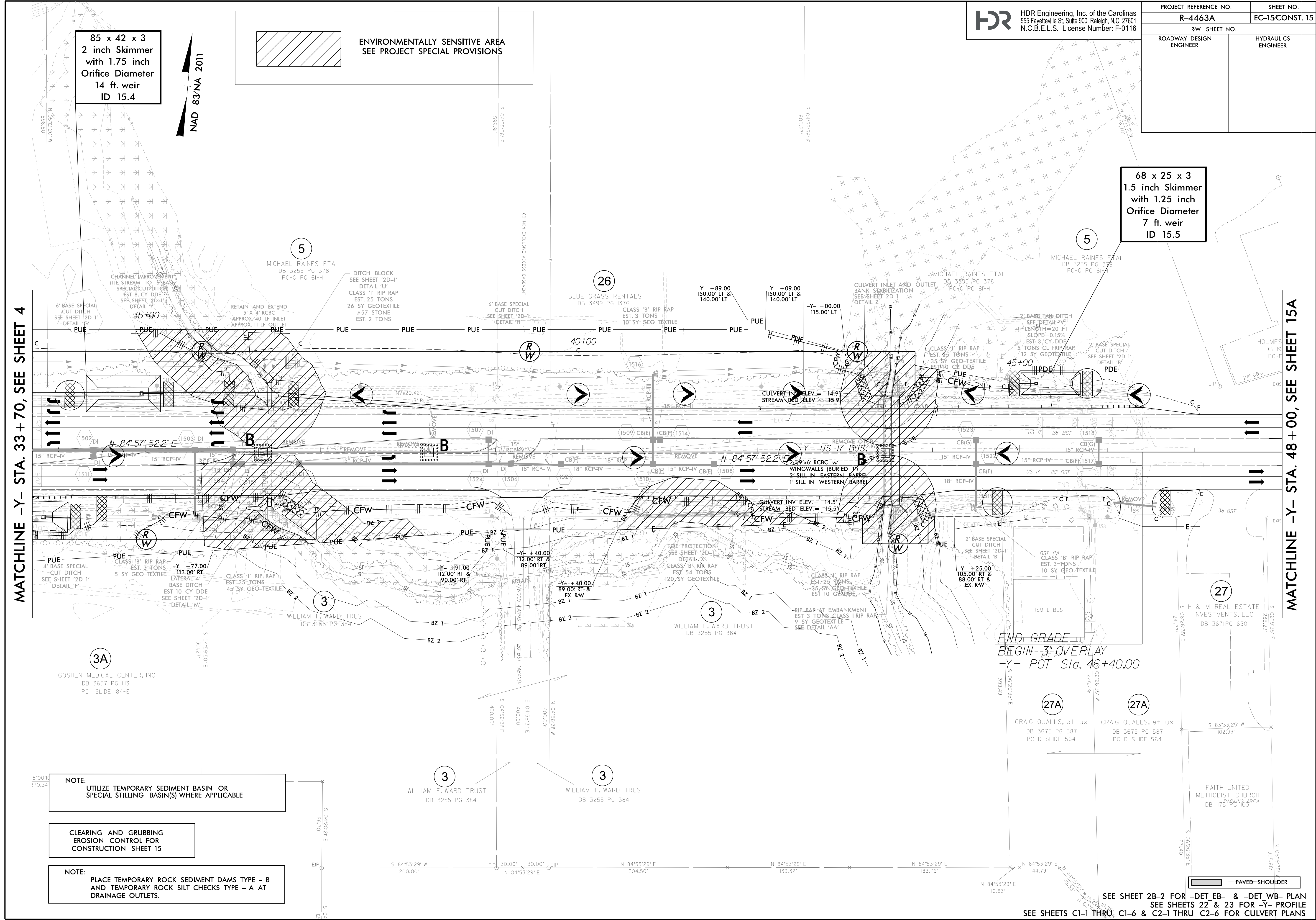
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

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

MATCHLINE -Y-
STA. 24+50, SEE SHEET 4

PLOT DRIVER: NCDOT_pdf_color_eng-100 _CGM USE FOR 2R8R8643E; NCDOT_EC_C&G BW.tbl
USER: DWAGNER DATE: 3/7/2025 TIME: 11:08:18 AM
FILE: ...\\PSH\\R4463A_EC.PSH-15_C&G.dgn

7/12/2022: PARCELS 3A & 27A CREATED FOR NEW OWNERS AND PARCEL BOUNDARIES



PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-15/CONST. 15
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

HDR

HDR Engineering, Inc. of the Carolinas

555 Fayetteville St, Suite 900 Raleigh, N.C. 27601

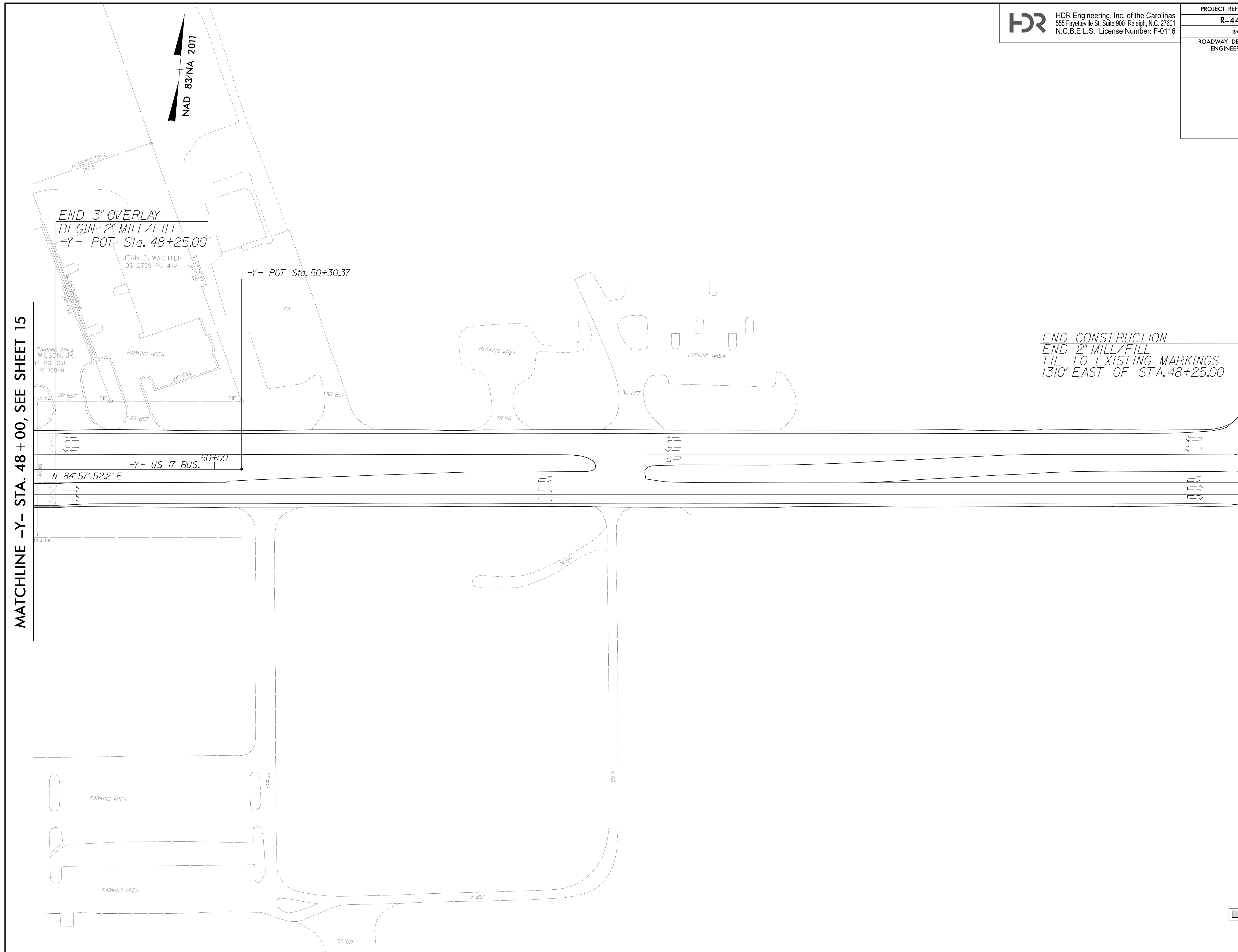
N.C.B.E.L.S. License Number: F-0116

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15

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

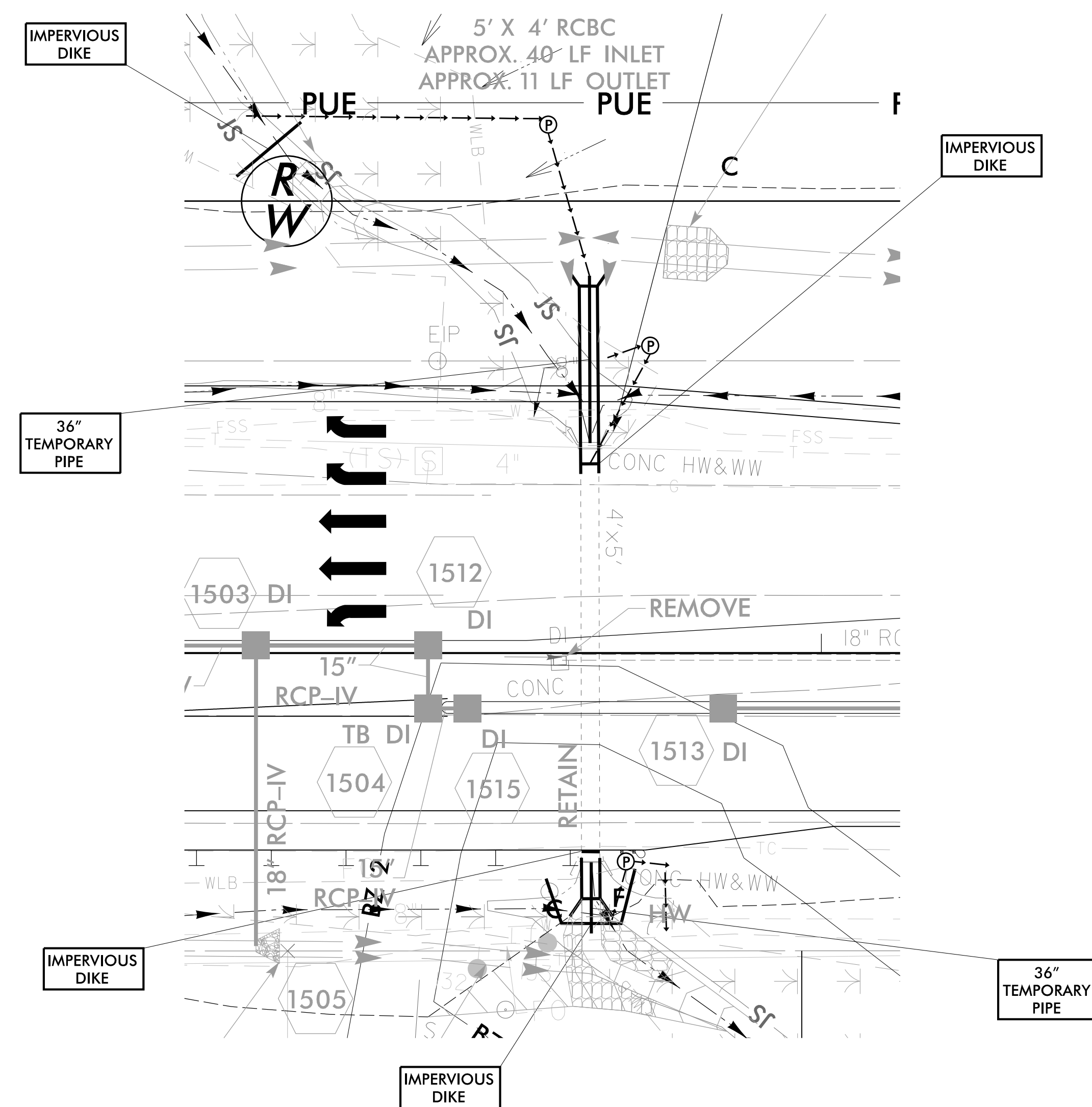
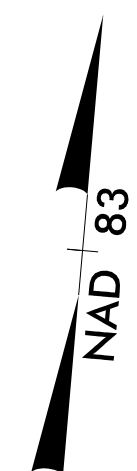
SEE SHEET 28-2 FOR -DET EB- & -DET WB-
SEE SHEETS 22 & 23 FOR -Y- PROFILE
SEE SHEETS C1-1 THRU C1-6 & C2-1 THRU C2-6 FOR CULVERT PLANS



 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	PROJECT REFERENCE NO.	SHEET NO.
	R-4463A	EC-15B/CONST.15
	RW SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

4' X 5' RCBC CONSTRUCTION SEQUENCE STA. 36+40 -Y-

NOT TO SCALE



1. CONSTRUCT PORTION OF FINAL LEFT AND RIGHT DITCHES AT INLET OF FUTURE 4'X5' RCBC EXTENSION. UTILIZE IMPERVIOUS DIKES AND PUMP AS SHOWN.
2. INSTALL TEMPORARY 36" PIPES AND IMPERVIOUS DIKES AT INLET AND OUTLET OF CULVERT TO ISOLATE WORK AREA.
3. DIVERT WATER THROUGH NEWLY CONSTRUCTED DITCHES INTO TEMPORARY 36" PIPE AT INLET OF EXISTING 4'X5' RCBC.
4. PROVIDE PUMP AND SPECIAL STILLING BASIN FOR DEWATERING OF THE WORK ZONE AT UPSTREAM AND DOWNSTREAM ENDS.
5. CONSTRUCT CULVERT EXTENSIONS.
6. COMPLETE ANY NECESSARY CHANNEL IMPROVEMENTS.
7. REMOVE IMPERVIOUS DIKES TO ESTABLISH FLOW THROUGH NEWLY CONSTRUCTED CULVERT.

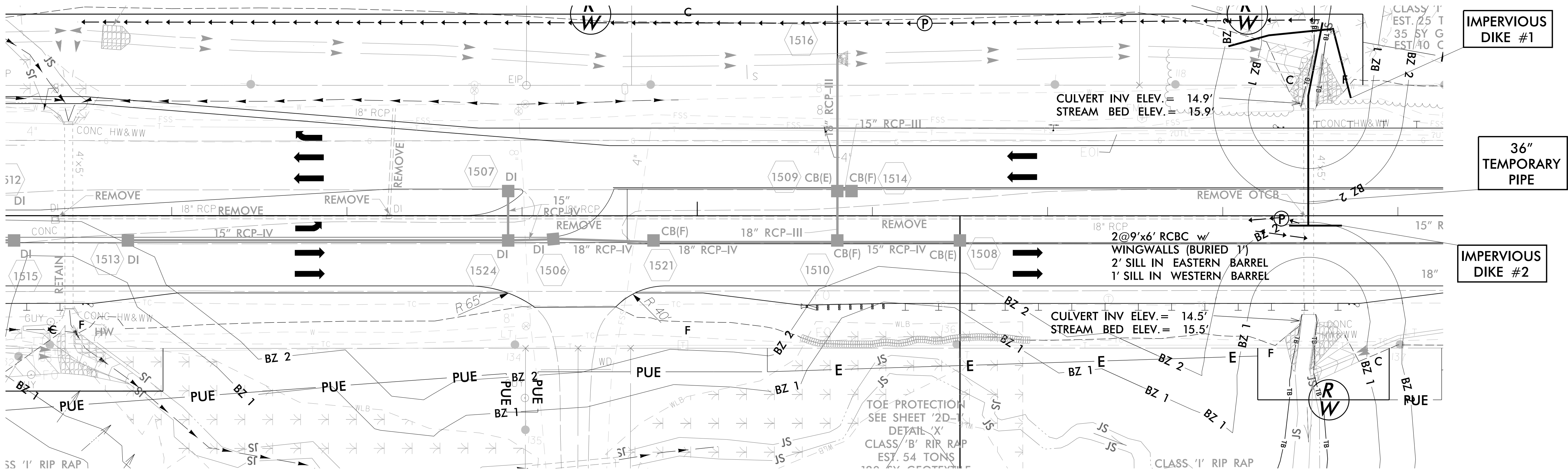
	HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	PROJECT REFERENCE NO.		SHEET NO.		
			R-4463A		EC-15C/CONST.15	
			RW SHEET NO.			
			ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

2 @ 9' X 6' RCBC CONSTRUCTION SEQUENCE STA. 43+50 -Y-

NOT TO SCALE

PHASE I

1. SHIFT TRAFFIC TO SOUTH SIDE.
2. INSTALL IMPERVIOUS DIKE #1 AT INLET OF EXISTING 4'X5' RCBC TO ISOLATE WORK AREA.
3. INSTALL PUMP-AROUND OPERATION TO DIVERT WATER AWAY FROM THE WORK AREA. STABILIZE OUTLET OF PUMPED DISCHARGE.
4. REMOVE NORTH SECTION OF EXISTING 4'X5' RCBC.
5. INSTALL IMPERVIOUS DIKE #2 AT INLET OF REMAINING SECTION OF 4'X5' RCBC AND INSTALL TEMPORARY 36" PIPE IN PLACE OF REMOVED SECTION OF EXISTING 4'X5' RCBC.
6. PROVIDE PUMP AND SPECIAL STILLING BASIN FOR DEWATERING OF THE WORK ZONE INTO REMAINING SECTION OF EXISTING 4'X5' RCBC.
7. ESTABLISH FLOW THROUGH TEMPORARY 36" PIPE AND REMAINING SECTION OF 4'X5' RCBC AND REMOVE PUMP-AROUND OPERATION.



HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116		PROJECT REFERENCE NO. R-4463A	SHEET NO. EC-15D/CONST.15
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

2 @ 9' X 6' RCBC CONSTRUCTION SEQUENCE STA. 43 + 50 -Y- (CONTINUED)

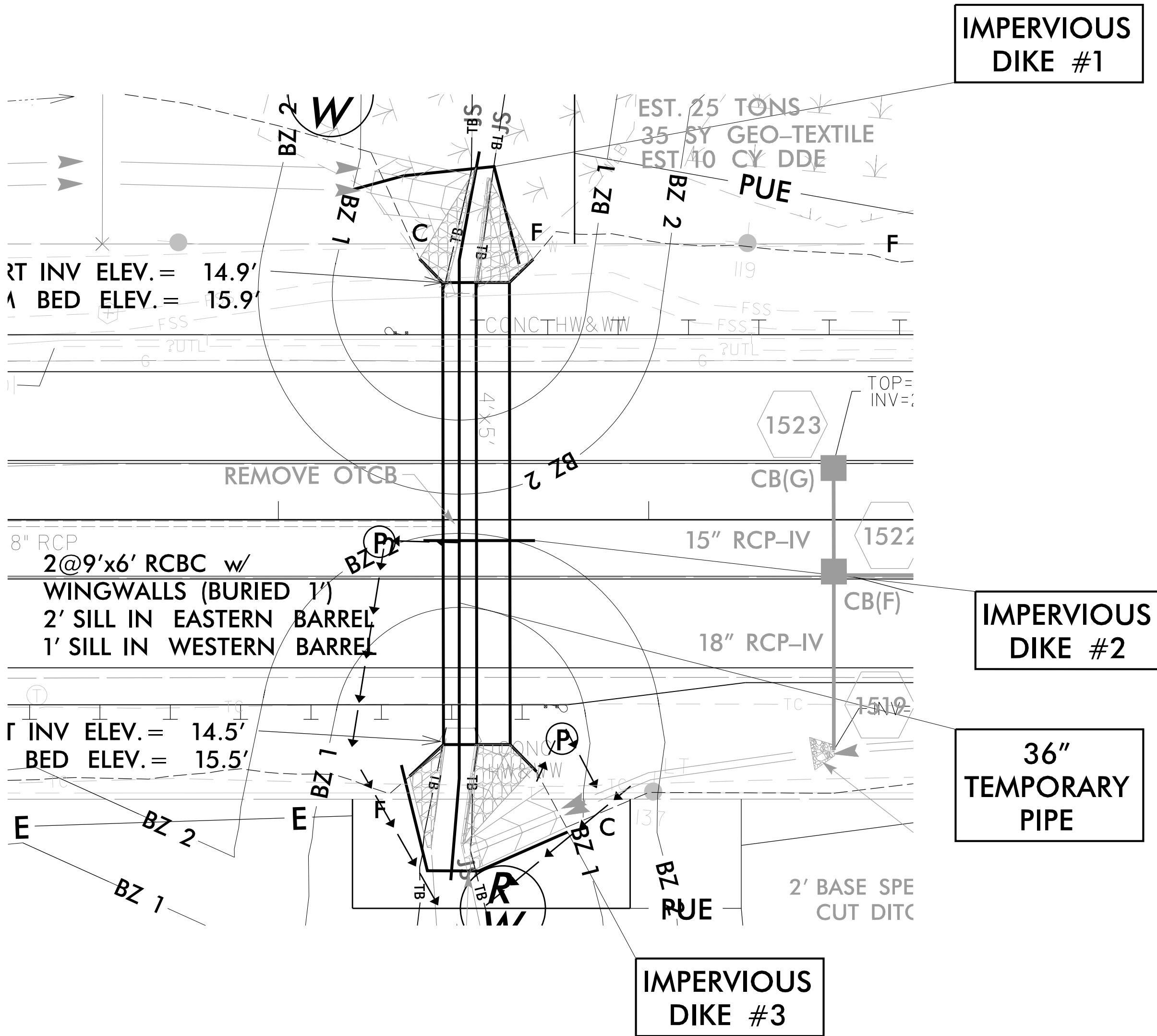
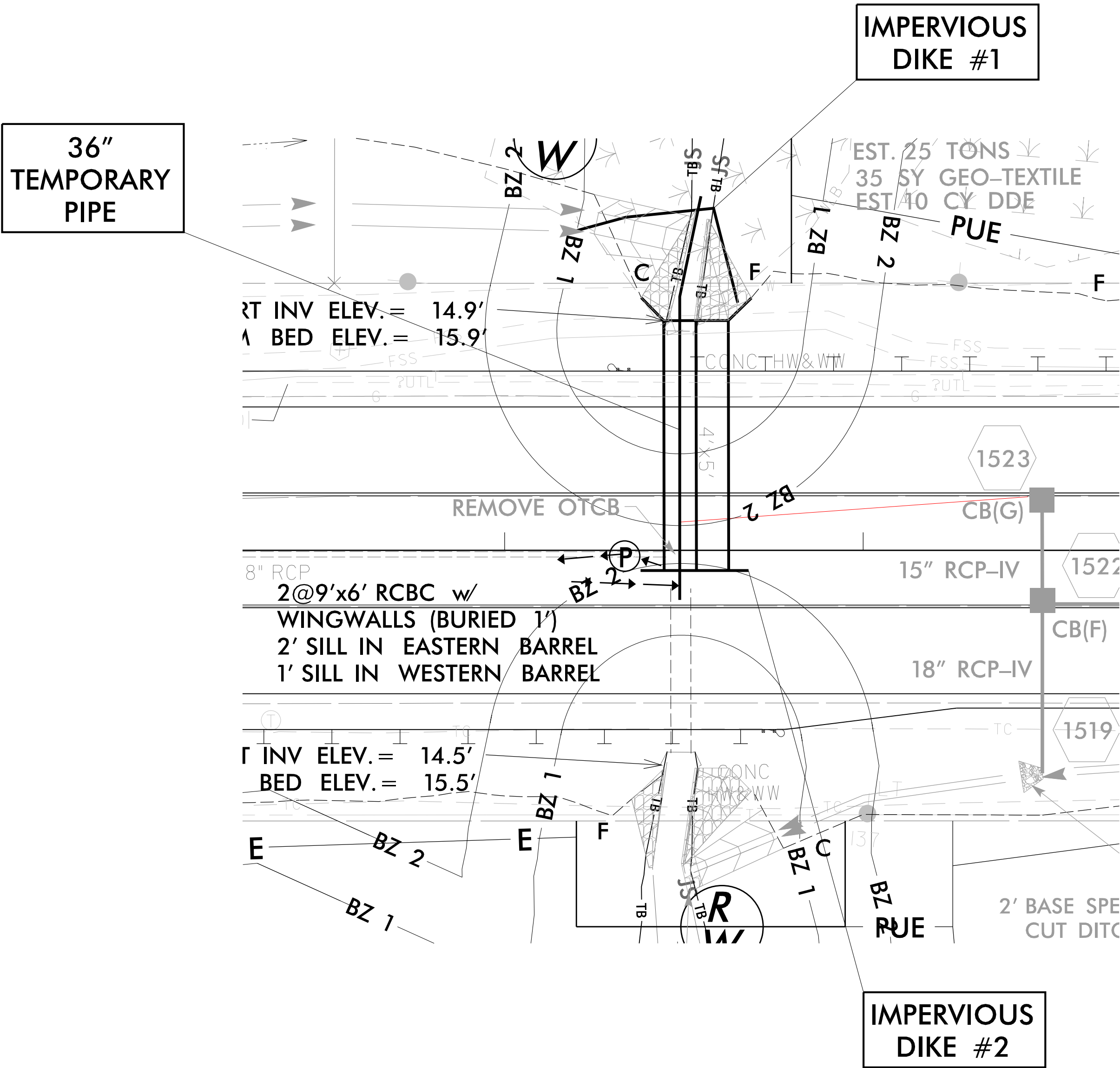
NOT TO SCALE

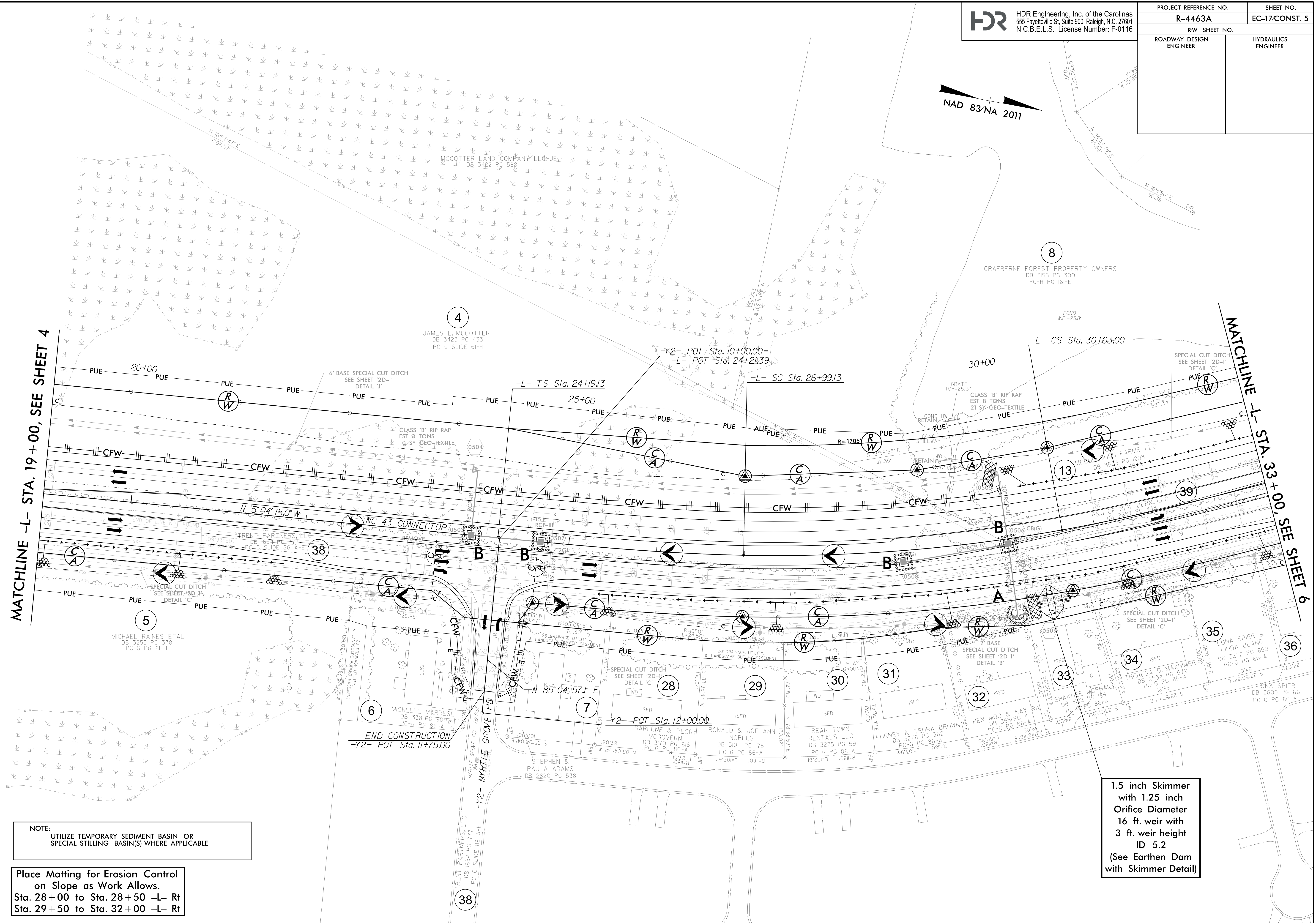
PHASE II

1. INSTALL NORTH SECTION OF BOTH BARRELS OF NEW 9'X6' RCBC.
2. MAINTAIN FLOW THROUGH TEMPORARY PIPE.
3. FINISH ROAD SURFACE OVER PORTION OF NEWLY CONSTRUCTED CULVERT.

PHASE III

1. SHIFT TRAFFIC TO NORTH SIDE.
2. INSTALL IMPERVIOUS DIKE #3 TO ISOLATE WORK AREA.
3. INSTALL PUMP-AROUND OPERATION TO DIVERT WATER AWAY FROM THE WORK AREA AS SHOWN.
4. PROVIDE PUMP AND SPECIAL STILLING BASIN FOR DEWATERING OF THE WORK ZONE AS SHOWN.
5. REMOVE REMAINING SECTION OF EXISTING 4'X5' RCBC.
6. EXTEND TEMPORARY 36" PIPE TO IMPERVIOUS DIKE AT OUTLET AND REMOVE PUMP-AROUND OPERATION. REMOVE IMPERVIOUS DIKE #2.
7. INSTALL REMAINING SECTION OF BOTH BARRELS OF NEW 9'X6' RCBC WHILE MAINTAINING FLOW THROUGH TEMPORARY 36" PIPE.
8. COMPLETE ANY NECESSARY CHANNEL IMPROVEMENTS.
9. REMOVE IMPERVIOUS DIKES AND TEMPORARY 36" PIPE TO ESTABLISH FLOW THROUGH NEWLY CONSTRUCTED CULVERT.





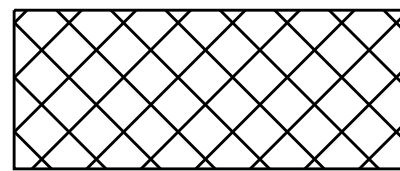
NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR
SPECIAL STILLING BASIN(S) WHERE APPLICABLE

Place Matting for Erosion Control on Slope as Work Allows. Sta. 28+00 to Sta. 28+50 -L- Rt Sta. 29+50 to Sta. 32+00 -L- Rt

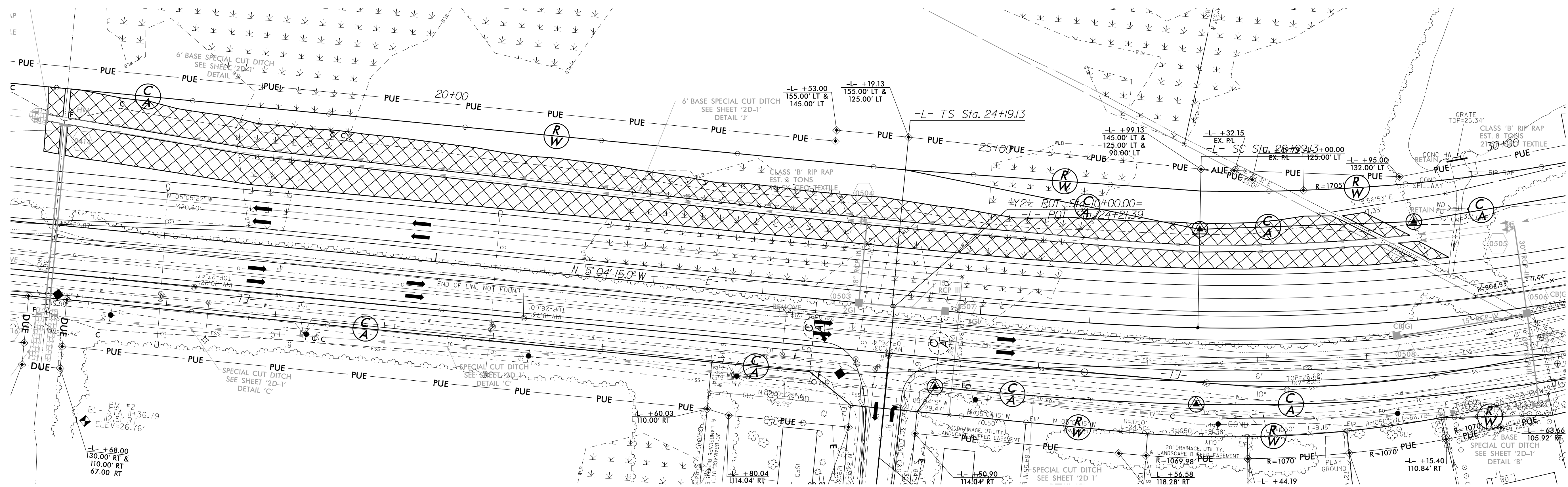
1.20 ACRE STREAMBANK REFORESTATION

PROJECT REFERENCE NO.		SHEET NO.	
R-4463A		EC-17A/CONST.5	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

LEGEND

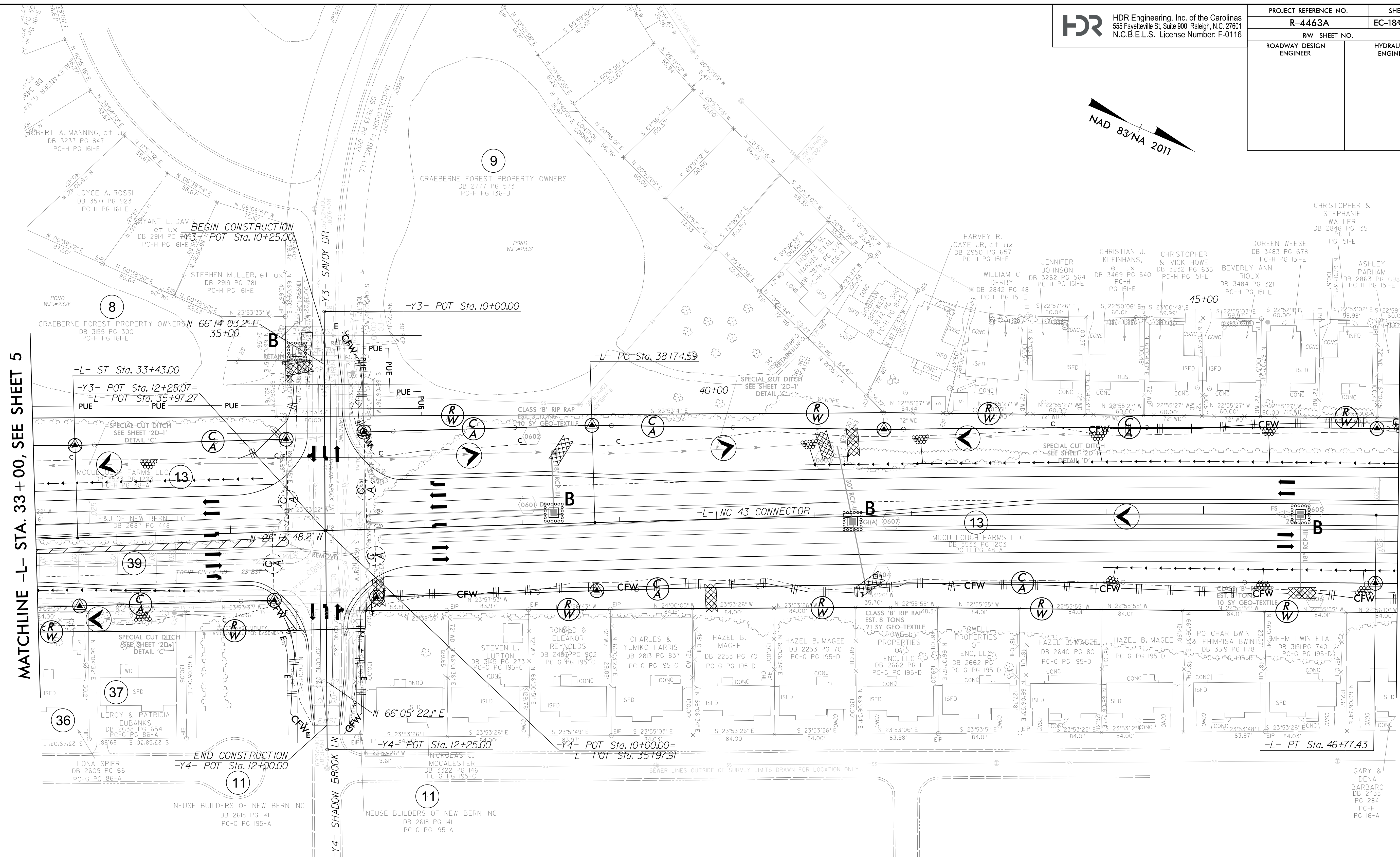
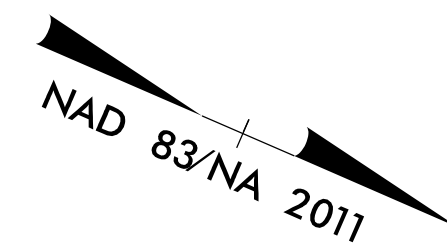


STREAMBANK REFORESTATION

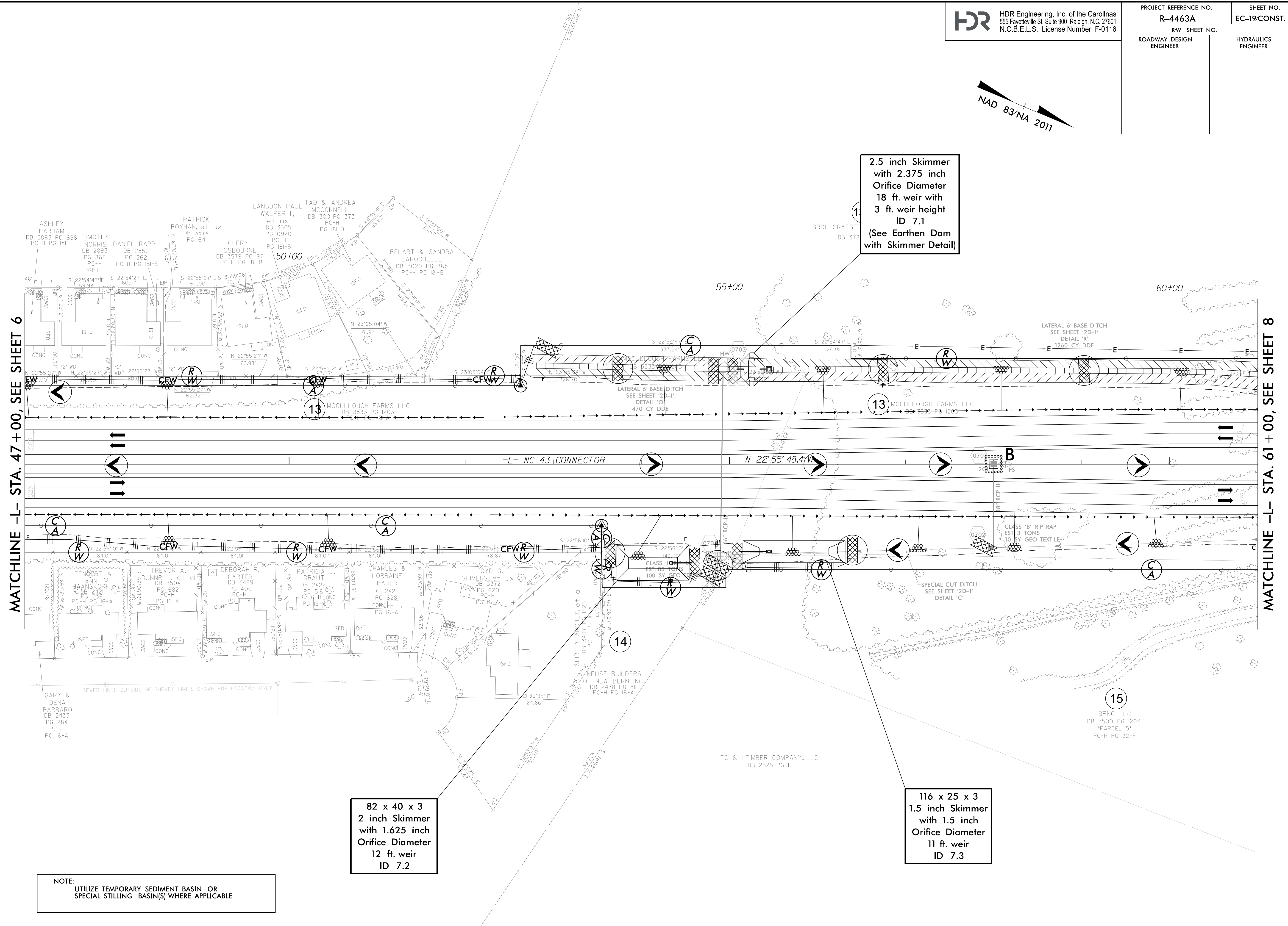
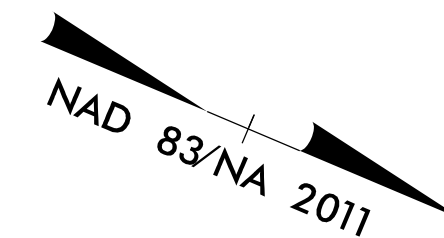


SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

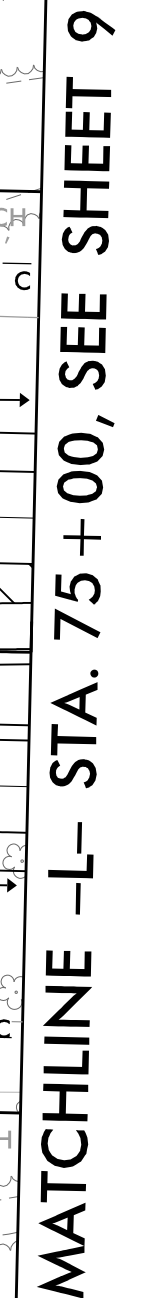
PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-18/CONST. 6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Place Matting for Erosion Control on Slope as Work Allows.
Sta. 44+00 to Sta. 58+00 -L- Lt
Sta. 46+50 to Sta. 59+50 -L- Rt



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

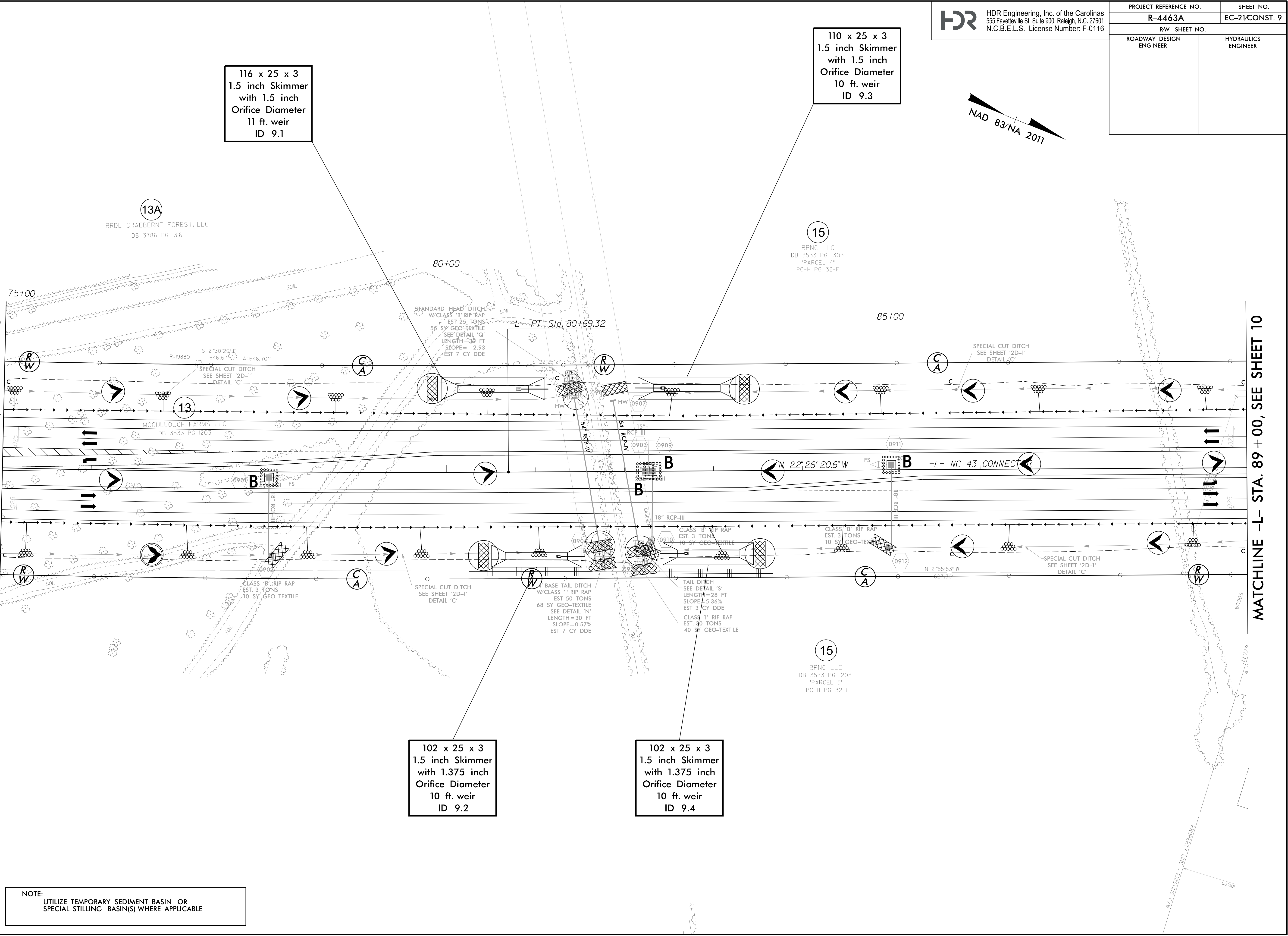


125 x 25 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
12 ft. weir
ID 8.1

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 63+00 to Sta. 63+50 -L- Rt
Sta. 71+00 to Sta. 71+50 -L- Lt
Sta. 72+50 to Sta. 79+00 -L- Lt
Sta. 68+50 to Sta. 80+50 -L- Rt

REVISIONS

MATCHLINE -L- STA. 75+00, SEE SHEET 8



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

13A

BRDL CRAEBERNE FOREST, LLC
DB 3786 PG 1316

13

MCCULLOUGH FARMS, LLC
DB 3533 PG 1203

80+00

STANDARD HEAD DITCH
W/CLASS 'B' RIP RAP
EST 25 TONS
58 SY GEO-TEXTILE
SEE DETAIL 'Q'
LENGTH=30 FT
SLOPE= 2.93
EST 7 CY DDE

PT. Sta. 80+69.32

54" RCP-N

15"

15" RCP-III

0903

0909

0910

0911

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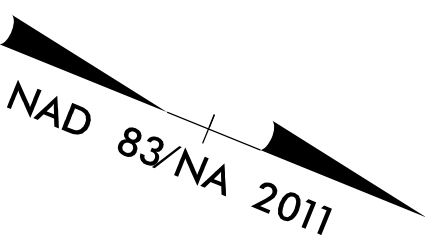
15

BPNC, LLC
DB 3533 PG 1303
PARCEL 4
PC-H PG 32-F

110 x 25 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
10 ft. weir
ID 9.3

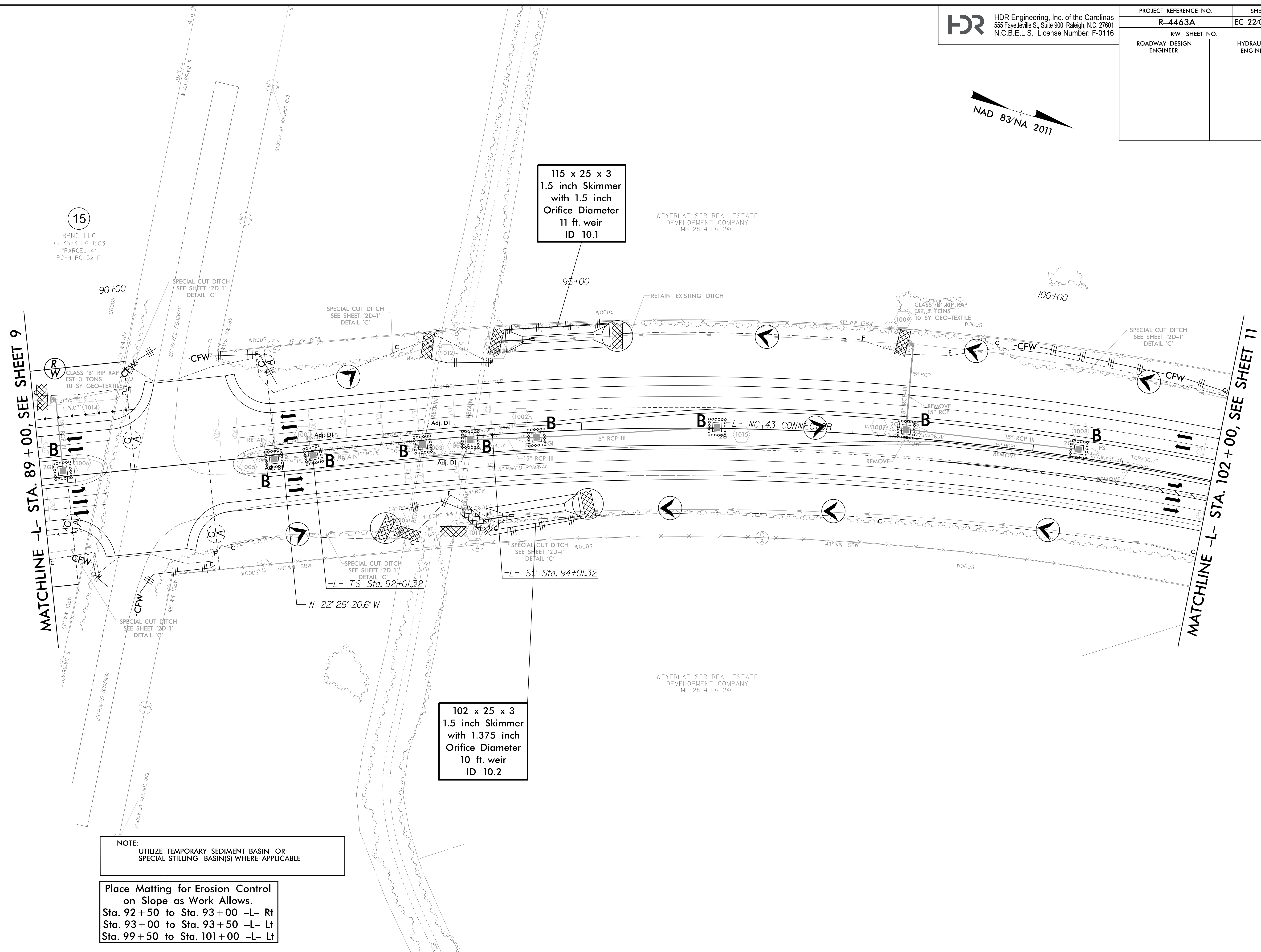
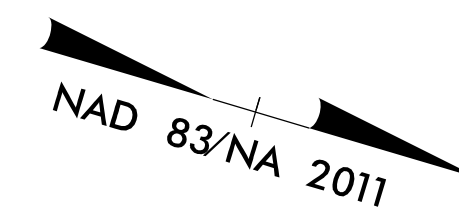


HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



PROJECT REFERENCE NO.		SHEET NO.	
R-4463A		EC-21/CONST. 9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

MATCHLINE -L- STA. 89+00, SEE SHEET 10



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

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 92+50 to Sta. 93+00 -L- Rt
Sta. 93+00 to Sta. 93+50 -L- Lt
Sta. 99+50 to Sta. 101+00 -L- Lt

REVISIONS

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 109+50 to Sta. 112+50 -L- Rt
Sta. 107+00 to Sta. 117+00 -L- Lt

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED BY ENGINEER IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO PREVENT IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC.

74 x 37 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
10 ft. weir
ID 11.1

102 x 25 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 11.2

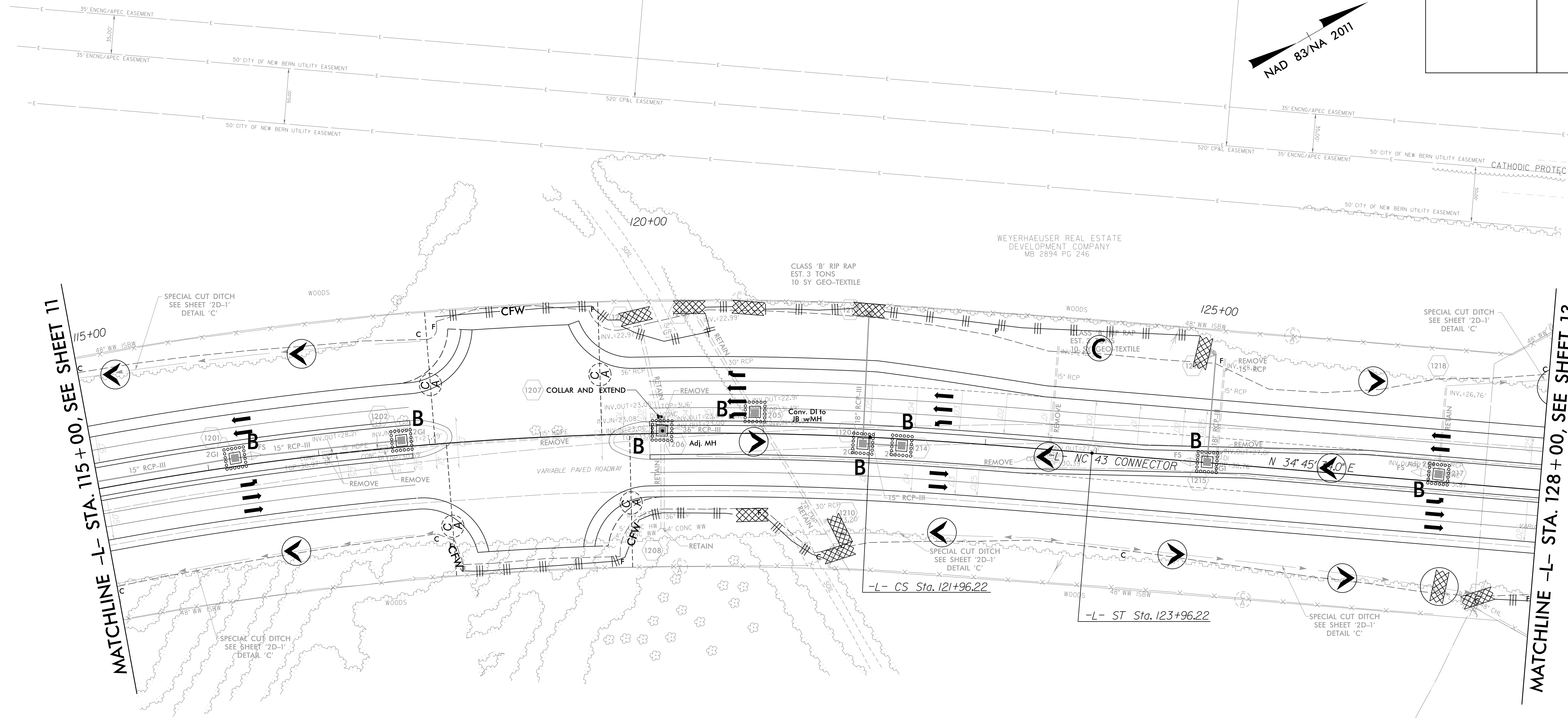
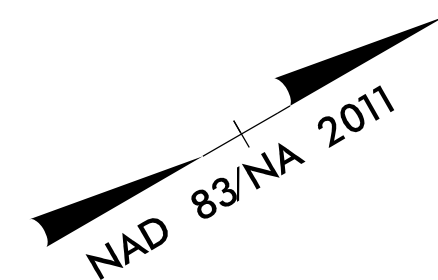
65 x 20 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 11.3

WEYERHAEUSER REAL ESTATE
DEVELOPMENT COMPANY
MB 2894 PG 246

112 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 11.4

MATCHLINE -L- STA. 115 + 00, SEE SHEET 12

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	EC-24/CONST. 12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



WEYERHAEUSER REAL ESTATE
DEVELOPMENT COMPANY
MB 2894 PG 246

Place Matting for Erosion Control on Slope as Work Allows. Sta. 127+00 to Sta. 127+50 -L- Rt Sta. 127+50 to Sta. 128+50 -L- Lt

NAD 83/NA 2011



END TIP PROJECT R-4463A
END 2" MILL/FILL
-L- POT Sta. 136+14.30

END GRADE
BEGIN 2" MILL/FILL
-L- POT Sta. 130+20.00

REVISIONS

REVISIONS



PROJECT REFERENCE NO.		SHEET NO.
R-4463A		EC-25A/CONST.13A
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	



NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED BY ENGINEER IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO PREVENT IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC.

NAD 83/NA 2011

END CONSTRUCTION
-YI- POT Sta. 12+75.00

-YI- PT Sta. 12+48.18

-YI- POT Sta. 14+96.96

-Y- POT Sta. 10+00.00

END 2" MILL/FILL
BEGIN GRADE
-Y- POT Sta. 14+40.00

1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
14 ft. weir with
3.0 ft. weir height
ID 14.1
(See Earthen Dam
with Skimmer Detail)

$$\frac{-YI - POT \text{ Sta. } 10+00.00}{-Y - POC \text{ Sta. } 21+50.00}$$

25

MCCOTTER LAND COMPANY LLC-JE
DB 3422 PG 598

STA. 24 + 50, SEE SHEET 4

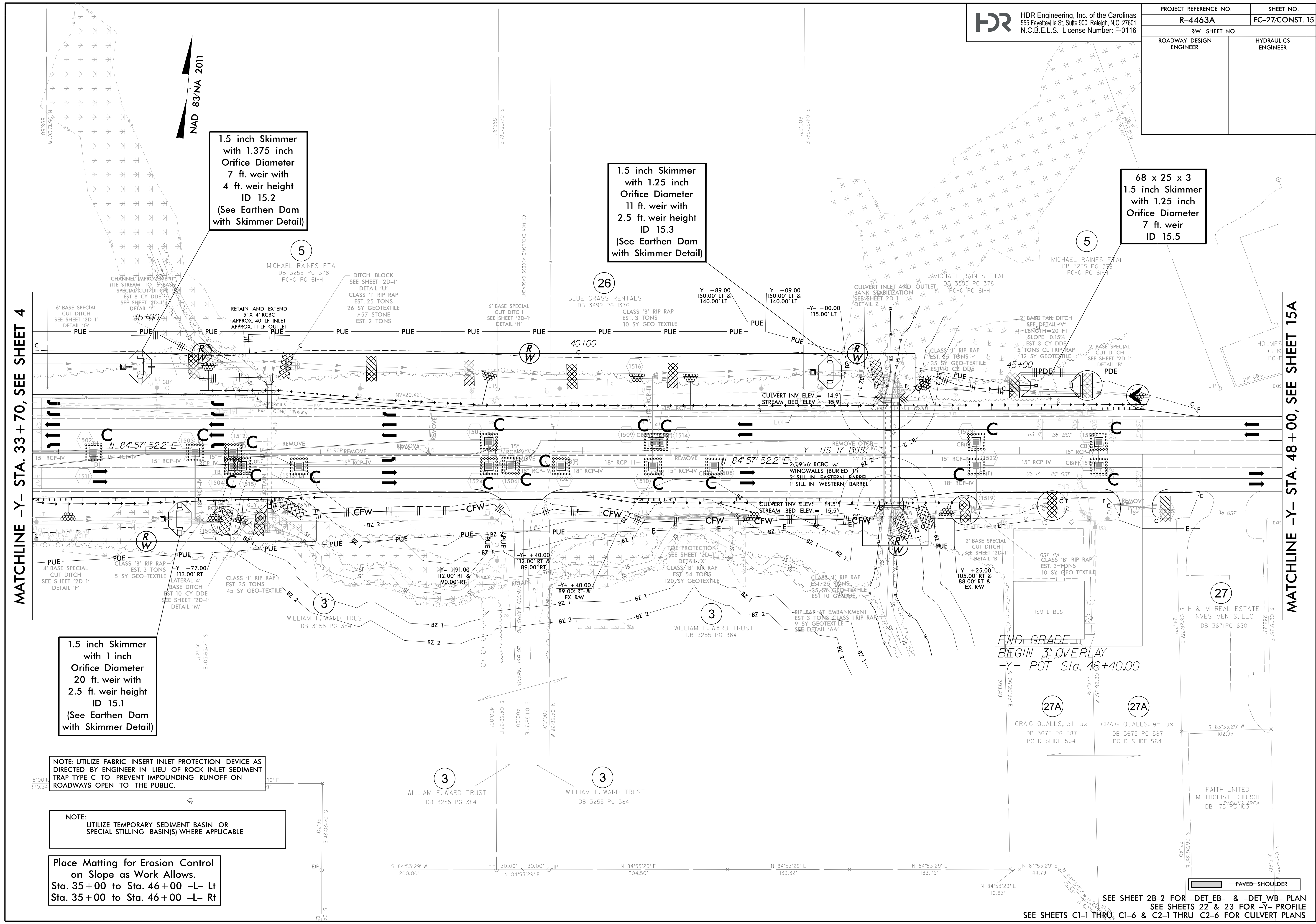
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REVISIONS

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7/12/2022: PARCELS 3A & 27A CREATED FOR NEW OWNERS AND PARCEL BOUNDARIES

MATCHLINE -Y- STA. 33+70, SEE SHEET 4



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PROJECT REFERENCE NO. R-4463A	SHEET NO. EC-27/CONST. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
7 ft. weir with
4 ft. weir height
ID 15.2
(See Earthen Dam
with Skimmer Detail)

1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
11 ft. weir with
2.5 ft. weir height
ID 15.3
(See Earthen Dam
with Skimmer Detail)

68 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
7 ft. weir
ID 15.5

1.5 inch Skimmer
with 1 inch
Orifice Diameter
20 ft. weir with
2.5 ft. weir height
ID 15.1
(See Earthen Dam
with Skimmer Detail)

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED BY ENGINEER IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO PREVENT IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC.

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

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 35+00 to Sta. 46+00 -L- Lt
Sta. 35+00 to Sta. 46+00 -L- Rt

END GRADE
BEGIN 3" OVERLAY
-Y- POT Sta. 46+40.00

27A

27A

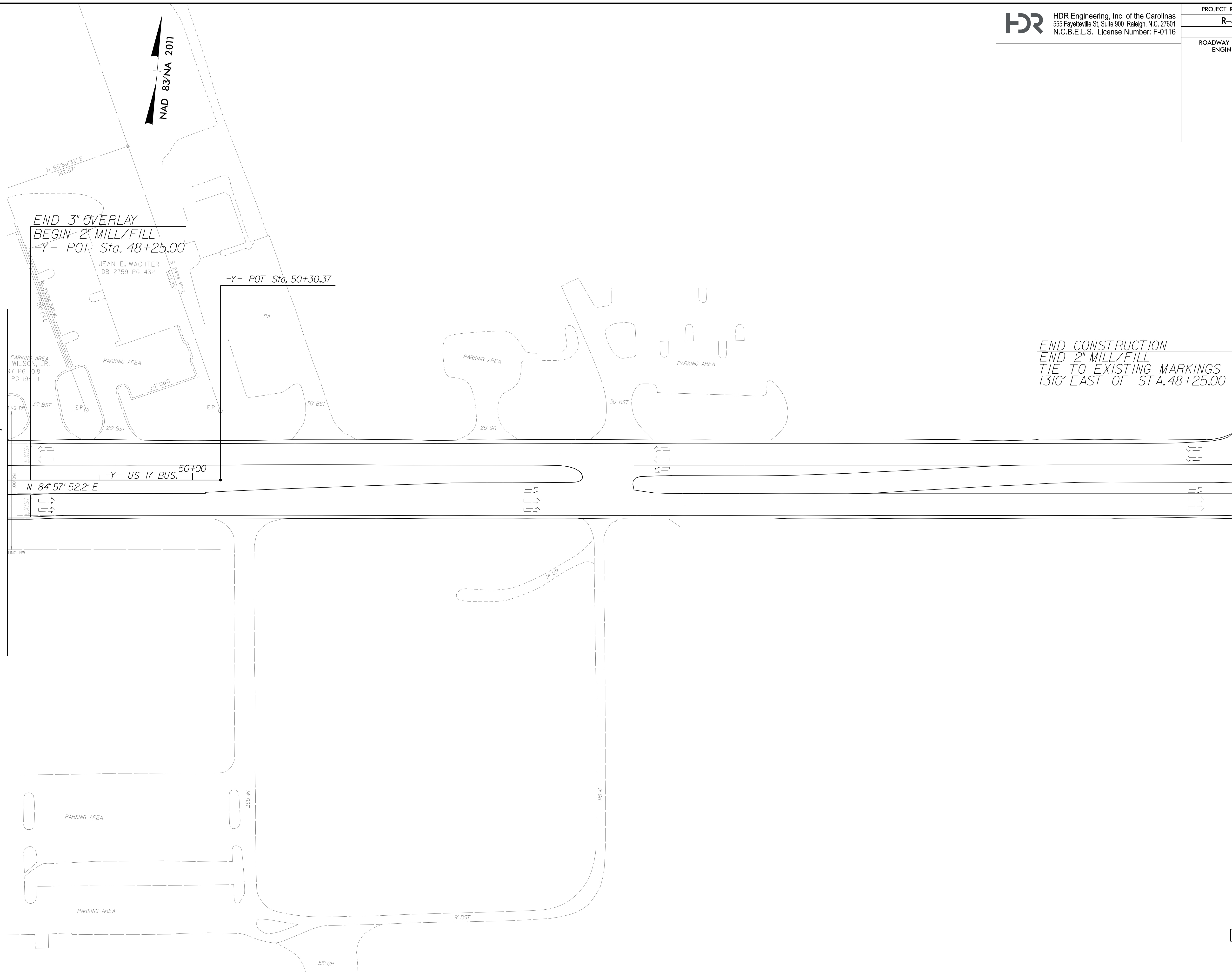
CRAIG QUALLS, et ux
DB 3675 PG 587
PC D SLIDE 564

CRAIG QUALLS, et ux
DB 3675 PG 587
PC D SLIDE 564

PAVED SHOULDER

SEE SHEET 28-2 FOR -DET EB- & -DET WB- PLAN
SEE SHEETS 22 & 23 FOR -Y- PROFILE
SEE SHEETS C1-1 THRU C1-6 & C2-1 THRU C2-6 FOR CULVERT PLANS

MATCHLINE -Y- STA. 48+00, SEE SHEET 15



PLOT DRIVER: NC00T_pdf_color_eng.100 _COM USE FOR 24K364BEE: NC00T_EC_FINAL BW.tbl
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