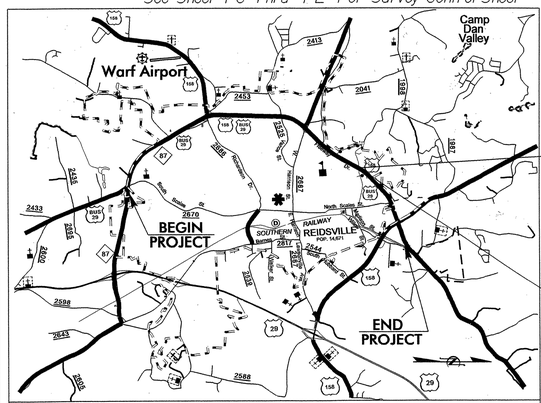
09/08/99

TIP PROJECT: U-3326A/B

CONTRACT: C202652

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C Thru 1-E For Survey Control Sheet



VICINITY MAP

DETOUR ROUTE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROCKINGHAM COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3326A/B	1	

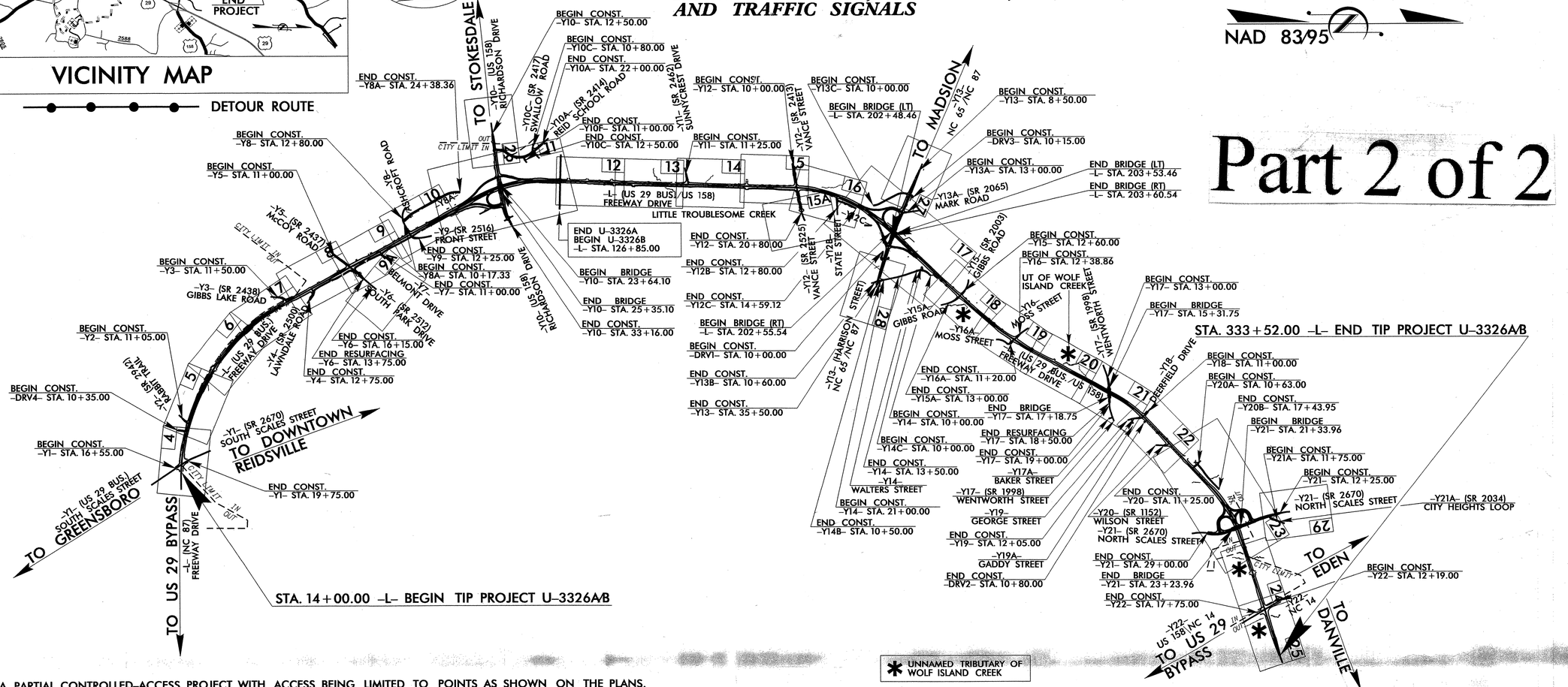
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34924.1.1	STP-29B(1)	P.E.
(A) 34924.2.4	HPPSTP-029B(2)	R/W & UTILITIES
(B) 34924.2.3	HPPSTP-029B(3)	R/W & UTILITIES
(A) 34924.3.1	STP-29B(2)	CONST.
(B) 34924.3.2	STP-29B(3)	CONST.

LOCATION: US 29 BUSINESS (FREEWAY DRIVE) FROM SR 2670 (SOUTH SCALES STREET) TO NC 14 IN REIDSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB AND GUTTER, RETAINING WALLS, STRUCTURES, CULVERTS, AND TRAFFIC SIGNALS

NAD 83/95

Part 2 of 2



THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2011 = 21090
ADT 2035 = 41000
DHV = 10 %
D = 55 %
T = 11 % *
V = 50 MPH
* TTST 5% DUAL 6%
FUNC. CLASS = URBAN ARTERIAL "STATEWIDE TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-3326A/B = 6.032 MI
LENGTH STRUCTURE TIP PROJECT U-3326A/B = 0.020 MI
TOTAL LENGTH OF TIP PROJECT U-3326A/B = 6.052 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 17, 2008

LETTING DATE:
JANUARY 17, 2012

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 31025 ENGINEER KAREN M. GUNDERSEN
SIGNATURE: Karen M. Gundersen P.E. 10/4/2011

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 33871 ENGINEER DANIEL W. GARDNER, JR.
SIGNATURE: Daniel W. Gardner Jr. P.E. 10/7/11

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Art McMillan P.E.
STATE HIGHWAY DESIGN ENGINEER

21-JUL-2011 13:41
R:\Roadway\Proj\u3326_rdy_tsh.dgn
$$$$USERNAME$$$$

TIP PROJECT: U-3326AB

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3326AB	EC-1	

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

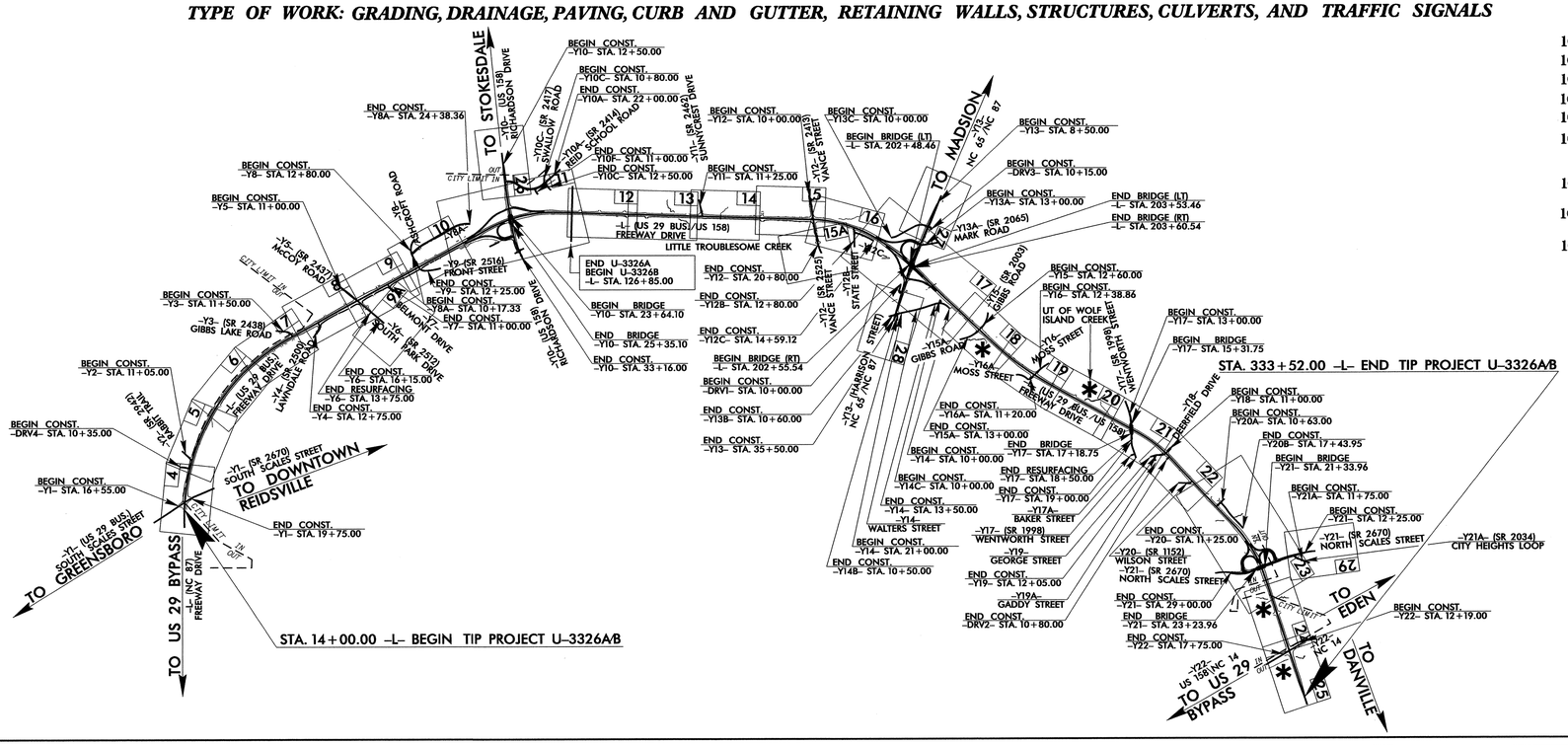
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NAD 83/95

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROCKINGHAM COUNTY

LOCATION: US 29 BUSINESS (FREEWAY DRIVE) FROM SR 2670 (SOUTH SCALES STREET) TO NC 14 IN REIDSVILLE
TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB AND GUTTER, RETAINING WALLS, STRUCTURES, CULVERTS, AND TRAFFIC SIGNALS



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	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	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.

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

2006 STANDARD SPECIFICATIONS

Roadway Standard Drawings

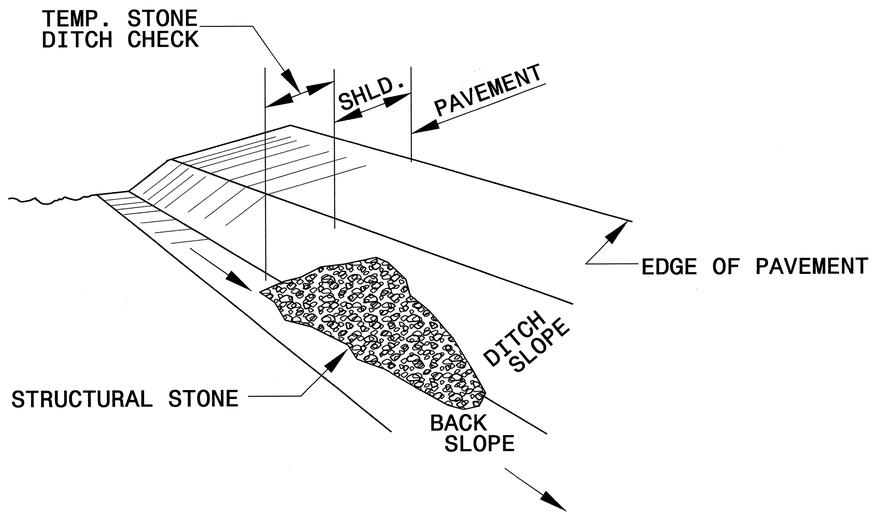
The following roadway <u>english</u> standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01	Temporary Silt Fence	1632.01	Rock Inlet Sediment Trap Type A
1606.01	Special Sediment Control Fence	1632.02	Rock Inlet Sediment Trap Type B
1607.01	Gravel Construction Entrance	1632.03	Rock Inlet Sediment Trap Type C
1622.01	Temporary Berms and Slope Drains	1633.01	Temporary Rock Silt Check 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

23-DEC-2011 7:04
R:\Roadway\Proj\U3326_EC_tsh.dgn
jenniferparish "AT RENV2418378"

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

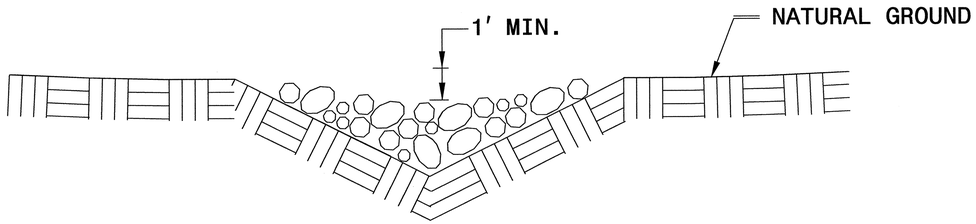


ISOMETRIC VIEW

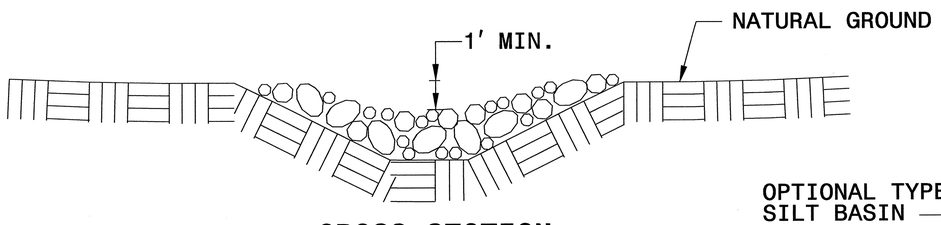
NOTES:

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

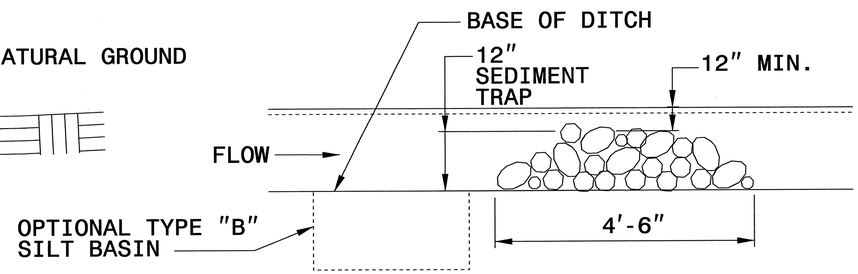
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION
VEE DITCH



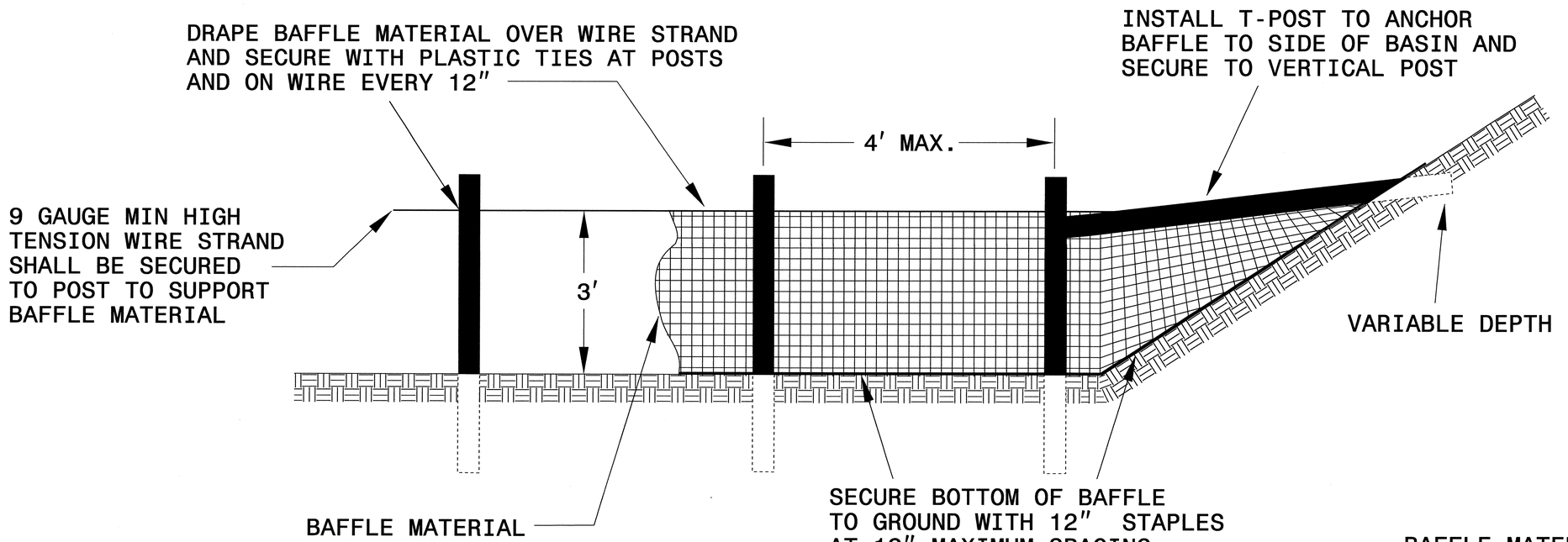
CROSS SECTION
TRAPEZOIDAL DITCH

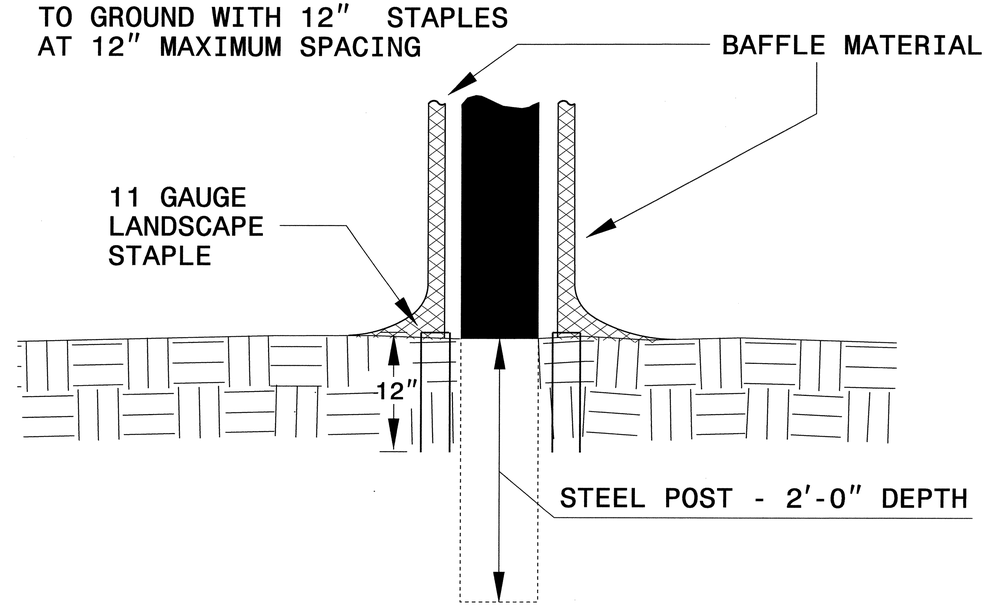


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2A
R/W 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:

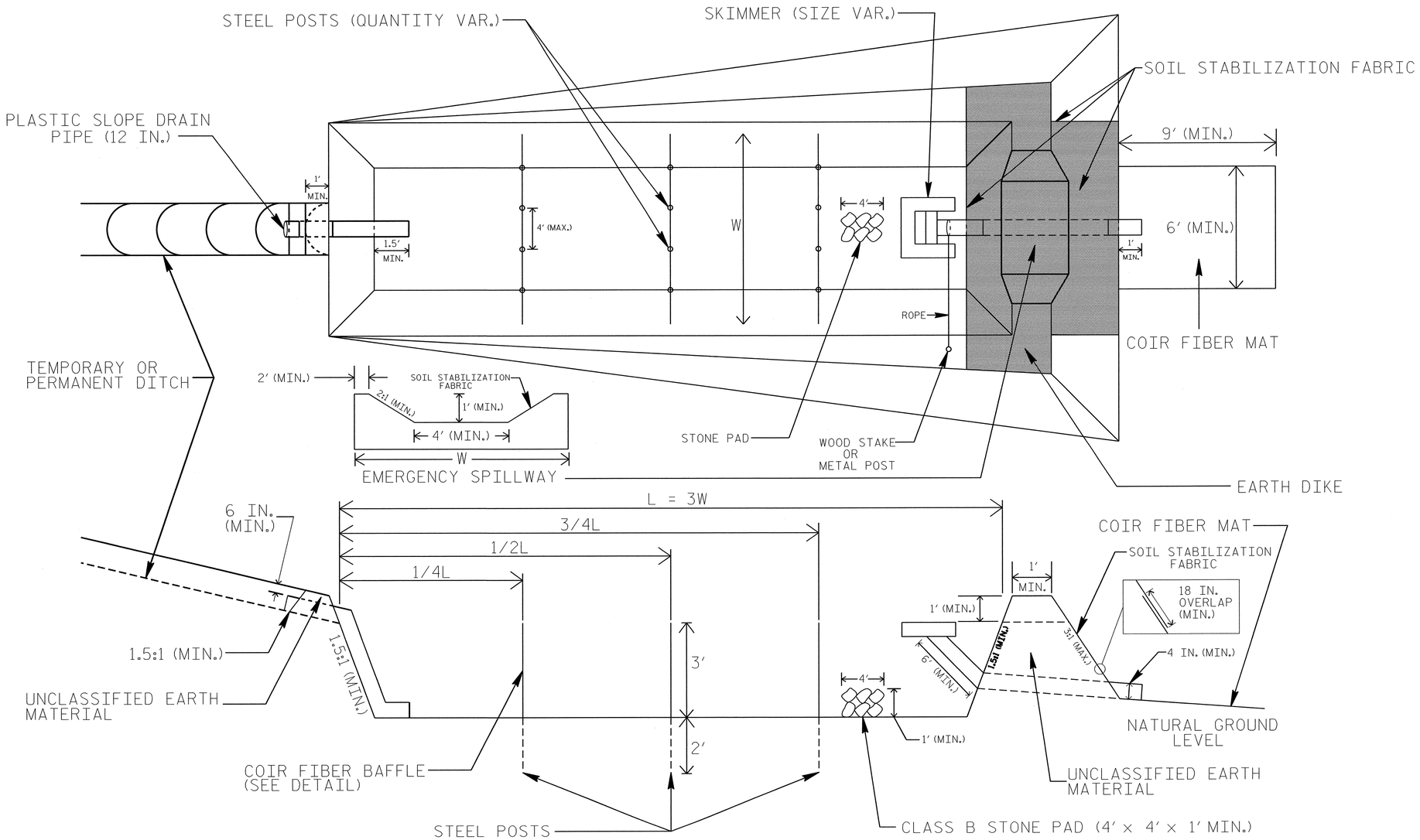
1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH.

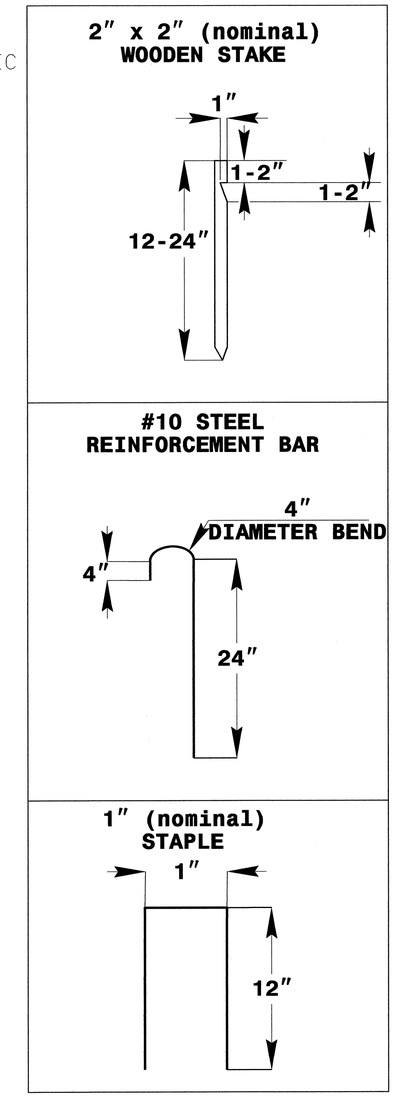
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

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

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

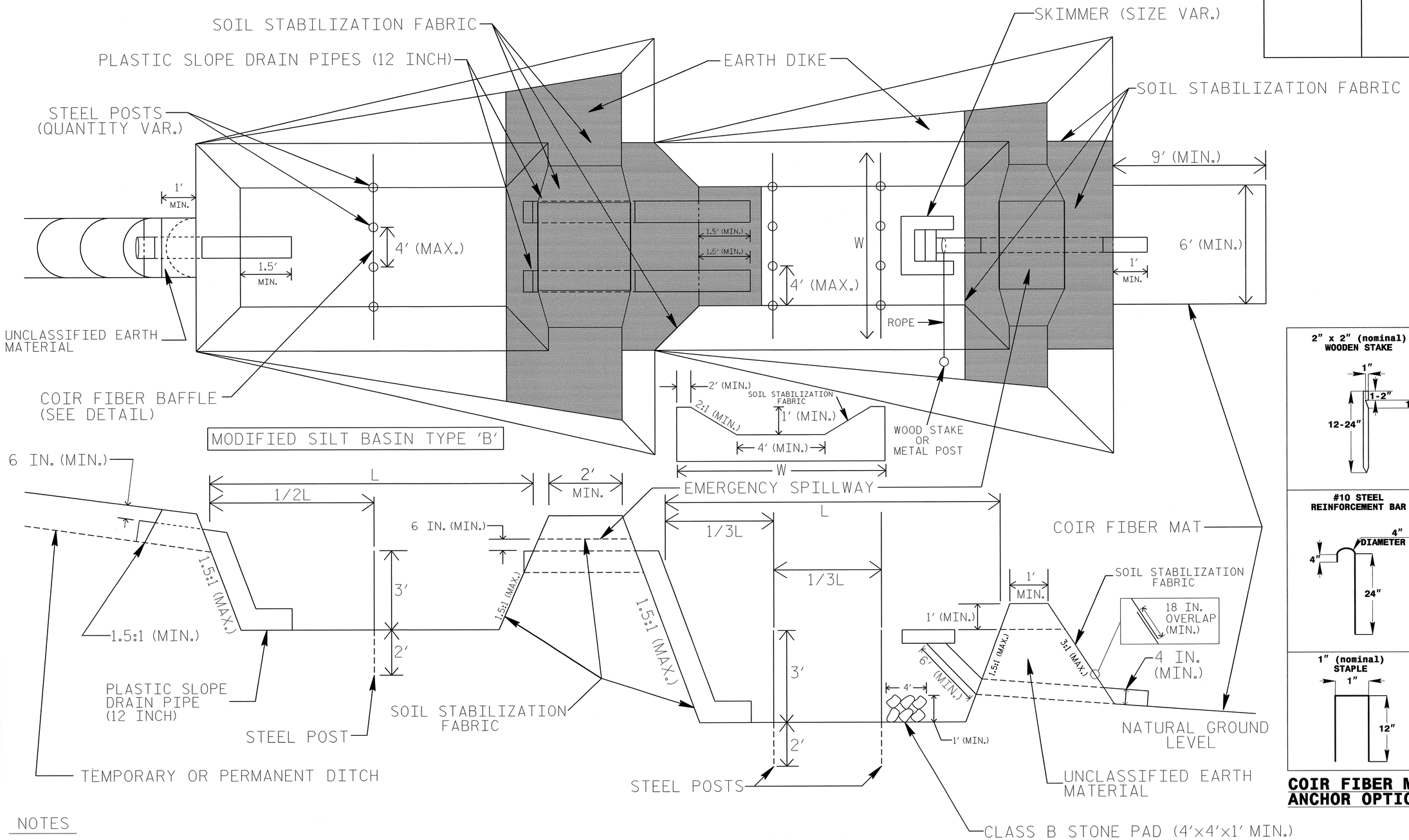
NOTES

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.
U-3326AB	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL



COIR FIBER MAT ANCHOR OPTIONS

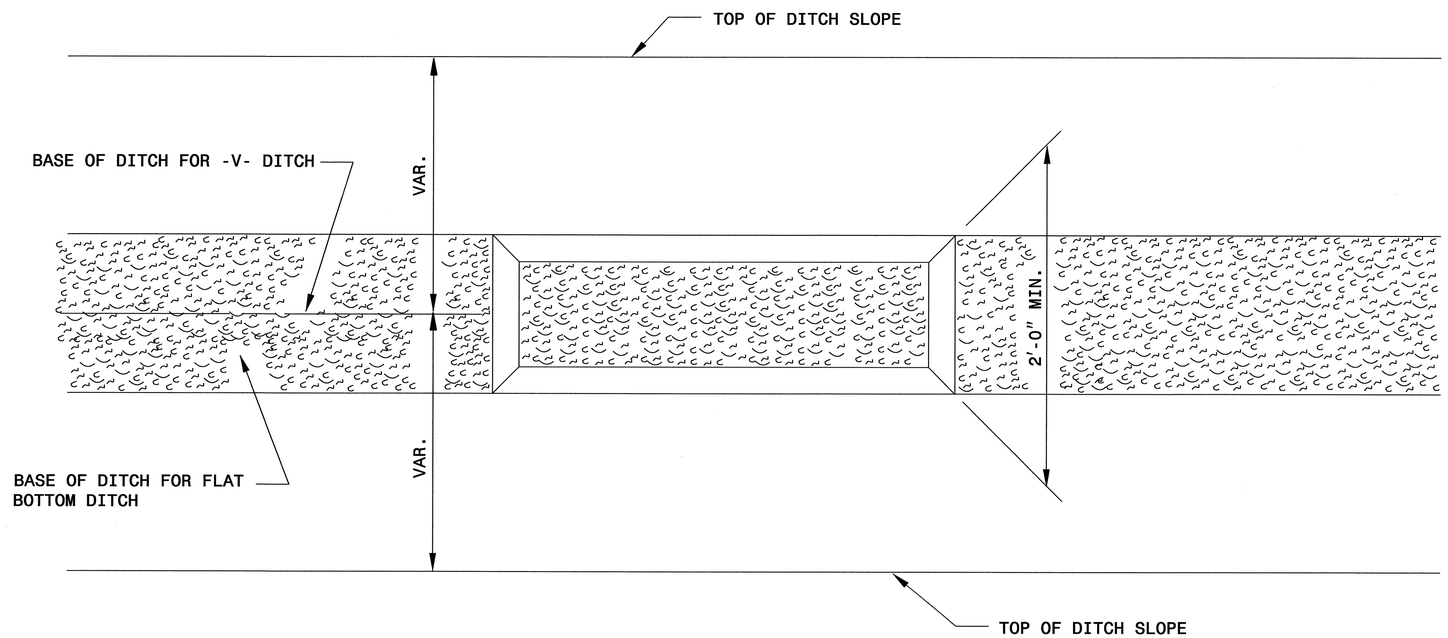
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. SOIL STABILIZATION FABRIC FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

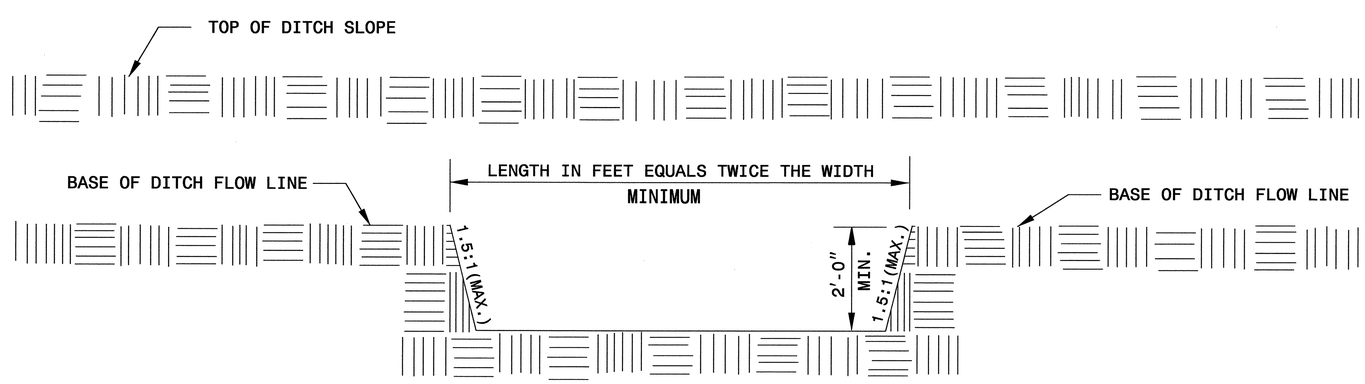
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



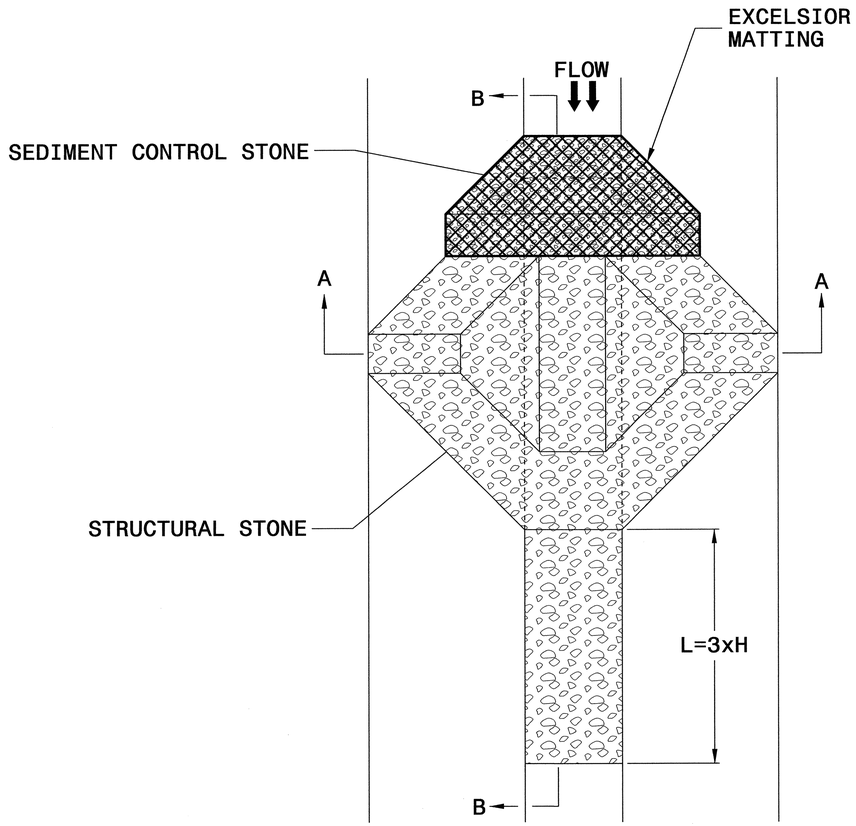
PLAN



ELEVATION

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



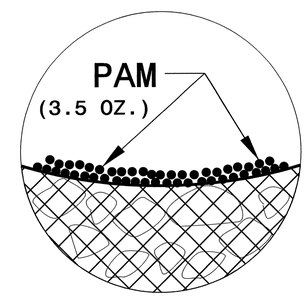
PLAN

NOTES

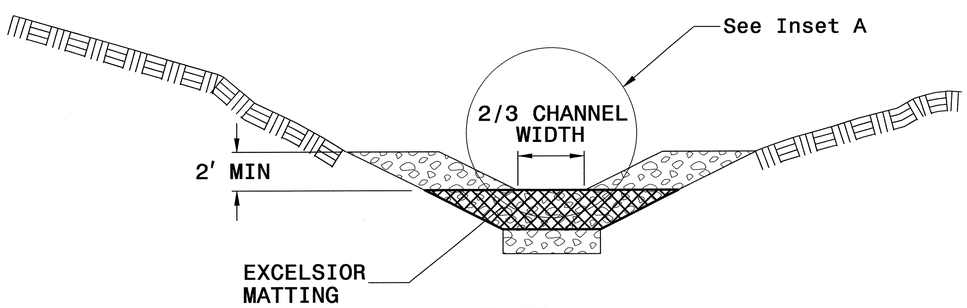
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 ROCK SILT CHECK.

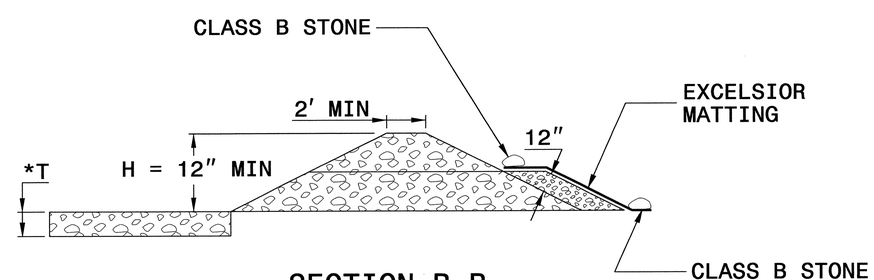
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



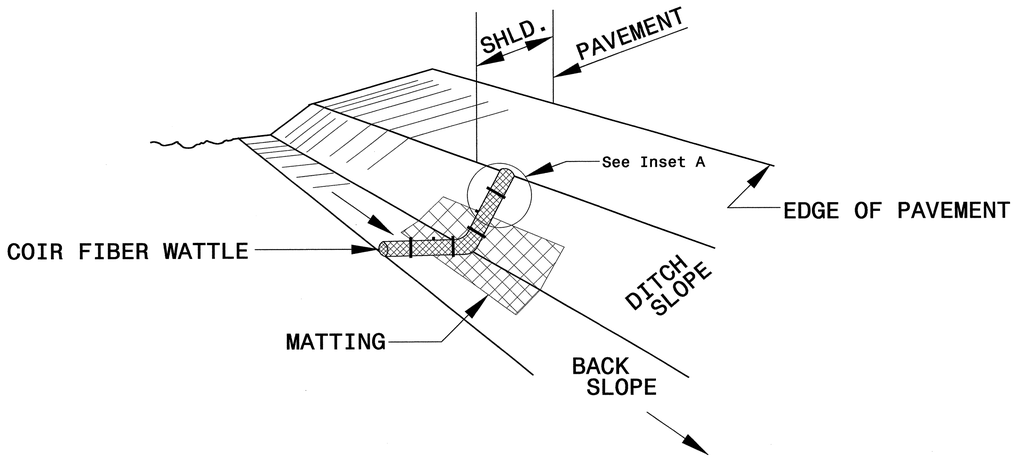
SECTION B-B

*T = 12" MIN., 18" MAX.

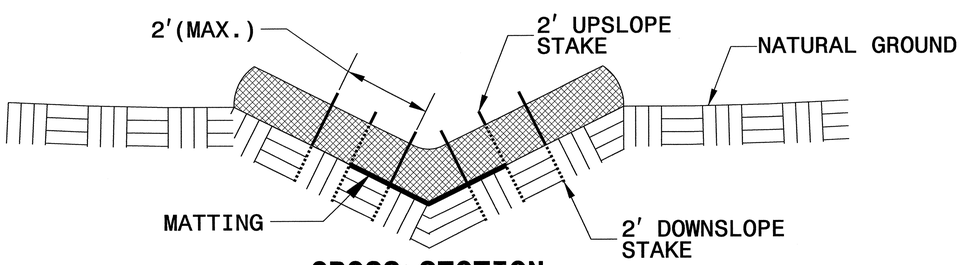
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

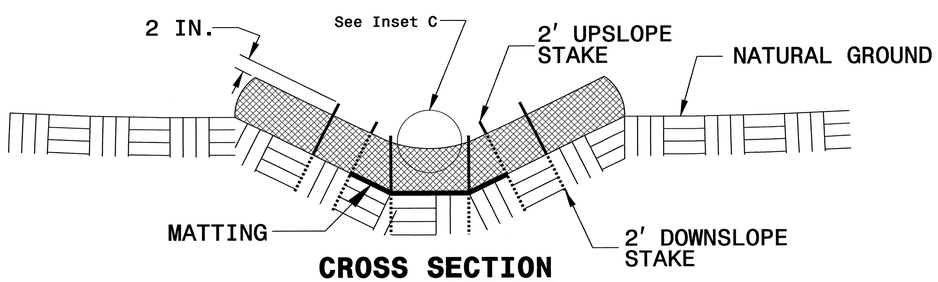
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) 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.

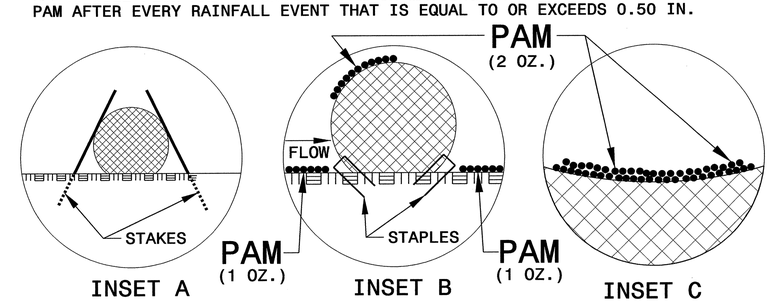
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

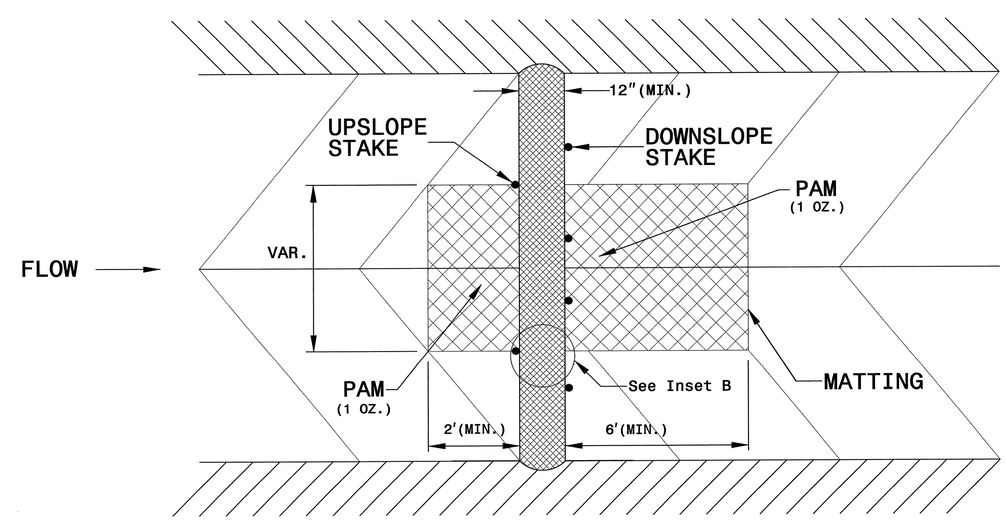
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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.

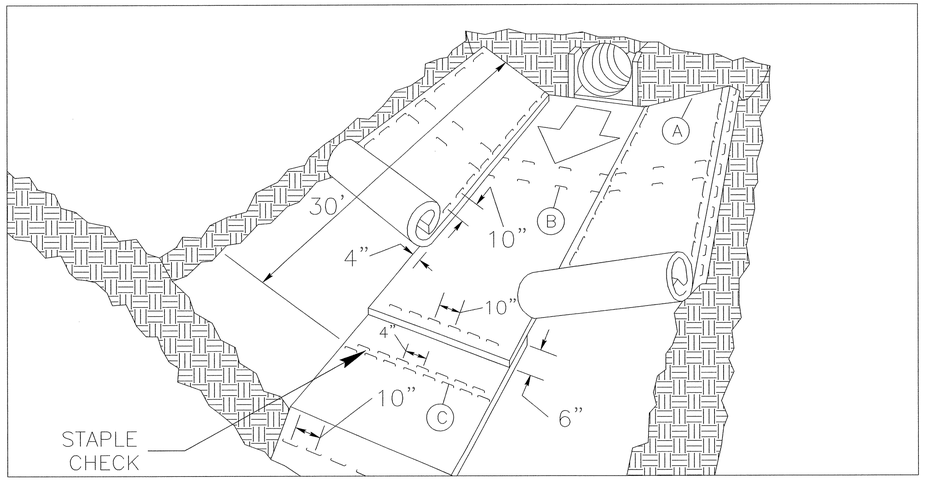




TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-2G
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

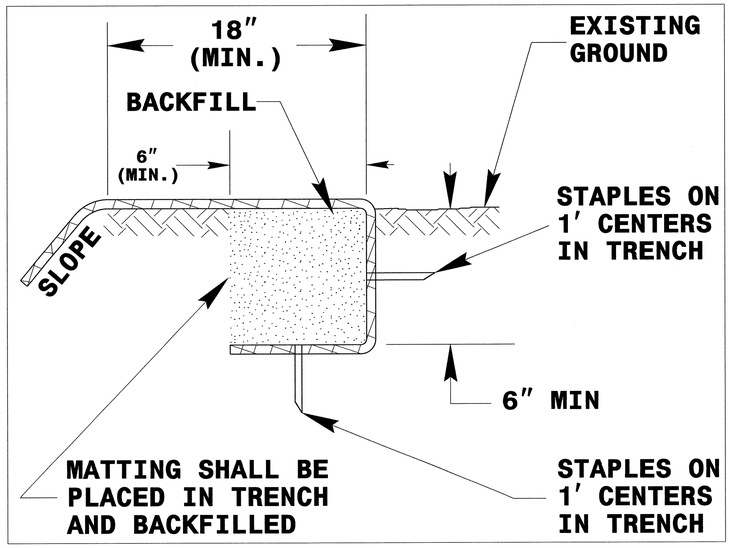
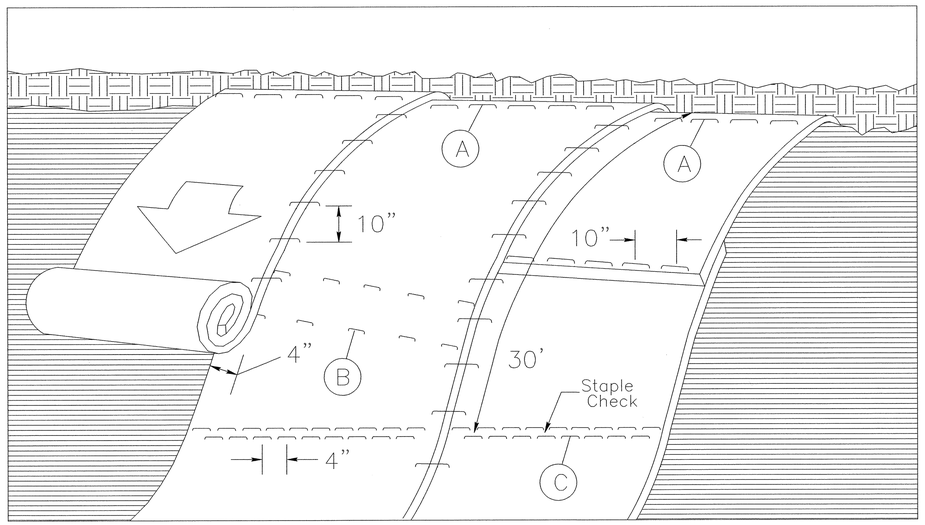


DIAGRAM (A)



MATTING ON SLOPES

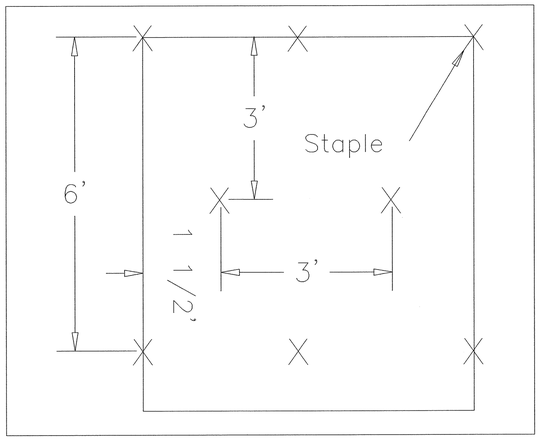


DIAGRAM (B)

Staple Check Pattern

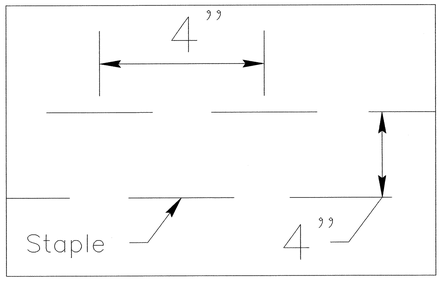


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	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)
5	-L-	23+00	31+50	RT	2335
5	-Y2-	11+25	12+25	LT	140
5	-Y2-	11+25	12+25	RT	140
6	-L-	36+00	37+50	RT	415
6	-L-	39+00	48+00	LT	3325
7	-L-	51+00	62+00	RT	3705
7	-L-	50+50	57+00	LT	2610
8	-Y4-	10+75	12+50	RT	425
9	-Y6-	10+50	13+50	LT	485
9	-Y6-	10+50	13+50	RT	485
10	-Y9-	10+75	12+00	LT	175
10	-Y9-	10+75	12+00	RT	175
11	-L-	108+00	111+00	LT	1350
11	-Y10RPC-	15+00	17+00	LT	450
11	-Y10RPC-	15+00	18+00	RT	1100
11	-Y10LPC-	12+20	13+00	RT	180
11A	-Y10DETB-	10+50	16+00	LT	1010
11A	-Y10DETB-	10+50	16+00	RT	1010
11A	-Y10DETC-	10+50	14+00	LT	645
14	-L-	160+50	163+50	RT	960
14	-L-	161+00	163+50	LT	660
14	-Y11-	11+50	12+25	LT	135
14	-Y11-	11+50	12+25	RT	135
15	-Y12-	10+50	11+00	LT	70
17	-Y13RPB-	10+34	13+84	LT	1380
17	-Y13RPC-	10+42	13+50	RT	825
17	-Y13-	19+50	21+50	RT	675
17	-Y13-	19+00	21+00	LT	675
17	-Y13RPD-	13+10	16+10	RT	1005
18	-Y15-	12+75	13+25	LT	95

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
18	-Y15-	12+75	13+25	RT	95
19	-Y16-	12+50	13+00	LT	55
19	-Y16-	12+50	13+00	RT	85
21	-L-	259+00	269+00	RT	1035
22	-Y19-	11+25	12+00	LT	105
23	-Y21-	15+00	17+50	LT	455
23	-Y21LPB-	12+00	12+50	LT	140
23A	-Y21DETB-	13+75	16+50	LT	505
23A	-Y21DETB-	13+75	16+50	RT	505
25	-L-	321+00	322+00	LT	140
25	-L-	329+50	333+00	LT	575
25	-L-	333+00	333+50	RT	85
25	-Y22-	12+50	14+50	RT	550
26	-Y10-	13+50	15+50	LT	455
26	-Y10-	17+00	18+00	LT	470
27	-Y13-	9+00	14+00	LT	700
27	-Y13-	9+50	14+00	RT	820
27	-Y13A-	13+25	13+75	LT	70
28	-Y13-	33+50	34+00	RT	70
29	-Y21-	12+50	15+00	LT	440
				SUBTOTAL	34130
MATTING TO BE INSTALLED BY THE ENGINEER					94365
				TOTAL	128495
				SAY	130000

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-L-	25+50	33+00	LT	2750
5	-L-	34+50	36+00	RT	220
7	-Y3-	11+75	12+25	LT	70
7	-Y3-	11+75	12+25	RT	70
11	-L-	125+50	126+50	LT	405
11	-Y10RPA-	14+43	16+43	LT	675
11	-Y10RPA-	14+43	16+43	RT	805
11	-Y10RPB-	14+30	20+70	LT	1175
11	-Y10RPB-	14+30	20+20	RT	1325
11A	-Y10DETC-	10+50	14+25	RT	690
17	-L-	195+50	196+00	LT	135
17	-Y13-	16+00	18+00	RT	675
17	-Y13RPB-	14+00	19+50	LT	1680
17	-Y13RPB-	13+00	16+00	RT	805
17	-Y13RPC-	13+50	15+80	RT	770
17	-Y13C-	10+50	15+35	LT	680
17	-Y13C-	10+50	15+35	RT	850
18	-L-	228+50	229+00	RT	40
18	-Y15A-	12+25	12+75	RT	70
19	-L-	232+50	235+00	RT	185
22	-L-	270+00	273+50	LT	345
23	-Y20A-	10+74	11+50	RT	110
23	-Y20B-	10+50	12+50	LT	280
23	-Y20B-	10+50	12+00	RT	280
23	-Y21RPC-	12+50	16+50	RT	525
23A	-Y21DETC-	10+50	15+50	LT	920
27	-Y13C-	15+35	16+00	RT	115
27	-DRV3-	10+25	10+75	RT	70
29	-Y21-	12+50	15+00	RT	455

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
			SUB	TOTAL	17175
	ADDITIONAL	PSRM TO	BE INST	ALLED	1951
				TOTAL	19126
				SAY	19200

PROJECT REFERENCE NO.	SHEET NO.
U-3326AB	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

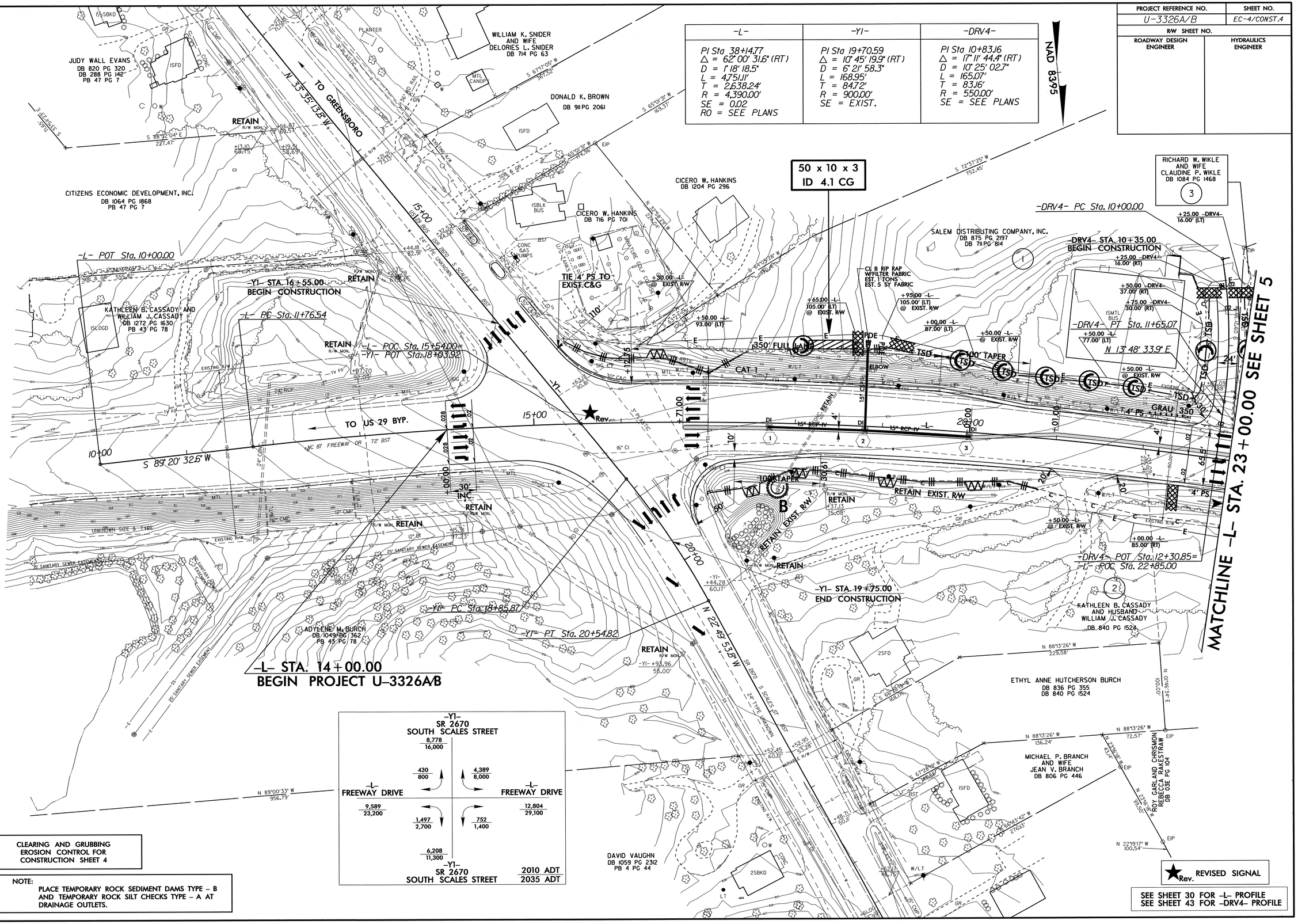
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.
U-3326A/B	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y1-	-DRV4-
PI Sta 38+14.77 Δ = 62° 00' 31.6" (RT) D = 1° 18' 18.5" L = 4,751.11' T = 2,638.24' R = 4,390.00' SE = 0.02 RO = SEE PLANS	PI Sta 19+70.59 Δ = 10° 45' 19.9" (RT) D = 6° 21' 58.3" L = 168.95' T = 84.72' R = 900.00' SE = EXIST.	PI Sta 10+83.16 Δ = 17° 11' 44.4" (RT) D = 10° 25' 02.7" L = 165.07' T = 83.16' R = 550.00' SE = SEE PLANS



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

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

★ Rev. REVISED SIGNAL

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 43 FOR -DRV4- PROFILE

8/17/99

16-MAY-2011 14:50
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jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

DETAIL B
BANK STABILIZATION
(Not to Scale)

Length= 25 Ft.
D= 3 Ft.
Est.= 35 Tons of Class I Rip-Rap

-L- STA. 35+00 Lt.

DETAIL H
STANDARD BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
Max. d= 1.0 Ft.
B= 3.0 Ft.
*When B is < 6.0'

Type of Liner= CLASS B Rip-Rap

FROM -L- STA. 34+65 TO 35+30 Lt.
DDE = 84 CY

DETAIL A17
HAZARDOUS SPILLBASIN

TOTAL CAPACITY REQUIRED : 6500 cu. ft.
TOTAL CAPACITY PROVIDED : 6750 cu. ft.
@ ELEV. 773.4 W/ 1.0 Ft. FREEBOARD

FROM -L- STA. 33+60 TO STA. 34+50 Lt.

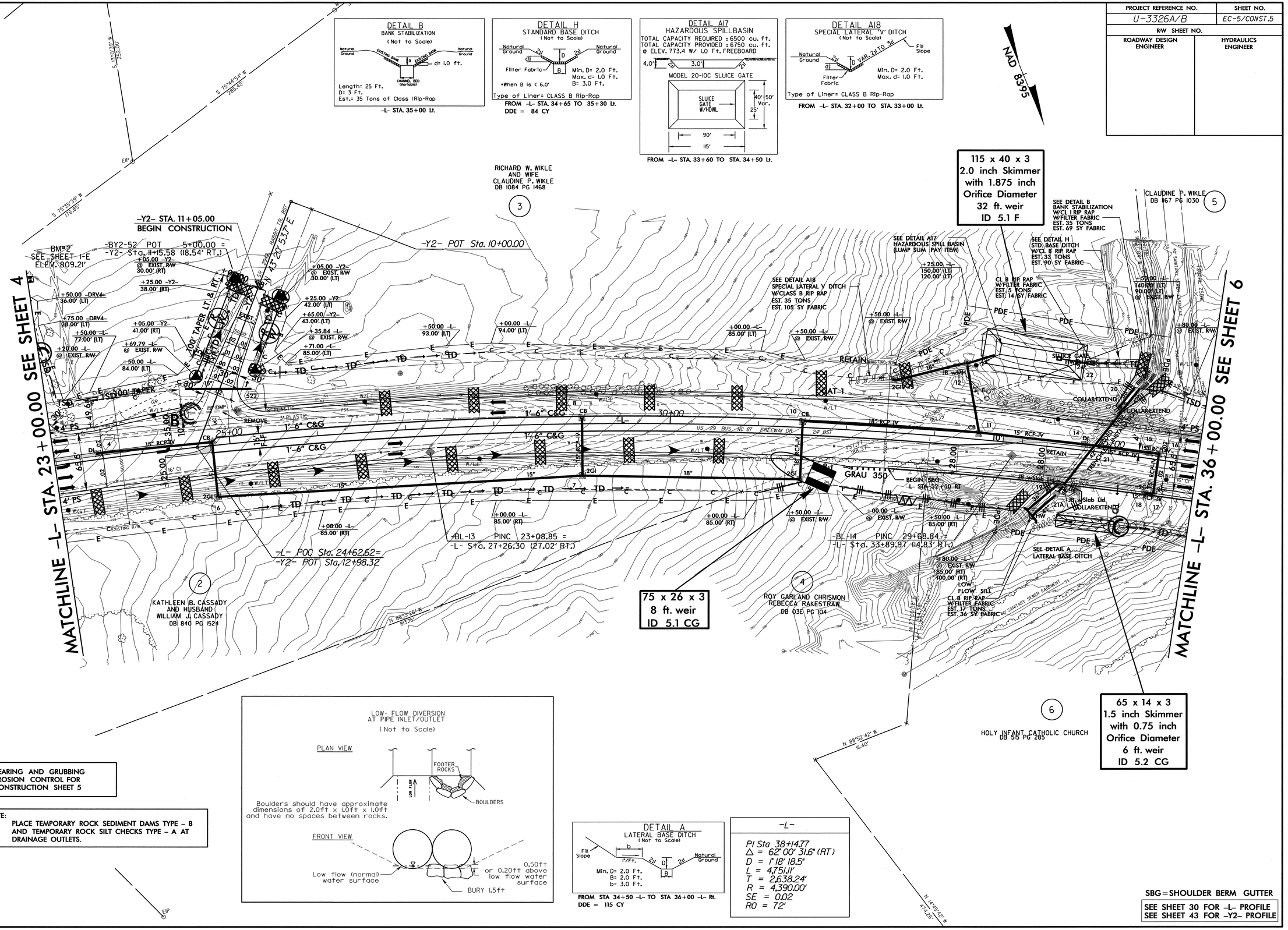
DETAIL A18
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= 2.0 Ft.
Max. d= 1.0 Ft.

Type of Liner= CLASS B Rip-Rap

FROM -L- STA. 32+00 TO STA. 33+00 Lt.

NAD 83/95



LOW- FLOW DIVERSION AT PIPE INLET/OUTLET
(Not to Scale)

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
B= 2.0 Ft.
b= 3.0 Ft.

FROM STA 34+50 -L- TO STA 36+00 -L- Rt.
DDE = 115 CY

-L-

PI Sta 38+14.77
Δ = 62° 00' 31.6" (RT)
D = 1° 18' 18.5"
L = 4,751.11'
T = 2,638.24'
R = 4,390.00'
SE = 0.02
RO = 72'

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.

SBG = SHOULDER BERM GUTTER

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 43 FOR -Y2- PROFILE

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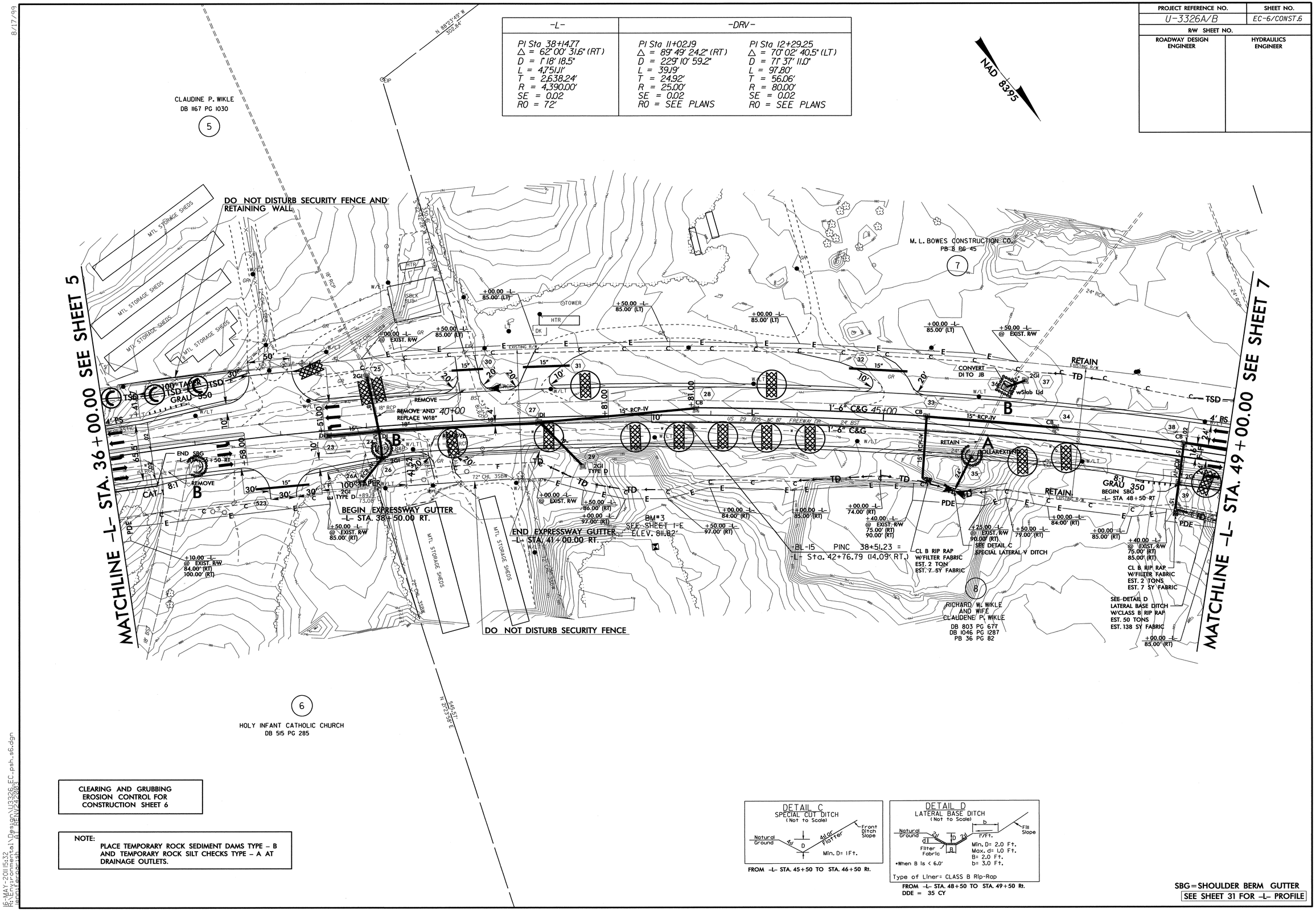
lenoirpowell AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-DRV-	
PI Sta 38+14.77 △ = 62° 00' 31.6" (RT) D = 1° 18' 18.5" L = 4,751.11' T = 2,638.24' R = 4,390.00' SE = 0.02 RO = 72'	PI Sta 11+02.19 △ = 89° 49' 24.2" (RT) D = 229° 10' 59.2" L = 39.19' T = 24.92' R = 25.00' SE = 0.02 RO = SEE PLANS	PI Sta 12+29.25 △ = 70° 02' 40.5" (LT) D = 71° 37' 11.0" L = 97.80' T = 56.06' R = 80.00' SE = 0.02 RO = SEE PLANS



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.

SBG=SHOULDER BERM GUTTER

SEE SHEET 31 FOR -L- PROFILE

8/17/99

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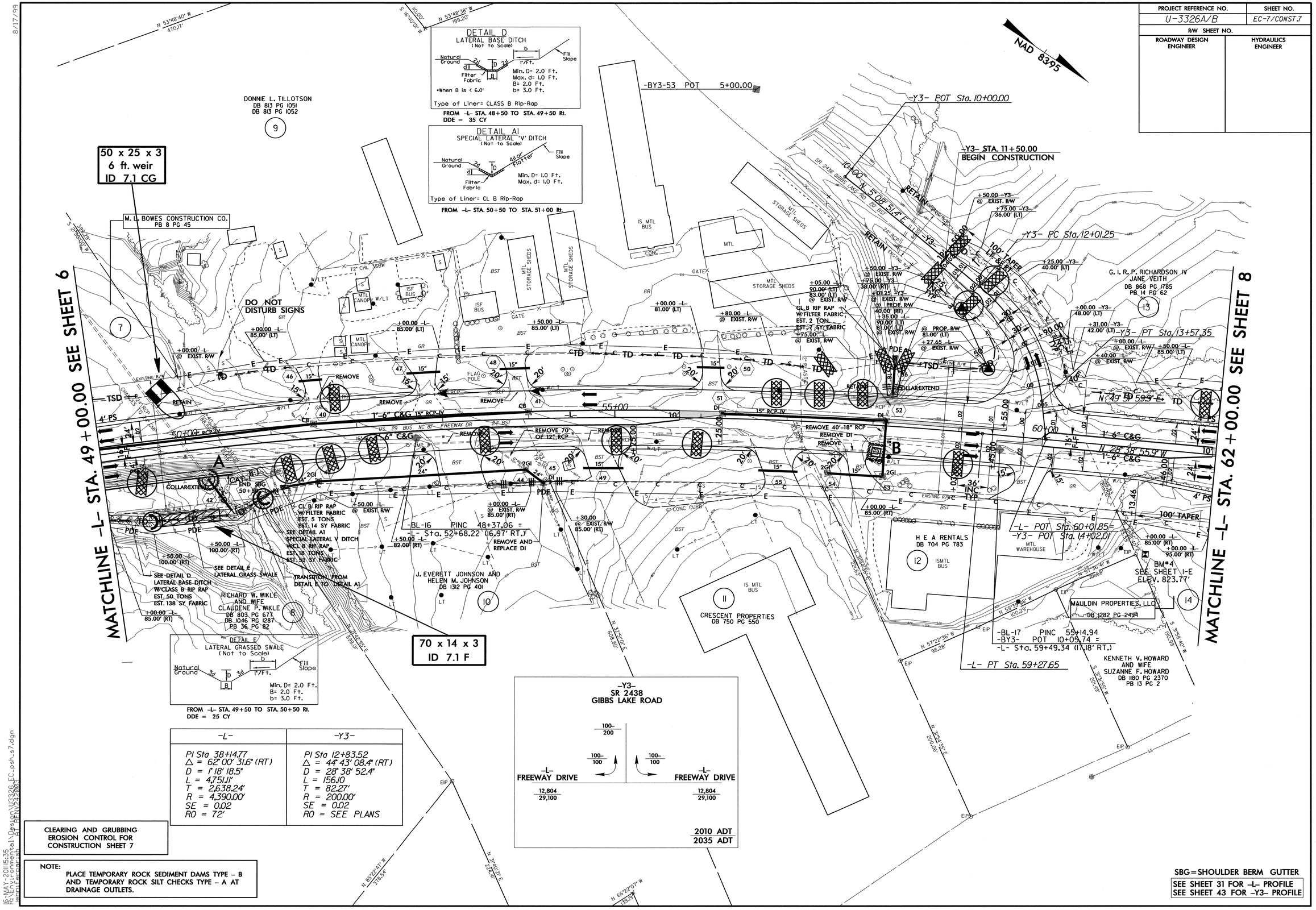
eanderson
A: BENW232002

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-7/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-	-Y3-
PI Sta 38+14.77 △ = 62° 00' 31.6" (RT) D = 1° 18' 18.5" L = 4,751.11' T = 2,638.24' R = 4,390.00' SE = 0.02 RO = 72'	PI Sta 12+83.52 △ = 44° 43' 08.4" (RT) D = 28° 38' 52.4" L = 156.10 T = 82.27' R = 200.00' SE = 0.02 RO = SEE PLANS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

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

SBG=SHOULDER BERM GUTTER

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 43 FOR -Y3- PROFILE

8/17/99

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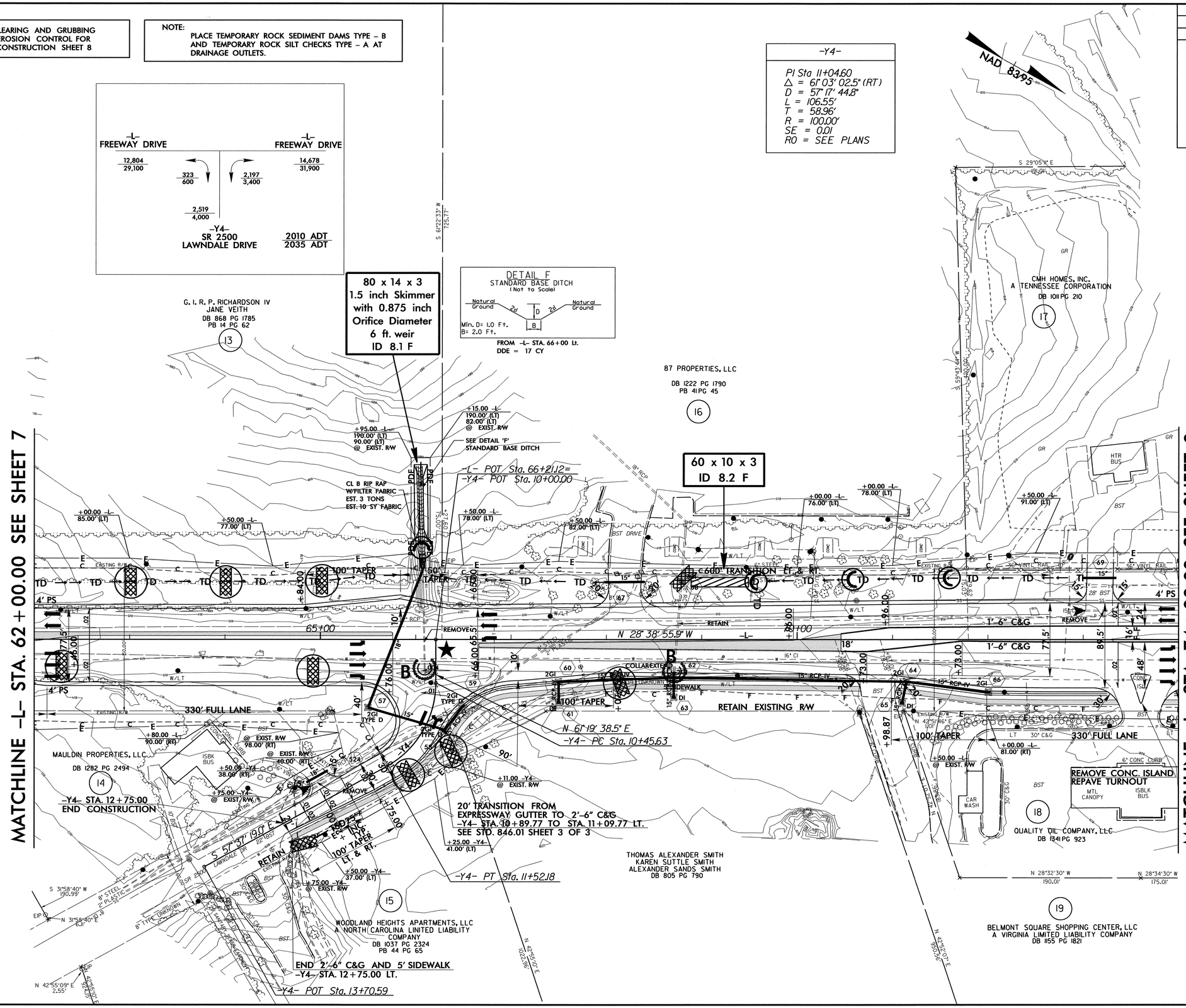
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-8/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

-Y4-
PI Sta 11+04.60
△ = 61° 03' 02.5" (RT)
D = 57° 17' 44.8"
L = 106.55'
T = 58.96'
R = 100.00'
SE = 0.01
RO = SEE PLANS



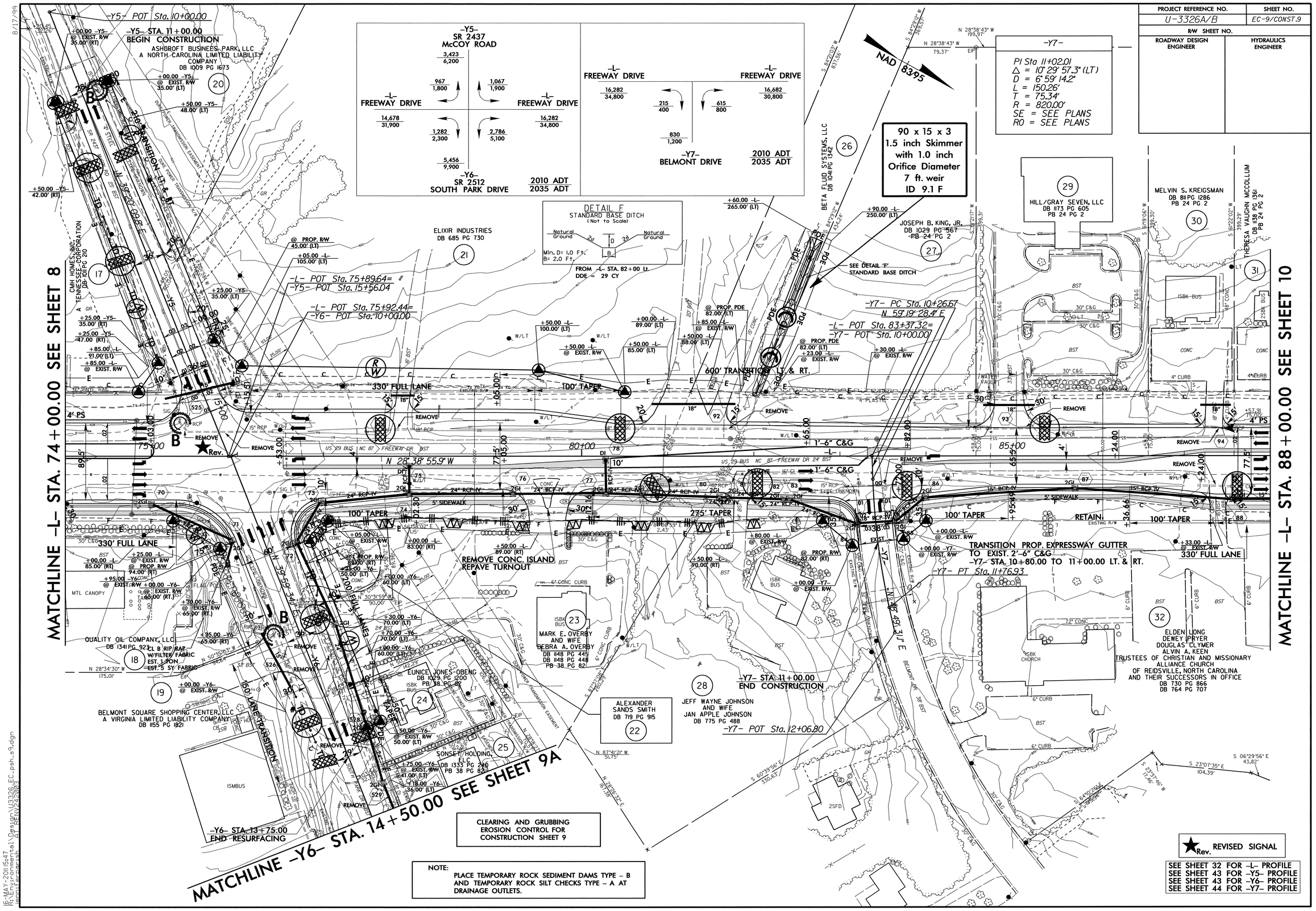
★ PROPOSED SIGNAL

SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 43 FOR -Y4- PROFILE

8/17/99

16-MAY-2011 15:43
R:\Hydraulics\Hydro-Environmental\Design\U3326_EC_psh_s8.dgn
pmcintyre@ncdot.gov

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-9/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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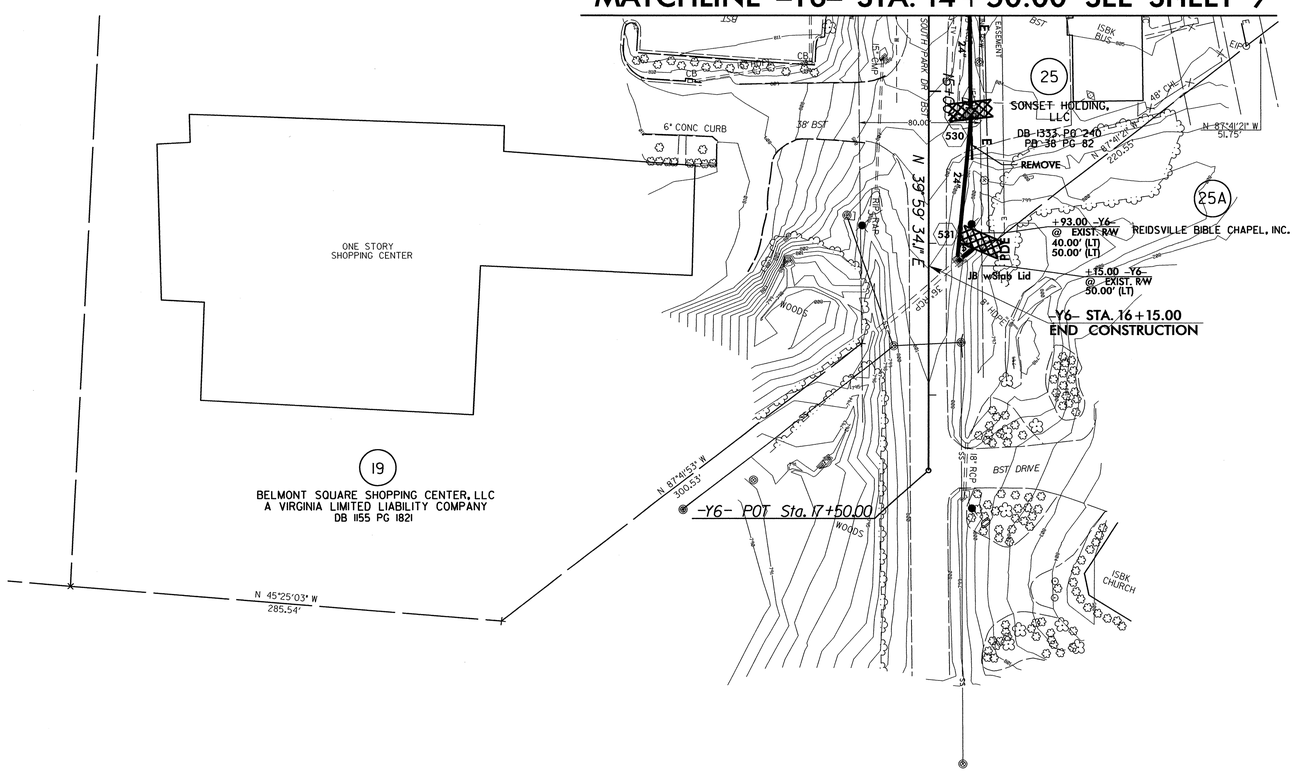
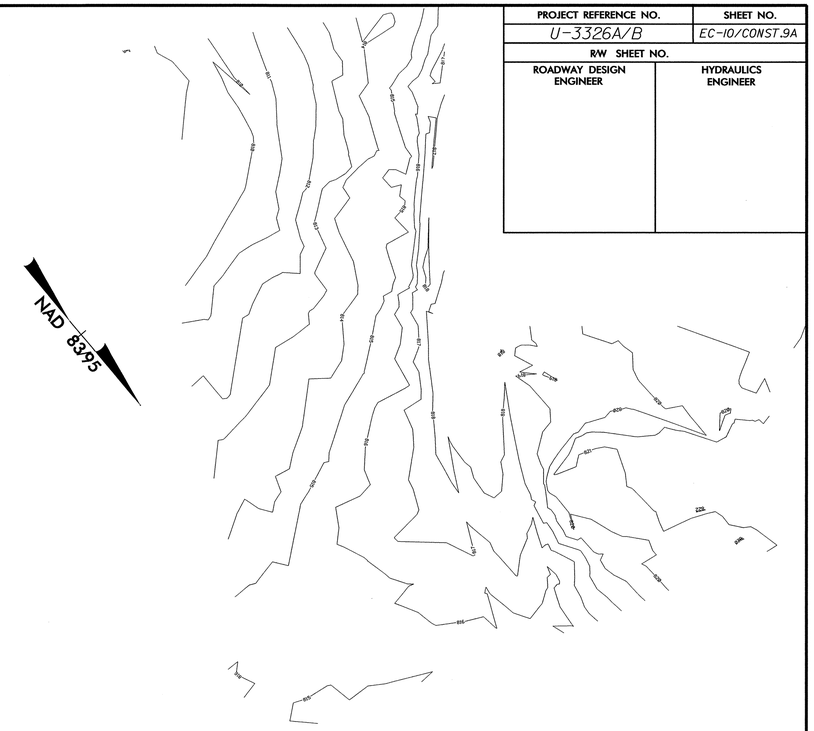
mcintosh APRENV232005

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-10/CONST.9A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE -Y6- STA. 14+50.00 SEE SHEET 9





CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9A

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

8/17/99

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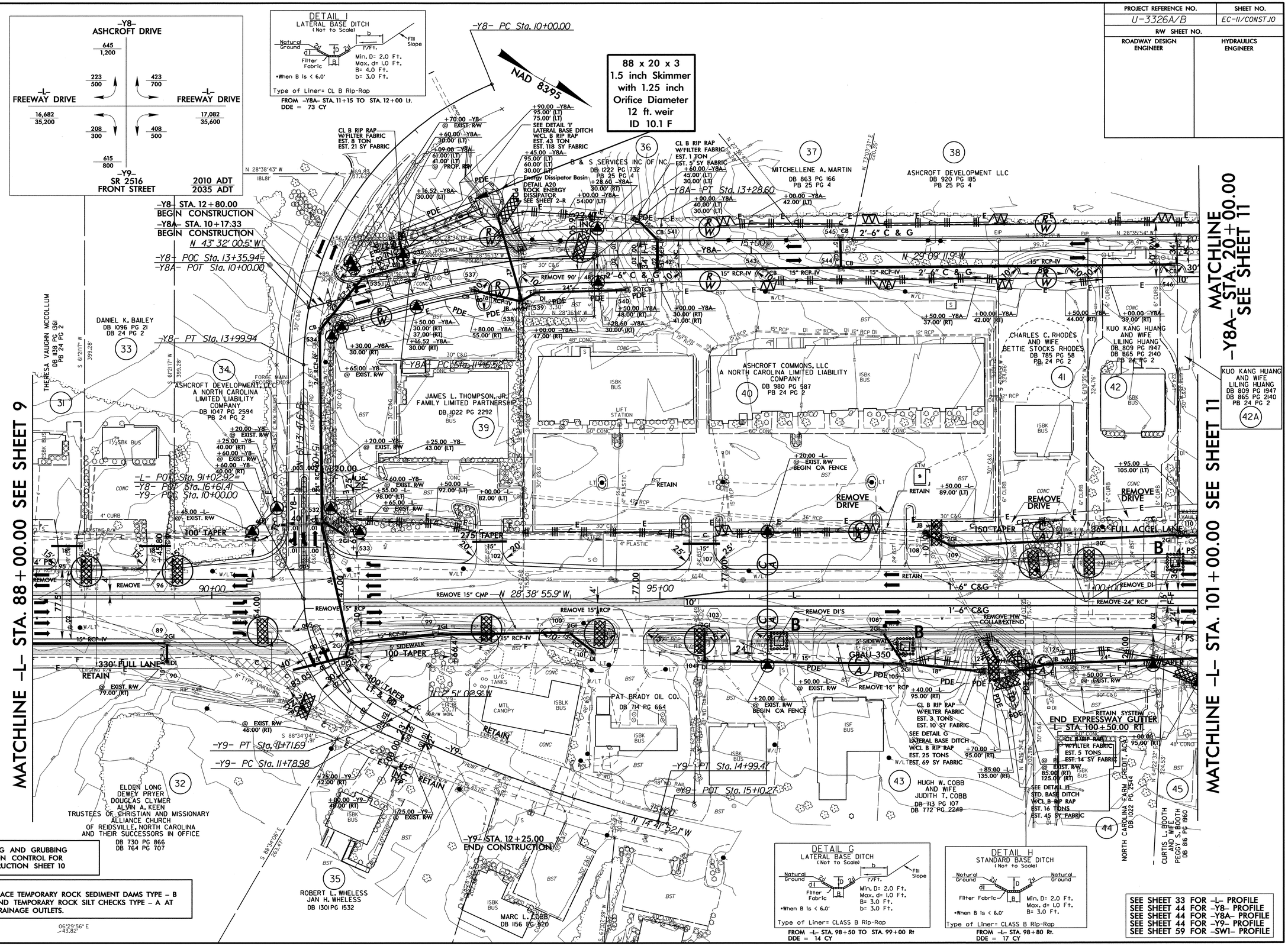
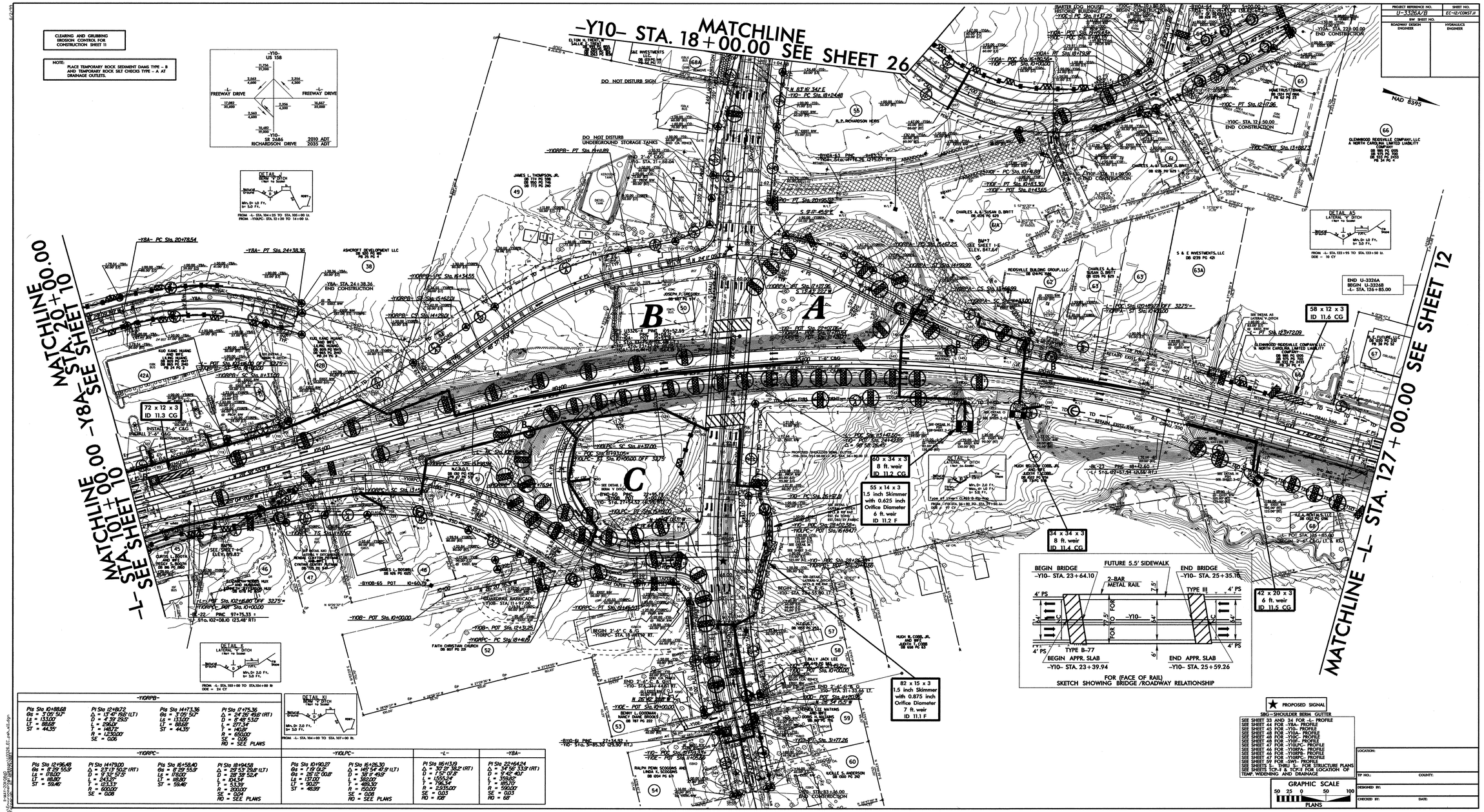
jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-11/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





-Y10RPB-			
Pts Sta 10+88.68	PI Sta 12+19.72	Pts Sta 14+73.36	PI Sta 17+75.36
Bs = N 05° 51' 51.5" E	Δ = 13° 41' 19.0" (LT)	Δ = 3° 05' 51.5" (RT)	Δ = 24° 26' 49.8" (RT)
Ls = 133.00'	D = 4° 39' 29.5"	D = 8° 48' 53.0"	D = 8° 48' 53.0"
LT = 88.68'	L = 206.00'	L = 133.00'	L = 277.34'
ST = 44.35'	T = 108.72'	LT = 88.68'	T = 140.31'
	R = 1230.00'	ST = 44.35'	R = 650.00'
	SE = 0.06		SE = 0.06
			RD = SEE PLANS

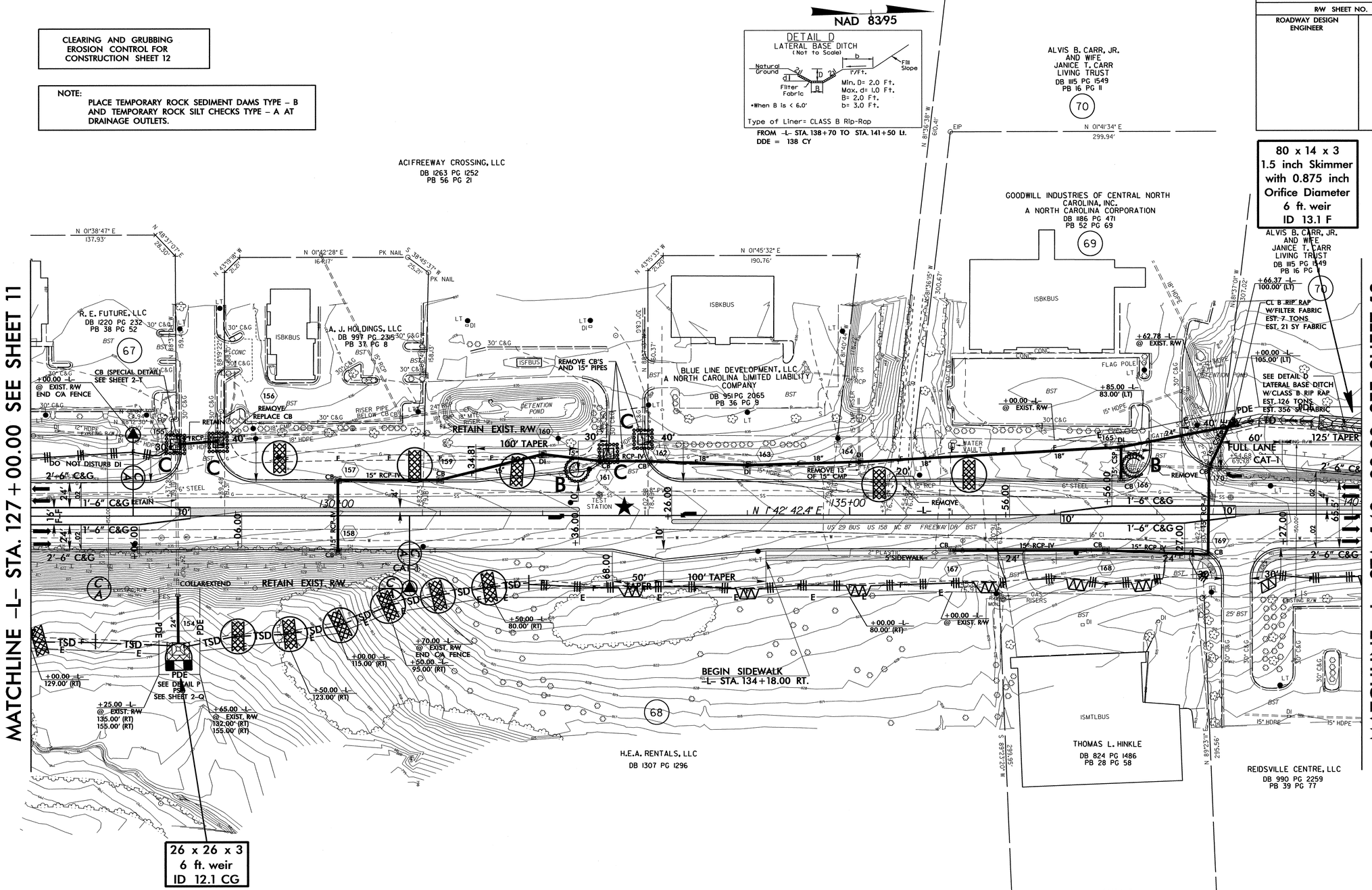
-Y10RPC-			
Pts Sta 13+96.49	PI Sta 14+79.00	Pts Sta 16+58.40	PI Sta 18+94.58
Bs = N 25° 55' 55.5" E	Δ = 53° 13' 50.2" (RT)	Bs = N 25° 55' 55.5" E	Δ = 29° 53' 29.8" (LT)
Ls = 178.00'	D = 9° 32' 57.5"	Ls = 178.00'	D = 28° 38' 52.4"
LT = 165.80'	L = 243.37'	LT = 165.80'	L = 104.54'
ST = 59.46'	T = 131.33'	ST = 59.46'	T = 53.39'
	R = 600.00'		R = 200.00'
	SE = 0.08		SE = 0.04
			RD = SEE PLANS

-Y10LPC-		-L-	-Y8A-
Pts Sta 10+90.27	PI Sta 16+26.30	PI Sta 16+43.19	PI Sta 22+64.24
Bs = N 1° 19' 01.2" E	Δ = 145° 54' 41.9" (LT)	Δ = 30° 21' 30.2" (RT)	Δ = 34° 56' 33.5" (RT)
Ls = 126° 12' 00.8"	D = 38° 11' 49.5"	D = 1° 57' 01.8"	D = 9° 42' 40.1"
LT = 137.00'	L = 382.00'	L = 1,053.24'	L = 359.85'
ST = 90.27'	T = 469.30'	T = 796.34'	T = 185.70'
ST = 46.99'	R = 150.00'	R = 2,935.00'	R = 590.00'
	SE = 0.08	SE = 0.03	SE = 0.03
	RD = SEE PLANS	RD = 108'	RD = 68'

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-13/CONST.12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



★ PROPOSED SIGNAL

SEE SHEET 34 FOR -L- PROFILE

8/17/99

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jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-14/CONST.J3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

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

NAD 83/95

DETAIL X
TOE PROTECTION
(Not to Scale)
Natural Ground, 2.0 ft FLAT, Fill Slope, d1, Filter Fabric
d= 1.0Ft.
Type of Liner= CL B Rip-Rap
FROM –L– STA. 149+00 TO STA. 150+50 Rt.

DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1, b, 1'/Ft., Fill Slope, d1, Filter Fabric, B
Min. D= 2.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
b= 3.0 Ft.
•When B is < 6.0'
Type of Liner= CLASS B Rip-Rap
FROM –L– STA. 138+70 TO STA. 141+50 Lt.
DDE = 138 CY

DETAIL H
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1, Natural Ground, d1, Filter Fabric, B
Min. D= 2.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
•When B is < 6.0'
Type of Liner= CL B Rip-Rap
–L– STA. 148+70 TO STA. 148+90 Lt
DDE = 9 CY

DETAIL T
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 3:1, B, B_2, D_2, 2:1, b, 1'/Ft., Fill Slope
D_2= 1.0 Ft.
B_2= VAR.-5.0 Ft.
Min. D= 3.0 Ft.
B= 5.0 Ft.
b= VAR.-5.0 Ft.
FROM –L– STA. 148+20 TO STA. 148+75 Lt.
DDE = 161 CY

80 x 14 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
6 ft. weir
ID 13.1 F

50 x 10 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
6 ft. weir
ID 13.2 CG

40 x 30 x 3
8 ft. weir
ID 13.3 F

55 x 14 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
6 ft. weir
ID 13.2 F

60 x 10 x 3
ID 13.1 CG

MATCHLINE –L– STA. 140+00.00 SEE SHEET 12

MATCHLINE –L– STA. 153+00.00 SEE SHEET 14

ALVIS B. CARR, JR. AND WIFE JANICE T. CARR LIVING TRUST
DB 1115 PG 1549
PB 16 PG 11
70

DANNY W. TRENT
DB 745 PG 468
PB 16 PG 11
71

GEORGE W. TRENT, JR
STEPHANIE D. TRENT
DB 745 PG 466
71A

SUNNYCREST CHURCH OF CHRIST
DB 771 PG 1183
74

REIDSVILLE CENTRE, LLC
DB 990 PG 2259
PB 39 PG 77

REIDSVILLE CORRAL GROUP, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
DB 999 PG 2258
PB 39 PG 77

UNITED DEVELOPMENT CORP.
DB 1267 PG 2280

CHARLES W. TRENT, JR. AND BETTY P. TRENT
PB 16 PG 11
72

STEPHEN E. SMITH
DB 1082 PG 1247
PB 18 PG 5
73

SEE DETAIL D
LATERAL BASE DITCH
W/CLASS B RIP RAP
EST. 126 TONS
EST. 356 SY FABRIC

SEE DETAIL T
LATERAL BASE DITCH

SEE DETAIL H
STD. BASE DITCH
WCL B RIP RAP
EST. 9 TONS
EST. 25 SY FABRIC

CL B RIP RAP
W/FILTER FABRIC
EST. 3 TON
EST. 30 SY FABRIC

SEE DETAIL N
PSH
SEE SHEET 2-Q

SEE DETAIL X
TOE PROTECTION
W/CL B RIP RAP
EST. 53 TONS
EST. 157 SY FABRIC

CL B RIP RAP
W/FILTER FABRIC
EST. 1 TON
EST. 5 SY FABRIC

SEE DETAIL S
LATERAL BASE DITCH
WCL-I RIP RAP
EST. 130 TON
EST. 237 SY FABRIC

DO NOT DISTURB SIGN

REMOVE/REPLACE DI

RETAIN

REMOVE

REMOVE/REPLACE

(REMOVE) DI

REMOVE/REPLACE COLLAR/EXTEND

COLLAR/EXTEND

GRAU 350

CAT-1

TSD

CWD

PDE

PDD

N 42° 42.4' E

N 89°22'26" E 293.31'

N 89°23'26" E 294.04'

S 86°33'26" E 1656.79'

N 01°41'49" E 259.68'

S 01°44'13" W 250.00'

490.43' N 01°40'45" E

DETAIL S
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 3:1, B, b, 1'/Ft., Fill Slope, d1, Filter Fabric
•When B is < 6.0'
Std. No. 876.01
Min. D= 3.0 Ft.
Max. d= 2.0 Ft.
B= 5.0 Ft.
b= min. 5.0-Var. Ft.
Type of Liner= CLASS I Rip-Rap
FROM –L– STA. 150+50 TO STA. 151+80 Rt.
DDE = 888 CY

CLEAN WATER DIVERSION
(Not to Scale)
CWD
STABILIZE EXCAVATED MATERIAL
FABRIC FOR SOIL STABILIZATION
OFFSITE CLEAN WATER
1' MIN.
1' MIN.

SEE SHEET 35 FOR –L– PROFILE

8/17/99

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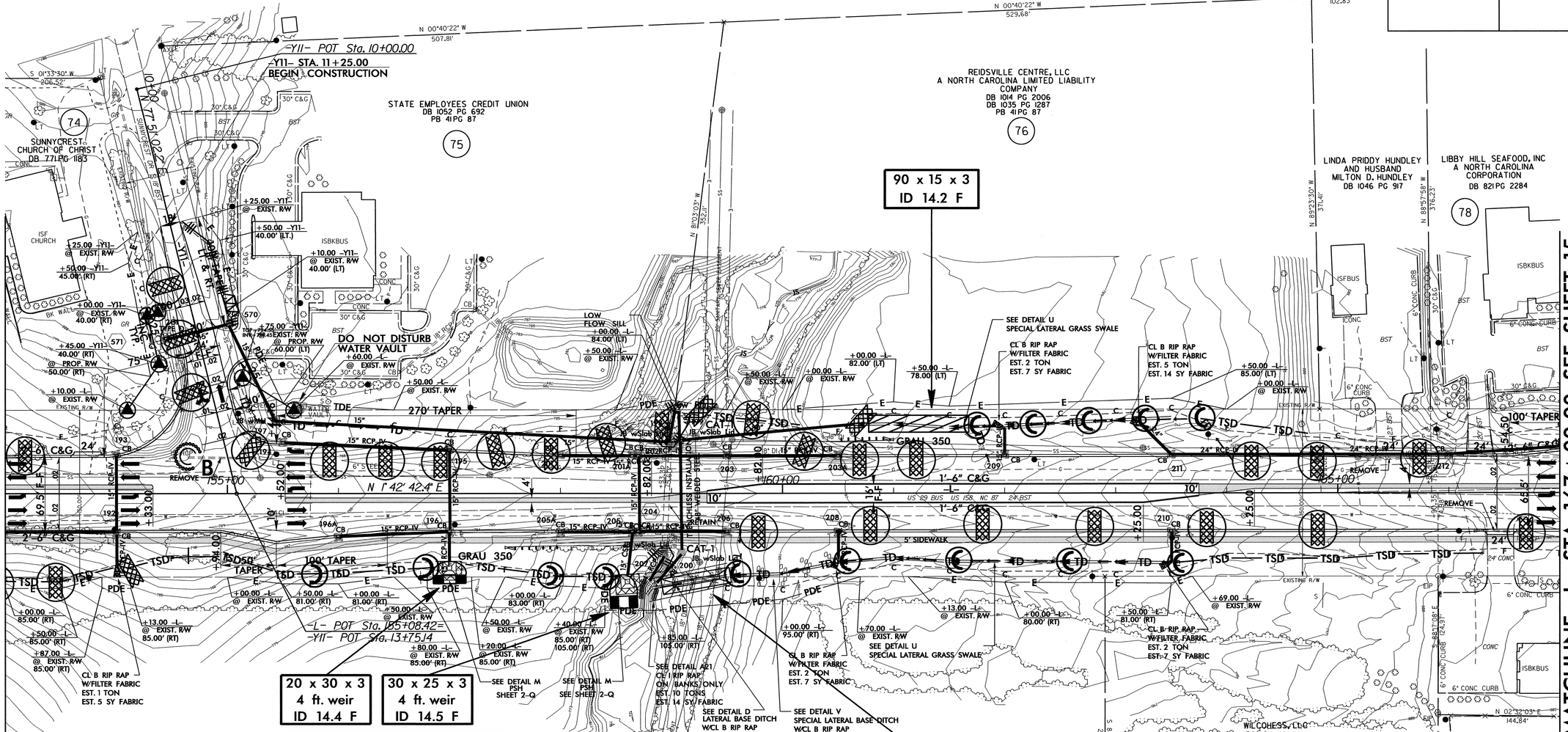
jenniferparrish AT REN\24x36x3

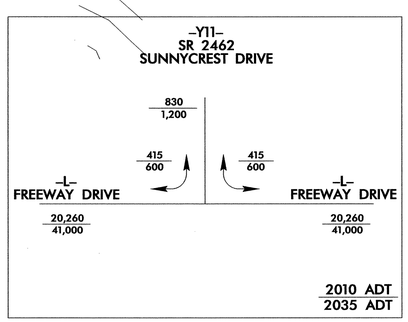
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-15/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

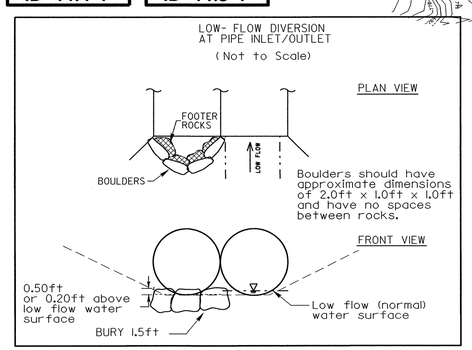
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

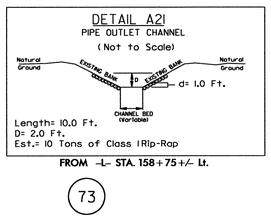
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NAD 83/95

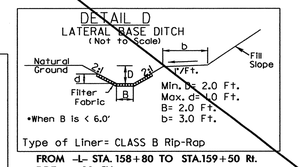




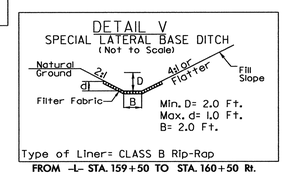




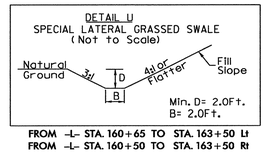
FROM –L– STA. 158+75+/– Lt.



FROM –L– STA. 158+80 TO STA.159+50 Rt.
DDE = 30 CY



FROM –L– STA. 159+50 TO STA. 160+50 Rt.



FROM –L– STA. 160+65 TO STA. 163+50 Lt
FROM –L– STA. 160+50 TO STA. 163+50 Rt

73
STEPHEN E. SMITH
DB 1082 PG 1247
PB 18 PG 5

SEE SHEET 35 FOR –L– PROFILE
SEE SHEET 48 FOR –Y11– PROFILE

8/17/99

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Mentz, Frances A. (FRENV2432003)

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-16/CONST.15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y12-
SR 2413
VANCE STREET

7,623 / 15,400

-L- FREEWAY DRIVE: 2,071 / 4,200 ; 2,071 / 4,200

-L- FREEWAY DRIVE: 20,260 / 41,000 ; 2,945 / 6,000 ; 1,197 / 2,400 ; 18,512 / 37,400

7,623 / 15,400

-Y12-
SR 2525
VANCE STREET

2010 ADT
2035 ADT

-L-	-Y12-	
PI Sta 186+88.71	PI Sta 11+50.14	PI Sta 17+41.77
Δ = 31° 56' 07.0" (RT)	Δ = 2° 35' 54.5" (RT)	Δ = 3° 23' 46.7" (LT)
D = 1° 58' 44.9"	D = 0° 59' 59.7"	D = 0° 49' 06.6"
L = 1,613.60'	L = 259.87'	L = 414.94'
T = 828.36'	T = 129.96'	T = 207.53'
R = 2,895.00'	R = 5,730.00'	R = 7,000.00'
SE = 0.03	SE = NC	SE = NC
RO = 108'		

NAD 83/95

-Y12- STA. 10+00.00
BEGIN CONSTRUCTION

-Y12= POT Sta. 10+00.00

-Y12A- POT Sta. 10+85.07
BEGIN 2'-6" C&G
-Y12- STA. 11+22.65 LT.

-Y12- PT Sta. 12+80.05

BEGIN 2'-6" C&G
-Y12- STA. 12+46.00 RT.

-L- POC Sta. 179+01.42=
-Y12- POT Sta. 15+31.40

-Y12- PC Sta. 15+34.24

-L- PC Sta. 178+60.35

-Y12- PC Sta. 10+20.8

-Y12- POC Sta. 10+97.29=
-Y12A- POT Sta. 10+00.00

N 78° 16' 19.6" E

MATCHLINE -L- STA. 167+00.00 SEE SHEET 14

MATCHLINE -L- STA. 181+00.00 SEE SHEET 16

MATCHLINE -Y12- STA. 18+00.00 SEE SHEET 15A

(78) LIBBY HILL SEAFOOD, INC.
A NORTH CAROLINA CORPORATION
DB 821 PG 2284

(79) GOLDEN MULLETT, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
DB 1099 PG 581

(80) NAGINBHAI G. PATEL AND WIFE MANJULABEN N. PATEL
DB 776 PG 52

MICHAEL D. CARTER
DB 1050 PG 1227
PB 45 PG 58

A & L OF GREENSBOROUGH, INC.
DB 1302 PG 1077
PB 52 PG 86

FREEWAY PARTNERS, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
DB 974 PG 1523
PB 45 PG 58

FREEWAY INVESTMENTS, LLC
DB 1312 PG 847

TACO REALTY INVESTMENTS, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
DB 996 PG 2264

VERA HODGES
DB 1315 PG 218

EARL B. FURR, JR. AND WIFE BETTEC. FURR
DB 755 PG 44

(81) ROBERT PERRY STUTTS, JR. AND WIFE ANNE LOVE STUTTS
DB 721 PG 228

(82) JOHN D. LOVE OIL COMPANY

(83) THE FIRST NATIONAL BANK OF REIDSVILLE, NORTH CAROLINA
DB 675 PG 795

(84) MEDIA GENERAL NEWSPAPERS, INC.
DB 955 PG 160

(85A) CAINE FAMILY, LLC

(85) AXINN BROWNSVILLE, LLC
DB 1245 PG 886

(86) PIEDMONT ENTERPRISES, INC.
A NORTH CAROLINA CORPORATION
DB 1145 PG 2080

END SIDEWALK
-L- STA. 178+98.83 RT.

DO NOT DISTURB WATER SPIGOT

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.

★ Rev. REVISED SIGNAL

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 49 FOR -Y12- PROFILE

8/17/99

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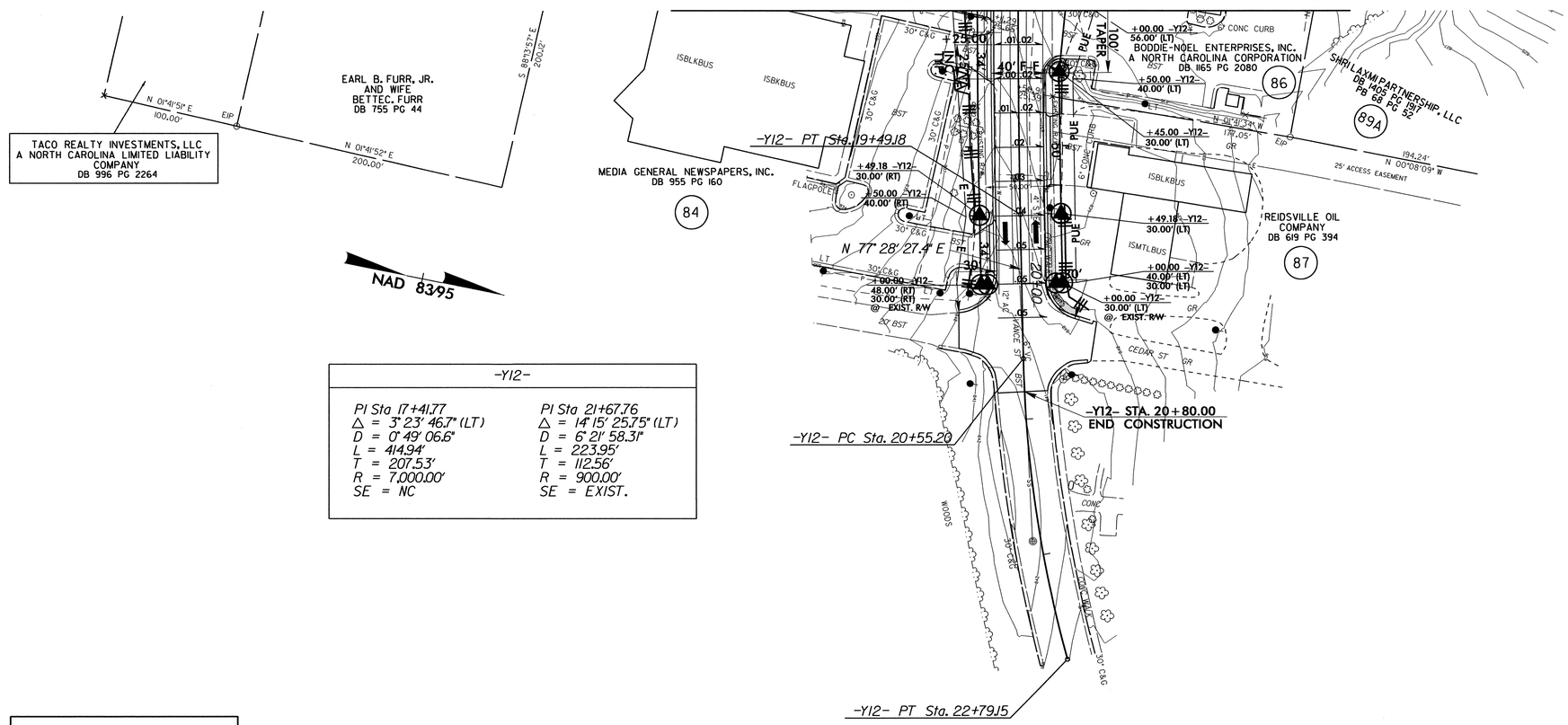
jennifer.pounds
AT REN\U3260_3

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-17/CONST.15A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE –Y12– STA. 18+00.00 SEE SHEET 15



–Y12–	
PI Sta 17+41.77	PI Sta 21+67.76
Δ = 3° 23' 46.7" (LT)	Δ = 14° 15' 25.75" (LT)
D = 0° 49' 06.6"	D = 6° 21' 58.31"
L = 414.94'	L = 223.95'
T = 207.53'	T = 112.56'
R = 7,000.00'	R = 900.00'
SE = NC	SE = EXIST.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15A

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

SEE SHEET 49 FOR –Y12– PROFILE

8/17/99
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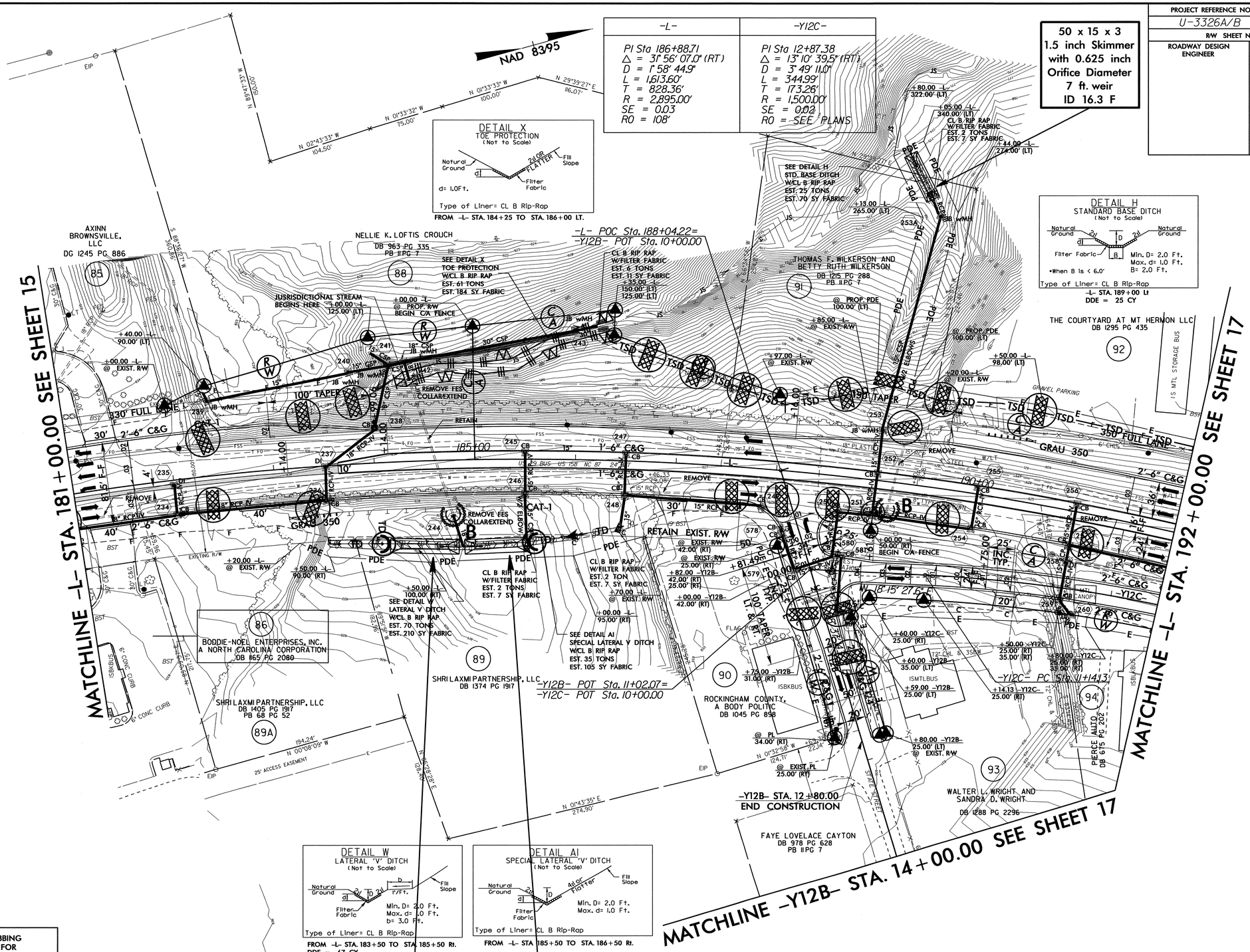
jenifer.corish AT BRENV232003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-18/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y12C-
PI Sta 186+88.71	PI Sta 12+87.38
△ = 31° 56' 07.0" (RT)	△ = 13° 10' 39.5" (RT)
D = 1° 58' 44.9"	D = 3° 49' 11.0"
L = 1,613.60'	L = 344.99'
T = 828.36'	T = 173.26'
R = 2,895.00'	R = 1,500.00'
SE = 0.03	SE = 0.02
RO = 108'	RO = SEE PLANS

50 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
7 ft. weir
ID 16.3 F



FROM -L- STA. 184+25 TO STA. 186+00 LT.

-L- STA. 189+00 Lt
DDE = 25 CY

FROM -L- STA. 183+50 TO STA. 185+50 Rt.
DDE = 67 CY

FROM -L- STA 185+50 TO STA. 186+50 Rt.

68 x 14 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
6 ft. weir
ID 16.1 CG

62 x 14 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
6 ft. weir
ID 16.1 F

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 16

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

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 49 FOR -Y12B- PROFILE
SEE SHEET 49 FOR -Y12C- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

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bennifer@parish_at_RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-19/CONST.17

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 17

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

SKETCH SHOWING BRIDGE /ROADWAY RELATIONSHIP

-L-			
PI Sta 186+88.71 Δ = 51°56'07.0" (RT) D = 1°59'44.5" L = 1,813.66' T = 839.38' R = 2,895.00' SE = 0.03' RO = SEE PLANS	PI Sta 198+52.87 Δ = 9°12'54.8" (RT) D = 1°25'56.8" L = 642.16' T = 322.07' R = 4,000.00' SE = 0.02' RO = 72'	PI Sta 207+08.62 Δ = 2°46'04.0" (RT) D = 0°34'22.2" L = 483.06' T = 241.58' R = 10,000.00' SE = NC	PI Sta 211+91.68 Δ = 0°40'04.0" (LT) D = 0°34'22.2" L = 466.00' T = 233.00' R = 10,000.00' SE = NC

-DRV1-		-Y14C-
PI Sta 10+25.98 Δ = 67°01'37.8" (RT) D = 47°55'33.0" L = 51.38' T = 29.58' R = 119.00' SE = SEE PLANS	PI Sta 11+87.71 Δ = 89°23'29.8" (LT) D = 173°31'24.9" L = 51.97' T = 33.26' R = 33.00' SE = SEE PLANS	PI Sta 10+40.22 Δ = 46°45'44.2" (RT) D = 143°14'22.0" L = 33.26' T = 17.79' R = 40.00' SE = 0.06' RO = SEE PLANS

-Y13RPB-		-Y13RPC-	
Pts Sta 11+18.80 Gs = 8°29'55.9" Ls = 176.00' LT = 118.80' ST = 59.46'	Pts Sta 13+13.34 Δ = 25°29'31.8" (LT) D = 9°32'57.5" L = 266.62' T = 135.32' R = 600.00' SE = 0.08' RO = SEE PLANS	Pts Sta 15+03.68 Gs = 8°29'55.9" Ls = 176.00' LT = 118.80' ST = 59.46'	Pts Sta 17+76.78 Δ = 55°13'10.4" (RT) D = 25°34'40.5" L = 137.69' T = 71.10' R = 224.00' SE = 0.04' RO = SEE PLANS

-Y13LPB-		-Y12C-	-Y13-	-Y13A-	-Y13C-	-Y14-	
Pts Sta 10+19.97 Gs = 20°45'57.4" Ls = 137.00' LT = 91.97' ST = 46.25'	Pts Sta 16+63.30 Δ = 140°29'33.0" (RT) D = 20°16'54.8" L = 463.44' T = 526.30' R = 189.00' SE = 0.08' RO = SEE PLANS	Pts Sta 13+22.29 Δ = 5°10'10.8" (RT) D = 1°54'35.5" L = 270.68' T = 135.43' R = 3,000.00' SE = NC	Pts Sta 24+41.80 Δ = 6°10'09.7" (LT) D = 0°38'11.8" L = 969.06' T = 485.01' R = 9,000.00' SE = NC	Pts Sta 13+44.49 Δ = 13°23'10.8" (RT) D = 10°30'46.8" L = 121.33' T = 61.98' R = 545.00' SE = SEE PLANS	Pts Sta 10+69.22 Δ = 22°59'01.8" (LT) D = 17°05'54.9" L = 134.06' T = 69.02' R = 335.00' SE = SEE PLANS	Pts Sta 12+14.67 Δ = 67°18'41.8" (LT) D = 22°30'12.6" L = 276.02' T = 154.47' R = 260.00' SE = 0.04' RO = 80'	Pts Sta 16+90.11 Δ = 6°16'39.5" (RT) D = 4°05'33.2" L = 153.56' T = 76.87' R = 1,400.00' SE = EXIST.

-Y13RPD-		
Pts Sta 11+18.80 Gs = 8°29'55.9" Ls = 176.00' LT = 118.80' ST = 59.46'	Pts Sta 12+70.95 Δ = 17°36'42.0" (LT) D = 9°32'57.5" L = 184.42' T = 92.95' R = 600.00' SE = 0.08'	Pts Sta 14+21.89 Gs = 8°29'55.9" Ls = 176.00' LT = 118.80' ST = 59.46'

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-19/CONST.17

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

SEE SHEET 37 FOR -L- PROFILE
SEE SHEET 40 FOR -Y12C- PROFILE
SEE SHEET 50 FOR -Y12B- PROFILE
SEE SHEET 53 FOR -Y13A- PROFILE
SEE SHEET 53 FOR -Y13C- PROFILE
SEE SHEET 53 FOR -DRV1- PROFILE
SEE SHEET 53 FOR -Y13LPB- PROFILE
SEE SHEET 53 FOR -Y13RPC- PROFILE
SEE SHEET 53 FOR -Y13RPD- PROFILE
SEE SHEET 53 FOR -Y14C- PROFILE
SEE SHEETS 5 - THRU 5 - FOR STRUCTURE PLANS
SEE SHEETS TCP-1 & TCP-2 FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

★ PROPOSED SIGNAL

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:

TIP NO.: COUNTY:

DESIGNED BY:

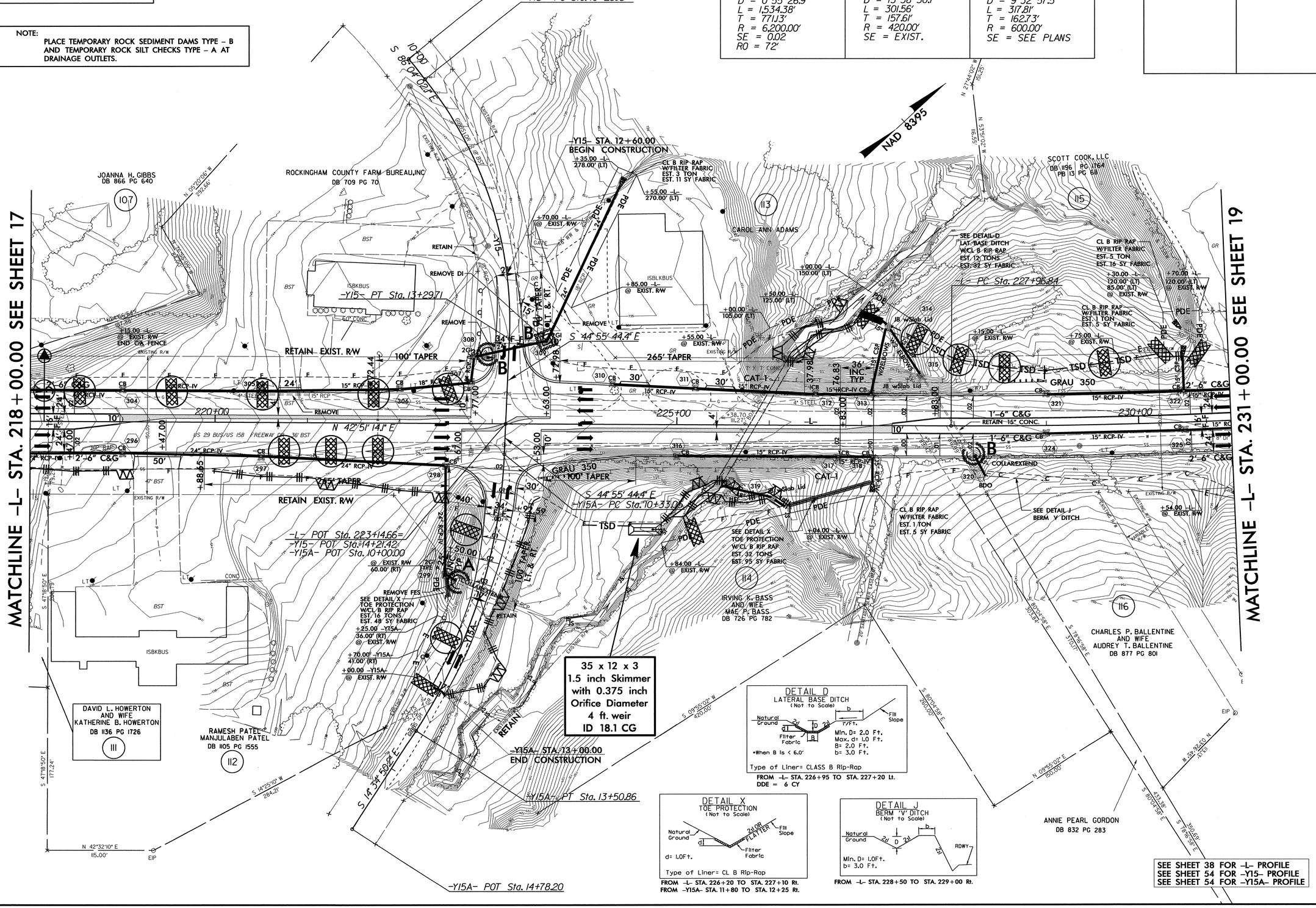
CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-20/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 18

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

-L-	-Y15-	-Y15A-
PI Sta 235+67.97 Δ = 14° 10' 46.6" (LT) D = 0° 55' 26.9" L = 1,534.38' T = 771.13' R = 6,200.00' SE = 0.02 RO = 72'	PI Sta 11+85.76 Δ = 41° 08' 17.8" (RT) D = 13° 38' 30.7" L = 301.56' T = 157.61' R = 420.00' SE = EXIST.	PI Sta 11+95.78 Δ = 30° 20' 54.1" (RT) D = 9° 32' 57.5" L = 317.81' T = 162.73' R = 600.00' SE = SEE PLANS



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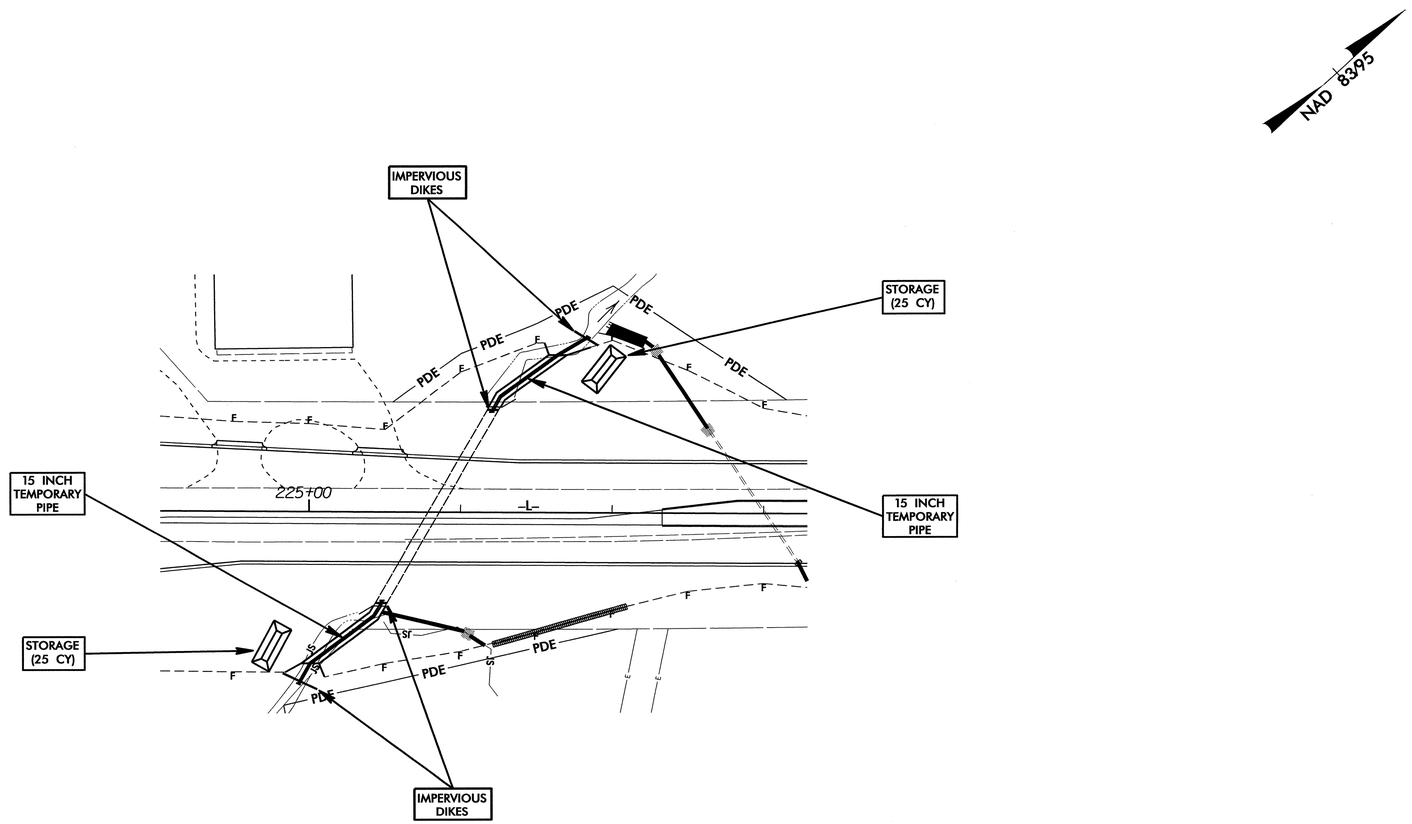
jenkins,jennifer,L AT BRENV2432003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-21/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 225+82.25 –L–

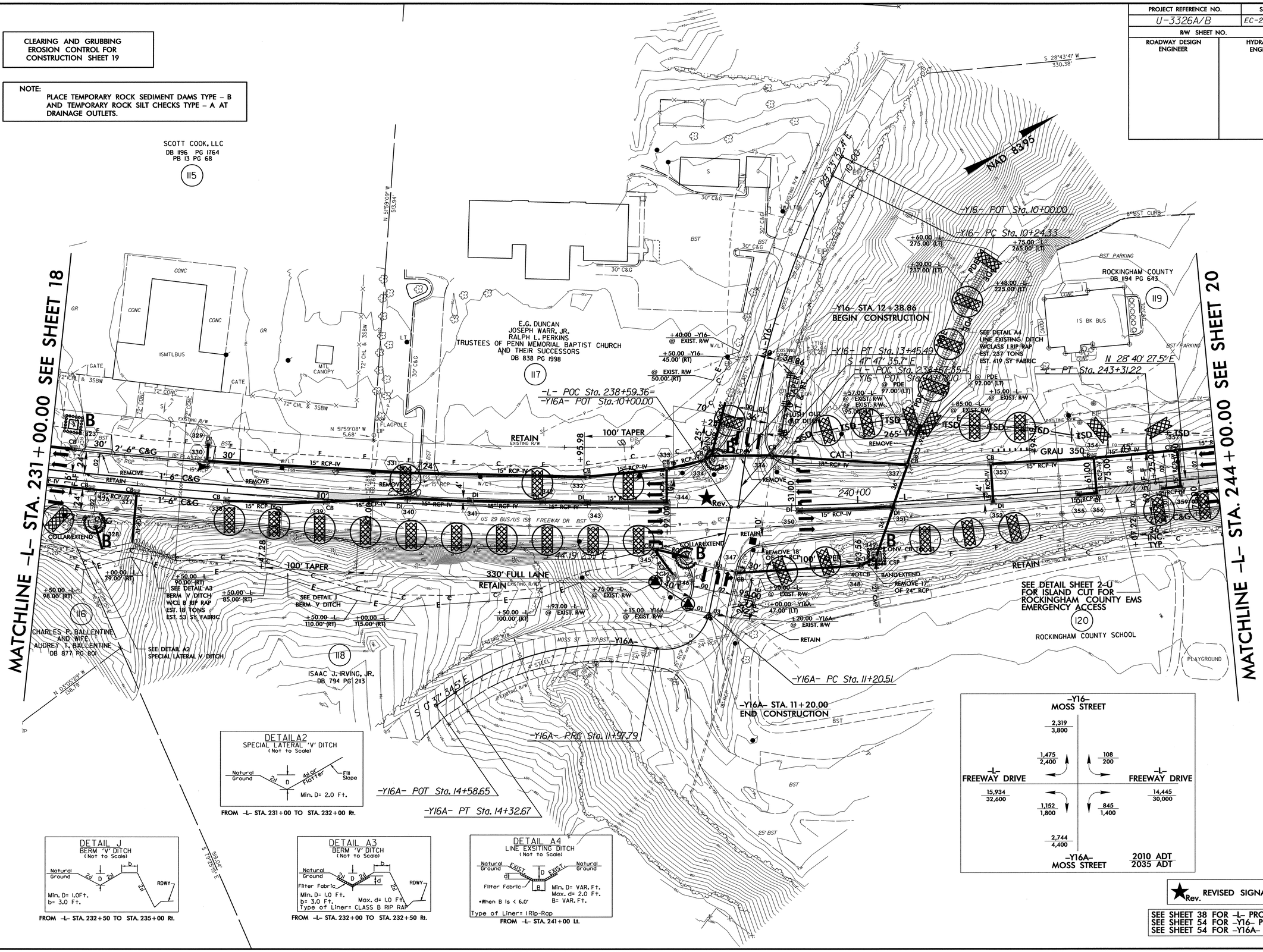
1. CONSTRUCT STILLING BASINS (25 CY EACH).
2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 15 INCH TEMPORARY PIPES, DIVERTING FLOW.
3. CONSTRUCT CULVERT EXTENSIONS, AND ANY NECESSARY UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES AND TEMPORARY PIPES.
5. REMOVE STILLING BASINS.
6. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-22/CONST.19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 19

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



SEE SHEET 38 FOR -L- PROFILE
SEE SHEET 54 FOR -Y16- PROFILE
SEE SHEET 54 FOR -Y16A- PROFILE

8/17/99

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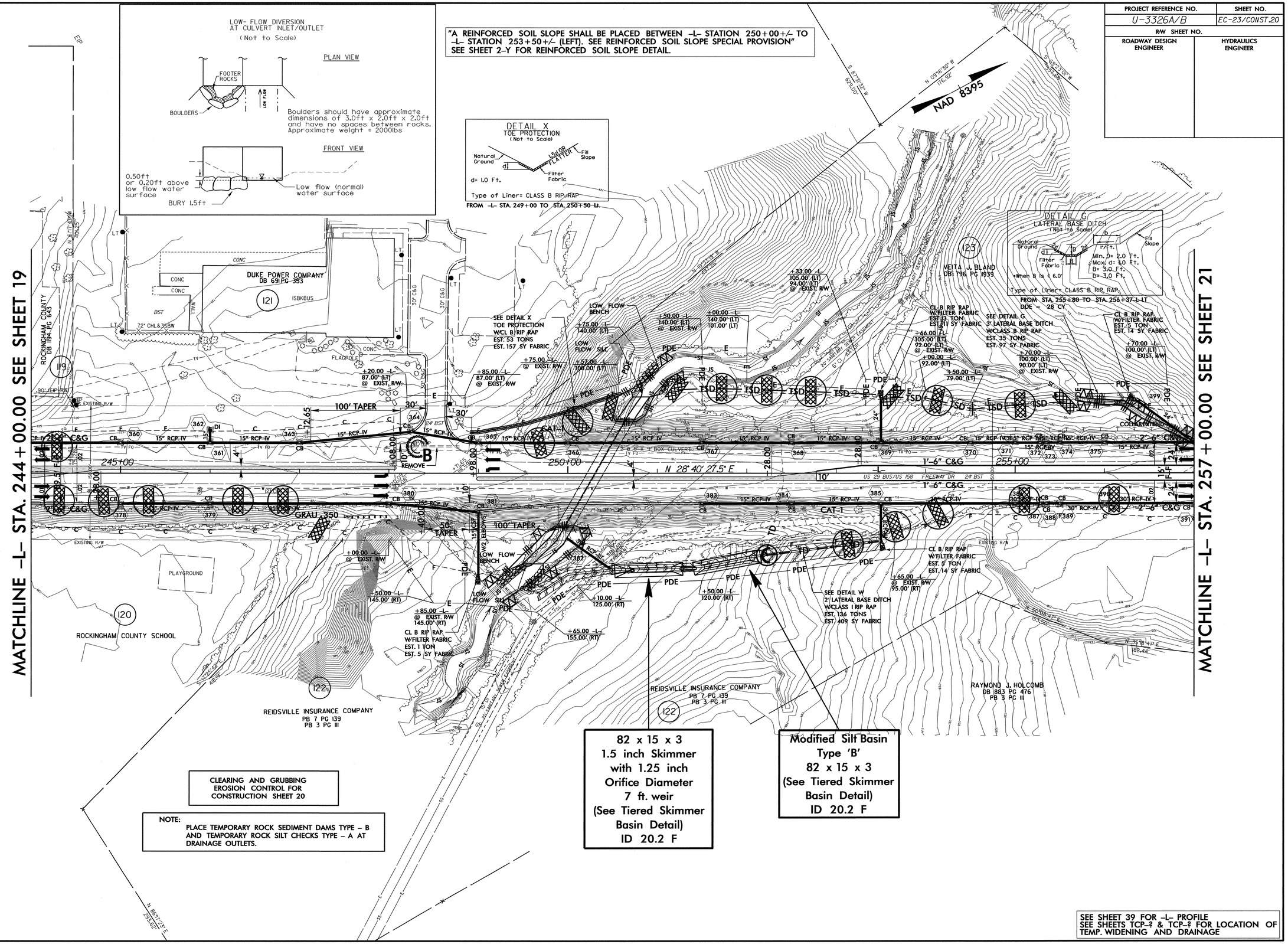
jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-23/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

"A REINFORCED SOIL SLOPE SHALL BE PLACED BETWEEN -L- STATION 250+00+/- TO -L- STATION 253+50+/- (LEFT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION" SEE SHEET 2-Y FOR REINFORCED SOIL SLOPE DETAIL.



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 20

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

SEE SHEET 39 FOR -L- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

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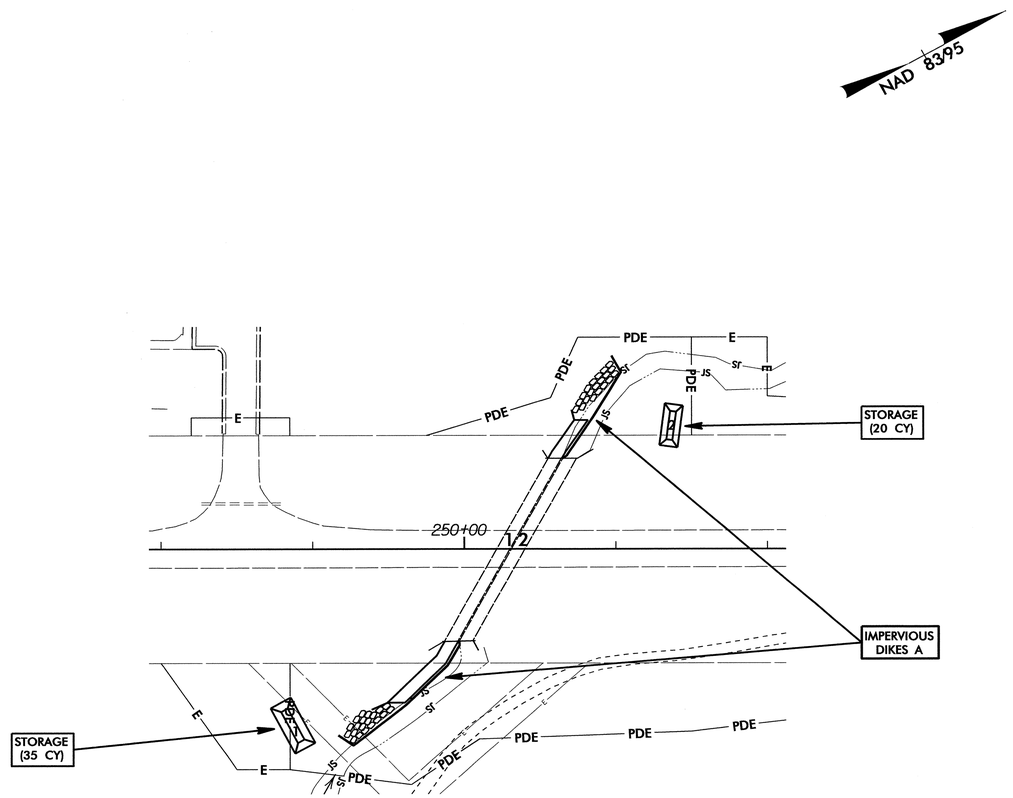
jenniferparish AT RENV242003

CULVERT CONSTRUCTION SEQUENCE STA. 250+30.41 –L–

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-24/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

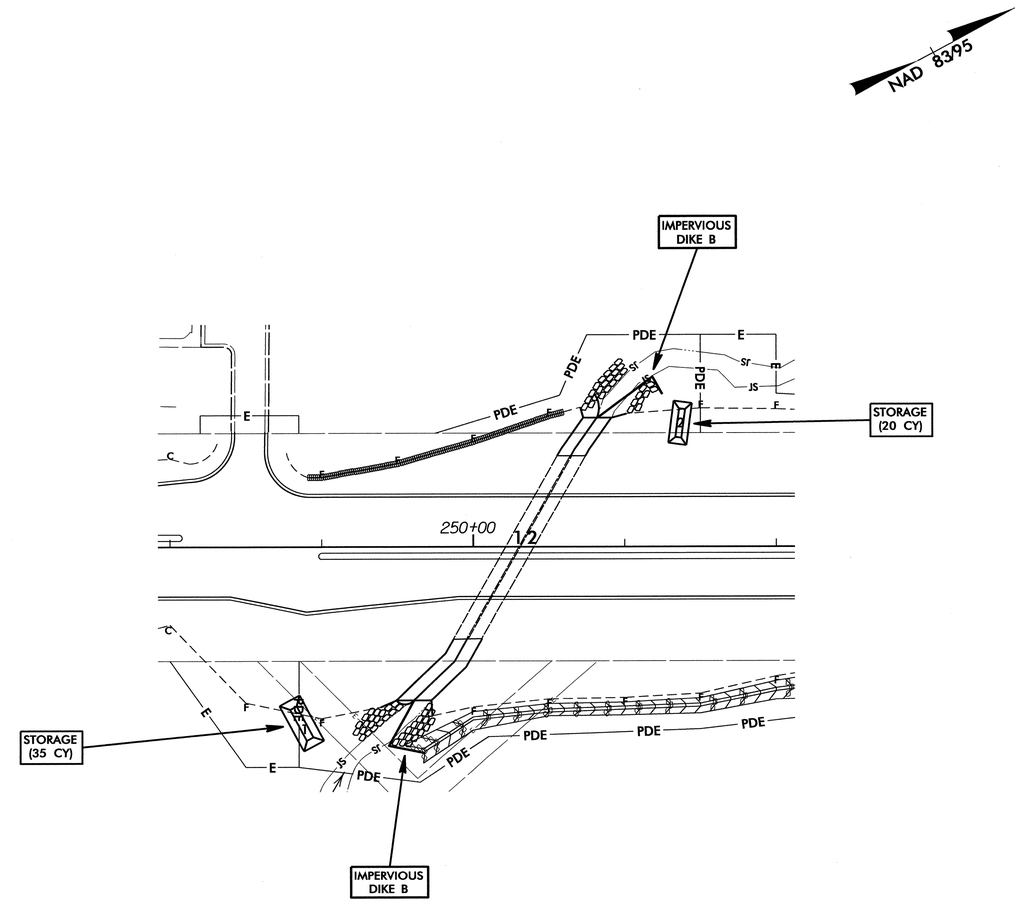
PHASE I

1. CONSTRUCT STILLING BASINS 1 (35 CY) AND 2 (20 CY).
2. CONSTRUCT IMPERVIOUS DIKES A, DIVERTING FLOW THROUGH BARREL 2.
3. CONSTRUCT PROPOSED CULVERT EXTENSIONS FOR BARREL 1, AND A PORTION OF UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES A.



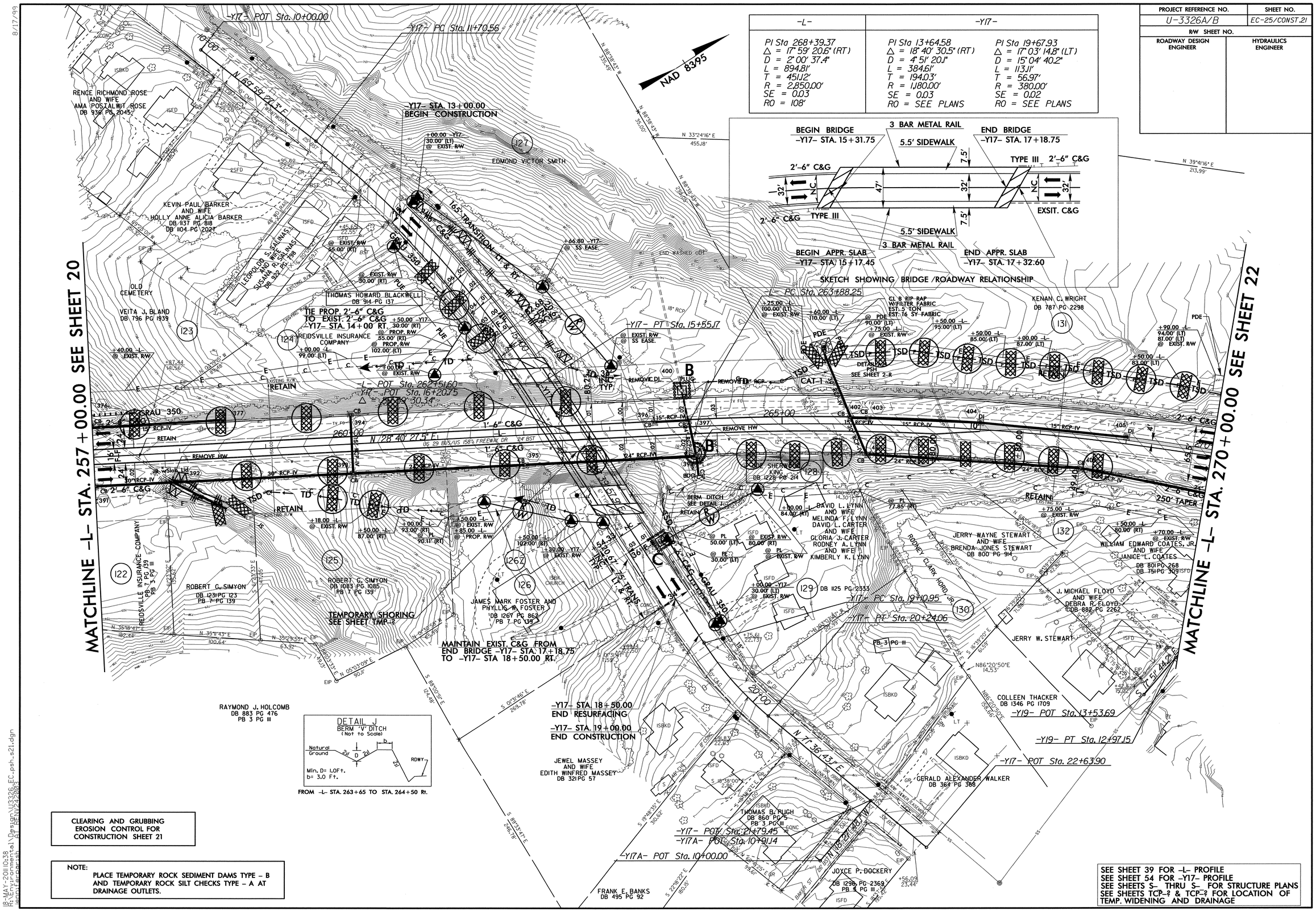
PHASE II

5. CONSTRUCT IMPERVIOUS DIKES B, DIVERTING FLOW THROUGH BARREL 1.
6. CONSTRUCT PROPOSED CULVERT EXTENSIONS FOR BARREL 2, AND REMAINING UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
7. REMOVE IMPERVIOUS DIKES B.
8. REMOVE STILLING BASINS.
9. COMPLETE ROADWAY.



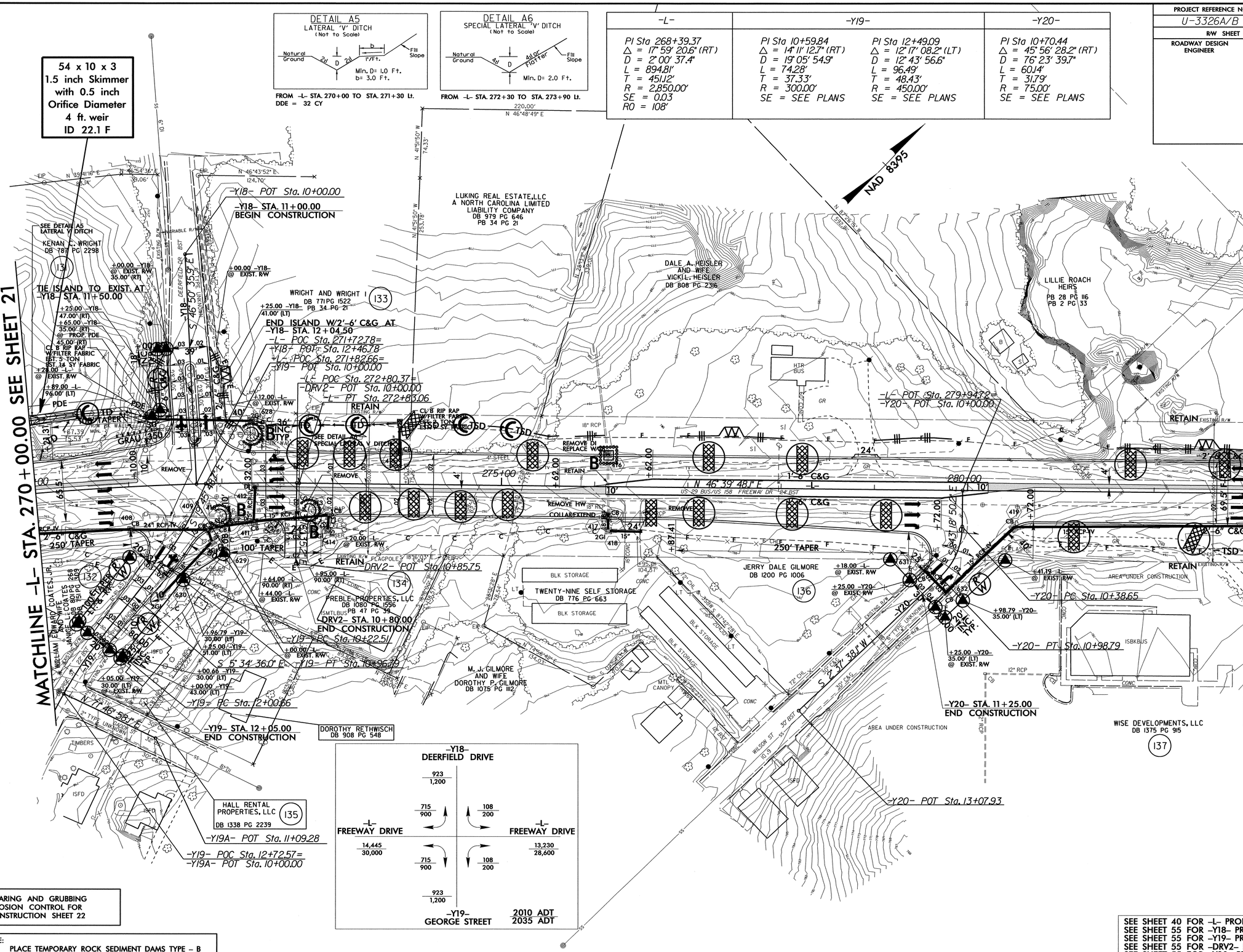
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-25/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y17-	
PI Sta 268+39.37	PI Sta 13+64.58	PI Sta 19+67.93
Δ = 17° 59' 20.6" (RT)	Δ = 18° 40' 30.5" (RT)	Δ = 17° 03' 14.8" (LT)
D = 2° 00' 37.4"	D = 4° 51' 20.1"	D = 15° 04' 40.2"
L = 894.81'	L = 384.61'	L = 113.11'
T = 451.12'	T = 194.03'	T = 56.97'
R = 2,850.00'	R = 1,180.00'	R = 380.00'
SE = 0.03	SE = 0.03	SE = 0.02
RO = 108'	RO = SEE PLANS	RO = SEE PLANS



PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-26/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y19-		-Y20-
PI Sta 268+39.37 Δ = 17° 59' 20.6" (RT) D = 2° 00' 37.4" L = 894.81' T = 451.12' R = 2,850.00' SE = 0.03 RO = 108'	PI Sta 10+59.84 Δ = 14° 11' 12.7" (RT) D = 19° 05' 54.9" L = 74.28' T = 37.33' R = 300.00' SE = SEE PLANS	PI Sta 12+49.09 Δ = 12° 17' 08.2" (LT) D = 12° 43' 56.6" L = 96.49' T = 48.43' R = 450.00' SE = SEE PLANS	PI Sta 10+70.44 Δ = 45° 56' 28.2" (RT) D = 76° 23' 39.7" L = 60.14' T = 31.79' R = 75.00' SE = SEE PLANS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 22

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

SEE SHEET 40 FOR -L- PROFILE
SEE SHEET 55 FOR -Y18- PROFILE
SEE SHEET 55 FOR -Y19- PROFILE
SEE SHEET 55 FOR -DRV2- PROFILE
SEE SHEET 55 FOR -Y20- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

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jennifer.parnell

-L-	-Y20B-		-Y21-		-Y21LPB-
PI Sta 299+65.13 Δ = 26°06' 03.5" (RT) D = 1°57' 43.9" Ls = 1,278.53' T = 649.59' R = 2,920.00' SE = 0.03 RO = 108'	PI Sta 11+49.94 Δ = 10°15' 55.2" (RT) D = 5°43' 46.5" L = 179.62' T = 89.75' R = 1,000.00' SE = SEE PLANS	PI Sta 13+28.77 Δ = 17°14' 04.4" (LT) D = 5°43' 46.5" L = 178.63' T = 89.55' R = 1,000.00' SE = SEE PLANS	PI Sta 16+50.81 Δ = 7°39' 06.3" (LT) D = 1°23' 56.6" L = 511.39' T = 256.07' R = 4,000.00' SE = 0.03 RO = 90'	PI Sta 26+22.04 Δ = 9°37' 34.9" (RT) D = 1°32' 20.7" L = 365.82' T = 183.55' R = 3,750.00' SE = 0.04 RO = SEE PLANS	PI Sta 30+45.86 Δ = 5°21' 12.5" (LT) D = 5°12' 31.3" L = 254.37' T = 127.27' R = 1,100.00' SE = EXIST.	PI Sta 18+41.44 Δ = 155°51' 30.0" (RT) D = 36°11' 40.9" L = 408.30' T = 704.44' R = 150.00' SE = 0.08 RO = SEE PLANS

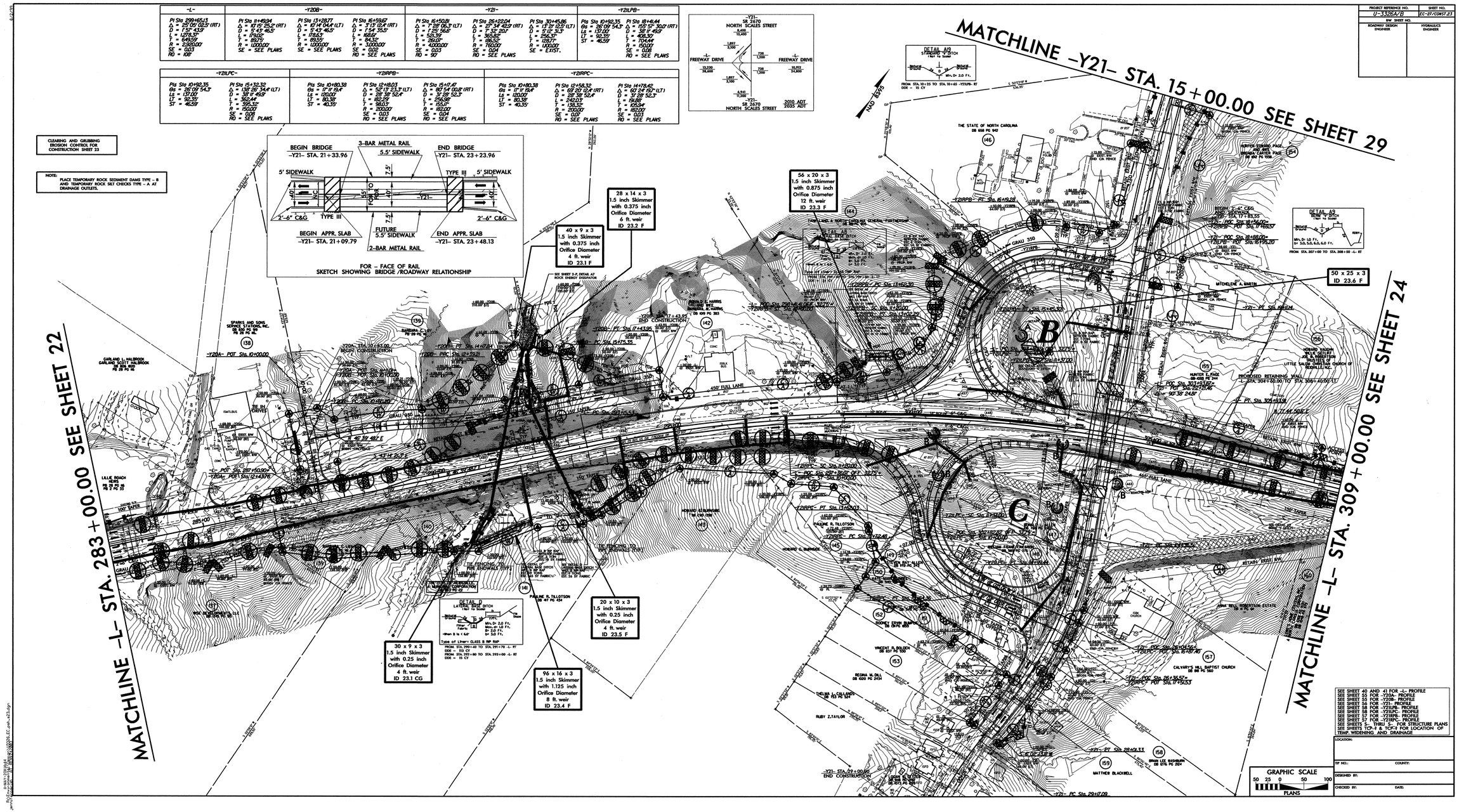
-Y21LPC-		-Y21RPB-		-Y21RPC-	
PIs Sta 10+92.35 Gs = 36°09' 54.3" Ls = 137.00' LT = 92.35' ST = 46.59'	PI Sta 15+32.32 Δ = 138°26' 34.4" (LT) D = 38°11' 49.9" L = 362.44' T = 395.32' R = 150.00' SE = 0.08 RO = SEE PLANS	PIs Sta 10+80.38 Gs = 17°11' 19.4" Ls = 120.00' LT = 80.38' ST = 40.35'	PI Sta 12+18.03 Δ = 52°13' 23.3" (LT) D = 28°38' 52.4" L = 182.89' T = 98.03' R = 200.00' SE = 0.03 RO = SEE PLANS	PI Sta 15+17.47 Δ = 87°54' 00.0" (RT) D = 31°28' 52.3" L = 256.98' T = 165.01' R = 182.00' SE = 0.04 RO = SEE PLANS	PIs Sta 10+80.38 Gs = 17°11' 19.4" Ls = 120.00' LT = 80.38' ST = 40.35'	PI Sta 12+58.32 Δ = 68°20' 10.4" (RT) D = 28°38' 52.4" L = 242.03' T = 136.92' R = 200.00' SE = 0.07 RO = SEE PLANS	PI Sta 14+78.42 Δ = 60°34' 19.7" (LT) D = 31°28' 52.3" L = 191.88' T = 105.94' R = 182.00' SE = 0.03 RO = SEE PLANS

-Y21-
SR 2470
NORTH SCALES STREET

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 23

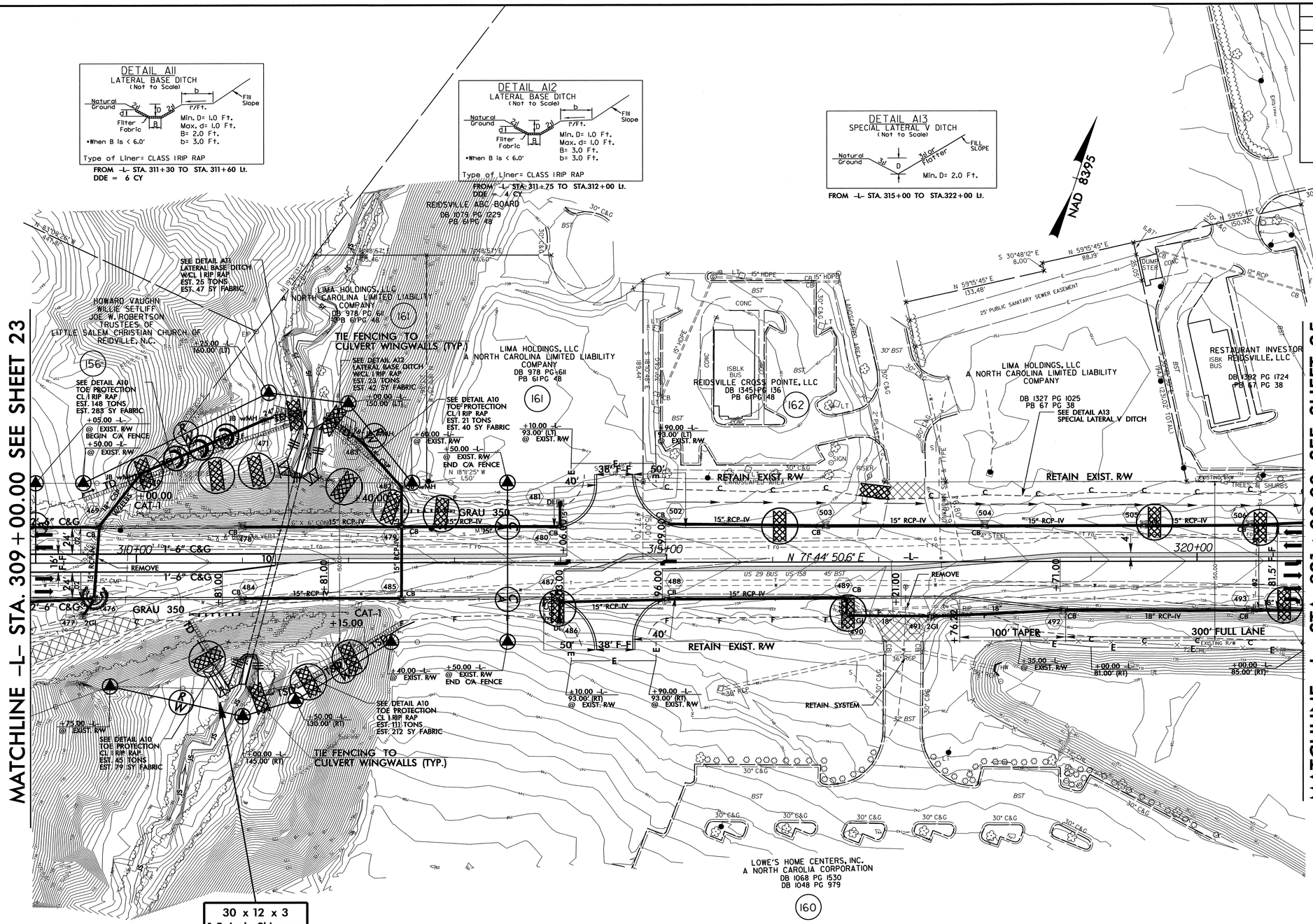
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

FOR – FACE OF RAIL
SKETCH SHOWING BRIDGE /ROADWAY RELATIONSHIP

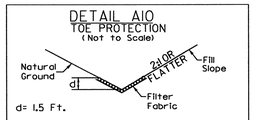


PROJECT REFERENCE NO.	SHEET NO.
U-3126A/B	EC-27/DWST 23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-28/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



DETAIL A10
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS I Rip-Rap

FROM -L- STA. 309+50 TO STA. 311+30 Lt.
FROM -L- STA. 312+00 TO STA. 312+25 Lt.
FROM -L- STA. 310+50 TO STA. 311+00 Rt.
FROM -L- STA. 311+15 TO STA. 312+50 Rt.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 24

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

SEE SHEET 41 FOR -L- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

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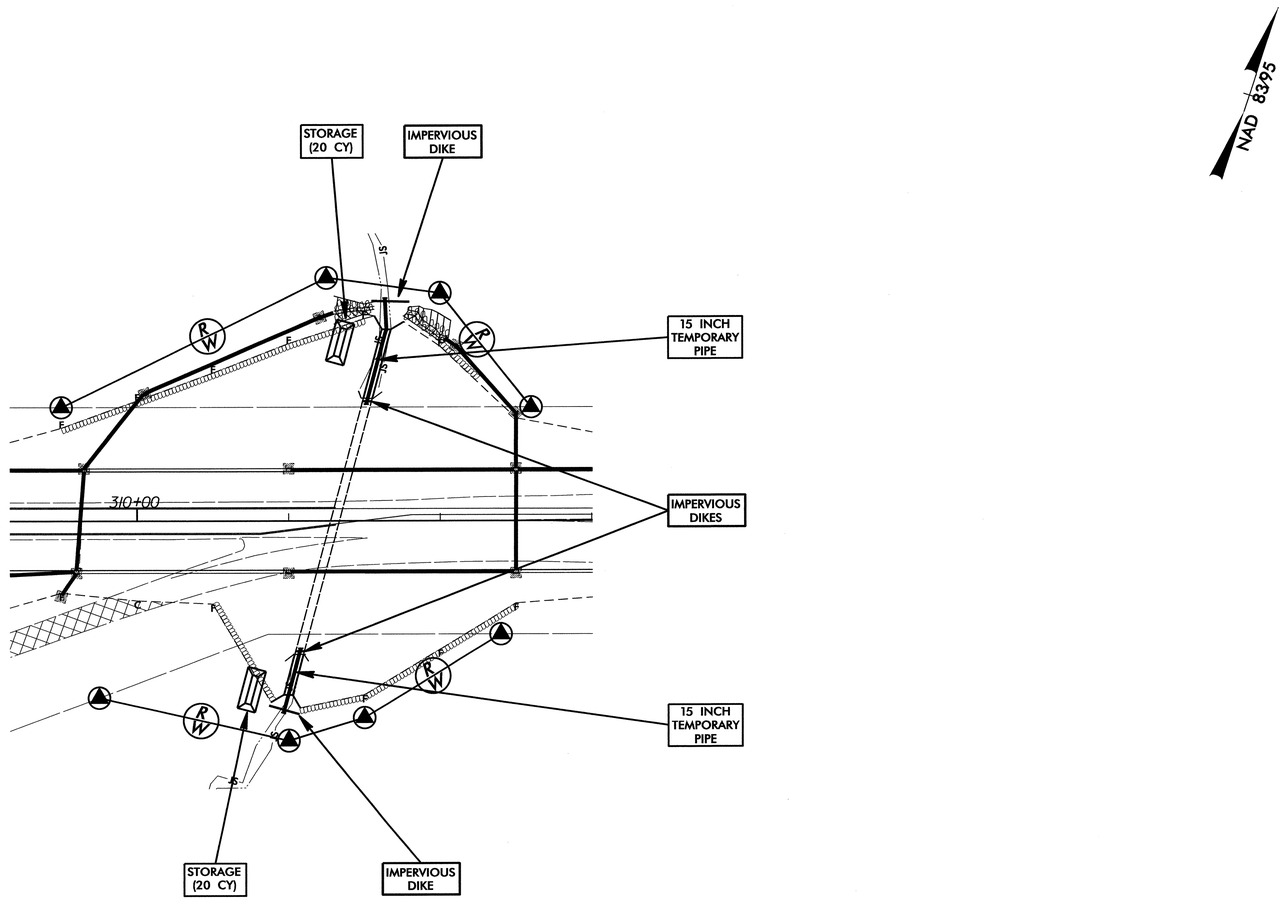
bmoitier@parsons.com

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-29/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 311+30.62 –L–

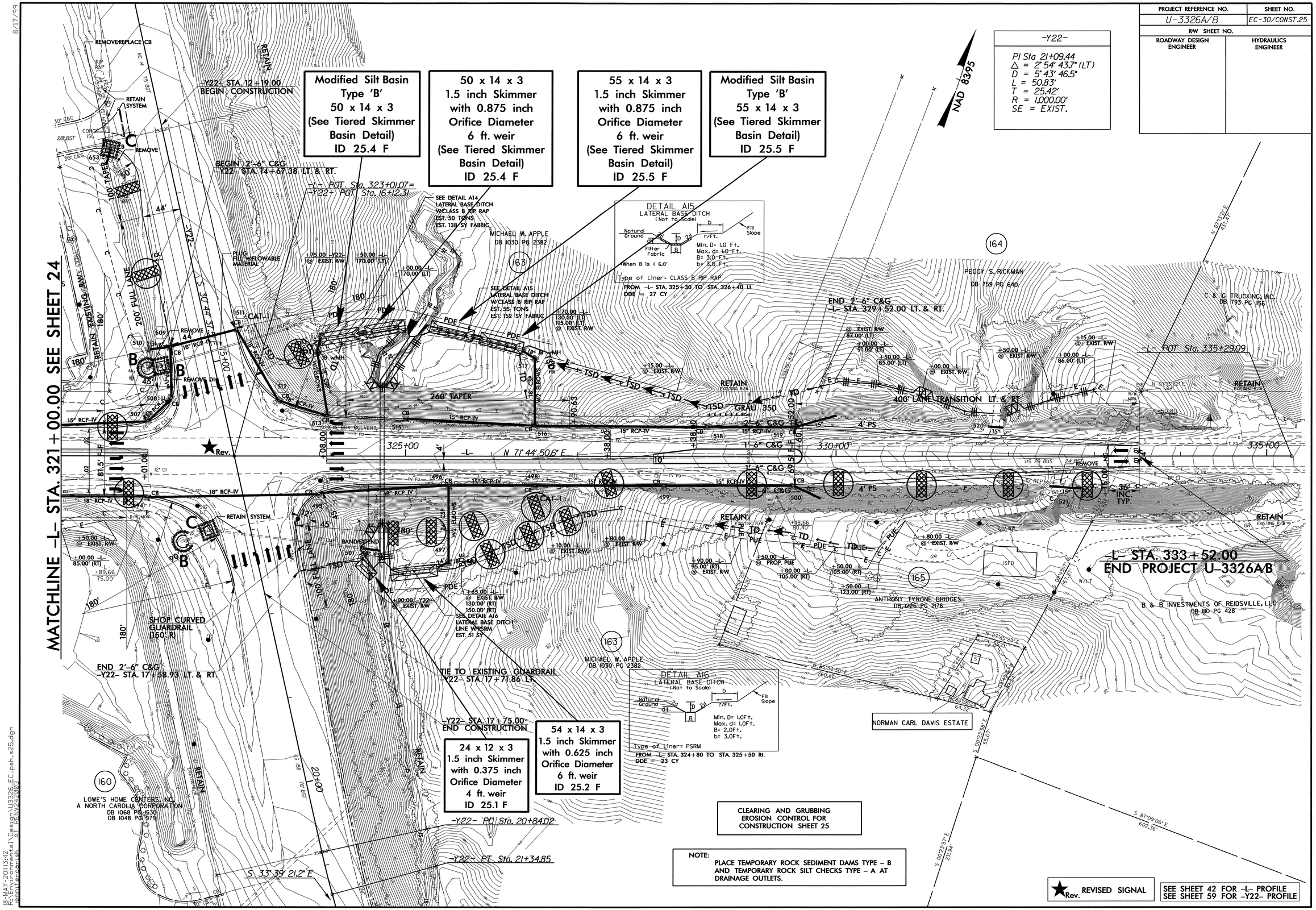
1. CONSTRUCT STILLING BASINS (20 CY EACH).
2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 15 INCH TEMPORARY PIPES, DIVERTING FLOW.
3. CONSTRUCT CULVERT EXTENSIONS, AND ANY NECESSARY UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES AND TEMPORARY PIPES.
5. REMOVE STILLING BASINS.
6. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-30/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y22-

PI Sta 21+09.44
Δ = 2° 54' 43.7" (LT)
D = 5° 43' 46.5"
L = 50.83'
T = 25.42'
R = 1,000.00'
SE = EXIST.



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 25

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

8/17/99

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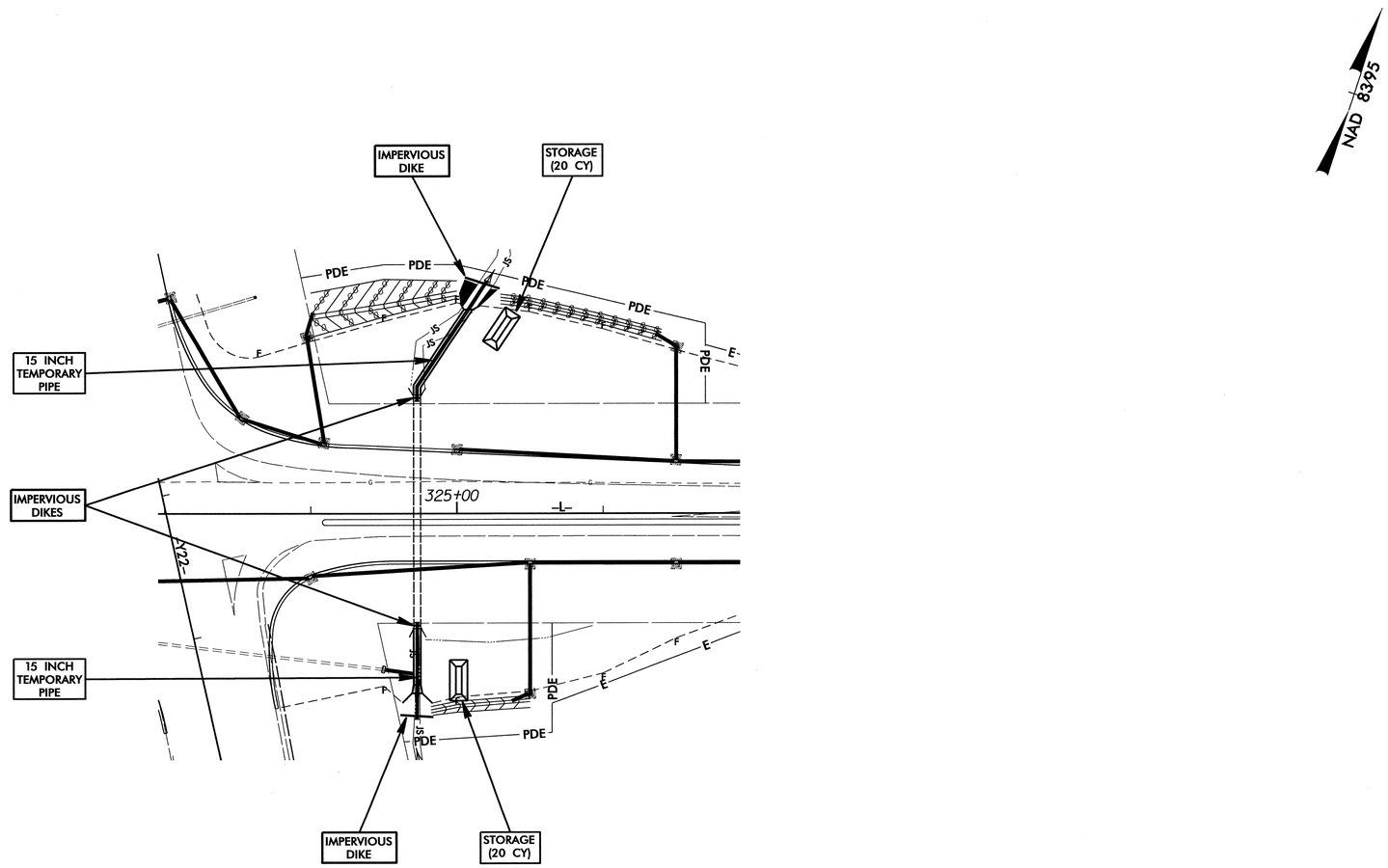
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-31/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

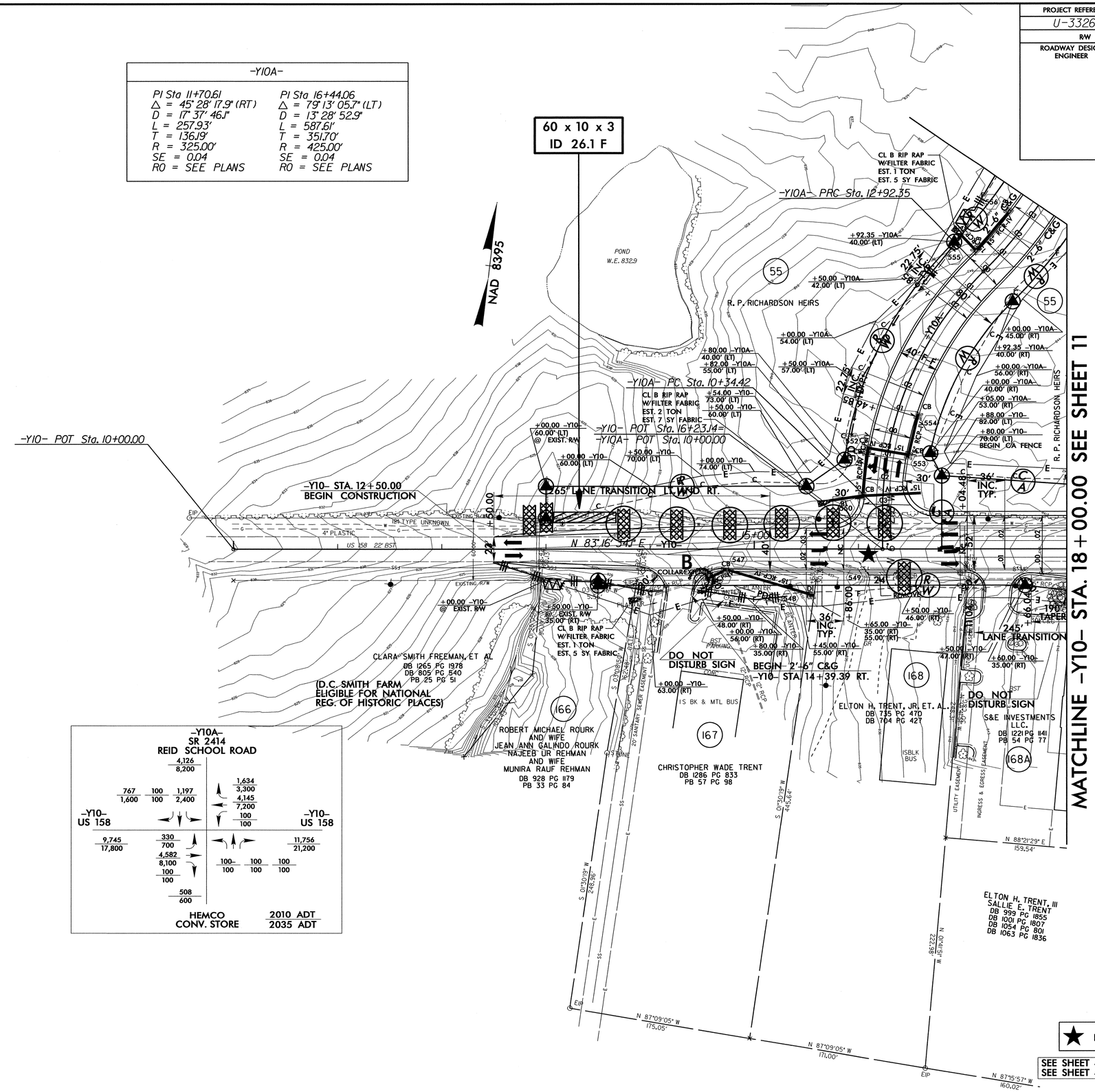
CULVERT CONSTRUCTION SEQUENCE STA. 324+72.83 –L–

1. CONSTRUCT STILLING BASINS (20 CY EACH).
2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 15 INCH TEMPORARY PIPES, DIVERTING FLOW.
3. CONSTRUCT CULVERT EXTENSIONS, AND ANY NECESSARY UPSTREAM/DOWNSTREAM CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES AND TEMPORARY PIPES.
5. REMOVE STILLING BASINS.
6. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-32/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y10A-	
PI Sta 11+70.61	PI Sta 16+44.06
△ = 45° 28' 17.9" (RT)	△ = 79° 13' 05.7" (LT)
D = 17° 37' 46.1"	D = 13° 28' 52.9"
L = 257.93'	L = 587.61'
T = 136.19'	T = 351.70'
R = 325.00'	R = 425.00'
SE = 0.04	SE = 0.04
RO = SEE PLANS	RO = SEE PLANS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 26

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

★ PROPOSED SIGNAL

SEE SHEET 45 FOR -Y10- PROFILE
SEE SHEET 48 FOR -Y10A- PROFILE

8/17/99

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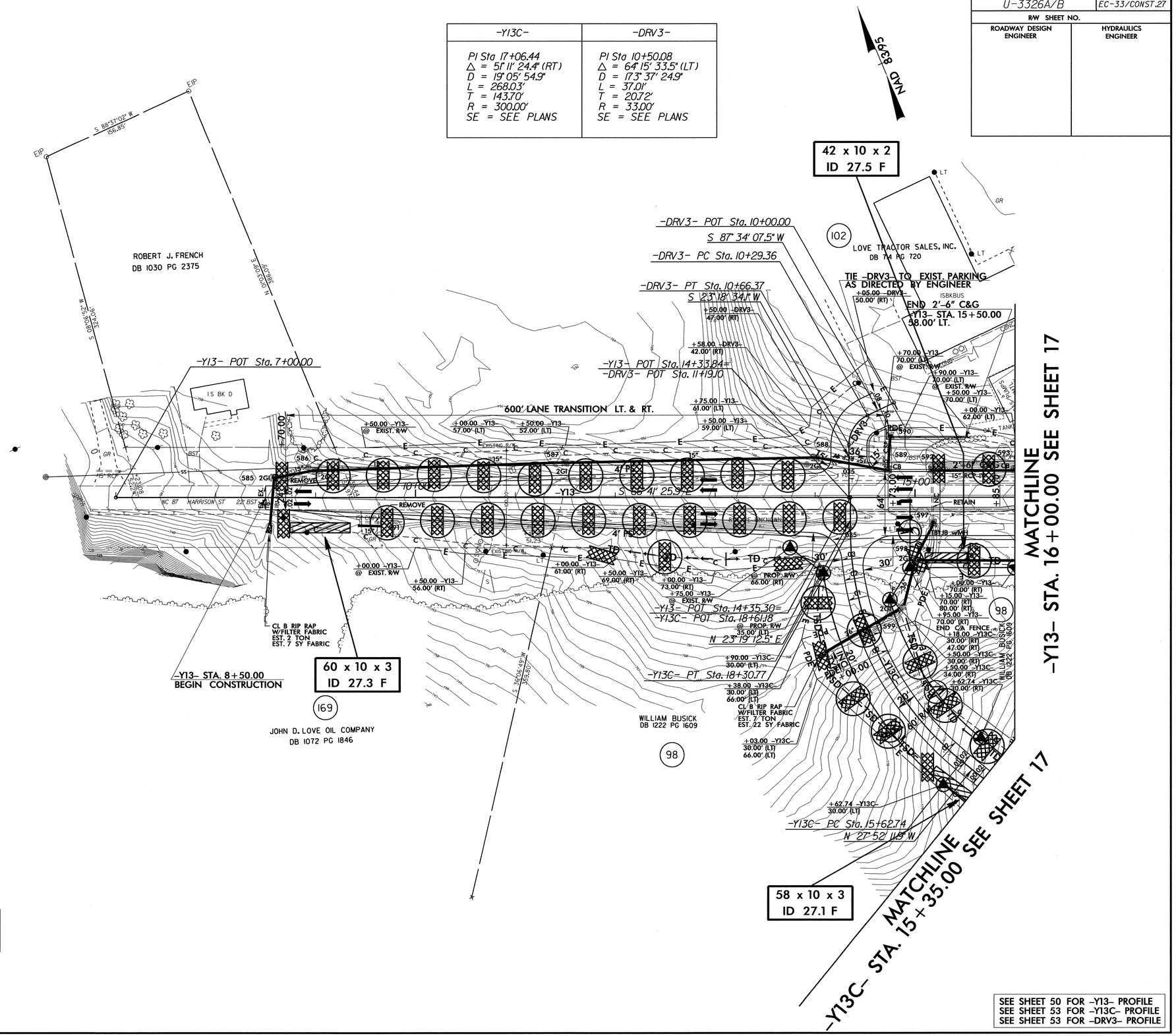
lenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-33/CONST.27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y13C-	-DRV3-
PI Sta 17+06.44 △ = 51° 11' 24.4" (RT) D = 19° 05' 54.9" L = 268.03' T = 143.70' R = 300.00' SE = SEE PLANS	PI Sta 10+50.08 △ = 64° 15' 33.5" (LT) D = 173° 37' 24.9" L = 37.01' T = 20.72' R = 33.00' SE = SEE PLANS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 27

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

SEE SHEET 50 FOR -Y13- PROFILE
SEE SHEET 53 FOR -Y13C- PROFILE
SEE SHEET 53 FOR -DRV3- PROFILE

8/17/99

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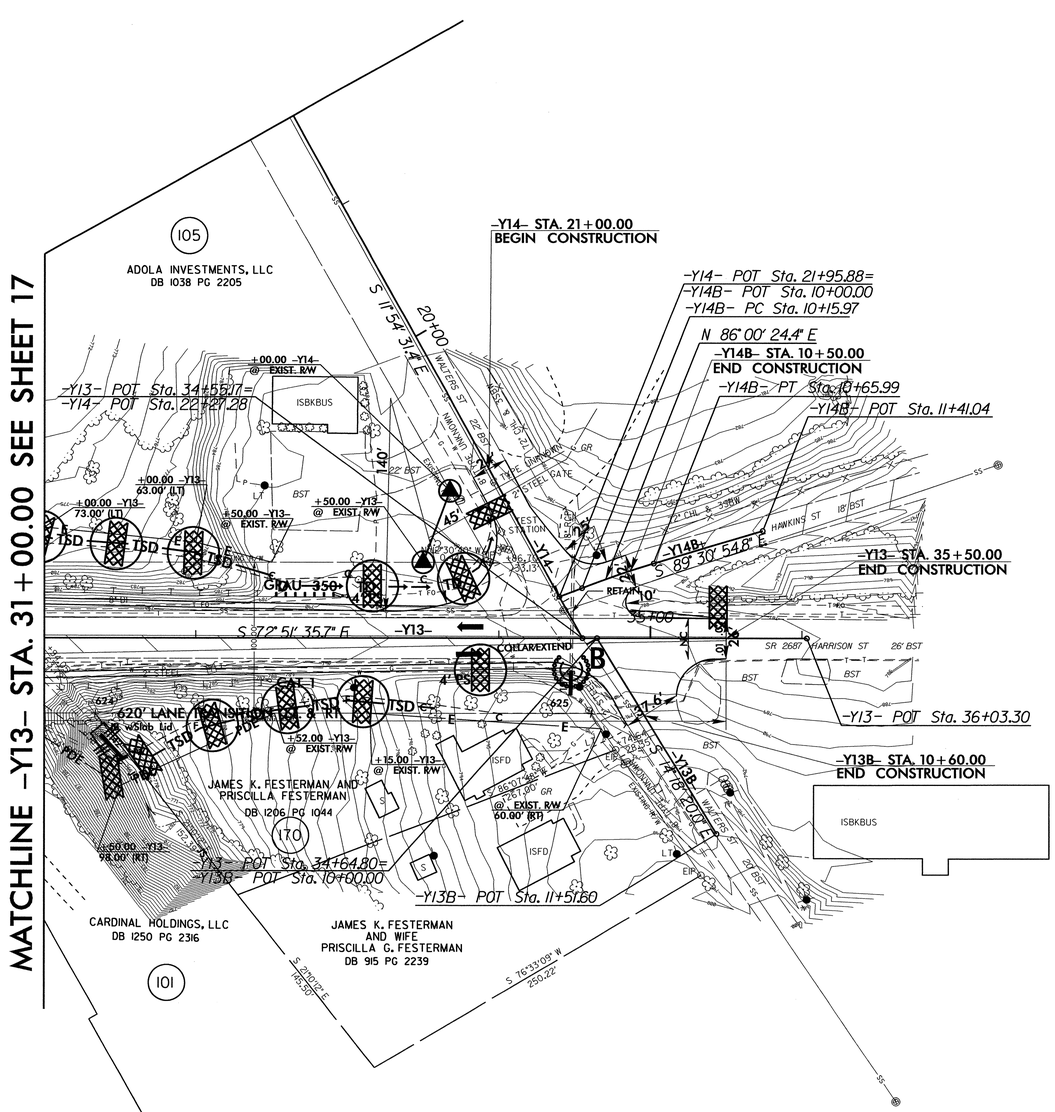
jennifer parish AT RENV2420003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-34/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y14B-

PI Sta 10+40.99
△ = 4° 28' 40.8" (RT)
D = 8° 57' 08.9"
L = 50.02'
T = 25.02'
R = 640.00'
SE = EXIST.

NAD 83/95



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 28

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

SEE SHEET 50 FOR -Y13- PROFILE

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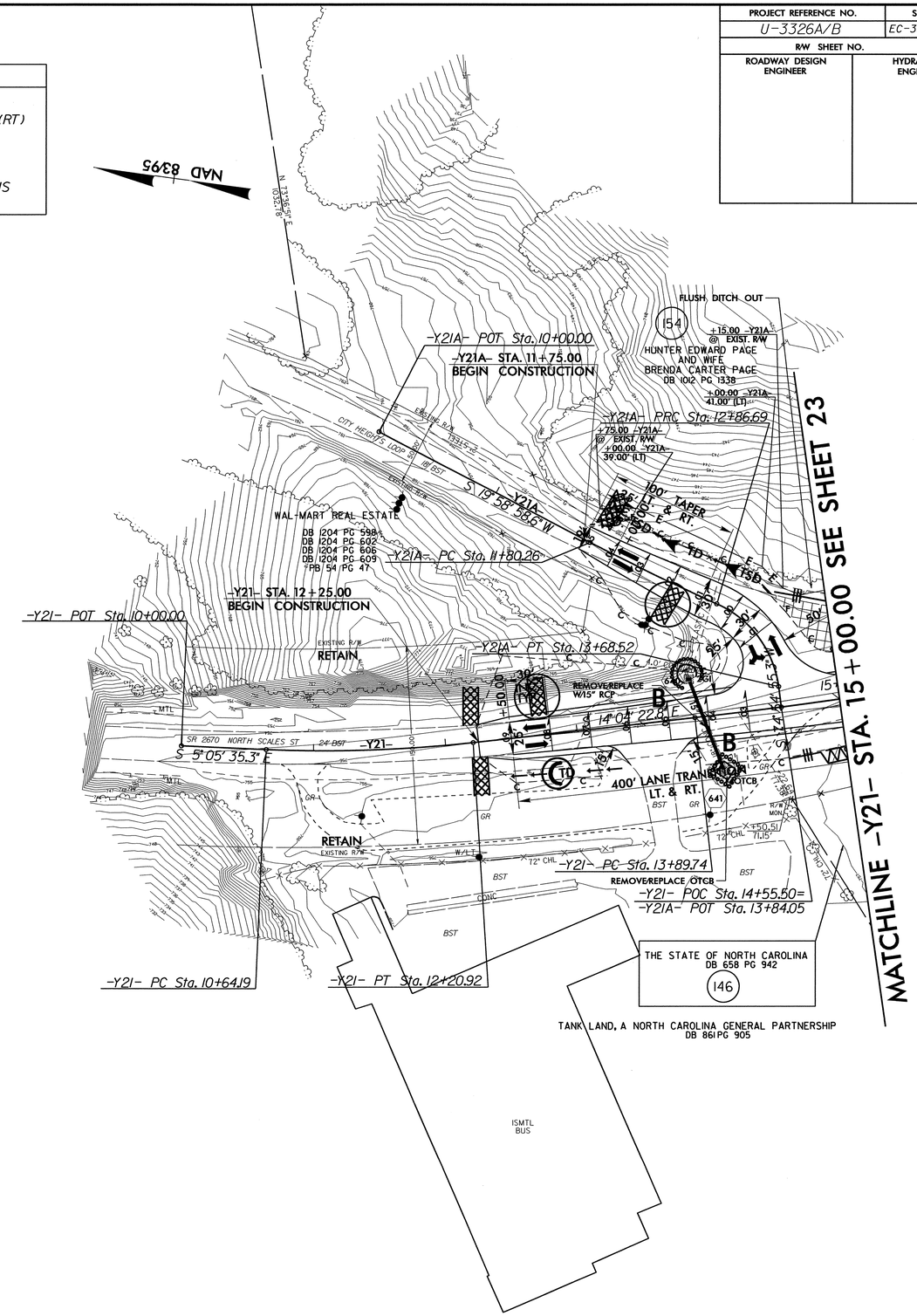
pmillsaps31 at RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-35/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y21-		-Y21A-	
PI Sta 11+42.72 △ = 8° 58' 47.5" (LT) D = 5° 43' 46.5" L = 156.73' T = 78.52' R = 1,000.00' SE = EXIST.	PI Sta 16+50.81 △ = 7° 28' 06.3" (LT) D = 1° 25' 56.6" L = 521.39' T = 261.07' R = 4,000.00' SE = 0.03 RO = SEE PLANS	PI Sta 12+33.50 △ = 3° 40' 24.5" (LT) D = 3° 27' 05.6" L = 106.43' T = 53.23' R = 1,660.00' SE = SEE PLANS	PI Sta 13+31.59 △ = 58° 36' 21.2" (RT) D = 71° 37' 11.0" L = 81.83' T = 44.90' R = 80.00' SE = SEE PLANS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 29

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

SEE SHEET 56 FOR –Y21– PROFILE
SEE SHEET 56 FOR –Y21A– PROFILE

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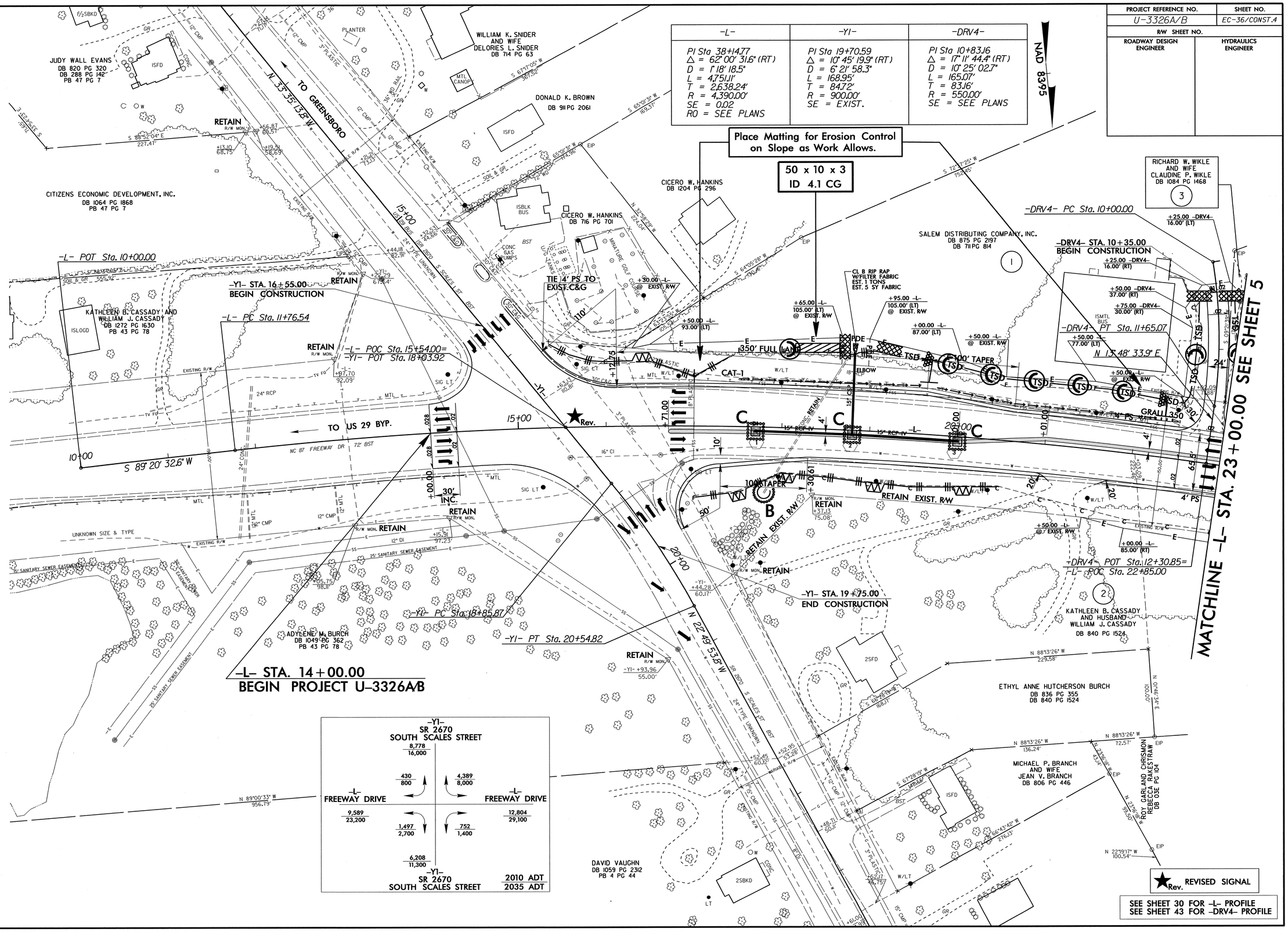
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-36/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y1-	-DRV4-
PI Sta 38+14.77	PI Sta 19+70.59	PI Sta 10+83.16
Δ = 62° 00' 31.6" (RT)	Δ = 10° 45' 19.9" (RT)	Δ = 17° 11' 44.4" (RT)
D = 1° 18' 18.5"	D = 6° 21' 58.3"	D = 10° 25' 02.7"
L = 4,751.11'	L = 168.95'	L = 165.07'
T = 2,638.24'	T = 84.72'	T = 83.16'
R = 4,390.00'	R = 900.00'	R = 550.00'
SE = 0.02	SE = EXIST.	SE = SEE PLANS
RO = SEE PLANS		



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smithgeorge1 ST_REV\24.0.0.0

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-37/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL B
BANK STABILIZATION
(Not to Scale)

Natural Ground — EXISTING BANK — d= 1.0 ft. — CHANNEL BED (Variable)

Length= 25 Ft.
D= 3 Ft.
Est.= 35 Tons of Class I Rip-Rap

-L- STA. 35+00 Lt.

DETAIL H
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 2:1 — D — 2:1 — Natural Ground — d — B — Filter Fabric

Min. D= 2.0 Ft.
Max. d= 1.0 Ft.
B= 3.0 Ft.

*When B is < 6.0'

Type of Liner= CLASS B Rip-Rap

FROM -L- STA. 34+65 TO 35+30 Lt.
DDE = 84 CY

DETAIL A17
HAZARDOUS SPILLBASIN

TOTAL CAPACITY REQUIRED : 6500 cu. ft.
TOTAL CAPACITY PROVIDED : 6750 cu. ft.
@ ELEV. 773.4 W/ 1.0 Ft. FREEBOARD

4.0' — 3:1 — 3.0' — 3:1

MODEL 20-10C SLUICE GATE

SLUICE GATE W/HDWL — 40'-50' Var. — 25' — 90' — 115'

FROM -L- STA. 33+60 TO STA. 34+50 Lt.

DETAIL A18
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

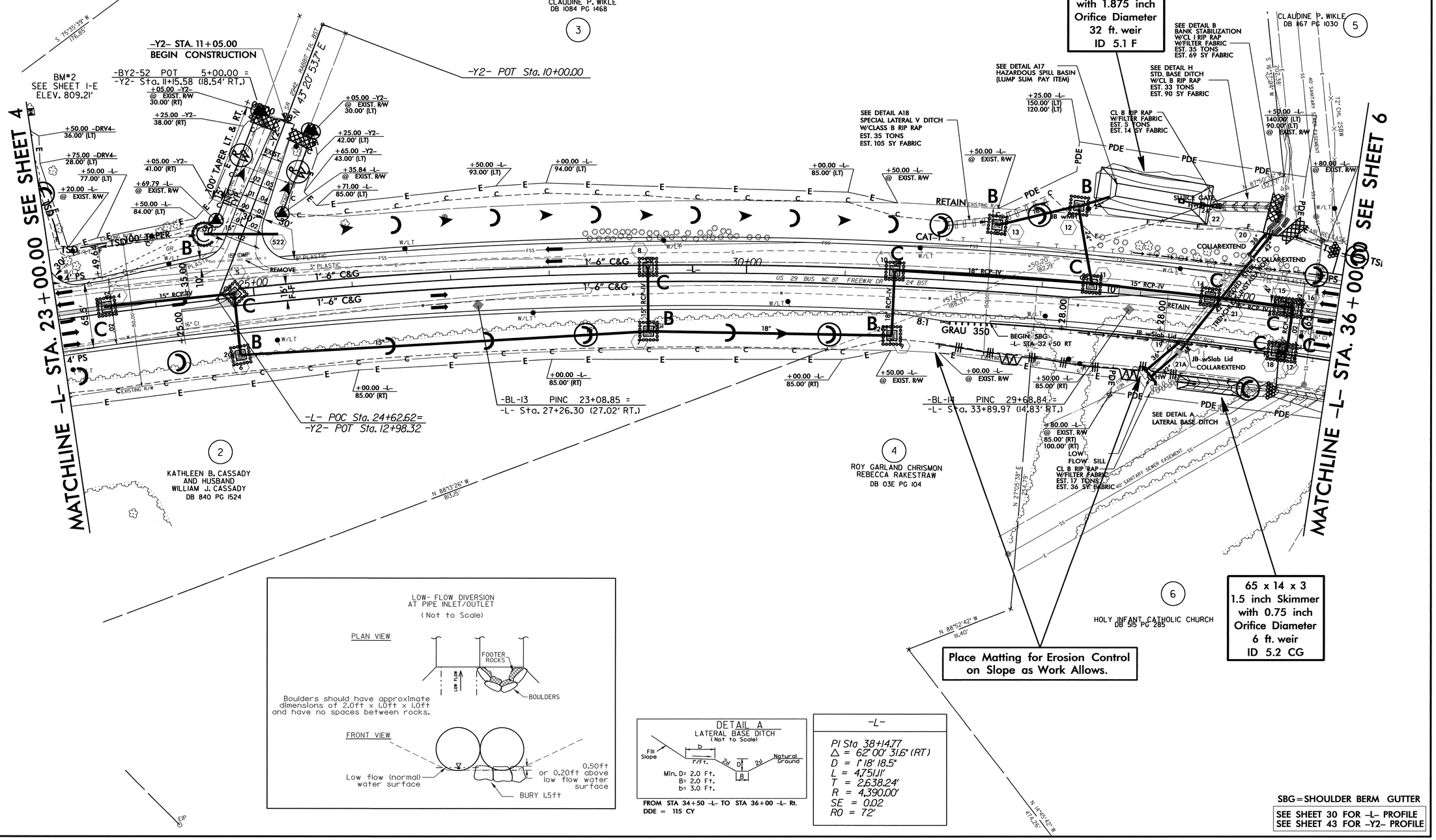
Natural Ground — 2:1 — d — D VAR. 2:1 TO 3:1 — Fill Slope — Filter Fabric

Min. D= 2.0 Ft.
Max. d= 1.0 Ft.

Type of Liner= CLASS B Rip-Rap

FROM -L- STA. 32+00 TO STA. 33+00 Lt.

NAD 83/95



LOW- FLOW DIVERSION AT PIPE INLET/OUTLET
(Not to Scale)

PLAN VIEW

FOOTER ROCKS — LOW FLOW — BOULDERS

Boulders should have approximate dimensions of 2.0ft x 1.0ft x 1.0ft and have no spaces between rocks.

FRONT VIEW

Low flow (normal) water surface — 0.50ft or 0.20ft above low flow water surface — BURY 1.5ft

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Fill Slope — b — 1'/Ft. — 2:1 — D — 2:1 — Natural Ground — B

Min. D= 2.0 Ft.
B= 2.0 Ft.
b= 3.0 Ft.

FROM STA 34+50 -L- TO STA 36+00 -L- Rt.
DDE = 115 CY

-L-

PI Sta 38+14.77
Δ = 62° 00' 31.6" (RT)
D = 1° 18' 18.5"
L = 4,751.11'
T = 2,638.24'
R = 4,390.00'
SE = 0.02
RO = 7.2'

SBG = SHOULDER BERM GUTTER

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 43 FOR -Y2- PROFILE

8/17/99

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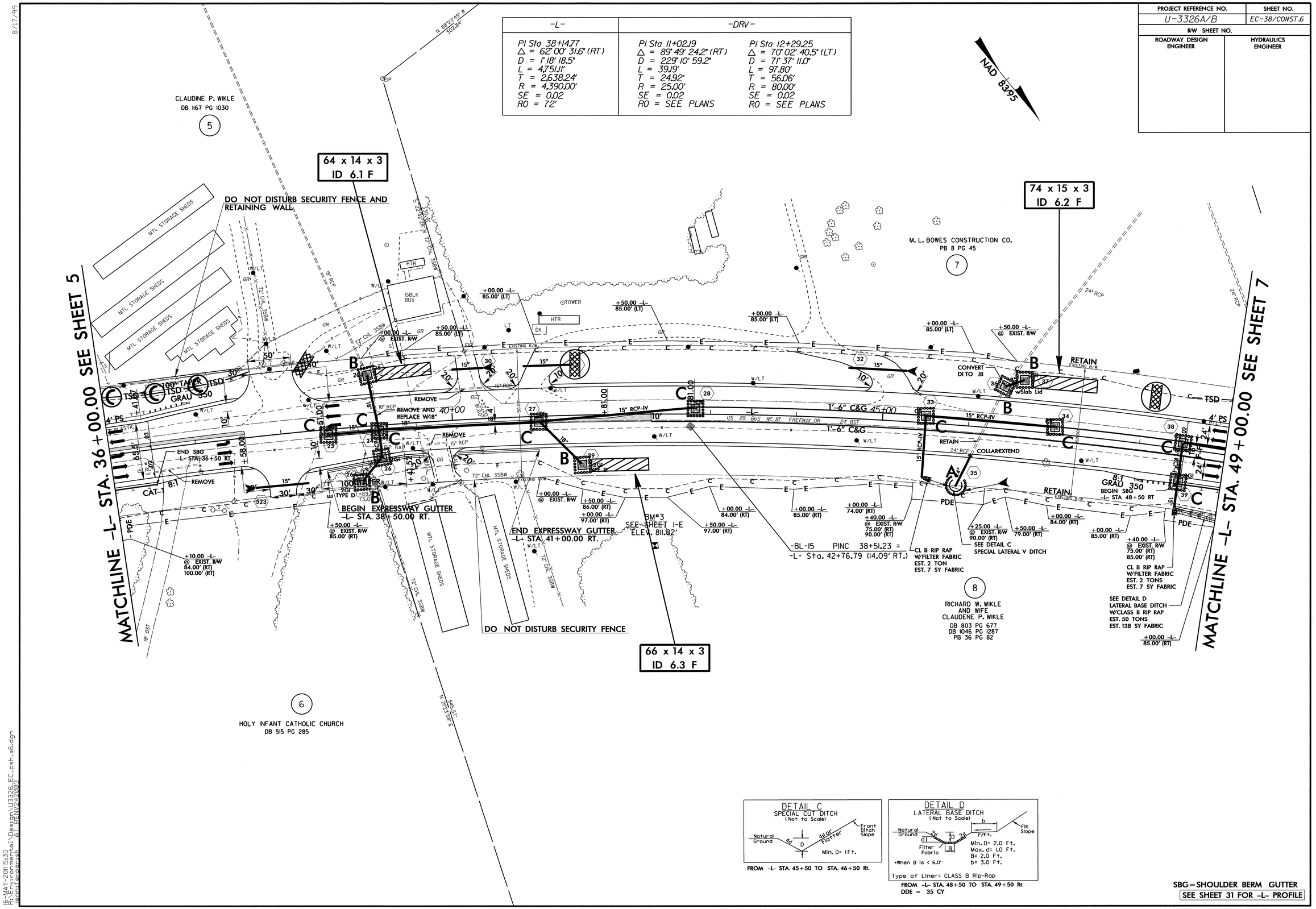
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-38/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-DRV-	
PI Sta 38+14.77 △ = 62° 00' 31.6" (RT) D = 1° 18' 18.5" L = 4,751.11' T = 2,638.24' R = 4,390.00' SE = 0.02 R0 = 72'	PI Sta 11+02.19 △ = 89° 49' 24.2" (RT) D = 229° 10' 59.2" L = 39.19' T = 24.92' R = 25.00' SE = 0.02 R0 = SEE PLANS	PI Sta 12+29.25 △ = 70° 02' 40.5" (LT) D = 71° 37' 11.0" L = 97.80' T = 56.06' R = 80.00' SE = 0.02 R0 = SEE PLANS



FROM -L- STA. 45+50 TO STA. 46+50 Rt.

FROM -L- STA. 48+50 TO STA. 49+50 Rt.
DDE = 35 CY

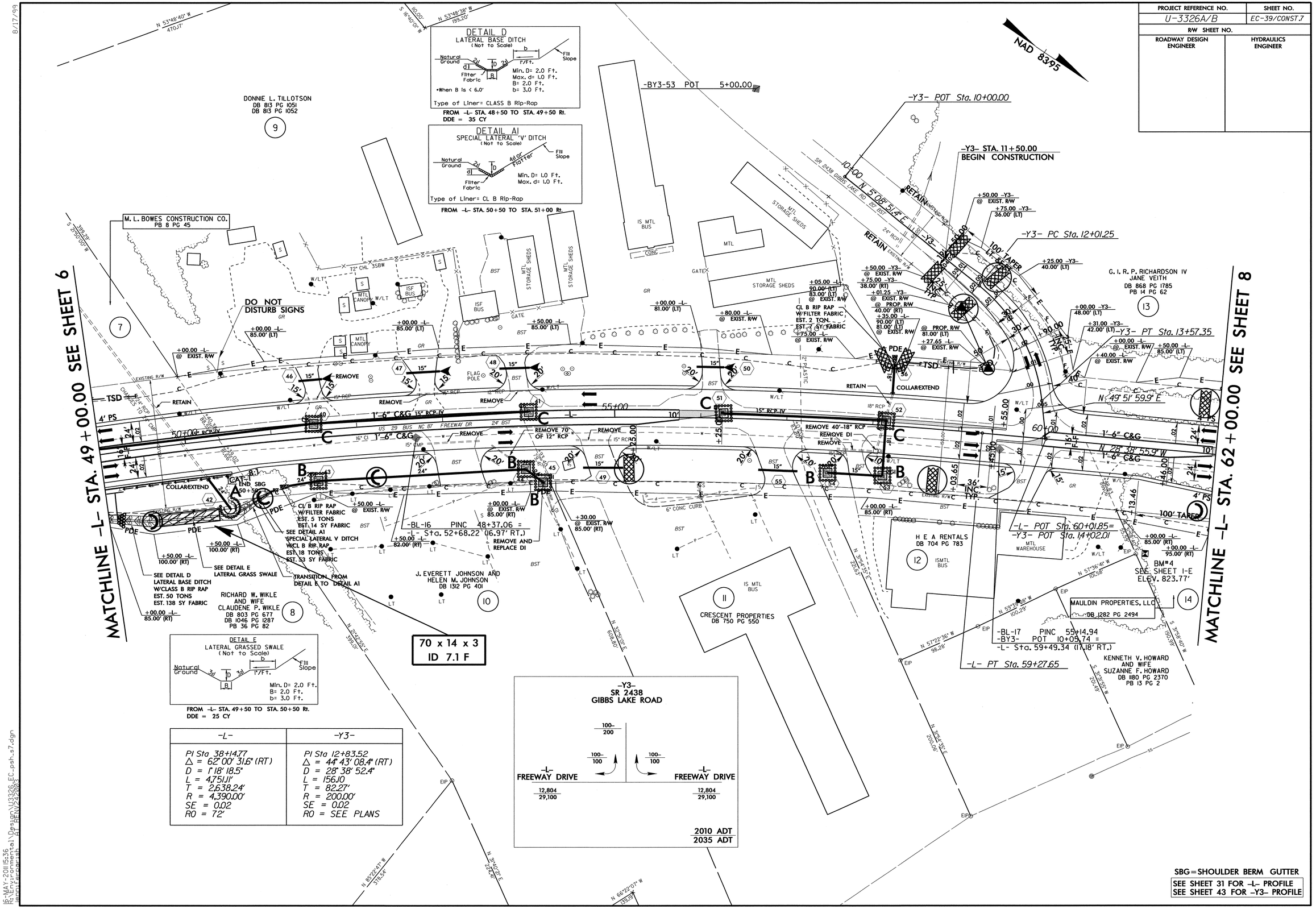
SBG=SHOULDER BERM GUTTER

SEE SHEET 31 FOR -L- PROFILE

8/17/99

16-MAY-2011 15:30
R:\Hydro\Commsh01\Design\U3326_EC_psh_s6.dgn
bennycopeland GP REN\242002

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-39/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



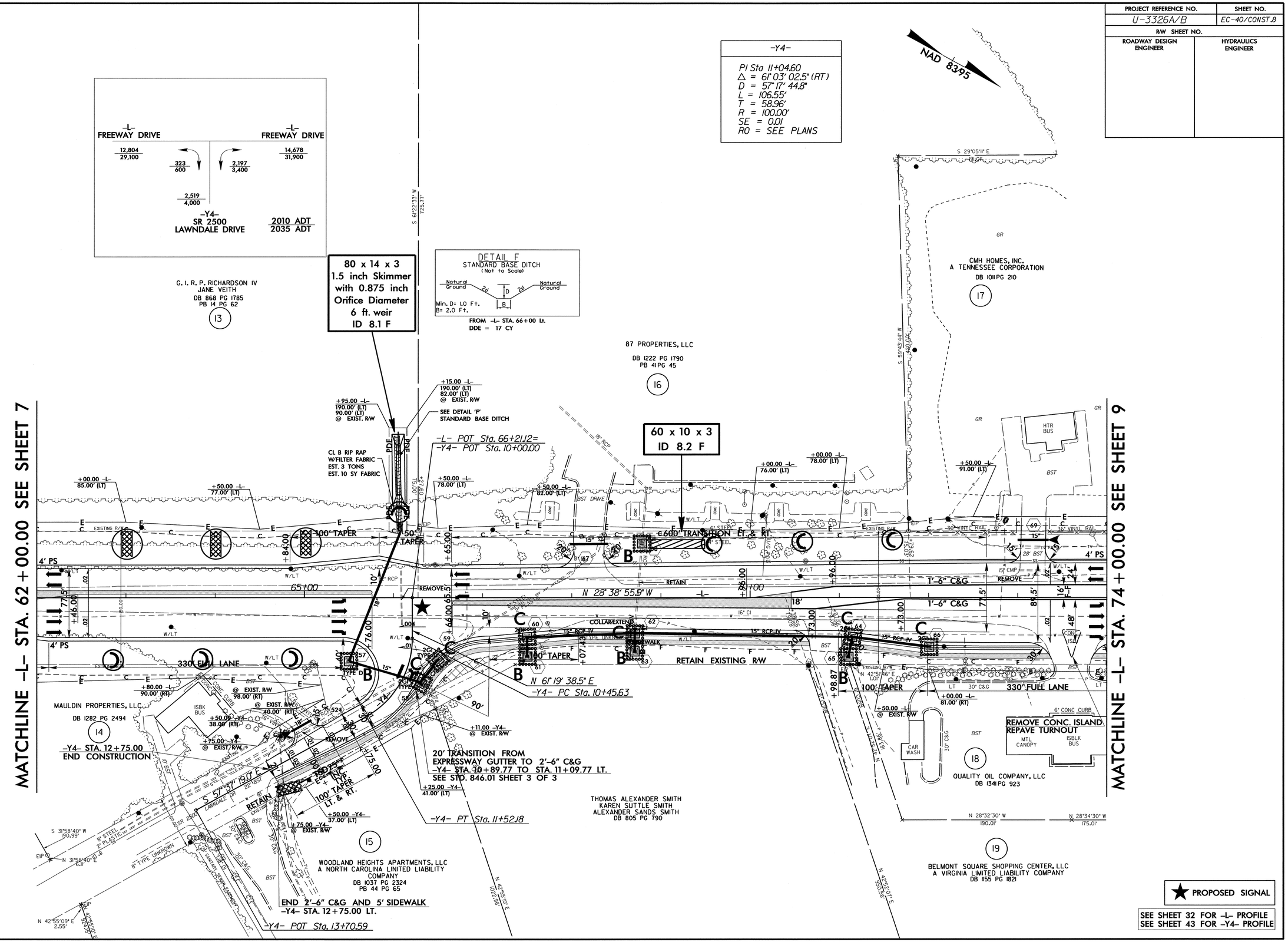
-L-	-Y3-
PI Sta 38+14.77	PI Sta 12+83.52
Δ = 62° 00' 31.6" (RT)	Δ = 44° 43' 08.4" (RT)
D = 1° 18' 18.5"	D = 28° 38' 52.4"
L = 4,751.11'	L = 156.10
T = 2,638.24'	T = 82.27'
R = 4,390.00'	R = 200.00'
SE = 0.02	SE = 0.02
RO = 72'	RO = SEE PLANS

8/17/99

15-MAY-2011 15:36
n:\environmental\Design\U3326_EC_psh_s7.dgn
mbrittsworth ATRENN/242005

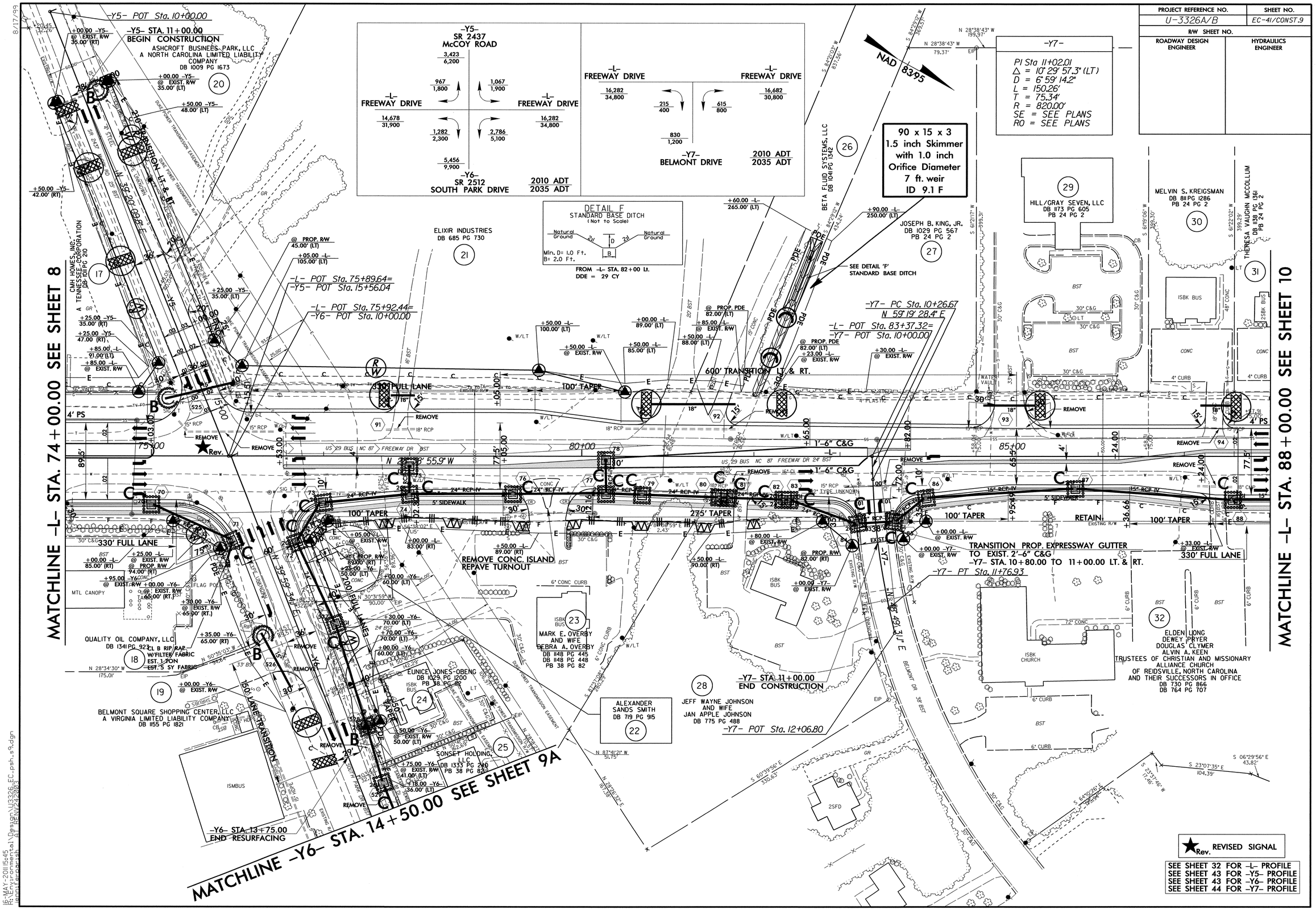
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-40/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



IE-MAY-2011 15:42
R:\Traffic\Traffic-01\Design\U3326_EC_psh_s8.dgn
jennifer.porcari
$$ENVIR42003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-41/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

16-MAY-2011 15:45
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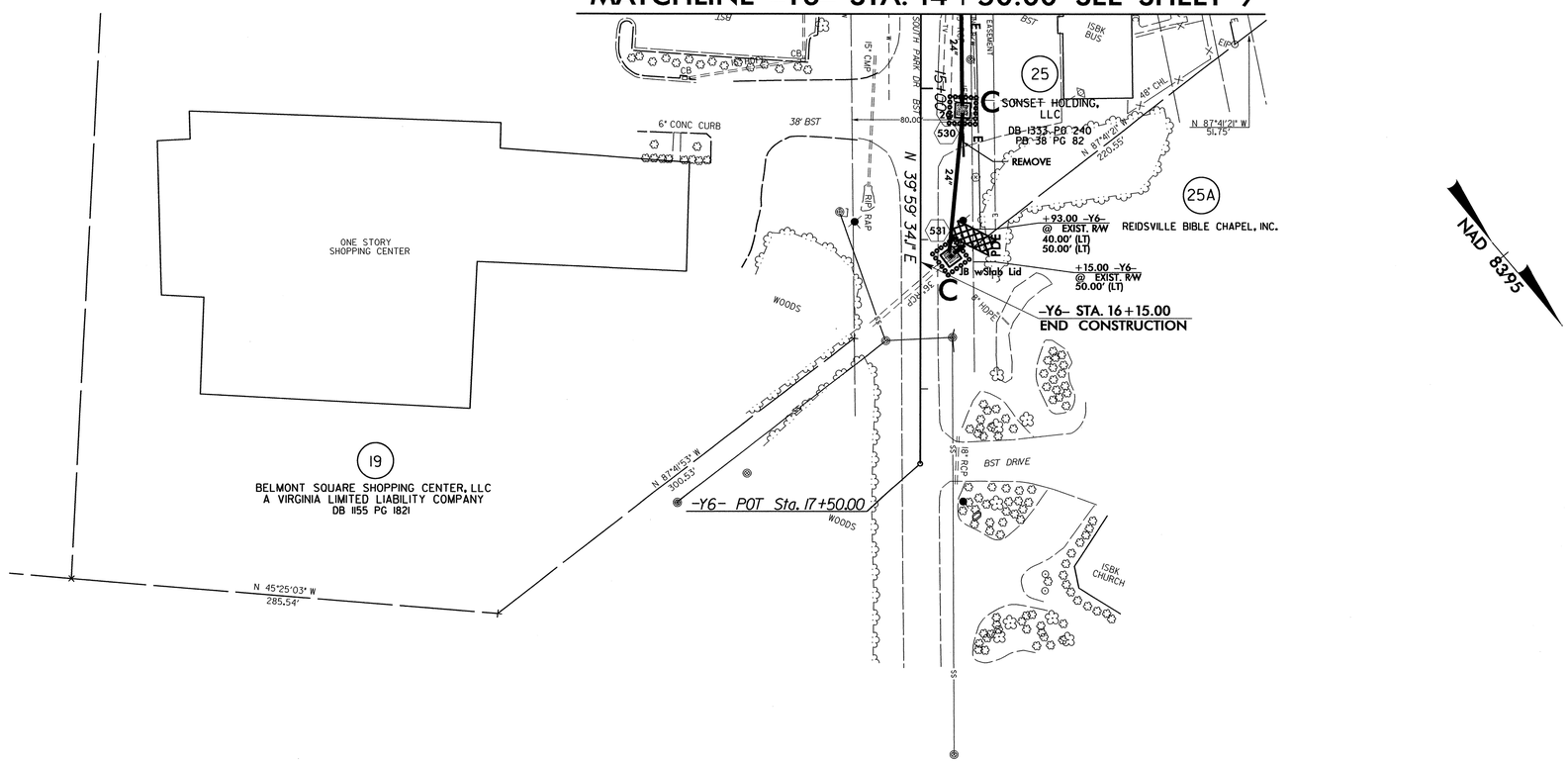
$$$$USERNAME$$$$ | $$$$DATE$$$$

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-42/CONST.9A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

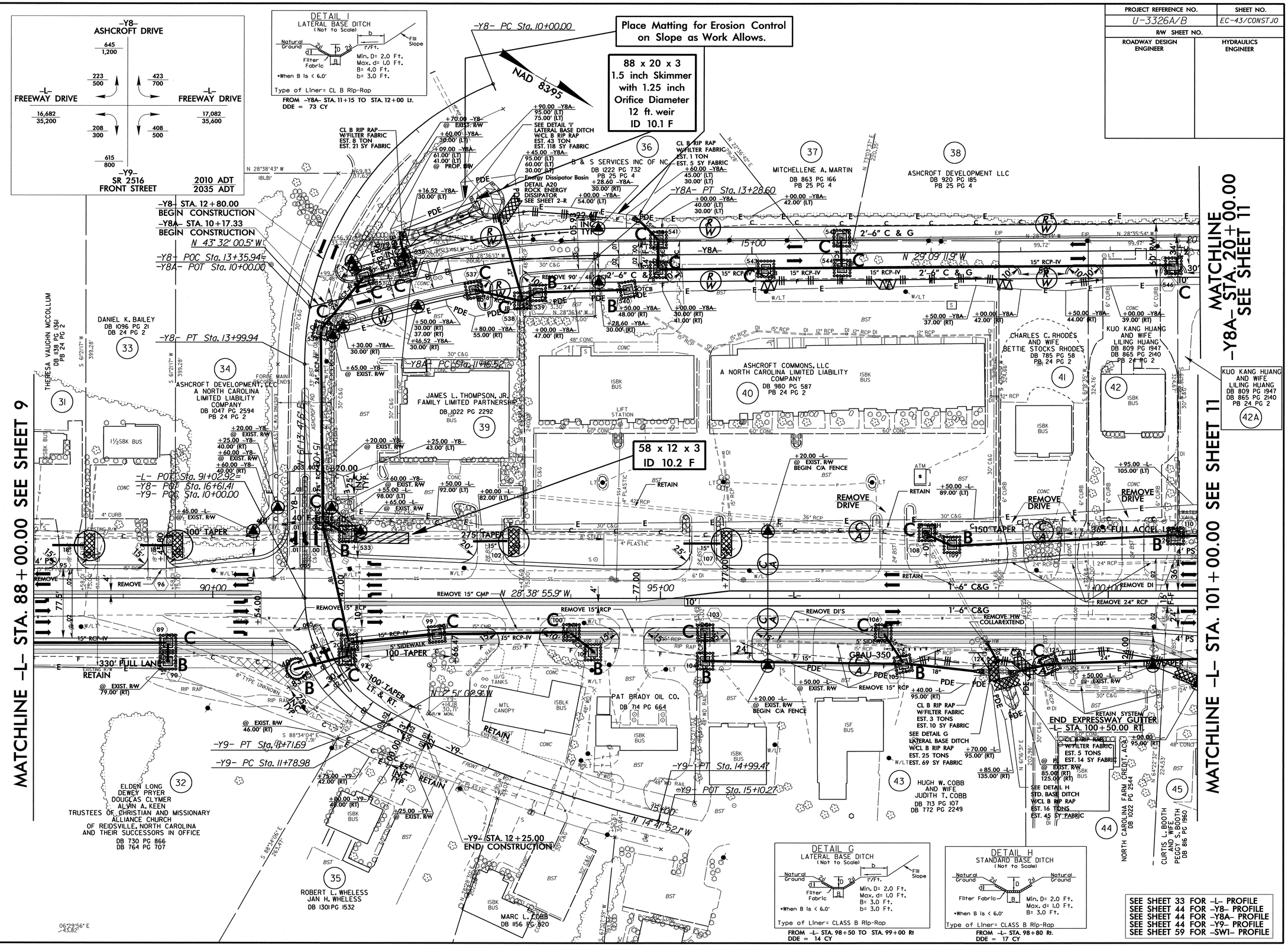
MATCHLINE -Y6- STA. 14+50.00 SEE SHEET 9



8/17/99

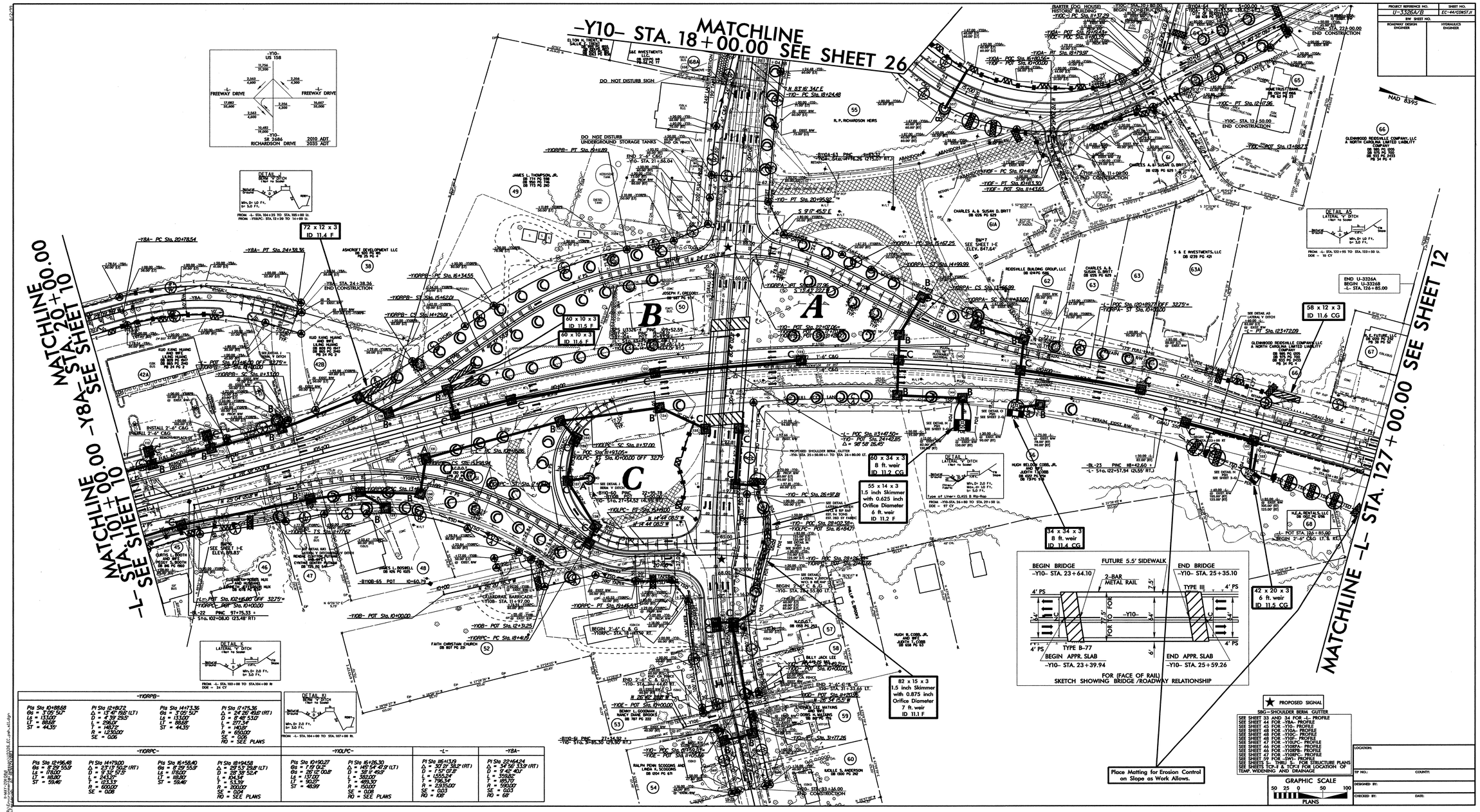
16-MAY-2011 15:49
R:\Environmental\Design\U3326_EC_psh_s9a.dgn
jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-43/CONST.J0
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

IR-MAY-2011 15:53
R:\Roadway\Proposals\Design\U3326_EC_psh_s10.dgn
$$$$USER$$$$ = APENNY242203



-Y10RPB-

Pts Sta 10+88.68	PI Sta 12+18.72	PI Sta 14+73.36	PI Sta 17+75.36
Gs = 3°05'50"	Δ = 27°13'50.2" (LT)	Δ = 24°25'49.8" (RT)	Δ = 24°25'49.8" (RT)
Ls = 173.00'	D = 4°39'29.5"	D = 8°48'53.0"	D = 8°48'53.0"
LT = 88.69'	L = 296.07'	L = 277.34'	L = 277.34'
ST = 44.35'	T = 148.77'	T = 140.81'	T = 140.81'
	R = 1230.00'	R = 650.00'	R = 650.00'
	SE = 0.06	SE = 0.06	SE = 0.06
			RO = SEE PLANS

-Y10RPC-

Pts Sta 12+96.48	PI Sta 14+79.00	PI Sta 16+58.40	PI Sta 18+94.58
Gs = 8°25'55.9"	Δ = 27°13'50.2" (RT)	Δ = 8°25'55.9"	Δ = 29°53'29.8" (LT)
Ls = 178.00'	D = 9°32'57.5"	Ls = 178.00'	D = 28°38'52.4"
LT = 89.80'	L = 243.27'	LT = 89.80'	L = 104.54'
ST = 59.46'	T = 123.33'	ST = 59.46'	T = 53.39'
	R = 600.00'		R = 200.00'
	SE = 0.08		SE = 0.04
			RO = SEE PLANS

-Y10LPC-

Pts Sta 10+90.27	PI Sta 16+26.30
Gs = 1°59'00.2"	Δ = 145°54'42.9" (LT)
Gs = 26°12'00.8"	D = 38°11'45.9"
Ls = 137.00'	L = 382.00'
LT = 90.27'	T = 489.30'
ST = 48.99'	R = 150.00'
	SE = 0.08
	RO = SEE PLANS

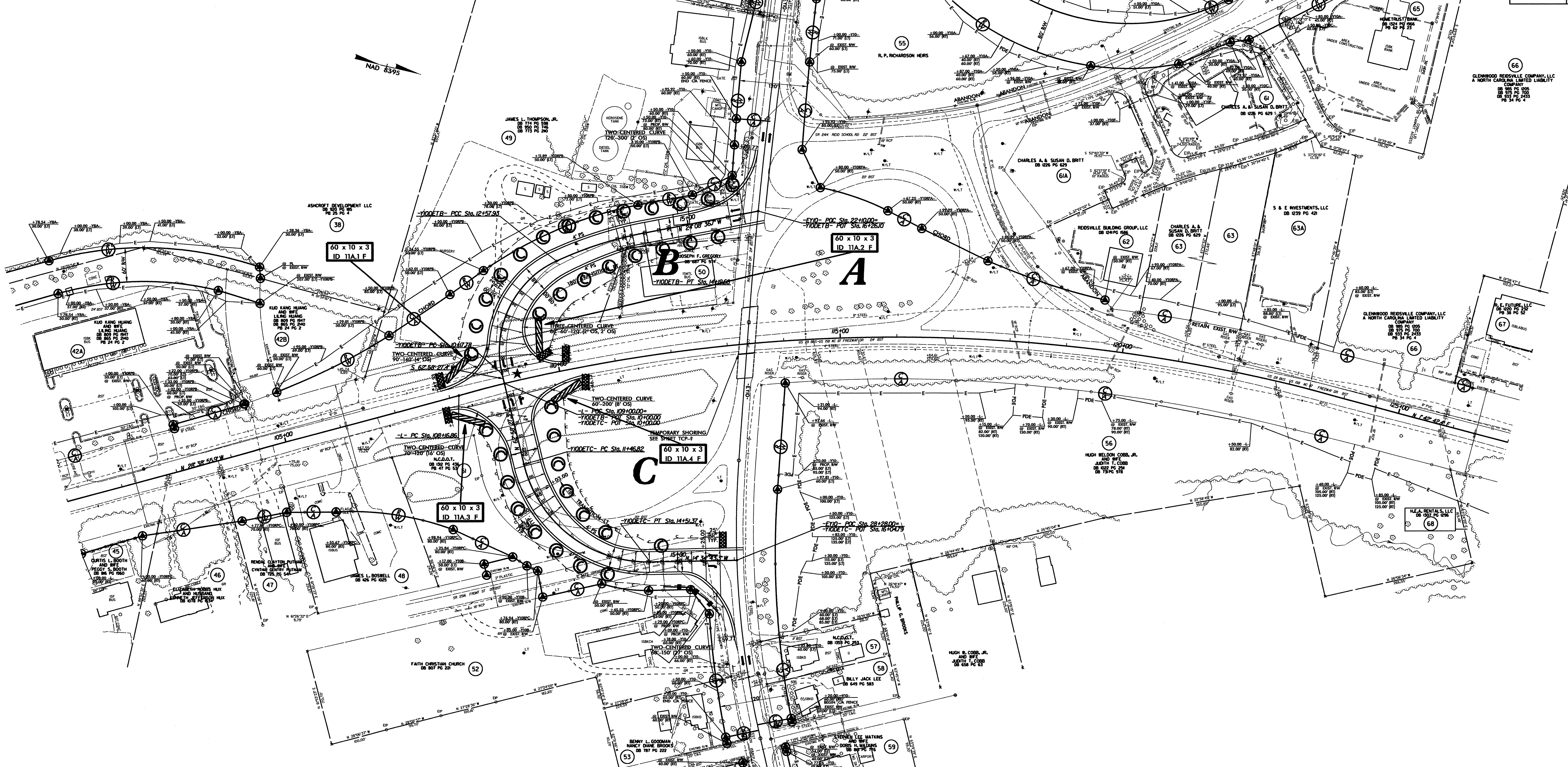
-L-

PI Sta 16+13.19
Δ = 31°21'38.2" (RT)
D = 1°57'01.8"
L = 1,555.24'
T = 796.34'
R = 2,935.00'
SE = 0.03
RO = 108'

-YBA-

PI Sta 23+54.64
Δ = 34°36'33.9" (RT)
D = 9°46'40.0"
L = 359.92'
T = 185.70'
R = 586.00'
SE = 0.03
RO = 68'

-Y10- DETOUR



V_{DESIGN}= 25MPH V_{DESIGN}= 25MPH

-L-	-Y10DETB-		-Y10DETC-
PI Sta 116+13.19 Δ = 30° 21' 38.2" (RT) D = 1° 57' 07.8" L = 1,555.24' T = 796.34' R = 2,935.00'	PI Sta 11+61.08 Δ = 78° 37' 34.2" (RT) D = 32° 44' 25.6" L = 240.15' T = 143.30' R = 175.00' SE = SEE PLANS	PI Sta 13+39.22 Δ = 14° 15' 21.7" (RT) D = 8° 48' 53.0" L = 161.73' T = 81.28' R = 650.00' SE = SEE PLANS	PI Sta 13+27.57 Δ = 77° 33' 10.7" (LT) D = 25° 27' 53.2" L = 304.55' T = 180.75' R = 225.00' SE = .08 RO = SEE PLANS

★ TEMPORARY SIGNAL

SEE SHEET 60 FOR -Y10DETB- PROFILE
SEE SHEET 60 FOR -Y10DETC- PROFILE

GRAPHIC SCALE
50 25 0 50 100
PLANS

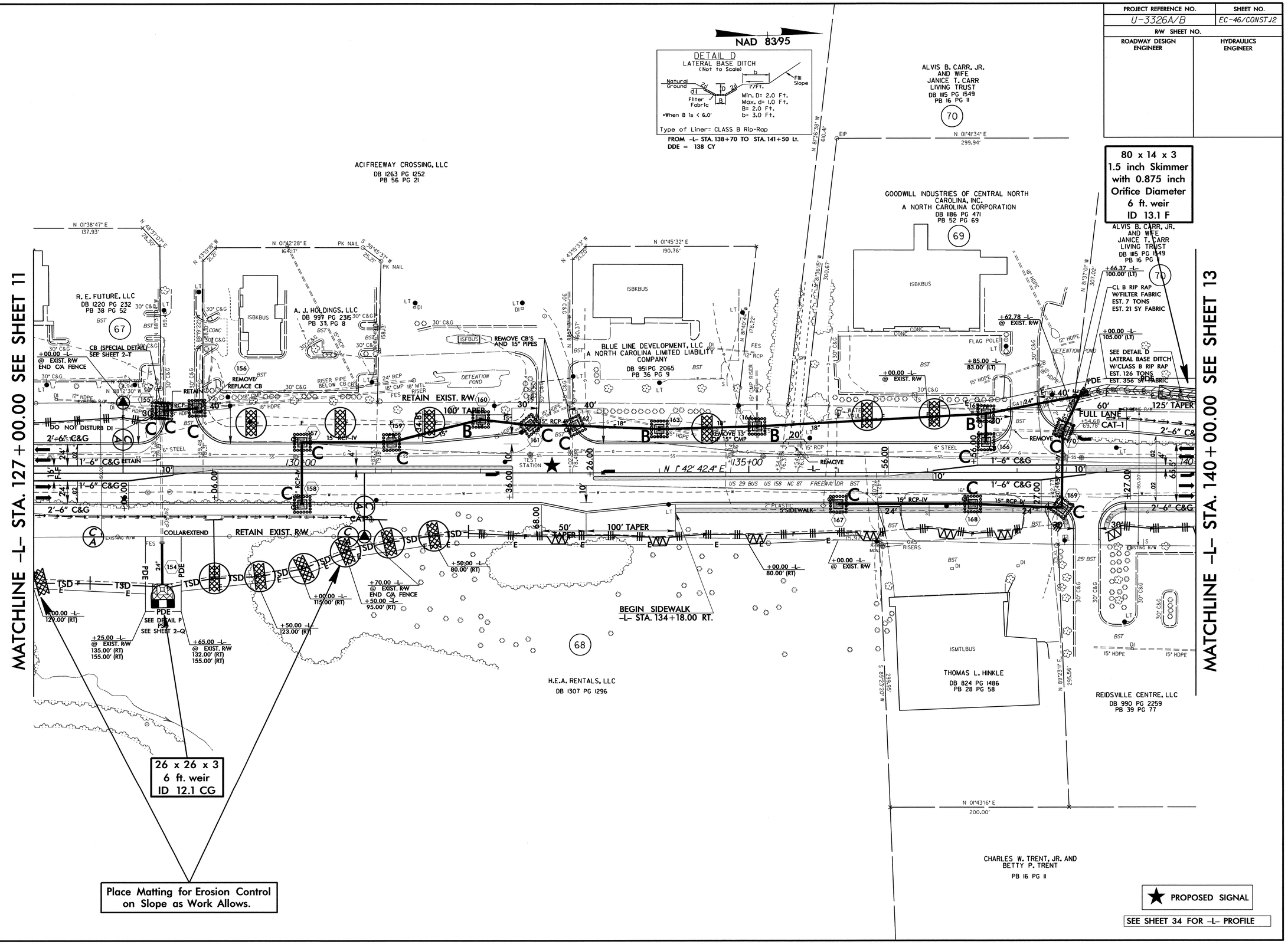
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-45/CONST.11A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCATION:
TIP NO.: COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

6/2/99

16-MAY-2011 16:10
R:\Environmental\Design\U3326_EC_psh_s11a.dgn
Jennifer.parish AT RENY242003

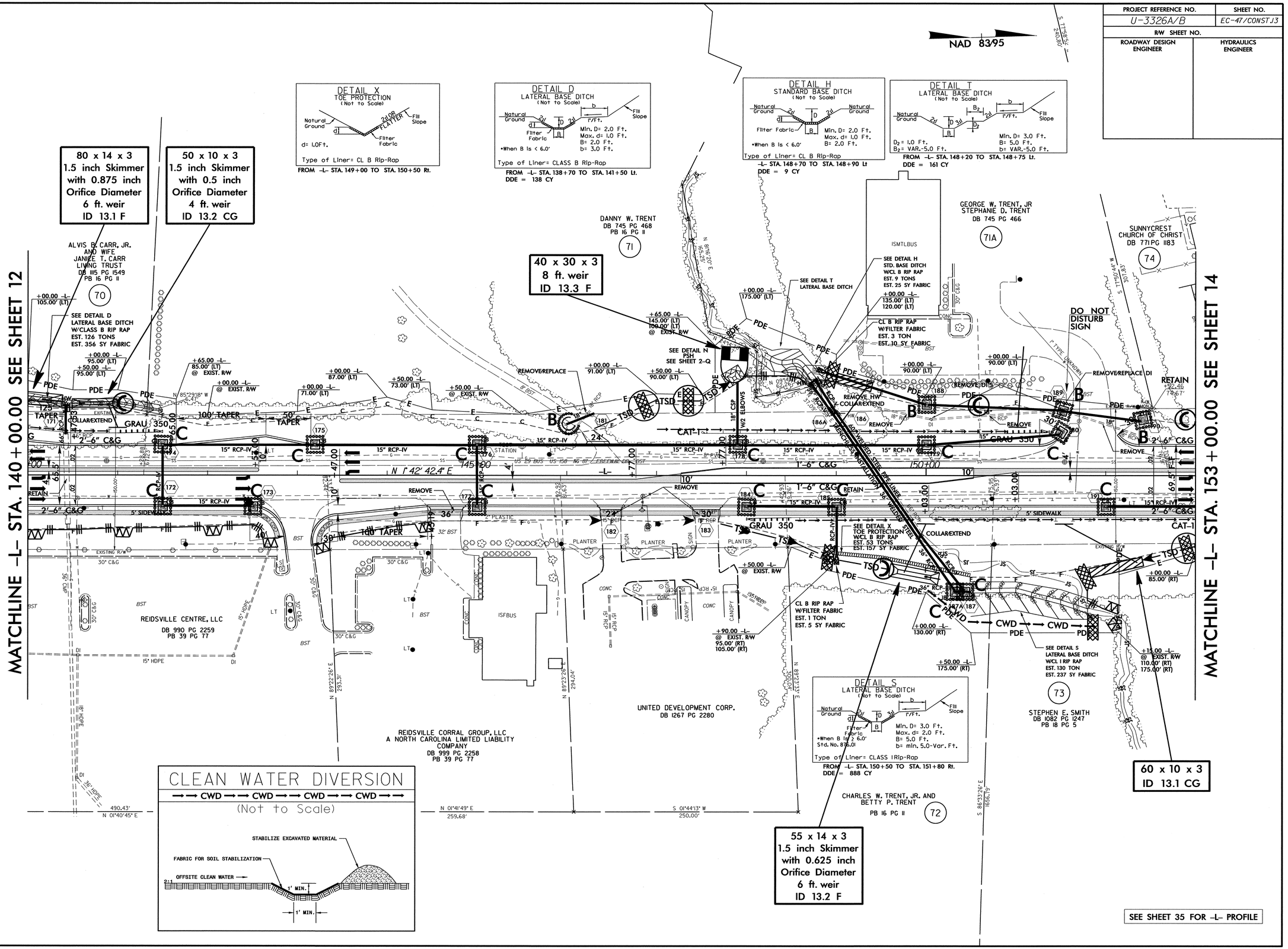
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-46/CONST.12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

16-MAY-2011 16:14
R:\Environmental\Design\U3326_EC_psh_s12.dgn
mpmillsapps01 at HRNV02240063

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-4T/CONST.J3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

16-MAY-2011 16:20
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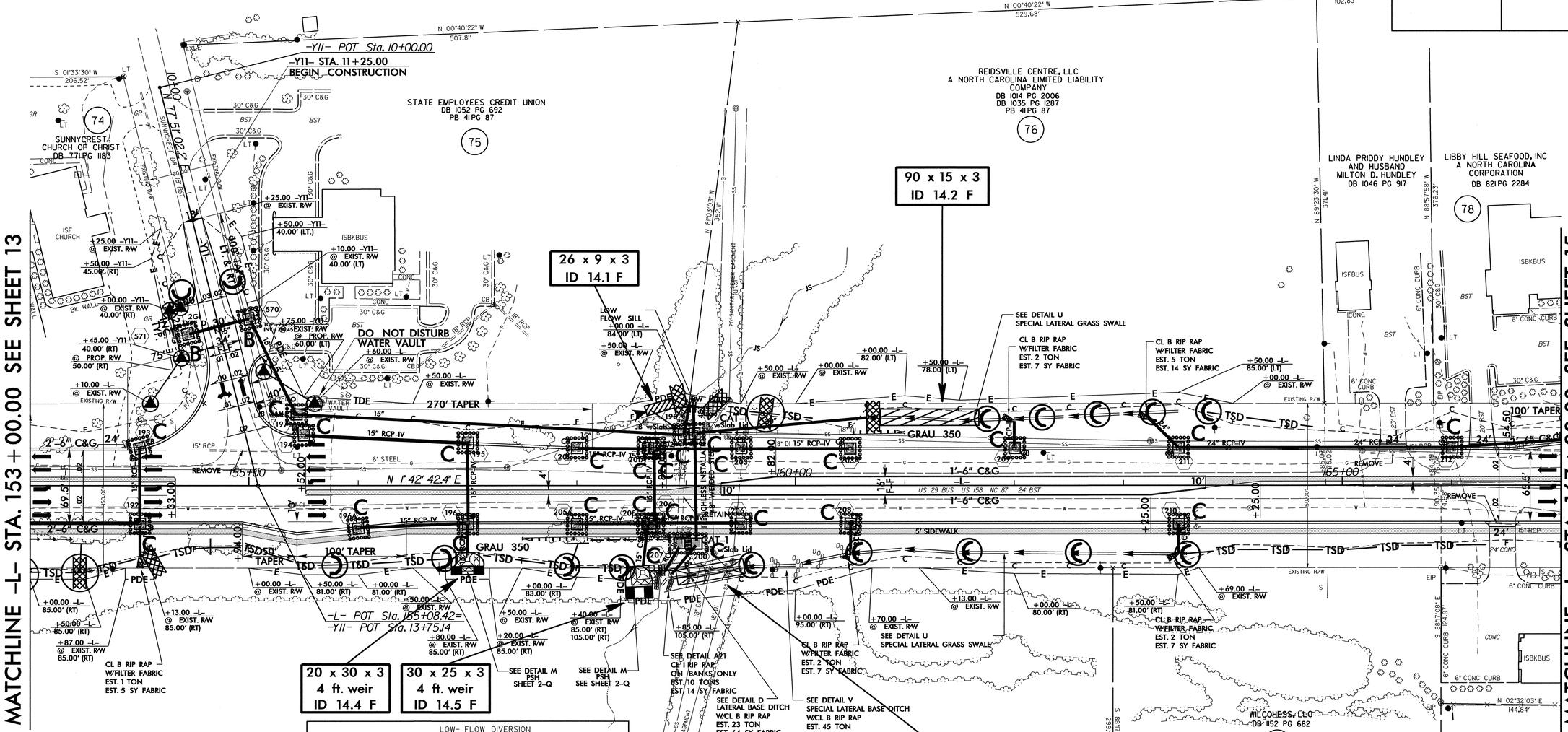
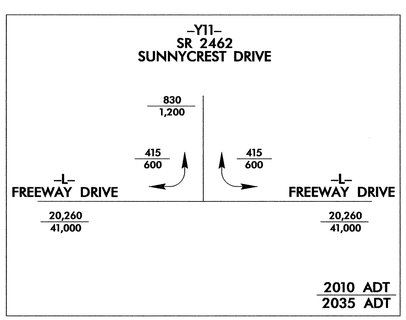
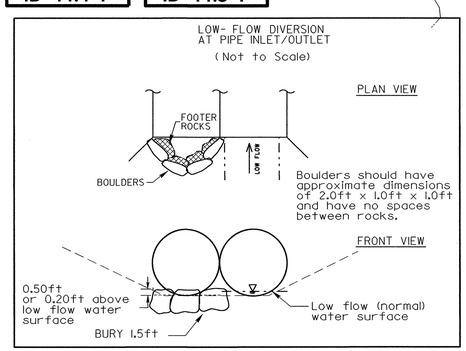
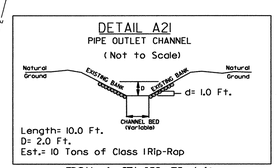
PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-48/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95





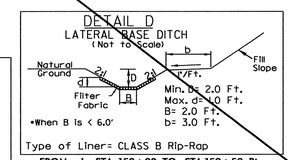




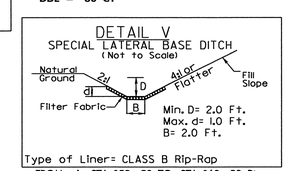
FROM -L- STA. 158+75+/- Lt.

73

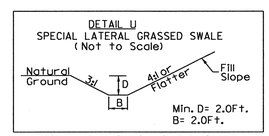
STEPHEN E. SMITH
DB 1082 PG 1247
PB 18 PG 5



FROM -L- STA. 158+80 TO STA.159+50 Rt.
DDE = 30 CY



FROM -L- STA. 159+50 TO STA. 160+50 Rt.



FROM -L- STA. 160+65 TO STA. 163+50 Lt
FROM -L- STA. 160+50 TO STA. 163+50 Rt

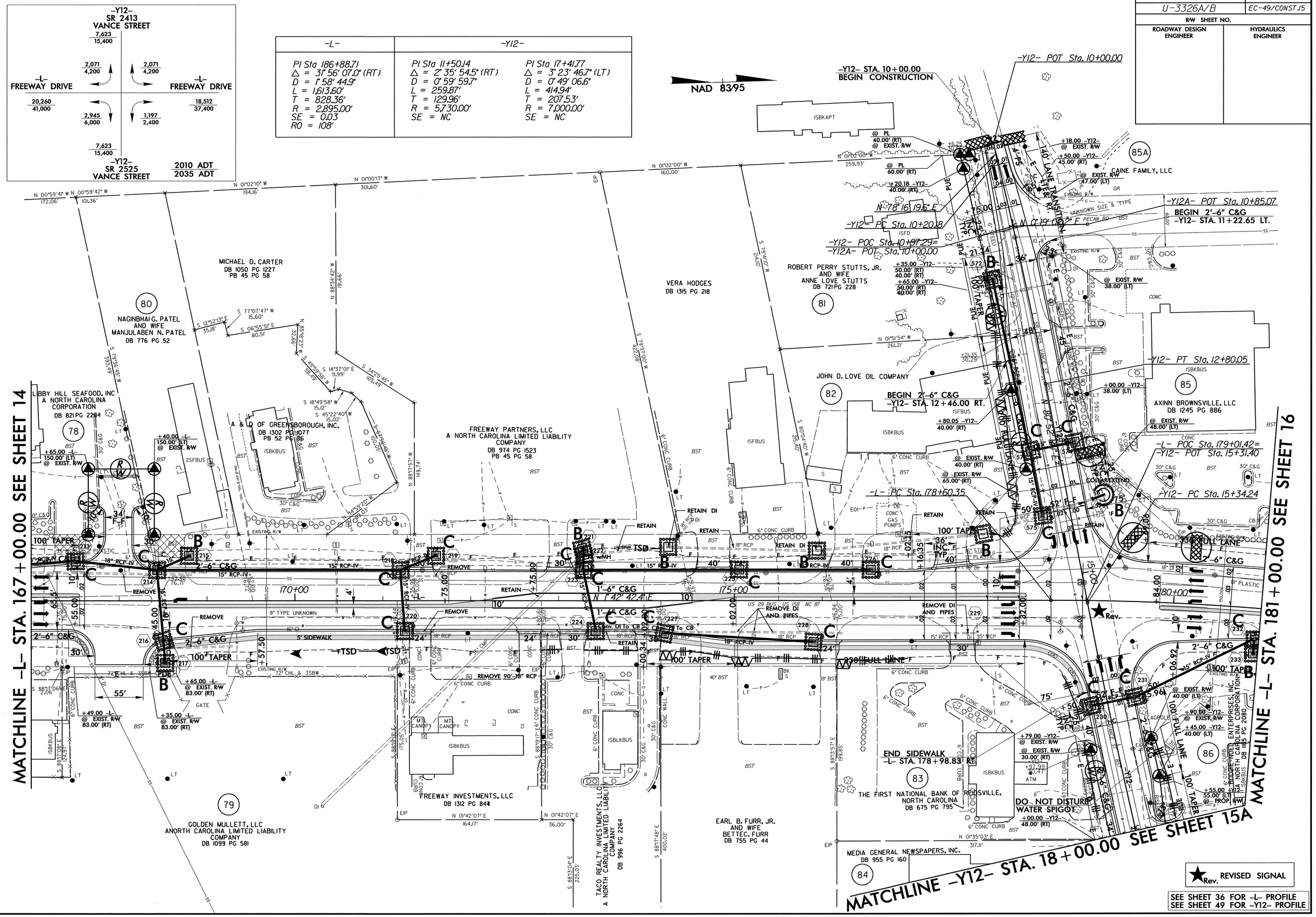
SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 48 FOR -Y11- PROFILE

8/17/99

16-MAY-2011 16:24
R:\Environmental\Design\U3326_EC_psh_s14.dgn
sunnycrestsh AT NEW242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-49/CONST J5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y12-	
PI Sta 186+88.71 Δ = 31° 56' 07.0" (RT) D = 1° 58' 44.9" L = 1,613.60' T = 828.36' R = 2,895.00' SE = 0.03 RO = 108'	PI Sta 11+50.14 Δ = 2° 35' 54.5" (RT) D = 0° 59' 59.7" L = 259.87' T = 129.96' R = 5,730.00' SE = NC	PI Sta 17+41.77 Δ = 3° 23' 46.7" (LT) D = 0° 49' 06.6" L = 414.94' T = 207.53' R = 7,000.00' SE = NC

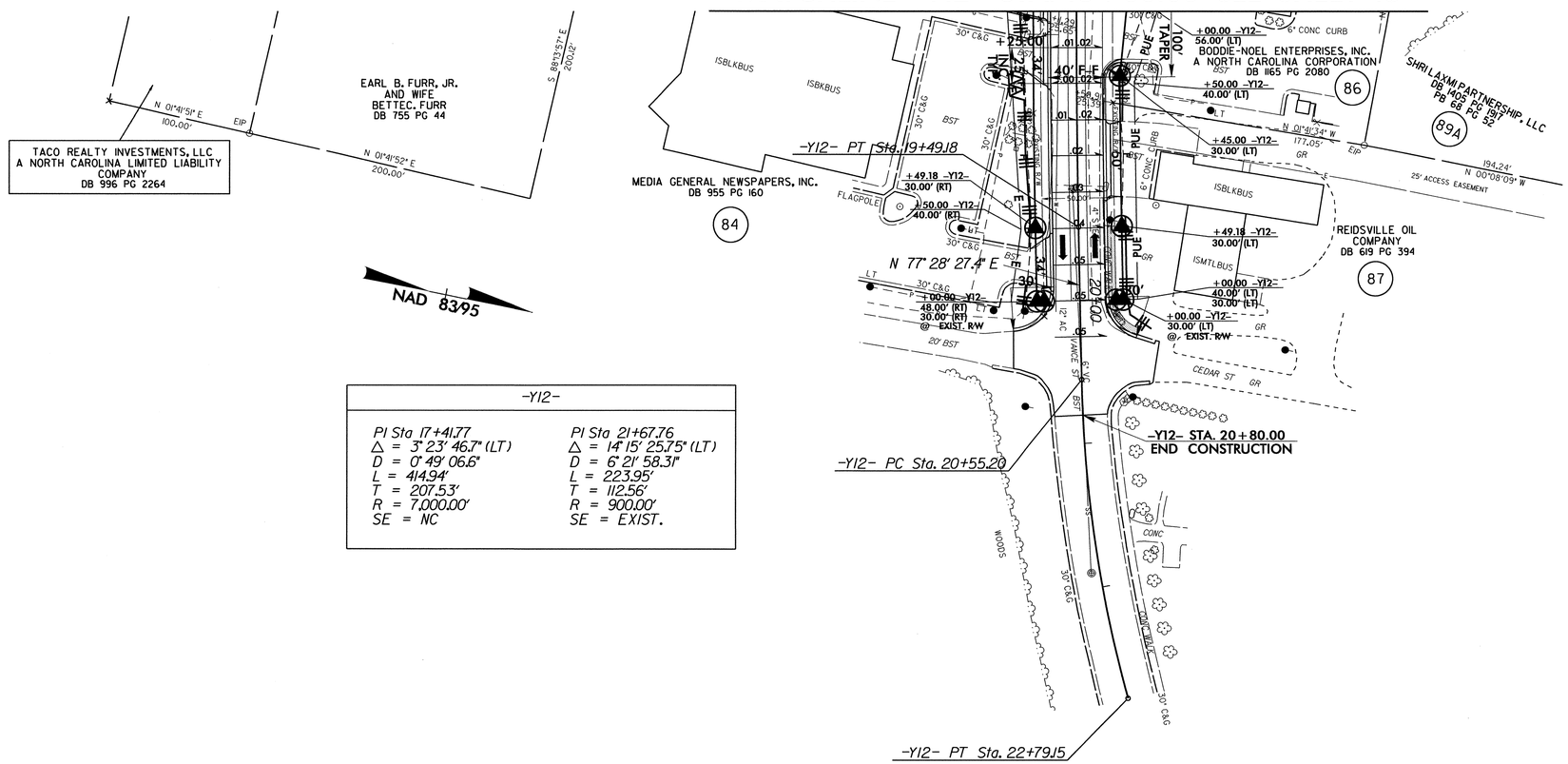


8/17/99

16-MAY-2011 16:28
R:\Hydraulics\Design\U3326_EC_psh_s15.dgn
R:\Environmental\Archeology\U3326_EC_psh_s15.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-50/CONST J5A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE –Y12– STA. 18+00.00 SEE SHEET 15



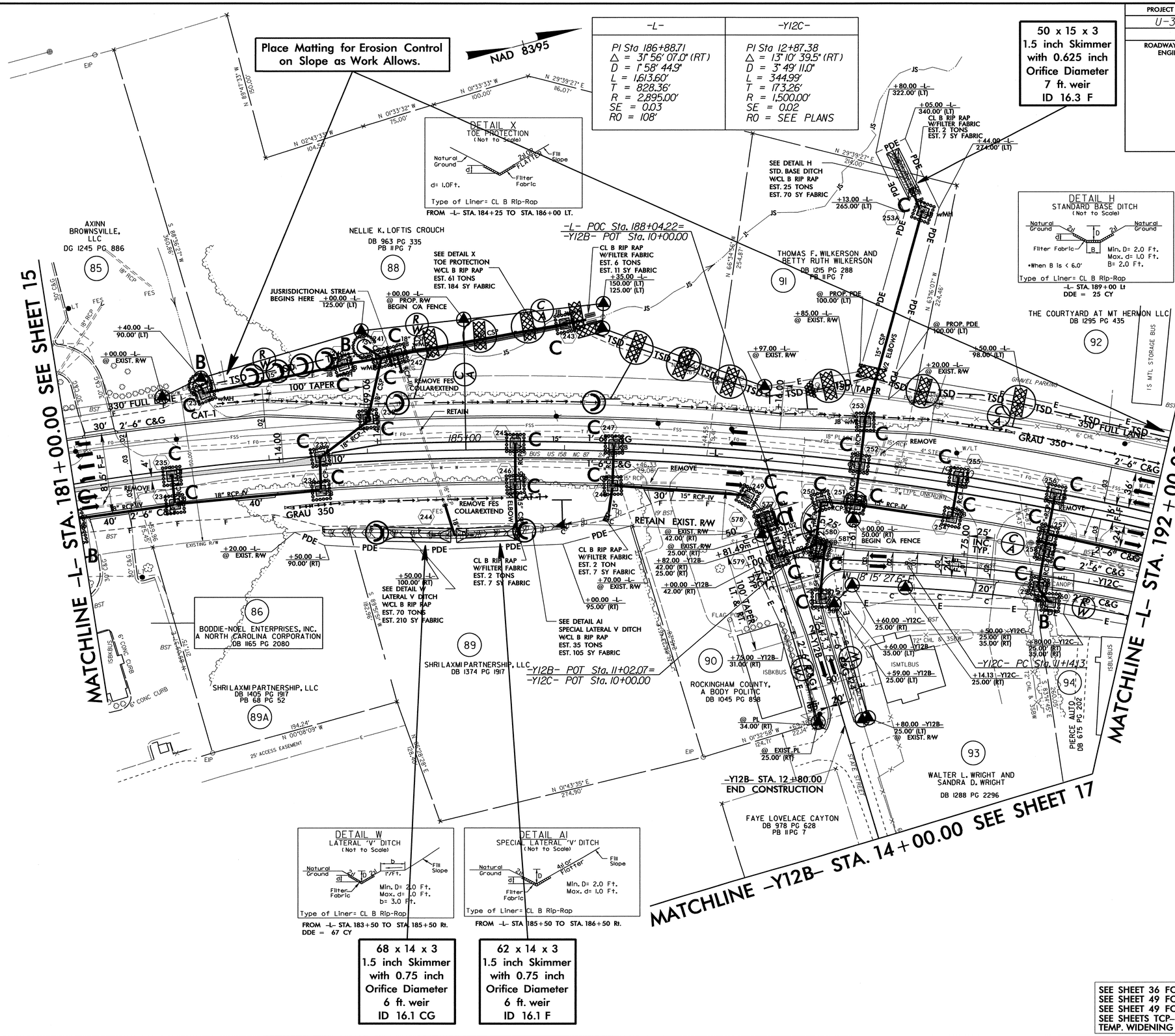
–Y12–	
PI Sta 17+41.77	PI Sta 21+67.76
△ = 3° 23' 46.7" (LT)	△ = 14° 15' 25.75" (LT)
D = 0° 49' 06.6"	D = 6° 21' 58.31"
L = 414.94'	L = 223.95'
T = 207.53'	T = 112.56'
R = 7,000.00'	R = 900.00'
SE = NC	SE = EXIST.

SEE SHEET 49 FOR –Y12– PROFILE

8/17/99
16-MAY-2011 16:32
R:\Environmental\Design\U3326_EC_psh_s15a.dgn
jcampbell
$$IEWV243002

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-51/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y12C-
PI Sta 186+88.71	PI Sta 12+87.38
△ = 31° 56' 07.0" (RT)	△ = 13° 10' 39.5" (RT)
D = 1° 58' 44.9"	D = 3° 49' 11.0"
L = 1,613.60'	L = 344.99'
T = 828.36'	T = 173.26'
R = 2,895.00'	R = 1,500.00'
SE = 0.03	SE = 0.02
RO = 108'	RO = SEE PLANS

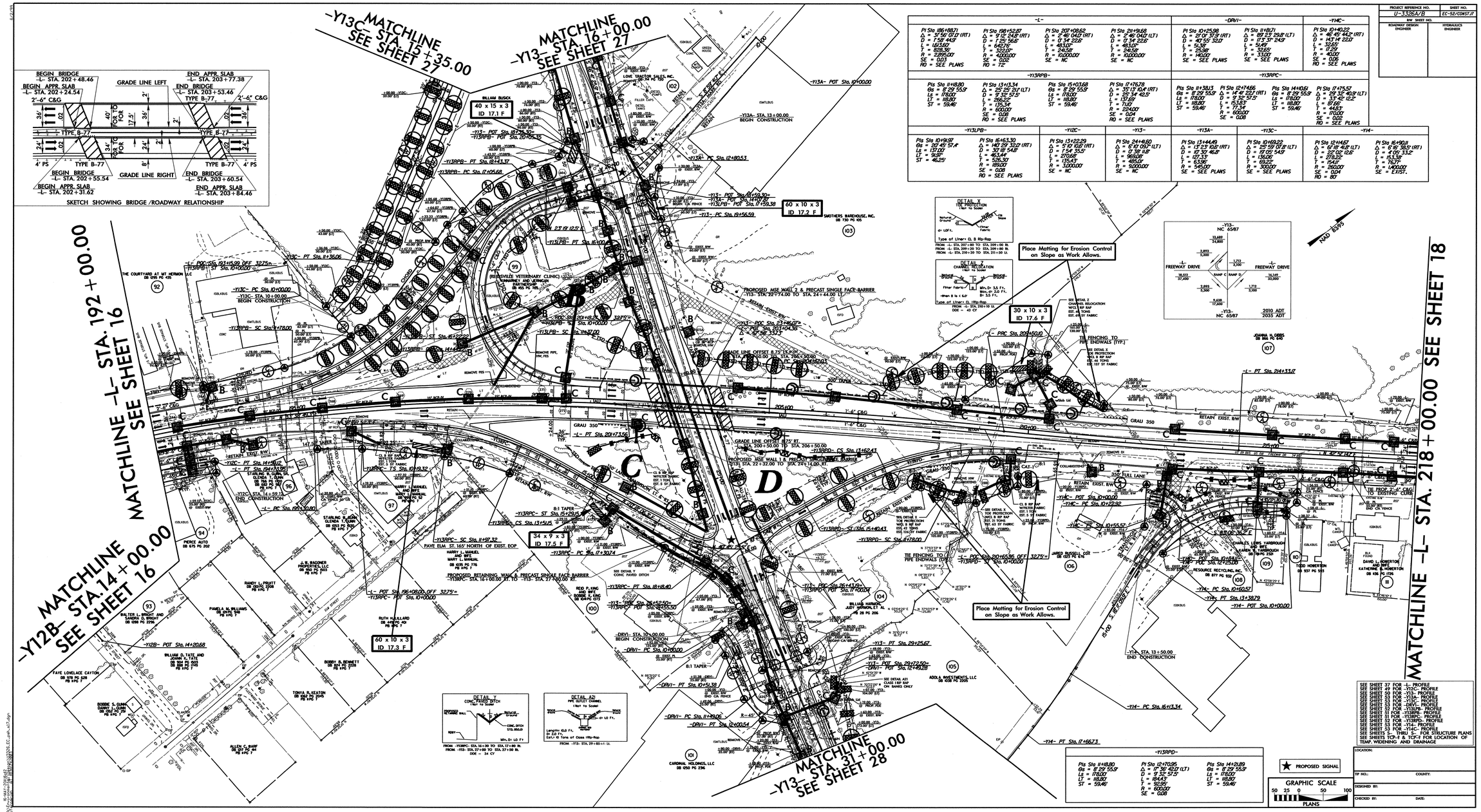


SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 49 FOR -Y12B- PROFILE
SEE SHEET 49 FOR -Y12C- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

IR-MAY-2011 16:35
c:\pwworking\01\Design\U3326_EC_psh_s16.dgn
Brian Parrish AT PRNV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-52/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-			
PI Sta 196+88.71 Δ = 37°56'07.0" (RT) D = 7°59'44.5" L = 1,613.60' T = 828.36' R = 717.49' SE = 0.03 RO = SEE PLANS	PI Sta 198+52.87 Δ = 9°12'54.8" (RT) D = 1°29'56.6" L = 642.76' T = 322.20' R = 3,820.00' SE = 0.02 RO = TZ	PI Sta 207+08.62 Δ = 2°46'04.0" (RT) D = 0°34'22.5" L = 483.01' T = 241.52' R = 10,000.00' SE = NC	PI Sta 211+91.68 Δ = 2°46'04.0" (LT) D = 0°34'22.5" L = 483.01' T = 241.52' R = 10,000.00' SE = NC

-DRV1-		
PI Sta 10+25.98 Δ = 21°01'37.9" (RT) D = 40°55'32.0" L = 51.38' T = 25.98' R = 140.00' SE = SEE PLANS	PI Sta 11+81.71 Δ = 169°23'29.8" (LT) D = 173°37'24.9" L = 54.49' T = 32.65' R = 33.00' SE = SEE PLANS	PI Sta 10+40.22 Δ = 46°45'44.2" (RT) D = 143°14'23.2" L = 32.65' T = 17.25' R = 40.00' SE = 0.06 RO = SEE PLANS

-Y13RPB-			
PI Sta 11+18.80 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'	PI Sta 13+13.34 Δ = 25°25'21.0" (LT) D = 9°32'57.5" L = 266.22' T = 135.34' R = 600.00' SE = 0.08 RO = SEE PLANS	PI Sta 15+03.68 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'	PI Sta 17+76.78 Δ = 35°13'10.4" (RT) D = 25°34'42.5" L = 137.69' T = 71.07' R = 224.00' SE = 0.04 RO = SEE PLANS

-Y13RPC-		
PI Sta 11+38.13 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'	PI Sta 12+74.66 Δ = 14°46'22.1" (RT) D = 9°32'57.5" L = 153.33' T = 77.34' R = 600.00' SE = 0.08	PI Sta 14+10.61 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'
PI Sta 17+75.57 Δ = 23°35'40.9" (LT) D = 33°42'12.2" L = 87.26' T = 44.83' R = 170.00' SE = 0.02 RO = SEE PLANS		

-Y13LPB-		-Y12C-	-Y13-	-Y13A-	-Y13C-	-Y14-	
PI Sta 10+19.97 Δs = 20°45'57.4" Ls = 137.00' LT = 91.91' ST = 46.25'	PI Sta 11+63.30 Δ = 147°59'30.0" (RT) D = 30°18'54.8" L = 463.44' T = 595.30' R = 189.00' SE = 0.08 RO = SEE PLANS	PI Sta 13+22.29 Δ = 5°10'10.6" (RT) D = 2°54'55.5" L = 270.66' T = 135.43' R = 3,000.00' SE = NC	PI Sta 24+41.60 Δ = 6°10'09.7" (LT) D = 0°38'11.8" L = 969.98' T = 485.01' R = 9,000.00' SE = NC	PI Sta 13+44.49 Δ = 13°23'10.6" (RT) D = 11°30'46.8" L = 127.33' T = 63.96' R = 545.00' SE = SEE PLANS	PI Sta 10+69.92 Δ = 25°59'09.8" (LT) D = 19°09'54.9" L = 136.06' T = 69.22' R = 300.00' SE = SEE PLANS	PI Sta 12+14.67 Δ = 67°19'41.8" (LT) D = 22°02'12.6" L = 270.22' T = 154.11' R = 260.00' SE = 0.04 RO = 80'	PI Sta 16+90.11 Δ = 6°16'38.5" (RT) D = 4°05'33.2" L = 153.39' T = 76.77' R = 1,400.00' SE = EXIST.

-Y13RPD-		
PI Sta 11+18.80 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'	PI Sta 12+70.95 Δ = 17°36'42.0" (LT) D = 9°32'57.5" L = 184.42' T = 92.95' R = 600.00' SE = 0.08	PI Sta 14+21.89 Δs = 8°29'55.9" Ls = 178.00' LT = 118.80' ST = 59.46'

SEE SHEET 37 FOR -L- PROFILE	
SEE SHEET 48 FOR -Y12C- PROFILE	
SEE SHEET 49 FOR -Y12A- PROFILE	
SEE SHEET 50 FOR -Y13A- PROFILE	
SEE SHEET 53 FOR -Y13C- PROFILE	
SEE SHEET 53 FOR -DRV1- PROFILE	
SEE SHEET 57 FOR -Y13LPB- PROFILE	
SEE SHEET 51 FOR -Y13RPC- PROFILE	
SEE SHEET 53 FOR -Y13RPD- PROFILE	
SEE SHEET 53 FOR -Y14C- PROFILE	
SEE SHEET 53 FOR -Y14- PROFILE	
SEE SHEETS 5 - THRU 5 - FOR STRUCTURE PLANS	
SEE SHEETS TCP-1 & TCP-3 FOR LOCATION OF TEMP. WIDENING AND DRAINAGE	

★ PROPOSED SIGNAL

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:

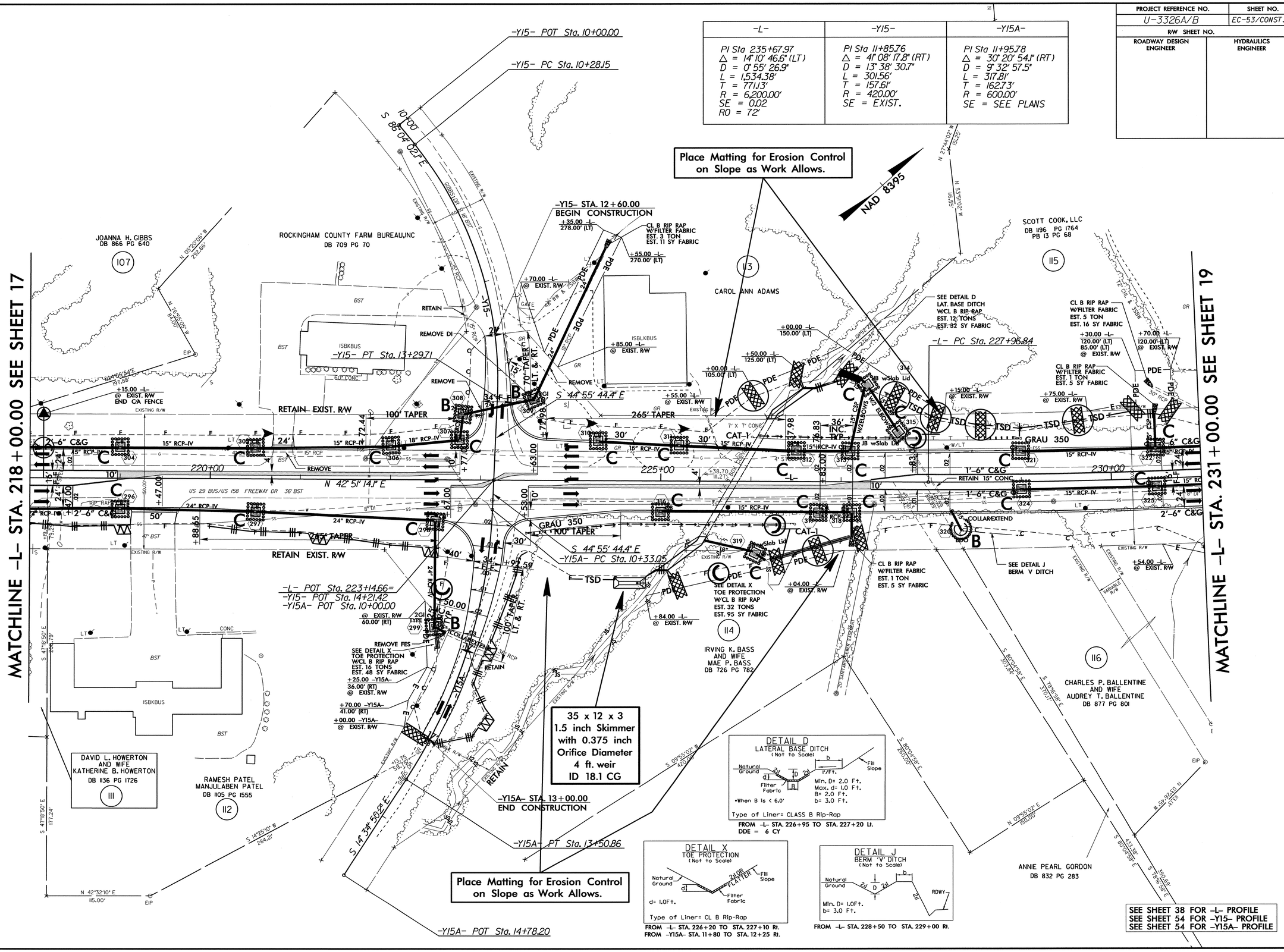
TIP NO.: COUNTY:

DESIGNED BY:

CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-53/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

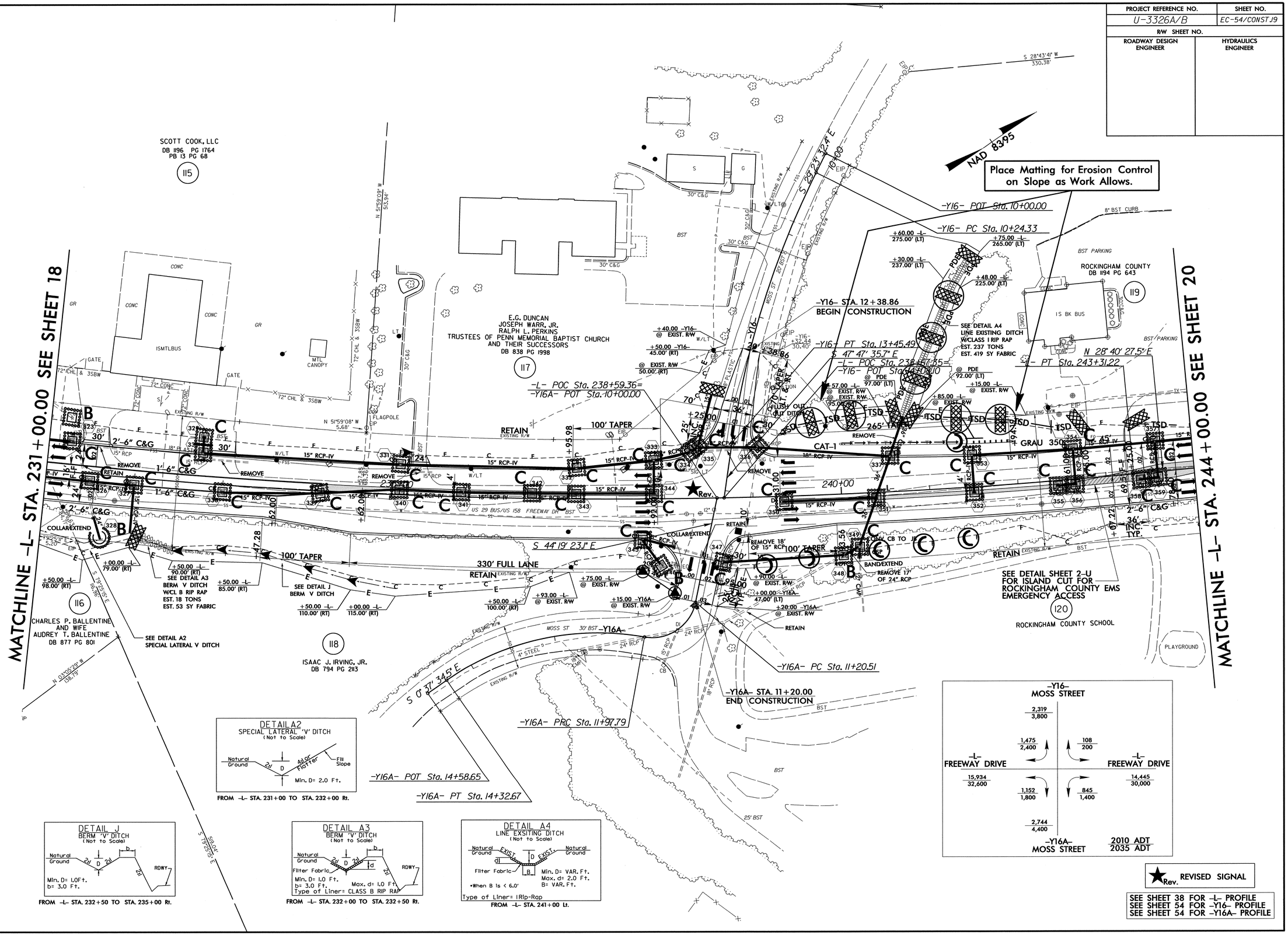
-L-	-Y15-	-Y15A-
PI Sta 235+67.97 △ = 14° 10' 46.6" (LT) D = 0° 55' 26.9" L = 1,534.38' T = 771.13' R = 6,200.00' SE = 0.02 RO = 72'	PI Sta 11+85.76 △ = 41° 08' 17.8" (RT) D = 13° 38' 30.7" L = 301.56' T = 157.61' R = 420.00' SE = EXIST.	PI Sta 11+95.78 △ = 30° 20' 54.1" (RT) D = 9° 32' 57.5" L = 317.81' T = 162.73' R = 600.00' SE = SEE PLANS



8/17/99

18-MAY-2011 10:28
R:\Roadway\Proj\U3326_B1\Design\U3326_EC_psh_s18.dgn
jennifer.parish
AT REN\V2420003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-54/CONST.J9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



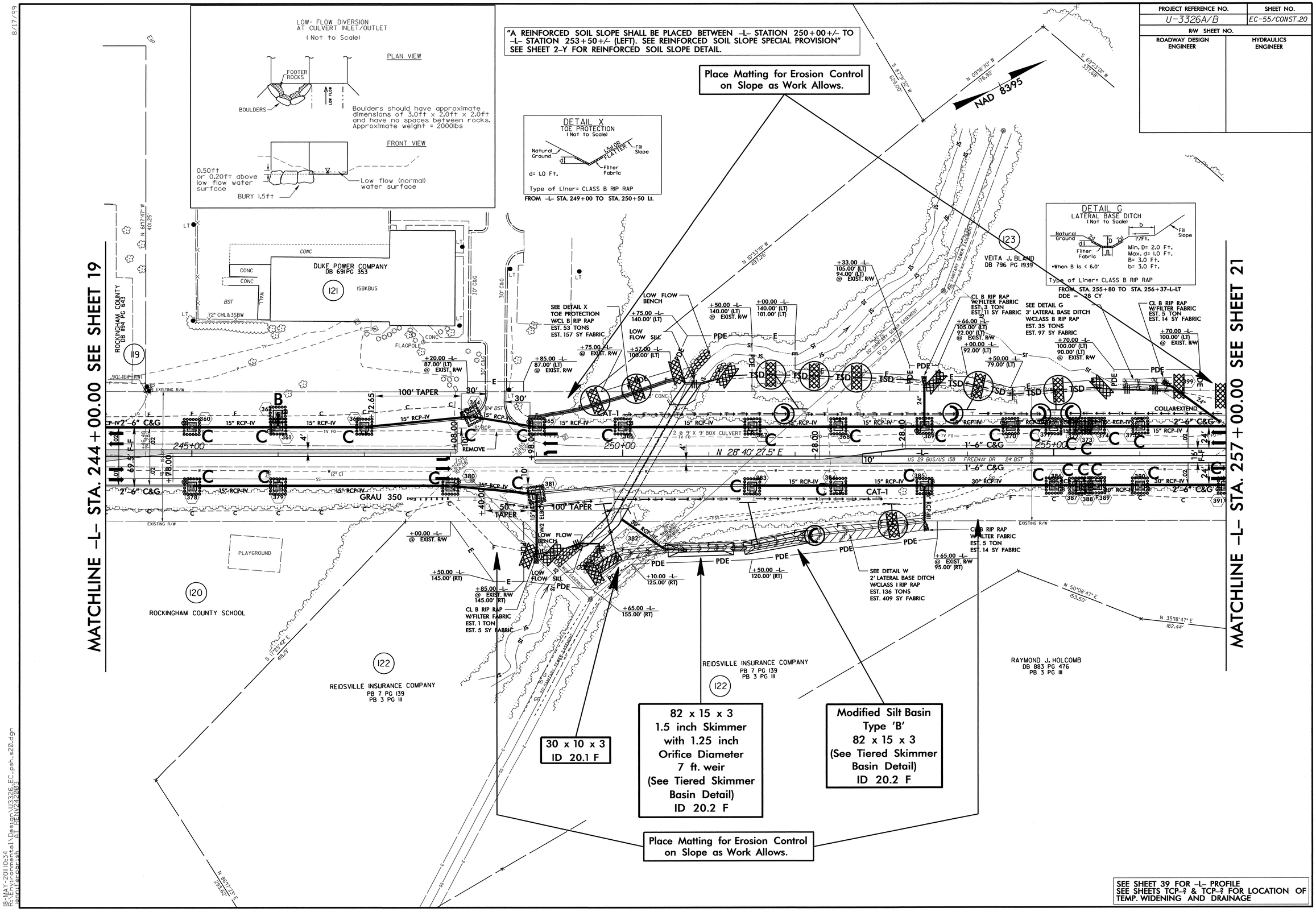
8/17/99

18-MAY-2011 10:30
R:\Environmental\Design\U3326_EC_psh_s19.dgn
bmillergarsh AT REV 24.2003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-55/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

"A REINFORCED SOIL SLOPE SHALL BE PLACED BETWEEN -L- STATION 250+00+/- TO -L- STATION 253+50+/- (LEFT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION" SEE SHEET 2-Y FOR REINFORCED SOIL SLOPE DETAIL.

Place Matting for Erosion Control on Slope as Work Allows.



SEE SHEET 39 FOR -L- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

18-MAY-2011 10:34
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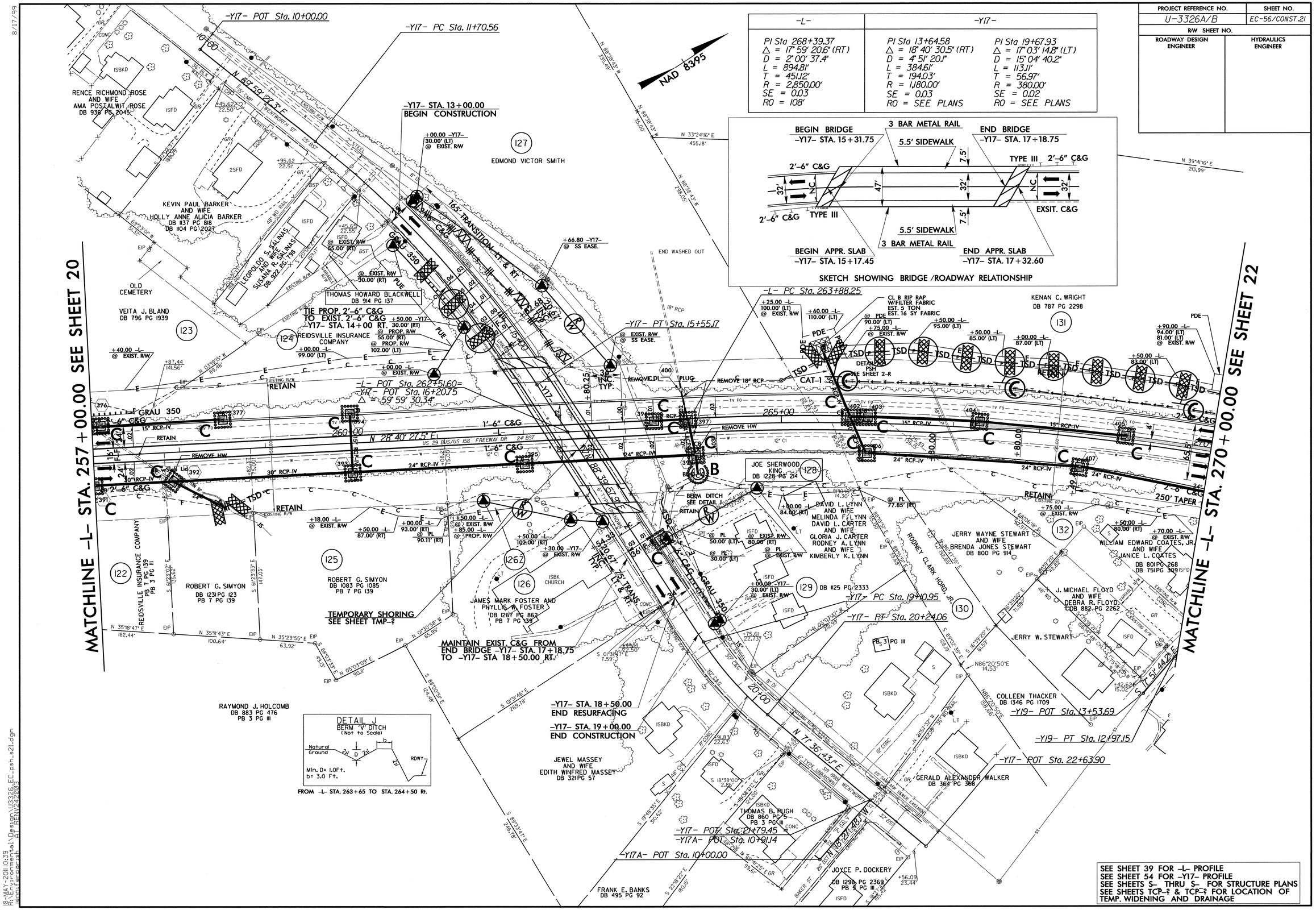
bwhitaker1 AT REIVZ2K02

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-56/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y17-	
PI Sta 268+39.37	PI Sta 13+64.58	PI Sta 19+67.93
Δ = 17° 59' 20.6" (RT)	Δ = 18° 40' 30.5" (RT)	Δ = 17° 03' 14.8" (LT)
D = 2° 00' 37.4"	D = 4° 51' 20.1"	D = 15° 04' 40.2"
L = 894.81'	L = 384.61'	L = 113.11'
T = 451.12'	T = 194.03'	T = 56.97'
R = 2,850.00'	R = 1,180.00'	R = 380.00'
SE = 0.03	SE = 0.03	SE = 0.02
RO = 108'	RO = SEE PLANS	RO = SEE PLANS



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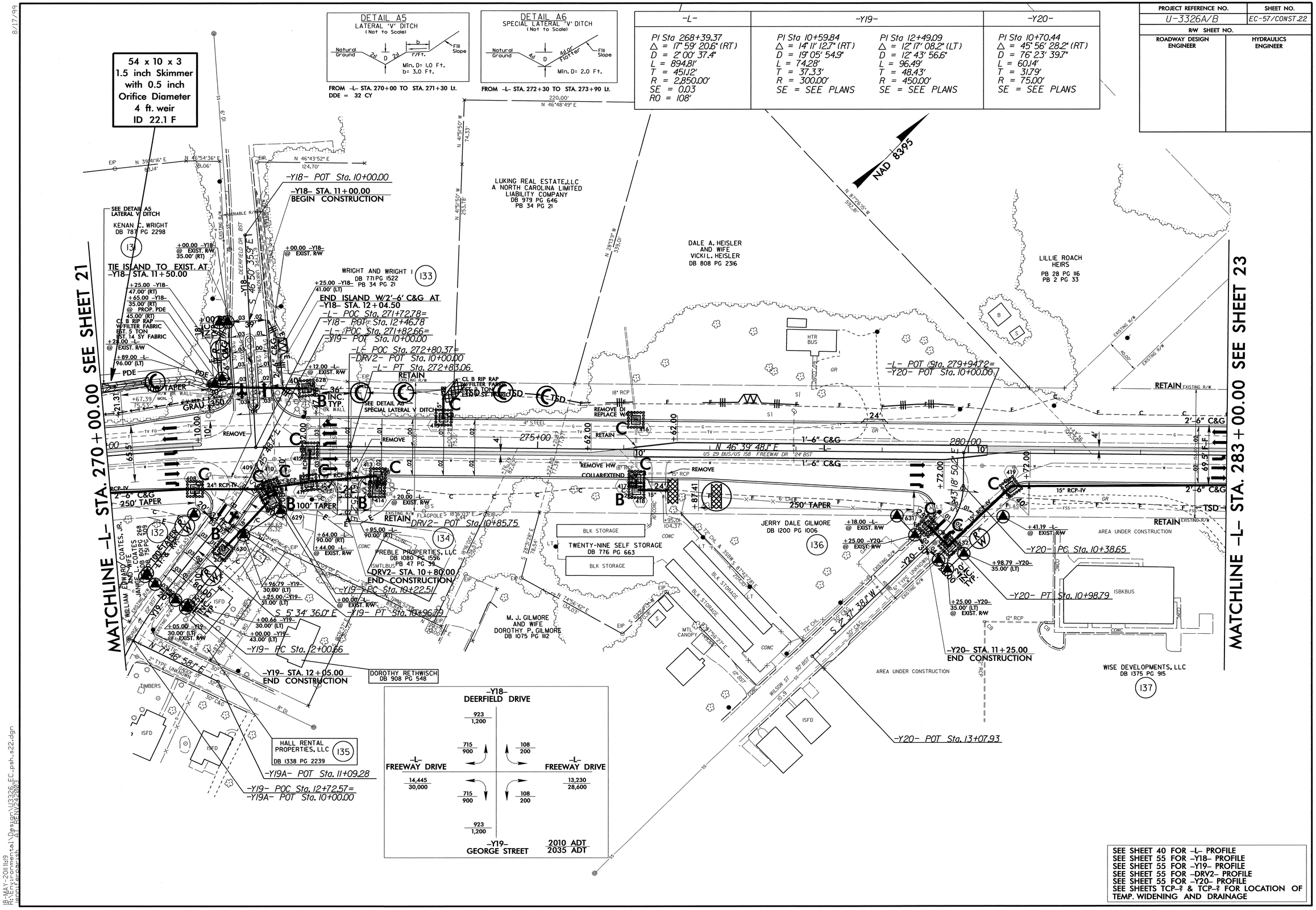
$$USERNAME$$

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-57/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y19-		-Y20-
PI Sta 268+39.37 Δ = 17° 59' 20.6" (RT) D = 2° 00' 37.4" L = 894.81' T = 451.12' R = 2,850.00' SE = 0.03 RO = 108'	PI Sta 10+59.84 Δ = 14° 11' 12.7" (RT) D = 19° 05' 54.9" L = 74.28' T = 37.33' R = 300.00' SE = SEE PLANS	PI Sta 12+49.09 Δ = 12° 17' 08.2" (LT) D = 12° 43' 56.6" L = 96.49' T = 48.43' R = 450.00' SE = SEE PLANS	PI Sta 10+70.44 Δ = 45° 56' 28.2" (RT) D = 76° 23' 39.7" L = 60.14' T = 31.79' R = 75.00' SE = SEE PLANS



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PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-58/CONST 23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-	-Y20B-	-Y21-	-Y21LPB-
PI Sta 299+50.13 Δ = 25° 09' 02.5" (RT) D = 1° 57' 43.9" L = 1,278.37' T = 646.59' R = 2,920.00' SE = 0.03 RO = 108'	PI Sta 11+49.94 Δ = 97° 15' 26.2" (RT) D = 5° 43' 46.5" L = 178.02' T = 119.75' R = 1,000.00' SE = SEE PLANS	PI Sta 13+28.77 Δ = 67° 14' 04.4" (LT) D = 5° 43' 46.5" L = 178.65' T = 99.55' R = 1,000.00' SE = SEE PLANS	PI Sta 16+59.67 Δ = 3° 13' 12.4" (RT) D = 1° 54' 33.5" L = 168.82' T = 84.32' R = 3,000.00' SE = 0.02 RO = SEE PLANS	PI Sta 16+50.81 Δ = 7° 38' 36.3" (LT) D = 1° 25' 56.6" L = 518.39' T = 260.07' R = 4,000.00' SE = 0.03 RO = 90'	PI Sta 26+22.04 Δ = 28° 34' 42.9" (RT) D = 3° 32' 20.7" L = 965.82' T = 494.55' R = 760.00' SE = 0.04 RO = SEE PLANS	PI Sta 30+45.86 Δ = 13° 31' 12.5" (LT) D = 5° 12' 31.3" L = 256.31' T = 128.77' R = 1,100.00' SE = EXIST.	PI Sta 10+92.35 Gs = 35° 09' 54.3" Lc = 137.00' LT = 92.35' ST = 46.59'	PI Sta 18+41.44 Δ = 152° 57' 30.0" (RT) D = 35° 11' 49.9" L = 408.30' T = 1044.44' R = 150.00' SE = 0.08 RO = SEE PLANS

-Y21LPC-	-Y21RPB-	-Y21RPC-
PI Sta 10+92.35 Gs = 35° 09' 54.3" Lc = 137.00' LT = 92.35' ST = 46.59'	PI Sta 15+32.32 Δ = 138° 26' 34.4" (LT) D = 38° 11' 49.9" L = 362.44' T = 396.32' R = 150.00' SE = 0.08 RO = SEE PLANS	PI Sta 10+80.38 Gs = 17° 11' 19.4" Lc = 120.00' LT = 80.38' ST = 40.35'	PI Sta 12+18.03 Δ = 52° 17' 23.3" (LT) D = 28° 38' 52.4" L = 182.55' T = 98.03' R = 200.00' SE = 0.03 RO = SEE PLANS	PI Sta 15+17.47 Δ = 80° 54' 00.0" (RT) D = 31° 28' 52.5" L = 256.98' T = 155.17' R = 182.00' SE = 0.04 RO = SEE PLANS	PI Sta 10+80.38 Gs = 17° 11' 19.4" Lc = 120.00' LT = 80.38' ST = 40.35'	PI Sta 12+58.32 Δ = 69° 20' 12.4" (RT) D = 28° 38' 52.4" L = 242.03' T = 136.32' R = 200.00' SE = 0.07 RO = SEE PLANS	PI Sta 14+78.42 Δ = 60° 24' 19.2" (LT) D = 31° 28' 52.5" L = 191.88' T = 105.94' R = 182.00' SE = 0.03 RO = SEE PLANS

-Y21-
SR 2670
NORTH SCALES STREET

FREEWAY DRIVE — 1,897 / 2,556 — 13,930 / 38,600 — 708 / 1,200 — 10,973 / 34,800 — 1,897 / 2,556 — 6,140 / 11,300 — FREEWAY DRIVE

-Y21-
SR 2670
NORTH SCALES STREET

2010 ADT
2035 ADT

BEGIN BRIDGE
-Y21- STA. 21+33.96

3-BAR METAL RAIL
5.5' SIDEWALK

END BRIDGE
-Y21- STA. 23+23.96

5' SIDEWALK — 7.5' — TYPE III — 5' SIDEWALK — 40' — 24' — 40' — 2'-6" C&G — TYPE III — 7.5' — FOR FUTURE — -Y21- — 2'-6" C&G

BEGIN APPR. SLAB
-Y21- STA. 21+09.79

FUTURE
5.5' SIDEWALK
2-BAR METAL RAIL

END APPR. SLAB
-Y21- STA. 23+48.13

FOR – FACE OF RAIL
SKETCH SHOWING BRIDGE /ROADWAY RELATIONSHIP

Place Matting for Erosion Control on Slope as Work Allows.

40 x 9 x 3
1.5 inch Skimmer with 0.375 inch Orifice Diameter
4 ft. weir
ID 23.1 F

28 x 14 x 3
1.5 inch Skimmer with 0.375 inch Orifice Diameter
6 ft. weir
ID 23.2 F

56 x 20 x 3
1.5 inch Skimmer with 0.875 inch Orifice Diameter
12 ft. weir
ID 23.3 F

50 x 25 x 3
ID 23.6 F

30 x 9 x 3
1.5 inch Skimmer with 0.25 inch Orifice Diameter
4 ft. weir
ID 23.1 CG

96 x 16 x 3
1.5 inch Skimmer with 1.125 inch Orifice Diameter
8 ft. weir
ID 23.4 F

20 x 10 x 3
1.5 inch Skimmer with 0.25 inch Orifice Diameter
4 ft. weir
ID 23.5 F

Place Matting for Erosion Control on Slope as Work Allows.

MATCHLINE -Y21- STA. 15+00.00 SEE SHEET 29

MATCHLINE -L- STA. 283+00.00 SEE SHEET 22

MATCHLINE -L- STA. 309+00.00 SEE SHEET 24

NAD 1983

SEE SHEET 40 AND 41 FOR -L- PROFILE
SEE SHEET 55 FOR -Y20A- PROFILE
SEE SHEET 55 FOR -Y20B- PROFILE
SEE SHEET 56 FOR -Y21- PROFILE
SEE SHEET 56 FOR -Y21LPB- PROFILE
SEE SHEET 56 FOR -Y21LPC- PROFILE
SEE SHEET 57 FOR -Y21RPB- PROFILE
SEE SHEET 57 FOR -Y21RPC- PROFILE
SEE SHEETS 3 THRU 7 FOR STRUCTURE PLANS
SEE SHEETS TCP-4 & TCP-7 FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

LOCATION:

TIP NO.: COUNTY:

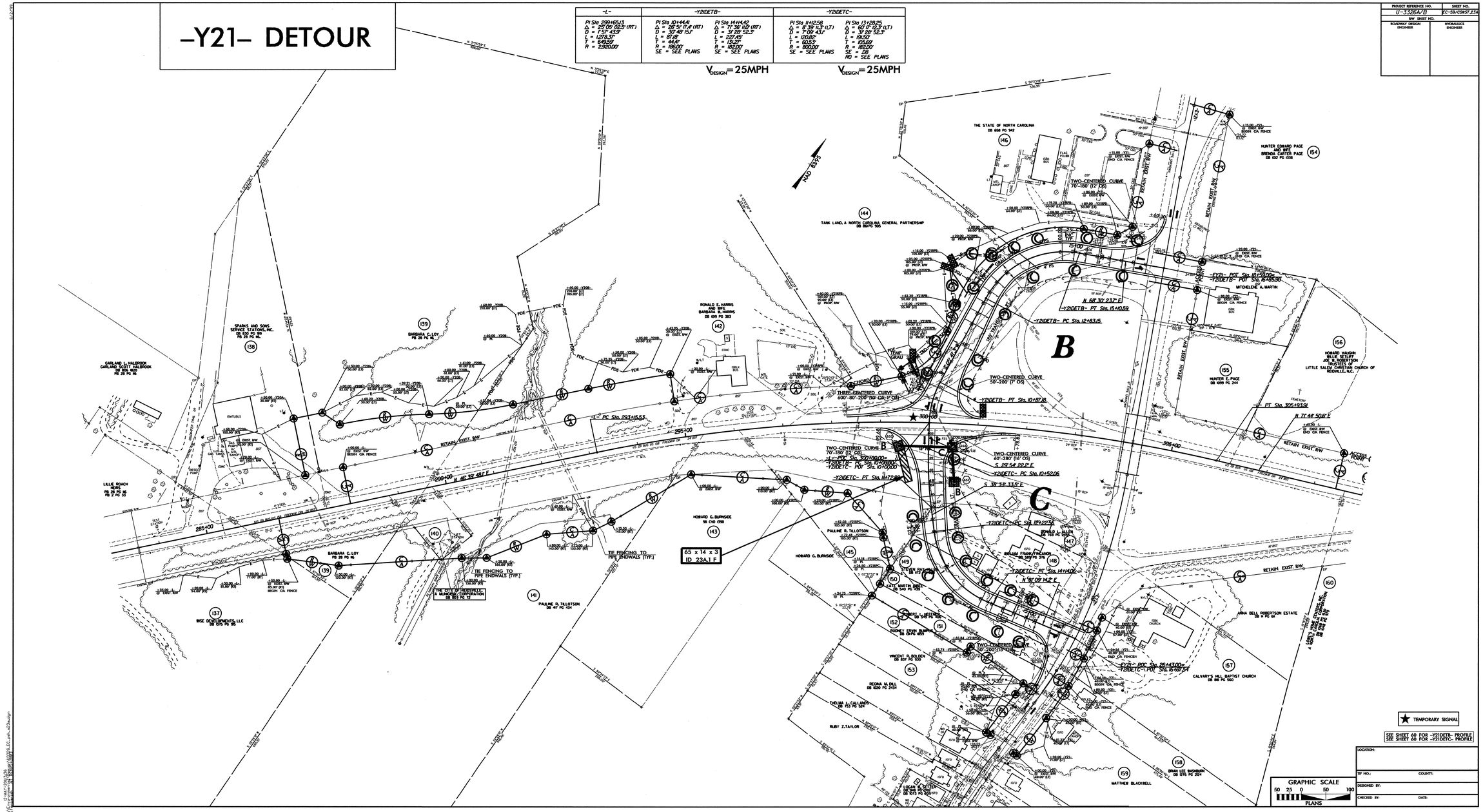
DESIGNED BY:

CHECKED BY: DATE:

GRAPHIC SCALE
50 25 0 50 100
PLANS

-Y21- DETOUR

-L-	-Y21DETB-		-Y21DETC-	
PI Sta 299+65.13 Δ = 25°05'02.5" (RT) D = 1°57'43.5" L = 1,278.37' T = 649.59' R = 2,920.00'	PI Sta 10+44.41 Δ = 26°51'17.4" (RT) D = 30°48'15.1" L = 87.18' T = 44.41' R = 186.00' SE = SEE PLANS	PI Sta 14+14.42 Δ = 71°36'11.0" (RT) D = 31°28'52.3" L = 227.45' T = 131.27' R = 182.00' SE = SEE PLANS	PI Sta 11+12.58 Δ = 6°39'11.3" (LT) D = 7°09'43.1" L = 120.82' T = 60.53' R = 800.00' SE = SEE PLANS	PI Sta 13+28.25 Δ = 60°11'12.3" (LT) D = 31°28'52.3" L = 191.50' T = 105.65' R = 182.00' SE = 0.08 RO = SEE PLANS
	V_{DESIGN} = 25MPH		V_{DESIGN} = 25MPH	



PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-59/CONST.23A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

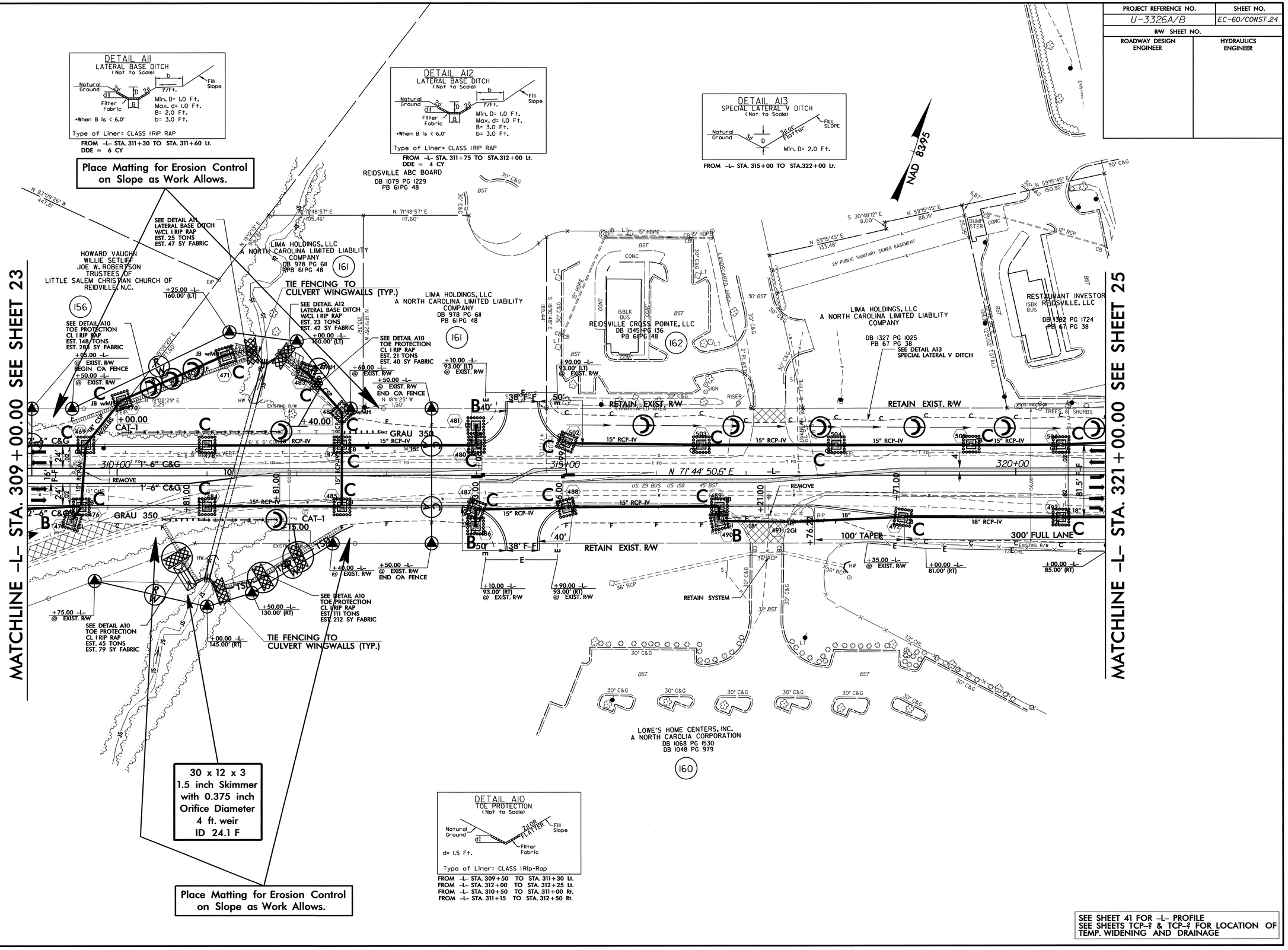
LOCATION:

TIP NO.: COUNTY:

DESIGNED BY:

CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-60/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEET 41 FOR -L- PROFILE
SEE SHEETS TCP-? & TCP-? FOR LOCATION OF TEMP. WIDENING AND DRAINAGE

8/17/99

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bmartin@ppsi.com

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-61/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y22-
PI Sta 21+09.44
Δ = 2° 54' 43.7" (LT)
D = 5° 43' 46.5"
L = 50.83'
T = 25.42'
R = 1,000.00'
SE = EXIST.

Place Matting for Erosion Control on Slope as Work Allows.

60 x 10 x 3
ID 25.3 F

Modified Silt Basin Type 'B'
50 x 14 x 3
(See Tiered Skimmer Basin Detail)
ID 25.4 F

50 x 14 x 3
1.5 inch Skimmer with 0.875 inch Orifice Diameter
6 ft. weir
(See Tiered Skimmer Basin Detail)
ID 25.4 F

55 x 14 x 3
1.5 inch Skimmer with 0.875 inch Orifice Diameter
6 ft. weir
(See Tiered Skimmer Basin Detail)
ID 25.5 F

Modified Silt Basin Type 'B'
55 x 14 x 3
(See Tiered Skimmer Basin Detail)
ID 25.5 F

MATCHLINE -L- STA. 321+00.00 SEE SHEET 24

-Y22- STA. 12+19.00
BEGIN CONSTRUCTION

BEGIN 2'-6" C&G
-Y22- STA. 14+67.38 LT. & RT.

-L- POT Sta. 323+01.07=
-Y22- POT Sta. 16+12.31

SEE DETAIL A14
LATERAL BASE DITCH
W/CLASS B RIP RAP
EST. 50 TONS
EST. 138 SY FABRIC

SEE DETAIL A15
LATERAL BASE DITCH
W/CLASS B RIP RAP
EST. 55 TONS
EST. 152 SY FABRIC

DETAIL A15
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, Filter Fabric, Fill Slope, 1'/Ft.
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 3.0 Ft.
b= 3.0 Ft.
When B is < 6.0'
Type of Liner= CLASS B RIP RAP
FROM -L- STA. 325+30 TO STA. 326+40 Lt.
DDE = 27 CY

END 2'-6" C&G
-L- STA. 329+52.00 LT. & RT.

-L- POT Sta. 335+29.09

260' TAPER

400' LANE TRANSITION LT. & RT.

-L- STA. 333+52.00
END PROJECT U-3326A/B

SHOP CURVED GUARDRAIL (150' R)

END 2'-6" C&G
-Y22- STA. 17+58.93 LT. & RT.

TIE TO EXISTING GUARDRAIL
-Y22- STA. 17+71.86 LT.

-Y22- STA. 17+75.00
END CONSTRUCTION

54 x 14 x 3
1.5 inch Skimmer with 0.625 inch Orifice Diameter
6 ft. weir
ID 25.2 F

24 x 12 x 3
1.5 inch Skimmer with 0.375 inch Orifice Diameter
4 ft. weir
ID 25.1 F

-Y22- PC Sta. 20+84.02

-Y22- PT Sta. 21+34.85

S 33° 39' 21.2" E

DETAIL A16
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, Fill Slope, 1'/Ft.
Min. D= 1.0Ft.
Max. d= 1.0Ft.
B= 2.0Ft.
b= 3.0Ft.
Type of Liner= PSRM
FROM -L- STA. 324+80 TO STA. 325+50 Rt.
DDE = 23 CY

Place Matting for Erosion Control on Slope as Work Allows.

NAD 83/95

MICHAEL W. APPLE
DB 1030 PG 2382

PEGGY S. RICKMAN
DB 759 PG 640

C & G TRUCKING, INC.
DB 793 PG 1156

ANTHONY TYRONE BRIDGES
DB 1226 PG 2176

B & B INVESTMENTS OF REIDSVILLE, LLC
DB 1110 PG 428

NORMAN CARL DAVIS ESTATE

LOWE'S HOME CENTERS, INC.
A NORTH CAROLIA CORPORATION
DB 1068 PG 1530
DB 1048 PG 379

★Rev. REVISED SIGNAL

SEE SHEET 42 FOR -L- PROFILE
SEE SHEET 59 FOR -Y22- PROFILE

8/17/99

18-MAY-2011 13:40
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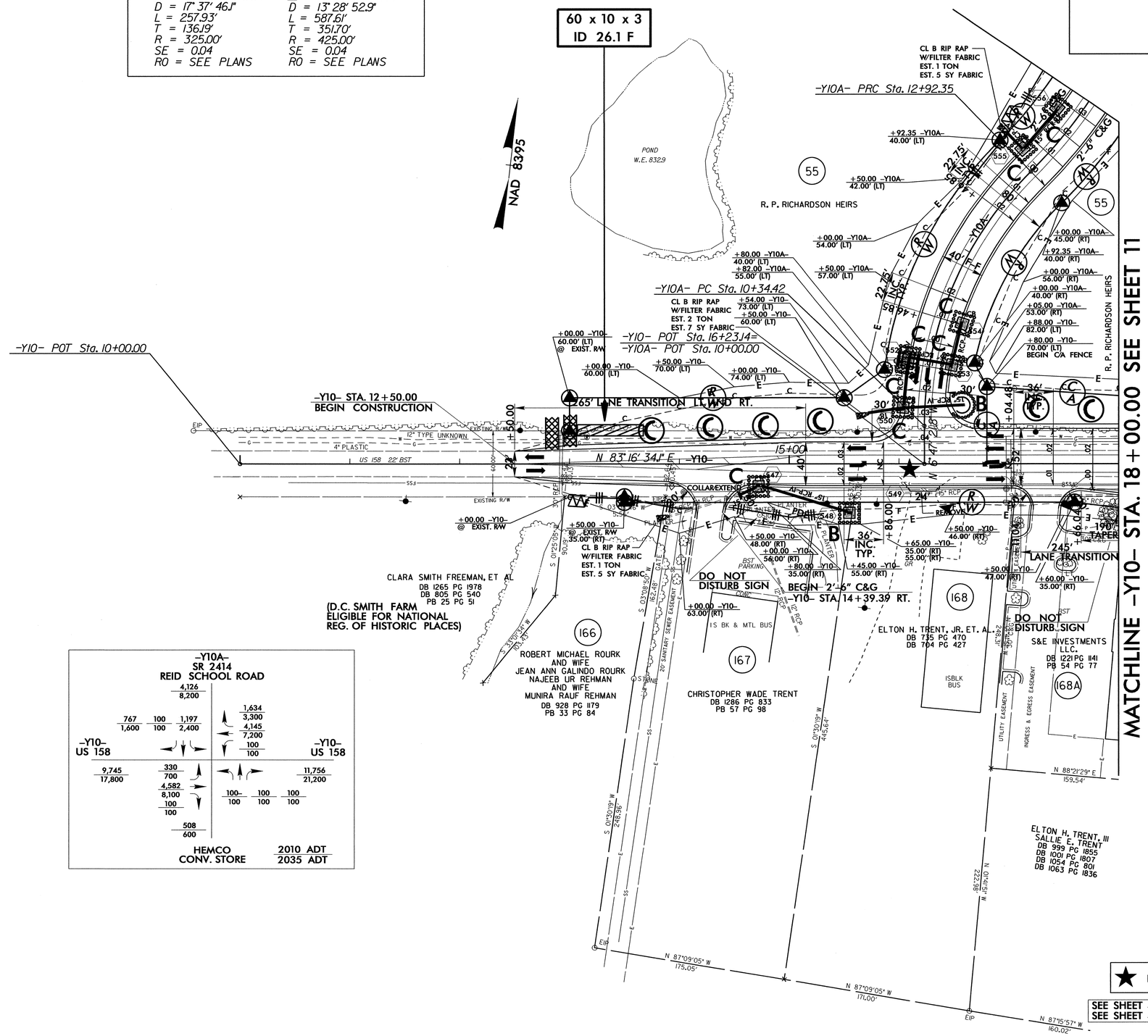
mmillerpowell 21 NAD/24.00pc

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-62/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y10A-	
PI Sta 11+70.61	PI Sta 16+44.06
△ = 45° 28' 17.9" (RT)	△ = 79° 13' 05.7" (LT)
D = 17° 37' 46.1"	D = 13° 28' 52.9"
L = 257.93'	L = 587.61'
T = 136.19'	T = 351.70'
R = 325.00'	R = 425.00'
SE = 0.04	SE = 0.04
R0 = SEE PLANS	R0 = SEE PLANS



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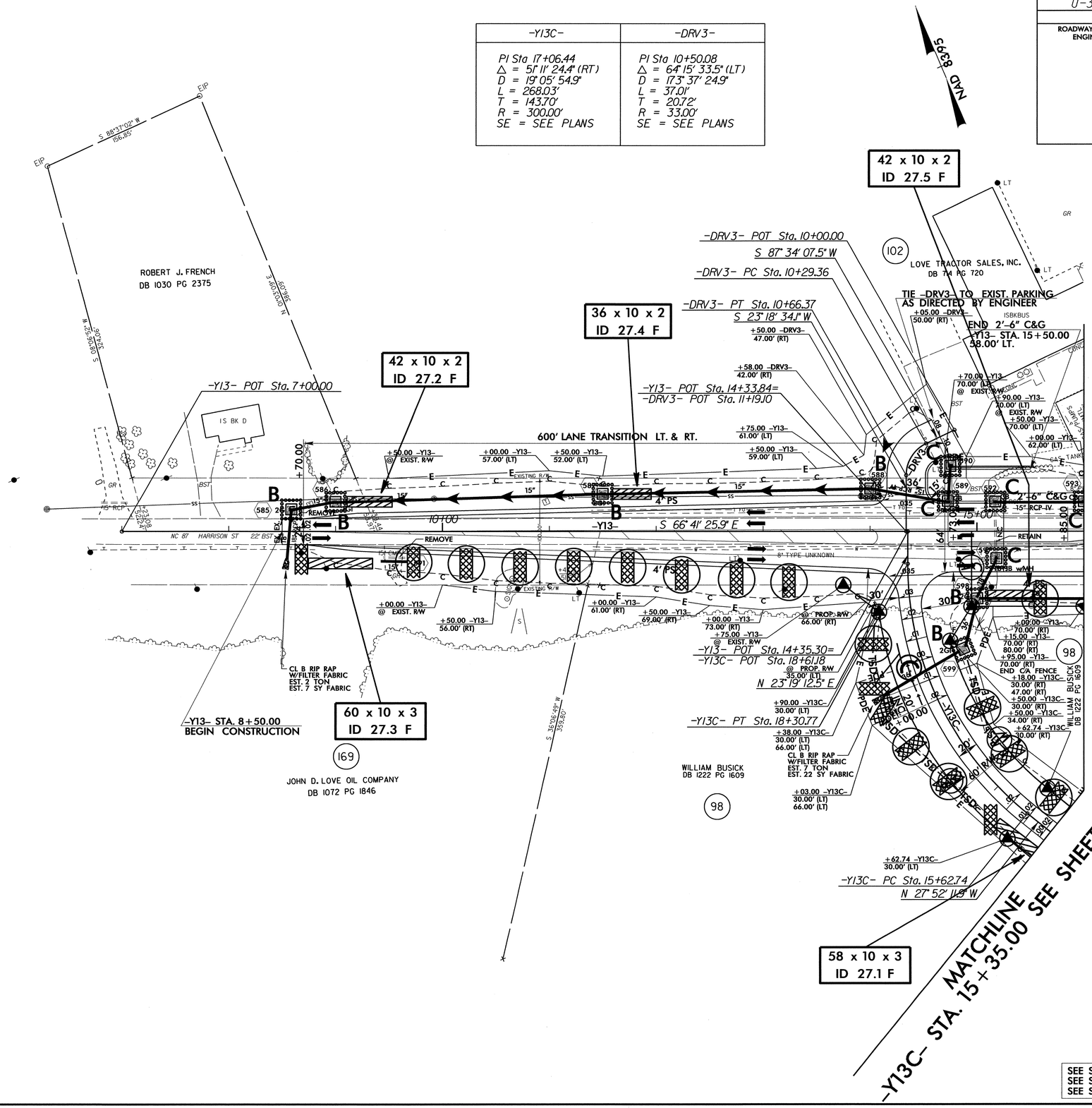
jennifer.parish
AT TRENV22.2003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-63/CONST.27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y13C-	-DRV3-
PI Sta 17+06.44 △ = 51° 11' 24.4" (RT) D = 19° 05' 54.9" L = 268.03' T = 143.70' R = 300.00' SE = SEE PLANS	PI Sta 10+50.08 △ = 64° 15' 33.5" (LT) D = 17° 37' 24.9" L = 37.01' T = 20.72' R = 33.00' SE = SEE PLANS



SEE SHEET 50 FOR -Y13- PROFILE
SEE SHEET 53 FOR -Y13C- PROFILE
SEE SHEET 53 FOR -DRV3- PROFILE

8/17/99

18-MAY-2011 11:34
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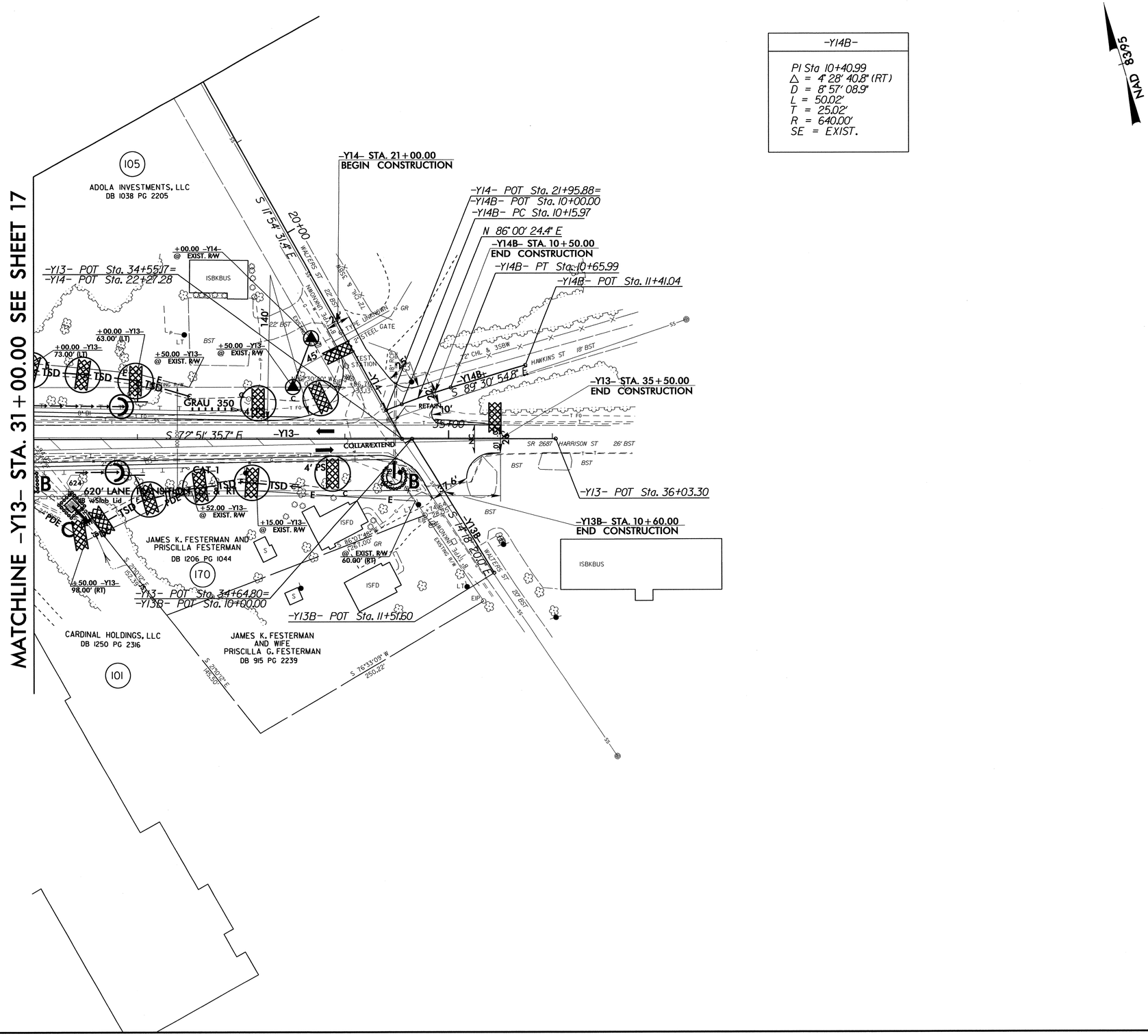
jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-64/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y14B-
PI Sta 10+40.99 △ = 4° 28' 40.8" (RT) D = 8° 57' 08.9" L = 50.02' T = 25.02' R = 640.00' SE = EXIST.



SEE SHEET 50 FOR -Y13- PROFILE

8/17/99

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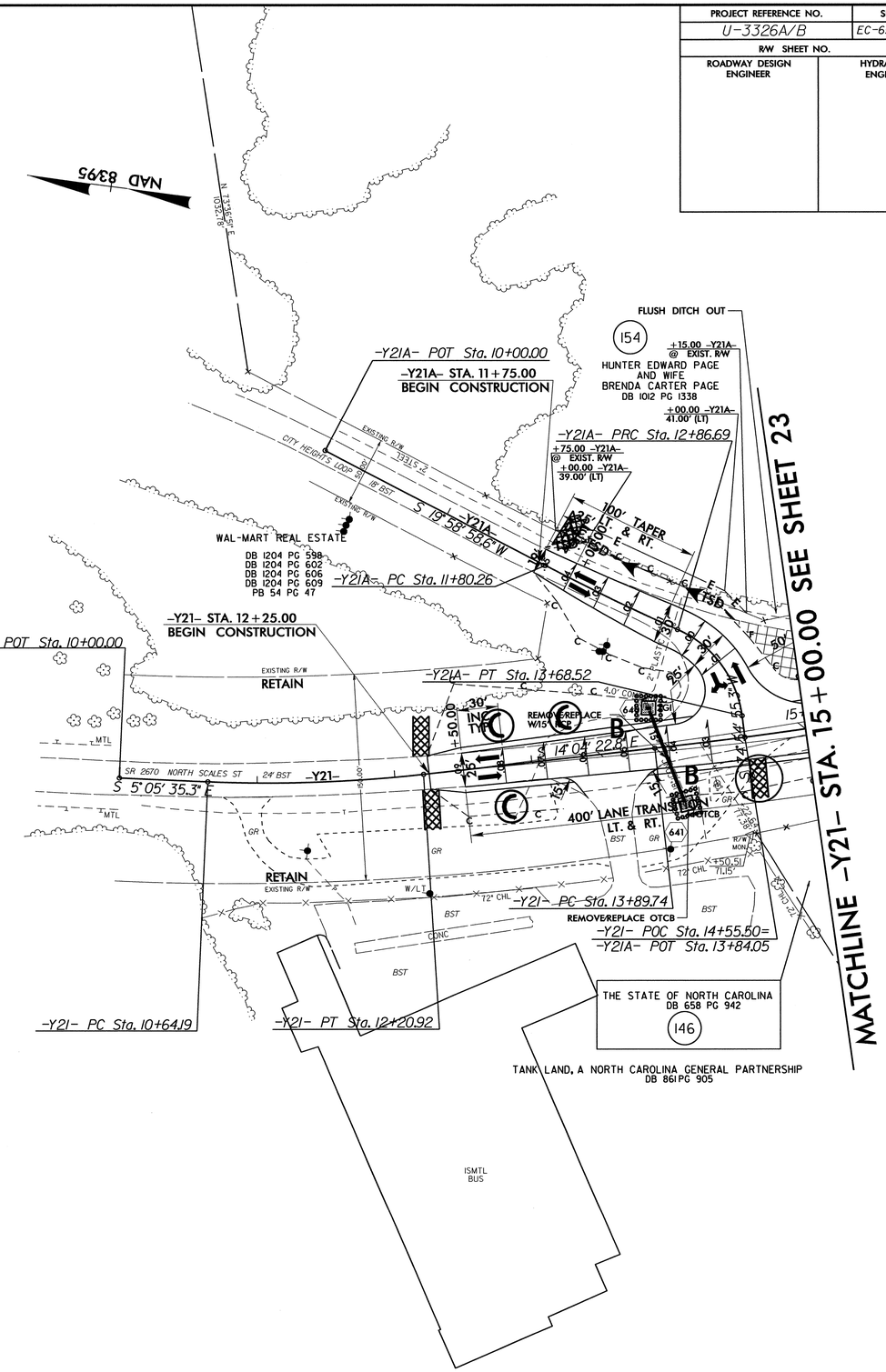
jenniferparish AT RENV242003

PROJECT REFERENCE NO.	SHEET NO.
U-3326A/B	EC-65/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y21-		-Y21A-	
PI Sta 11+42.72 △ = 8° 58' 47.5" (LT) D = 5° 43' 46.5" L = 156.73' T = 78.52' R = 1,000.00' SE = EXIST.	PI Sta 16+50.81 △ = 7° 28' 06.3" (LT) D = 1° 25' 56.6" L = 521.39' T = 261.07' R = 4,000.00' SE = 0.03 RO = SEE PLANS	PI Sta 12+33.50 △ = 3° 40' 24.5" (LT) D = 3° 27' 05.6" L = 106.43' T = 53.23' R = 1,660.00' SE = SEE PLANS	PI Sta 13+31.59 △ = 58° 36' 21.2" (RT) D = 71° 37' 11.0" L = 81.83' T = 44.90' R = 80.00' SE = SEE PLANS



SEE SHEET 56 FOR -Y21- PROFILE
SEE SHEET 56 FOR -Y21A- PROFILE

8/17/99

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smith2@ST1 AT1PNV242002