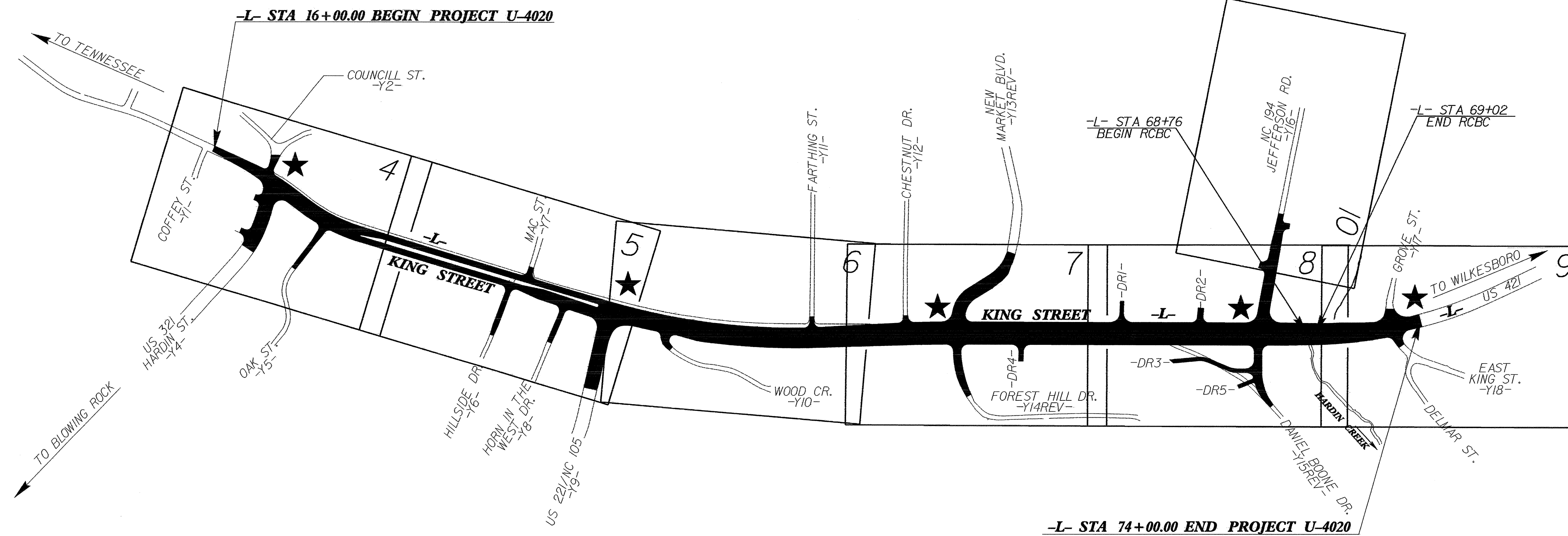
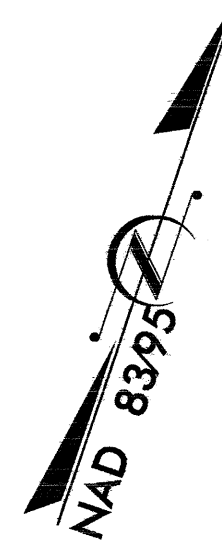


**TIP PROJECT: U-4020**

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

**LOCATION: US 421 (KING STREET) FROM US 321 (HARDIN STREET)  
 TO EAST OF NC 194 (JEFFERSON ROAD) IN BOONE**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, CULVERT EXTENSION,  
 RETAINING WALLS, SIGNING AND SIGNALS**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4020	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

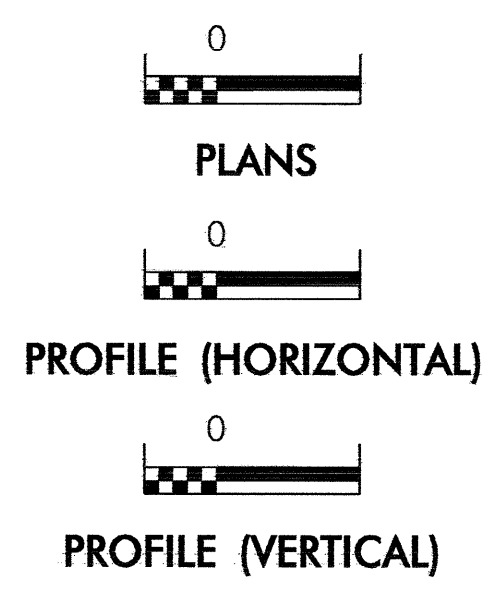
**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
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	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

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

**THIS PROJECT HAS  
 BEEN DESIGNED TO  
 SENSITIVE WATERSHED  
 STANDARDS.**

**GRAPHIC SCALE**



ROADSIDE ENVIRONMENTAL UNIT  
 DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA

Prepared In the Office of:  
**ROADSIDE ENVIRONMENTAL UNIT**  
 1 South Wilmington St.  
 Raleigh, NC 27611  
**2006 STANDARD SPECIFICATIONS**

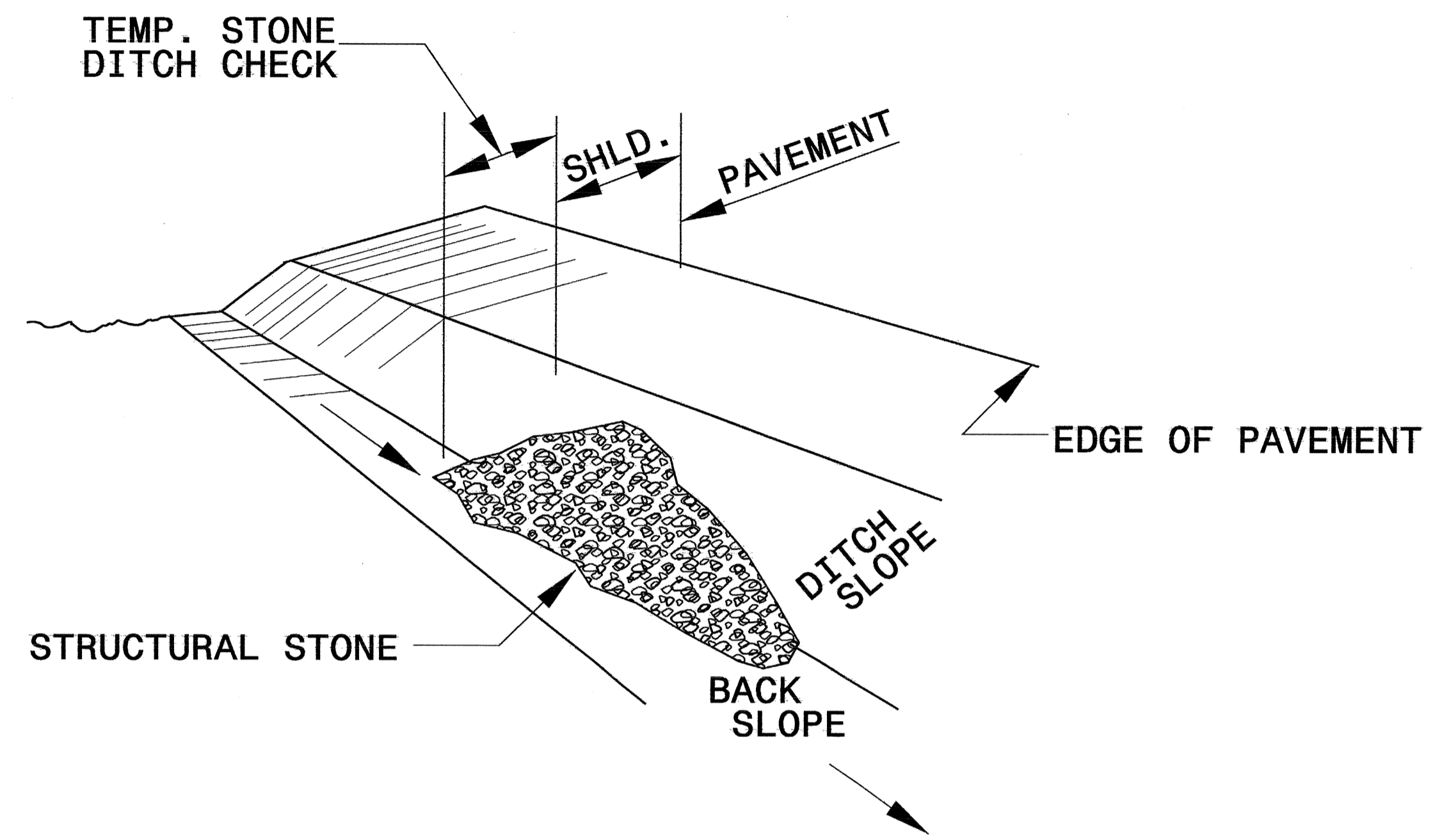
Roadway Standard Drawings

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

1605.01 Temporary Silt 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	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.05 Temporary Diversion	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.06 Special Stilling Basin	

PROJECT REFERENCE NO. U-4020	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

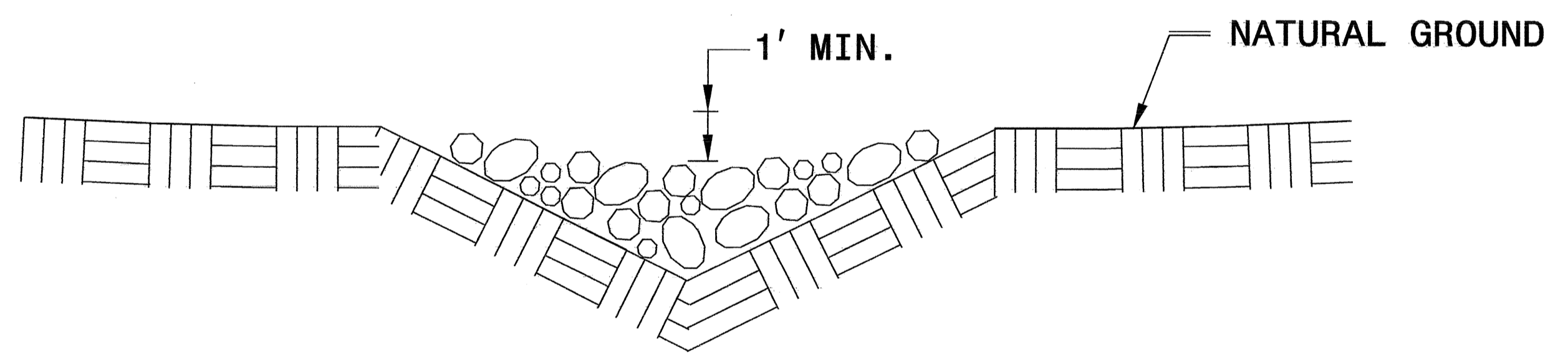


**ISOMETRIC VIEW**

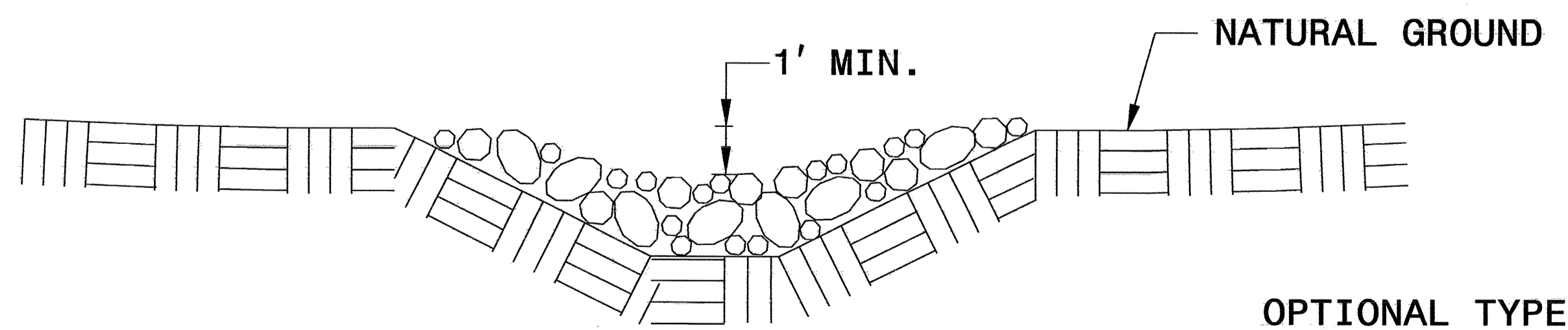
**NOTES:**

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

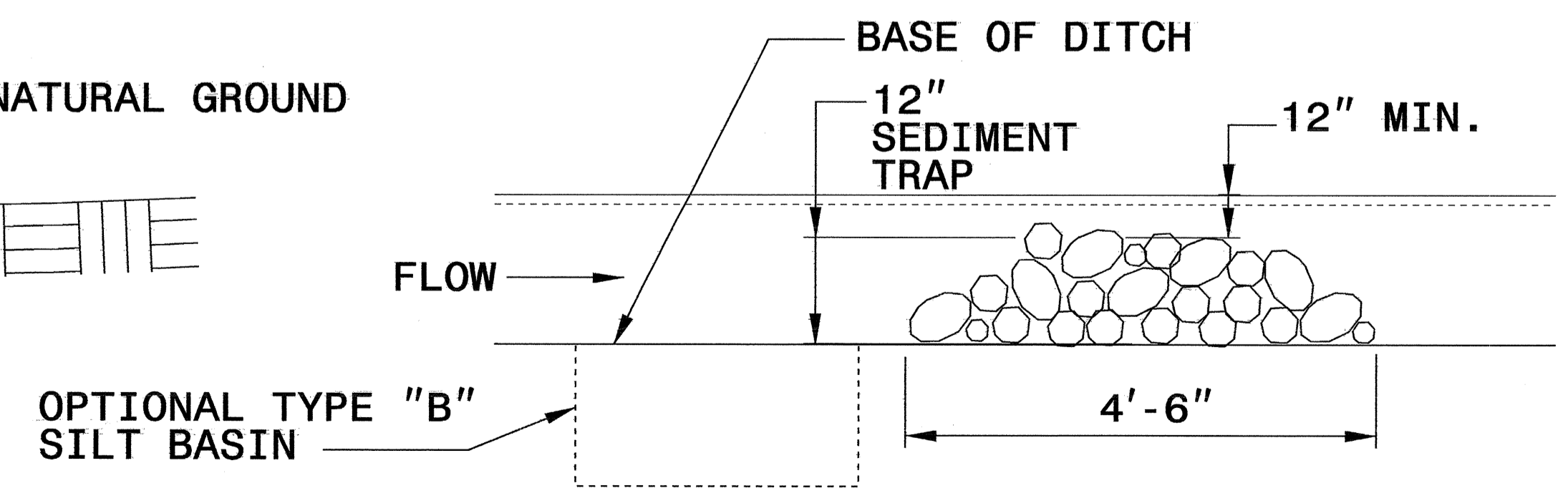
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION VEE DITCH**



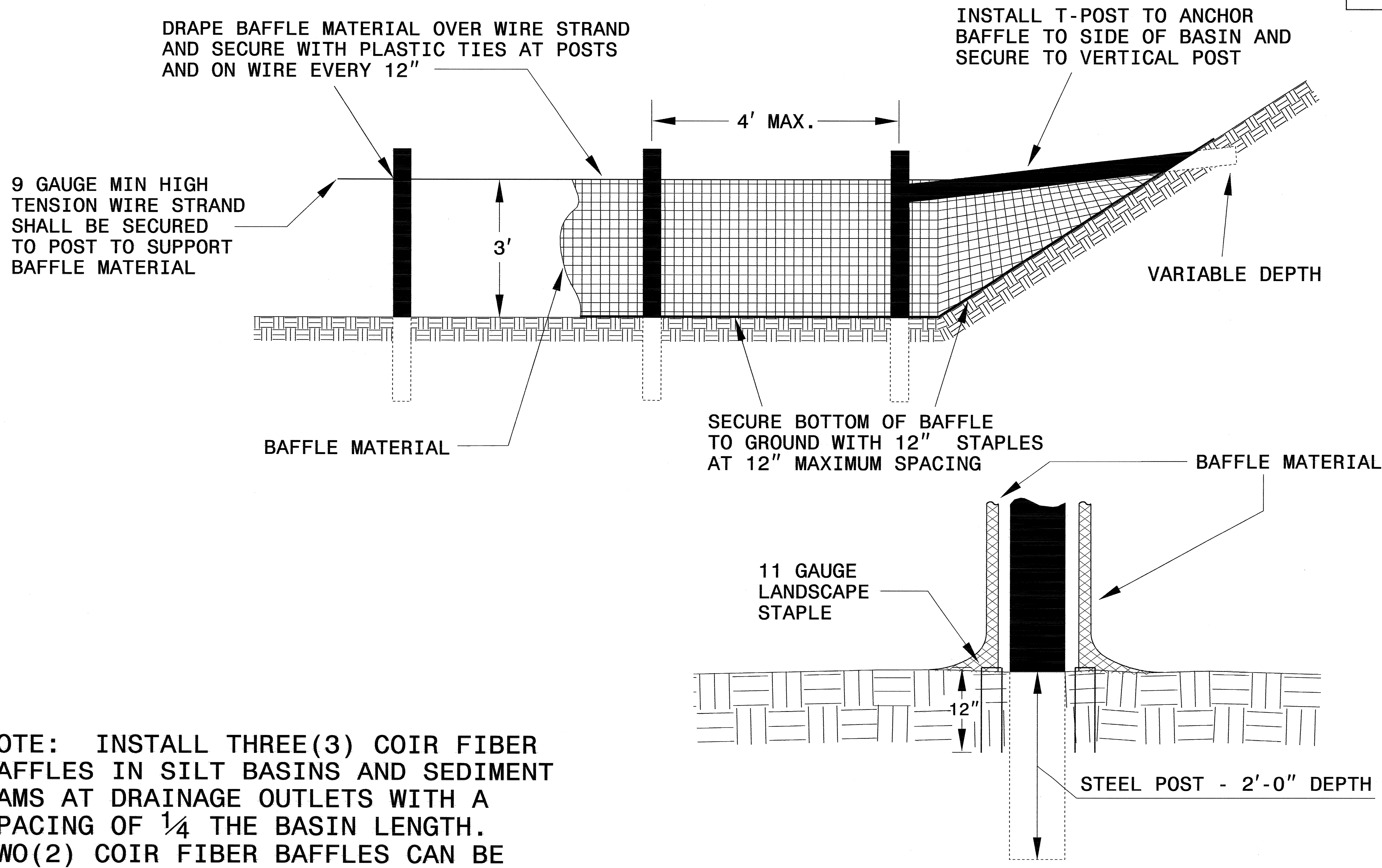
**CROSS SECTION TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

PROJECT REFERENCE NO. U-4020	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL

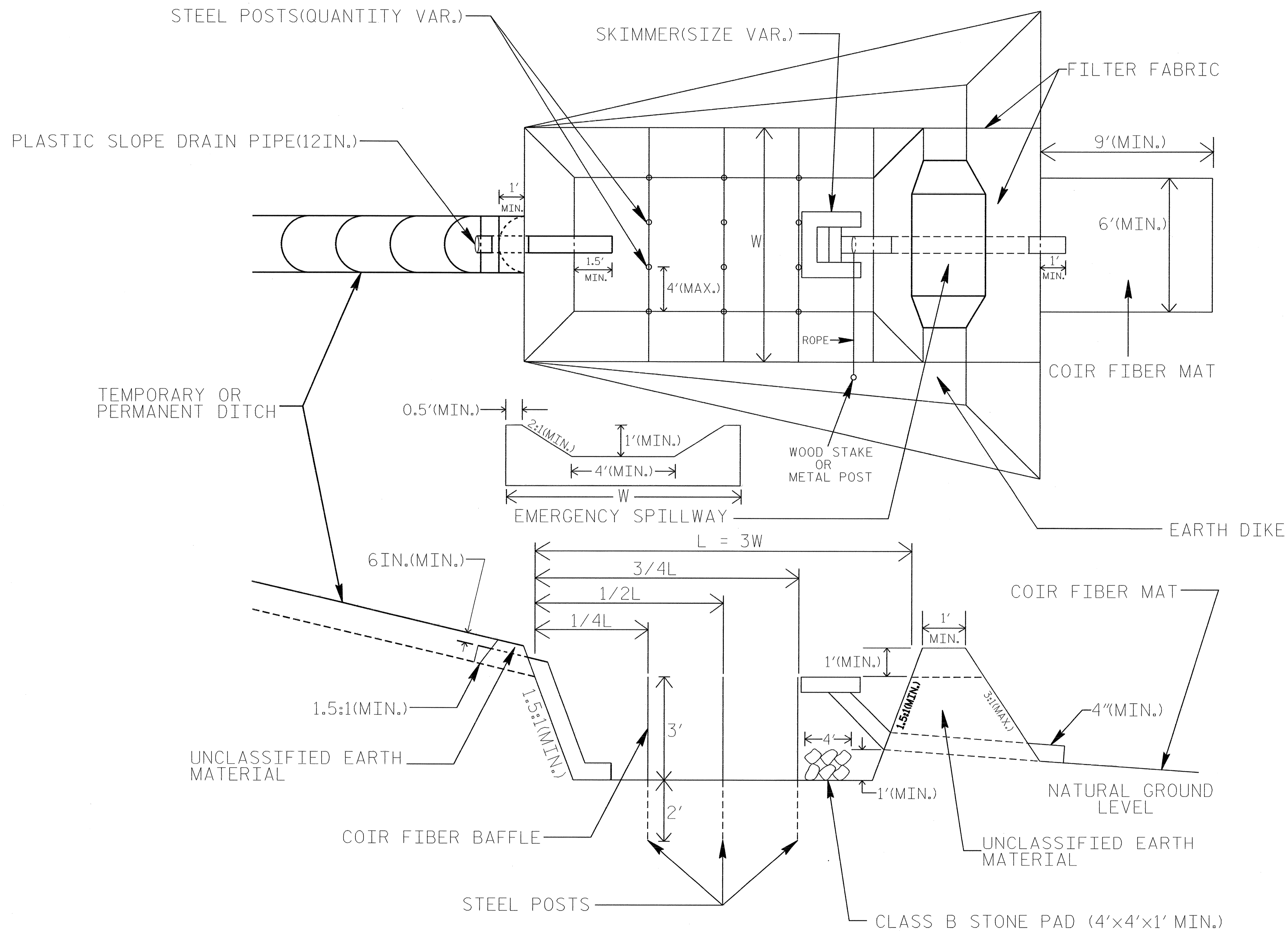


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF  $\frac{1}{4}$  THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.

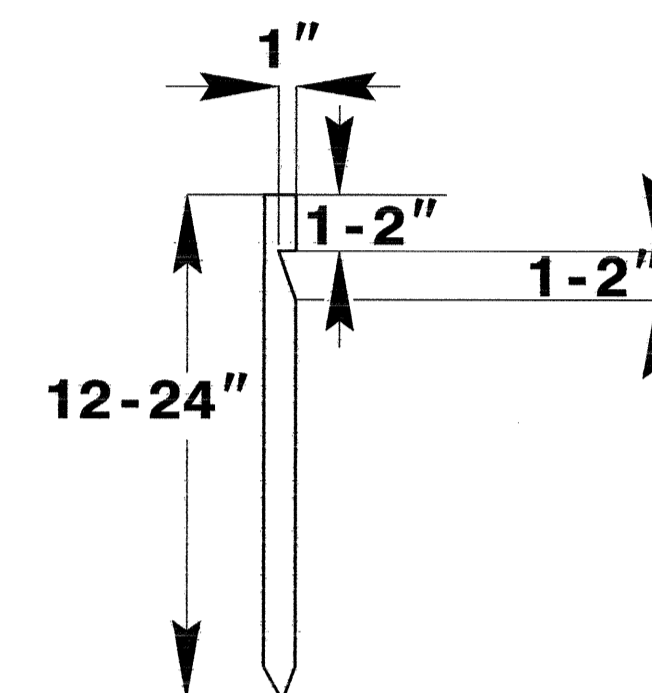
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

# SKIMMER BASIN WITH BAFFLES DETAIL

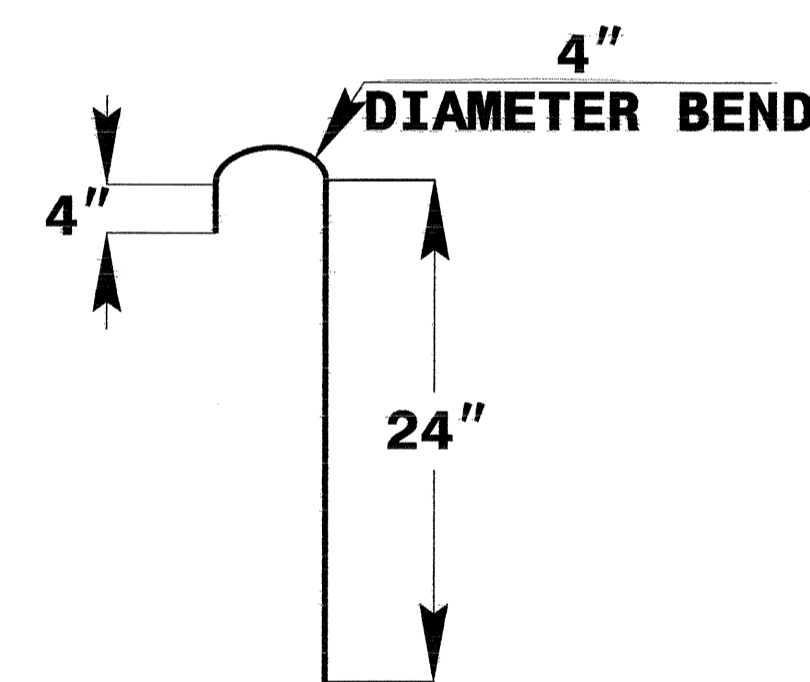
PROJECT REFERENCE NO. U-4020	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



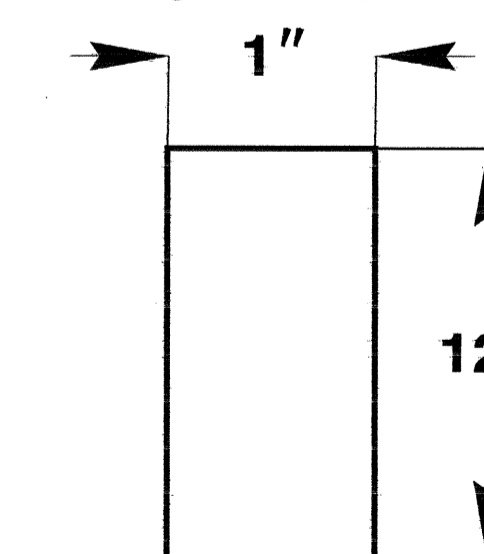
**2" x 2" (nominal)  
WOODEN STAKE**



**#10 STEEL  
REINFORCEMENT BAR**



**1" (nominal)  
STAPLE**



**COIR FIBER MAT  
ANCHOR OPTIONS**

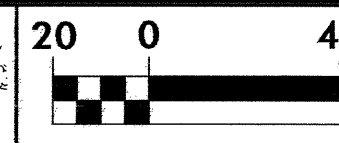
## NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. 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.

NOT TO SCALE



8.17.99



PROJECT REFERENCE NO. U-4020	SHEET NO. EC-4/CONST.4
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**BEGIN TIP PROJECT U-4020**  
**-L- POT STA. 16+00.00**

TURNHART ACQUISITION CORPORATION  
RB III PG 038

-L- PT 15+40.34

-Y2-POT 13+58.79  
L-POC 19+31.58

-Y2-POT 12+88.90

-Y4-POT 10+17.51  
-L-POT 19+63.79

-L-PC 21+51.66

-L-PT 24+39.51

-Y5-POT 10+29.36  
-L-POC 22+78.95

-Y1-POT 10+00.00  
-L-POT 16+11.69

-Y1-PC 10+92.35

-Y1-PT 11+46.38

-Y1-POT 11+56.43

-L-PC 17+67.45

-L-PT 19+42.95

-Y4-PC 11+69.18

**-Y1-**  
PI Sta 11+19.39  
 $\Delta = 5' 24'' 09.4''$  (LT)  
D = 10' 00' 00.0"  
L = 54.03'  
T = 27.03'  
R = 572.96'

**-Y4-**  
PI Sta 13+04.04  
 $\Delta = 26' 29'' 25.5''$  (RT)  
D = 10' 00' 00.0"  
L = 264.90'  
T = 134.86'  
R = 572.96'  
e = 0.04

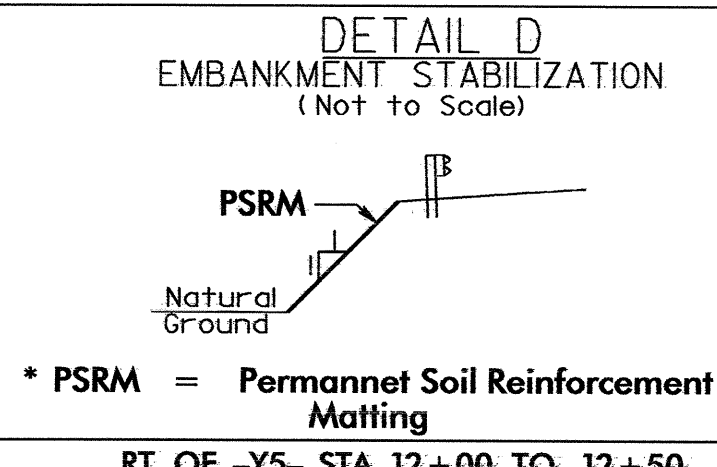
END CONSTRUCTION  
-Y4- POC 13+50.00

END CONSTRUCTION  
-Y5- STA. 13+00.00

STATE OF NORTH CAROLINA  
DB 229 PG 567

STATE OF NORTH CAROLINA  
STATE PROPERTY OFFICE  
NORTH CAROLINA DEPARTMENT  
OF ADMINISTRATION  
RB 252 PG 365

THE HALBEDEL'S CORPORATION  
RB 912 PG 177



NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.

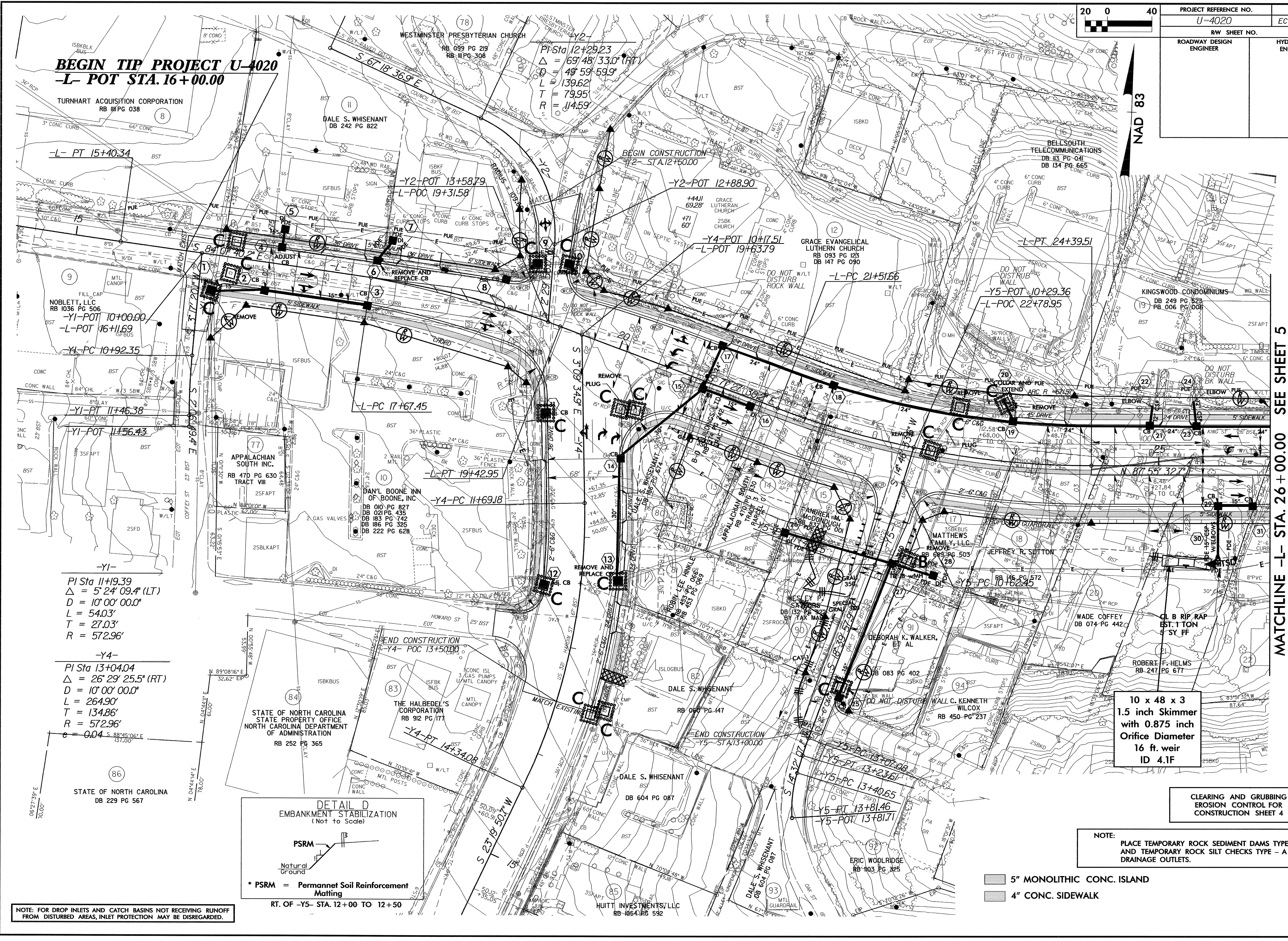
10 x 48 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
16 ft. weir  
ID 4.1F

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.

- 5" MONOLITHIC CONC. ISLAND
- 4" CONC. SIDEWALK

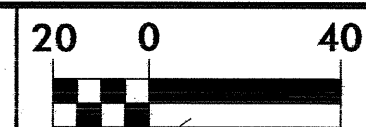
MATCHLINE -L- STA. 26+00.00 SEE SHEET 5



4" CONC. SIDEWALK

5" MONOLITHIC CONC. ISLAND

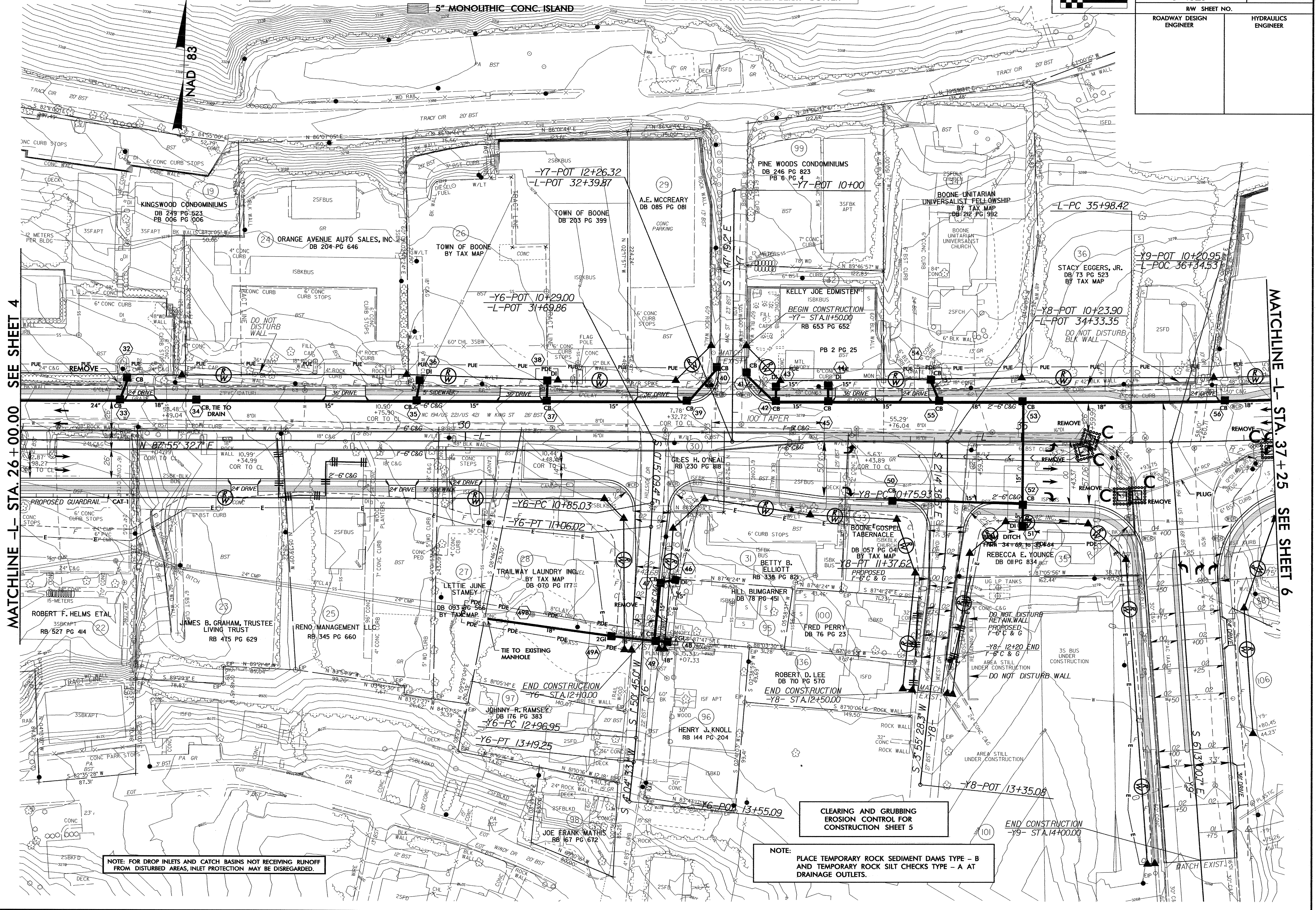
"SBG" DENOTES SHOULDER BERM GUTTER



PROJECT REFERENCE NO. U-4020	SHEET NO. EC-5/CONST.5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE -L- STA. 26+00.00 SEE SHEET 4

MATCHLINE -L- STA. 37+25 SEE SHEET 6



NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

END CONSTRUCTION -Y9- STA. 14+00.00

END CONSTRUCTION -Y6- STA. 12+00.00

END CONSTRUCTION -Y8- STA. 12+50.00

-Y6-PC 12+96.95

-Y6-PT 13+19.25

-Y6-PC 10+85.03

-Y6-PT 11+06.02

-Y6-PC 10+75.03

-Y6-PT 11+06.02

-Y6-PC 10+75.03

-Y6-PT 11+06.02

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-L-PC 35+98.42

-Y9-POT 10+20.95

-L-PC 36+34.53

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35

-Y8-POT 10+23.90

-L-POT 34+33.35







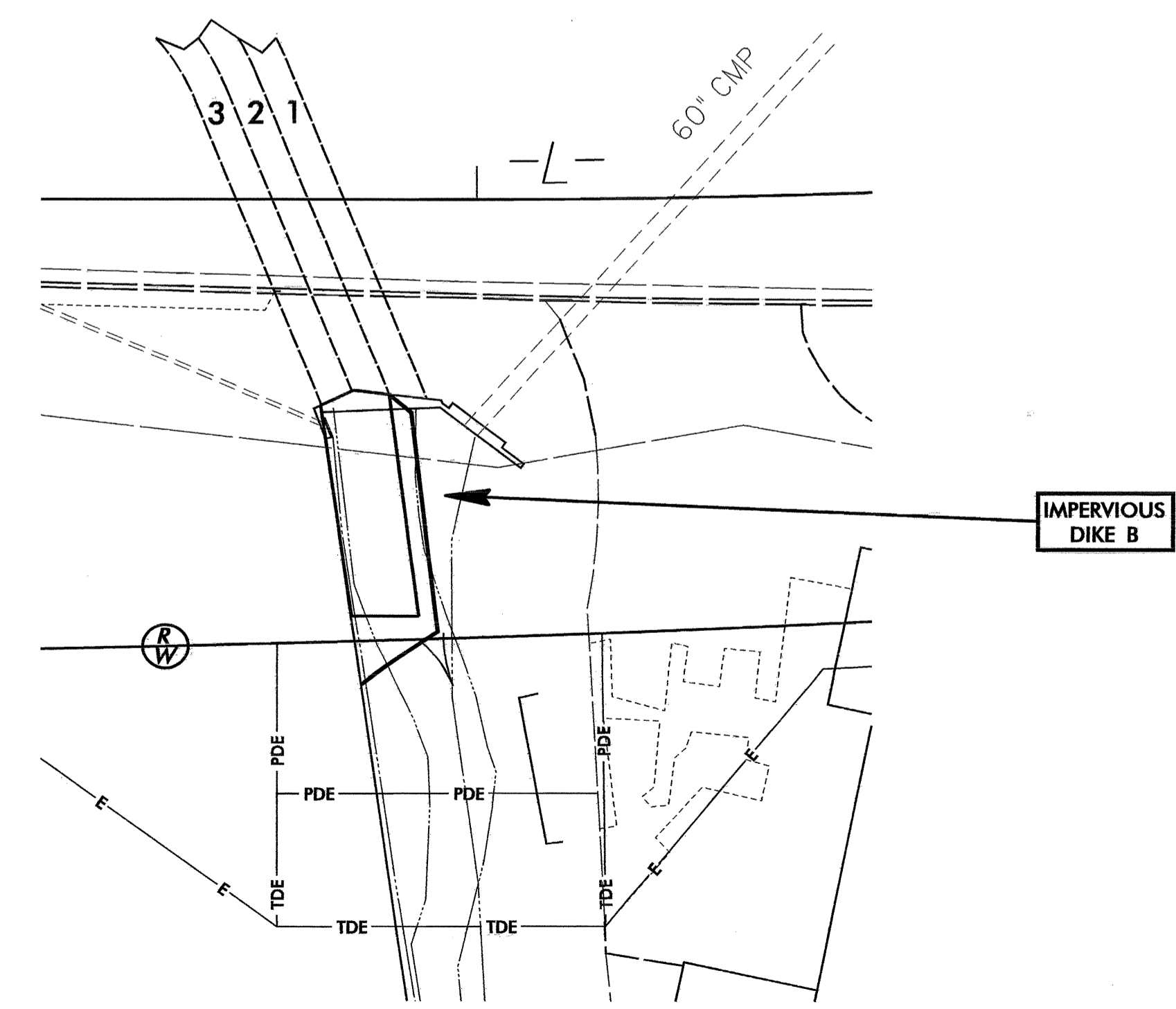
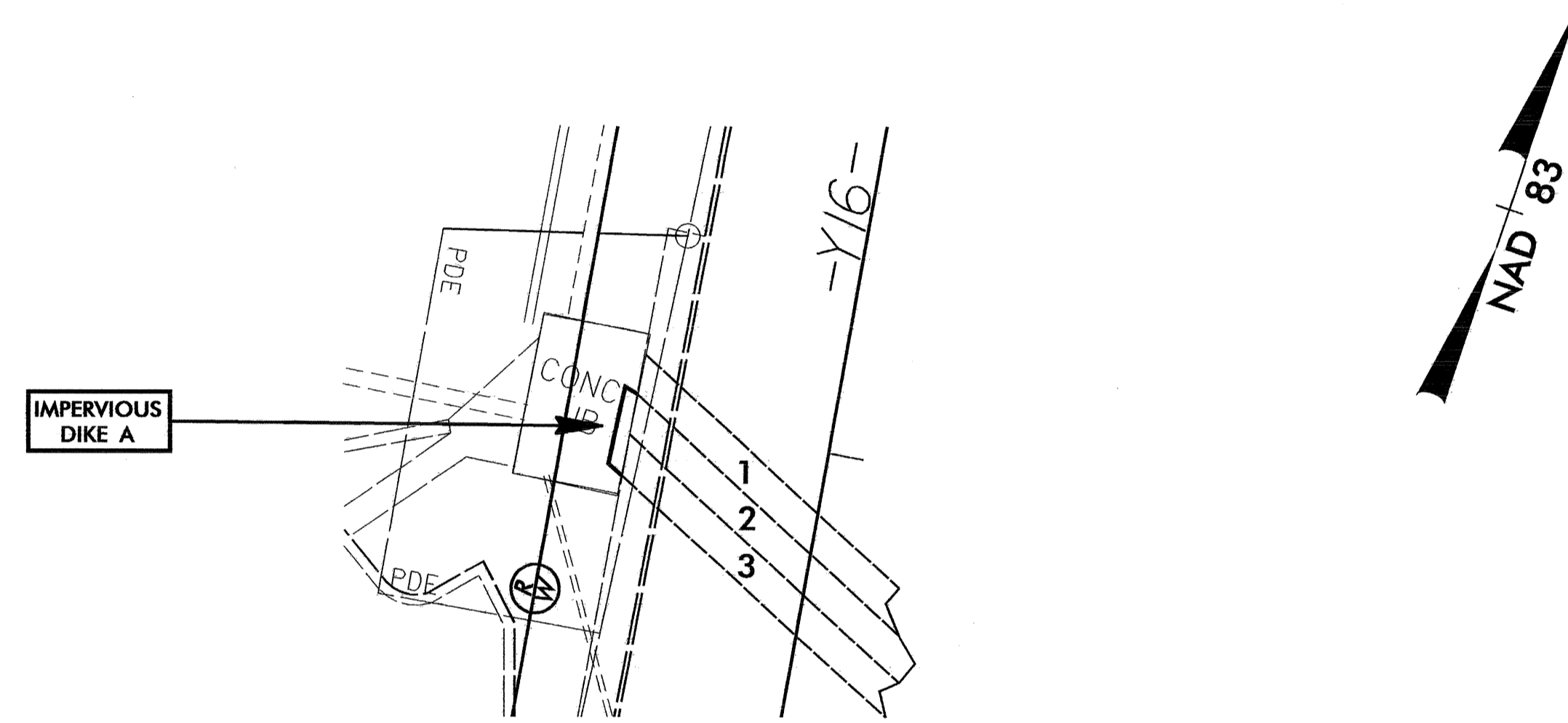


# CULVERT CONSTRUCTION SEQUENCE STA. 68+87 -L-

PROJECT REFERENCE NO.	SHEET NO.
U-4020	EC-9/CONST.B
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

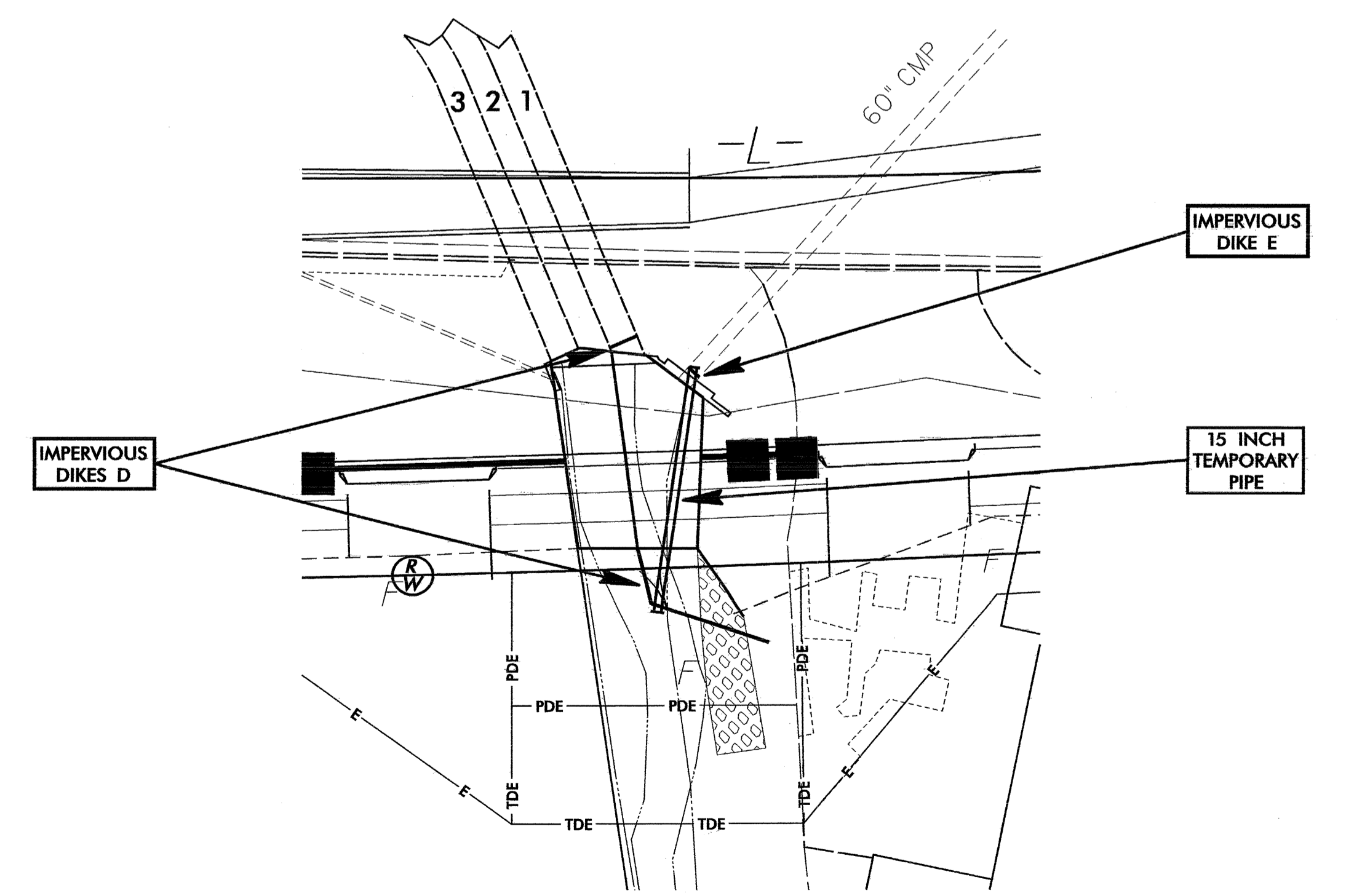
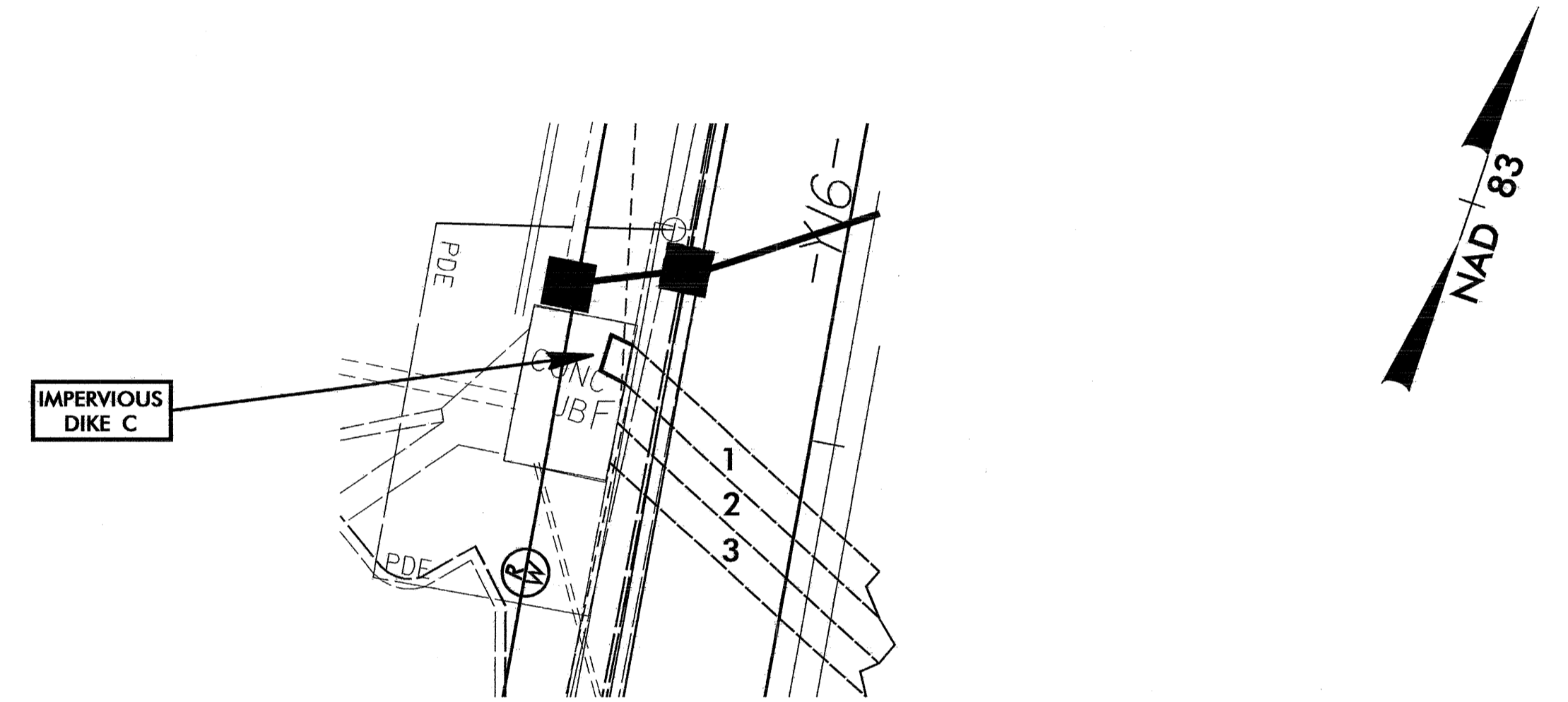
## PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CILVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES A AND B, DIVERTING FLOW THROUGH BARREL 1.
3. CONSTRUCT CULVERT EXTENSION FOR BARRELS 2 AND 3.
4. REMOVE IMPERVIOUS DIKES A AND B.



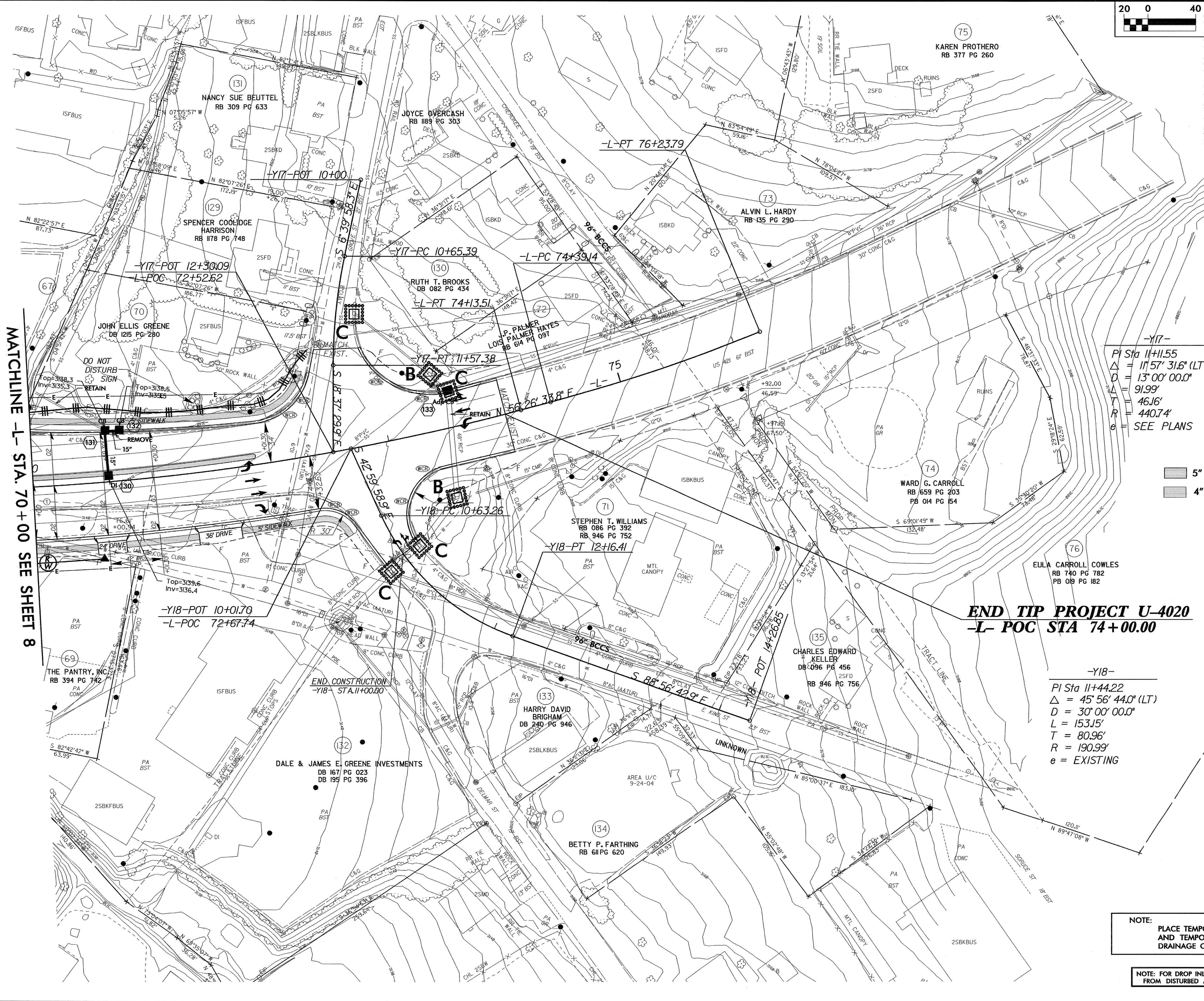
## PHASE II

5. CONSTRUCT IMPERVIOUS DIKES C AND D, DIVERTING FLOW THROUGH BARRELS 2 AND 3 AND THE COMPLETED EXTENSION.
6. CONSTRUCT IMPERVIOUS DIKE E AND INSTALL 15" TEMPORARY PIPE, DIVERTING FLOW FROM THE 60" CMP.
7. COMPLETE CULVERT EXTENSION.
8. REMOVE IMPERVIOUS DIKES C, D, AND E, 15" TEMPORARY PIPE, AND ANY REMAINING SPECIAL STILLING BASIN(S).
9. CONSTRUCT ANY NECESSARY CHANNEL IMPROVEMENTS, AND COMPLETE ROADWAY.

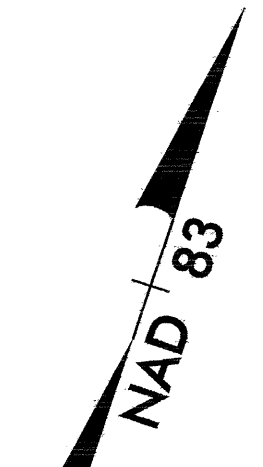




PROJECT REFERENCE NO. U-4020		SHEET NO. EC-10/CONST.9	
R/W SHEET NO. ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



MATCHLINE -L- STA. 70+00 SEE SHEET 8



-Y17-  
 PI Sta 11+11.55  
 $\Delta = 11^{\circ}57'31.6''$  (LT)  
 $D = 13^{\circ}00'00.0''$   
 $L = 91.99'$   
 $T = 46.16'$   
 $R = 440.74'$   
 $e = \text{SEE PLANS}$

- 5" MONOLITHIC CONC. ISLAND
- 4" CONC. SIDEWALK

**END TIP PROJECT U-4020**  
**-L- POC STA 74+00.00**

-Y18-  
 PI Sta 11+44.22  
 $\Delta = 45^{\circ}56'44.0''$  (LT)  
 $D = 30^{\circ}00'00.0''$   
 $L = 153.15'$   
 $T = 80.96'$   
 $R = 190.99'$   
 $e = \text{EXISTING}$

END CONSTRUCTION  
 -Y18- STA. 11+00.00

CLEARING AND GRUBBING  
 EROSION CONTROL FOR  
 CONSTRUCTION SHEET 9

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

NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF  
 FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.

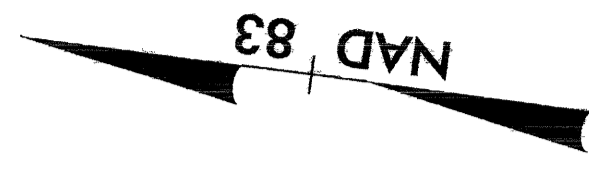


PROJECT REFERENCE NO.  
U-4020

SHEET NO.  
EC-II/CONST.10

RW SHEET NO.  
ROADWAY DESIGN ENGINEER  
HYDRAULICS ENGINEER

SEE SHEET 16 FOR PROFILE -Y16-



-Y16-  
PI Sta 17+11.73  
 $\Delta = 1'01'51''$  (LT)  
 $D = 2'00'00.0''$   
 $L = 51.54'$   
 $T = 25.77'$   
 $R = 2,864.79'$   
 $e = \text{SEE PLANS}$

-Y16-POT 10+00.00

(124)  
T & C PROPERTIES OF BOONE, LLC  
RB 487 PG 662  
BY TAX MAP

JAMES P. MIZNER  
MICHAEL C. MCKIBBIN  
RB 634 PG 245

-Y16-PC 16+85.96  
2'-6" C&G  
CHANNELIZATION

BEGIN CONSTRUCTION  
-Y16- STA. 15+00.00

REMOVE

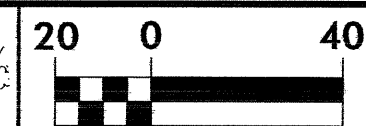
MATCHLINE -Y16- STA. 17+00.00 SEE SHEET 8

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 10

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

NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF  
FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.

8/17/99



PROJECT REFERENCE NO. U-4020	SHEET NO. EC-12/CONST.4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

**BEGIN TIP PROJECT U-4020**  
**-L- POT STA. 16+00.00**

PI-STA 12+29.23  
 $\Delta = 69^\circ 48' 33.0" (RT)$   
 $D = 49' 59' 59.9"$   
 $L = 139.62'$   
 $T = 79.95'$   
 $R = 114.59'$

TURNHART ACQUISITION CORPORATION  
 RB III PG 038

-L- PT 15+40.34

-Y2-POT 13+58.79  
 L-POC 19+31.58

-Y2-POT 12+88.90

BELLSOUTH TELECOMMUNICATIONS  
 DB 13 PG 041  
 DB 134 PG 665

NOBLETT, LLC  
 RB 1036 PG 506

-Y1-POT 10+00.00  
 -L-POT 16+11.69

-Y1-PC 10+92.35

-Y1-PT 11+46.38

-Y1-POT 11+56.43

-Y1-

PI Sta 11+19.39  
 $\Delta = 5^\circ 24' 09.4" (LT)$   
 $D = 10^\circ 00' 00.0"$   
 $L = 54.03'$   
 $T = 27.03'$   
 $R = 572.96'$

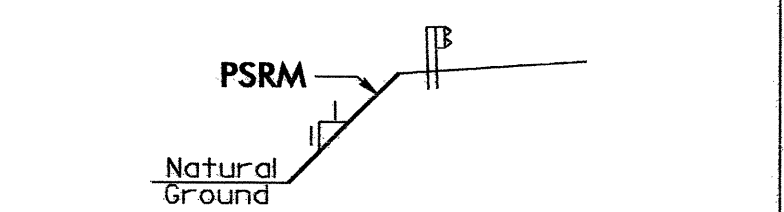
-Y4-

PI Sta 13+04.04  
 $\Delta = 26^\circ 29' 25.5" (RT)$   
 $D = 10^\circ 00' 00.0"$   
 $L = 264.90'$   
 $T = 134.86'$   
 $R = 572.96'$

$e = 0.04$

STATE OF NORTH CAROLINA  
 DB 229 PG 567

**DETAIL D**  
**EMBANKMENT STABILIZATION**  
 (Not to Scale)



\* PSRM = Permanet Soil Reinforcement Matting

RT. OF -Y5- STA. 12+00 TO 12+50

NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.

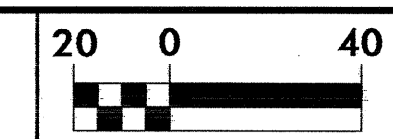
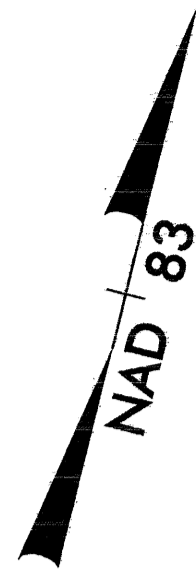
10 x 48 x 3  
 1.5 inch Skimmer  
 with 0.875 inch  
 Orifice Diameter  
 16 ft. weir  
 ID 4.1F

5" MONOLITHIC CONC. ISLAND  
 4" CONC. SIDEWALK

MATCHLINE -L- STA. 26+00.00 SEE SHEET 5



8/17/99

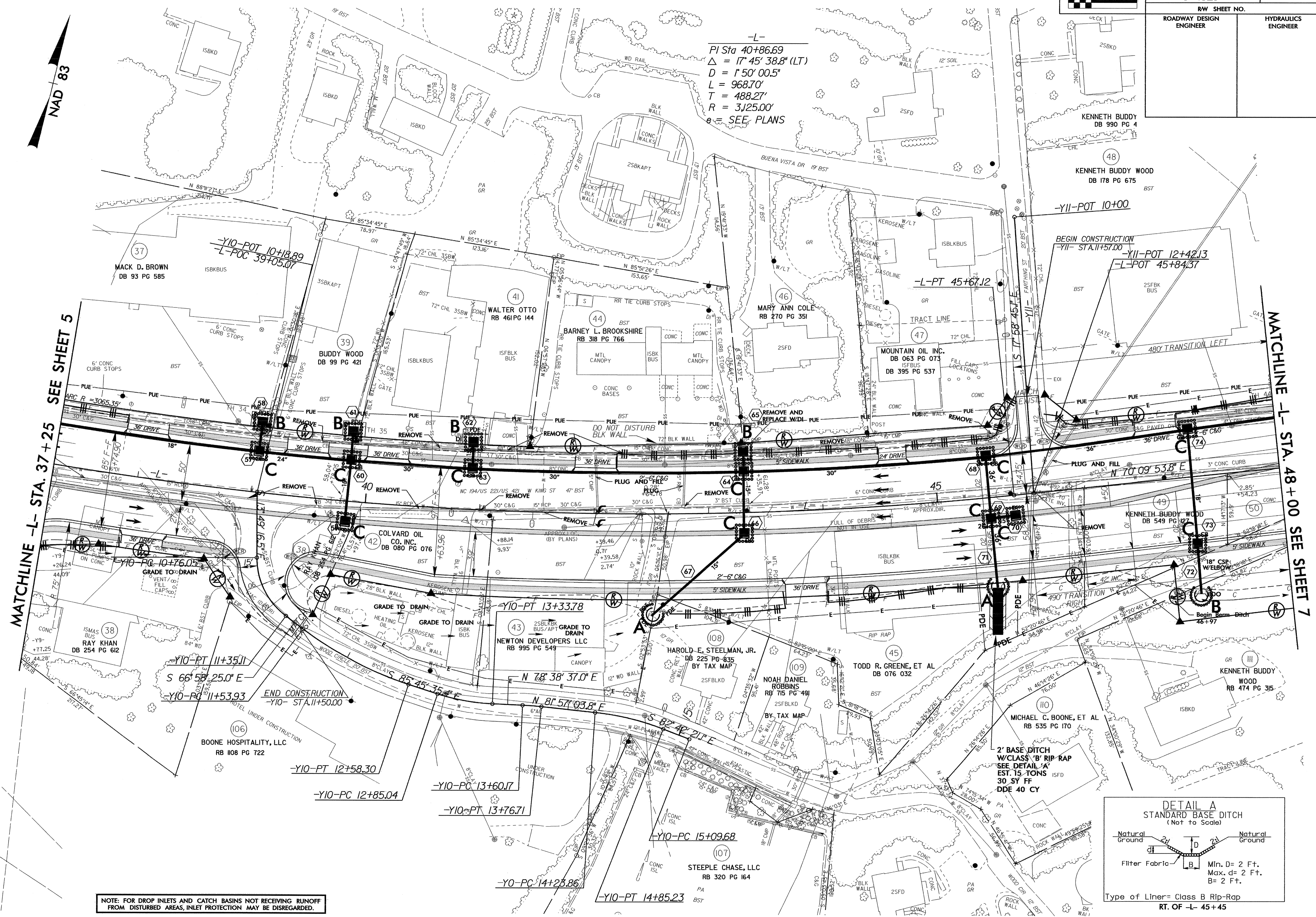


PROJECT REFERENCE NO. U-4020		SHEET NO. EC-14/CONST.6
RW SHEET NO. ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

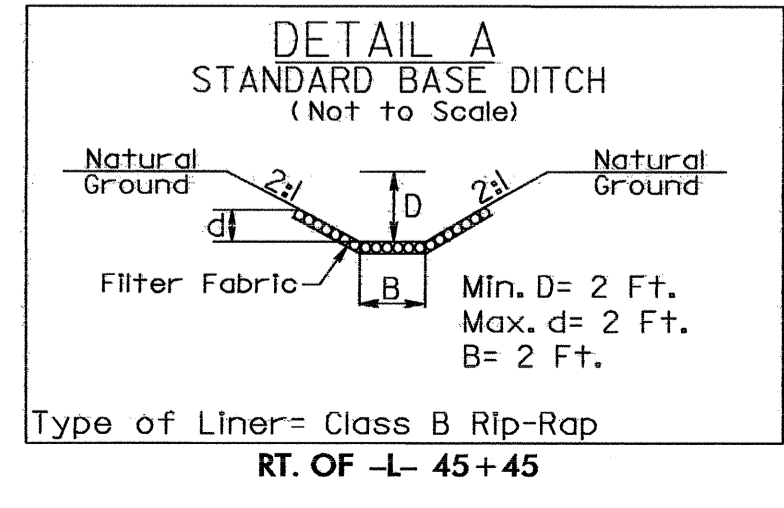
-L-  
 PI Sta 40+86.69  
 $\Delta = 17' 45" 38.8" (LT)$   
 $D = 1' 50" 00.5"$   
 $L = 968.70'$   
 $T = 488.27'$   
 $R = 3,125.00'$   
 $\theta = \text{SEE PLANS}$

MATCHLINE -L- STA. 37+25 SEE SHEET 5

MATCHLINE -L- STA. 48+00 SEE SHEET 7



NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.



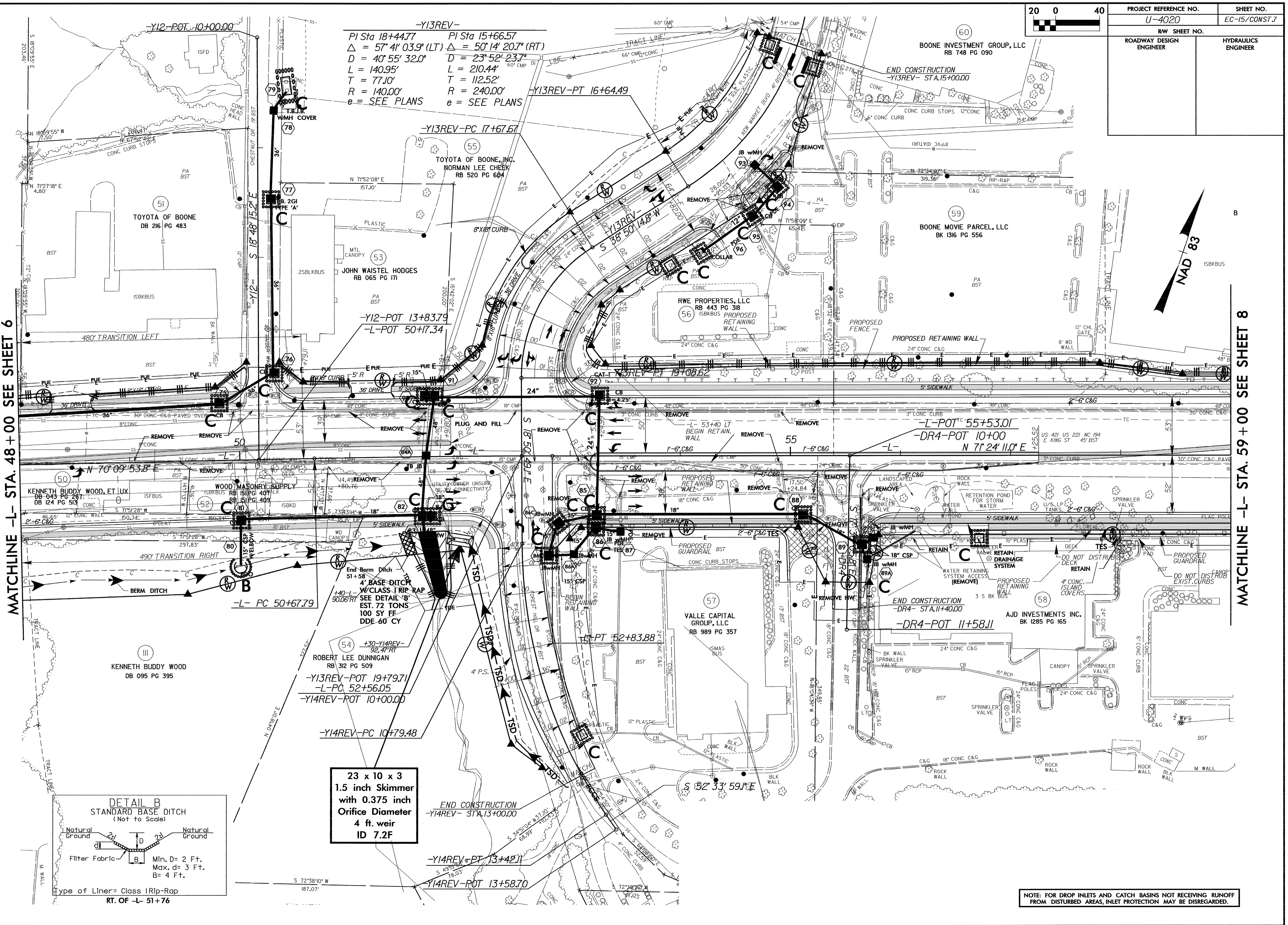




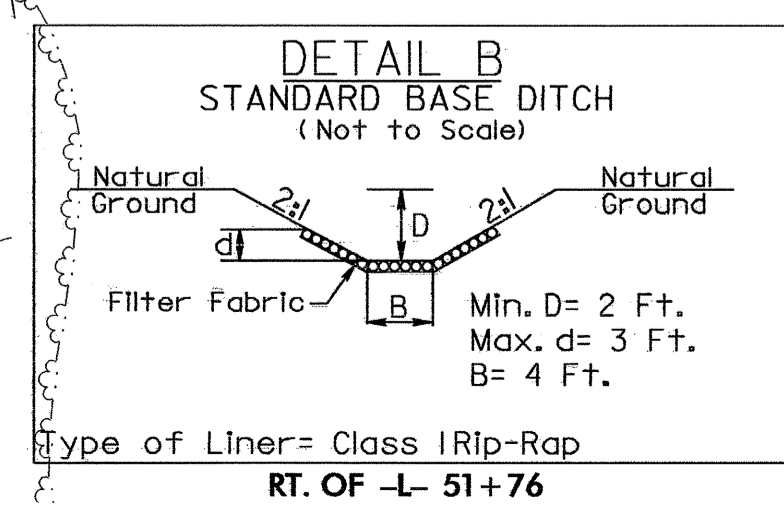
PROJECT REFERENCE NO. U-4020	SHEET NO. EC-15/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE -L- STA. 48+00 SEE SHEET 6

MATCHLINE -L- STA. 59+00 SEE SHEET 8

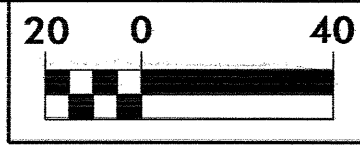


**-Y13REV-**  
 PI Sta 18+44.77    PI Sta 15+66.57  
 $\Delta = 57^\circ 41' 03.9''$  (LT)     $\Delta = 50^\circ 14' 20.7''$  (RT)  
 $D = 40' 55'' 32.0''$      $D = 23' 52'' 23.7''$   
 $L = 140.95'$      $L = 210.44'$   
 $T = 77.10'$      $T = 112.52'$   
 $R = 140.00'$      $R = 240.00'$   
 $e = \text{SEE PLANS}$      $e = \text{SEE PLANS}$



**23 x 10 x 3**  
 1.5 inch Skimmer  
 with 0.375 inch  
 Orifice Diameter  
 4 ft. weir  
 ID 7.2F

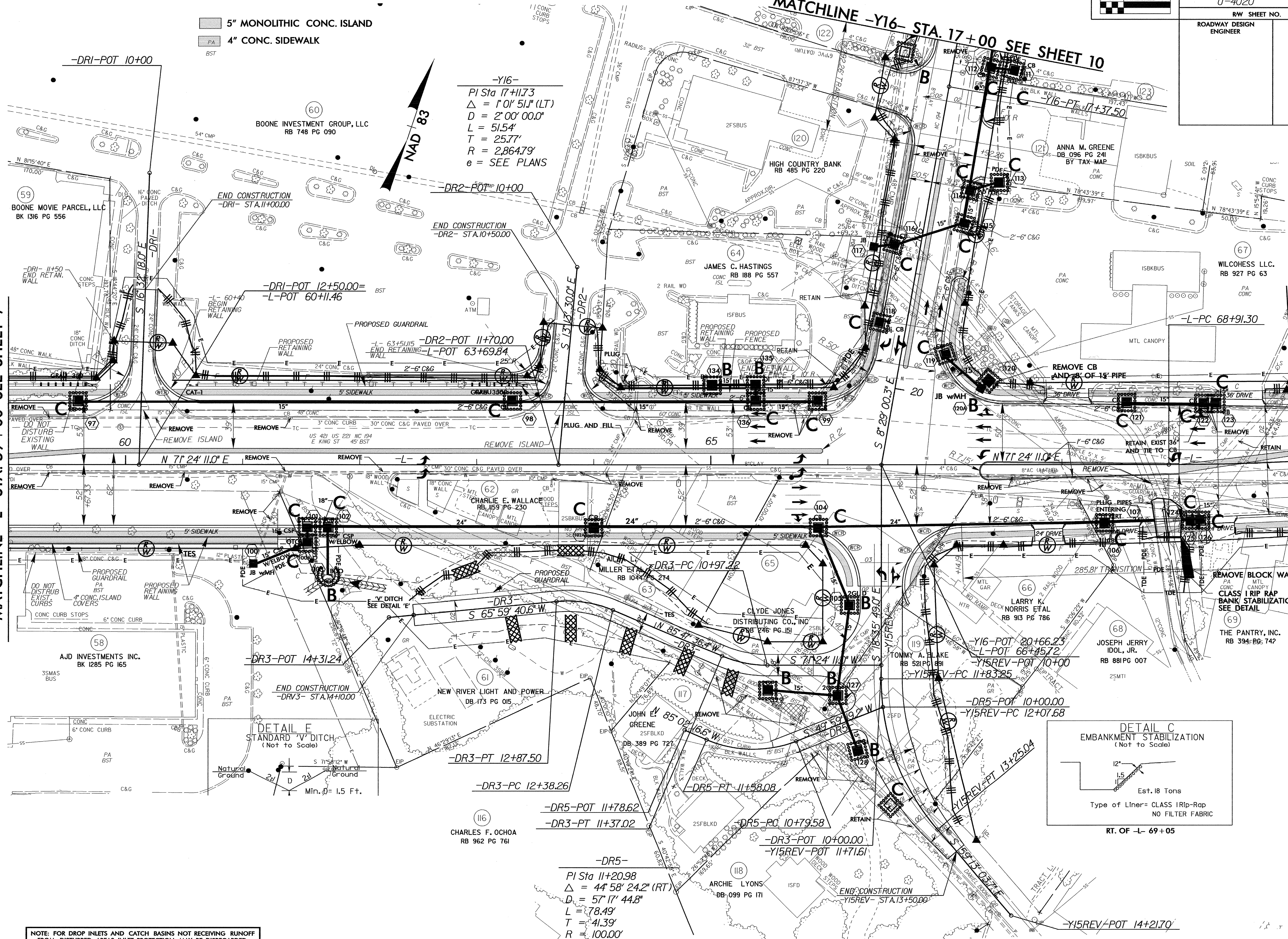
NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.



PROJECT REFERENCE NO. U-4020		SHEET NO. EC-16/CONST.8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

MATCHLINE -L- STA. 59+00 SEE SHEET 7

MATCHLINE -L- STA. 70+00 SEE SHEET 9



5" MONOLITHIC CONC. ISLAND  
4" CONC. SIDEWALK

-YI6-  
PI Sta 17+11.73  
 $\Delta = 1^{\circ} 01' 51.1''$  (LT)  
 $D = 2^{\circ} 00' 00.0''$   
 $L = 51.54'$   
 $T = 25.77'$   
 $R = 2,864.79'$   
e = SEE PLANS

MATCHLINE -YI6- STA. 17+00 SEE SHEET 10

-DRI-POT 12+50.00=  
-L-POT 60+11.46

END CONSTRUCTION  
-DR2- STA.10+50.00

-DR2-POT 11+70.00  
END RETAINING -L-POT 63+69.84

-DR3-POT 14+31.24

END CONSTRUCTION  
-DR3- STA.14+00.00

-DR3-PT 12+87.50

-DR3-PC 12+38.26

-DR5-POT 11+78.62

-DR3-PT 11+37.02

-DR5-PC 10+79.58

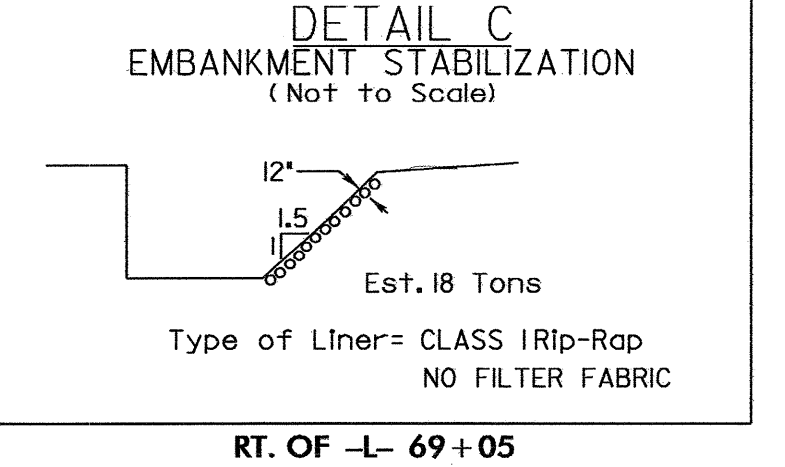
-DR3-POT 10+00.00  
-YI5REV-POT 11+71.61

-DR5-  
PI Sta 11+20.98  
 $\Delta = 44^{\circ} 58' 24.2''$  (RT)  
 $D = 57^{\circ} 17' 44.8''$   
 $L = 78.49'$   
 $T = 41.39'$   
 $R = 100.00'$

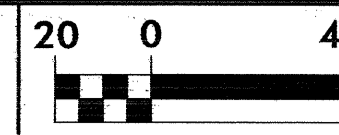
-YI6-POT 20+66.23  
-L-POT 68+45.72  
-YI5REV-POT 10+00  
-YI5REV-PC 11+83.25

-DR5-POT 10+00.00  
-YI5REV-PC 12+07.68

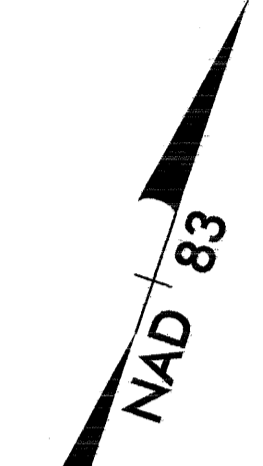
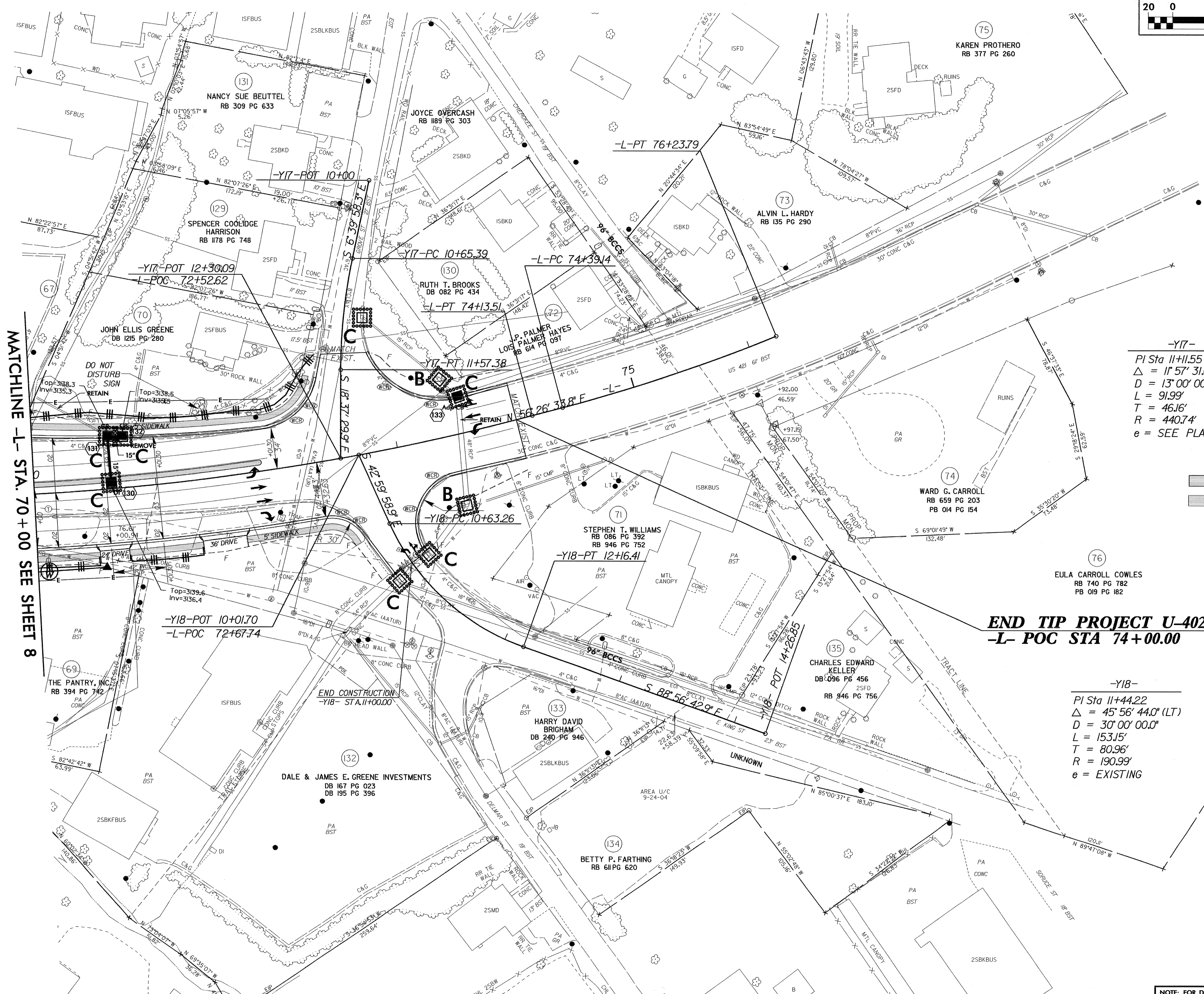
-YI5REV-PT 13+25.04



NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.



PROJECT REFERENCE NO. <b>U-4020</b>	SHEET NO. <b>EC-17/CONST.9</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



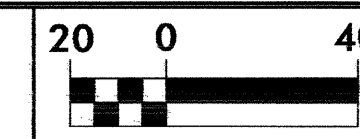
-Y17-  
 PI Sta 11+11.55  
 $\Delta = 11^{\circ} 57' 31.6''$  (LT)  
 $D = 13^{\circ} 00' 00.0''$   
 $L = 91.99'$   
 $T = 46.16'$   
 $R = 440.74'$   
 $e = \text{SEE PLANS}$

5" MONOLITHIC CONC. ISLAND  
 4" CONC. SIDEWALK

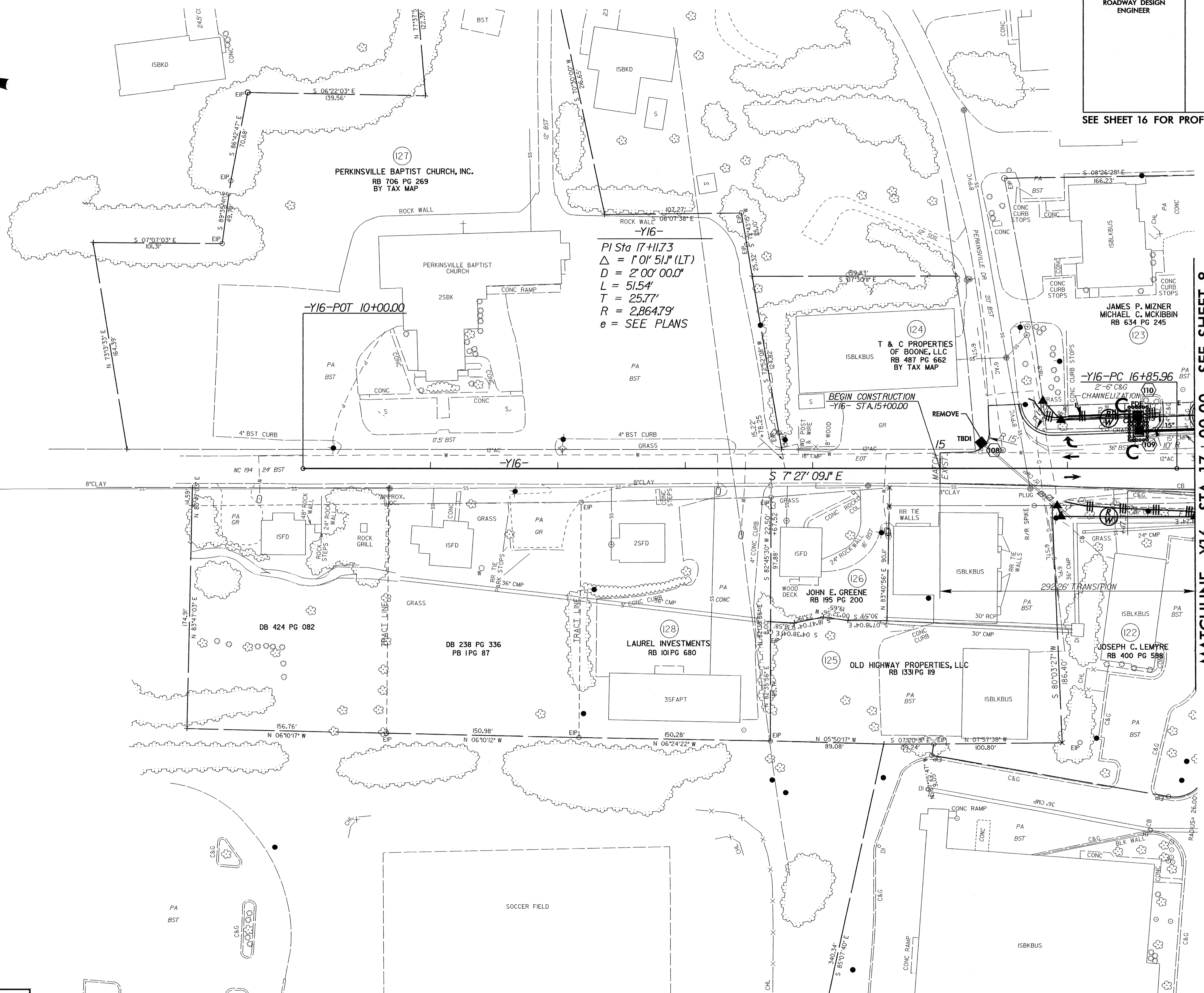
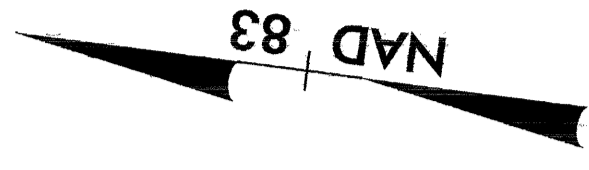
**END TIP PROJECT U-4020**  
**-L- POC STA 74+00.00**

-Y18-  
 PI Sta 11+44.22  
 $\Delta = 45^{\circ} 56' 44.0''$  (LT)  
 $D = 30^{\circ} 00' 00.0''$   
 $L = 153.15'$   
 $T = 80.96'$   
 $R = 190.99'$   
 $e = \text{EXISTING}$

NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.



PROJECT REFERENCE NO. U-4020	SHEET NO. EC-18/CONST.JO
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEET 16 FOR PROFILE -Y16-

MATCHLINE -Y16- STA. 17+00.00 SEE SHEET 8

NOTE: FOR DROP INLETS AND CATCH BASINS NOT RECEIVING RUNOFF FROM DISTURBED AREAS, INLET PROTECTION MAY BE DISREGARDED.